



ARAB REPUBLIC OF EGYPT

NATIONAL RESEARCH CENTRE

# WHO'S WHO

Edited by  
*Prof. Ahmed A. Fakhry*  
*Prof. Ahmed F. Sahab*

CAIRO  
1989



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ ﴾

(سورة فاطر آية ٢٨)

“ In the name of God, Most gracious Most merciful ”

“ Those truly fear God, Among His Servants Who have  
Knowledge ”

(From the Holly Koraan)

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*PRESIDENT MOHAMED HOSNY MOUBARAK  
PRESIDENT OF ARAB REPUBLIC OF EGYPT*



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## FOREWORD

It is a historical fact that mankind is the most precious renewable resource ever created by God. History provides us with many examples emphasizing this fact. The ingenious class of scientists working in every field of human endeavours are the driving wheel of any community for achieving its developmental objectives and progress. Ancient civilizations as well as modern incredible achievements always reflect the role of scientific research in different aspects of life.

The accumulative nature of knowledge has been preserved and promoted by those distinguished scientists who can be truly identified as the “civilization keeping forces” on our planet, the Earth.

It gives me a great pleasure to witness the birth and progress of this project “NRC — Who’s Who”. It includes over 900 biographees, all are research staff members (Ph. D. holders) representing the 15 NRC research divisions. It reflects the potentialities and the “Human wealth” of this big, unique and distinguished institution known as the National Research Centre.

*Prof. Dr. Adel Ezz*

**The Minister of State for  
Scientific Research**



## PREFACE

The National Research Centre is a unique multidisciplinary research institution covering a wide spectrum of research activities reflected in its eight major programs. I feel proud that NRC research staff has been growing since its establishment in 1956 and progressively covered various areas of paramount importance to Egypt's development plans.

According to recent records over 900 scientists are involved in scientific research at the NRC and they held their doctoral and masters degrees from Egyptian and foreign Universities. This staff is classified as Research Professors, Associate Research Professors and Researchers, and they are assisted by about 2000 research assistants. Besides, the research activities their main task, some staff members also acquired experience through teaching in Egyptian, Arab, African and some foreign Universities either as part-time or full-time members.

The response of my colleagues, the NRC research staff to our invitation to participate in this project "NRC who's who" is almost overwhelming. They provided the material (C.V.) which was then re-edited and compiled by two of my colleagues, Dr. A. Fakhry and Dr. A. F. Sahab, members of NRC Technical Office, to whom, I am grateful for their sincere efforts to prepare this book. In this connection, I would like to express my gratitude to Prof. Dr. A. Refaei, Head of the Technical Office for his constructive support and kind help throughout the preparation of the manuscript.

I feel confident that this volume, will serve as a directory to man-power potentialities available in that leading research establishment, the National Research Centre.

*Prof. Dr. Hussein S. Salama*

**President, NRC**

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## INTRODUCTION

It is one of our national endeavours to create and consolidate a class of research scientists who are capable to confront and cope with different challenges facing our country. The National Research Centre since its establishment in 1956 has concentrated during its first evolutionary stage which lasted over one decade on basic sciences and scientific staff development. Human ingenuity is for sure the driving force for development and prosperity. The creation, over the past three decades, of NRC research staff (Ph. D. holders) exceeding 900 Research Professors, Associate Research Professors and Researchers who are assisted by about 2000 research and technical assistants, constitutes by all means a great achievement. This fact makes NRC a milestone in the infrastructure of the scientific community in Egypt. The present NRC manpower capabilities has been mobilized towards the execution of research projects within the framework of three major research disciplines, that is, in-house, local projects and those with foreign agencies. This marks the real involvement of NRC in R & D Programs with different production and service sectors of Egypt. The idea to compile in this volume over 900 entries from the NRC 15 research divisions representing the research staff is quite necessary to our decision makers to utilize properly - literally speaking - this "task force" to the welfare and prosperity of our country.

**Editor**

*Ahmed A. Fakhry*

*Feb. 1989*

## THE NATIONAL RESEARCH CENTRE

### **Brief History of the Organisation**

The NRC is by far the largest national multidisciplinary R & D centre devoted to conduct research activities both basic and applied within the major fields of interest. Eight main research programs constitute the framework of NRC activities. These are: Rural Development, Food and Agriculture, Health and Environment, Technology Transfer, Natural Resources, Energy, Computers and Genetic Engineering.

The NRC started operating in 1956 and has since then passed through three evolutionary stages. The initiation stage, extended to 1968, concentrated on basic sciences and staff development. The orientation stage, 1968-1973, was marked by a growing interaction with the production and services sector. The customer-oriented research stage, 1973 to the present, features plans for research activity that serve the specific needs of end users. This latter stage required the establishment of specialized offices, in marketing, contracting, R & D management, and the development of managerial capabilities through training.

During the history of NRC, the following institutes have emerged from it; and are located now outside its premises: Petroleum Research Institute, Theodor-Bilharz Research Institute and Central Metallurgical Research Institute.

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## **OBJECTIVES**

- Conducting research in different areas of science and technology to serve the national economy and knit together with the overall developmental plans.
- Provision of services and scientific consultations to the national development sectors; in order to assist in solving pressing problems related to the economic and social development; and to promote the commercialisation of generated technologies in the local production enterprises.
- Guiding the national economy sectors for the requisite transfer of technology and stimulating efforts for rapid assimilation of imported technologies and spreading of their benefits.
- Training of university graduates and young researchers in various scientific disciplines as a basis for balanced growth of national technological capabilities.

## **RESEARCH PROGRAMS**

NRC is marked by a basic orientation of its activities to customer oriented research in order to address the national needs more effectively through scientific and technical research. So, it organises its development related activities into eight major multidisciplinary programs: Rural Development, Food & Agriculture, Health & Environment, Technology Transfer, Natural Resources, Energy, Genetic Engineering & Biotechnology and Computers.

## **PUBLICATIONS**

- Bulletin of NRC - a quarterly periodical for publication of scientific articles in English language, local distribution (steps are being taken at the present time to be distributed internationally).
- NRC News - a quarterly documentary journal covering the NRC activities in Arabic language. (local distribution).

## **MEETINGS**

NRC organises periodically regular scientific meetings, conferences and symposia at national and regional levels.

## **FUNDING**

Mainly governmental funding and partially through bilateral research contracting with local and foreign agencies.

## **PRIZES (AND HONOURS) AWARDED BY NRC**

- NRC Prize for scientific appreciation (candidates are nominated by the corresponding Division Councils, and granted the award by the NRC Board of Directors).
- NRC Prize for distinguished scientific contribution (for NRC Senior Scientists).
- NRC Prize for scientific contribution (for NRC Young Scientists).



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## RESEARCH PROJECTS MANAGEMENT

The NRC research activities are managed through contracts:

- **In-House Projects Contracts**

These projects run through contracts between NRC administration and research teams and financed from its budget. These are planned in an integrated approach to orient NRC community towards projects work of first priority to national development. Certain criteria are established for project selection, approval of team members and budget. A follow-up on project extension through evaluation is made before approval of reports.

- **Local Projects Contracts**

These contracts run between NRC administration and Academy of Scientific Research and Technology as well as with the various industrial, production and services sectors. In this connection, NRC aims to strengthen the link between the research community and the needs of various sectors of production and services, to sharpen the focus of R & D work on major problems; and to improve the formulation of tasks by both users and researchers. The partnership with end users is stimulated through offering consultancy and advisory services with market oriented management.

- **Contracts with Foreign Agencies**

Within this context, joint research work run between NRC scientists and researchers from other parts of the globe mainly developed countries. This cooperation strengthens the link between local and foreign scientists, stimulate research and urge the display of capabilities and thoughts on the international level. Progressive open relations with several developed countries is a major item in the policy of NRC.

## TRAINING

The training centre affiliated with NRC organises an annual program of training courses in various scientific and technological areas and at different levels. The program is mainly concerned with the transfer of specially tailored experience to those who work in sectors of industry, production and services in Egypt, Arab World and African Continent. The experience attained by those trainees is essential as a basis to keep up with the fast moving developments of science.

Joint training courses with foreign and international organisations are often organised in some areas. R & D management training courses are offered as well to researchers and administrators in universities, ministries and public sector enterprises.

## GENERAL SERVICES

NRC has different units that serve its activities and those of production and services sectors; these are:

- Central Services Laboratory which conducts organic analysis, chromatography, infra-red, NMR, X-ray analysis and electron microscopy, ... etc.
- Materials Testing Laboratory is provided for six industrial applications; pharmaceuticals, textiles, polymers, ceramics, paper and leather in addition to biological fluids.
- Experimental Animals Breeding Laboratory.
- Medical Services Unit.
- Agricultural Experimental Research Stations for plant production, animal production and medicinal plants.
- Systems and Information Research Laboratory.
- Textile Pilot Unit.
- Food Industries Pilot Unit.

Within the campus of NRC, which occupies an area of 12 acres, there exists also a Library, National Information and Documentation Centre, Scientific Instrumentation Centre which serve the Centre activities. These institutions are affiliated to the Academy of Scientific Research and Technology.

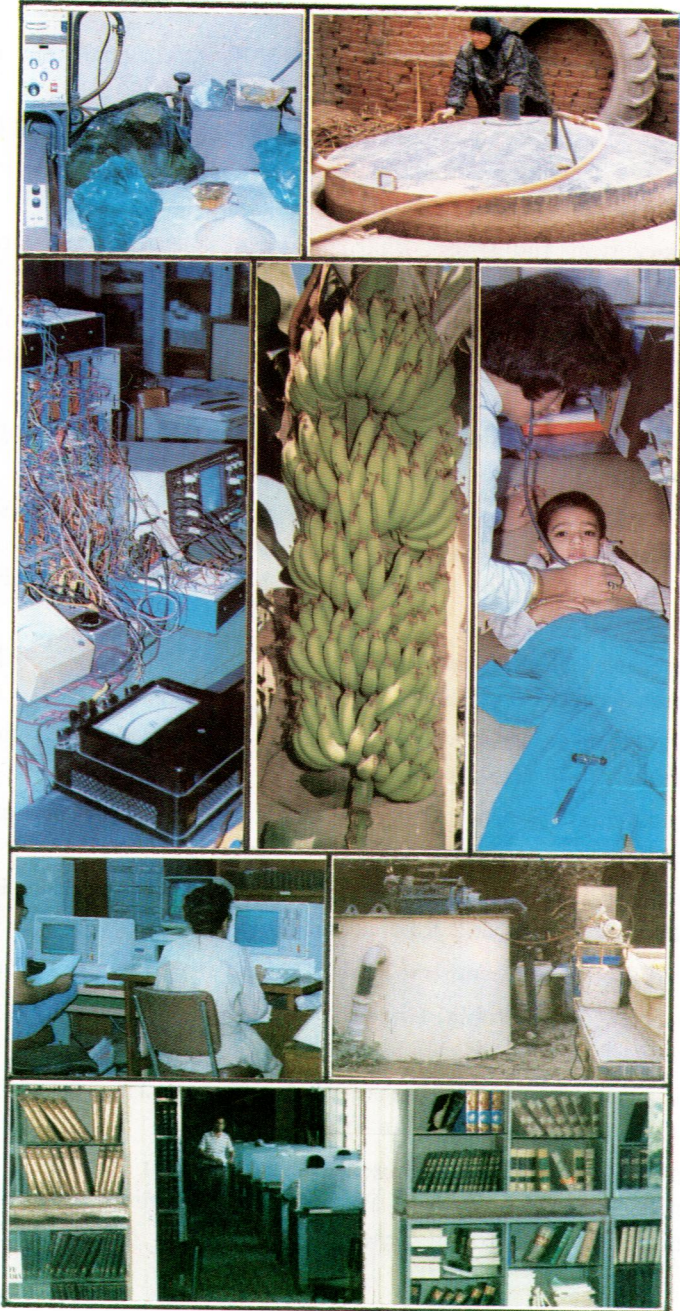
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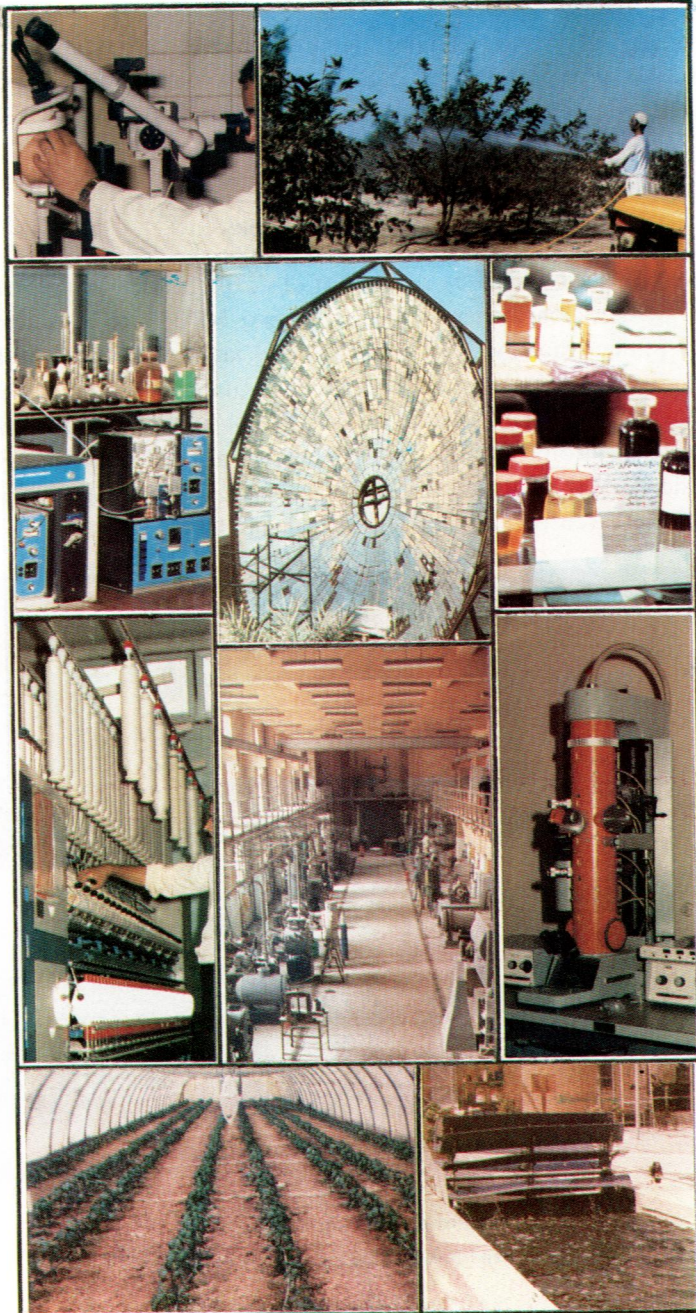
## RESEARCH DIVISIONS AND DEPARTMENTS

At present, the NRC consists of 15 Research Divisions and 62 Departments.

- Chemical Industries: Paper and Cellulose - Tanning Materials and Protein Chemistry - Polymers and Pigments - Chemistry of Pesticides - Glass, Refractories and Building Materials.
- Pharmaceutical Industries: Pharmaceutical Sciences - Therapeutical Chemistry - Chemistry of Natural and Microbial Products.
- Textile Industries: Dyeing, Printing and Textile Auxiliaries - Spinning and Weaving - Pretreatment and Finishing of Cellulosic Fibres - Protein and Synthetic Fibres.
- Food Industries and Nutrition: Food and Dairy Industries - Fats and Oils - Food and Nutrition.
- Agriculture and Biology: Botany - Pests and Plant Protection - Soil and Water Use - Animal Reproduction and Artificial Insemination - Animal and Poultry Production and Nutrition - Parasites and Animal Diseases - Agricultural Economy.
- Engineering: Mechanical Engineering - Solar Energy - Chemical Engineering and Pilot Plant.
- Medical Sciences: Basic Medical Sciences - Pharmacology - Community Medicine - Child Health - Hormones.
- Environmental Sciences : Water pollution - Air Pollution - Occupational Health and Industrial Medicine.
- Applied Organic Chemistry: Organic Chemistry - Biochemistry - Chemistry of Flavoring Agents and Related Substances.
- Applied Inorganic Chemistry: Physical Chemistry - Inorganic Chemistry.
- Basic Sciences: Microbial Chemistry - Cytology and Genetics - Earth Sciences - Photochemistry - Flora and Plant Taxonomy.
- Physics: Solid State - Spectroscopy - Microwave - Theoretical Physics - Electron Microscopy and Thin Films.
- Genetic Engineering and Biotechnology: Cellular Biology - Human Genetics - Molecular Biology - Plant Cell and Tissue Culture - Microbial Biotechnology - Microbial Genetics.









- Ophthalmic Diseases: Basic Medical - Clinical Medical.
- Electronics: Microwave Engineering - Computers and Systems - Microstrip Circuits - Power Electronics and Energy Conversion - Scientific Consultation for Computation and Statistics - Photovoltaic Cells.

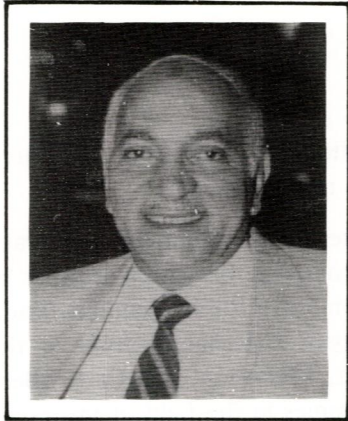
#### BOARD OF DIRECTORS

The NRC is governed by a board of directors headed by the President of NRC. Other board members are the two NRC Vice-Presidents, the President of the Academy of Scientific Research and Technology, the director of the Agricultural Research Centre, the first Under-Secretary of the State Ministry for Scientific Research, Vice-President of the General Authority for Industrialization, the first Under-Secretary of the Ministry of Finance and the heads of the NRC 15 Research Divisions. The Minister of State for Scientific Research is the Higher President of the NRC.



Board of Directors of NRC  
and Staff of Technical Office

- These research divisions have emerged out as independent institutes according to the Presidential Decree on Jan. 1989.



*Prof. Dr. Adel Abdel-Hamid Ezz*

Prof. Ezz, Professor of Economics and Insurance, Minister of State for Scientific Research and the Higher President of the NRC was born on Dec. 1, 1932. Graduated from Cairo University with B. Comm. and awarded Ph.D. in Economics and Insurance from St. Gallen University, Switzerland.

Prof. Ezz held the following positions : President of Sadat Academy for Management Sciences and Chairman of Department of Statistics, Mathematics and Insurance; Dean of Faculty of Commerce, Cairo University; Vice-Dean of the Faculty of Commerce, Cairo University; Professor, Cairo University and Manager, Research Dept., Insurance Organization.

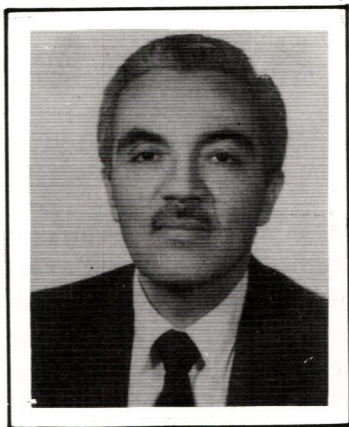
Offerend many consultancy services to : General Organization for Health Insurance; Nile General Company of East Delta Bus; Ministry of Insurance; and Ministry of Economics. Chairman of the Board of Suez Canal Insurance Company. Member of Board of Directors of Misr Insurance Company; Misr Company for Real Estate and Touristic Investment and Housing Bank.

He is the author of many publications in the field of economics and insurance: "Inflation, reasons behind, social and economic effects"; "Economic planning for developing countries"; "Insurance role in economic development"; "Health insurance; studies on the health insurance cost in Egypt"; "Problems of occupational accidents insurance"; "Inflation and its effects on insurance"; "Social insurance problems in Egypt" "Mathematical basis for calculation of premiums in non-life insurance"; "Supervision and control of insurance sector"; "Manpower planning"; "The effects of foreign trade development on marine insurance"; "Income elasticity of insurance demand"; "Mathematics for business and economics"; "Insurance principals and practice"; "Social insurance theory

and practice”; “Applied statistics (population statistics)” and “Research on insurance (Cost-accounting, economics, mathematics)”.

Supervised about 50 Doctoral and Master theses. Member of the board of Social Insurance Society. Attended International Insurance Seminar 10 successive years in the USA and Europe. Attended Public Administration Conference in Europe, Australia and Japan. External Lecturer at the Universities of Alexandria, Zagazig, Assuit, Mansoura, and Cairo (Beni Suef). Organized different training programmes in the field of insurance and social insurance in different Arab countries for United Nations and Arab Leagues organizations; member of El-Shoura Council.





*Prof. Dr. Hussein Samir*

*Abdel-Rahman Salama*

*Ph.D., D.Sc.*

Prof. Salama, President of the National Research Centre (NRC) of Cairo, was born on January 26, 1936, in Gharbia, Egypt, married with two children. He earned his degrees at Ain Shams University, Faculty of Science (B.Sc. Hons. in 1955, M.Sc. in Entomology in 1959) and Cairo University, Faculty of Science (Ph.D. - Entomology in 1962, and D. SC. - Entomology in 1987). He served as a post-doctoral fellow (1963-1965) at the Department of Entomology, University of Alberta, Canada, and then as a fellow of Alexander von Humboldt Organization, working at the Institute of Applied Zoology, University of Munich (1974-1976).

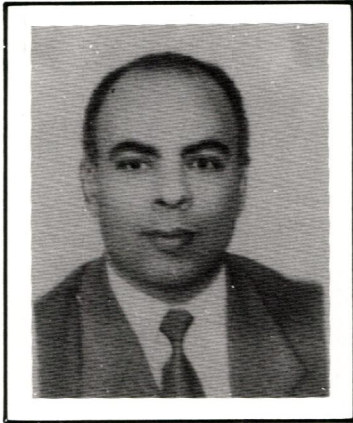
He started a career as a Research Assistant, Entomology Research Unit (NRC) back in 1955. He then became Researcher (1962-1967); Associate Research Professor (1967-1973); Research Professor of Entomology at NRC, since 1973; Head of the Pests and Plant Protection Laboratories (1976-1987); Head of Agricultural Research Department, NRC (1978-1980 and again in 1988) in addition to his participation in many scientific and administrative activities before he was appointed as the President of NRC on May 1988.

Due to his outstanding achievements, Prof. Salama was awarded: the Golden Medal of NRC on the occasion of its Silver Jubilee (1981); The Golden Medal of the Entomological Society of Egypt (1982); The State Prize for Biological Sciences (1973); The State Prize for Agricultural Sciences (1983); The Order of Science and Arts - First Rank, was conferred to him twice by the President of the Republic.

During his career, he supervised the research work of 20 post - graduates (for M.Sc. and Ph. D. degrees), and he has made several valuable contributions to Entomology specially in the field of Insect Ecology and Microbial Control; his publications amounting to some 140 research papers, the majority published in refereed international journals, in addition to some book chapters and review articles.

Prof. Salama is a member of several learned bodies. He is Currently the Vice-President of the National Food and Agriculture Research Council (1988); Member of the Research Council for Basic Sciences, since 1981; National Committee for Biological Sciences, since 1981; Plant Protection Research Division, and Biological Sciences Research Division board, since 1981; Elected Council member of the Egyptian Institute for Scientific Culture (1982); Elected member of the Executive Council of the International Union of Biological Sciences, IUBS (1980-1988); Elected Council member of the International Organization for Biological Control (IOBC/WPRS), since 1985; Association for Advancement of Agricultural Sciences in Africa (AAASA, since 1981); Elected Council member for International Congresses of Entomology, since 1984; African Association of Insect Scientists (1984); Member of the Preparatory Committee for the Establishment of the International Centre of Genetic Engineering and Biotechnology (1984-1988); National Committee for International Science Foundation (1985); Elected member of the board of the Egyptian Academy of Sciences (1986); Founding member of the Islamic Academy of Sciences, since 1986, and member of the editorial board of its journal; Member of the board of Research and Training Centre on Vectors of Diseases, Ain Shams University (1987-1989); Member of the board of Metallurgical Research Institute (1988); Member of the board of Faculty of Science, Cairo University (1988); Member of the Council of the Academy of Scientific Research and Technology (1988); Vice-President of the Council of the Entomological Society of Egypt (1988); Member of the Entomological Society of America, and the Society of Invertebrate Pathology.

Prof. Salama participated in many local and international conferences, and participated in many scientific delegations to many countries, e.g. U.S.A., U.K., France, Italy, F.R.G., Greece, Hungary, Checkoslovakia, Austria, Pakistan, India, Philippines, Korea, China, Japan, Saudi-Arabia, Iraq and Kuwait.



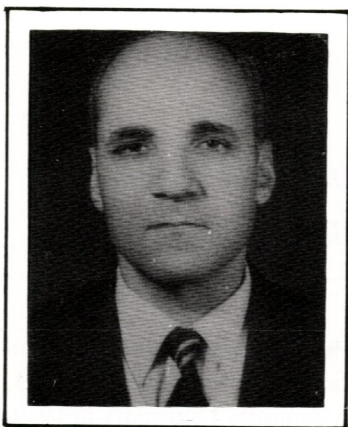
*Prof. Dr. Adel Mahmoud  
Abdel-Dayem*

Prof. Abdel-Dayem, Research Professor of Chemical Engineering, and Vice-President of NRC for Technical Affairs, was born on February 15, 1936 in Alexandria, Egypt. Graduated from Alexandria University in 1959, with B.Sc. in Chemical Engineering. Awarded the Ph. D. (D. Sc. Tech.) from Federal High Institute of Technology (ETH), Zurich, Switzerland, in Chemical Engineering in 1966.

Prof. Abdel-Dayem held the following positions since his graduation: assumed the post of Assistant Lecturer at Faculty of Engineering, Alexandria University for one year (1959-1960) after which he left for Switzerland on a post-graduate scholarship. Awarded the Ph. D. in 1966 from ETH, Zurich. At the NRC, he held the following positions: Researcher, Chemical Engineering and Pilot Plant Laboratory (1966-1972); Associate Research Professor (1972-1978); and Research Professor, since 1978. He assumed the post of Head of Engineering Division, NRC from 1987 to 1988 after which he was nominated the Vice-President of NRC for Technical Affairs.

Prof. Abdel-Dayem supervised and participated in more than ten research projects of applied nature. Offered many consultancy and advisory services of scientific and technical nature for a number of companies in the field of Chemical Technology and Engineering. Consultant to Economic and Social Commission for Western Asia (ESCWA) in the field of Biogas Technology. He supervised six M.Sc., and five Ph.D. theses in Chemical Engineering. Author of over 30 papers published in national and international journals. Fluent in English and German. Member of Egyptian Society of Chemical Engineering, and Egyptian Syndicate for Engineers. Participated in more than 25 international and local conferences in the field of Chemical Engineering and Renewable Energy Resources.





*Prof. Dr. Alei El Din*  
*Abd-El-Shafey El-Sherbeiny*

Prof. El-Sherbeiny, Research Professor of Applied Chemistry and Vice President for Research Projects Activities, NRC, was born on October 1st, 1933, Koom El-Noor, Metgamer, Egypt. He obtained B.Sc. in Chemistry and Geology from Faculty of Science, Ain-Shams University in 1959. In 1963, he was granted his M.Sc. degree from Faculty of Science, Cairo University, and obtained his Ph. D. degree in Applied Chemistry from the same university in 1966.

Prof. El-Sherbeiny held the following positions at NRC:

- Scholarship at the Tanning Research Unit, 1959-1961.
- Research Assistant, 1961-1966.
- Researcher, the same unit, 1966-1973.
- Associate Research Professor, 1973-1978.
- Research Professor of Applied Chemistry, 1978-1988.
- Head of Division of Industrial Chemistry, 1988.

He participated in a number of research projects, such as production of Egyfoam and local plants as potential sources of tannins. Supervised more than ten M.Sc. and Ph.D. theses. Author of more than 35 scientific publications.

# **RESEARCH STAFF**

## **I. RESEARCH PROFESSORS**





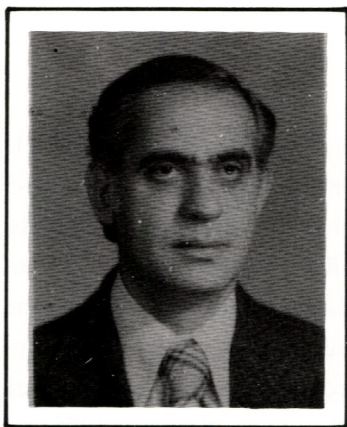


## CHEMICAL INDUSTRIES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 - PAPER AND CELLULOSE.
- 2 - TANNING MATERIALS AND PROTIEN CHEMISTRY.
- 3 - POLYMERS AND PIGMENTS.
- 4 - CHEMISTRY OF PESTICIDES.
- 5 - GLASS, REFRACTORIES AND BUILDING MATERIALS.



*Prof. Dr. Mahmoud Sidky*

*Ph.D., D.Sc.*

Prof. Sidky was born in Tanta, Egypt, on Sept. 1929. He was graduated in May 1951 with B.Sc. in Chemistry (Hons.) from Cairo University. In October of the same year, he was appointed as an Assistant in the Chemistry Department, Faculty of Science. In 1954, he was awarded the M.Sc. degree, and in 1957 he received his Ph.D. degree from the same university. Thenafter, he spent three years post-doctoral fellowship in the "Pharmazutisch-Chemisches Institut" of Bonn University, FRG.

Appointed in 1960 as a Researcher at the National Research Centre (NRC), Cairo. In 1963, he was promoted to Associate Research Professor, and in the same year he visited the Soviet Academy of Sciences. In 1966, he spent a sabbatical year in the laboratory of Prof. Dr. C.L. Stevens at Wayne State University, Detroit, USA.

In 1970, Dr. Sidky was promoted to the post of Research Professor of applied organic chemistry and Head of the Laboratory of Pesticide Chemistry, NRC.

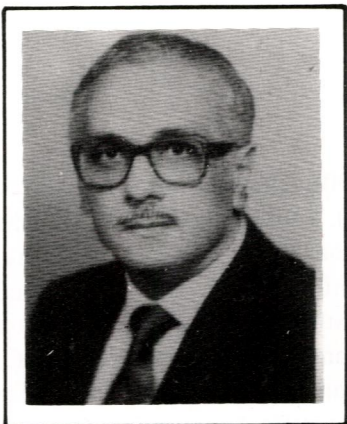
Prof. Sidky went to Germany on a DFG assignment to work with Prof. Dr. A. Schonberg in the TU-Berlin (1973-1974). In May 1977, he was granted a DAAD fellowship for three months to the "Institut für Organische Chemie", Bonn University. This visit was repeated in October 1980. As a result of this last visit, a combined research project on the Photochemistry of Pesticides was developed between the University of Bonn and the NRC. This project was financed jointly by the "Deutsche Forschungsgemeinschaft (DFG)" and the Egyptian ASRT. Being the Principal Investigator of this

co-joint project, Prof. Sidky visited the same institute in August 1986. He was invited in the years 1978, 1980 and 1984 to lecture in some Polish institutes and universities on the chemistry of organophosphorus compounds. In August 1979, he completed a workshop on R & D technology assessment, held at the University of Denver, USA. In addition, he visited India and U.K. He is the founder of the research school of organophosphorus chemistry at NRC. Author of over 120 research publications. He obtained the degree of D.Sc. in Chemistry from the University of Cairo, 1984. He is one of the pioneers who established strong linkages between research and industry in Egypt. For the past twenty five years, he has been acting as scientific consultant for Egyptian companies producing pesticides and chemicals. He acted as Deputy Director of the National Research Centre for Technical Affairs in the period 1985-1987. He was elected as President of the Chemical Industries Research Division, NRC, in 1988. Prof. Sidky is the Editor-in-Chief of the Egyptian Journal of Chemistry and a member of the Publication Committee of the National Information and Documentation Centre (NIDOC), Cairo. He is also a member of the board of the Egyptian Chemical Society, a member of the Basic Sciences Research Council, ASRT, and a member of the European Photochemical Association (EPA). In 1986, he was elected as a member of the Egyptian Academy of Sciences.

Prof. Sidky's scientific achievements have been recognized by the following awards:

- The State Prize of Chemistry, 1968.
- The Order of Sciences and Arts of the First Rank, 1981.
- The National Research Centre Golden Medal, 1981.
- The NRC Prize for Scientific Appreciation in Chemistry, 1983.
- The Order of the Republic, Second Rank, 1985.





*Prof. Dr. Yehia Abdel-Latif Fahmy*

Prof. Fahmy, Research Professor Emeritus, Cellulose and Paper Department, NRC, was born on July 19, 1927. Married with three sons (two of them Ph. D. holders). Graduated from Cairo University, with B.Sc. Hons. in 1948. Awarded Diploma Chem. and Dr. Rer. Nat. from Darmstadt, FRG, in 1952 and 1954, respectively.

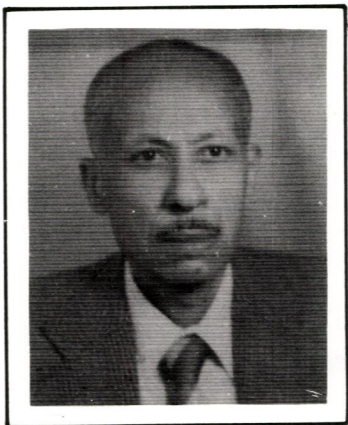
Prof. Fahmy held the following positions :

- Demonstrator, Alexandria University, 1948-1949.
- Demonstrator, Faculty of Medicine, Cairo University, 1949-1950.
- Researcher and Supervisor, Cellulose and Fibers Unit, NRC, 1954-1961.
- Associate Research Professor, and Head of Cellulose and Paper Laboratory, NRC, 1961-1965.
- Research Professor, and Head of Cellulose and Paper Laboratory, 1965-1986.
- Director, NRC, Feb. 1987 — July 1987.
- Professor Emeritus since July 1987.

Prof. Fahmy, leading scientist in the field of cellulose and fibers; he supervised many research projects: e.g. "Investigation of bagasse as a raw material for dissolving pulps", financed by the General Organization for Industrialization (1969-1971); established the Cellulose and Fibers Unit at NRC in 1954 and supervised the research activities of the graduate students, many already awarded M.Sc. and Ph. D. degrees (total of 40). Published over 70 papers in national and international journals and conferences. Has wide range of consultancy and advisory activities, e.g., General Pulp and Paper Company "Rakta", Alexandria. Member of advisory editorial board of "Cellulose Chemistry and Technology", International scientific journal, Romania, since 1965. Elected fellow of International Academy of Wood Sciences since 1978. Member of board of directors of NRC, and Head of



Division of Chemical Industries (1968-1970). Granted several research fellowships abroad to FRG (Von Humboldt), a total of two years over the period 1962-1982, and to Canada Pulp and Paper Research Institute, Montreal (1966-1967). Attended several conferences in pure and applied chemistry; pulp and paper technology and textiles in Europe, USA, Canada and Egypt. Member of several societies, committees and councils at NRC, different ministries, organizations and Egyptian ASRT. Awarded State Prize for Chemistry (1961), the NRC Prize for Scientific Appreciation for 1985 (the Highest honour bestowed by the NRC Board of Directors), Order of Commerce and Industry, First Rank (1962), and Order of Arts and Science, First Rank (1963). Biographee, National Encyclopedia. Invited to Hamburg University as Visiting Professor for three semesters over the period 1973-1978, and to a short visit to FRG research institutes and universities presented by Board of Directors Alexander von Humboldt Foundation in 1987.



*Prof. Dr. Mohamed Hassan Fadl*

Prof. Fadl, Professor Emeritus, Cellulose and Paper Chemistry and Technology Department, NRC, was born on May 25, 1928, Cairo, Egypt. Graduated from Cairo University in 1954, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph. D. from the same university in Chemistry, in 1959 and 1963, respectively.

Prof. Fadl held the following positions at NRC :

- Research Scholarship, 1955-1957.
- Research Assistant, 1957-1963.
- Researcher, 1964-1971.
- Associate Research Professor, 1971-1976.
- Research Professor, 1976-1988.
- Professor Emeritus since May 25, 1988.

He supervised several graduate students: six M.Sc. and four Ph. D. already awarded the degrees from Egyptian universities. Published over 34 papers in national and international journals. Assumed the post of liaison officer and monitoring for the Applied Science and Technology Program between Egyptian ASRT and US — AID (1978-1987). ASRT supervisor for the coordination and integration between the sectors that carried out scientific research on national level (1977-1981). Attended many symposia and workshops in Egypt and USA. Awarded the Golden Medal on the occasion of NRC Silver Jubilee, 1982.

Represented the Egyptian government in the meetings of the African Centre for Transfer of Technology, Organization of African Unity (OAU). Participated in "Evaluation of bagasse for the production of viscose pulp", NRC in collaboration with Egyptian Organization of Industrialization (1971 - 1972).



*Prof. Dr. Fardous Mohamed  
Abdel-Megeed Mobarak*

Prof. Mobarak, Research Professor, and Head of Cellulose and Paper Department, NRC, was born on January 22, 1942, Sharkia, Egypt. Married with one son. Fluent in English, German, French, and mother tongue Arabic languages. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. in Applied Chemistry from the same university in 1968 and 1971, respectively.

Prof. Mobarak held the following positions at NRC:

- Research Assistant, 1965-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1982.
- Research Professor, since December 1982.
- Assumed the post of Head of Cellulose and Paper Department, since 1988.

She participated in a number of research projects: “Elucidation of fine structure of cellulose fibers”; “Some additives as retention aids for fillers by different paper pulps” (1972-1973); “Hemicelluloses as additives in paper making”; “Energy and chemicals from agricultural residues”; and “Binderless lignocellulose composites and lignocellulose-polymer composites (1978-1979)”. All the mentioned projects executed in collaboration with Institute of Wood Chemistry, Hamburg, FRG, and financed by Alexander von Humboldt Stiftung. In 1982, another project with Institute of Wood Chemistry, Munich was carried out on “Fine structure of cellulose and graft-polymerized cellulose fibers”. Supervised several graduates for M.Sc.

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and Ph.D. degrees. Published over 30 papers in specialized journals. Granted several research fellowships and visits to FRG, Italy, Belgium, France and Canada. Member of several committees, Ministry of Industry for formulation of testing methods and specifications of printing papers, wood chip boards and other particle boards (1985). Member of Egyptian Chemical Society, and Syndicate of Scientific Professions of Egypt. Awarded the State Prize for Chemistry (1983), ASRT, and the Order of Arts and Science, First Rank (1986). Selected for the inclusion, as a Biographe, in the National Encyclopedea currently under preparation.





*Prof. Dr. Salwa Omar*

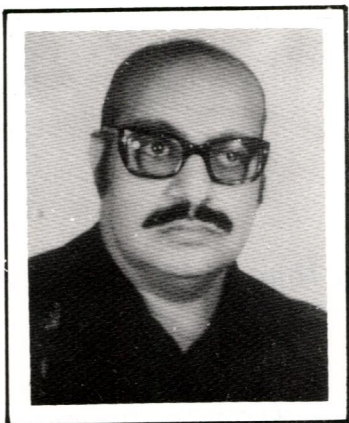
*Ahmed Heikal*

Prof. Heikal, Research Professor, Cellulose and Paper Department, NRC, was born on June 7, 1940. Married with two children. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph. D. from the same university in applied organic chemistry in 1968 and 1973, respectively.

Prof. Heikal held the following positions at NRC:

- Research Assistant, 1965-1973.
- Researcher, Cellulose and Paper Department, 1973-1978.
- Associate Research Professor, 1978-1983.
- Research Professor, since 1983.

She participated in several research projects covering fields of cellulose fibers, additives in paper making and fiber board from agricultural residues. Author of over 30 publications in national and international journals. Member of a number of professional societies, and the Syndicate for Scientific Professions of Egypt.



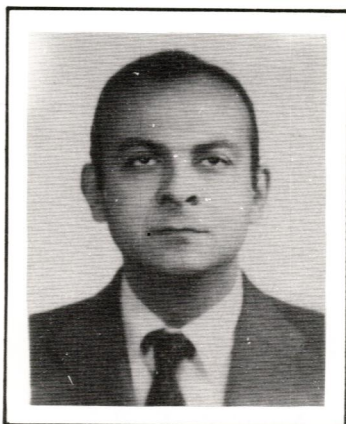
*Prof. Dr. Naim A. Fadl*

Prof. Fadl, Research Professor, Cellulose and Paper Department, NRC, was born on March 23, 1941, Girga, Egypt. Married with four children. Graduated from Assuit University, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in 1968 and 1973, respectively.

Prof. Fadl held the following positions at NRC:

- Research Scholarship, 1964-1965.
- Research Assistant, 1965-1973.
- Researcher, 1973-1978.
- Associate Research Professor, 1978-1983.
- Research Professor, since 1983.

He participated in several research projects and offered consultancy and advisory services to several governmental and non-governmental organisations and companies. Supervised a number of Ph.D. and M.Sc. theses. Author of over 40 publications in the field of cellulose fiber board and wood. Author of a booklet in Arabic on "Paper Making" published in 1984. Awarded the State Prize in Chemistry (ASRT) for 1985. Awarded a short visit fellowship from the British Council to visit Pulp and Paper Department, Manchester University. Member of a number of scientific professional societies.



*Prof. Dr. Houssni El-Saied M. Ali*

Prof. El-Saied, Research Professor, Paper and Cellulose Department, NRC, was born on March 21, 1943, Alexandria, Egypt. Graduated from Alexandria University in 1964, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from Cairo University in Applied Chemistry in 1969 and 1973, respectively.

He held the following positions at NRC:

- Researcher, 1973-1978.
- Associate Research Professor, 1978-1984.
- Research Professor, since 1984.

He participated in several research projects: "Evaluation of bagasse for the production of viscose pulps", NRC and Egyptian Organization of Industrialization (1971-1972); "Production of animal feed from rice hulls", NRC and Egyptian Organization for Rice Milling (1973-1974); "Studying the components of breaking lining", NRC and Spring & Transportation Needs Manufacture Company (1975); "Energy Conservation" (1987-1988) and "Production of proteins and fats from food wastes", Benha Faculty of Science and ASRT (1986-1987). Offered research and consultancy services to New Valley Governorate (1984-1985). Granted several fellowships and attended many training courses in FRG, USA and Egypt. Attended many conferences and symposia in Egypt, Austria, Canada, and USA. Supervised several M.Sc. and Ph.D. students. Published over 40 papers in specialized journals and conferences. Offered many consultancy and advisory services to different industrial and production sectors and companies. Member of Egyptian Chemical Society, American Chemical Society, Egyptian Society of Polymer Science and Technology, and the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Nabila*

*Ahmed El-Shinnawy*

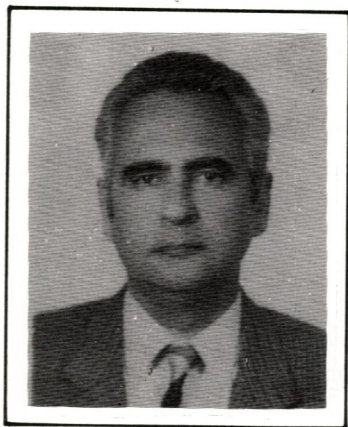
Prof. El-Shinnawy, Research Professor, Cellulose and Paper Department, NRC, was born on April 1, 1944, Cairo, Egypt. Married with one child. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from the same university in 1970 and 1974, respectively.

Prof. El-Shinnawy held the following positions at NRC:

- Research Assistant, 1965- 1974.
- Researcher, 1974-1979.
- Associate Research Professor, 1979-1985.
- Research Professor, since 1985.

She participated in a number of research projects. Granted post-doctoral fellowship to University of Technology, Hungary (1976-1977). Participated in chemistry workshop (1977) sponsored by NRC and American Chemical Society, on the "Utilization of fibrous raw materials". Member of a number of committees and Egyptian General Organization for Standardization, Ministry of Industry, engaged with formulation of standard testing methods and specification of printing paper (1985). Sharing in supervision of several M.Sc. and Ph.D. theses. Published over 30 papers in specialized journals covering fields of cellulose chemistry, grafting, saccarification and other related subjects. Member of Egyptian Chemical Society and Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Magdi Zaki Sefain*

Prof. Sefain, Research Professor of Applied Organic Chemistry, Cellulose and Paper Department, NRC, was born on February 25, 1940. Cairo, Egypt. Graduated from Ain-Shams University in 1963, with B.Sc. in Chemistry and Botany. Granted M.Sc. from Cairo University in Applied Organic Chemistry in 1968. Awarded Ph.D. in "Fibre Science" from Leeds University, UK, in 1975.

Prof. Sefain held the following positions at NRC:

- Research Scholarship, 1964-1966.
- Research Assistant, 1966-1975.
- Researcher, 1975-1980.
- Associate Research Professor, 1980-1985.
- Research Professor, since 1985.

He participated in a number of research projects in the field of cellulose including the utilization of agricultural residues in hard board industry and the attempts to improve the products. Granted a post-graduate scholarship to Leeds University, UK, for Ph.D. degree (1971-1975). Supervised a number of students for M.Sc. and Ph.D. degree. Published over 26 papers in specialized journals. Attended several conferences, seminars and symposia.



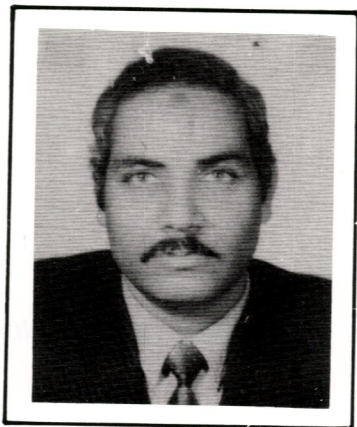
*Prof. Dr. Atef Abdel-Aziz Ibrahim*

Prof. Ibrahim, Research Professor of Physical Chemistry, Cellulose and Paper Department, NRC, was born on November 30, 1943, Cairo, Egypt. Graduated from Ain-Shams University in 1964, with B.Sc. in Applied Chemistry. Granted M.Sc. in Applied Organic Chemistry in 1970 from the same university. Awarded Ph.D. in Physical Chemistry from Cairo University in 1976.

Prof. Ibrahim held the following positions at NRC:

- Research Assistant, 1965-1970.
- Researcher, 1976-1981.
- Associate Research Professor, 1981-1985.
- Research Professor, since 1985.

He participated in several research projects: "Evaluation of bagasse for production of viscose pulps", General Organization for Industry (1971-1972); and developmental research activities offered to the New Valley Governorate (1984-1985). Supervised one M.Sc. and three Ph.D. theses. Attended two conferences in Cairo: Egyptian Chemical Conference (1984), and the 2nd Conference on Optical Spectroscopy and Applications (1985). Author of over 37 papers published in national and international journals. Member of Egyptian Chemical Society, Egyptian Society of Polymer Science & Technology and the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Abdalla Mohamed*

*Abdalla Nada*

Prof. Nada, Research Professor, Cellulose and Paper Department, NRC, was born on December 5, 1946, El-Kanater El-Khairia, Egypt. Married. Graduated from Ain-Shams University in 1967, with B.Sc. in Applied Chemistry. Granted M.Sc. from Cairo University in 1974, and Ph.D. from Al-Azhar University in 1978 in Applied Organic Chemistry.

Prof. Nada held the following positions at NRC:

- Research Assistant, 1968-1978.
- Researcher, 1978-1982.
- Associate Research Professor, 1982-1987.
- Research Professor, since November 1987.

He participated in several research projects: "Energy conservation"; "Suitability of some plants for the production of paper pulps, boards and rayon"; development research activities offered to the New Valley Governorate (1984-1985), and "Utilization of palm leaves in producing paper and artificial woods". Supervised several M.Sc. and Ph. D. theses in the field of Cellulose and Paper Technology. Offered several consultancy and advisory services to industrial and production sectors. Published over 55 papers in national and international journals and conferences. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1987. Member of a number of societies, Egyptian Chemical Society, Egyptian Society of Polymer Science and Technology and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Samira Fahmy  
El-Kalyoubi*

Prof. El-Kalyoubi, Research Professor, Cellulose and Paper Department. NRC, was born on March 8, 1944, Cairo, Egypt. Married with two daughters. Graduated from Cairo University, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from the same university in 1970 and 1978, respectively.

Prof. El-Kalyoubi held the following positions at NRC:

- Research Assistant, 1965-1978.
- Researcher, 1978-1983.
- Associate Research Professor, 1983-1988.
- Research Professor, since 1988.

She participated in a number of research projects. Supervising at present one M.Sc. thesis in the field of Cellulose Chemistry. Her fields of interest: fibrous acetylation of pulps; additives in paper making; isolations, characterisation and uses of hemicellulose from agricultural residues; chemically modified cellulose fibers and graft copolymerized fibers, and thermogravimetric studies of different celluloses. Published over 29 papers in national and international journals. Attended chemistry workshop on "Utilization of fibrous raw materials", sponsored by NRC and American Chemical Society held in Cairo (1977). Member of Egyptian Chemical Society, and Syndicae of Scientific Professions of Egypt.





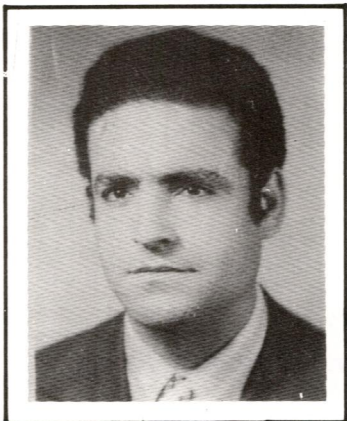
*Prof. Dr. Moheb Sadek Ishak*

Prof. Ishak, Research Professor of Chemistry of Polyphenolic and Flavonoid Compounds, NRC, was born on December 10, 1931, Cairo, Egypt. Single. Graduated from Cairo University in 1954, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1957 and 1960, respectively.

Prof. Ishak held the following positions at NRC:

- Research Scholarship, 1955-1958.
- Research Assistant, 1958-1961.
- Researcher, 1961-1966.
- Associate Research Professor, 1966-1973.
- Research Professor, since 1974.

He participated in several research projects initiated by Tanning Research Laboratory, NRC. Granted two post-doctoral fellowships and short visit: Max-Planck Institute for Protein and Leather Research, Munich (1962-1965); and Royal Society, UK (Sep.-Oct., 1981). Supervised several research graduate students already awarded M.Sc. and Ph.D. from Egyptian universities. Assumed many administrative positions: National Information and Documentation Centre, ASRT (1977-1980); and supervised NRC President's Office (1987). Head of Chemical Industries Research Division, NRC, and member of Board of Directors (1982-1984). Head of Chemistry of Tanning Materials and Protein Department, since 1987. Attended and participated in organizing several chemical conferences held in Cairo. Author of several papers published in national and international journals. Member of Egyptian Chemical Society.



*Prof. Dr. Mahmoud*

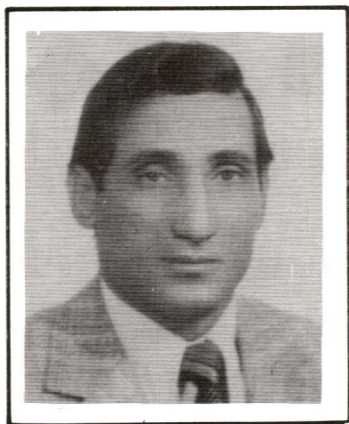
*Abd-El-Moien Mahmoud*

Prof. Mahmoud, Research Professor of Chemistry of Natural Phenolics. NRC, was born on January 3, 1944, Monoufia, Egypt. Married with two children. Graduated from Cairo University in 1965, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from the same university in Applied Chemistry in 1970 and 1974, respectively.

Prof. Mahmoud held the following positions at NRC:

- Research Assistant, 1966-1974.
- Researcher, 1974-1979.
- Associate Research Professor, 1979-1984.
- Research Professor, since 1984.

He was granted post-doctoral fellowship during 1978, GTZ, FRG. Later, granted another one and half year research fellowship to "Institute für Spektrochemik, ISAS, Dortmund, FRG" (1980-1981). Visited the (ISAS) in 1983 for a six months period. Published several papers in national and international journals on isolation techniques used for separation of individual natural compounds from their plant extracts and the analytical techniques for identifying their structure. Member of several societies and syndicates.



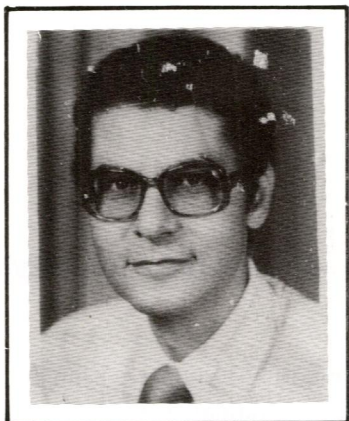
*Prof. Dr. Mohamed Fawzy  
Abdalla*

Prof. Abdalla, Research Professor of Plant Phenolics and Flavonoids, NRC, was born on October 5, 1938, Sharkia, Egypt. Married with three children. Graduated from Cairo University in 1962, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1966 and 1970, respectively.

Prof. Abdalla held the following positions at NRC:

- Research Assistant, 1963-1970.
- Researcher, 1970-1980.
- Associate Research Professor, 1980-1985.
- Research Professor, since 1985.

He supervised a number of graduate students, two Ph.D. and two M.Sc. already awarded the degrees from Egyptian universities. Granted a training scholarship to the Central Leather Research Institute, Madras, India (1966-1968) and a post-doctoral short visit to U.K., presented by Royal Society (1983). Author of over 30 papers published in national and international journals. Attended several workshops on management and working techniques for project leaders (organized by German Foundation for Int. Development and NRC); and on R & D (NRC).



*Prof. Dr. Sabry Ibrahim Mustafa  
El-Negoumy*

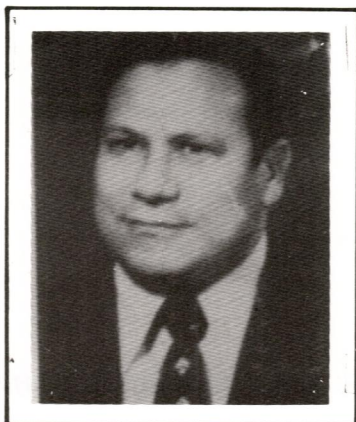
Prof. El-Negoumy, Research Professor of Plant Phenolics and Flavonoids, NRC, was born on December 11, 1941, Dakahlia, Egypt. Married with one child. Graduated from Cairo University in 1964. with B.Sc. in Chemistry. Awarded the M.Sc. from the same university in 1972 and the Ph.D. from Faculty of Engineering Chemistry, Romania in 1977. Fluent in English and good in Romanian.

Prof. El-Negoumy held the following positions at NRC:

- Research Assistant, 1965-1977.
- Researcher, 1977-1982.
- Associate Research Professor, 1982-1987.
- Research Professor, since 1987.

He was granted a scholarship to Romania (for Ph.D.) and a post-doctoral fellowship to City University (UK) presented by the Royal Society (1986). Supervised graduate students, one already awarded the Ph.D. and two M.Sc. degrees. Published over 32 papers in national and international journals. Member of several societies and syndicates.





*Prof. Dr. Abdalla Bakr Moustafa*

Prof. Moustafa, Research Professor, Emeritus, Polymer Chemistry Department, NRC, was born on January 9, 1925. Graduated from Farouk the 1st University (Alexandria University) in 1948, with B.Sc. in Industrial Chemistry. Granted the M.Sc. from the same university in 1955. Awarded Ph.D. from Technical University, Munich, FRG in 1966.

Prof. Moustafa held the following positions at NRC:

- Researcher, 1966-1972.
- Associate Research Professor of Organic Chemistry and its Applications, 1972-1977.
- Research Professor of Chemistry and Technology of Plastics, 1977-1985.
- Research Professor, Emeritus since 1985.

He participated in several research projects. Supervised several M.Sc. and Ph.D. theses. His fields of interest cover: Polymerization of isoprene using different organic solvents mixtures; Vinyl acetate monomer preparation using different catalysts; Methyl methacrylate monomer preparation from its scrap-polymer; Resins used in antifouling and anti-corrosive paints, and several other related subjects. Author of over 100 papers published in specialized journals. Attended several conferences held in Egypt and abroad. Granted a research fellowship to Tohoku University, Sendai, Japan, for four months presented by the Japanese Society for Promotion of Science. Granted research fellowship and short visit to UK research centres and universities presented by the Royal Society in 1976 (four months), and 1978 (two weeks). Awarded the State Prize in Chemistry in 1976, Order of Science and Arts 1st Class, Order of the Republic of 2nd Class (1982), and the Golden Medal in Recognition of the Cooperation with Chemical Engineers, Order of the Republic (1985) for the 2nd time for his



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contributions at NRC, Einstein Diploma of Science and Culture (1986), and NRC Prize for Scientific Contribution in Chemistry and its Applications in 1988 (Granted for NRC Senior Scientists). Member of several chemical societies, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Abbas*

*Abdel-Kerim Ibrahim Yehia*

Prof. Yehia, Research Professor, Polymers and Pigments Department, NRC, was born on June 25, 1935, Dakahlia, Egypt. Married with two children. Graduated from Alexandria University in 1958, with B.Sc. in Chemistry (Hons.). Awarded Ph. D. from Moscow Institute of Fine Chemical Technology, USSR, in 1963.

Prof. Yehia held the following positions at NRC:

- Researcher, 1964-1972
- Associate Research Professor, 1972-1976.
- Research Professor, since 1976.

Assumed the post of Head of Chemical Industries Research Division, NRC, from November 1984 for two years, and the Head of Department of Polymers and Pigments since November 1986. He participated in several research projects as principal investigator: "Improvement of the quality of dielectric materials locally produced", ASRT (1976-1977); "Rubber closures for medical and pharmaceutical uses". ASRT: (1984-1987); the ongoing "Adhesive project for Sakr Company for developed industries"; and several NRC internal research projects. Granted several post-doctoral fellowships: Alexander von Humboldt Stiftung (1972-1974), Freiburg, FRG; Alexander von Humboldt, ULM University, FRG (1983); and as Visiting Professor at the same university (June-August, 1988). Attended several conferences in the field of Chemistry of Polymers, held in Egypt, USSR, FRG, Japan and England. Published over 35 papers. Supervised several graduate students awarded already Ph.D. and M.Sc. degrees. Offered consultancy and advisory services to several industrial companies.



*Prof. Dr. Nagi Naguib Messiha*

Prof. Messiha, Research Professor of Polymer Chemistry, NRC, was born in El-Mansoura on November 7, 1938. Dr. Messiha earned his B.Sc. in 1959, Ain-Shams University, M.Sc. in 1963, Cairo University and Ph.D. in 1969, Ain-Shams University.

Prof. Messiha held the following positions at NRC:

Research Assistant from 1961 to 1969, Researcher from 1969 to 1974, Associate Research Professor from 1974 to 1981 and Research Professor from 1981 to the present. He was the principal investigator of the research project: "Marine fouling-boring-corrosion and antifouling-anti-boring-anticorrosion measures in the mediterranean, the Suez-Canal and the Red Sea", a joint contract between Office of Naval Research, Institute of Oceanography and Fisheries and NRC from 1980 to 1983. Also, from 1980 to 1981 he has been the principal investigator of the research project; "Organisms of disease and fouling and corrosion in marine environment and protective measures".

Professor Messiha supervised several M.Sc. and Ph.D. theses and has over 50 scientific publications on the topics of: organic synthesis, preparation and characterization of polyester resins, copolymerization reactions and monomer reactivity ratios, organotin polymers and antifouling performance of new organotin polymer formulations.

His activities included a fellowship to Tashkent University from 1972 to 1973. He is a member of the Egyptian Society of Chemistry and the Egyptian Society of Polymer Sciences. Professor Messiha is a member of the Technical office, NRC.



*Prof. Dr. Nawal Edward  
Ikladious*

Prof. Ikladious, Research Professor, Polymer Chemistry Department, NRC, was born on February 26, 1944, in Beni Suef, Egypt. Married. Graduated from Assiut University in 1965, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from Ain-Shams University in 1969 and 1974, respectively, in the field of Polymer Chemistry.

Prof. Ikladious held the following positions at NRC :

- Research Scholarship, 1966 - 1967.
- Research Assistant, 1967 - 1974.
- Researcher, 1974 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor, since 1986.

She participated in several projects covering mechanism of synthesis and degradation of polymers, synthesis of organotin polymers, and applications as anti-fouling paint ; rheological properties of suspensions and polymers ; and other related subjects. Granted post-doctoral fellowship to Institute of Polymer Chemistry, DDR (1974 - 1976), and to University of Karlsruhe, FRG (1983 - 1984). Author of several papers published in specialized journals. Member of Egyptian Chemical Society, Egyptian Society of Polymers, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Nawal Mishriki Toma*

Prof. Toma, Research Professor and Head of Department of Pesticide Chemistry, NRC, was born on September 24, 1936. Graduated from Ain-Shams University in 1958, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in 1962 and 1968, respectively, in Organic Chemistry.

Prof. Toma held the following positions at NRC :

- Research Scholarship, 1958 - 1960.
- Research Assistant, 1960 - 1968.
- Researcher, 1968 - 1973.
- Associate Research Professor, 1973 - 1980.
- Research Professor, since 1980.

She participated in several research projects dealing with the synthesis of new heterocycles of anticipated biological activity. Attended several conferences held in Egypt, UK, Czechoslovakia, Switzerland, Austria and Japan. Granted a research fellowship (von Humboldt) to Institute of Organic Chemistry, Mainz University, FRG (1976 - 1977). Co-principal Investigator of a joint project NRC — Office of Naval Research, USA (1978 - 1983). Participated in a joint research work with Institute of Chemotherapy, Wuppertal, FRG (1982). Author of over 45 papers published in specialized journals. Supervised four M.Sc. and three Ph.D. theses awarded the degrees from Cairo and Ain-Shams Universities. Member of Egyptian Chemical Society, and Syndicate of Scientific Professions of Egypt.





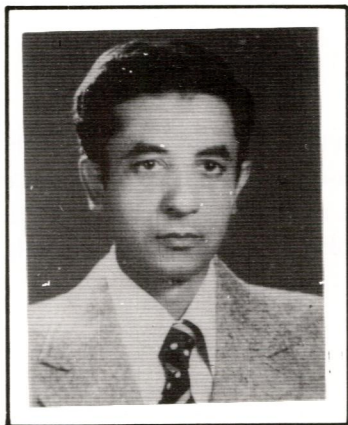
*Prof. Dr. Fouad Mohamed  
Ahmed Soliman*

Prof. Soliman, Research Professor of Organic Chemistry, NRC, was born on October 1, 1938, Cairo, Egypt. Married. Graduated from Ain-Shams University in 1960, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from Cairo University in 1963 and 1966, respectively.

Prof. Soliman held the following positions at NRC :

- Research Assistant, 1960 - 1966.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1974 - 1980.
- Research Professor, since 1980.

He participated in several research activities covering the studying of reactions and mechanisms in organophosphorus compounds; Synthesis and reactions of heterocyclic compounds; and Preparation and reactions of diazo-compounds. Granted post-doctoral fellowships to Central Institute of Chemical Research, Hungarian Academy of Science, Budapest (1967 - 1969), and two fellowships from Alexander von Humboldt to Institute of Organic Chemistry, Erlangen-Nurnberg University (FRG), the first from 1977 to 1979 and the second for six-months period (1984). Supervised research work for M.Sc. and Ph.D. degrees. Author of over 36 papers published in national and international journals and conferences. Member of Egyptian Chemical Society, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed*

*Refaat Hussein Mahran*

Prof. Mahran, Research Professor of Applied Organic Chemistry, NRC, was born in Cairo, Egypt in January 9, 1940.

In 1956, he joined Ain-Shams University and graduated in June 1961 with B.Sc. in Chemistry and Zoology. In October of the same year, he joined the NRC as Research Scholar. Awarded the M.Sc. in 1964 from Cairo University. In the same year, he was appointed as Research Assistant at the NRC. In 1968, was awarded the Ph.D. degree from the same university. He was promoted as Researcher, then as Associate Research Professor in the Laboratory of Pesticide Chemistry, NRC in 1968 and 1974, respectively.

In 1974, he won the fellowship of the Alexander von Humboldt-Stiftung in FRG, and spent sixteen months at "the Institut für Chemie der Universität Münster/Westf."

In the frame of the German-Egyptian agreement for establishing the Central Laboratory for General Services (CLGS) at NRC, he was awarded a DAAD fellowship in July 1978, for five months at "the Institut für Organische Chemie der Technische Universität Berlin" and at "the Institut für Organische Chemie der Freien Universität Berlin". Since returning to Egypt in December 1978, he is taking and sharing responsibilities in directing the CLGS as well as in supervising the Division of Mass Spectrometry at the same laboratory.

In 1980, he was promoted to the post of Research Professor of Applied Organic Chemistry at NRC.

In 1981, Prof. Mahran was granted a fellowship presented by DFG, W. Germany for two years to the "Institut für Organische Chemie der Universität Bonn". In this period, he carried out research work within the first phase of the co-joint project on the "Photochemistry of some

Pesticides", between the University of Bonn and the NRC. He is also the co-principal investigator of the second phase of this project which was financed since 1984 by the ASRT. He is a member of several scientific societies. Author of a number of papers published in specialized journals.



*Prof, Dr. Hossnia Hassan  
Moussa*

Prof. Moussa, Research Professor of Applied Organic Chemistry, Department of Pesticides Chemistry, NRC, was born on January 21, 1937, El-Gharbia, Egypt. Graduated from Cairo University in 1960, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from Ain-Shams University in Organic Chemistry in 1964 and 1971, respectively.

Prof. Moussa held the following positions at NRC :

- Research Scholarship, 1960 - 1963.
- Research Assistant, 1963 - 1972.
- Researcher 1972 - 1977.
- Associate Research Professor, 1977 - 1983.
- Research Professor of Applied Organic Chemistry, since 1983.

She Participated in several research projects. Supervised a number of graduates for M.Sc. and Ph.D. dissertations. Published several papers in national and international journals. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1983. Member of a number of societies, and the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Fayez Hassan  
Hassan Osman*

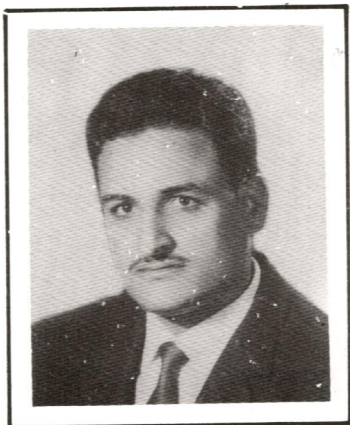
Prof. Osman, Research Professor of Organic Chemistry, NRC, was born on January 13, 1938, Cairo, Egypt. Married with three children. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from the same university in Organic Chemistry in 1970 and 1973, respectively.

Prof. Osman held the following positions at NRC :

- Research Scholarship, 1965 - 1967.
- Research Assistant, 1967 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1985.
- Research Professor, since 1985.

He participated in several research projects. Granted several scholarships and short visits to : University of Paul Sabatier, Toulouse, France (1976 - 1978) and (1979) ; Centre of Molecular and Macromolecular Studies, Boczna, Poland (1980) ; and Department of Chemistry, University of Massachusetts, USA (1986 - 1987). Published several papers in national and international journals and conferences. Attended a number of conferences in Egypt, France, Poland and DDR. Member of a number of societies, and Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Khairy Abdel*

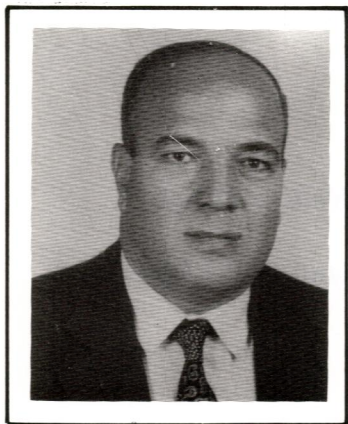
*Hameed Mohsen El-Bayouki*

Prof. El-Bayouki, Research Professor of Organic Chemistry, Pesticide Chemistry Department, NRC, was born on 1939, Behera, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in Organic Chemistry in 1970 and 1974, respectively.

Prof. El-Bayouki held the following positions at NRC :

- Research Assistant, Applied Organic Chemistry Department, 1967 - 1974.
- Researcher, 1974 - 1979.
- Associate Research Professor, 1979 - 1985.
- Research Professor, since 1985.

He participated in several research projects dealing with synthesis, structural proof and elucidation of organic compounds with the aim of biological evaluation. Supervised a number of M.Sc. and Ph.D. theses. Author of over 40 papers in the field of synthesis of potential pesticides, insecticides, herbicides, plant-growth regulators and related subjects. Co-author of a novel patent in the field of Purine Derivatives for regulating plant growth (Ciba-Geigy AG, Basel, Switzerland). Attended several national and international conferences held in Egypt, Czechoslovakia, and Japan. Member of Egyptian Chemical Society, American Chemical Society and American Agro-Chemical Society.



*Prof. Dr. Sameeh*

*Abdel-Kader Mansour*

Prof. Mansour, Research Professor of Environmental Toxicology of Pesticides, NRC, was born on March 30, 1942, Gharbia, Egypt. Graduated from Alexandria University, Faculty of Agriculture, with B.Sc. in 1964. Awarded M.Sc. and Ph.D. from the same university in Chemistry of Pesticides in 1967 and 1973, respectively.

Prof. Mansour held the following positions at NRC :

- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1986.
- Research Professor, since 1986.

He is the Principal Investigator of some research projects dealing with pesticide residue analysis, and monitoring of pesticide usage in the environment. Author of over 35 papers published in specialized journals and conferences. Supervised three M.Sc. and three Ph.D. theses. Participated in several conferences held in Egypt and abroad. Member of Weed Science Society of America, Pesticide Science Society of Japan, and Entomological Science Society of Egypt.



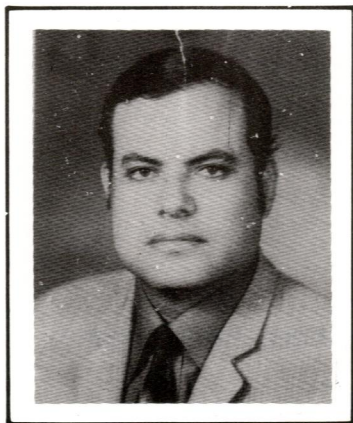
*Prof. Dr. Laila Sadek Boulos  
Goubran*

Prof. Goubran, Research Professor of Organic Chemistry, Department of Pesticide Chemistry, NRC, was born on December 1, 1943, Cairo, Egypt. Married with two children. Graduated from Ain-Shams University in 1964 with B.Sc. in Chemistry and Physics. Obtained M.Sc. from Cairo University in 1970 in Applied Chemistry. Awarded Ph.D. from University of Saarlandes, Saarbrücken, FRG, in 1972 in Applied Chemistry.

Prof. Goubran held the following positions at NRC :

- Research Scholarship, 1965 - 1970.
- Research Assistant, 1970 - 1972.
- Researcher, 1972 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor of Applied Organic Chemistry, since 1986.

She participated in a number of research projects. Supervised one M.Sc. thesis awarded the degree in 1984 and one still underway. Published over 35 papers in specialized journals. Attended several chemical conferences held in Cairo. Granted an Alexander von Humboldt research grant to University of Erlangen-Nurnberg (FRG). Member of a number of societies and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mahmoud Ahmed Hammad*

Prof. Hammad, Research Professor of Organic Chemistry, Department of Chemistry of Pesticides, NRC, was born on January 1, 1941, Helwan, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from Ain-Shams University in Organic Chemistry in 1969 and 1975, respectively.

Prof. Hammad held the following positions at NRC :

- Research Assistant, 1965 - 1975.
- Researcher, 1975 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor, since 1986.

He participated in a number of research projects. Supervised M.Sc. and Ph.D. theses on Pesticide Chemistry. Author of over 30 publications in national and international journals and conferences. Granted a three months fellowship to Odense University, Denmark, in 1984. Member of several societies and the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Wafaa Mahmoud Abdou*

Prof. Abdou, Research Professor of Applied Organic Chemistry, NRC, was born on September 16, 1943, Sharkia, Egypt. Married with two children. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Physics. Awarded M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1968 and 1973, respectively.

Prof. Abdou held the following positions at NRC :

- Research Assistant, 1964 - 1974.
- Researcher, 1974 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

She participated in a number of research projects. Supervised a number of graduates for M.Sc. and Ph.D. degrees. Author of several papers published in national, international journals and conferences. Granted two post-doctoral research fellowships to USA (1982), and FRG (1984). She participated in the project financed by DFG between NRC, Bonn University and Egyptian ASRT on "Photochemistry of Pesticides", since 1984. Member of Association of Graduates of Faculty of Science of Egypt, Syndicate of Scientific Professions of Egypt, and American Chemical Society. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1986 (awarded for NRC young scientists).





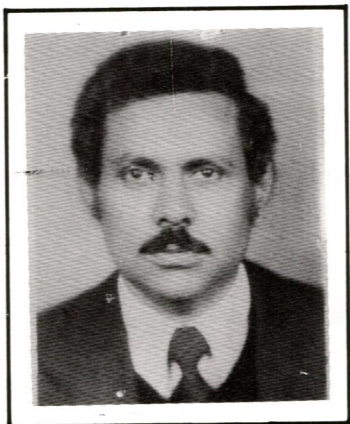
*Prof. Dr. Soad Abdel Meguid  
Mohamed Osman*

Prof. Osman, Research Professor of Organic Chemistry of Pesticides NRC, was born on November 11, 1942, Sohag, Egypt. Married with two children. Graduated from Cairo University in 1964, with B.Sc. in Chemistry (Dist. with Hons.). Awarded M.Sc. and Ph.D. from the same university in Organic Chemistry in 1970 and 1975, respectively.

Prof. Osman held the following positions at NRC :

- Research Assistant, 1966 - 1976.
- Researcher, 1976 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

She participated in several research projects. Supervised three M.Sc. and four Ph.D. theses. Author of over 30 publications in national and international journals. Member of several societies and syndicates : International Society of Heterocyclic Chemistry ; Egyptian Chemical Society ; and the Syndicate of Scientific Professions of Egypt.



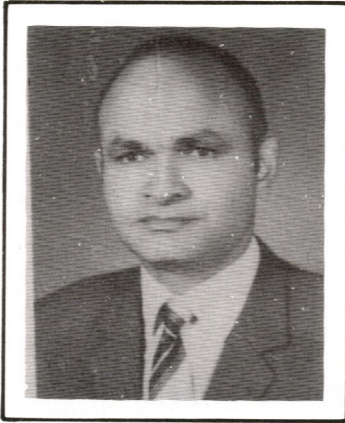
*Prof. Dr. Fahmy Mikhail Asaad*

Prof. Asaad, Research Professor of Pesticide Chemistry, NRC, was born on July 3, 1939, El-Bagour, Egypt. Married with two children. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from Ain-Shams University in Chemistry in 1969 and 1976, respectively.

Prof. Asaad held the following positions at NRC :

- Research Assistant, 1964 - 1976.
- Researcher, 1976 - 1982.
- Associate Research Professor, 1982 - 1988.
- Research Professor, since 1988.

He participated in several research projects. Supervised a number of graduate students for M.Sc. and Ph.D. degrees. Author of over 27 papers published in national and international journals and conferences. Attended several conferences held in Egypt, Canada, Netherlands, Czechoslovakia and Japan. Granted a research fellowship to Chemistry Institute, Odense University, Denmark (1983 - 1984). Member of Egyptian Chemical Society, and Syndicate of Scientific Professions of Egypt.



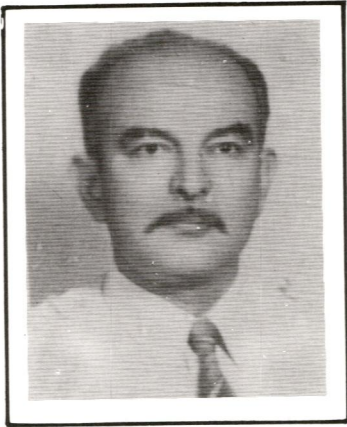
*Prof. Dr. Atia Hosni  
Morsi Kabesh*

Prof. Kabesh, Research Professor Emeritus, Ceramic Department, NRC, was born on May 20, 1927, Cairo, Egypt. Graduated from Aachen Engineering University (FRG) in 1964, with B.Sc., Ceramic Engineering. Awarded the Ph.D. from the same university in Refractories in 1971.

Prof. Kabesh held the following positions at NRC :

- Researcher, Ceramic Department, 1973 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, 1986 - 1987.
- Professor, Emeritus since 1987.

He participated in several research projects : “Suitability of some Egyptian clays for the manufacture of building bricks and other heavy-clay products”, Fayoum Province (1977) ; “Utilization of rice husk ash silica in the refractory industry”, Egyptian Company for Refractories (1982 - 1984) ; and “Characterization of south Sinai kaolin deposits”, Sinai Manganese Company (1984). Offered several consultancy and advisory services on techno-economic assessment of clay raw materials for brick and ceramic industries. Attended several conferences held in Egypt, USA and China.



*Prof. Dr. Ali Abdel-Aziz Omar*

Prof. Omar, Research Professor and Head of Glass, Refractories and Building Materials Department, NRC, was born on March 19, 1938. Married with two children. Graduated from Alexandria University in 1958 with B.Sc. in Chemistry and Geology. Awarded Ph.D. in 1965 from Moscow State University (USSR).

Prof. Omar held the following positions:

- Demonstrator, Assiut University, 1958-1961.
- Research Assistant NRC, 1961-1966.
- Researcher, NRC, 1966-1972.
- Associate Research Professor, 1972-1978.
- Research Professor, since 1978.
- Head of Department since 1982.

He participated in several research projects. Offered consultancy and advisory services to many organizations and companies in the field of glass technology, raw materials, and analytical instrumental and conventional techniques applied in the field of glass and ceramic technology in general. Managed the discovery of white sand for glass manufacture and clays for refractories and building bricks in Saudi Arabia (1972-1977). Supervised several Ph.D. and M.Sc. theses. Author of many scientific publications and industrial reports. Attended several conferences held in Egypt, Jordan, France, and FRG. Member and representative of NRC at the International Commission on Glass. Member of Chemical Society of Egypt, Mineralogical Society of Egypt, and Geological Society of Egypt. Also, member of several councils, committees and divisions of Egyptian ASRT. Referee at some Egyptian and Arab scientific and research organizations.



*Prof. Dr. Lamey Gindy Girgis*

Prof. Girgis, Research Professor of Refractories, NRC, was born on November 8, 1935, Qena, Egypt. Graduated from Cairo University in 1957, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from the same university in Inorganic Chemistry in 1962 and 1965 respectively.

Prof. Girgis held the following positions at NRC:-

- Research Scholarship, 1959-1961.
- Research Assistant, 1961-1965.
- Researcher, 1965-1971.
- Associate Research Professor, 1971-1979.
- Research Professor, since 1979.

He participated in a number of research projects. Principal investigator of "Production of Forsterite Refractories", El-Nasr Company for Refractories and Ceramics, Egyptian Company for Refractories (1975); and "Improvement of the quality of locally produced magnesite refractories". NRC, ASRT, El-Nasr Company for Refractories and Ceramics, and Egyptian Iron and Steel Company (1984-1986). Vice-Principal Investigator for the project "Study of magnesia recovery from raw dolomite for basic refractory manufacture", NRC, Egyptian General Organization for Industry, Egyptian Company for Refractories (1976-1977). Granted a research fellowship to Slovakian Institute of Silicates, Czechoslovakia (1967-1968). Author of over 33 papers in the field of structural ceramics and refractories published in specialized journals and conferences.





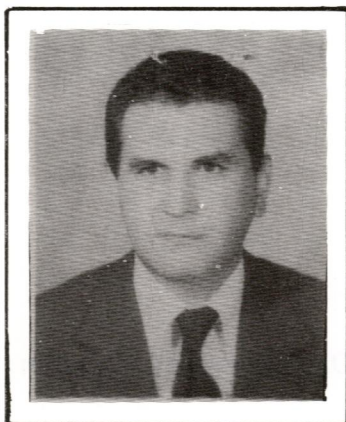
*Prof. Dr. Doreya M. Ibrahim*

Prof. Ibrahim, Research Professor of Inorganic Chemistry, Ceramic Department, NRC, was born on July 30, 1937. Graduated from Cairo University in 1958, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from the same university in Inorganic Chemistry in 1962 and 1968, respectively.

Prof. Ibrahim held the following positions at NRC :

- Research Scholarship, 1958 - 1961.
- Research Assistant, 1961 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1981.
- Research Professor, since 1981.

She participated in several research projects. Offered consultancy services to several industrial organizations and companies, e.g., Egyptian Refractory Company, Sinai Manganese Company, Sornaga Company, and several others. Studies covered raw material evaluation for ceramic industry. Supervised four M.Sc., two M.D., and two Ph.D. theses. Granted a post-graduate scholarship to TH Aachen (1964 - 1965) and three DAAD short fellowships (2 - 3 months) in 1976, 1982 and 1987. Published several papers and reports. Member of several societies : Egyptian Chemical Society ; Egyptian Geological Society ; Egyptian Mineralogical Society ; and British Ceramic Society. Awarded State Prize in Chemistry and Order of Arts and Science (1981).



*Prof. Dr. Mohamed  
Abdel-Maksoud Khattab*

Prof. Khattab, Research Professor of Inorganic Chemistry (Building Materials Technology), Ceramic Department, NRC, was born on July 3, 1939, Cairo, Egypt. Graduated with B.Sc. in Chemistry and Geology, and awarded M.Sc. and Ph.D. from Cairo University in 1960, 1965 and 1969, respectively.

Prof. Khattab held the following positions at NRC :

- Research Scholarship, 1961 - 1965.
- Research Assistant, 1965 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1982.
- Research Professor, Glass, Ceramics and Building Materials Department, since, 1982.

He participated and supervised some research projects in the area of assessment of clays and shales for brick and cement industries. Contributed to the standardization of building materials specification. Supervised some M.Sc. and Ph.D. theses. Granted a scholarship to Institute of Construction Materials (Yugoslavia, September 1967 - January 1968), and post-doctoral fellowship to Institute of Inorganic Chemistry (Czechoslovakia, 1971). Attended several Arab Chemistry Conferences, and International Congress on Rheology, Italy (1980). Published several papers in national and international journals.



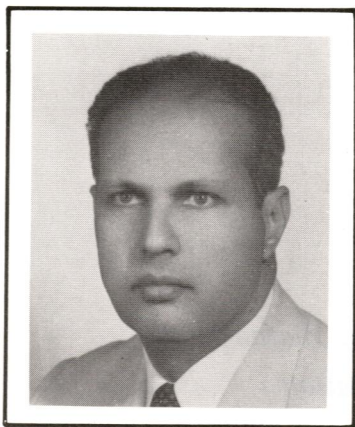
*Prof. Dr. Wafaa Ismail  
Abdel-Fattah*

Prof. Abdel-Fattah, Research Professor of Applied Inorganic Chemistry, Ceramic Department, NRC, was born on March 13, 1939, Cairo, Egypt. Married with three sons. Graduated from Cairo University in 1960, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1965 and 1971, respectively.

Prof. Abdel-Fattah held the following positions at NRC :

- Research Assistant, 1960 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1982.
- Research Professor, since 1982.

She participated in several research projects : "Improvement of electric insulators locally produced", ASRT, NRC (1977 - 1980) ; "Utilization of solid wastes as fluxes for producing pottery and porcelain" ; "Bentonite in ceramic whitewares" ; and "Design, development and study of the properties of bone-equivalent bioceramics", Supreme Council of Universities, financed by USA (1984 - 1986). Supervised nine M.Sc. and Ph.D. theses in collaboration with Biophysics Department, Cairo University, and Department of Pottery, Faculty of Applied Art, Helwan University. Author of over 35 papers published in national and international journals and conferences. Attended several conferences on Ceramics Building Materials and Silicate Industry and Technology, held in Egypt, Jordan, Italy, Hungary, Sweden, UK and FRG. Awarded the State Prize for Chemical Sciences for 1982 (ASRT), and the Order of Arts and Science, First Rank, 1984. Member of several scientific societies, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Abdel-Aziz*

*Ahmed El-Sayed Khalil*

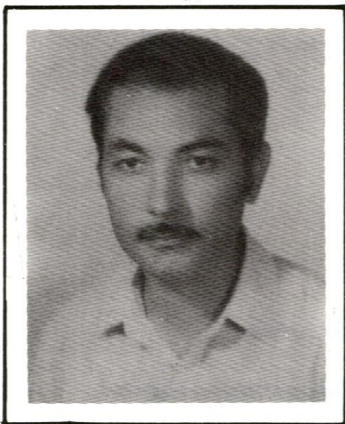
Prof. Khalil, Research Professor, Ceramics and Building Materials Department, NRC, was born on March 10, 1941, Menoufia, Egypt. Married. Graduated from Cairo University in 1962, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from the same university in Inorganic Chemistry and Building Materials in 1966 and 1971, respectively.

Prof. Khalil held the following positions at NRC :

- Research Scholarship, 1963-1965.
- Research Assistant, 1965-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1982.
- Research Professor, since June 1982.

He participated in several research projects : “Beneficiation of clay from Lake Mariut, West Alexandria, for the production of Portland Cement clinker”, EGIA and Alexandria Portland Cement Company (1971-1973); “Building bricks from black ash of rice husk”, Egyptian General Corporation for Rice Millers (1972-1974); “Assessment of industrial gypsum plasters for moulding purposes”, General Company for Pottery and Porcelain (1973); “The use of Wadi Gharandel (Sinai) clay deposits for the production of various ceramic products”, Eastern Company for Petroleum (1977-1978); and “Technical assessment of Hamraween gypsum deposits”, Misr Phosphate Company (1985). Offered several consultancy and advisory services. Author of several papers published in national and international journals and conferences (Egypt and Italy). Supervised one M.Sc. and another Ph.D. theses. One Ph.D. under channel system joint supervision (with Erlangen University, FRG), is still underway. Member of a number of societies, and the Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Morsi Mohamed Morsi*

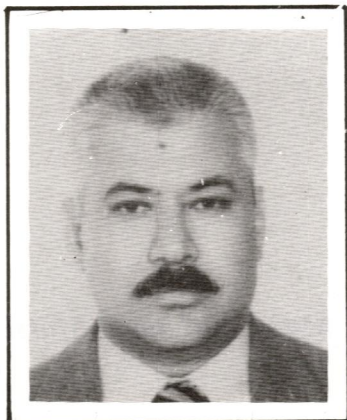
Prof. Morsi, Research Professor of Glass Science and Technology, NRC, was born on May 28, 1944, Alexandria, Egypt. Graduated from Alexandria University in 1964, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from Cairo University, in Inorganic and Physical Applied Chemistry, in 1969 and 1973, respectively.

Prof. Morsi held the following positions at NRC :

- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor since 1983.

He participated in a number of research projects. Attended several conferences held in Egypt and FRG. Supervised four M.Sc. and one Ph.D. theses. Author of several papers published in national and international journals and conferences. Participated in the Summer College on Biophysics held in ICTP, Trieste, Italy, in 1982. Member of the 20th International Seminar for Research and Education in Chemical Engineering and Physical Chemistry, Karlsruhe, FRG (1984 - 1985). Member of several scientific societies, and Syndicate of Scientific Professions of Egypt. Awarded the "Encouragement State Prize" in the field of Chemistry in 1984 from ASRT, and the First Class Medal for Science and Arts from the President of Egypt in 1985.





*Prof. Dr. Ahmed*

*Abd-El-Rahman Ahmed*

Prof. Ahmed, Research Professor of Physical Chemistry (Glass Technology), NRC, was born on February 16, 1942, Kalubia, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from the same university in Physical Chemistry in 1968 and 1973, respectively.

Prof. Ahmed held the following positions at NRC :

- Research Scholarship, Glass Research Laboratory, 1964 - 1965.
- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor, since 1983.

He participated in several research projects. Offered consultancy and advisory services to many glass companies. Supervised five M.Sc. and five Ph.D. theses already granted from Egyptian universities. Attended several conferences, meetings and symposia held in Egypt and abroad. Author of over 32 papers published in international journals and eight presented to conferences and meetings. Member of several national and international societies : Chemical Society of Egypt ; Society of Glass Technology (UK) ; and International Commission on Glass Sub-Committee (1978 - 1986). Invited to join the American Ceramic Society.



*Prof. Dr. Samir Bushra Hanna*

Prof. Hanna, Research Professor of Refractories, NRC, was born on August 6, 1942, Assiut, Egypt. He graduated from Faculty of Science, Assiut University in 1963, with B.Sc. in Chemistry and Geology. After his graduation, he joined the NRC, as a Chemist at the Refractory Department. In 1967, he became a Research Assistant at the same department. Received M.Sc. degree from Ain-Shams University in Inorganic Chemistry in 1968. In 1969, he went to GDR, there he received in 1974 the degree of Dr. Techn. from the Department of Ceramic Engineering at HAB Weimar.

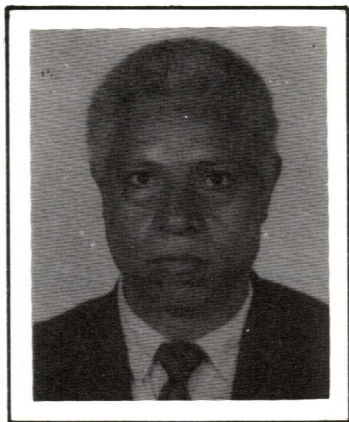
Prof. Hanna held the following positions at NRC :

- Researcher, 1974.
- Associate Research Professor, 1979.
- Research Professor of Refractories at Glass, Refractories and Building Materials Department, since 1985.

He took a leave of absence for one year to work with Ceramics Group of Karlsruhe University, FGR (1979). His major interests have been in the field of chemistry and technology of special refractories. Author and Co-author of more than thirty papers published in international journals. Participated in some international conferences in Egypt, GDR, Yugoslavia, France and USA.

Supervised some projects as a senior researcher : “Preparation and sintering of sialon as a ceramic material, 1984”. “Preparation and stabilization of some ceramic oxides, 1985” and “Production of silicon carbide from rice hulls, 1983”.

He is a member of some scientific societies and Syndicate of Scientific Professions of Egypt.



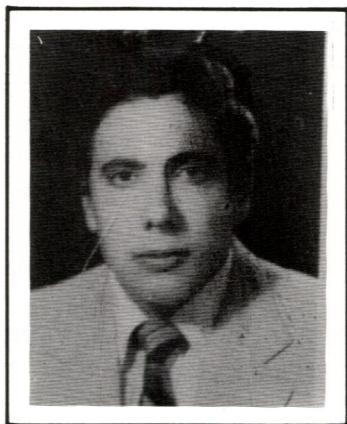
*Prof. Dr. Abd-El-Raouf Fadl Abbas*

Prof. Abbas, Research Professor of Physical Chemistry (Glass Technology), NRC, was born on November 5, 1938, Giza, Egypt. Graduated from Assiut University in 1964, with B.Sc. in Chemistry and Geology. Awarded M.Sc. and Ph.D. from Cairo University in Physical Chemistry in 1970 and 1975, respectively.

Prof. Abbas held the following positions at NRC :

- Technician, Glass Research Laboratory, 1965 - 1971.
- Research Assistant, same laboratory, 1971 - 1975.
- Researcher, 1975 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

He participated in several NRC sponsored research projects, and a joint one between El-Nasr Glass and Crystal Company and NRC. Supervised a number of post-graduate studies, four Ph.D. and two M.Sc. already granted. Author of over 32 papers published in national and international journals and conferences, in the field of Glass Science and Technology. Member of Egyptian Chemical Society ; Physical Society of Egypt ; and Egyptian Society of Spectroscopy.



*Prof. Dr. Mohamed Abdel-Kader Serry*

Prof. Serry, Research Professor of Physical Chemistry, Ceramic Department, NRC, was born on November 27, 1943, El-Menya, Egypt. Married with two children. Graduated from Assiut University in 1964, with B.Sc. in Chemistry and Geology. Awarded the M.Sc. and Ph.D. from Cairo University in Organic and Physical Chemistry in 1970 and 1974, respectively.

Prof. Serry held the following positions at NRC :

- Research Assistant, Ceramic Laboratory, 1965 - 1974.
- Researcher, 1974 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor, since 1986.

He participated in several research projects. His field of interest : Phase equilibria and properties of ceramic materials and refractories. Granted a post-doctoral fellowship to Polytechnic Institute, Bucharest, Romania (1979 - 1980). Supervised several M. Sc. and Ph.D. theses in the field of chemistry and technology of ceramics. Offered consultancy and advisory services to several industrial companies. Participated in an international seminar (1978 - 1979), Institute of Chemistry and Technology, Karlsruhe University, FRG. Attended several conferences and symposia on chemistry and technology of ceramics. Member of a number of societies, and the Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Essam El-Din Mohamed  
Hassan Sallam*

Prof. Sallam, Research Professor of Ceramic Engineering, Ceramic Department, NRC, was born on December 2, 1939, Cairo, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Physics. Awarded M.Sc. from the same university in 1968 in Inorganic Chemistry, and Ph.D. from Sheffield University, UK, in 1975.

Prof. Sallam held the following positions at NRC :

- Research Assistant, 1963 - 1975.
- Researcher, 1975 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since July 1986.

He participated in several research projects : “Study of the utilization of rice-husk silica in the refractory industry”, NRC and Egyptian Company for Refractories (1982 - 1984) ; “Characterization of south Sinai kaolin deposits”, NRC and Sinai Manganese Company (1984) ; “Production of red ceramic floor tiles”, NRC and El-Nasr Company for Refractories (1985) ; and several internal NRC projects. Offered several consultancy services on technical and economic assessment of ceramic raw materials for ceramic industries, electrical insulators, wall and floor tiles, dental porcelain, ... etc. Supervised three theses. Published over 27 papers in specialized journals. Attended two conferences in Egypt and Romania. Member of some societies, and the Syndicate of Scientific Professions of Egypt.





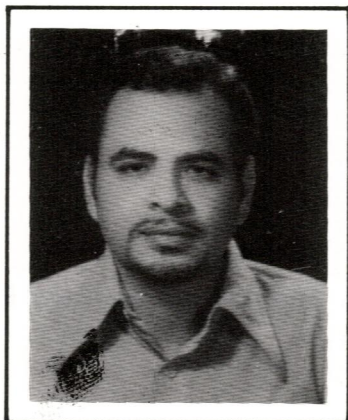
*Prof. Dr. Soliman Ali Soliman El-Hemaly*

Prof. El-Hemaly, Research Professor of Inorganic Chemistry, Refractories and Building Materials Department, NRC, was born on December 25, 1939, Sharkyiah, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Geochemistry. Awarded the M.Sc. from the same university in 1969 and Ph.D. from Aberdeen University, UK, in 1975.

Prof. El-Hemaly held the following positions at NRC :

- Research Scholarship, 1965 - 1966.
- Research Assistant, 1966 - 1975.
- Researcher, 1975 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, Refractories and Building Materials Department, since 1986.

He contributed and supervised some research projects, e.g., "Beneficiation of Lake Mariut clays for the production of cement", "Production of supersulphated cement in Egypt", and several others. Offered consultancy and analytical services to various sectors of industry. Granted research scholarship to UK (1972 - 1975). Attended and contributed to the activities of more than ten conferences held in Egypt and abroad. Supervised some research programs for Ph.D. and M.Sc. degrees (total of 8). Author of several papers published in specialized journals. Member of the Refractories and Building Material Committee, Council of Industrial Research (ASRT), since 1985. Member of a number of societies, and the Syndicate of Scientific Professions of Egypt.



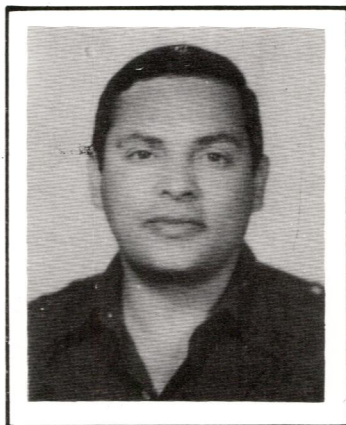
*Prof. Dr. Saad Moghazy Salman*

Prof. Salman, Research Professor of Chemistry and Technology of Glass. NRC, was born on July 22, 1942, Luxor, Egypt. Graduated from Assiut University in 1966, with B.Sc. in Chemistry and Geology (Hons.). Awarded the M.Sc. and Ph.D. in Inorganic Chemistry, Chemistry and Technology of Glass, from Cairo University in 1970 and 1976, respectively.

Prof. Salman held the following positions at NRC :

- Research Assistant, 1967 - 1976.
- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

He participated in a number of research projects, some of which are financed by El-Nasr Glass and Crystal Company. Offered consultancy and advisory services to several companies in the field of Glass and Ceramics. Supervised one Ph.D. and four M.Sc. theses. Author of over 35 papers published in international journals and conferences. Visited several universities and glass companies during his mission to UK, in 1985. Member of the NRC Director's Office (1987). General Secretary and member of Directory Board of Egyptian Chemical Society since 1987, and member of the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed*

*Reda Kamel Ibrahim*

Prof. Ibrahim, Research Professor of Applied Inorganic Chemistry, NRC, was born on November 1, 1944, Dakahlia, Egypt. Graduated from Ain-Shams University in 1964, with B.Sc. in Chemistry. Granted M.Sc. in Chemistry in 1970 from the same university. Awarded Ph.D. from Cairo University in 1976 in Applied Inorganic Chemistry.

Prof. Ibrahim held the following positions at NRC :

- Research Scholarship, Refractory and Building Material Laboratory, 1965 - 1966.
- Research Assistant, 1966 - 1976.
- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1987.
- Research Professor, since 1987.

He participated in several research projects : “Improvement of the quality of locally produced magnesia refractories” — Egyptian ASRT, El-Nasr Company for Refractories and Ceramics and Egyptian Iron & Steel Company (1984 - 1987), and a number of internal NRC projects. Granted a fellowship to Karlsruhe University, FRG (1979 - 1980). Attended the “Institute of Ceramic” Conference held in Bologna, Italy, 1983. Author of 26 publications. Member of several professional societies and syndicates.









## PHARMACEUTICAL INDUSTRIES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — PHARMACEUTICAL SCIENCES.
- 2 — THERAPEUTICAL CHEMISTRY.
- 3 — CHEMISTRY OF NATURAL PRODUCTS.



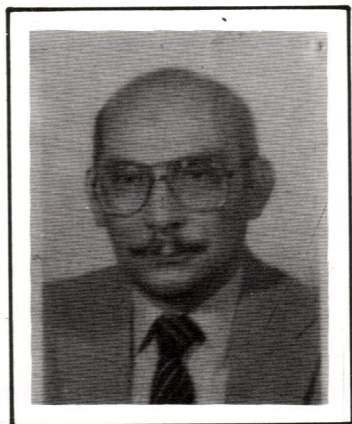
*Prof. Dr. Effat Abdel-Hamid Abu-Mustafa*

Prof. Abu-Mustafa, Research Professor of Natural Products, NRC. Graduated from Cairo University in 1956, with B.Sc. in Chemistry and Botany. Awarded the M.Sc. and Ph.D. from the same university in Organic Chemistry in 1959 and 1964, respectively.

Prof. Abu-Mustafa held the following positions :

- Research Assistant, NRC, 1956 - 1964.
- Researcher, NRC, 1964 - 1971.
- Associate Research Professor, NRC, 1971 - 1974.
- Research Professor, NRC, since 1974.

She participated in several research projects. Principal Investigator of a joint project for "Production of xanthotoxin and khellin from plants", NRC and Memphis Chemical Company (1971 - 1975). Co-Principal Investigator of a project : "Preparation of selected pharmaceutical chemicals", results of which are investigated on a pilot plant scale by the El-Nasr Company for Pharmaceutical Chemicals. Awarded several scholarships and post-doctoral fellowships to : Swedish Institute of Pharmacy (1961) ; Soviet Academy of Sciences, USSR (1966 - 1968) ; Royal Society, UK (1979) ; and Denver Institute, USA (1979). Supervised graduate students, 20 awarded M.Sc. and M. Pharmacy degrees and six Ph.D. degrees. Author of over 50 papers published in specialized journals. Attended several conferences, symposia and meetings held in Egypt and abroad. Author of three patents registered by ASRT. Member of several scientific chemical, pharmaceutical and medicinal plants societies (American, Arab, German and Egyptian). Awarded the NRC Gold Medal and the Medal of the Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed Nabil Youssef  
Aboul-Enein*

Prof. Aboul-Enein, Research Professor of Pharmaceutical Chemistry, NRC, was born on June 23, 1936, Cairo, Egypt. Graduated from Cairo University in 1956, with B. Pharm. & Pharm. Chem. Awarded Ph.D. in Pharmaceutical Chemistry from the Pharmazeutisches Inst. ETH, Zurich, Switzerland in 1963.

Prof. Aboul-Enein held the following positions :

- Demonstrator, Analytical Chemistry Department, Faculty of Pharmacy, Cairo University, 1956 - 1958.
- Research Assistant, Pharmaceutical Chemistry Unit, NRC, 1958 - 1963.
- Researcher, same unit, NRC, 1963 - 1970.
- Associate Research Professor, NRC, 1970 - 1974.
- Research Professor of Pharmaceutical Chemistry, NRC, since 1974.
- Chairman of Division of Pharmaceutical Industries NRC, 1984 - 1986.
- Head of Department of Pharmaceutical Sciences, since 1986.

He is the Principal Investigator of a major research project "Preparation of selected pharmaceutical chemicals" for the expansion of activities of the local pharmaceutical industry through the development of the know-how needed for manufacturing synthetic pharmaceutical chemicals. Active member of the research group who discovered the Khellin for the treatment of Vitiligo and Psoriasis (trade name Psorvitil, Memphis). Author of over 53 papers published in national and international journals. Granted several scholarships and fellowships abroad to : Switzerland, USA, FRG, UK, Denmark, France, Hungary and India. Provided consultancy services to several companies representing the chemical and pharmaceutical sectors. Member of several councils, syndicates and societies : Egyptian

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Pharmaceutical Society, Egyptian Chemical Society, Pharmacists Syndicate, board of Egyptian Pharmacopoea (Pharmaceutical Chemistry Division), National Council of Medical and Drug Research (ASRT), and Drug Research Division (ASRT). Awarded NRC Prize for Scientific Contribution in Pharmaceutical Sciences (1984), and Certificate of Appreciation from Scientific Society for Cultural Development in S & T, Ministry of Scientific Research, Egypt (1988).





*Prof. Dr. Gamila Mahmoud*

*Osman Wassel*

Prof. Wassel, Research Professor of Pharmacognosy, Pharmaceutical Sciences Department, NRC, was born on March 18, 1931, Alexandria, Egypt. Widow. Graduated from Alexandria University in 1955, with B.Pharm. and Pharm. Chem. Awarded the Ph.D. in Pharmacognosy from London University, School of Pharmacy in 1964. Fluent in English, French, German and Arabic.

Prof. Wassel held the following positions:

- Demonstrator, Alexandria University, Faculty of Pharmacy, 1955-1957.
- Research Scholarship (Research Assistant), NRC, 1957-1965.
- Researcher, Medicinal Plants and Pharmacognosy Unit, 1965-1971.
- Associate Research Professor, Pharmaceutical Sciences Laboratory, NRC, 1971-1974.
- Research Professor, since 1974.

She participated in several research projects. Principal Investigator of “Industrialization of Medicinal Plants”, 1984-1988, ASRT, and a number of internal NRC projects in the field of Pharmacognosy and Chemistry of Natural Products. Granted several scholarships and post-doctoral fellowships and visits abroad: France (1957-1958), FRG (1958-1960), UK (1960-1964), China, Romania, USA, and several Arab countries. Assumed the post of Head of Industrial Pharmaceutical Sciences Division, NRC, from 1987 to 1988. Attended several national and international conferences. Supervised eight M.Sc. and four Ph.D. awarded the degrees from Faculty of Science and Pharmacy, Cairo University. Published over 70 papers in international and national journals. Offered consultancy and advisory services to a number of chemical, pharmaceutical companies and organizations. Member of editorial boards of: Egyptian Journal of Pharmaceutical Sciences, and



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Bulletin of the NRC. Author of a book in Arabic on "Curing with Medicinal Plants", 1988. Awarded the NRC Prize for Scientific Contribution for 1986. Contributor to the discovery of a new drug for the treatment of Vitiligo and Psoriasis (Trade Name Psorvital, Memphis Co.).



*Prof. Dr. Faiza M. Hammouda*

Prof. Hammouda, Research Professor of Phytochemistry, Pharmaceutical Sciences Department, NRC, was graduated from Cairo University in 1957, with B.Sc. in Chemistry. Awarded both the M.Sc. and Ph.D. from the same university in Phytochemistry in 1961 and 1964, respectively.

Prof. Hammouda held the following positions:

- Research Scholarship, NRC, 1958-1960.
- Research Assistant, NRC, 1960-1964.
- Researcher, NRC, 1964-1971.
- Associate Research Professor, NRC, 1971-1976.
- Research Professor, NRC, since 1976.

She acted as Principal Investigator for several research projects on: "Poisonous Plants", sponsored by FDA - USA (1977-1988); "Medicinal Plants", NRC and University of Qatar (1981-1988); and "Colour Additives", NRC and ASRT, since 1984. Deputy Principal Investigator of a project on "Assessment of Medicinal Plants in Suez Canal Zone", between Suez Canal University and University of Maryland, USA (1983-1988). Consultant, CID Drug Company, since 1971. Granted several research fellowships to UK (Bradford University, 1964-1966), and to USA (FDA, 1978-1979 and 1981). Visited drug industries and institutes of pharmacognosy in UK, FRG, Norway, Denmark, France, Italy, Bulgaria, Rumania, Korea and Hong Kong. Attended several national and international conferences. Official mission to Royal Society, UK (1979 and 1980). Attended workshop on Technology Assessment, Denver Research Institute, Colorado, USA (1979). Author of over 80 papers and 14 reports. Supervised 10 Ph. D. and M.Sc. theses (already awarded), 17 more Ph.D. and M.Sc. are still underway. Member of the Syndicate of Scientific Professions of Egypt, Egyptian

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Chemical Society, Arab Syndicate of Medicinal Plants, Society Medicinal Plant Research (FRG), and several scientific and social women societies and associations. Member of El-Shoura Council.



*Prof. Dr. Mohamed Nabil Ahmed Eid*

Prof. Eid, Research Professor of Medicinal and Aromatic Plants, NRC, was born on April 22, 1939. Graduated from Ain-Shams University in 1960, with B.Sc. in Agricultural Sciences. Awarded M.Sc. and Ph.D. from the same university in 1964 and 1969, respectively.

Prof. Eid held the following positions:

- Research Assistant, NRC, 1966-1970.
- Researcher, NRC, 1970-1975.
- Associate Research Professor, NRC, 1975-1980.
- Research Professor, NRC, since 1980.

Spent five years after graduation (1961-1966) at the Department of Medicinal and Aromatic Plants, Ministry of Agriculture.

He participated in several research projects. Member of official mission to National Research Council (Sudan) for establishment of a new Medicinal Plants Unit during 1977. Attended workshop in marketing of research, Denver Research Institute, (Colorado, U.S.A.) during 1979. Cooperated, through consultation services and supervision, with CID and KATO Aromatic Companies in establishing ornamental park gardens. Attended several conferences held in Egypt and Greece on Horticulture, Medicinal and Aromatic Plants and Pharmaceuticals. Author of several papers published in specialized journals. Awarded the NRC Golden Medal, on the occasion of the NRC Silver Jubilee (1982). Member of a number of societies and syndicates.





*Prof. Dr. Hussein Othman Ammar*

Prof. Ammar, Research Professor, Laboratory of Pharmaceutical Sciences, NRC, was born on June 15, 1943, Menia, Egypt. Graduated from Cairo University, Faculty of Pharmacy in 1964, with B. Pharmacy, Pharmaceutical Chemistry (Hons.). Awarded the M. Pharmacy, and Ph.D. from the same university in Pharmaceutical Sciences in 1968 and 1970, respectively.

Prof. Ammar held the following positions:

- Research Assistant, Laboratory of Pharmaceutical Sciences, NRC, 1965-1970.
- Researcher, same laboratory, 1971-1976.
- Associate Research Professor, NRC, 1976-1981.
- Research Professor, NRC, since 1981.

He participated in several research projects. Principal Investigator "Studies on the bioavailability of drugs under local conditions"; and Co-Principal Investigator "Rubber articles for medical and pharmaceutical uses", both sponsored by ASRT. Attended several conferences in Egypt, FRG and Netherlands. Author of one patent and over 50 publications in the field of Pharmaceutical Technology including Biopharmaceutics, Stability, Complexation and Rheology. Member of Egyptian Pharmaceutical Society and Egyptian Pharmaceutical Association. Supervised ten graduate students already awarded M.Ph. and Ph.D. degrees.



*Prof. Dr. Souad Eisawy El-Gengaihi*

Prof. El-Gengaihi, Research Professor, Pharmaceutical Sciences Department, NRC, was born on August 20, 1938, Tanta, Egypt. Graduated from Cairo University in 1959, with B.Sc. in Agriculture. Awarded the M.Sc. and Ph.D. from the same university in Plant Nutrition, Medicinal, and Aromatic Plants in 1964 and 1970, respectively.

Prof. El-Gengaihi held the following positions:

- Research Assistant, NRC, 1961-1971.
- Researcher, NRC, 1971-1976.
- Associate Research Professor, NRC, 1967-1981.
- Research Professor, since 1981.

She participated in several research projects, e.g., "Cultivation of senna, amelioration and production of mint spices"; and the national project on "Medicinal plants", sponsored by ASRT. Granted one year fellowship to Horticultural University, Budapest, Hungary (1976-1977). Attended several conferences and symposia on Plants and Spices, held in Egypt, FRG and USA. Supervised 14 graduates for M.Sc. and Ph.D. degrees awarded from Faculties of Science, Agriculture and Pharmacy. Author of a number of papers published in specialized journals. Member of International Society of Medicinal Plants (FRG); International Society of Horticulture Sciences (Netherlands); International Association of Plant Tissue Culture (Netherlands); Plant Growth Regulator Society of America (USA); and Arab Society for Medicinal Plants.



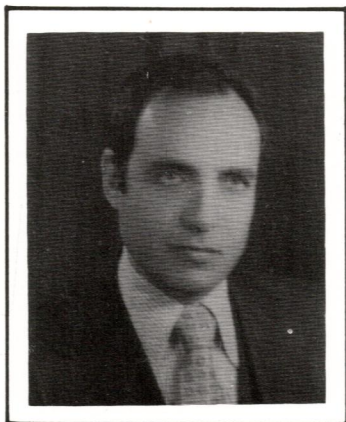
*Prof. Dr. Salah Sayed Ahmed*

Prof. Ahmed, Research Professor of Chemistry and Physiology of Medicinal Plants, NRC, was born on April 20, 1942, Cairo, Egypt. Married with two children. Graduated from Aim-shams University in 1962, with B.Sc. in Agriculture. Awarded the M.Sc. and Ph.D. from the same university in 1966 and 1971, respectively.

Prof. Ahmed held the following positions:

- Research Assistant, NRC, 1963-1971.
- Researcher, NRC, 1971-1976.
- Associate Research Professor, NRC, 1976-1982.
- Research Professor, NRC, since 1982.

He participated in several research projects namely : “Cultivation of khella plants”; “Guar plant”; “Silybum plant”; “Poisonous plants”, NRC-FDA; “Medicinal and aromatic plants”; NRC - Suez Canal University; and another similar one sponsored by ASRT. Author of over 30 papers published in international journals. Granted post-doctoral fellowships from Alexander von Humboldt, Institute of Agricultural Chemistry, George August University, FRG (1976-1978), (1980) and (1983). Attended many conferences in Egypt, Norway, UK, Netherlands and FRG. Supervised five graduate students for M.Sc. and Ph.D. degrees. Member of a number of professional and scientific societies and syndicates.



*Prof. Dr. Atef El-Azab M. El-Nimr*

Dr. Atef E. M. El-Nimr. Ph. D., in Pharmaceutical Sci., First Order of Sciences and Arts holder (1986), and State Prize Winner in Medical Sciences (1986), is presently, a Professor of Pharmaceutics, at the National Research Centre. He is the elder of four brothers, born on Feb. 7, 1939; in Tanta, El-Gharbia. He is married since 1975, and has three children.

He obtained his B. Pharm. & Pharm. Chem. (1961), from Faculty of Pharmacy, Alexandria University. On Jan. 1965, Dr. El-Nimr, was appointed as an Assistant Researcher, at the NRC. Three years later, he held his M. Pharm., (1968), followed by the Ph.D. Pharm. (1971), both in Pharmaceutical Sciences (Pharmaceutics), from Faculty of Pharmacy, Cairo University.

Since 1971, Prof. El-Nimr, was a senior supervisor and co-supervisor, on researches of M. Pharm. and Ph. D. Pharm. candidates, in fields, covering the areas of Pharmaceutics, Biopharmaceutics and Ophthalmic Pharmacy. Also, he was a visiting Assoc. Professor at College of Pharmacy, University of Florida, Gainesville, Fl., U. S. A., (1978-1980) and a visiting Professor at Institute of Pharmacy, University of Tubingen, Tubingen, FRG (Autumn 1985). Attended and shared in almost all the National Pharmaceutical Conferences, beside certain International ones, particularly, those held in: U.S.A. (1979), Austria (1981), France (1983) and Scotland (1984). Dr. El-Nimr, has authored and co-authored more than 30 publications, of these articles, seven were recently presented at International Pharmaceutical Conferences (1981-1984). Prof. El-Nimr, is a principal investigator on researches relevant to, some major public health problems, with particular emphasis on ophthalmology and Anaemias.

Other merits and qualifications are : member of the Medical Research Council, ASRT, member of the Drug Research Division, ASRT, member

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of the Drug & Pharmaceutical Industry Division Council, NRC, and member of the Pharmaceutical Sciences Department Council, NRC. Head of the Pharmaceutical Unit, Laboratory of Testing Materials NRC. Member of the Egyptian Pharmaceutical Society. Member of the Egyptian Syndicate of Pharmacists. Registered Pharmacist, Ministry of Health, Cairo - Egypt.





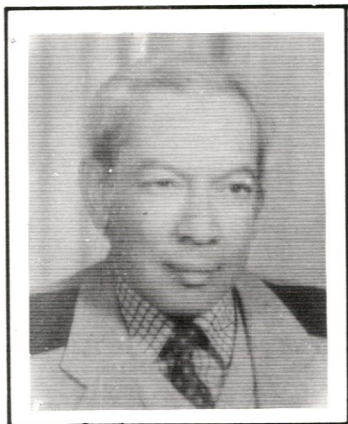
*Prof. Dr. Amir Guirgis Mattha*

Prof. Mattha, Research Professor of Pharmaceutical Technology, NRC, was born on May 5, 1943, Cairo, Egypt. Married with two children. Graduated from Cairo University, with B.Sc. (Pharmacy and Pharmaceutical Chemistry) in 1964. Awarded M. Pharm. Sc. in 1969, and the Ph.D. in 1971 from the same university. Fluent in French, English and Arabic.

Prof. Mattha held the following positions at NRC :

- Research Scholarship, 1965-1966.
- Research Assistant, 1966-1972.
- Researcher, 1972-1977.
- Associate Research Professor of Pharmaceutical Technology, 1977-1984.
- Research Professor, since 1984.

He participated in several NRC research projects and a joint project with USA. Offered research services to pharmaceutical industry and other research institutes in the fields of Rheology, Micromeritics and Monitoring of Particulate Contamination in Parenterals, Tablet Testing, HPLC, Bioavailability, ... etc. Supervisor and co-founder of the Pharmaceuticals Testing Laboratory, NRC, since 1980. Granted several post-doctoral research fellowships abroad : France, Montpellier University (1975-1977); USA, College of Pharmacy, University of Florida (1983-1984); and USA, Florida Agricultural and Mechanical University (Sept.-Dec., 1984). Attended several international and national conferences. Supervised a number of graduate students for M.Sc. and Ph.D., Author of over 40 papers published in national and international journals and conferences. Member of Egyptian Pharmaceutical Society, Egyptian Pharmaceutical Association, and Association des Pharmaciens Industriels de Montpellier, France.



*Prof. Dr. Shams El-Din Imbaby  
Ismail*

Prof. Ismail, Research Professor of Medicinal Plants, Pharmaceutical Sciences department, NRC, was born on February 24, 1941. Graduated from Ain-Shams University in 1964, with B.Sc. in Chemistry and Biochemistry. Obtained M.Sc. from Cairo Univeristy in Applied Organic Chemistry in 1964. Awarded the Ph.D. from Ain-Shams Univeristy in Chemistry of Medicinal Plants, Organic Chemistry in 1973.

Prof. Ismail held the following positions :

- Scholarship, NRC, 1965.
- Research Assistant, Pharmaceutical Sciences Laboratory, NRC, 1966-1973.
- Researcher, same laboratory, 1973-1978.
- Associate Research Professor, NRC, 1978-1984.
- Research Professor, Pharmaceutical Sciences Laboratory, since 1984.

He participated in several research projects : “Poisonous plants”, NRC and US FDA (1976-1983); “Chemical and biological studies on the Flora of Qatar”; “Development and utilization of plants growing in Sinai Peninsula”; “Industrialization of the active principles of Silybum marianum as a drug for liver diseases”; “Medicinal plants in pharmaceutical products”; and “Colour additives from natural plant sources”, NRC and ASRT. Granted fellowships to US FDA (1978), and Royal Society, UK (1982). Attended conferences held in Egypt, Belgium and FRG. Author of over 30 papers and five reports. Supervised 14 M.Sc. and 12 Ph.D. theses. Consultant, CID (Chemical and Pharmaceutical Development Company) since 1976. Member of the European Society of Medicinal Plants Research (GA), and several Egyptian chemical and pharmaceutical societies.



*Prof. Dr. Medhat M. H. Seif El-Nasr*

Prof. Seif El-Nasr, Research Professor of Chemistry of Medicinal Plants, Pharmaceutical Sciences Department, NRC, was born on October 31, 1946, Tanta, Egypt. Graduated from Ain-Shams University in 1967, with B.Sc. in Special Chemistry. Obtained M.Sc. from Cairo University in 1971 and Ph.D. from Ain-Shams University in 1973, both in Applied Organic Chemistry.

Prof. Seif El-Nasr held the following positions :

- Research Scholarship, NRC, 1968 - 1970.
- Research Assistant, NRC, 1970 - 1973.
- Researcher, Pharmaceutical Sciences Laboratory, NRC, 1973 - 1978.
- Associate Research Professor, NRC, 1978 - 1984.
- Research Professor, NRC, since 1984.

He participated in several research projects : “Phagostimulants in cotton leaves eliciting feeding of cotton leaf worm”, Ministry of Agriculture, Cairo (1970 - 1972) ; “Poisonous plants contaminating edible ones and toxic substances in plant foods”, US Food and Drug Administration ; and a number of NRC internal projects. Offered consultancy services to Chemical Industrial Development Company. Attended workshop and advanced course on mycotoxin analysis and liquid chromatography, organized by National Research Centre and FDS (USA) in 1981. Supervised two Ph.D. and five M.Sc. (awarded) and one Ph.D. and two M.Sc. are still underway. Attended several conferences. Author of over 30 papers in the field of Chemistry of medicinal plants. Member of several national, Arab, and foreign associations and societies.



*Prof. Dr. Samia Mohamed El-Difrawy*

Prof. El-Difrawy, Research Professor of Pharmaceutical Chemistry, Pharmaceutical Sciences Department, NRC, was born on August 3, 1943, Menoufia, Egypt. Married, with three children. Graduated from Cairo University in 1964, with B.Sc. in Pharmacy and Pharmaceutical Chemistry. Awarded the M.Sc. and Ph.D. from the same university in Pharmaceutical Organic Chemistry in 1968 and 1972, respectively.

Prof. El-Difrawy held the following positions :

- Scholarship, Pharmaceutical Sciences Laboratory, NRC, 1965 - 1966.
- Research Assistant, NRC, 1966 - 1972.
- Researcher, NRC, 1972 - 1980.
- Associate Research Professor, NRC, 1980 - 1986.
- Research Professor, NRC, since 1986.

She participated in several research projects, one of which sponsored by I.F.S. (Sweden). Supervised graduate students for four M.Sc. and one Ph.D. degrees in Pharmaceutical Chemistry. Attended several conferences in Egypt. Published over 20 papers. Member of General Syndicate of Pharmacists of Egypt, and the Egyptian Society of Pharmacy.





*Prof. Dr. Aida Abdel-Sattar*

*Mohamed El-Azzouny*

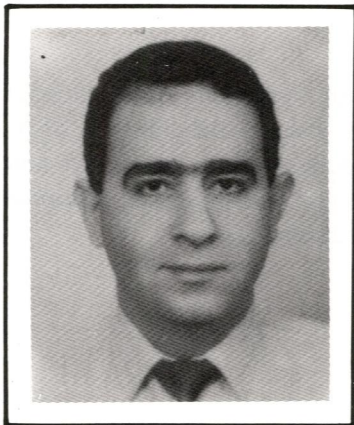
Prof. El-Azzouny, Research Professor of Pharmaceutical Chemistry, NRC, was born on December 8, 1945, in Damietta, Egypt. Married. Graduated from Cairo University in 1967, with B. Pharmacy and Pharmaceutical Chemistry. Awarded the M. Pharmaceutical Sciences from the same university in 1971 and the Dr. rer. nat. in 1974 from Martin Luther University, GDR.

Prof. El-Azzouny held the following positions :

- Research Assistant, Laboratory of Pharmaceutical Chemistry, NRC, 1967 - 1975.
- Researcher, same laboratory, 1975 - 1982.
- Associate Research Professor, NRC, 1982 - 1987.
- Research Professor, NRC, since 1987.

She participated in research projects, e.g., "Preparation of selected pharmaceutical chemicals". Supervised two graduate students for Ph.D. and M. Pharmacy both already awarded, and one for M. Pharmacy, is still underway. Author of over 23 papers published in national and international journals. Granted a post-doctoral fellowship from DAAD to Bonn University, FRG, for three months (1984). Member of Egyptian Pharmaceutical Society and Egyptian Syndicate of Pharmacists. Participated in several conferences and symposia in Egypt, GDR, UK, Netherlands and Hungary.





*Prof. Dr. Bassem S. El-Menshawi*

Prof. El-Menshawi, Research Professor of Pharmacognosy, Pharmaceutical Sciences Department, NRC, was born on May 1, 1945, El-Mansoura, Egypt. Married. Graduated from Assiut University in 1967, with B. Pharm. & Pharm. Chem. Awarded the M. Pharm. Sc. and Ph.D. from Cairo University in Pharmacognosy in 1972 and 1975, respectively. Fluent in English, and mother tongue Arabic ; fair in German.

Prof. El-Menshawi held the following positions at NRC :

- Research Assistant, 1967 - 1975.
- Researcher, 1975 - 1979.
- Associate Research Professor, 1979 - 1988.
- Research Professor, since 1988.

He participated in several research projects : Principal Investigator of the chemistry team of "Adaptation of some oilseed plants in the newly reclaimed soils", Ministry of Land Reclamation — NRC (1980 - 83) ; "Health hazards from glucosinolates in cruciferous plants" (1979 - 81). Contributor to the discovery of a novel treatment for skin diseases : Vitiligo and Psoriasis by Khellin (trade name, Psorvital, Memphis, 1981)". Vice-Principal Investigator of "Synthesis of certain isothiocyanate producers for treatment of infections of the urinary and respiratory systems", ASRT and Nile Company Pharmaceuticals and Chemical Industries (1984). One of the inventors of the Egyptian patent for "Novel medicinal preparations based on *Salvadora persica*", (to Eipico ; trade name : Epident), 1987. Supervised one M. Pharm. and one Ph.D. theses already awarded, while four others are still underway. Granted post-doctoral fellowships to Institute of Pharmaceutical Chemistry ; Wilhelms University, FRG (1975 - 1977), and to Purdue University, Department of Medicinal Chemistry and Pharmacognosy, Indiana, USA (1987). Published several papers in

specialized national and international journals. Attended several national and international conferences held in Egypt, Poland, Belgium and USA. Provided consultancy services to several domestic pharmaceutical and chemical companies. Member of several national, regional and international societies of pharmaceutical sciences and medicinal plants.

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*Prof. Dr. Ibrahim Mohamed Nabih*

Prof. Nabih, Research Professor Emeritus, Therapeutical Chemistry Department, Pharmaceutical Industries Division, NRC, was born on November 13, 1927, Sharkia, Egypt. Graduated from Alexandria University, Faculty of Science, in 1949. Awarded Ph.D. from University of Tubingen, FRG, in 1957.

Prof. Nabih held the following positions :

- Research Associate at Research Institute for Tropical Medicine, 1949 - 1953.
- Researcher, at the same institute, 1957 - 1963.
- Associate Research Professor, NRC, 1963 - 1966.
- Research Professor, NRC, since 1966.

He has been granted several scholarships and fellowships abroad : post-graduate scholarship, University of Tubingen, FRG (1953 - 1957) ; Research fellowship to University of Michigan, USA (1965 - 1966) ; Karolinska Nobel Institute, Sweden (1971 - 1974) ; University of Bonn, FRG (1975, 1978 & 1981) ; and University of Hamburg, FRG (1986). Attended many conferences in Egypt, Greece, Sweden, FRG, USA, France, Canada, UK, Austria, Mexico, Hungary, Czechoslovakia and Iran. Author of over 136 scientific papers in national and international journals.



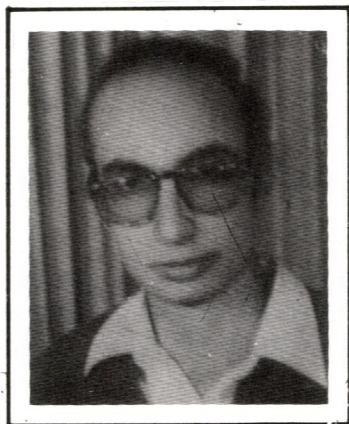
*Prof. Dr. Josephine Metri Michael*

Prof. Michael, Research Professor of Organic Chemistry, was born on March 8, 1945, in Giza. She studied Chemistry and Zoology at Cairo University, where she obtained her B.Sc. in 1966, M.Sc. in Organic Chemistry from the same university in 1971 and the Ph.D. from Ain-Shams University in 1976.

Prof. Michael held the following positions at NRC :

- Research Assistant, Laboratory of Medicinal Chemistry, 1969
- Researcher, the same Laboratory, 1976.
- Associate Research Professor, 1981.
- Research Professor since 1986.

She has been engaged in a number of research projects in the field of production of important drug materials and eradication of Schistosomiasis. She is the author of more than 30 publications in national and international journals and conferences in the field of synthetic medicinal organic chemistry, Member of a number of scientific societies. Granted two fellowships to the USA in 1983 and in 1986.



*Prof. Dr. Mohsen*

*Mohammed Kamel Saeed*

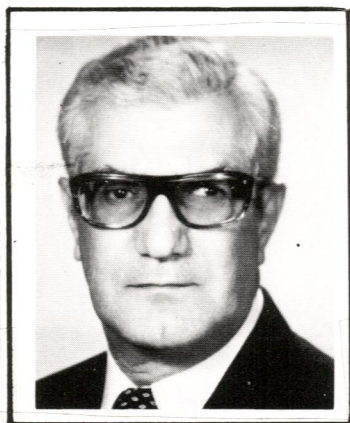
Prof. Saeed, Research Professor and Head of Therapeutical Chemistry Department, was born on August 1st, 1944 in Damietta, Egypt. He studied Chemistry at Cairo University, where he obtained his B.Sc. in 1965. He obtained M.Sc. in Organic Chemistry from Cairo University in 1971. In 1976 he obtained his Ph.D. from Ain-Shams University.

Prof. Saeed held the following positions at NRC :

- Research Assistant, Laboratory of Medicinal Chemistry, 1971.
- Researcher, the same laboratory, 1976.
- Associate Research Professor, 1982.
- Research Professor, 1987.
- Head of the Therapeutical Chemistry Department, since June 1988.

He has been engaged in a number of research projects in the field of production of important drug materials and eradication of Schistosomiasis. He is the author of more than 40 publications in national and international journals and conferences in the field of synthetic medicinal organic chemistry. He is a member of a number of scientific societies. Prof. Saeed is a member of the Patent Office, ASRT, since 1980 till now.





*Prof. Dr. Mohamed Baha-Eldin Fayez*

Prof. Fayez Research Professor, Emeritus, was born on 4 February, 1927, Cairo. He obtained his B.Sc. (Chemistry) from Alexandria University in 1948, and Ph.D. (Chemistry of Natural Products) from Glasgow University in 1956.

His first research appointment was at the National Research Centre, where he founded the Department of Chemistry of Natural Products, and in 1975 became the first Head of the Pharmaceutical (Drug) Industries Research Division. He directed many M.Sc. and Ph.D. theses and authored more than 90 research publications. The main areas of his research were concerned with the chemistry of the natural and synthetic products belonging to the groups of coumarins, chromones, steroids, alkaloids and terpenoids, in addition to contributions in the fields of phytochemical screening of local flora, mass spectrometry and nuclear magnetic resonance spectroscopy.

An important proportion of his research was so designed and directed as to achieve practical goals of relevance to the pharmaceutical industry. Some of the results obtained constituted the subject matter of six patents, of which one relates to the discovery and manufacture of one of the most effective urinary tract medicines in actual use today. He also organized and managed a major national project for the development of industrial know-how for several synthetic pharmaceutical chemicals. This project engaged the participation of several research groups in the National Research Centre and was implemented in close collaboration with the local pharmaceutical industry for the direct application of its results. He also served, on several occasions, as consultant to some local pharmaceutical companies.

Prof. Fayez's career includes an important phase in which he held positions of high responsibility as a science and technology executive. This

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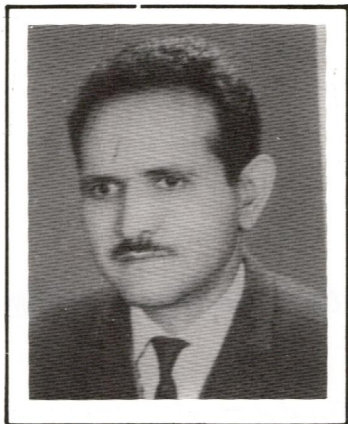
comprised a period (started in 1976) of more than eight years during which he was Vice-President of the Academy of Scientific Research and Technology, and another (started in 1984) during which he was Director of the National Research Centre, a position which he held until he reached the age of retirement (60 years) in 1987.

An important development in his professional career resulted from his participation in major national and international efforts in the area of technology policy and technological development as a central issue in socio-economic development. At the national level, his activities included participation in the deliberations and studies which culminated in the formation of Egypt's National Technology Policy, released in 1984, and in those related to national action in the area of transfer of technology. He also founded and directed Egypt's UNDP-supported "Transfer of Knowledge Through Expatriate Nationals" programme, since 1980, counted as one of the most successful in the world.

As an official representative of Egypt, as well as in personal capacity, he took part in most of the international and United Nations functions related to technological transformation and transfer of technology for the benefit of developing countries. He was the Chairman of the United Nations (General Assembly) Intergovernmental Committee on Science and Technology for Development (New York) and of UNCTAD's Committees on Transfer of Technology and Reverse Transfer of Technology (Geneva). He served on several occasions, as consultant to, and on behalf of, the United Nations in the field of technology policies (as related to technology generation and transfer), and was UNCTAD's Chief Advisor in the implementation of a project in Zembabwe in the field of technological development. As related to, and for the purpose of, these activities he authored many reports and studies in the field of technology policies and their relevance to socio-economic development.

Prof. Fayez received national recognition in the field of scientific research by being awarded the State Prize for Chemistry (1966). He was also honoured by the award of the Order of the Republic, the Order of the Sciences and Arts, the Gold Medal of the National Research Centre for Outstanding Achievement, and the First Prize and Gold Medal of the Egyptian Patent Office. His received international recognition included several honorary society memberships, many high-level scholarships, and visiting professorships at several universities in the U.S.A., the U.K. and Germany. He is currently founding Member of the Islamic Academy of Sciences, Member of the Egyptian Academy of Sciences, and Member of the Institut d'Egypte. He was the awardee of the 1982 Prize for Islamic Medicine by the Kuwait Foundation for the Advancement of Science, the

1984 World Intellectual Property Organization Prize and Gold Medal for an outstanding invention, and several other honours.



*Prof. Dr. Ahmed Fakhry Aboulezz*

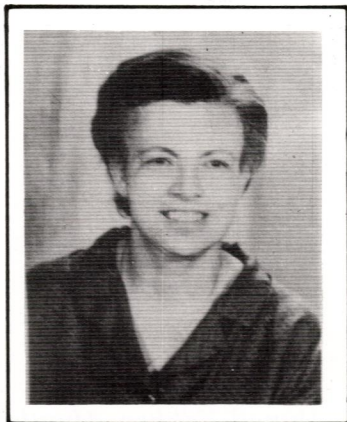
Prof. Aboulezz, Research Professor Emeritus, Department of Chemistry of Natural Products, NRC, was born on September 10, 1927, Damietta, Egypt. Graduated from Cairo University in 1951, with B.Sc. in Chemistry. Granted Doctorat d'Etat from France, Paris in 1955.

Prof. Aboulezz held the following positions at NRC :

- Research Assistant, 1958 - 1959.
- Researcher, 1959 - 1965.
- Associate Research Professor, 1965 - 1973.
- Research Professor, 1973 - 1987.
- Head of Pharmaceutical Industrial Research Division, 1980 - 1982.
- Professor Emeritus, since September 1987.

He participated in a number of research projects : "Development in the production of xanthotoxin and khellin from Ammi plants and synthesis of psoralenes", NRC and Memphis Chemical Company (1971 - 1975) ; and "Preparation of selected pharmaceutical chemicals" (1982), the results of which are applied on production scale at El-Nasr Company for Pharmaceutical Chemicals (Agreement signed in 1985 between NRC and El-Nasr Company). Granted several short scientific visits to pharmaceutical industrial companies in USA (July - August, 1983), and in India (February 1985), and a post-doctoral research fellowship to Organic Chemistry Institut, Seged University, Hungary (1963 - 1964). Offered consultative and advisory services to ASRT and pharmaceutical companies. Supervised graduate students for M.Sc. and Ph.D. degrees. Author of many papers published in national and international journals and conferences.





*Prof. Dr. Orchidee Hassan Hishmat*

Prof. Hishmat, Research Professor, Department of Chemistry of Natural Products, NRC, was born on May 9, 1930. Married with two children. Graduated from Fouad 1st University (Cairo University), in 1951, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in 1954 and 1957. Obtained Certificate in "Feasibility Studies and Project Evaluation" from American University in Cairo in 1976.

Prof. Hishmat held the following positions :

- Demonstrator, Chemistry Department, Faculty of Science, Cairo University, 1951 - 1957.
- Researcher, Pharmaceutical Chemistry Unit, NRC, 1957 - 1963.
- Associate Research Professor, same unit, 1963 - 1971.
- Research Professor, Chemistry of Natural Products Department, since 1971.
- Chairman of the same department, since 1976.

She participated in several research projects. Supervised over 26 M.Sc. and 15 Ph.D. theses already awarded from Egyptian universities. Member of research fellowship to Zurich University (1958 - 1960), and post-doctoral fellowship (Cancer Research) to University of Wisconsin, Madison, Wisconsin, USA (1962 - 1963). Attended several national and international conferences and symposia in Egypt, USA, FRG and France in the fields of heterocyclic chemistry, medicinal chemistry, natural products, and organic synthesis. Author of over 100 papers in the field of synthetic chemistry and pharmaceutical chemistry, published in national and international journals. Visited Curie Institute, Paris, in 1974, and Konstanz University, FRG in 1988. Member of several scientific societies : Egyptian Chemical Association, Indian Chemical Society, European Pharmaceutical Chemistry Society, and Heterocyclic Chemistry Society (USA). Awarded the Honorary Golden



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Medal, NRC (1980), and the NRC Prize for Scientific Contribution (1986) (for Senior NRC Scientists). Biographee : Who's Who in the World, 6th Ed. (1982 - 1983), and Marquis Who's Who (1984).



*Prof. Dr. Abdel-Moniem Hassan  
El-Refai*

Prof. El-Refai, Research Professor of Industrial Microbiology at the Natural and Microbial Products Chemistry Research Department, was born on March 23, 1935, Mehalla El-Kobra, Egypt. Married with three children. He studied at Ain-Shams University, Faculty of Science, and obtained his B.Sc. in Chemistry and Botany in 1958. In 1961, he was granted his M.Sc. degree in Microbiology from the same university. He obtained his Ph.D. degree in Microbiology from Faculty of Science, Cairo University in 1964.

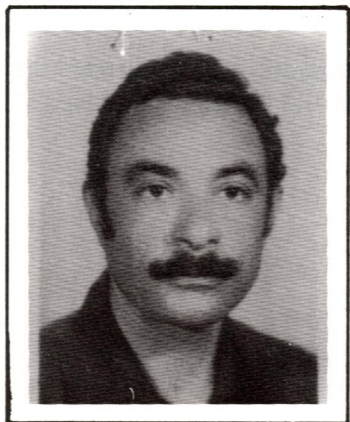
Prof. El-Refai held the following positions at NRC :

- Scholarship at the Microbiological Chemistry Research Unit, 1958 - 1961.
- Research Assistant, 1961 - 1966.
- Researcher, 1966 - 1971.
- Associate Research Professor, 1971 - 1976.
- Research Professor, since 1976.

Prof. El-Refai has participated in a number of research projects such as : “Systems Analysis of Mediterranean Desert Eco Systems of Northern Egypt (joint project between Alexandria University and Utah State University, USA, 1973 - 1974), and “Utilization of Cane Sugar Bagasses” (joint project between NRC and US Department of Agriculture). He is the author of more than 120 scientific publications in national and international journals and conferences in the fields of Microbial physiology, biochemistry and fermentation industries. Supervisor of over 32 M.Sc. and Ph.D. theses. He is a member of the Botanical Society, the Society of Applied Microbiology, the Chemical Society of Egypt, and Basic Sciences Council of the Academy of Scientific Research and Technology. He was awarded the State Prize in Biology in 1970, as well as the First Class Medal of Science and Art for his contribution in Microbiological Sciences in 1974. Awarded

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the NRC Prize of Scientific Distinction in Biology in 1986. He directed the Local Research Projects Office of NRC (1985 - 1987). He is in charge of the Technical Office, NRC, since June 1988.



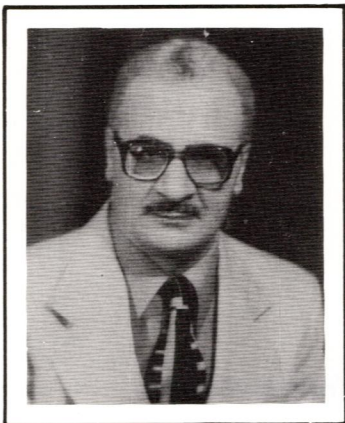
*Prof. Dr. Ahmed Fouad Abdel-Fattah*

Prof. Abdel-Fattah, Research Professor at the Department of Natural and Microbial Products, was born on April 19, 1935, Alexandria, Egypt. Married. He obtained his B.Sc. degree in Chemistry and Botany from Faculty of Science, Alexandria University in 1956. He was granted the M.Sc. from Faculty of Science, Cairo University in 1962. He obtained his Ph.D. degree from the same university in 1966 on the pectic substances and their enzymatic degradation.

Prof. Abdel-Fattah held the following positions at NRC :

- Research Assistant, Laboratory of Microbial Chemistry, 1957 - 1966.
- Researcher, 1966 - 1972.
- Associate Research Professor, the same laboratory, 1972 - 1977.
- Research Professor, Department of Natural and Microbial Products, since 1977.

He participated in a number of research projects. He was the Principal Investigator of a joint Egyptian-American research project entitled "Utilization of Cane Sugar Bagasses" (1977 - 1981). Prof. Abdel-Fattah is the author of more than 94 publications in national and international journals and conferences. He also supervised 16 M.Sc. and 11 Ph.D. theses in the field of Biological Sciences. Prof. Abdel-Fattah was granted a number of fellowships and short visits abroad, namely, to United Kingdom and United States of America. He was awarded the State Prize for Biological Sciences in 1973.



*Prof. Dr. Lotfy Abdel-Raouf Sallam*

Prof. Sallam, Research Professor of Natural and Microbial Products, NRC, was born on September 10, 1934. Married. Graduated from Ain-Shams University in 1959, with B.Sc. in Chemistry (Special Degree). Awarded the M.Sc. and Ph.D. from Cairo University in Applied Organic Chemistry in 1964 and 1967, respectively.

Prof. Sallam held the following positions :

- Research Scholarship, NRC, 1959 - 1962.
- Research Assistant, NRC, 1962 - 1967.
- Researcher, NRC, 1967 - 1973.
- Associate Research Professor, NRC, 1974 - 1979.
- Research Professor, NRC, since 1979.

He participated in several research projects : “System analysis of Mediterranean desert ecosystems of northern Egypt, Environment Protection Agency, (USA) Alexandria University ; “Utilization of canesugar bagasses”, NRC-US Department of Agriculture (1977 - 1981) ; and continuation of the latter as internal project (1983 - 1985). Supervised graduate students research work, seven Ph.D. degrees and 12 M.Sc. degrees already awarded from Egyptian universities. Granted several fellowships abroad : Alexander von Humboldt (1975 - 1979) at Institute of Microbiology, Hannover (FRG) ; US Department of Agriculture (1979) and FRG (1986). Author of over 80 publications in national and international journals in the fields of Microbial Transformations of Steroids, Biochemical Studies on Alkaloid Biosynthesis in Fungi, and Chemical Composition of Plant Products. Member of Egyptian Society of Microbiology, and Syndicate of Scientific Professions of Egypt. Awarded the state Prize for Biological Sciences in 1970, and the NRC Prize of Scientific Contribution in Biology, 1988.





*Prof. Dr. Mohamed Hany*

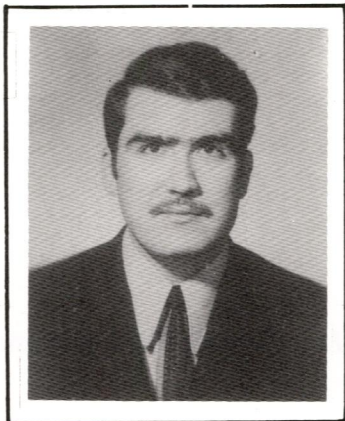
*Abdel-Moneim Elgamal*

Prof. Elgamal, Research Professor, Department of Natural Products, NRC, was born on June 23, 1939, Damietta, Egypt. Married. Graduated from Cairo University in 1960, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in the field of Organic Chemistry of Natural Products in 1965 and 1967, respectively.

Prof. Elgamal held the following positions at NRC :

- Research Scholar, 1960 - 1965.
- Research Assistant, 1965 - 1967.
- Researcher, 1967 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor, since January 1979.

He participated in a number of NRC research projects and one joint project with FRG entitled "The natural constituents of some plants used in Egyptian folk medicine", with Ruhr Univ. Bochum. Granted several fellowships abroad : Alexander von Humboldt, FRG (1970 - 1972), (1976 - 1977) and (1985), and to Academy of Science, DDR (1976). Author of Patent No. 10059, on extraction of effective ingredients in *Cymbopogon proximus* Staph., ASRT (1975). Author of over 52 papers published in national and international journals and conferences. Supervised several graduate students, 13 already awarded M.Sc. and Ph.D. degrees from Egyptian universities, two more are still underway. Member of Egyptian Chemical Society, Faculty of Science Graduates Society, Syndicate of Scientific Professions of Egypt, and "Gesellschaft für Arzneipflanzenforschung", FRG.



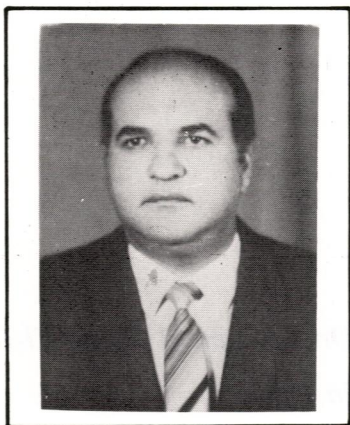
*Prof. Dr. Mohamed Magd El-Din  
Hussein Darwish*

Prof. Darwish, Research Professor of Biochemistry, Department of Natural and Microbial Products, NRC, was born on October 30, 1943, Damanhour, Egypt. Married. Graduated from Cairo University, Faculty of Agriculture, in 1964, with B.Sc. in Biochemistry. Awarded the Diploma in Microbiology, M.Sc. and Ph.D. in Biochemistry from the same university in 1966, 1970 and 1973, respectively.

Prof. Darwish held the following positions :

- Assistant Researcher, El-Nasr Company for Pharmaceutical Chemicals, Abou-Zaabal, 1964 - 1966.
- Research Assistant, Laboratory of Microbial Chemistry, NRC, 1966 - 1973.
- Researcher, Laboratory of Natural Products, NRC, 1973 - 1978.
- Associate Research Professor, same laboratory, 1978 - 1983.
- Research Professor, NRC, since 1983.

He participated in several research projects. Supervised graduate students, for two Ph.D. and five M.Sc. degrees in the field of Biochemistry. Author of over 40 papers. Member of a number of societies and syndicates.



*Prof. Dr. Farouk Ali Hamissa*

Prof. Hamissa, Research Professor of Microbiology, Natural Products Chemistry Department, NRC, was born on January 1, 1937. Married with two children. Graduated from Cairo University in 1961, with B.Sc. in Chemistry and Botany. Awarded M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1966 and 1971, respectively.

Prof. Hamissa held the following positions :

- Research Assistant, NRC, 1961 - 1973.
- Researcher, NRC, 1973 - 1978.
- Associate Research Professor, 1978 - 1985.
- Research Professor, NRC, since 1985.

He participated in a number of research projects. Granted a post-doctoral fellowship to Czechoslovakia in 1971. Attended several conferences in Egypt and Czechoslovakia. Offered consultancy services and carried out feasibility studies to several pharmaceutical and chemical companies. Supervised one M.Sc. and two Ph.D. theses. Member of Botanical Society of Egypt ; Society of Applied Microbiology of Egypt and Chemical Society of Egypt.



*Prof. Dr. Nadia Naim Ahmed*

Prof. Naim, Research Professor of Natural and Microbial Products of Industrial Fermentation, NRC, was born on July 10, 1942. Graduated from Ain-Shams University in 1964, with B.Sc. in Chemistry and Botany. Obtained M.Sc. in Botany and Microbiology from Cairo University in 1970. Awarded Ph.D. in the same field from Ain-Shams University in 1973.

Prof. Naim held the following positions :

- Scholarship, NRC, 1965 - 1966.
- Research Assistant, NRC, 1966 - 1973.
- Researcher, NRC, 1973 - 1979.
- Associate Research Professor, NRC, 1979 - 1985.
- Research Professor, NRC, since 1985.

She participated in a number of research projects : “Utilization of cane sugar bagasses”, NRC and US Department of Agriculture (1977 - 1981) ; and “Utilization of Egyptian sugar cane bagasses” (1982 - 1984). Author of over 40 publications in national and international journals. Supervised four Ph.D. and six M.Sc. theses. Member of a number of scientific professional societies and syndicates.



*Prof. Dr. Khairia Mohamed  
Ahmed Khalil*

Prof. Khalil, Research Professor of Applied Organic Chemistry, Department of Natural Products, NRC, was born in Cairo, Egypt. Married with three children. Graduated from Cairo university in 1961, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1966 and 1972, respectively.

Prof. Khalil held the following positions at NRC :

- Research Assistant, 1961 - 1972.
- Researcher, 1972 - 1978.
- Associate Research Professor, 1978 - 1986.
- Research Professor, since 1986.

She participated in several research activities covering the synthesis and reactions of heterocyclic compounds, the studying of reactions and mechanisms in organophosphorus compounds. Granted two post-doctoral fellowships from DAAD to Institut of Organic Chemistry, Erlangen-Nürnberg University (FRG), 1979 and 1986 respectively. Supervised research work for M.Sc. and Ph.D. degrees. Author of a number of papers published in specialized national and international journals and conferences. Member of Association of Graduates of Faculty of Sciences of Egypt and Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Nabila Mohamed Attia  
El-Ebrashi*

Prof. El-Ebrashi, Research Professor, NRC, was born on March 3, 1944. Graduated from Cairo University in 1964, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1968 and 1973, respectively.

Prof. El-Ebrashi held the following positions :

- Scholarship, Synthetic Pharmaceutical Chemistry Department, NRC, 1964.
- Research Assistant, NRC, 1965 - 1973.
- Researcher, NRC, 1973 - 1978.
- Associate Research Professor, NRC, 1978 - 1986.
- Research Professor, NRC, since 1986.

She was granted several scholarships and fellowships abroad : FRG (1966), and France (1970), (1976 - 1977). Attended several conferences in Egypt, Tunisia, Hungary and Poland. Supervised post-graduate students for five M.Sc. and three Ph.D. degrees, ongoing one M.Sc. and one Ph.D. Published several papers in specialized journals. Member of El-Shoura Council 1980-1989. Member of Egyptian Chemical Association ; Association of Science Graduates ; and Scientific Women Association. Awarded the 1st Degree Award of Science and Arts (1981).



*Prof. Dr. Ezz El-Din Ahmed*

*Mohamed El-Khrisy*

Prof. El-Khrisy, Research Professor of Chemistry of Natural Products, NRC, was born on January 3, 1942, Qena, Egypt. Married. Graduated from Assiut University in 1963, with B.Sc. in Chemistry and Physics. Obtained M.Sc. and Ph.D. in Organic Chemistry from Cairo University in 1969 and 1976, respectively.

Prof. El-Khrisy held the following positions :

- Research Assistant, NRC, 1965 - 1976.
- Researcher, NRC, 1976 - 1981.
- Associate Research Professor, NRC, 1981 - 1986.
- Research Professor, Natural Products Laboratory, NRC, since 1986.

He participated in a number of research projects. Supervised graduate students, three awarded Ph.D. degrees and 15 M.Sc. degrees. Author of over 35 publications in the fields of natural products (Coumarins and Furocoumarins) and related analytical techniques : Chromatography, IR, UV, MS and NMR Spectroscopy. Member of a number of scientific societies.





## TEXTILE INDUSTRIES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — SPINNING AND WEAVING.
- 2 — PRETREATMENT AND FINISHING  
OF CELLULOSIC FIBRES.
- 3 — DYEING, PRINTING AND TEXTILE AUXILIARIES.
- 4 — PROTEIN AND SYNTHETIC FIBRES.



*Prof. Dr. Mona Moustafa Kamel*

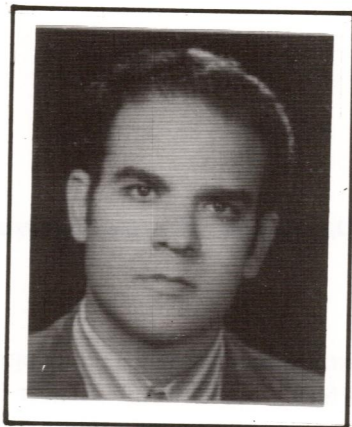
Prof. Kamel, Research Professor of Textile Chemistry and Technology, and Head of the Textile Research Division NRC, was born on October 6, 1939, Cairo, Egypt. Married with two children. Graduated from Cairo University in 1960 with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1963 and 1967, respectively.

Prof. Kamel held the following positions :

- Scholarship, Dyeing and Finishing Laboratory, NRC, 1960 - 1961.
- Research Assistant, same laboratory, NRC, 1960 - 1967.
- Researcher, same laboratory, 1967 - 1974.
- Associate Research Professor, same laboratory, 1974 - 1979.
- Research Professor, same laboratory, since 1979.
- Head of the Textile Research Division, NRC, since 1988.

She participated in some national and foreign research projects, e.g., "Mechanisms of degradation of cotton and effects of mercirization-stretching upon the course of these mechanisms" ; "Chemical factors affecting soil release from cotton containing durable press fabrics" ; "Production of fabrics from Egyptian polyester and its blends with natural fibres" ; and ongoing project "Development of sizing agents and sizing operation in textile industry". Participated in solving many industrial problems. Awarded several fellowships and research grants abroad : Alexander Von Humboldt, Textile Research Institute, Krefeld (FRG), and Institute of Spectroscopy (ISAS), Dortmund (FRG). Attended several national, regional and international conferences in the field of dyeing of fibres, held in Hungary, FRG and Egypt. Supervised a number of post-graduates for M.Sc. and Ph.D. theses. Published over 50 publications in international journals. Member of some scientific societies and syndicates.





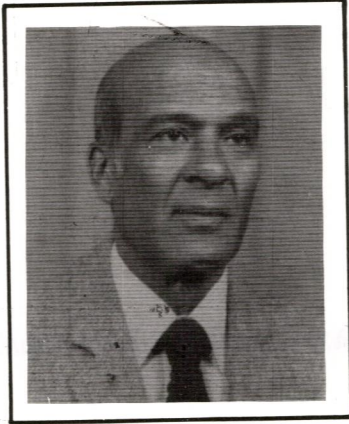
*Prof. Dr. Sami Abdel-Kader Mansour*

Prof. Mansour, Research Professor of Textile Engineering and Technology, NRC, was born on November 30, 1943, Gharbia, Egypt. Graduated from Alexandria University in 1967, with B.Sc. in Textile Engineering. Awarded the M.Sc. from the same university in Textile Engineering in 1971. Awarded the Ph.D. in Textile Engineering and Technology from Leeds University, UK, in 1975.

Prof. Mansour held the following positions :

- Engineer, NRC, 1967 - 1969.
- Research Assistant, NRC, 1969 - 1975.
- Researcher, NRC, 1975 - 1980.
- Associate Research Professor, NRC, 1980 - 1986.
- Research Professor, NRC, since 1986.
- Head of the Spinning and Weaving Department, NRC, 1988.

Prof. Mansour participated in two research projects ; “The behaviour of Egyptian cottons towards chemical treatments and new technology” and “Production of fabrics from Egyptian polyester and its blends with natural fibres”. Author of some papers published in national and international journals, and of some books in the textile field. Supervisor of some M.Sc. and Ph.D. theses. Participated in establishment of the pilot unit for spinning and weaving, NRC. Attended some conferences, symposia and meetings in Egypt and UK. Member of some scientific societies and syndicates.



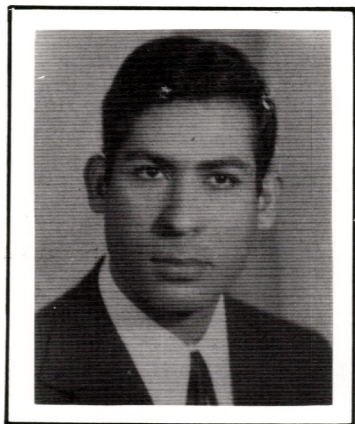
*Prof. Dr. Hussein Ibrahim Nasr*

Prof. Nasr, Research Professor, Textile Research Division, NRC, was born on January 14, 1933. Graduated from Cairo University in 1960, with B.Sc. in Chemical Biology. Awarded M.Sc. in Dyestuffs Syntheses in 1966, and Ph.D. in Polymerization Kinetics from the same university in 1969 (in collaboration with the Hungarian Textile Institute).

He held the following positions at NRC :

- Researcher, 1970 - 1975.
- Associate Research Professor, 1975 - 1980.
- Research Professor in Application of High-Energy Radiation in Textile Finishing, since 1980.

Granted a diploma in Industrial Radiation Technology (1970) ; a diploma in R & D Marketing from Denver Research Institute, Colorado, USA (1979), and two diploma in Health and Safety in 1983 and 1984. Assumed the posts of Head of Textile Research Department (1983 - 1985) ; Head of Preparation and Finishing of Cellulosic Fibres Laboratory, since 1985 ; and Head of NRC Health and Safety Committee (1983 - 1987). Supervised M.Sc. and Ph.D. theses on Radiation Chemical Finishing of Textiles. He was in charge of the Engineering and Maintenance Department, NRC (1981 - 1987). Member of the Egyptian Supreme Council for Safety and Occupational Health (1987). Published over 33 scientific and technical papers in national and international journals and conferences. Member of several national sporting federations and councils. Member of Giza City Popular Council, for 1988 - 1992 term.



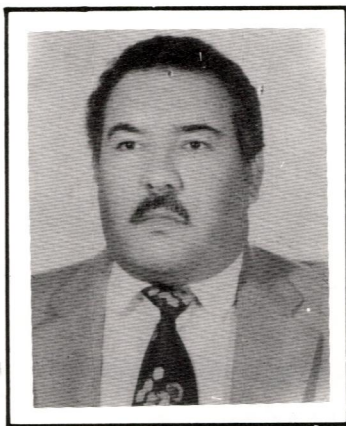
*Prof. Dr. Mohamed Ibrahim Khalil*

Prof. Khalil, Research Professor of Textile Chemistry and Technology, NRC, was born on July 6, 1942, Zagazig, Egypt. Married with three children. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Geology. Awarded the M.Sc. and Ph.D. from the same university in Applied Chemistry in 1968 and 1971, respectively.

Prof. Khalil held the following positions :

- Research Fellow, NRC, 1964 - 1968.
- Research Assistant, NRC, 1968 - 1972.
- Researcher, NRC, 1972 - 1977.
- Associate Research Professor, NRC, 1977 - 1982.
- Research Professor, Textile Research Division, NRC, since 1982.

He participated in some national and foreign research projects. Published over 50 papers in international journals and conferences in the field of applied chemistry. He supervised some M.Sc. and Ph.D. theses. Participated in some industrial research projects. Delegated to Hungarian Textile Institute (1968 - 1970). Member of Egyptian Chemical Society and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed Hussein  
El-Rafei*

Prof. El-Rafei, Research Professor of Textile Chemistry and Technology, Textile Research Division, NRC, was born on May 24, 1942, Egypt. Married, with three children. Graduated from Cairo University in 1964 with B.Sc. in Chemistry and Physics. Granted the M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1969 and 1972, respectively.

Prof. El-Rafei held the following positions :

- Research Assistant, NRC, 1965 - 1972.
- Researcher, NRC, 1972 - 1977.
- Associate Research Professor, NRC, 1977 - 1982.
- Research Professor of Textile Chemistry and Technology, Textile Research Division, NRC, since 1982.

Prof. El-Rafei participated in a number of research projects dealing with chemical pretreatment of cotton fabrics, financed by ASRT, Agriculture Department (USA), and by local textile factories. Published several papers in specialized journals. Member of a number of societies and Syndicate of Scientific Professions of Egypt.





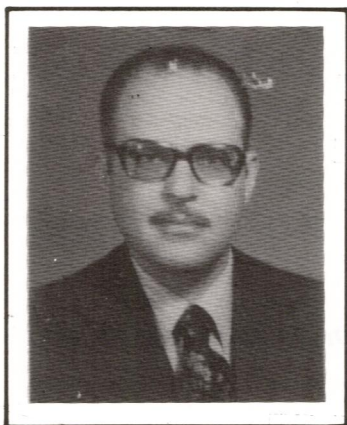
*Prof. Dr. Nabil Youssrie  
Abou-Zeid Mahmoud*

Prof. Abou-Zeid, Research Professor of Textile Chemistry and Technology, Textile Research Division, NRC, was born on October 1, 1940, Cairo, Egypt. Married with two children. Graduated from Cairo University in 1962, with B.Sc. in Chemistry and Physics. Obtained the M.Sc. in Applied Chemistry from the same university in 1966. Awarded the Ph.D. in Textile Chemistry from Aachen University, FRG, in 1972.

Prof. Abou-Zeid held the following positions at NRC :

- Research Assistant, 1962 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor, Textile Research Division, since 1983.

He participated in a number of research projects financed by ASRT, Agriculture Department, USA, and some textile factories. Author of several papers published in national and international journals. Took part in solving some industrial problems in the field of textiles. Member of a number of scientific societies. Member of the ASRT Technical Office since 1984, and co-ordinator of the ASRT — specialized committee on Textile-Fibre Future in Egypt.



*Prof. Dr. Ahmed Tawfik El-Aref*

Prof. El-Aref, Research Professor, Textile Research Division, NRC, was born on October 3, 1941, Sohag, Egypt. Married with two children. Graduated from Assiut University in 1964, with B.Sc. in Chemistry and Geology. Awarded the M.Sc. and Ph.D. in Applied Organic Chemistry from Cairo University in 1970 and 1974, respectively.

Prof. El-Aref held the following positions :

- Research Scholarship NRC, 1964 - 1965.
- Research Assistant, NRC, 1965 - 1974.
- Researcher, NRC, 1974 - 1979.
- Associate Research Professor, NRC, 1979 - 1984.
- Research Professor, NRC, since 1984.

Prof. El-Aref participated in the current research programs, Textile Research Division. Participated in two research projects sponsored by US Department of Agriculture, and others sponsored by ASRT and Textile Industry. Visited a number of research institutions in Spain and UK. Author of several papers published in national and international journals. Member of a number of societies and NRC committees.



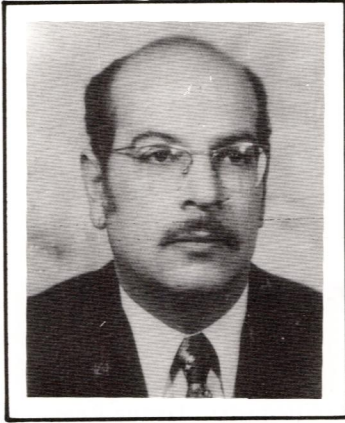
*Prof. Dr. Ekhlass Abd-Rabbo  
El-Alfy*

Prof. El-Alfy, Research Professor of Textile Chemistry and Technology, Textile Research Division, NRC. Married with three children. Graduated from Cairo University in 1969, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. in Applied Chemistry from the same university in 1971 and 1976, respectively.

Prof. El-Alfy held the following positions :

- Research Assistant, NRC, 1966 - 1976.
- Researcher, NRC, 1976 - 1981.
- Associate Research Professor, NRC, 1981 - 1986.
- Research Professor, NRC, since 1986.

She participated in a number of research projects financed by ASRT and US Department of Agriculture. Published over 43 papers in specialized journals covering the chemical modification of cotton and other related subjects. Member of a number of societies. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1984 (for NRC young scientists).



*Prof. Dr. Mohamed Aly Allam*

Prof. Allam, Research Professor, Head of Dyeing, Printing and Textile Auxiliaries Department, NRC, was born on February 7, 1933. Married with two children. Graduated from Cairo University in 1954 with B.Sc. in Chemistry. Awarded the M.Sc. in 1957, and Ph.D. from High School, Aachen, West Germany in 1960.

Prof. Allam held the following positions :

- Assistant, Faculty of Engineering, Ain-Shams University 1954 - 1958.
- Member of a mission of NRC Egypt in West Germany 1958 - 1962.
- Researcher, NRC, 1960 - 1964.
- Associate Research Professor, NRC, 1964 - 1972.
- Research Professor, NRC, since 1972.
- Head of Textile Research Division, NRC, 1972 - 1980.
- Advisor of Ministry of High Education, Saudi Arabia, 1981 - 1988.
- Head of Dyeing, Printing and Textile Auxiliaries Department, NRC, since 1988.

He participated in some national and foreign research projects, financed by ASRT and Agriculture Department USA in the field of textile chemistry. Awarded several fellowships and research grants abroad. Attended several national, regional and international conferences in the field of dyeing of fibres. Supervised a number of post-graduates for M.Sc. and Ph.D. theses. Member of some scientific societies and syndicates. Published over 50 papers and patents in national and international journals in the field of synthesis and application of dyestuffs.





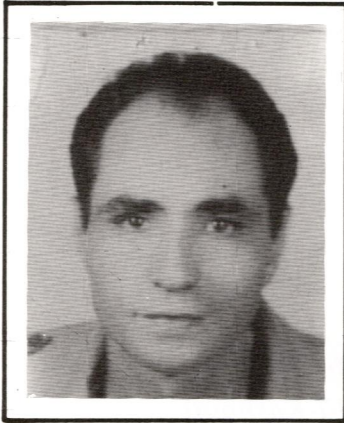
*Prof. Dr. Sanaa Ahmed Amin*

Prof. Amin, Research Professor of Textile Chemistry, Textile Research Division, NRC, was born on November 22, 1937, Dakahlia, Egypt. Married. Graduated from Ain-Shams University in 1959, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in 1963 and 1967, respectively.

Prof. Amin held the following positions :

- Scholarship, NRC, 1960 - 1962.
- Research Assistant, NRC, 1962 - 1967.
- Researcher, Textile Research Department, NRC, 1967 - 1973.
- Associate Research Professor, same department, 1973 - 1980.
- Research Professor, same department, since 1980.

She participated in several NRC research projects on finishing, dyeing and printing of cotton, wool and synthetic fibres ; Chemical modification of fibres ; Development of chemical treatment of fabrics ; and Technological studies on dyeing and printing of textiles. Involved in contracts with production sector : “Cairo for Dyeing and Finishing” ; “Shourbagy” ; and “Establishment for Silk and Cotton (ESCO)”. Also participated in two projects financed by USDA and JICA (Japan). The latter designed to upgrade the Textile Research Division and establishment of a pilot for spinning, weaving and knitting. Offered many services, consultations and technical reports submitted to NRC and related specialized committees. Attended many conferences, seminars and symposia in Egypt. Granted several fellowships and scientific visits to different universities, institutions and research centres abroad : England, Netherlands, USA, Australia, FRG and Switzerland. Member of Egyptian Chemical Society and Syndicate of Scientific Professions of Egypt. Awarded the Golden Medal and Certificate of Merit (NRC) in 1982.



*Prof. Dr. Ibrahim Abd El-Thalouth  
Hermina*

Prof. Hermina, Research Professor of Textile Printing Chemistry and Technology, Textile Research Division, NRC, was born on May 25, 1940, Assiut, Egypt. Married with three children. Graduated from Assiut University in 1963 with B.Sc. in Chemistry and Geology. Awarded the M.Sc. and Ph.D. from Cairo University in Applied Organic Chemistry in 1968 and 1971, respectively.

Prof. Hermina held the following positions :

- Research Assistant, NRC, 1963 - 1972.
- Researcher, Textile Research Laboratory, NRC, 1972 - 1977.
- Associate Research Professor, same laboratory, NRC, 1977 - 1982.
- Research Professor, NRC, since 1982.

Prof. Hermina took part in a number of research projects in the field of chemistry and technology of textile printing and textile auxiliaries, financed by ASRT and US Academy of Science. Attended some conferences organized on national and international levels. Author of several papers published in specialized journals. Member of a number of scientific societies and syndicates.



*Prof. Dr. Madiha  
Abdou El-Kashouti*

Prof. El-Kashouti, Research Professor of Textile Printing Chemistry, and Technology NRC, was born on April 14, 1941, Alexandria, Egypt. Married with two children. Graduated from Alexandria University in 1962 with B.Sc. in Chemical Engineering. Awarded the M.Sc. and Ph.D. in the same field from Cairo University in 1967 and 1970, respectively.

Prof. El-Kashouti held the following positions:

- Research Assistant, NRC, 1962-1970.
- Researcher, Textile Research Laboratory, NRC, 1971-1978.
- Associate Research Professor, same laboratory, 1978-1983.
- Research Professor of Textile Printing Chemistry, NRC, since 1983.

Prof. El-Kashouti participated in a number of research projects financed by ASRT, different textile factories, and jointly ASRT and Agriculture Department, USA. Attended several conferences. Took part in solving some problems facing the textile industry through research projects, consultancy services and technical reports. Published several papers in specialized national and international journals. Member of some scientific societies and syndicates.



*Prof. Dr. Hanna Labib Hanna*

Prof. Hanna, Research Professor of Chemical Technology of Textile Dyeing, Textile Research Division, NRC, was born on October 16, 1941. Single. Graduated from Assiut University in 1962, with B.Sc. in Geochemistry. Awarded the M.Sc. from Cairo University in 1967 in Chemistry. Awarded the Ph. D. from Leningrad Textile Institute, USSR in 1973.

Prof. Hanna held the following positions at NRC:

- Research Assistant, 1963-1973.
- Researcher, 1973-1978.
- Associate Research Professor, 1978-1984.
- Research Professor, since 1984.

Prof. Hanna participated in several research projects in the field of textile dyeing, chemistry and technology. Published several papers in specialized journals. Member of a number of scientific societies and Syndicate of Scientific Professions of Egypt. Supervised a number of post-graduate research work for M.Sc. and Ph.D. degrees.





*Prof. Dr. Elham Abbas Elkharadly*

Prof. Elkharadly, Research Professor of Dyeing and Finishing of Textiles, Textile Research Division, NRC, was born on January 1, 1943, Tanta, Egypt. Married with two children. Graduated from Alexandria University in 1963, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in Applied Organic Chemistry in 1968 and 1973, respectively.

Prof. Elkharadly held the following positions at NRC:

- Research Assistant, 1965-1974.
- Researcher, 1974-1979.
- Associate Research Professor, 1979-1984.
- Research Professor, since 1984.

She participated in a number of research projects financed by NRC, ASRT and USA. Offered consultancy services to industrial sectors in the field of dyeing and finishing of textile. Author of over 27 papers published in specialized journals.



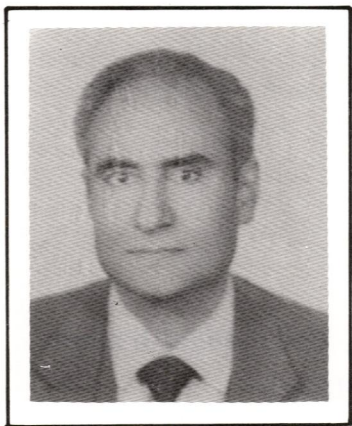
*Prof. Dr. Laila Abdel Wahab  
Ahmed Abdou*

Prof. Abdou, Research Professor of Applied Organic Chemistry, Textile Research Department, NRC, was born on July 17, 1944. Married with three children. Graduated from Cairo University in 1963, with B.Sc. in Applied Chemistry. Awarded the M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1969 and 1973, respectively.

Prof. Abdou held the following positions at NRC:

- Research Assistant, 1966-1973.
- Researcher, 1973-1979.
- Associate Research Professor, 1979-1984.
- Research Professor, since 1984.

She participated in several research projects sponsored by ASRT, NRC and USA. Shared in consultancy services offered to the industrial sector. Author of a number of papers published in specialized journals in the fields of dyeing and textile chemistry.



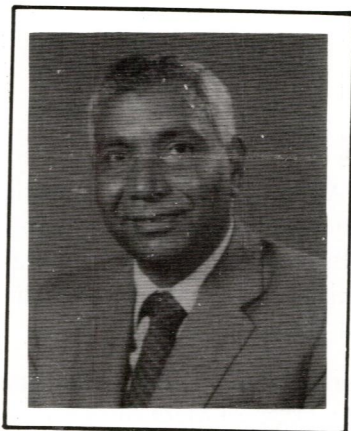
*Prod. Dr. Salah El-Din Hassanein  
Shakra*

Prof. Shakra, Research Professor of Dyeing and Dye Chemistry, Textile Research Division, NRC, was born on December 5, 1939, Kalyoubeya, Egypt. Graduated from Cairo University in 1964 with B.Sc. in Chemistry and Physics. Awarded the M.Sc. from the same university in 1969 in Applied Organic Chemistry. The Ph.D. degree was awarded to Prof. Shakra in 1975 from Mendeleev Institute, Moscow, USSR.

Prof. Shakra held the following positions at NRC:

- Research Assistant, 1965-1970.
- Researcher, 1970-1975.
- Associate Research Professor, 1975-1980.
- Research Professor, Textile Research Division, since 1980.

Prof. Shakra acted as principal investigator of the research project "Plan of industrial production of disperse dyes", financed by ASRT. Participated in another research project financed jointly by ASRT (Egypt), and Agriculture Department (USA). Author of several papers published in specialized journals dealing with chemical and physical properties of dyes and dye synthesis. Member of a number of societies and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed Kamel  
Mahmoud  
Ph.D., D.Sc.*

Born on September 5, 1926. Prof. Kamel Mahmoud studied at Cairo University where he obtained a D.Sc. in Chemistry in 1975.

He held the following positions:

- Demonstrator, Chemistry Department, Faculty of Science, Cairo University, 1948-1954.
- Lecturer 1954-1957.
- Member of a mission of NRC, Egypt, in Switzerland, 1957-1960.
- Associate Research Professor, NRC, 1960-1964.
- Research Professor, and Head of Textile Research Division, NRC, 1964-1974.
- President of NRC, 1974-1984.
- President of ASRT, 1984-1986.

and is presently a Research Professor Emeritus, NRC.

He published over 100 papers in national and international journals and conferences in the field of organic chemistry, dyestuff and textile chemistry and in science policy. He supervised the thesis work of 15 Ph.D. and 24 M.Sc. students, and authored a book in Arabic on Textile Chemistry.

After he established the first Egyptian Research Unit in Textile Chemistry in 1960, he pioneered the establishment of linkages between Research and Industry from 1960 to 1974, supervised the establishment of: Theodor Bilharz Research Institute; the Eye Diseases Research Institute, the Electronics Research Institute, and the Renewable Energy Research Station in Cairo, and introduced modern R & D management in the National Research Centre.

Holder of Alexander von Humboldt Foundation Fellowship (1967-1969). Advisor, Qatar University, Scientific and Applied Research Institute (1979-1980), and Girls Colleges Agency (SA) (Dec. 82-Feb. 83).



Prof. Dr. Kamel Mahmoud is a member of :

The Institute of Egypt, the Board of ASRT, since 1974, Scientific Council of Africa, the Board of the International Federation of Institutes of Advanced Studies, and the Board of Behring-Bilharz International Foundation. President of the Egyptian Chemical Society, and Vice-Syndic of the Syndicate of Scientific Professions of Egypt.

He was presented with the following awards : State Prize of Chemistry (1965), Order of Republic (Third Grade, 1965), Order of Merit (First Grade with Star) from FRG (1979), Order of Science and Art (First Grade, 1981), State Recognition award (1986) and Order of the Republic (First Grade, 1986).



*Pror. Dr. Abdel-Aziz*

*Mohamed Kantouch*

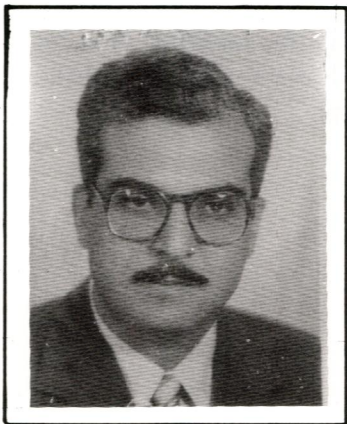
Prof. Kantouch, Research Professor Emeritus of Textile Chemical Technology, NRC, was born on March 16, 1928, Behera, Egypt. Married with five children. Graduated from Alexandria University in 1952 with B.Sc. in Chemical Engineering. Awarded the Ph.D. (Doctor Engineer) from Strassburg University, France, in 1961.

Prof. Kantouch held the following positions:

- Dyeing and Printing Division, Modern Textiles Company, 1953-1955.
- Bleaching Division, Misr Helwan Spinning and Weaving, 1955-1956.
- Assistant, Faculty of Engineering, Alexandria University, 1956.
- Research Assistant, NRC, 1956-1961.
- Researcher, NRC, 1961-1965.
- Associate Research Professor, NRC, 1965-1972.
- Research Professor, NRC, since 1972.
- Head of Spinning and Weaving Laboratory, 1974-1988.
- Head of Proteinic and Synthetic Fibres Lab. 1980-1988.
- Head of Textile Research Division, 1977-1978.

Prof. Kantouch acted as principal investigator for the following research projects of national nature: "Cotton stalk fibres"; "Behaviour of Egyptian cottons towards chemical and technical treatments"- "Improvement of wool scouring and recovery of wool wax" and "Production of fabrics from Egyptian polyester and its blends with natural fibres". Co-principal investigator of several other research projects on related subjects. Published over 75 papers and 15 industrial reports. Supervised over 30 post-graduate studies for M.Sc. and Ph.D. degrees. Establishment of the Textile Chemistry Unit at N.R.C., 1961. Supervision and establishment of the Textile Pilot Unit for Spinning and Weaving in cooperation with JICA, Japan. Long and

short term visits and fellowships to Textile Research Institutes in : France, England, Hungary, DDR, Japan, FRG, and Italy. Paid visits to many textile plants abroad: France, England, Switzerland, FRG, USA, Sweden, Italy and Hungary. Member of Egyptian Chemical Society and Syndicate of Engineers. Awarded the State Prize in Chemistry (1969); First Class Medal of Science and Art (1971); Golden Medal of NRC (1981); NRC Prize for Scientific Contribution (1985); and NRC Prize for Scientific Appreciation (1987).



*Prof. Dr. Ahmed Naim  
Abdel-Latif El-Bendak  
Ph.D., D.Sc.*

Prof. El-Bendak, Research Professor of Wool and Synthetic Fibres Chemistry and Technology, Textile Research Division, NRC, was born on July 4, 1940, Alexandria, Egypt. Married with two children. Graduated from Alexandria University in 1961, with B.Sc. in Chemistry. Awarded the M.Sc. in 1965, Ph.D. in 1969 and D.Sc. in 1989.

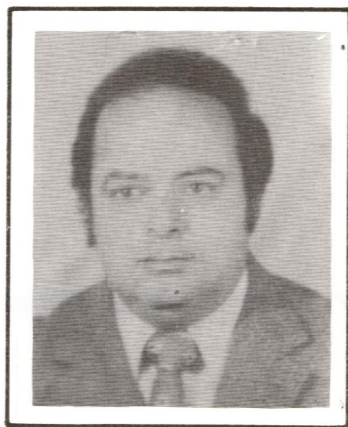
Prof. El-Bendak held the following positions at NRC :

- Research Scholarship, 1961 - 1965.
- Research Assistant, 1965 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor, Textile Research Division, since 1979.
- Head of the division, 1985 - 1987.
- Head of Proteinic and Synthetic Fibres Department since 1988.

Prof. El-Bendak participated in several research projects : “Wool scouring and wool wax recovery”. “Production of fabrics from Egyptian polyester and its blends with natural fibres”, and a number of projects sponsored by NRC dealing with cotton mercirization mechanisms and soil-release studies on cotton/polyester fabrics. Managed several technical studies and consultancy services with local textile industry. Participated in several conferences, symposia and meetings in Egypt, France and FRG. Granted the Alexander von Humboldt fellowship, FRG (1974 - 1976). Member of several Egyptian and International Scientific Societies. Paid several visits to textile departments, and factories in Western Europe and USA. Supervised several M.Sc. and Ph.D. theses. Published over 95 papers in specialized international journals. Awarded : the State Prize in Chemistry, 1978, First Class State-Medal of Science and Art, 1979, Medal of Science and Technology, NRC, 1979, Prize of Scientific Promotion, NRC, 1982,



Silver Medal from Egyptian Patent Office, ASRT, 1985 and NRC Prize for Scientific Contribution, 1988. He is a member of several scientific societies and Syndicate of Scientific Professions of Egypt.



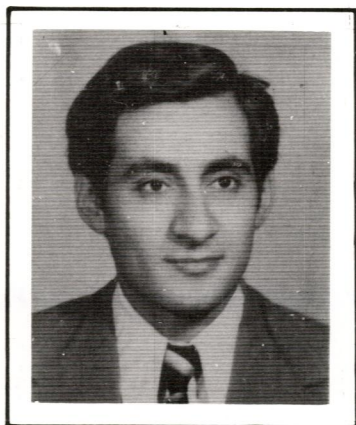
*Prof. Dr. Saleh Hamed Abdel-Fattah*

Prof. Abdel-Fattah, Research Professor of Textile Chemistry and Technology, NRC, was born on January 11, 1937, Cairo, Egypt. Married with three children. Graduated from Cairo University in 1962, with B.Sc. in Chemistry and Physics. Awarded the M.Sc. and Ph.D. from the same university in Applied Chemistry in 1967 and 1970, respectively.

Prof. Abdel-Fattah held the following positions at NRC :

- Research Assistant, 1962 - 1970.
- Researcher, 1970 - 1975.
- Associate Research Professor, Textile Research Department, 1975 - 1980.
- Research Professor, Textile Research Division, since 1980.

Prof. Abdel-Fattah took active part in research projects e.g. "Wool scouring and recovery of wool wax". Involved in some industrial contracts for dyeing and finishing of wool, cotton, flax and polyester fabrics as well as consultancy and advisory activities to textile factories. Published over 50 papers in national and international journals. Participated in conferences in the field of applied chemistry. Member of Egyptian Chemical Society and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Samy El-Sebay Shalaby*

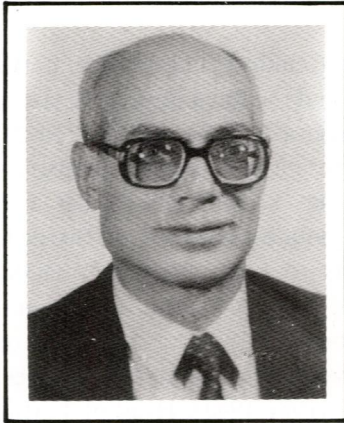
Prof. Shalaby, Research Professor of Production and Chemical Modification of Chemical Fibres, Textile Research Division, NRC, was born on September 2, 1940. Married, with one child. Graduated from Moscow Textile Institute (USSR) in 1965, with High Diploma in Chemical Fibres. Awarded the Ph.D. from the same institute in 1971.

Prof. Shalaby held the following positions at NRC :

- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor of Chemistry and Technology of Chemical Fibres, Textile Research Division, since 1983.

He participated in many research projects. Published several papers in national and international journals. Supervised a number of post-graduate research work for M.Sc. and Ph.D. degrees : “Mechanisms of degradation of cotton and effects of mercirization-stretching upon the course of these mechanisms”, “Chemical factors affecting soil release from cotton containing durable press fabrics”, “Production of fabrics from Egyptian polyester and its blends with natural fibres” and “Wool scouring and recovery of wool wax”.

Offered many services, consultations and author of technical reports submitted to NRC and related specialised committees. Member of several societies and syndicate of Scientific Professions of Egypt.



*Prof. Dr. Ali Ali Hebeish*  
*Ph.D., D.Sc.*

Prof. Hebeish, part-time Research Professor of Textile Chemistry and Technology, NRC, was born on December 21, 1936, El-Mehalla El-Kubra, Egypt. Married with two children. Graduated from Cairo University in 1960, with B.Sc. in Chemistry and Geology. Awarded the M.Sc. from the same university in 1965. The Ph.D. degree was awarded to him from Gujarat University, India, in 1968. Awarded the D.Sc. in Chemistry from Cairo University in 1983.

Prof. Hebeish held the following positions:

- Research scholarship, NRC, 1960-1961.
- Research Assistant, NRC, 1961-1967.
- Researcher, NRC, 1968-1974.
- Associate Research Professor, NRC, 1974-1979.
- Research Professor, NRC, 1979-1984.
- Under-Secretary of State for Office of the ASRT President, 1985-1988.
- Vice-President, ASRT, since 1988.

Prof. Hebeish acted as principal investigator and participated in several R & D research projects sponsored by Egyptian and foreign organisations: "Mechanisms of degradation of cotton and effects of mercirization-stretching upon the course of these mechanisms"; and "Chemical factors affecting soil release from cotton containing durable press fabrics", both sponsored by US Department of Agriculture. A third project entitled "Treatment of tents and tent fabrics to impart fire resistance properties", sponsored by Saudi Arabia. Also principal investigator for five more projects sponsored by Textile industry in the area of wet processing of cotton and polyester/cotton blend fabrics. Ongoing project "Development of sizes and sizing operation in the textile industry", sponsored by ASRT and the Textile Industry, since 1983. Established R & D Units, e.g., Textile



Research Division, NRC (1961/1962); The Cellulose Laboratory at the General Egyptian Book Organization (1970); and the Spinning and Weaving Department, Faculty of Engineering, Mansoura University (1971/1972). Granted several long and short fellowships abroad: Textile Industry's Research Association (India); textilforschung krefeld (Alexander von Humboldt Foundation, FRG) (1973-1975); Commercialization of Textile R & D Results (UK - 1977); two short visits to USA, Hungary, DDR, Netherland, Cuba, USSR, FRG, Finland, Saudi Arabia, and India. Published over 300 papers in international journals as well as a number of books in Arabic and in English. Supervised over 40 Ph.D. and M.Sc. theses. Head of the Textile Research Division, NRC (1981-1983). Head of Textile Finishing Laboratory, NRC (1981-1984). Head of the Executive Council of the Egyptian National Network for Scientific and Technical Information (1985 till now). Head of the Central Office of the National Network for Technology Development (1986 till now). Awarded the State Prize in Chemistry (1972); Order of Science and Art, 1st Grade (1974); NRC Prize in Chemistry (1982); Golden Medal, NRC (1982); Order of the Republic, 2nd Grade (1983); and Production Prize of the Republic 1985.



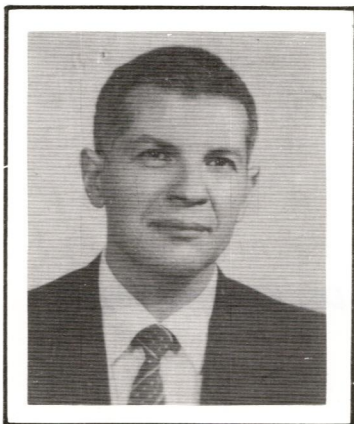


## **FOOD INDUSTRIES AND NUTRITION DIVISION**



### **RESEARCH DEPARTMENTS ( RD )**

- 1 — FOOD TECHNOLOGY AND DAIRY INDUSTRIES.**
- 2 — FATS AND OILS.**
- 3 — FOOD SCIENCE AND NUTRITION.**



*Prof. Dr. Mohamed*

*El-Husseiny Abdel-Salam*

Prof. Abdel-Salam, Research Professor, Department of Food Technology and Dairying, and Head of Food Industries and Nutrition Division was born on March 13, 1938. Married with two children. He studied at Cairo University, Faculty of Agriculture where he obtained his B.Sc. in 1957. He obtained his M.Sc. and Ph.D. from the same university in the field of Dairy Chemistry and Technology in 1960 and 1963, respectively.

Prof. Abdel-Salam held the following positions at NRC :

- Research Assistant, Dairy Research Laboratory, 1958 - 1963.
- Researcher, the same laboratory, 1963 - 1968.
- Associate Research Professor, the same laboratory, 1968 - 1973.
- Research Professor, Department of Food Technology and Dairying, NRC, since 1974.

Prof. Abdel-Salam participated in a number of research projects either local or with foreign counterparts in the field of Dairy Chemistry and Technology. He is the author of more than 120 publications in national and international journals and conferences. Supervised several M.Sc. and Ph.D. theses. He is a member of a number of scientific societies and committees at NRC and ASRT. He is a member of the American Dairy Science Association. Member of the Editorial Board of the Asian Journal of Dairy Research, since 1982. He is the Editorial Secretary of the Egyptian Journal of Dairy Science, and the Bulletin of NRC (1984 - 1986). He was awarded in 1979 the State Prize in Agricultural Sciences.





***Prof. Dr. Khairyia Naguib***

Prof. Naguib is a Research Professor Emeritus, Food Technology and Dairy Industries Department was Born on November 8 1928, Egypt. She obtained B.Sc. in 1952 from Faculty of Agriculture, Cairo University, and M.Sc. in 1956 in Microbiology, Cairo University. In 1961 she obtained Ph.D. in Food Microbiology from Ain-Shams University.

Prof. Naguib held the following positions :

- Researcher and Head of Food Microbiology Unit, NRC, 1962.
- Associate Research Professor, Food and Dairy Research Laboratory, NRC., 1967.
- Research Professor, the same laboratory, 1972.

She has participated in a number of research projects and established in 1976 the first central laboratory on mycotoxins in Egypt with the financial support from the Food and Drug Administration (U.S.A. - F.D.A.). Also she established the food technology pilot plant with the financial support of AID. She supervised a number of M.Sc. and Ph.D. theses and published more than 75 papers in the field of food microbiology and mycotoxins in national and international journals and conferences. She conducted two international scientific conferences on mycotoxins in 1981 and 1983 in Egypt. Also, she was selected in 1983 as vice-chairman of the science committee in Washington which belongs to the AOAC. She was selected in 1987 as chairman of nutrition and toxin committee of the XIV International Congress of Nutrition, held in Seoul, Korea, 1989, and which belongs to the International Union of Nutritional Sciences (IUNS). She introduced the field of phycotoxins in Egypt through a combined project with the FDA and the New Jersey Marine Sciences Consortium, financially supported by the AID, 1986. She is a member of a number of national committees and councils at the NRC and ASRT, Egypt.



*Prof. Dr. El-Sayed Abdel-Bar Salem*

Prof. Salem, Research Professor of Food Science and Technology, NRC, was born on March 1, 1941, Cairo, Egypt. Graduated from Cairo University in 1961, with B.Sc. in Food Science and Technology. Awarded the M.Sc. and Ph.D. from Ain-Shams University in 1964 and 1968, respectively.

Prof. Salem held the following positions at NRC :

- Research Assistant, Food Technology Laboratory, 1961 - 1969.
- Researcher, same laboratory, 1969 - 1974.
- Associate Research Professor, same laboratory, 1974 - 1979.
- Research Professor, Food Science Technology, NRC, since 1979.

Prof. Salem participated in several research projects. Established the Food Technology Laboratory at the NRC, and cooperated in solving problems facing the food technology in Egypt, either through consultations, projects or technical reports. Published several papers in specialized journals. Supervised several M.Sc. and Ph.D. theses. Member of several committees in Egyptian Standards Organization, Public Committee, and Egyptian Codex, Ministry of Industry. Awarded the Certificate of Better Process Control School from University of Wisconsin, (USA) 1981.



*Prof. Dr. Safinaz El-Sayed  
El-Shibiny*

Prof. El-Shibiny, Research Professor of Dairy Chemistry and Technology, Department of Food Science and Dairying, NRC, was born on January 24, 1938, Menoufia, Egypt. Married. Graduated from Cairo University in 1960, with B.Sc. in Agriculture. Awarded the M.Sc. and Ph.D. from the same university in Dairy Science in 1964 and 1968, respectively.

Prof. El-Shibiny held the following positions at NRC :

- Research Assistant, 1960 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor, since 1979.

She participated in a number of research projects. Principal investigator for "Production of standardized pickled soft cheese — a continuous method using skim milk powder", sponsored by ASRT. Supervised ten graduate students for M.Sc. and Ph.D. Published over 76 papers in national and international journals in the field of Dairy Chemistry and Technology. Awarded several fellowships and short visits abroad : DAAD, DFG, (FRG), and visit to Food Research Institute, Spain. Member of the Board of Directors for the Egyptian Society of Dairy Science, and member of IDF, group E2 "Physical properties of dried milk". Awarded the NRC Prize for Scientific Contribution for 1983, and the State Prize in Agricultural Sciences for 1984.



*Prof. Dr. Nawal Sayed Ahmed*

Prof. Ahmed, Research Professor of Dairy Chemistry and Technology, NRC, was born on March 3, 1939, Cairo, Egypt. Graduated in 1959, with B.Sc. in Agriculture. Awarded the M.Sc. from Ain-Shams University in 1963 in Dairy Science and Ph.D. in the same field, from the same University in 1968.

Prof. Ahmed held the following positions :

- Research scholarship, Dairy and Food Technology Department, NRC, 1960 - 1962.
- Research Assistant, same department, 1962 - 1969.
- Researcher, same department, 1969 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor of Dairy Chemistry and Technology, same department, NRC, since 1979.

She participated in a number of research projects : “More and better food — Utilization of dried skim milk in white cheese manufacture; Improvement of production and processing of milk and its products under local conditions — US AID” and other projects sponsored by ASRT and NRC. Author of over 45 papers in national and international journals. Supervised a number of graduate student research works for M.Sc. and Ph.D. degrees. Member of Egyptian Society of Dairy Science, and The Egyptian Society of Food Science and Technology. Participant in several conferences, symposia and meetings held on dairy science, food technology and environmental pollution with pesticides.





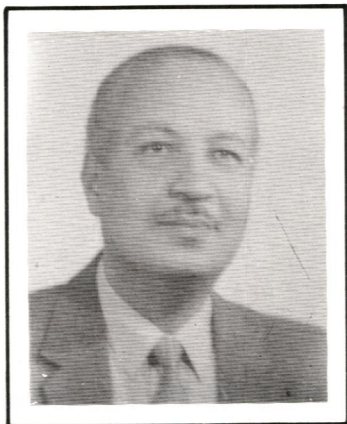
*Prof. Dr. Mohamed  
Abdel-Gileel Khorshid*

Prof. Khorshid, Research Professor at the Food and Dairy Sciences Department, was born on February 28, 1941. Married with two children. He studied at Ain-Shams University, where he obtained his B.Sc. from the Faculty of Agriculture, in 1961. His M.Sc. and Ph.D. degrees have been granted to him from the same university in Dairy and Food Technology in 1964 and 1968, respectively.

Prof. Khorshid held the following positions at NRC:

- Research Assistant, Dairy and Food Technology Department, 1961-1968.
- Researcher, same department, 1968-1975.
- Associate Research Professor, same department, 1975-1979.
- Research Professor, same department, 1979 till now.
- Deputy of Food Technology and Nutrition Division, since May 1988.

Prof. Khorshid has been granted a number of post-doctoral fellowships abroad : National Dairy Research Institute, Bangalore, India (1970); Danish Government Research Institute for Dairy Industry, Denmark (1970-1972); and The National Food Institute, Denmark (1979). Participated in a number of research projects in the field of dairy technology. Executive director for the Dairy Technology Unit, Ministry of Agriculture, since 1983. Published about 56 scientific articles in national and international journals. Member of the Egyptian Society of Dairy Science, the Egyptian Society of Food Science, and Alumni Association, Bangalore, India.



*Prof. Dr. Mohamed  
Mahmoud Naguib*

Prof. Naguib, Research Professor, Food Technology and Dairy Industries Department, NRC, was born on April 20, 1941. Graduated from Cairo University in 1961 with B.Sc. in Agricultural Sciences. Awarded the M.Sc. and Ph.D. from Ain-Shams University in Dairying and Dairy Microbiology in 1965 and 1969, respectively.

Prof. Naguib held the following positions at NRC :

- Research Assistant, 1962 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor, since 1979.

Prof. Naguib participated in several research projects : Senior Investigator — US projects of mycotoxins and food toxins, and many NRC projects. Supervised the research work of several post-graduates for M.Sc. and Ph.D. degrees. Author of over one hundred publications in dairy food technology and mycotoxins. Awarded a research fellowship for one year to Yugoslavia. Awarded a post-doctoral research fellowship to the Tropical Products Institute, London, 1979. Organized two international conferences on Mycotoxins in Egypt in 1981 and 1983. In 1976, he participated in establishing the first central laboratory on mycotoxins in Egypt and the Middle East, with the support of FDA (US Food and Drug Administration).



*Prof. Dr. Azza Abdel-Aziz Ismail*

Prof. Ismail, Research Professor, Department of Food Technology and Dairy Industries NRC, was born on November 8, 1944, Cairo, Egypt. Graduated from Ain Shams University in 1965, with B.Sc. in Agricultural Science. Awarded the M.Sc. and Ph.D. from the same University in 1968 and 1973, respectively.

Prof. Ismail held the following positions at NRC :

- Research Scholarship, 1966.
- Research Assistant, 1967.
- Researcher, 1974.
- Associate Research Professor, 1979.
- Research Professor, NRC, since 1984.

She participated in a number of local and foreign research projects : “Utilization of factories and food residues”, “Quality improvement and standard specifications of white cheese”, “Standard specification of dairy products”, “Utilization of by-products of dairy factories”, “Studies on some microbes of economic value”, “Production of white cheese with standard specifications — ASRT”, “Utilization of whey produced from cheese manufacture - ASRT”, “Estimation of mycotoxins — US AID”, and “More and better food — US AID”. Supervised several M.Sc. and Ph.D. theses. Published over 52 papers in specialized journals. Attended several national conferences. Member of the Egyptian Society of Dairy Science, and Society of Food Science and Technology. Awarded two research fellowships to Denmark (1971 and 1982).



*Prof. Dr. Soheir Abdalla  
El-Nokrashy*

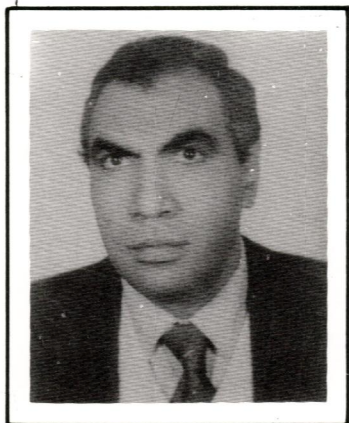
Prof. El-Nockrashy, Research Professor of Food and Dairy Science (Microbiology), NRC, was born on May 19, 1939, Gharbia, Egypt. Graduated from Ain Shams University in 1960, with B.Sc. in Agriculture (Food Science). and the M.Sc. in 1966 from Ain Shams University, in Dairy Science. Awarded the Ph.D. in 1972 from Hungary.

Prof. El-Nockrashy held the following positions:

- Demonstrator, High Agriculture Institute, Kafr El-Shaikh, 1960-1963.
- Research Scholarship NRC, 1963.
- Research Assistant, NRC, 1965-1972.
- Researcher, NRC, 1972-1979.
- Associate Research Professor, Department of Food Technology and Dairy Science, NRC, 1979-1985.
- Research Professor since 1985.

Prof. El-Nockrashy participated in a number of research projects. Supervised a number of post-graduates research work for M.Sc. and Ph.D. degrees. Published over 30 papers in the field of dairy and food microbiology. Attended an International Training Course, University of California, on "Methods of analysis to estimate the pesticides residues in food stuffs", 1982. Attended several national conferences. Member of the Egyptian Society for Dairy Sciences, and Egyptian Society for Food Science and Technology.





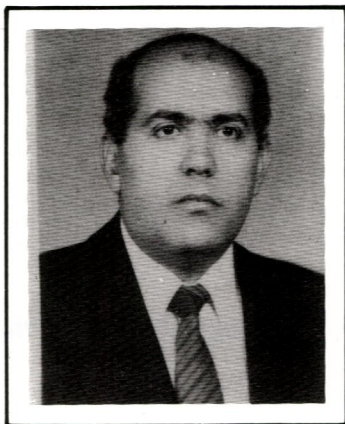
*Prof. Dr. Farouk Rashed Helal*

Prof. Helal, Research Professor of Food Technology and Dairy Science, NRC, was born on February 11, 1943, Giza, Egypt. Graduated from Cairo University in 1962, with B.Sc. in Agricultural Sciences. Awarded the M.Sc. and Ph.D. from Ain-Shams University in Food Technology, in 1966 and 1971, respectively.

Prof. Helal held the following positions :

- Research Assistant, NRC, 1963 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, NRC, 1976 - 1985.
- Research Professor, NRC, since 1985.

Prof. Helal acted as senior investigator in some research projects. Supervised a number of M.Sc. and Ph.D. theses in dairy and food technology field. Author of over 30 papers published in specialized journals. Awarded a research fellowship to the Federal Dairy Research Institute, Kiel, FRG. Expert in Food Standardization (SASO). Participated in Codex Alimentaries Commission (CAC) of food activities in the Hague, Netherlands (1980). Consultant for quality control in Arabs Food Medical Company. Expert in Egyptian Standardization Organization. Participated in a number of conferences in Egypt and Saudi Arabia. Member of the Egyptian Society of Dairy Science, and Egyptian Society of Food Technology Sciences.



*Prof. Dr. Amir Amin Ibrahim*

Prof. Ibrahim, Research Professor of Food Technology Department of Food Technology and Dairy Industries NRC, was born on November 28, 1945, Cairo, Egypt. Married with three children. Graduated from Cairo University in 1966 with B.Sc. in Food Science and Technology. Awarded the M.Sc. and Ph.D. from the same university in 1970 and 1974, respectively.

Prof. Ibrahim held the following positions :

- Planning and Production Engineer, The Egyptian General Organization for Food Industries, 1967 - 1972.
- Research Assistant, Laboratory of Food and Dairy Technology, NRC, 1972 - 1974.
- Researcher, same laboratory, NRC, 1974 - 1980.
- Associate Research Professor, same laboratory, 1980 - 1985.
- Research Professor, Department of Food and Dairy Technology, NRC, since 1985.

Prof. Ibrahim participated in a number of research projects : “Improvement of food products quality”, and “Survey and evaluation of rural food industries — More and Better Food, US AID”. Published over 29 papers in national and international journals on meat, fish, cereals jam industries, and waste products. Collaborated in supervising six M.Sc. theses. Attended many conferences in Egypt, Jordan, Belgium and England. Awarded post-doctoral fellowship to Catholic University of Louvin, Belgium, on food technology (1976 - 1979). Member of Society of Food Science and Technology, and Society of Food Science and Industrial Fermentation, Belgium.



*Prof. Dr. Ali Abou-Serieh Ramadan*

Prof. Ramadan, Research Professor of Food Science and Technology, NRC, was born on August 8, 1935, Kalyoubia, Egypt. Awarded the Ph.D. from Czechoslovak Academy of Sciences in 1975 in Biological Sciences.

Prof. Ramadan held the following positions :

- Specialist, Analytical Chemistry Laboratory of Pesticide Analysis, Ministry of Agriculture, 1960 - 1965.
- Research Assistant, Food Science and Technology, NRC, 1965 - 1975.
- Researcher, same laboratory, 1975 - 1980.
- Associate Research Professor, same laboratory, 1980 - 1985.
- Research Professor, same laboratory, NRC, since 1985.

He participated in several research projects : "More and better food" — US AID ; "Pathogenic micro-organisms and parasites in edible fish in native water resources" — FDA, USA ; "Effect of food processing on pesticide residues in foodstuffs" — ASRT ; and a number of projects sponsored by NRC. Attended several training courses in Czechoslovakia, USA and Egypt. Awarded certificate of modern technology of pesticide residue in foods from University of California, Davis 1982. Also attended over 27 conferences held in Egypt and abroad. Consultant for several local companies. Member of Codex Alimentarius Commission in Egyptian Organization of Standardization, Ministry of Industry, since 1982. Agricultural consultant for Food Industry, and Egyptian Bank of Industrial Development. Member of a number of scientific societies. He supervised many research activities towards M.Sc. and Ph.D. degrees in food chemistry and technology.

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*Prof. Dr. Hamza Aly El-Alamy*

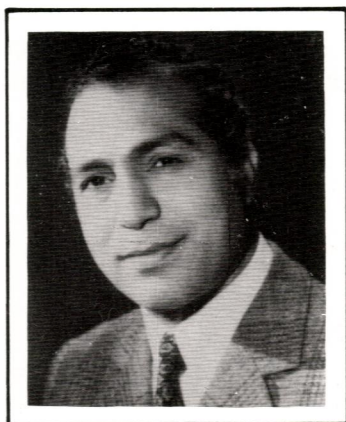
Prof. El-Alamy, Research Professor, Department of Food Technology and Dairy Industries NRC, was born on July 7, 1939, Dakahlia, Egypt. Married. Graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture Sciences. Awarded the M.Sc. and Ph.D. from the same university in Dairy Science in 1970 and 1976, respectively.

Prof. El-Alamy held the following positions at NRC :

- Technical Assistant, 1965 - 1970.
- Research Assistant, 1970 - 1976.
- Researcher, 1976 - 1982.
- Associate Research Professor, 1982 - 1988.
- Research Professor of Dairy Science, since 1988.

Prof. El-Alamy participated in a number of research projects. Supervised seven post-graduates for M.Sc. and Ph.D. degrees. Published over 26 papers in the field of dairy chemistry and technology, and milk production. Member of The Egyptian Society of Dairy Science, and Society of Food Science and Technology.





*Prof. Dr. Mohamed Mahmoud  
Hassan El-Mallah*

Prof. El-Mallah, Research Professor Emeritus, Fats and Oils Research Department, NRC, was born on October 11, 1928, Cairo, Egypt. Graduated from Cairo University in 1954, with B.Sc. in Chemistry and Botany (Hons.). Awarded the M.Sc. and Ph.D. in Chemistry from the same university in 1957 and 1961, respectively.

Prof. El-Mallah held the following positions at NRC :

- Research Student, 1955 - 1957.
- Research Assistant, 1957 - 1961.
- Researcher, 1961 - 1965.
- Associate Research Professor, 1965 - 1972.
- Research Professor, since 1972.
- Head of Fats and Oils Research Laboratory, NRC, 1983 - 1985.
- Head of Food Industries and Nutrition Department, NRC, 1982 - 1984.

Prof. El-Mallah participated in several research projects. Principal investigator of "Rice bran utilization for wax production" — NRC with Food Products Organization (1969 - 1973) ; and "Utilization of fatty materials as sources for the preparation of epoxy and hydroxy acids and other derivatives used in different industries". Awarded several research fellowships abroad : England (1964 - 1965) ; FRG Alexander von Humboldt (1967 - 1969) and (1972 - 1973). In 1985, he spent three months at the Institute of Spectrochemistry as a continuation of the same fellowship (Alexander von Humboldt). Attended several conferences, congresses and meetings in France, Austria, Hungary, India, Japan, FRG and Egypt. Vice-President of Edible Oils and their derivatives committee, ASRT, since 1988, and member of Edible Oils Standards and Chemical Industries Committees, Egyptian Organization for Standardization and Quality Control

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(EOS), Ministry of Industry, since 1980. Awarded the Golden Medal and Appreciation Certificate on the occasion of NRC Silver Jubilee (1982). Member of a number of societies and syndicates. Published over 50 papers in national and international journals. Supervised over 20 Ph.D. and M.Sc. theses since 1961.



*Prof. Dr. Zein El-Abdine Shoeb*

Prof. Shoeb, Research Professor and Head of the Fats and Oils Department, NRC, was born on May 9, 1931. Graduated from Cairo University in 1952, with B.Sc. in Special Chemistry (Hons.). Obtained his M.Sc. from the same university in 1956 in Physical Organic Chemistry. In 1960, was awarded the Ph.D. (Dr. rer. nat.) from Muenster University, FRG, in Technical Chemistry.

Prof. Shoeb held the following positions :

- Lecturer Assistant, Chemistry Department, Faculty of Science, Cairo University, 1952 - 1957.
- Researcher, Fats and Oils Laboratory, NRC, 1962 - 1964.
- Associate Research Professor, same laboratory, 1964 - 1972.
- Assumed the post of Head of Fats and Oils Laboratory, NRC, 1958 - 1972.
- Research Professor, same laboratory, Food Science Technology and Nutrition Department, NRC, since 1972.
- Head of Food Science Technology and Nutrition Department, NRC, Jan. 1981 - Dec. 1982.

Prof. Shoeb participated in several research projects. His research activities cover chemistry of vegetable and animal fats and oils, technical processes, e.g., extraction, refining, bleaching and hydrogenation in oil industry, methodology in fat analysis, metabolism of lipids, vegetable protein concentrates and isolates, protein chemistry and nutrition, as well as synthesis of fat derivatives. Member of several scientific societies and syndicates.



*Prof. Dr. Ahmed Samih  
El-Nockrashy*

Prof. El-Nockrashy, Research Professor of Biochemistry and Nutrition, NRC, was born on March 27, 1933. Graduated from Cairo University in 1954, with B.Sc. in Chemistry (Hons.). Obtained the M.Sc. in Chemistry from the same university in 1957. Awarded the Ph.D. in Biochemistry and Nutrition from Texas A. & M. University, USA, in 1962.

Prof. El-Nockrashy held the following positions at NRC :

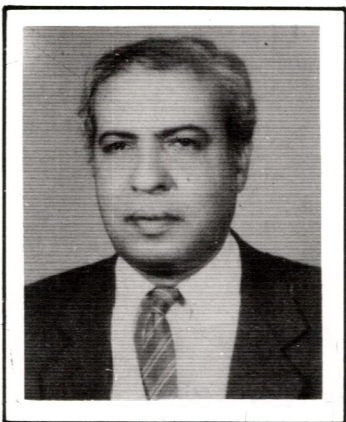
- Research Assistant, 1955 - 1963.
- Researcher, 1963 - 1966.
- Associate Research Professor, 1966 - 1973.
- Research Professor, since 1973.
- Chairman, Technical Office, NRC, 1987 - 1988.
- Member and Secretary of NRC Administrative Council, 1987 - 1988.

He participated in several research projects, technical consultancy services and studies covering food industries, petroleum and oil companies, Nutrition Institute (Ministry of Health), Egyptian Organization for Standards (Ministry of Industry), Ministry of Agriculture, besides regular consultancy offered to private, public sectors and ministries. Awarded a diploma in R & D Management for Executives from Denver Research Institute, USA, in 1979. Later, in 1983, awarded another diploma in Production R & D from Battelle Memorial Research, Columbus, Ohio, USA. Coordinator of the steering committee of "More and Better Food Program", a multidisciplinary program involving over 700 research scientists from over 15 research institutions (1978 - 1986). Has experience in establishing training programs on R & D Management (1982 - 1985). Published a book on "Productive R & D Management". Managed the contracting system of Applied R & D in the NRC, with both private and public sectors as well as between NRC and USDA, FDA, NAS (USA) ; DKFZ (FRG) ; IRC (Canada) ; Katar University and Um Al-Kora University (Saudi Arabia).



Author of several reports and guideline studies on consultation services offered by NRC in the fields of food processing, building materials and ceramics, waste water management and biogas technology. Involved in many activities of ASRT where he held the following positions : Head, R & D Department (1976 - 1978) ; Director, foreign S & T programs (1977 - 1987) ; and Executive Director, S & T cooperation with USA, since 1988 (full-time).

He was granted several research fellowships abroad. Member in official delegations for visits and meetings to several countries, e.g., France, Spain, Italy, England, Poland, Canada, Japan, S. Korea, China, India, Jordan, Lebanon, Saudi Arabia, Morocco, Jamaica and Mexico. Supervision of a large number of graduate students, 25 awarded Ph.D. degree and 13 M.Sc. degree. Published 75 papers in international journals, and four patents in FRG, France, Canada and Sweden. Prepared and collaborated in the preparation of large number of studies (in Arabic and in English). Member of several societies, councils, and committees (NRC, ASRT), Scientific Research Society of America "RESA", USA, the Society of Sigma XI, USA, and the American Oil Chemists Society. Awarded the NRC Golden Medal on the occasion of NRC Silver Jubilee, 1982.



*Prof. Dr. Youssef Aly El-Shattory*

Prof. El-Shattory, Research Professor, Fats and Oil Department, NRC, was born on August 27, 1938. Married with two children. Graduated from Cairo University in 1963 with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1967 and 1971.

Prof. El-Shattory held the following positions :

- Research Assistant, NRC, 1964 - 1972.
- Researcher, Fats and Oil Laboratory, NRC, 1972 - 1977.
- Associate Research Professor, same laboratory, NRC, 1977 - 1982.
- Research Professor, same laboratory, NRC, since 1982.

Prof. El-Shattory participated in research projects : “Monitoring of soybean processing in local mills”, and “Evaluation of bentonite clay in bleaching of oils”. Supervised a number of M.Sc. and Ph.D. theses. Granted a research fellowship for two and half years to University of Gruelph, Ontario, Canada (1977 - 1979). Visited the Academy of Science, Spain, for two weeks in 1976. Attended two conferences in Canada during his stay in 1977 and 1979. Author of over 30 papers in national and international journals. Member of several scientific societies and syndicates.



*Prof. Dr. Fakhriya*

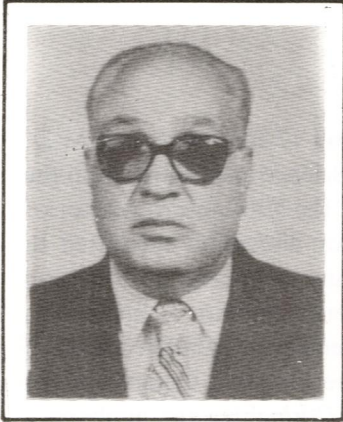
*Sayed Taha Abdel-Bar*

Prof. Taha, Research Professor, Fats and Oils Department, NRC, was born on November 20, 1945, Cairo, Egypt. Graduated from Cairo University in 1966, with B.Sc. in Chemistry and Applied Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1971 and 1977, respectively.

Prof. Taha held the following positions :

- Research Assistant, Fats and Oils Department, NRC, 1967 - 1978.
- Researcher, same department, 1978 - 1982.
- Associate Research Professor, same department, 1982 - 1987.
- Research Professor, same department, since, 1987.

Prof. Taha participated in a number of research projects : “Refining of colour-fixed cotton seed oil (AID)” ; “Preparation of culture media for the growth of micro-organisms and the production of vaccines (US Navy)”, and a number of NRC sponsored projects. Supervised three M.Sc. and three Ph.D. theses. Published over 27 papers in national and international journals in the fields of fats, oils and unconventional protein sources. Attended the World Congress of Food Sciences and Technology, held in Singapore (1987). Referee for Journal of Food and Agriculture of Nigeria, and Journal of Agriculture and Food Chemistry (USA). Member of a number of societies and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Sabry Riad Morcos*

Prof. Morcos, Professor Emeritus of Food Science and Nutrition, NRC, was born on February 17, 1923, Souhag, Egypt. Married with three children. Graduated from Cairo University in 1945, with B.Sc. in Chemistry and Zoology. Awarded the M.Sc. and Ph.D. from Alexandria University in Biochemistry in 1951 and 1957 respectively. Awarded in 1963 the Ph.D. from University of London, UK, in Nutrition.

Prof. Morcos held the following positions :

- Demonstrator, Biochemistry Department, Faculty of Medicine, University of Alexandria, 1946 - 1950.
- Assistant Lecturer, same faculty, 1950 - 1951.
- Lecturer, same faculty, 1951 - 1957.
- Researcher, Nutrition Research Unit, NRC, 1957 - 1958.
- Associate Research Professor and Head of Food Chemistry Research Unit, NRC, 1958 - 1964.
- Research Professor, Food Science and Nutrition Department, NRC, since 1964.
- Chairman, Medical and Pharmaceutical Research Department, NRC, 1967 - 1969.
- Chairman, Food Science, Technology and Nutrition Department, NRC, 1975 - 1977.

Prof. Morcos headed a team of experts to draw up a project plan for establishment of a centre for food science, technology and nutrition in Africa for research and training (OAU). Attended PUGWASH conferences for scientists and world affairs. Visiting Researcher, Human Nutrition Research Unit, NIMR, the Ridgeway, London, UK (1961 - 1963). Author of a great number of publications in national and international journals and conferences.



Supervised 17 theses for M.Sc. degrees and 17 for Ph.D. and M.D. degrees. Established the Department of Food Science and Nutrition in the NRC, Cairo. Established the Animal House of the NRC, Cairo. Editor of "A Nutrition Policy for Egypt", a report for discussion submitted to El-Shoura Council. Prof. Morcos attended many congresses on Nutrition and Food Science. Awarded the Medal of Science and Art — first order, and Medal of the Republic — second order. Member of : British Nutrition Society ; Egyptian Nutrition Society ; and the National Committee for Nutritional Sciences, ASRT. Member of the Committee for applying a nutritional policy for Egypt, Ministry of Agriculture, Cairo, Egypt. Member of El-Shoura Council, Egypt, since September, 1986. Fluent in English, French and the mother tongue Arabic.



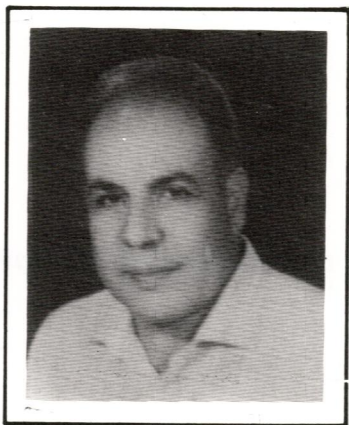
*Prof. Dr. Onsi Mohamed Metwalli*

Prof. Metwalli, Research Professor and Head of Food Science and Nutrition Research Department, NRC, was born on August 7, 1936. Married. Graduated from Ain-Shams University in 1959, with B.Sc. in Biochemistry. Obtained Diploma in Biochemical Analysis in 1961 from Cairo University. Awarded the M.Sc. and Ph.D., both in Biochemistry from Ain-Shams University in 1962 and 1966, respectively.

Prof. Metwally held the following positions :

- Researcher, Nutritional Biochemistry, Food Science and Nutrition Research Department, NRC, 1966 - 1971.
- Associate Research Professor, NRC, 1971 - 1977.
- Research Professor of Food Science and Nutrition, NRC, since 1977.
- Head of the Nutrition Research Department, NRC, since 1983.

He is the principal investigator of several research projects in the domaine of food science and nutrition : Preparation of local food composition tables ; Nutrients inter-relationships ; Special foods ; Feeding programs to combat anaemia and other nutrition deficiency diseases and food-drug inter-relationships. Supervised six Ph.D. and 15 M.Sc. theses, awarded the degrees in Science, Medicine, Pharmacy, Agriculture, and Home Economics. Author of over 60 papers published in national and international journals. Member of several Egyptian societies : Nutrition ; Physiological Sciences and Clinical Chemistry. Member of the editorial board of "The Arab Journal of Laboratory Medicine", and member of the joint consultative group of school feeding programs.



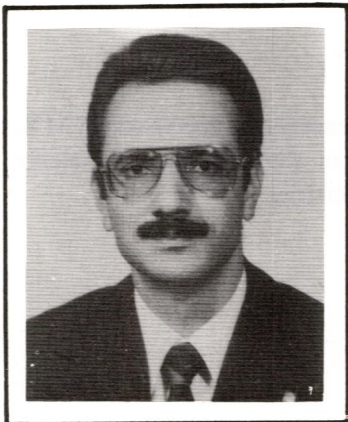
*Prof. Dr. El-Sayed Mohamed Hegazy*

Prof. Hegazy, Research Professor of Food Science, NRC, was born on November 3, 1934. Graduated from Cairo University in 1958, with B.Sc. in Agriculture. Awarded the M.Sc. in 1962 from the same University, and Ph.D. in 1967 from Cairo University, both in Biochemistry.

Prof. Hegazy held the following positions :

- Demonstrator, Faculty of Agriculture, Zagazig University, 1958 - 1964.
- Research Assistant, Nutrition Department, NRC, 1965 - 1967.
- Researcher, same department, 1967 - 1973.
- Associate Research Professor, same department, 1973 - 1978.
- Research Professor of Food Science, NRC, since 1978.

Prof. Hegazy acted as principal investigator for the research projects : “Improvement of supramine — More and Better Food, US AID”, and “Preparation of food composition table for Egyptian foods”. Participated in a research project on nutrients interrelationship and another one on combating anaemia among school age children. Supervised the research work of two post-graduates for Ph.D. degrees on nutrition. Participated in UN University Programme (INCAP), held in Guatemala (Jan. - July, 1981). Author and co-author of over 40 papers published in national and international journals. Member of a number of scientific societies and syndicates.



*Prof. Dr. Fawzi Amin El-Shobaki*

Prof. El-Shobaki, Research Professor of Biochemical Nutrition, NRC, was born in Cairo, 1938. He got his B.Sc. in Chemistry from the Faculty of Science, Cairo University in 1960. Awarded M.Sc. in Applied Chemistry in 1966, and then in 1970, the Ph.D. in Biochemistry from the same university.

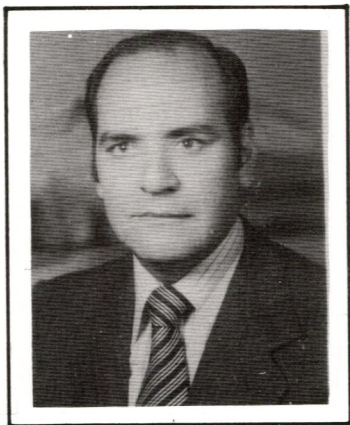
Prof. El-Shobaki held the following positions at NRC :

- Research Assistant, 1961 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1981.
- Research Professor of Biochemical Nutrition, since 1981.

Prof. El-Shobaki was granted the "Alexander von Humboldt" fellowship in 1976 - 1978, University of Saarbrücken, Faculty of Medicine, FRG. He also visited W. Germany afterwards as a Visiting Professor twice in the same university during the years 1981 - 1982 and 1983 - 1984. He is an AID participant in the Faculty of Medicine, Kansas City University, Kansas, USA. He participated in many scientific projects inside and outside the NRC. Co-principal investigator in the projects : "Improvement of supramine quality", More and Better Food Project ; and "A pilot study to combat anaemia", More and Better Food Project. He is the principal investigator in the project : "Evaluation of the nutritional value of (El-Adahi) sacrificed meet, El-Hag Research Centre, Saudi Arabia. Participated in the project "Protein calorie-malnutrition" supported by the Office of Naval Research, AUC, Cairo. He shared and supervised the establishment of the Biochemistry Laboratory at the Faculty of Medicine, Mansoura University, and the Biochemistry Department at the Institute of Ophthalmology (NRC). He is a member of the Egyptian Nutrition Society and the Egyptian Physiological Society. Published more than 60 publications



in international and local journals and conferences. He supervised ten M.Sc. theses and eight Ph.D. and M.D. theses in the Faculties of Science, Agriculture and Medicine in Egyptian Universities.



*Prof. Dr. Gamal Noub Gabriel*

Prof. Gabriel, Research Professor of Food Science and Nutrition, NRC, was born on October 10, 1935. Graduated from Alexandria University in 1959, with B.Sc. in Chemistry and Biology. Awarded the M.Sc. and Ph.D. from Cairo University in Applied Chemistry (Nutrition) in 1967 and 1971, respectively.

Prof. Gabriel held the following positions :

- Scholarship, NRC, 1960 - 1962.
- Research Assistant, Food Science and Nutrition Department, NRC, 1962 - 1971.
- Researcher, same department, 1972 - 1977.
- Associate Research Professor, same department, NRC, 1977 - 1982.
- Research Professor, since 1982.

Prof. Gabriel participated in a number of research projects. Granted a research training fellowship, 1977, funded by the International Agency for Research on Cancer, World Health Organization (WHO), for one year at M.I.T., Cambridge, Mas., USA. This was followed by a post-doctoral research fellowship, 1978, funded by M.I.T. Cambridge, Mass., USA.

Member of the Egyptian Physiological Society and the Egyptian Nutrition Society. Prof. Gabriel participated also in the project "A pilot study to combat anaemia", More and Better Food Project. Supervised M.Sc., Ph.D. and M.D. theses in the Faculties of : Science, Agriculture and Medicine. Published a great number of articles in international and local journals and conferences.







## **AGRICULTURAL AND BIOLOGICAL RESEARCH DIVISION**



### **RESEARCH DEPARTMENTS ( RD )**

- 1 — BOTANY.**
- 2 — PESTS AND PLANT PROTECTION.**
- 3 — SOIL AND WATER USE.**
- 4 — AGRICULTURAL ECONOMY.**
- 5 — ANIMAL REPRODUCTION AND ARTIFICIAL  
INSEMINATION.**
- 6 — ANIMAL AND POULTRY PRODUCTION AND  
NUTRITION.**
- 7 — PARASITES AND ANIMAL DISEASES.**



*Prof. Dr. Mohamed Abbas Rasheed*

Prof. Rasheed, Research Professor of Soils and Head of the Agricultural and Biological Research Division, NRC, was born on October 14, 1936, Aswan, Egypt. Married with two children. Graduated from Ain-Shams University in 1958, with B.Sc. in Agriculture (Soils). Awarded the diploma in Radioisotopes in Agriculture in 1959 from Radio-isotope Regional Centre for the Middle East, Cairo, Egypt, and Ph.D. in Agriculture (Soils) from Newcastle University (UK) in 1965. Fluent in English, French and mother tongue Nubian and Arabic.

Prof. Rasheed held the following positions at NRC:

- Research Scholarship, 1958.
- Researcher, 1965.
- Associate Research Professor, 1972.
- Research Professor, since 1977.
- Head of Soil and Water use Department 1983-1988.

Prof. Rasheed assumed the post of Director of Inter-African Bureau for Soils (BIS) of the Scientific, Technical and Research Commission (STRC) of the Organization of African Unity (OAU), Addis Ababa, Ethiopia, from January 1971 till February 1983. Participated in several research projects: "More and Better Food", US AID-NRC; Principal Investigator of "Improvement of calcareous soils", NRC (1983-1988); "Promotion of soil physical conditions and water management for desert soils", Egypt, EEC-NRC (1984-1988); Co-principal Investigator "National campagne for improving citrus production in Egypt", ASRT, since 1983; and "Semi-arid food grain research and development in Africa", OAU/STRC. He supervised ten M.Sc. and six Ph.D. theses, also supervised the NRC Training Centre (1986-1988). Author of over 150 papers and technical reports in the field of soils and rural development. Attended many conferences, meetings

and symposia in over 75 countries all over the world. Coordinated the efforts for a possible interafrican cooperation. Editor of the "Journal of African Soils" from 1971 till 1983. Offered many consultancy and advisory services to different Egyptian and international organizations in the field of Agriculture and Rural Development. Member of several committees, associations and societies formed by NRC, ASRT and different ministries as well as several international standing committees in Egypt and abroad: "Inter-African Panel of Scientific Consultants on Soils"; "East and West African Soil Correlation Sub-Committees"; "Soils Data Processing International Network (SDPIN), Paris, France"; "The Permanent Inter-States Committee for Drought Control in the Sahel (CILSS); "International Soil Science Society (ISSS)"; "British Soil Science Society (BSSS)"; "African Soil Science Society (ASSS)"; "Scientific Council of Africa (SCA)"; "Association for Advancement of Agricultural Sciences in Africa (AAASA), Ethiopia"; "The executive board of the Egyptian Soil Science Society"; "Food and Agriculture Council, ASRT"; "Water Resources Division, ASRT"; Secretary General for "Land Reclamation Division, ASRT"; "The Permanent Promotion Committee for Professors in the field of Agriculture and Biology"; and also "Syndicate of Agricultural Professions of Egypt".





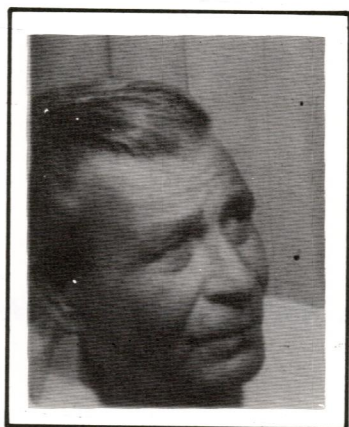
*Prof. Dr. Abdel Hamid Talat Hegazi*

Prof. Hegazi, Research Professor Emeritus of Plant Physiology was born on July 20, 1927, Cairo, Egypt. Married with two sons. Graduated from Cairo University in 1950, with B.Sc. (Hons) in Botany and Chemistry. Awarded M.Sc. and Ph.D. from the same university in Botany in 1953 and 1956, respectively.

Prof. Hegazi held the following positions: Appointed as a Demonstrator, Botany Department, Cairo University, 1950; Researcher, NRC, 1958; Associate Research Professor of Crop Physiology, NRC, 1962; and Research Professor, since 1967. He assumed the post of Head of Botany Laboratory, NRC, 1970-1987; and Head of Agriculture and Biology Department, NRC, 1970-1972.

He has been granted a number of research fellowships to FRG: German Academy of Science, Berlin (Institute of Culture and Plant Research, 1958-1959, and Institute of Medicine and Biology, 1959-1960), and Institute of Plant Physiology, Giessen (1962-1963). Invited to visit several agricultural scientific institutions in FRG and Netherlands (1963), Argentina (1979), USA (1980). Member of a research fellowship from the British Council, UK (Jan.-Aug. 1967). Attended many scientific symposia, conferences and meetings in Egypt and abroad. Author of over 50 papers published in national and international journals and conferences. Supervised 15 Ph.D. and 25 M.Sc. theses in the fields of Plant (crops and horticulture) Physiology over the period from 1960 to 1989. Member of several committees and societies: Biological and Agricultural Committee, NRC, (Coordinator); National Committee of Physiological Sciences (Coordinator); Egyptian Society of Botany; Egyptian Society of Physiological Sciences; Food and Agriculture Council (ASRT, 1971-1973); and member of the Saudi Society of Biological Sciences.





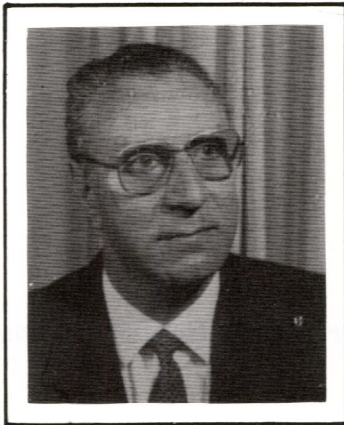
*Prof. Dr. Mamdouh Hassib Abbas*

Prof. Hassib, Research Professor, Emeritus, of Horticulture, NRC, was born on March 22, 1929, Cairo, Egypt. Graduated from Cairo University in 1951, with B.Sc. in Agriculture. Awarded Ph.D. from Hohenheim University, FRG in 1958, Diploma in application of radioactive elements from FRG in 1965, and Diploma in project management from AUC in 1976.

Prof. Hassib held the following positions:

- Research Assistant, Agricultural Research Centre, 1951-1958.
- Researcher, Agricultural Research Centre, 1958-1962.
- Associate Research Professor, NRC, 1966-1975.
- Research Professor, NRC, since 1975.
- Head of Agricultural Research Division, NRC, 1976-1977.
- Head of Botany Department, NRC, 1987-1989.

He supervised seven Ph.D. and 12 M.Sc. theses. Published over 32 papers in journals and conferences. Granted several fellowships and short visits to: Institute of Plant Biochemistry, Halle University, GDR (1964); Plant Nutrition Institute, Giessen University, FRG (1965); Institute of Tropical and Subtropical Crops, Goettingen University, FRG (1972 and 1978), Yugoslavia (1977) and Iraq (1978). Participated in several national and foreign research projects. Offered consultancy and advisory services to Red Sea, Sinai Governorates, and other governmental and private companies and organizations. Member of a number of societies, and Syndicate of Agricultural Professions of Egypt.



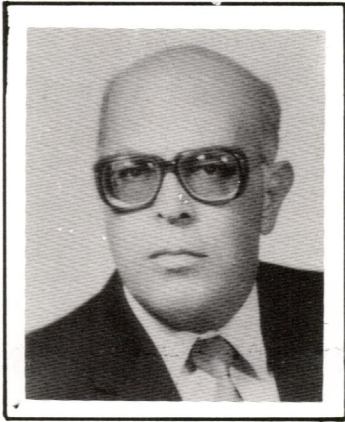
*Prof. Dr. Mohamed Talaat El-Saidi*

Prof. El-Saidi, Research Professor of Plant Physiology, NRC was born on December 5, 1937, Benha, Egypt. Married with two children. Graduated from Cairo University in 1958, with B.Sc. in Agriculture (Hons.). Awarded Ph.D. from Tashkent Agricultural Institute (USSR) in 1964 in Biology.

Prof. El-Saidi held the following positions at NRC:

- Researcher and Head of Plant Water Relations Research Unit, 1964-1970.
- Associate Research Professor, Plant Physiology Department, 1970-1974.
- Research Professor, since 1976.
- Head of Agricultural Research Division, 1980-1982.
- Head of Botany Department since 1989.

He participated in a number of research projects: “Growing high yield and short season cotton in Egypt (1982-1986)” and “Growing different kinds of field crops and vegetables that can resist drought and tolerate salts (since 1984)”. Offered consultancy and advisory services to Gharbia Governorate on Cotton Production (1986-1987). Acted as manager and scientific advisor to the Agricultural Experimental Research Station (NRC), UN Environmental Programme Expert in International Courses dealing with “Management and productivity of rangelands”, and “Fixation of shifting sands and reclamation of sandy soils”. Granted several short visits and fellowships to: UK (1969); Netherlands (1970); USSR (1980) and (1981); Australia (1981) and FRG (1983). Supervised several graduate students for eight M.Sc. and six Ph.D. degrees. Published over 50 papers in national and international journals and conferences. Member of Agricultural Engineering Society of Egypt; Egyptian Botanical Society; Society of Egyptian Physiological Sciences; and Society for Experimental Biology (UK).



*Prof. Dr. Nabih Ibrahim Ashour*

Prof. Ashour, Research Professor of Agronomy NRC, was born on February 12, 1937, Cairo, Egypt. Married with three children. Graduated from Cairo University in 1958, with B.Sc. in Agriculture. Awarded Diploma in Radioisotopes in Agriculture, and Ph.D. in Plant Physiology from Soviet Academy of Agricultural Sciences, Moscow in 1962 and 1964, respectively. Fluent in English and Russian, besides mother tongue Arabic.

Prof. Ashour held the following positions at NRC:

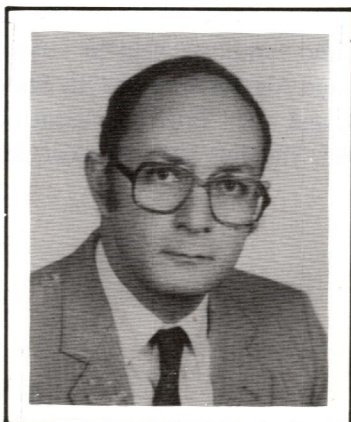
- Researcher, Department of Plant Physiology, 1965-1972.
- Associate Research Professor, Botany Department, 1972-1978.
- Research Professor, since 1978.
- Head of Agricultural and Biological Research Division, 1984-1986.

He participated in several research projects: “Biological evaluation of mixtures of fertilizers and herbicides for cereal production” (1972-1974); Principal Investigator “Improvement of maize production, a sub-project of More and Better Food”, US AID and NRC; “Introduction of short season and high yielding cotton varieties in Egypt”, ASRT (1981-1983); Director of National Development Project “Improving maize production and introduction of multicutting forage crops in Middle Egypt” (1981-1985); Principal Investigator “Growing of field crops tolerating salinity and drought in Sinai”, since 1984; and Co-principal Investigator of National Campaign for Improving of Maize Production in Egypt. Granted scholarship to USSR for Ph.D. degree (1960-1964), and post-doctoral training R & D Management program, Denver Research Institute, University of Denver, USA (1984). Supervised ten M.Sc. and eight Ph.D. theses. Author of over 85 papers published in national and international journals and conferences. Offered many consultancy and advisory services to several ministries and organizations in the field of Agriculture and Rural Development. Attended

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several conferences, meetings, workshops and symposia held in Egypt, Greece, Australia, USA, Belgium, Pakistan and Algiers. Awarded the State Prize in Agricultural Sciences, ASRT, 1970, and NRC Prize for Scientific Contribution in Agricultural Sciences for 1985. Member of several societies and committees.





*Prof. Dr. Mohamed Mostafa El-Fouly*

Prof. El-Fouly, Research Professor of Plant Nutrition, NRC, was born on March 25, 1939, Alexandria, Egypt. Married with two children. Graduated from Alexandria University in 1959, with B.Sc. in Agriculture. Awarded Dr. agr. from Technical University, Munich, Institute for Plant Nutrition in 1963. Fluent in German, English and mother tongue Arabic, with working knowledge of French.

Prof. El-Fouly held the following positions at NRC:

- Researcher, 1966-1972.
- Associate Research Professor, 1972-1977.
- Research Professor, since 1977.

He assumed the position of Researcher at Biochemistry Department, Saar University, FRG, and Agricultural Chemistry Laboratory at Agriculture Research Station Limburgerhof, BASF AG, FRG, over the period from 1963 to 1966. Attended training courses on "The Use of Isotopes in Biology and Biochemistry, Nuclear School, Karlsruhe, FRG in 1963". Granted several scholar - and fellowships to Netherlands (1961); FRG (1960-1963); FRG (DAAD, 1969); and Alexander von Humboldt, FRG (1975-1976) and (1986). Awarded golden medal of NRC in 1981 for his outstanding achievements. Principal Investigator of joint project "Micro-nutrient problems in Egypt" (NRC/GTZ project), supported by FRG (Ministry of Economic Cooperation), and Egyptian ASRT (Phase 1,2 1979/1986; Phase 3, 1987/1992); a revolving fund for "Optimizing the use of micro-nutrient fertilizers (1985 onwards); "Algae production, in collaboration with Institute of Biotechnology, Julich, FRG and Egyptian ASRT (since 1987)", and "Leaf protein", supplemented by the Development Fund, Barclays Bank International, UK (since 1983). Member of many committees, councils and societies in Egypt and abroad. Member of Executive Committee of Assoc.

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for the Advancement of Agricultural Sciences in Africa (AAASA) (Ethiopia) since 1975, Hon. Sec. Gen. since 1981 and acting Admin. Sec. Gen. since 1984. Member of Intern. Committee for Plant Nutrition (1978-1982), (1982-1986), (1986-1989). Member of Permanent Committee of Intern. Ass. for Optimizing Plant Nutrition, France (1982-1984), (1984-1988), (1988-1992). Offers consultancy and advisory services to different Egyptian and International Organizations. Visited over 50 countries for attending conferences, meetings or studies. Published over 150 papers in local and international journals and conferences. Author of over 30 Articles and seven books on popular science as well as seven consultancy studies. Editor and co-editor of eight proceedings of conferences and workshops. Organiser of over 30 seminars and training courses. Special expertise in R & D management and marketing, project planning and R & D institutional organisation.



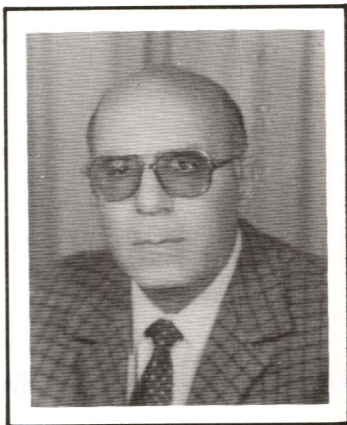
*Prof. Dr. Fatma Abdel Hamid Reda*

Prof. Reda, Research Professor of Plant Physiology, Botany Department, NRC, was born on July 14, 1939, Cairo, Egypt. Married with two children. Graduated from Ain-Shams University in 1958, with B.Sc. in Botany and Chemistry. Awarded M.Sc. and Ph.D. from Cairo University in Plant Physiology in 1963 and 1967, respectively.

Prof. Reda held the following positions at NRC :

- Research Scholarship, 1958 - 1961.
- Research Assistant, 1961 - 1967.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

She supervised and participated in several research projects. Supervised eight M.Sc. and three Ph.D. theses granted from Faculties of Science and Agriculture, Egyptian Universities. Author of over 53 papers published in national and international journals and conferences. Attended several conferences on Pharmaceutical Sciences, Botanical Sciences, and Horticultural Sciences in Egypt, USSR and FRG. Granted two post-doctoral fellowships to FRG (1973) and Denmark (1973 - 1974). Member of Egyptian Society of Botany, Egyptian Society of Physiological Sciences, and Syndicate of Scientific Professions of Egypt. Contributed to the establishment of Plant Physiology Department, NRC, since 1958.



*Prof. Dr. El-Shahat Nasr*

*Abou-Zied*

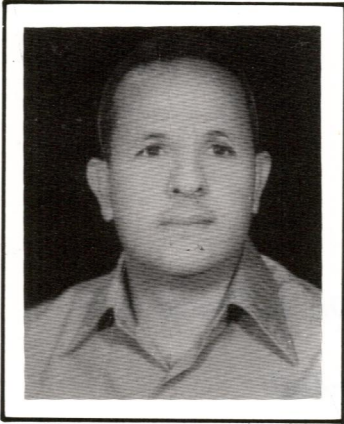
Prof. Abou-Zied, Research Professor of Physiology of Medicinal and Aromatic Plants, Botany Department, NRC, was born on January 19, 1936. Graduated from Cairo University in 1959, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in 1964 and 1968, respectively.

Prof. Abou-Zied held the following positions at NRC :

- Research Scholarship, Unit of Medicinal and Aromatic Plants, 1960 - 1962.
- Research Assistant, Botany Laboratory, 1962 - 1968.
- Researcher, 1968 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

He participated in a number of research projects. Supervised research work of graduate students for M.Sc. and Ph.D. degrees. Published several papers in specialized journals and conferences. Member of a number of societies.





*Prof. Dr. Dardiri Mohamed El-Hariri*

Prof. El-Hariri, Research Professor of Agronomy, NRC, was born on March 9, 1938. Married. Graduated from Cairo University in 1960, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from Ain-Shams University in Agronomy in 1964 and 1968, respectively.

Prof. El-Hariri held the following positions at NRC :

- Researcher, 1968 - 1975.
- Associate Research Professor, 1975-1980.
- Research Professor since 1980.

He supervised and participated in several research projects : “National campaign of corn” ; “Crop development and intensification” ; “Modern scientific means in rural development, Middle Egypt” ; “Production of crops and varieties tolerant to salinity and drought in Sinai” ; and “Planning and development of agricultural areas around New Damietta Port”. Supervised several graduates for M.Sc. and Ph.D. degrees. Granted certificate on “Studies concerning exploitation and development of natural environment”, UNESCO, France, 1973. Director of NRC Experimental Station, Shalakan, Qaliubia Governorate. Author of over 40 papers published in specialized journals and conferences. Member of Egyptian Society of Crop Science, Egyptian Society of Botany, Egyptian Society of Physiological Science, and Egyptian Society of Weeds.



*Prof. Dr. Salah Abdel-Aziz Saleh*

Prof. Saleh, Research Professor, Botany Department, NRC, was born on January 3, 1938, Giza, Egypt. Graduated from Ain-Shams University in 1960, with B.Sc. in Agriculture (Crops). Awarded M.Sc. and Ph.D. from the same university in 1965 and 1970, respectively.

Prof. Saleh held the following positions at NRC :

- Research Scholarship, 1961 - 1963.
- Research Assistant, 1963 - 1970.
- Associate Research Professor, 1976 - 1981.
- Research Professor, since 1981.

He participated in two research projects : “More and Better Food”, and “Increasing the yield of maize”. Supervised six M.Sc. and five Ph.D. theses. Published over 45 papers in the field of Physiology of Crops. Attended several conferences held in Egypt on Botany, Agronomy and Mineral Nutrition. Awarded the Silver Medal on the occasion of the NRC Silver Jubilee (1982). Member of some scientific societies.



*Prof. Dr. Sohair Khalil Ibrahim*

Prof. Ibrahim, Research Professor of Plant Physiology, Botany Department, NRC, was born on November 6, 1935, Cairo, Egypt. Married. Graduated from Cairo University in 1957, with B.Sc. in Botany and Chemistry. Awarded M.Sc. and Ph.D. from the same university in Plant Physiology in 1965 and 1970, respectively.

Prof. Ibrahim held the following positions at NRC :

- Research Assistant, 1960 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1983.
- Research Professor, since 1983.

She participated in many research projects dealing with plant physiology and growth regulators under Egyptian environmental conditions. Supervised seven graduate students for M.Sc. and Ph.D. degrees. Six more are still underway. Granted two post-doctoral fellowships to Leiden University (1973) and Berlin University (FRG), 1976. Author of over 39 papers published in national and international journals and conferences. Attended four conferences held in Egypt. Member of National Committee of Physiological Sciences ; Egyptian Physiological Science Society ; Egyptian Botanical Society ; and Egyptian Horticulture Society.



*Prof. Dr. Raafat Ragheb El-Masry*

Prof. El-Masry, Research Professor of Plant Physiology, Botany Department, NRC, was born on June 20, 1935, Cairo, Egypt. Graduated from Cairo University in 1958, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in 1964 and 1970, respectively. Granted Diploma from Kassel University, Department of Intern. Agriculture (FRG) in 1977.

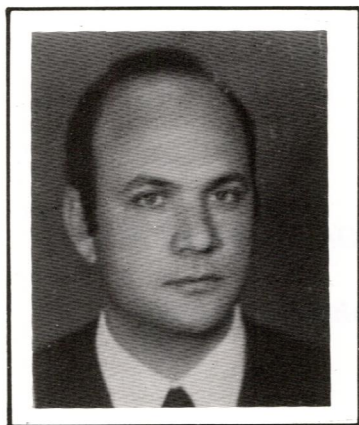
Prof. El-Masry held the following positions at NRC :

- Research Scholarship, 1958 - 1961.
- Research Assistant, 1961 - 1970.
- Researcher, 1970 - 1977.
- Associate Research Professor, 1977 - 1983.
- Research Professor, since 1983.

He participated in research projects : “Manufacturing mixtures containing a nitrogenous fertilizer with the herbicide 2,4-D to control annual weeds in wheat fields” ; “Studies for controlling weeds” ; “More and Better Food” ; “The use of some growth regulators and herbicides for increasing the productivity of some economic crops” ; “Improving maize production in Middle Egypt” ; “Cultivating the shores of Aswan High Dam” ; and “Improving methods for controlling perennial, parasitic and aquatic weeds in field crops and water canals”. Supervised four M.Sc. and one Ph.D. theses. Five more still under supervision. Granted a research training fellowship, and visits from DAAD to Institute of Tropical and Subtropical Crop Husbandry, Göttingen University, FRG (1973), from DFG to the same institute (1974 - 1975), from UK to visit research stations and institutes (1955), from FRG to Kassel University (1977), and from Czechoslovak Academy of Science (1981). Author of over 40 papers published in journals and conferences in the field of Weed Biology and Control. Member of



Egyptian Botanical Society, Egyptian Society of Physiological Sciences, and  
Weed Science Society of Egypt.



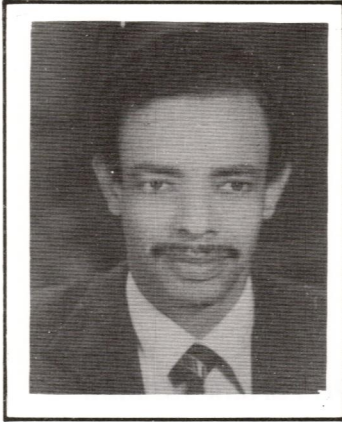
*Prof. Dr. Farouk Ibrahim  
El-Bastawesy*

Prof. El-Bastawesy, Research Professor of Plant Physiology, Botany Department, NRC, was born on May 12, 1937, Mansoura, Egypt. Married with two sons. Graduated from Cairo University in 1960, with B.Sc. in Agriculture. Awarded M.Sc. in 1965 from the same university in Plant Production, and Ph.D. in Agronomy from Ain-Shams University in 1970.

Prof. El-Bastawesy held the following positions at NRC :

- Research Assistant, 1966 - 1970.
- Researcher, 1970 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor, since 1983.

He participated in several research projects : "More and Better Food" (1979 - 1980) ; "Improvement of methods for controlling perennial, parasitic and aquatic weeds in field crops as well as in water canals" ; "Improving of maize in Middle Egypt" (1983) ; "Cultivating the shores of Aswan High Dam Lake" (1986) ; and the National Project for Improving Maize Yield (1987 - 1988). Supervised seven Ph.D. and six M.Sc. theses. Author of over 38 papers published in specialized journals. Granted a post-doctoral fellowship to Czechoslovakia, Botanical Institute, Praha (1984 - 1986). Member of Egyptian Society of Botany, Egyptian Society of Physiological Sciences, Saudi Society of Biological Sciences, and Head of Weed Science Society of Egypt.



*Prof. Dr. Mohamed Morsy*

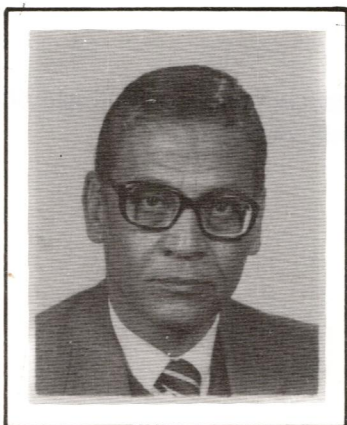
*Mohamed Hussein*

Prof. Hussein, Research Professor of Irrigation and Water Relations NRC, was born on November 25, 1943, Edfu, Egypt. Married. Graduated from Assiut University in 1964, with B.Sc. in Agriculture (Hons.). Awarded M.Sc. and Ph.D. from Ain-Shams University in Agronomy in 1968 and 1973, respectively.

Prof. Hussein held the following positions at NRC :

- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1983.
- Research Professor, since 1983.

He participated in research projects : “Improving maize yield”, ASRT since 1980 ; and “More and Better Food” (1979 - 1984). Granted several post-doctoral research fellowships and short visits to Technical University, Berlin, FRG (1976) ; Academy of Sciences, Iraq (1977) ; Yugoslavia (1979) ; FRG (1980) ; USSR, International Course on Rice Machinery and Technology (1981) ; and (FRG) DAAD Grant (June - Sep. 1983). Attended several conferences in Egypt and abroad. Author of over 46 papers published in national and international journals and conferences. Member of Egyptian Society of Agronomy ; Egyptian Society of Botany ; Egyptian Society of Ecological Sciences ; Egyptian Society of Physiological Sciences ; Egyptian Society of Soil Sciences ; and Egyptian Society of Horticulture Science.



*Prof. Dr. Ahmed Fawzi Abdel  
Hamid Fawzi*

Prof. Fawzi, Research Professor of Plant Nutrition, NRC, was born on October 21, 1937, Cairo, Egypt. Married with one child. Graduated from Cairo University in 1958, with B.Sc. in Agriculture. Awarded M.Sc. (1964) and Ph.D. (1974) in Agricultural Sciences from Plant Production Department, Faculty of Agriculture, Cairo University. Fluent in English and Arabic. Prof. Fawzi held the following positions at NRC :

- Research Assistant 1967 - 1974.
- Researcher 1974 - 1979.
- Associate Research Professor 1979 - 1985.
- Research Professor since 1985.

He was granted several scholarships and fellowships to FRG, Technical University of Munich (1972/73), DAAD 1976, GTZ 1979, DAAD & GTZ 1984/85. Attended training courses on "Plant Nutrition" in FRG and Italy through Institute of Plant Nutrition, Technical University, Munich (1983), in Morocco (1986) and in USA (1988), as well as a training course on "Project Management" in Cairo (1987). Member of the working groups in the joint project "Micronutrient Problems in Egypt", supported by FRG Ministry of Economic Cooperation, and Egyptian ASRT since 1977, AID. Project "More and Better Food" (1979/87) and ICARDA/IFAD Project "Faba-bean in Nile-Valley" since 1984. The Executive manager of a revolving fund for "Optimizing the use of micronutrient fertilizers" since 1985 supported by FRG Ministry of Economic Cooperation. Member of the Botanical, Physiological and Soil Societies in Egypt as well as of the Assoc. for Advancement of Agric. Sci. in Africa (Ethiopia) and the Internat. Assoc. for Optimizing Plant Nutrition, (France). Offers consultancy and advisory services to different Egyptian and International Organizations. Participated in planning 4 Egypto-German projects in Egypt. Visited 7



countries for attending conferences, meetings and studies. Published 50 papers in local and international journals and conferences.



*Prof. Dr. Abdel-Hamid Hamed  
Firgany*

Prof. Firgany, Research Professor of Plant Physiology, Botany Department, NRC, was born on April 12, 1940, Dakahlia, Egypt. Graduated from Ain-Shams University in 1963, with B.Sc. in Agriculture. Awarded M.Sc. in Agronomy from the same university in 1967, and Ph.D. in Botany from Cairo University, 1975.

Prof. Firgany held the following positions at NRC :

- Research Assistant, 1965 - 1975.
- Researcher, 1975 - 1980.
- Associate Research Professor, 1980 - 1985.
- Research Professor, since 1985.

He participated in research projects : "Micro-nutrients and other plant nutrition problems in Egypt", GTZ (FRG) and Egyptian ASRT (1976 - 1983) ; "More and Better Food", NRC-USA ; Principal Investigator "Evaluation of phoseun fertilizers on some Egyptian crops" ; "Improvement of tomato production in Egypt" ; "Improvement of maize production in Egypt" ; "Improvement of citrus production in Egypt" ; and "Management of agricultural crops, for governmental agricultural companies". Granted several scholarships and post-doctoral fellowships to : "Institute of Biochemistry, DDR (1973)". "Institute of Plant Nutrition, Munich, (FRG) (1977 - 1978) and West Berlin (1981)" ; and DAAD short visit to different West German institutions and universities (July 1982). Supervised a number of post-graduate studies for M.Sc. and Ph.D. Author of several papers in specialized journals and conferences. Member of Egyptian Botanical Society ; Egyptian Society of Physiological Sciences ; Association for Advancement of Agriculture Sciences in Africa (AAASA) ; and Egyptian Crops Society.



*Prof. Dr. Raga'a Osman Osman*

Prof. Osman, Research Professor of Biochemistry, Botany Department, NRC, was born on October 15, 1936, Cairo, Egypt. Graduated from Cairo University in 1960, with B.Sc. in Agriculture. Granted Diploma and M.Sc. in Biochemistry from Glasgow University (UK) in 1963 and 1965, respectively. Awarded Ph.D. from Ain-Shams University in 1972.

Prof. Osman held the following positions at NRC :

- Research Assistant, 1961 - 1972.
- Researcher, 1972 - 1978.
- Associate Research Professor, 1978 - 1985.
- Research Professor, since 1985.

She participated in research projects : "The role of growth regulators in improving yield of field crops", and "More and Better Food". Supervised two M.Sc. theses. Published over 20 papers in national and international journals and conferences. Member of a number of societies, and Syndicate of Agricultural Professions of Egypt.



*Prof. Dr. Abdalla El-Morsi Abdalla*

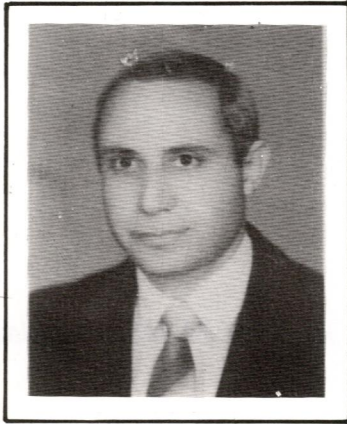
Prof. Abdalla, Research Professor of Plant Physiology, Botany Department, NRC, was born on November 16, 1944, Dakahlia, Egypt. Graduated from Cairo University 1964, with B.Sc. in Agriculture. Awarded M.Sc. from the same university in Plant Physiology in 1970, and Ph.D. from Al-Azhar University in 1976.

Prof. Abdalla held the following positions at NRC :

- Research Scholarship, 1965 - 1966.
- Research Assistant, 1966 - 1976.
- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1987.
- Research Professor, since June 1987.

He participated in several research projects : “Micronutrients and plant nutrition problems in Egypt”, NRC — FRG ; “More and Better Food” ; “Improvement of maize production in Egypt” ; “Improving maize crop” ; and many internal NRC projects. Granted a three months fellowship to Institute of Plant Nutrition, Munich, FRG (1977). Attended over ten conferences and workshops held in Egypt, on the subject of specialization. Supervised four M.Sc. and one Ph.D. theses. Published over 36 papers in national and international journals and conferences in Plant Physiology and Medicinal Plants. Member of Egyptian Botanical Society ; Egyptian Society of Physiological Sciences ; Egyptian Society of Horticulture ; Arab Society of Medicinal Plant Research ; and Association for the Advancement of Agricultural Sciences in Africa (AAASA).





*Prof. Dr. Ahmed Osama Mahmoud*

*Saad*

Prof. Saad, Research Professor of Agronomy (Crop Physiology), NRC, was born on January 1, 1942, Cairo, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Agricultural Sciences. Awarded M.Sc. and Ph.D. from Ain-Shams University in Agronomy in 1971 and 1977, respectively.

Prof. Saad held the following positions at NRC :

- Research Scholarship, 1965 - 1967.
- Research Assistant, 1967 - 1977.
- Researcher, 1977 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since November 1987.

He participated in a number of research projects : “Developing of corn production in Middle Egypt” ; “More and Better Food” ; and member of the scientific agricultural group working at the Remote Sensing Centre, Egyptian ASRT (1977 - 1983). Granted training fellowships to attend the Regional Seminar on Remote Sensing for Agriculture, Range Land and Hydrology (UNDP, Upper Volta, 1980), the International course on Remote Sensing Application, US Geological Survey (S. Dakota, USA, 1980) and the International course on application of remote sensing technique in surveying and forecasting of Desert Locust, Rome, 1983.

Supervised two M.Sc. and four Ph.D. theses. Published several papers in national and international journals and conferences. Attended several conferences held in Egypt on topics covering Crop Science, Remote Sensing in Agriculture, Methods of Narcotics Detection, and other related areas.



*Prof. Dr. Magda Mahrous Ibrahim  
Kandil*

Prof. Kandil, Research Professor, Botany Department, NRC, was born on September 9, 1944, Cairo, Egypt. Married with four children. Graduated from Cairo University in 1964, with B.Sc. in Agriculture (Hons.). Awarded M.Sc. and Ph.D. from the same university in 1966 and 1977, respectively.

Prof. Kandil held the following positions at NRC :

- Research Scholarship, 1965 - 1966.
- Research Assistant, 1966 - 1977.
- Researcher, 1977 - 1983.
- Associate Research Professor, 1983 - 1988.
- Research Professor, since 1988.

She participated in a number of research projects. Supervised one Ph.D. and two M.Sc. theses. Author of over 23 papers in specialized journals and conferences in the field of Plant Physiology.



*Prof. Dr. Esmat Abd Al-Fattah*

*M. Hassan*

Prof. Hassan, Research Professor of Plant Physiology, Botany Department, NRC, was born on December 29, 1942, Cairo, Egypt. Graduated from Cairo University in 1962, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in 1969 and 1977, respectively.

Prof. Hassan held the following positions at NRC :

- Research Scholarship, Plant Physiology Unit, 1963 - 1965.
- Research Assistant, 1965 - 1978.
- Researcher, Plant Physiology, 1978 - 1983.
- Associate Research Professor, 1983 - 1988.
- Research Professor, since 1988.

She participated in a number of research projects : "Mycotoxin Project, FAD and NRC" ; "More and Better Food, US AID and NRC" ; and "Application of micronutrients, JTZ (FRG) and NRC". Supervised two graduate students for Ph.D. degrees and another two for M.Sc. degrees. Attended several conferences held in Egypt and abroad. Granted scholarships and fellowships to Colorado State University (1970 - 1971) ; FRG (1977), and scientific visit to Czechoslovakia, Institute of Botany, Prague (1986). Member of several societies : Egyptian Botanical Arab Society of Medicinal Plants ; Egyptian Physiological Sciences and Egyptian Society of Weed Science. Also, she is a member of Association for the Advancement of Agricultural Sciences in Africa (AAASA), and Arab Association for Integration of Culture. Author of over 26 publications in national journals and conferences.



***Prof. Dr. Abdel-  
Mongy B. Abou Aziz***

Prof. Abou-AZIZ, Part-time Research Professor, Botany Department, NRC was born on Jan. 20, 1932, Menofia, Egypt. Graduated from Ain-Shams Univeristy in 1956 with B.Sc. Agriculture (Horticulture). Granted M.Sc. and Ph.D. in Pomology from the same university in 1961 and 1969 respectively.

Prof. Abou-Aziz held the following positions :

- Research Assistant, Botany Lab., NRC (1958-1964);
- Researcher, same Lab. (1964-1971);
- Associate Research Professor (1971-1976);
- Research Professor, NRC, (1976-1982);
- Head of the Agricultural and Biological Division, NRC and member of NRC Board of Directors (1982-1984);
- Vice-President of ASRT for Scientific and Cultural relations since 1987.

Prof. Abou-Aziz participates in several research activities. Principal investigator of : “National banana project-NRC-ASRT”; “Banana research project-Ministry of Agriculture-California Univ. (USA)”; “National citrus project”; “Minimizing loss of tomato yield” and general coordinator of national agriculture research project between NRC and Ministry of Agriculture. Member of the research team of “New crops in arid and semiarid land, ASRT and AID”. Offered many advisory and consultancy services to ministries and companies. Member of the technical committee of Horticulture project between Ministry of Agriculture and USA. Raporteur of special committee on handling and storage of Horticultural Crops (1970).

Awarded fellowshhips to England (1965); Netherlands (1966) and several visits to Agriculture Institutions and Experimental Stations in England, FRG, Netherlands, Romania, Albania, Hungary, USA and France. Attended



several conferences and symposia held in Egypt, Saudi Arabia and Iraq. He is a member of several committees and councils of NRC, Ministry of Agriculture, Agriculture Research Centre and ASRT. Member of Board of Directors of : Institute of Horticultural Crops (Agric. Res. Centre); Research Institute of Ophthalmology and Water Research Centre. Member of several professional societies : Egyptian Botanical Soc.; Egyptian Soc. of Physiological Sciences; Egyptian Society of Horticulture and the Indian Society of Pomology. Supervised several post-graduates for M.Sc. and Ph.D. degrees. Author of a number of papers published in specialized journals.



*Prof. Dr. Nadia Zikry Dimetry*

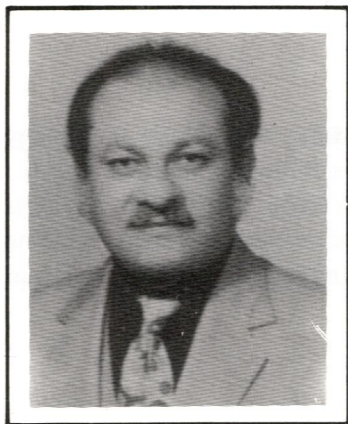
Prof. Dimetry, Research Professor of Insect Biology and Ecology, and Head of Pests and Plant Protection Department, NRC, was born on February 1, 1939, Sohag, Egypt. Married with 3 children. Graduated from Ain-Shams University in 1959, with B.Sc. in Chemistry and Entomology. Awarded M.Sc. and Ph.D. from Cairo University in Entomology in 1962 and 1965.

Prof. Dimetry held the following positions at NRC :

- Research Scholarship, 1960 - 1962.
- Research Assistant, 1962 - 1966.
- Researcher, 1966 - 1972.
- Associate Research Professor, 1972 - 1977.
- Research Professor, since 1977.
- Head of Agricultural & Biological Division (Jan. - April, 1988).
- Head of Pests and Plant Protection Department, since June 1988.

She is the principal investigator of the following projects : "Efficiency of certain insecticides against the American bollworm under laboratory conditions" Egyptian ASRT "Lessening the loss in the yield of tomato and citrus by means of combating pests" ; "The role of some plant extracts for the control of economic pests that attack leguminous plants in Egypt" and participated in "More and Better Food" AID and "Integrated control of cotton pests". Supervised six M.Sc. and two Ph.D. theses. Attended many conferences held in Egypt and Poland. Author of over 60 papers published in national and international journals and conferences. Member of several committees and member of editorial board of Bulletin of NRC. Member of Entomological Society of Egypt and Syndicate of Scientific Professions of Egypt. Granted the Alexander von Humboldt fellowship (1972 - 1973) and (1983) to West Germany. Visiting Professor to Institute of Animal

Physiology Bochum, West Germany 1985 and to Institute of Entomology  
Czechoslovak Academy of Sciences.



*Prof. Dr. Mohamed Talaat  
El-Ibrashy*

Prof. El-Ibrashy, Research Professor of Insect Physiology, Pests and Plant Protection Department, NRC, was born on August 15, 1935, El Mansoura, Egypt. Graduated from Cairo University in 1957, with B.Sc. in Entomology and Chemistry. Awarded M.Sc. in Entomology from the same university in 1961, and Ph.D. in the same field from Agriculture University of Wageningen, Netherlands, in 1965. Fluent in Arabic, English, Spanish and Deutch.

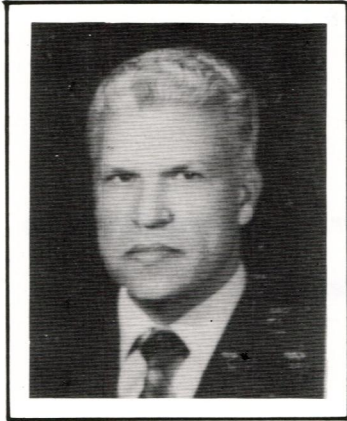
Prof. El-Ibrashy held the following positions at NRC :

- Research Scholarship, Cotton Leafworm Unit, 1958 - 1960.
- Research Assistant, Insect Physiology Unit, 1960 - 1966.
- Researcher and Head of the Insect Physiology Unit, 1966 - 1972.
- Associate Research Professor and Head of the Unit, 1972 - 1977.
- Research Professor, since 1977.

Recruited as a UNESCO Expert to Havana University (Cuba), Faculty of Science, in the field of Insect Biochemistry (1972 - 1973). Participated in several research projects and activities. Supervised five Ph.D. and 11 M.Sc. dissertations granted the degrees from Egyptian universities (one M.Sc. awarded the degree from Havana University, Cuba in 1975). Attended many conferences, meetings, seminars and symposia in Egypt, Netherlands, UK, Belgium, Cuba, Poland, Hungary, Malaysia, Kenya, Czechoslovakia, Canada and Austria. Member of Egyptian Society of Physiological Sciences ; Japanese Society of Applied Entomology and Zoology ; Entomological Society, Egypt ; Malaysian Plant Protection Society ; European Society for Comparative Endocrinology ; International Organization for Biological Control of Noxious Animals and Plants (IOBC) ; International Society of Invertebrate Reproduction (ISIR) ; and Syndicate of Scientific Professions of Egypt. Awarded the Gold Medal on the occasion of the 75th Anniversary



of the Entomological Society of Egypt (1982) ; NRC Prize in Biology (Agricultural Sciences) (1982) ; State Prize in Biological Sciences (1983) ; Egypt's 1st Class Ribbon for Science and Arts (1985) ; and the 1985 Diploma of the World Cultural Council (Mexico). Author of over 50 papers including several review articles published in national and international journals and conferences.



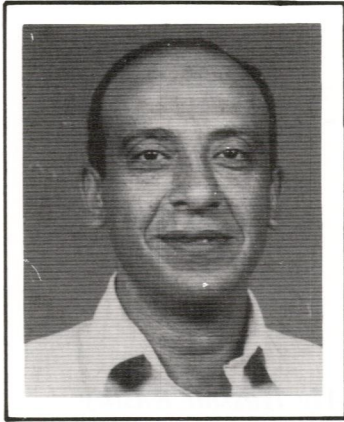
*Prof. Dr. Aly Hassan Rasmy*

Prof. Rasmy, Research Professor of Acarology (Zoology), NRC, was born on August 22, 1938, Tanta, Egypt. Graduated from Cairo University in 1960, with B.Sc. in Agriculture (Crop Protection). Awarded M.Sc. and Ph.D. from the same university in Acarology in 1963 and 1966, respectively.

Prof. Rasmy held the following positions at NRC :

- Research Assistant, 1960 - 1966.
- Researcher, 1966 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

He participated in a number of research projects. Granted post-doctoral fellowship by Canadian National Research Council on Entomology (1967 - 1969). Visiting Professor, Entomology Department, N. Carolina St. University, USA. (1977), and to Bonn University, FRG (1988). Attended many conferences on Pesticides, Entomology, Plant Protection, and Acarology, held in UK, Canada, Austria, USSR, FRG, India, Czechoslovakia and Egypt. Supervised several graduate students for Ph.D. and M.Sc. Author of over 60 papers published in national and international journals and conferences. Member of several societies, and Syndicate of Agricultural Professions of Egypt.



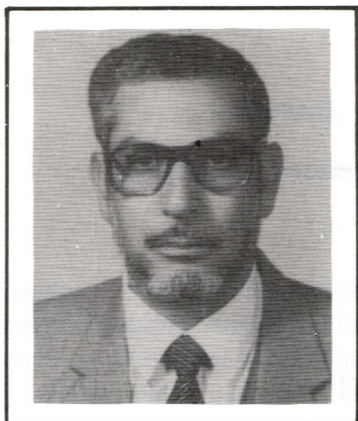
*Prof. Dr. Mohamed Dia-Eldin  
Hassanien Ali*

Prof. Ali., Research Professor of Phytopathology, NRC, was born on April 13, 1940. Married with two children. Graduated from Ain-Shams University in 1960. Awarded Ph.D. in Phytopathology from the same university in 1967.

Prof. Ali held the following positions at NRC :

- Research Scholarship, 1960 - 1963.
- Research Assistant, 1963 - 1967.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor of Plant Pathology, since 1978.

He participated in several national research projects : “More and Better Food” (ASRT/AID) ; “Mycotoxins in feed and food stuff” (US AID/NRC) and “Plant protection development project” (FAO/MOA). Supervised over 15 M.Sc. and Ph.D. theses, and published over 40 scientific papers. Attended many conferences, symposia and meetings held in Egypt, USA, Canada, France, England, Holland and Bulgaria ; and also attended short visits and training programmes in the field of Science Management and Technology Assessment in USA. Member of Plant Pathology, Microbiology and Botany Associations. Member of National Committee of Plant Protection (MOA, 1984 till now), and Head of Sub-committee of Plant Protection of the same National Committee (MOA, 1986 till now). He is Under-secretary of National Committee of Plant Protection Research Programmes (ASRT, 1986 till now).



*Prof. Dr. Ahmed Abd-El-Aziz  
Mohamed Morsy*

Prof. Morsy, Research Professor of Plant Pathology, NRC, was born on October 5, 1938. Graduated from Alexandria University in 1958, with B.Sc. in Agriculture (Pesticides). Awarded Ph.D. in Plant Pathology from Uzbekistan, USSR, in 1964.

Prof. Morsy held the following positions at NRC :

- Research Assistant, March - July 1968.
- Researcher, 1968 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, Plant Protection Department, since 1978.

He participated in several research projects : “More and Better Food” ; “Improvement of maize production in Egypt” and “Improvement of citrus production in Egypt”. Supervised graduate students for three Ph.D. and six M.Sc. degrees. Published over 35 papers in national and international journals and conferences. Member of Egyptian Society of Plant Pathology, and Egyptian Society of Applied Microbiology.





*Prof. Dr. Hamdi*

*Zaki Mohamed Aboul-Eid*

Prof. Aboul-Eid, Research Professor of Nematology, NRC, was born on July 27, 1938, Cairo, Egypt. Married with two children. Graduated from Cairo University in 1959, with B.Sc. in Agriculture. Awarded M.Sc. from the same university in 1964, and Ph.D. from Ghent University (Belgium), in 1969 and from Cairo University in 1970. All his post-graduate degrees were on Plant Nematology.

Prof. Aboul-Eid held the following positions at NRC:

- Research Assistant, Soil Biology Unit, 1961-1971.
- Researcher, Pests and Plant Protection Laboratory 1971-1976.
- Associate Research Professor, 1976-1981.
- Research Professor, since 1981.

He participated in 17 research projects, seven of which he acted as principal or co-principal investigator. He supervised three Ph.D. and six M.Sc. theses. Author of 61 research papers, 16 project reports, 3 undergraduate notes on Zoology and 2 post-graduate notes on Nematology. Participated in 13 local and international conferences in Egypt, USA, Canada, FRG and Kenya. Vice-President of the Afro-Asian Society of Nematologists, since 1984; and member of the European Society of Nematologists (UK) Society of Nematologists (USA); Egyptian Society of Phytopathology and Egyptian Zoological Society.

He is a part-time research member of the Remote Sensing Centre, agricultural applications team, since 1971. A member of Food, Agriculture and Irrigation Research Council, Environmental Research Council, and Plant Protection Committee of the Academy of Scientific Research and Technology, since 1986. He is also a member of the Ministry of Agriculture, Pest Control Recommendation Council, during 1987-1988, and Pest Control Projects, Funding Council, since 1987.



*Prof. Dr. Ikbal Zaki Boctor*

Prof. Boctor, Research Professor of Insect Biochemistry, Department of Pests and Plant Protection, NRC, was graduated from Cairo University, Faculty of Science, in 1958, with B.Sc. Awarded M.Sc. and Ph.D. from the same university in 1966 and 1970, respectively.

Prof. Boctor held the following positions at NRC:

- Research Assistant, 1961-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1981.
- Research Professor, since 1981.

She participated in a number of research projects. Author of several papers published in national and international journals and conferences in Biochemistry, with special emphasis on metabolic pathways of amino acids, carbohydrates, lipid classes, phospholipids, and fatty acid composition in the developmental stages of insects. Member of several societies, and Syndicate of Scientific Professions of Egypt. Supervised a number of M.Sc. and Ph.D. theses.



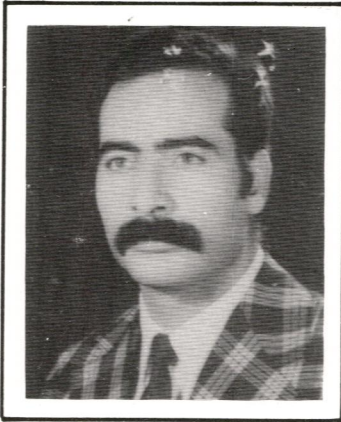
*Prof. Dr. Mansour Habib Mansour*

Prof. Mansour, Research Professor of Insect Physiology, Department of Pests and Plant Protection, NRC, was born on May 25, 1939, Monoufia, Egypt. Married. Graduated from Cairo University in 1961, with B.Sc. in Chemistry and Entomology. Awarded M.Sc. and Ph.D. from the same university in Entomology and Insect Physiology in 1965 and 1971, respectively.

Prof. Mansour held the following positions at NRC:

- Research Scholarship, 1961-1963.
- Research Assistant, 1963-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1981.
- Research Professor, since December 1981.

He participated in several research projects: Co-princ.invest. of "Efficiency of certain insecticides against the American bollworm *Heliothis armigera*" Egyptian ASRT; "Economic Pests attacking the short season cotton *Gossypium hirsutum* under Egyptian conditions", Egyptian ASRT; "More and Better Food", US AID; and "Increasing the corn yield in Egypt". Granted several post-doctoral fellowships to: Institute of Entomology, Gottingen, FRG (1972-1973); BBI FRG (1983); and DAAD, FRG (1985). Attended several conferences, meetings and symposia held in Egypt and Canada. Supervised two M.Sc. and one Ph.D. theses already granted, while one Ph.D. is still underway. Author of over 35 papers in specialized journals and conferences. Member of Entomological Society of Egypt, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed  
Fahmi Mohamed Eissa*

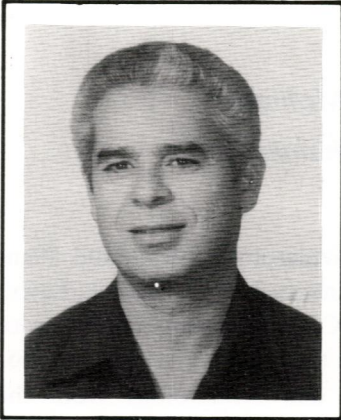
Prof. Eissa, Research Professor of Nematology, Pests and Plant Protection Department, NRC, was born on January 2, 1942, Zagazig, Egypt. Married with two children. Graduated from Cairo University in 1961, with B.Sc. in Agriculture. Awarded M.Sc. from the same university in 1965, Diploma and Ph.D. in Plant Pathology and Nematology from the Agricultural University, Wageningen, The Netherlands in 1966 and 1971, respectively. Fluent in English, Dutsch and mother tongue Arabic.

Prof. Eissa held the following positions at NRC:

- Research Assistant, 1962-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1982.
- Research Professor, since 1982.

He participated in several research projects: "Survey of cotton nematode pests in Egypt"; "Controlling cotton pests by soil pesticides"; "More and Better Food"; "Effect of intercropping on nematode pest population"; "Agriculture development systems"; US AID/MOA; and several projects for improving rice, citrus, tomato and peanut crops in Egypt. Granted several scholarships and post-doctoral fellowships to the Netherlands (1962-1971). Attended several conferences held in Egypt, Syria, Nigeria, Greece, Belgium, Ireland, Poland, Portugal, USA, Saudi Arabia, Canada, and Cyprus. Supervised a number of graduates for M.Sc. and Ph.D. degrees. Author of over 45 papers published in national and internaional journals and conferences. Member of the American Society of Nematologists; European Society of Nematologists; Afro-Asian Society of Nematologists; Pakistan Society of Nematologists; AAASA; Egyptian Zoological Society; Egyptian Plant Pathology Society; and the Saudi Biological Society.





*Prof. Dr. El-Sayed  
Ibrahim El-Sayed*

Prof. El-Sayed, Research Professor of Insecticides, Department of Pests and Plant Protection, NRC, was born on January 13, 1939, Mansoura, Egypt. Married with three children. Graduated from Cairo University in 1961, with B.Sc. in Agriculture, Plant Protection. Awarded M.Sc. and Ph.D. in Entomology from Louisiana State University USA, in 1965 and 1968, respectively.

Prof. El-Sayed held the following positions at the NRC:

- Research Assistant, Laboratory of Plant Protection, 1961-1969.
- Researcher, 1970-1977.
- Associate Research Professor, 1977-1983.
- Research Professor, since 1983.

He participated in a number of research projects. Supervised research work of graduate students for M.Sc. and Ph.D. degrees. Attended several conferences in Egypt and abroad. Published several papers in national and international journals and conferences. Member of a number of societies, and Syndicate of Agricultural Professions of Egypt.



*Prof. Dr. Fikry Fouad Moussa*

Prof. Moussa, Research Professor of Nematology, Pests and Plant Protection Department, NRC, was born in 1939, Cairo, Egypt. Married with three sons. Graduated from Cairo University in 1960, with B.Sc. in Agriculture (Plant Protection). Awarded M.Sc. from Ain-Shams University in 1968 in Nematology, and Ph.D. from State University of Ghent (Belgium). in 1972.

Prof. Moussa held the following positions at NRC :

- Research Assistant, 1964-1972.
- Researcher, 1973-1978.
- Associate Research Professor, 1978-1983.
- Research Professor, since 1983.

He participated in the following joint projects : “Controlling plant parasitic nematodes”, USDA, Egyptian Ministry of Agriculture and Faculty of Agriculture, Cairo University ; and “More and Better Food”, NRC and US AID. Besides, he contributed to several internal research projects for plant protection and improvement of rice production. Supervised several research studies for M.Sc. and Ph.D. degrees. Published over 38 papers in specialized journals and conferences. Attended over 30 conferences held in Egypt and abroad. Member of Zoological Society of Egypt ; European Society of Nematologists ; US Society of Nematologists ; Association for Advancement of Agricultural Sciences in Africa and Pakistan Society of Nematologists.



*Prof. Dr. Samira*

*Ahmed Hassan Abdallah*

Prof. Abdalla, Research Professor, Pests and Plant Protection Department, NRC, was born on February 2, 1944. Graduated from Alexandria University in 1963, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. in Pesticides from the same university in 1966 and 1972, respectively.

Prof. Abdallah held the following positions :

- Demonstrator, Alexandria University, Faculty of Agriculture. 1963-1972.
- Lecturer, same university, 1972-1973.
- Researcher, NRC, 1973-1977.
- Associate Research Professor, Plant Protection laboratory, NRC. 1978-1984.
- Research Professor, since 1984.

She participated in several research projects. Supervised two M.Sc. and three Ph.D. theses on Toxicological, Biological and Ecological Studies on Some Insects. Attended several conferences held in Egypt. Published several papers in journals and conferences



*Prof. Dr. Hamida  
Ahmed Ibrahim Osman*

Prof. Osman, Research Professor of Nematology, Pests and Plant Protection Department, NRC, was graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. from the same university in 1969, and Ph.D. from Cairo University, in Nematology. Married with two children.

Prof. Osman held the following positions at NRC :

- Research Scholarship, 1965-1966.
- Research Assistant, 1966-1975.
- Researcher, 1975-1980.
- Associate Research Professor, 1980-1985.
- Research Professor, since 1985.

She participated in several research projects : "Screening of nematode resistance for some economical crops", USDA and Cairo University (1978-1981) ; "More and Better Food", US AID and NRC ; "Identification of physiological races of root knot nematodes which infect peanut plants in Florida", University of Florida, USA (1981-1983) ; "Increasing the production of corn, soybean and onion plants by controlling nematodes" ; and "Biological control of root-knot nematodes in leguminous plants". Attended several conferences in Egypt and USA. Granted a post-doctoral fellowship to Institute of Food and Agricultural Sciences, University of Florida, USA (1981-1983). Author of over 30 papers published in national and international journals and conferences. Member of Egyptian Society of Phytopathology ; Egyptian Society of Zoology ; Association for Advancement of Agricultural Sciences in Africa (AAASA) ; American Society of Nematologists ; and Scientific Research Society (Sigmaxi, 1980). Supervised a number of graduates for M.Sc. and Ph.D. degrees.





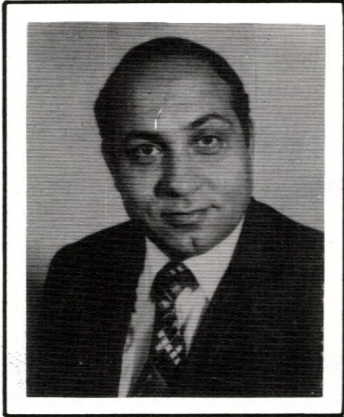
*Prof. Dr. Nadia Fouad Shehata*

Prof. Shehata, Research Professor, Pests and Plant Protection Department, NRC, was born on July 13, 1943, Beni-Suef, Egypt. Graduated from Ain-Shams University in 1964, with B.Sc. in Entomology (Hons.). Awarded M.Sc. and Ph.D. from Cairo University in Physiology and Radiation Biology in 1971 and 1974, respectively.

Prof. Shehata held the following positions at NRC :

- Researcher, 1974-1979.
- Associate Research Professor, 1979-1986.
- Research Professor, since 1986.

She participated in research projects : “Improvement of fruits in orchard crops” ; “Decreasing the loss of orchard crops - citrus and tomatoes” ; “Vine and citrus” ; and several internal NRC projects. Supervised one M.Sc. and one Ph.D. theses. Attended a number of conferences in Egypt and Lebanon. Member of a number of societies, and Syndicate of Scientific Professions of Egypt. Author of over 27 papers published in national and international journals and conferences.



*Prof. Dr. Mohamed  
Abdel-Latif Nofal*

Prof. Nofal, Research Professor of Plant Pathology, NRC, was born on December 8, 1943, Mansoura, Egypt. Married. Graduated from Ain-Shams University in 1965, with B.Sc. in Agriculture (Plant Pathology). Awarded M.Sc. and Ph.D. from the same university in 1972 and 1976, respectively.

Prof. Nofal held the following positions at NRC :

- Research Scholarship, Plant Protection Laboratory, 1966-1968.
- Research Assistant, 1968-1976.
- Researcher, 1976-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, since 1986.

He participated in a number of research projects. Published several papers in specialized journals and conferences on Plant Pathology (Fungi and Bacteria). Member of a number of societies.



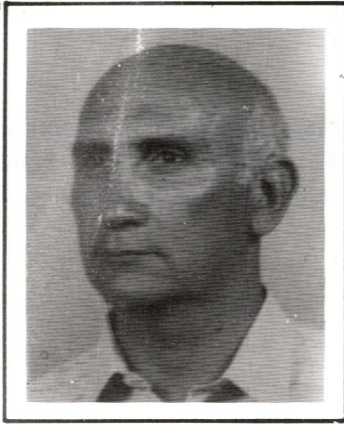
*Prof. Dr. Faika  
Hassan Fahmy Koura*

Prof. Koura, Research Professor of Nematology, Pests and Plant Protection Department, NRC, was born on September 1, 1946. Graduated from Cairo University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in 1968 and 1975, respectively.

Prof. Koura held the following positions at NRC :

- Research Scholarship, 1965 - 1966.
- Research Assistant, 1966 - 1975.
- Researcher, 1975 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

She participated in several research projects. Supervised one M.Sc. and another Ph.D. thesis. Author of over 30 papers published in national and international journals and conferences in the field of Nematology and Plant Pathology. Member of several scientific and professional societies.



*Prof. Dr. Ahmed Farahat Ahmed  
Sayed Sahab*

Prof. Sahab, Research Professor of Plant Pathology and Microbiology, NRC, was born on April 3, 1942, Cairo, Egypt. Married with three children. Graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in Plant Pathology and Microbiology in 1970 and 1976, respectively.

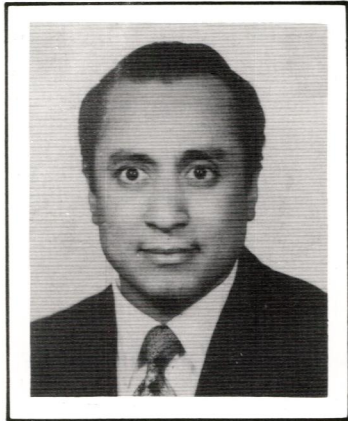
Prof. Sahab held the following positions at NRC :

- Research Assistant, 1965 - 1976.
- Researcher, Pests and Plant Protection Laboratory, 1976 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since September 1986.

He participated in several research projects : “Utilization of waste maize products in the production of microbial protein”, US Department of Agriculture, and Faculty of Agriculture, Ain-Shams University ; Principal Investigator “Improvement of mango and grape yield production — More and Better Food”, US AID/NRC ; “Microbial studies on the atmosphere of Muna Valley (Saudi Arabia) during Al-Hajje season”, Al-Hajje Research Centre (Saudi Arabia) and NRC ; “Improvement of onion by controlling diseases and pests during field, transportation and storage” ; “Improvement of tomato in Egypt” ; “Improvement of maize in Egypt” ; and Principal Investigator of “Mycorrhiza as biological control of wilt and root rot diseases”. Supervised four Ph.D. and seven M.Sc. theses. Supervising the Microbiological Laboratory of General Egyptian Book Organization since 1984. Co-editorial Secretary of Egyptian Journal of Phytopathology since 1980. Member of the Technical Office, NRC, 1988. Co-chairman of Pests and Plant Protection Laboratory (1982 - 1988). Author of over 47 papers and 15 reports in the field of specialization. Granted a short visit to UK by the Royal Society (1986). Member of two official missions to Al-Hajje



Research Centre (Saudi Arabia) in 1982 and 1983. Awarded NRC Prize for Scientific Contribution in Agriculture for 1986. Member of Soc. of Plant Pathology, Egypt. Soc. of Applied Microbiology and Syndicate of Agricultural Professions of Egypt.



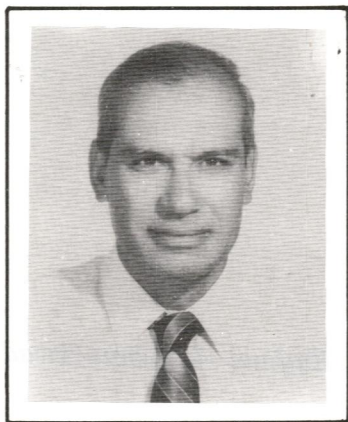
*Prof. Dr. Badawi A. Abou-Awad*

Prof. Abou-Awad, Research Professor of Acarology, Pests and Plant Protection Department, NRC, was born on June 6, 1941, Sohag, Egypt. Married with two children. Graduated from Assiut University in 1966 ; with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from Cairo University in Acarology in 1970 and 1976, respectively.

Prof. Abou-Awad held the following positions at NRC :

- Research Assistant, 1967 - 1976.
- Researcher, 1976 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

He participated in several research projects : “Improvement of corn production” ; “Fire blight on pear : management and factors affecting the production” ; “Improvement of tomato production” ; “More and Better Food” ; and “Improvement of cotton production”. Supervised one M.Sc. thesis granted from Cairo University (1988). Attended several conferences held in Egypt. Author of several papers published in specialized journals and conferences. Awarded State Prize in Agricultural Sciences, Egyptian ASRT (1985) ; and the NRC Prize for Scientific Contribution in Agricultural Sciences for 1985.



*Prof. Dr. El-Sayed El-Banhawy*

Prof. El-Banhawy, Research Professor of Acarology, NRC, was born on October 13, 1943. Married with two children. Graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture (Entomology). Awarded M.Sc. and Ph.D. from the same university in Zoology and Entomology in 1967 and 1973, respectively.

Prof. El-Banhawy held the following positions at NRC :

- Research Assistant, 1964 - 1973.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

Prof. El-Banhawy participated in several research projects : “Morphology and taxonomy of mites associated with social insects, particularly honey bees” ; “Effect of pesticides on common predacious and phytophagous mites” ; “Effect of plant extracts on the predacious and phytophagous mites” ; and “Introduction of predacious mites to protected agriculture”. Granted several post-doctoral fellowships to Brazil (1974) ; Canada (1978) ; and USA (1983). Attended many conferences held in Egypt, USA, Brazil and Peru. Supervised post-graduate studies for M.Sc. and Ph.D. degrees. Author of over 50 publications in national and international journals and conferences. Awarded the State Prize in Agricultural Sciences for 1985 (Egyptian ASRT). Member of several scientific and professional societies.



*Prof. Dr. Fayez Nazir Zaki*

Prof. Zaki, Research Professor of Biological Control Pests and Plant Protection Department, NRC, was born on August 16, 1939. Graduated from Ain-Shams University in 1960, with B.Sc. in Agriculture (Entomology). Awarded M.Sc. and Ph.D. in Entomology (Biological Control) from the same university in 1966 and 1975, respectively.

Prof. Zaki held the following positions at NRC :

- Research Assistant, 1961 - 1975.
- Researcher, 1975 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

He took part in several research projects : “Biological control of cotton pests, USDA ; “More and Better Food, USAID ; and “Microbial control of oil crops”, Canada. Besides, he participated in several national projects for pest management on peanuts, maize, mango and soybean. Granted post-doctoral fellowship to “Institut de Zoologie et de Lutte Biologique”, France (1978 - 1979). Supervised three Ph.D. theses. Published over 32 papers in national and international journals and conferences. Member of the Society of Entomology, Egypt ; and Society of Parasitology of Egypt. Awarded the Bronze Medal on the occasion of the NRC Silver Jubilee (1982), NRC Prize for Scientific Contribution (Agriculture) (1985), and State Prize in Biology (1986).





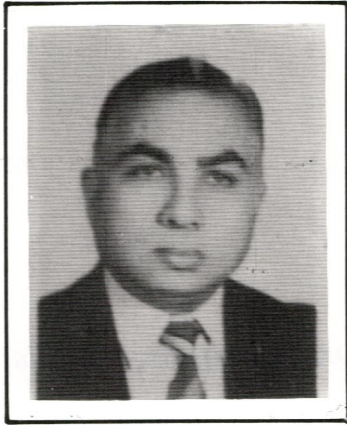
*Prof. Dr. Aziza M.  
Fouad El-Sharaby*

Prof. El-Sharaby, Research Professor of Entomology, NRC, was born on Feb. 14, 1946, Cairo, Egypt, Married with four children. Graduated from Cairo University in 1967 with B.Sc. (Hons.) in Agriculture (Plant Protection). Awarded M.Sc. and Ph.D. in Entomology from Ain-Shams University in 1972 and 1978 respectively.

She held the following positions at NRC :

- Research Scholarship (1968 - 1970).
- Research Assistant (1970 - 1978).
- Researcher (1978 - 1984).
- Associate Research Professor (1984 - 1989).
- Research Professor since Jan. 1989.

Prof. El-Sharaby participated in several research projects : “Biological pest control in Egypt, NRC — USDA” ; “Biological pest control on pests of oilseed crops, NRC — IDRC”, “More and Better Food, NRC — USAID” and a number of NRC internal projects. Supervised one M.Sc. thesis. Granted a short visit to USDA Beltsville, Agric. Res. Centre, Arizona, and California Research Institutes and universities, in 1983. Attended several conferences held in Egypt in the field of Pest Control, Plant Protection and Entomology. Member of Entomological Society of Egypt and Syndicate of Agricultural Professions of Egypt. Awarded the State Prize in Biological Sciences for 1987.



*Prof. Dr. Fayez Salib Hanna*

Prof. Hanna, Research Professor of Soil Science, NRC, was born on February 10, 1935, Mansoura, Egypt. Married with three children. Graduated from Ain-Shams University in 1956, with B.Sc. in Agriculture. Awarded M.Sc. in Soil Science from Cairo University in 1959, and Ph.D. in the same field from Bonn University (FRG) in 1966.

Prof. Hanna held the following positions at NRC :

- Research Scholarship, 1956 - 1959.
- Research Assistant, Soils Laboratory, 1959 - 1966.
- Researcher, 1966 - 1972.
- Associate Research Professor, 1972 - 1977.
- Research Professor, since May, 1977.

He headed research team working on research projects : “Problems of calcareous soils reclamation” (1977 - 1983) ; and “Improvement of physical properties of the Egyptian soils”. Granted several scholarships and post-doctoral fellowships to : FRG, Bonn University, for Ph.D. (1961 - 1966) ; FRG, Bonn University, Soil Science Institute (1973 - 1975) ; Iraq, Institute of Land Researches, Baghdad (February, 1977) ; FRG, Bonn University, Soil Science Institute (June - November, 1978) ; USA, US Department of Agriculture, University of California, University of Arizona, and USDA in Phoenix (May, 1980) ; Belgium, University of Gent (July, 1981) ; USSR, Symptom sand dune fixation, UNEP/USSR (October, 1981) ; and Belgium, University of Gent (September, 1982). Member of several councils, Egyptian ASRT, and Consultant, General Authority for Rehabilitation Projects and Agricultural Development, Ministry of Development (1983 - 1986). Supervised seven M.Sc. and two Ph.D. theses. Author of over 30 papers published in national and international journals and conferences. Presented eight technical reports upon the request of ASRT.



*Prof. Dr. Mostafa H. M. Hilal*

Prof. Hilal, Research Professor of Soil and Water Use, NRC, was born on February 2, 1937, Qaliubia, Egypt. Married. Graduated from Cairo University in 1958, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. in Agriculture Chemistry and Soil from University of Arizona, USA in 1963 and 1966, respectively.

Prof. Hilal held the following positions at NRC :

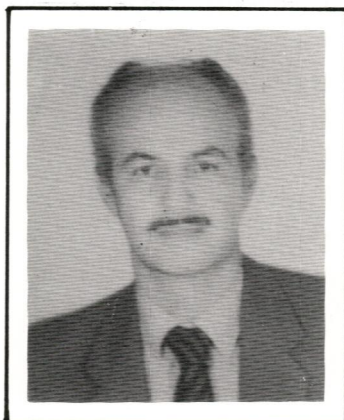
- Researcher, 1966 - 1972.
- Associate Research Professor, 1972 - 1977.
- Research Professor, since 1977.

He assumed the post of Head of Soils and Water Use Dept., from 1974 to 1977. He participated as Principal Investigator and Co-Principal Investigator in several research projects : "Effect of Nile suspended matter deficit on the properties and fertilization requirements of Egyptian soils" ; "Micro-nutrients and plant nutrition problems in Egypt" — an Egyptian-FRG Project ; "Salt accumulation in village of Adendan" ; "Promotion of soil physical conditions and water management" — joint project with Gent University, Belgium ; "Use of sulphur for soil reclamation and agriculture development in Egypt" — Egypt.-USA joint project ; "Soil degradation due to pollution factors associated with fertilizer, industry, traffic and wastes" — NRC and ASRT ; and "Agriculture hydrology" — DRTPC-MIT of Cairo University. Granted a number of scholarships and fellowships and visits to USA, Canada, Belgium, Bulgaria, FRG, UK and several Arab countries. Attended several conferences held in Egypt and abroad. Member of several committees, councils and working groups. Member of Egyptian Society of Soil Sciences ; Egyptian Society of Microbiology ; and Syndicate of Agricultural Professions of Egypt. Supervised several graduate studies for M.Sc. and Ph.D. degrees (four Ph.D.

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and ten M.Sc.). Offered several consultancy and advisory services and author of many technical reports and over 65 papers published in national and international journals.





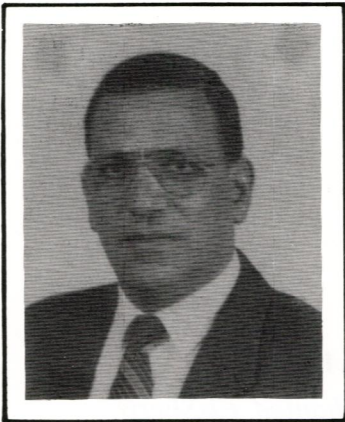
*Prof. Dr. Farouk Anter El-Said*

Prof. El-Said, Research Professor of Soil Science, NRC, was born on January 5, 1938. Graduated from Ain-Shams University, with B.Sc. in Agriculture (Soil) in 1959. Awarded M.Sc. and Ph.D. in Agriculture (Soil) from the same university in 1963 and 1967, respectively.

Prof. El-Said held the following positions at NRC :

- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

He participated in several research projects and activities in Egypt and Saudi Arabia. Granted a fellowship to A.B.O.S. (Belgium) for one year (1974 - 1975), and another one to FRG (Alexander von Humboldt Stiftung) for 14 months (1976 - 1977). Supervised a number of M.Sc. and Ph.D. theses. Participated in several international and regional conferences and meetings in the field of soil science. Author of over 52 papers published in national and international journals.



*Prof. Dr. Hassan  
Moawad Abdel-Aal*

Prof. Abdel-Aal, Research Professor and Head of Soil Microbiology Group NRC, was born on November 3, 1940. Married with three daughters. Graduated from Ain-Shams University in 1961, with B.Sc. in Agriculture (Soil). Awarded Ph.D. in Ecology from Moscow State University in 1967. Fluent in Arabic, English and Russian, with experience in scientific translation.

Prof. Abdel-Aal held the following positions at NRC :

- Research Assistant, 1962 - 1967.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

He acted as principal investigator for US/BOSTID research project on “Competitive relationships between indigenous and inoculant rhizobia nodulating broad beans and lentils”. Granted post-doctoral research fellowship to University of Minnesota (1979 - 1980), and to University of Hawaii (1980 - 1981). Participated in many conferences, workshops, symposia and meetings in Egypt, several Arab countries, USA, Thailand, FRG, Malaysia, Colombia, Canada, Philippines, Netherlands, and Hawaii (USA). Supervised several graduates for M.Sc. and Ph.D. degrees. Author of many articles and papers published in national and international journals and conferences. Member of Soil Pollution Committee, ASRT, Egyptian Society for Microbiology, American Society for Microbiology, and Association for Development of Agricultural Science in Africa. Certified member of UN rosters of experts in biological nitrogen fixation area. Member of US Academy of Sciences Panel to participate in the preparation of research priorities for developing countries in the area of soil sciences and plant nutrition (1982). Member of National Committee for Microorganisms, ASRT.



*Prof. Dr. Ahmed  
Fouad Mohamed El-Sherif*

Prof. El-Sherif, Research Professor of Soils, NRC, was born on June 19, 1934. Married. Graduated from Ain-Shams University in 1958, with B.Sc. in Agriculture (Soils). Awarded M.Sc. and Ph.D. from the same university, also in soils, in 1964 and 1967, respectively.

Prof. El-Sherif held the following positions at NRC :

- Research Assistant, 1964 - 1967.
- Researcher, Soils and Water Use Laboratory, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since December 1978.

He participated in many research projects. Principal Investigator of "Effect of Nile suspended matter deficit on the properties and fertilization requirements of Egyptian soils", ASRT ; "Adaptation of certain plant species of economical value in the newly reclaimed areas", ASRT ; and "Reclamation of sandy soils, methods and economical aspects", ASRT. Participated in "Micronutrients and plant nutrition problems in Egypt", Egypto-German Cooperation ; "More and Better Food", ASRT and US AID ; "Egyptian Bentonite", ASRT and US AID ; and "National program for improving citrus", ASRT and Ministry of Agriculture and Food Security, Egypt. Member of scientific field visits to Democratic Republic of Sudan (1975 and 1976) ; Iraq (1975) ; DDR (1975) ; FRG (1978) ; USA (1981) ; Czechoslovakia (1984) ; Austria (1984) ; Tunisia (1985) ; and Algiers (1988). Author of over 43 papers published in national and international journals and conferences.



*Prof. Dr. Abdel  
Hafez Salama Hamed*

Prof. Hamed, Research Professor of Soil Microbiology, NRC, was born on April 23, 1936, Cairo, Egypt. Married. Graduated from Ain-Shams University in 1959, with B.Sc. in Agriculture (Soil). Awarded M.Sc. and Ph.D. from the same university in 1964 and 1968, respectively.

Prof. Hamed held the following positions at NRC :

- Research Assistant, 1961.
- Researcher, 1968.
- Associate Research Professor, 1973.
- Research Professor, since 1978.

Prof. Hamed participated and coordinated eight projects between NRC and Hajj Research Centre (HRC), Jeddah, Saudi Arabia (1978/1983) : “Air Quality in Muna Valley”, NRC-HRC (1978) ; “Air Quality in Holly Area”, NRC-HRC (1979) ; “Sacrifice in Hajj”, Faculty of Science — King Abdul Aziz University — HRC (1974/1976), NRC-HRC (1979-1981), HRC only (1981/1984) ; “Production of Antifire Tent”, NRC-HRC (1980/1981) ; “Microbiology and Climatology of Muna Valley”, NRC-HRC (1980/1982) ; “Water Quality of Zam Zam Well in Holly Mecca”, HRC (1980/1984) ; “Water Quality of the Water Seepage from Underground Tunnel near Sacred Harm Mecca” (1982/1983) ; and “Air Quality of King Abdul Aziz Air Port Jeddah, Saudi Arabia”, HRC — Karatchi University, Pakistan (1983).

Supervised two Ph.D. and three M.Sc. theses. Published over 40 papers and ten reports in national and international journals and conferences. Attended several conferences, meetings and symposia held in Egypt and abroad : UK, France, FRG, Netherlands, Belgium, USA, Australia, New Zealand, Japan, Indonesia, Pakistan, and Djibouti in the field of agricultural, environmental and biological sciences.



Member of several societies : “Egyptian Society of Applied Microbiology (1969/1973) ; “Society of Soil Science”, and “Egyptian Society of Plant Phytopathology”.



*Prof. Dr. Mohamed Saber*

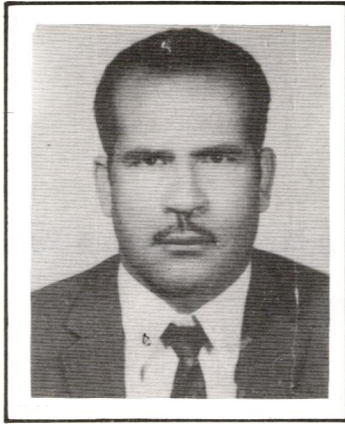
Prof. Saber, Research Professor, Soil and Water Use Department, NRC, was born on January 1941, Giza, Egypt. Married with three children. He studied at Ain-Shams University where he obtained his B.Sc. in Agricultural Sciences (Soil Science) in 1961. Awarded M.Sc. and Ph.D. from Cairo University in Soil Microbiology in 1966 and 1969, respectively.

Prof. Saber held the following positions at NRC :

- Research Scholarship, Soil and Water Use Laboratory 1961-1965.
- Research Assistant, 1965 - 1970.
- Researcher, 1970 - 1975.
- Associate Research Professor, 1975 - 1980.
- Research Professor, since 1980.

He participated in a number of research projects : “The economic utilization of tobacco dust and filter residues” ; “Development of field and vegetable crops production ; “Development of agricultural practices in middle Egyptian governorates” ; “The use of sulfur in agricultural development” ; and “The development of biofertilizers (bacterin)” ; as well as the preparation of national monograph on soil water management. He published over 60 papers in national and international journals and conferences, covering the field of biology, agriculture, and environment. Member of Egyptian Society of Soil Science, Egyptian Society of Applied Microbiology, Egyptian Botanical Society, as well as a number of national committees and councils at the NRC and ASRT, Egypt. He supervised the research work of several graduate students for M.Sc. and Ph.D. degrees. Offered consultancy and advisory services to several governmental and private sectors in the fields of biology, agriculture and environment. Participated in the efforts coordinated by NRC and Egyptian ASRT aiming at the establishment of regional research centres, the formulation of national

scientific policy, national environmental research plan, and other related activities. Granted a number of post-doctoral fellowships to FRG, USA and Belgium. Attended several conferences, symposia, workshops and seminars held in Egypt, USA, Japan, Netherlands, FRG, France, Zambia on topics covering agricultural, environmental and biological sciences. Author and translator of several books published in Arabic for popularization of science. Head of Scientific Information Committee, NRC, 1981-1987.



*Prof. Dr. Mohamed  
Yousef Tayel*

Prof. Tayel, Research Professor of Soil Physics and Soil Water Relations, NRC, was born on November 12, 1936, Kalubia, Egypt. Graduated from Cairo University in 1960, with B.Sc. in Soils (Agriculture). Granted M.Sc. from Ain-Shams University in 1964, and Ph.D. from California University in 1970 in Soil Physics.

Prof. Tayel held the following positions at NRC :

- Research Assistant, 1961 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1981.
- Research Professor, since 1981.

He participated in several research projects : “More and Better Food” ; “Microbiology and climatology of Muna Valley” ; “Reclamation of sandy soils — methods and economical aspects” ; “Effect of Nile suspended matter deficit on the properties and fertilization requirement of Egyptian soils” ; “Improvement of the yield of citrus” ; “Selecting and growing vegetable and field crops tolerating salts and drought” ; and “Promotion of soil physical conditions and water management”. Supervised graduate students for M.Sc. and Ph.D. degrees. Published over 53 papers in specialized journals and conferences. Member of the American Scientist Society, and Egyptian Soil Science Society. Awarded the NRC Prize for Scientific Contribution in Soil Science for 1983.





*Prof. Dr. Kout-El-Koloub Soliman*

*Abdel-Fattah*

Prof. Abdel-Fattah, Research Professor, Soils and Water Use Dept. NRC. Graduated from Ain-Shams University in 1959 with B.Sc. in Agriculture (Soils). Awarded M.Sc. from Ain-Shams University in 1963, Diploma in soil classification from State University of Ghent, Belgium 1966 and Ph.D. from Ain-Shams University in 1970 (soil chemistry and plant nutrition).

She held the following positions at NRC :

- Research Scholarship, Soils and Water Use Dept., 1959.
- Research Assistant, 1960.
- Researcher, 1971.
- Associate Research Professor, 1976.
- Research Professor, 1981.

She participated in several research projects : Tile drainage project, Ministry of Irrigation; Ground water research project, Ministry of Irrigation; Medicinal plants project; Agricultural residues and its agricultural use; More and better food; Management of calcareous soils, and Evaluation of soil productivity deterioration as affected by pollution factors. Granted research scholarship in 1965 (Belgium), a study leave (1966 - 1969) to State Agriculture University, Wageningen, the Netherlands, and scientific mission to Technical University of Berlin, West Germany in 1976. Supervised two M.Sc. and two Ph.D. theses, published over 25 papers on soil chemistry and plant nutrition and other related subjects. Attended many conferences. Member of Egyptian Soc. of Soil Science, Egyptian Soc. of Applied Microbiology and Arab Soc. for Medicinal Plant Research.



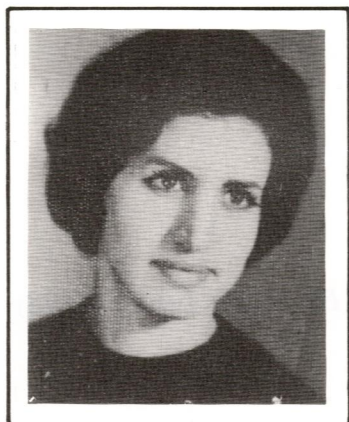
*Prof. Dr. Laila Ismail Zohdy*

Prof. Zohdy, Research Professor of Soil Microbiology, NRC, was born on April 30, 1940, Cairo, Egypt. Married. Graduated from Ain-Shams University in 1961, with B.Sc. in Agriculture (Soil). Awarded M.Sc. and Ph.D. from the same university in 1965 and 1971, respectively.

Prof. Zohdy held the following positions at NRC :

- Research Assistant, 1962 - 1971.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1982.
- Research Professor, since 1982.

She participated in several research projects : “Development and application of biogas technology in rural areas of Egypt” (1979 - 1984) ; “Effect of silt deficiency on soil properties and fertilization requirements” (1975 - 1977) ; “Improvement of sand soil specificity and its economical reclamation” (1976 - 1979) ; and “Economical use of sacrificed animal internal viscera as organic fertilizers” (1981 - 1982). Supervised three Ph.D. and two M.Sc. theses. Published over 40 papers in national and international journals and conferences. Attended several conferences, meetings and symposia held in Egypt and abroad (Poland), in the field of agricultural, environmental and biological sciences. Member of Egyptian Society of Applied Microbiology ; Egyptian Society of Soil Sciences and Waste Management Research Branch, ASRT. Awarded the Silver Medal on the occasion of NRC Silver Jubilee (1982) ; State Prize in Agriculture for 1985 ; and Order of Science and Art (First Class), 1985.



*Prof. Dr. Fawkia Labib Bahna*

Prof. Labib Bahna, Research Professor of Soil Science, Soil and Water Use Department, NRC, was born on 1939, Assiut, Egypt. Married with three sons. Graduated from Ain-Shams university in 1959, with B.Sc. in Agriculture (Soil Science). Awarded M.Sc. from the same university in 1963, and M.Sc. in Soil Survey and Classification from St. University of Ghent, Belgium, in 1966. Granted Ph.D. from Ain-Shams University in 1970, in Pedology and Mineralogy.

Prof. Bahna held the following positions at NRC :

- Research Assistant, 1960 - 1972.
- Researcher, 1972 - 1977.
- Associate Research Professor, 1977 - 1982.
- Research Professor, since 1982.

She participated in several research projects : "Effect of deficiency of Nile suspended matter on soil properties and crop requirements", ASRT (1975 - 1978) ; "Reclamation of sandy soils" (1979 - 1982) ; "Trace elements and clay minerals in Egypt" (1979 - 1988) ; "Promotion of hydrophysical properties of some Egyptian soils", EEC, since 1981 ; and other NRC sponsored projects. Supervised research work of four M.Sc. and four Ph.D. theses. Published over 32 papers in specialized journals and conferences. Granted research scholarships to Belgium (1965 - 1966 and 1967 - 1971). Obtained diploma in fixation of shifting sands from Moscow (1979). Attended several conferences in Egypt, USSR and France. Member of Soil Science Society of Egypt, International Soil Science Society, and Belgium Soil Science Society.



*Prof. Dr. Mohamed Yousry  
Mohamed Morsy*

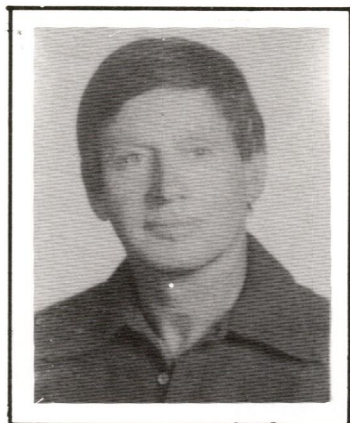
Prof. Morsy, Research Professor, Soils and Water Use Department, NRC, was born on March 2, 1942, Zagazig, Egypt. Married. Graduated from Ain-Shams University in 1961 with B.Sc. in Agric. (Soils). Awarded M.Sc. from Cairo University in 1967 and Ph.D. from Ain-Shams University in 1972.

Prof. Morsy held the following positions at NRC ::

- Research Assistant, 1965-1972.
- Researcher, 1972-1977.
- Associate Research Professor, 1977-1983.
- Research Professor, since 1983.

He participated in several research projects : “Problems of plant nutrition”. Egyptian-German Project ; “Agricultural development in new valley” ; and several NRC projects. Granted several scholarships and post-doctoral fellowships and visits to : Technical University in Berlin, FRG (1974) ; Technical University in Munich, FRG (1976 and 1980) ; Ghent University, Belgium (1985) ; and Technical University, Berlin, FRG (1987). Attended International Conference on Sulphur Uses in Arab Countries held in Riyadh (Saudi Arabia, 1985). Member of several councils (ASRT and Supreme Council of Universities). Supervised M.Sc. and Ph.D. theses. Published several papers in national and international journals and conferences. Member of Egyptian Society of Soil Science.





*Prof. Dr. Dia-El-Dean El-Badry  
Hassan*

Prof. Hassan, Research Professor, Soil and Water Use Department, NRC, was born on July 10, 1934, Giza, Egypt. Graduated from Cairo University in 1957, with B.Sc. in Agricultural Science. Awarded M.Sc. and Ph.D. from the same university in Soil Chemistry in 1963 and 1970, respectively.

Prof. Hassan, held the following positions at NRC :

- Researcher, 1973-1978.
- Associate Research Professor, 1978-1983.
- Research Professor, since 1983.

He was granted three diplomas : from FRG (1976) ; USSR (UNEP - 1980) ; and FRG (EEC - 1980), in Agricultural Development, Soil Reclamation, and Export Promotion. Expert in Agricultural Researches in UN (International Trade Centre, Geneva, since 1983). Participated in research projects ; “More and Better Food”, 1979-1981 ; and “Effect of deficiency of Nile suspended matter and alternative resources”. Supervised two M.Sc. and one Ph.D. theses. Published over 25 papers in specialized journals and conferences. Attended many conferences, symposia and meetings held in Egypt. Member of Egyptian Soil Science Society, Citrus Board and Aromatic & Oily Plants.



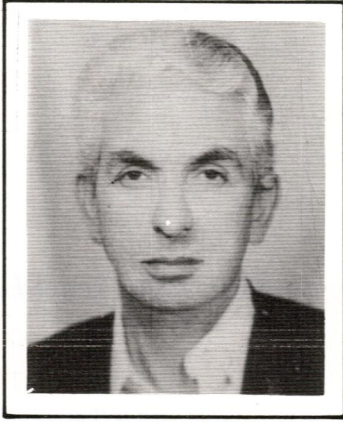
*Prof. Dr. Ibrahim Atia Abdel-Latif*

Prof. Abdel-Latif, Research Professor, Soil and Water Use Department, NRC, was born on January 28, 1936. Married. Graduated from Ain-Shams University in 1959, with B.Sc. in Agriculture. Awarded M.Sc. from Assiut University in 1965 and Ph.D. from Ain-Shams University in 1973.

Prof. Abdel-Latif held the following positions at NRC :

- Research Assistant, 1967-1973.
- Researcher, 1973-1979.
- Associate Research Professor, 1979-1984.
- Research Professor, since 1984.

He participated in the following research projects : “Effect of Nile suspended matter deficiency on the properties and fertility of Egyptian soils, 1975-1977” ; “Evaluation of soil productivity deterioration as affected by pollution factors” ; and “Use and management of different classes of calcareous soils”. Published over 20 papers in journals and conferences on chemistry of soil organic matter, and other related subjects. Attended many conferences held in Egypt. Visited the Sudan (1975) and FRG (1974) for short periods. Member of Society of Soil Science.



*Prof. Dr. Samy  
Abd El-Hamid Korkor*

Prof. Korkor, Research Professor of Soil and Water Use, NRC, was born on January 10, 1933. Married. Graduated from Cairo University in 1957, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in 1961 and 1969, respectively.

Prof. Korkor held the following positions at NRC :

- Research Assistant, 1966-1969.
- Researcher, 1969-1976.
- Associate Research Professor, 1976-1985.
- Research Professor, Department of Soil and Water Use, NRC, since 1985.

He participated in several research projects : “Feasibility of mixing herbicides with phosphate fertilizers”, Kafr El-Zayat Company ; “Field data for remote sensing studies”, ASRT ; “Efficient use of fertilizers and optimum fertilization” ; and “Use of sulphur for soil reclamation and agriculture development in Egypt”. Attended several conferences and workshops in Egypt, Abu-Dhabi and China. Visited the Scientific Research Foundation in Iraq in 1977. Author of over 21 papers published in national and international journals.



*Prof. Dr. Abd El-  
Rasheed Abd El-Monsef Shehata*

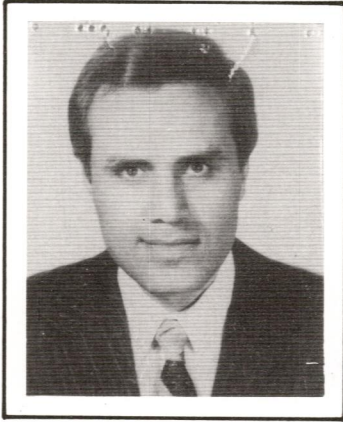
Prof. Shehata, Research Professor of Soil Chemistry, NRC, was born on July 21, 1942, Gharbia, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Soils (Agriculture). Granted M.Sc. and Ph.D. from the same university in 1970 and 1975 in Soil Chemistry.

Prof. Shehata held the following positions at NRC :

- Research Assistant, 1965-1975.
- Researcher, 1975-1980.
- Associate Research Professor, 1980-1985.
- Research Professor, since 1985.

He participated in several projects : “Effect of Nile suspended matter deficit on the properties and fertilization requirement of Egyptian soils” ; “Water quality studies on the River Nile and Lake Nasser” (agricultural implications of soil salinization and fertilization) and “Sand dune fixation in Egypt”. Supervised graduate students for M.Sc. and Ph.D. degrees. Published over 40 papers in specialized journals and conferences. Member of the Egyptian Soil Sciences Society. Lecturer to the International Centre for Theoretical Physics, Trieste (Italy), 1980.





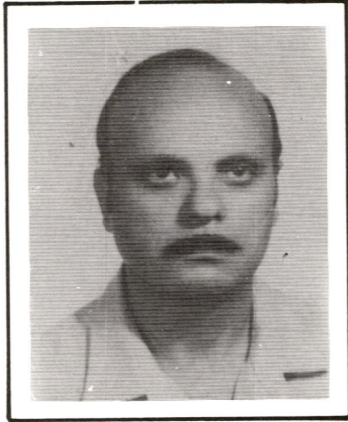
*Prof. Dr. Fikry Awad Mosaad*

Prof. Mosaad, Research Professor, Soils and Water Use Department, NRC, was born on August 11, 1942, Cairo, Egypt. Married. Graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture (Soils). Awarded M.Sc. and Ph.D. in Soil Chemistry and Plant Nutrition from the same university in 1969 and 1977, respectively, Granted Diploma in "Irrigation" from Italy in 1975, and another Diploma in "Reclamation of Saline Irrigated Soils" from USSR (course sponsored by UNEP), 1977.

Prof. Mosaad held the following positions at NRC :

- Research Assistant, 1964-1977.
- Researcher, 1977-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, since 1986.

He participated in the following research projects : "More and Better Food" ; Principal Investigator "Promotion of soil physical conditions and water management of Egyptian soils" (sponsored by NRC and EEC) ; and Principal Investigator of "Evaluation of soil conditioner and slow-release fertilizer for improving soil properties and plant growth" (sponsored by NRC and Berlin University, FRG). Supervised graduate studies for M.Sc. and Ph.D. degrees. Granted several scholarships and post-doctoral fellowships and visits to Italy, USSR, FRG and Belgium. Attended several conferences, symposia and meetings in Egypt, USA and FRG. Member of Egyptian Society of Soil Science, and International Society of Soil Science. Author of several papers published in specialized journals and conferences.



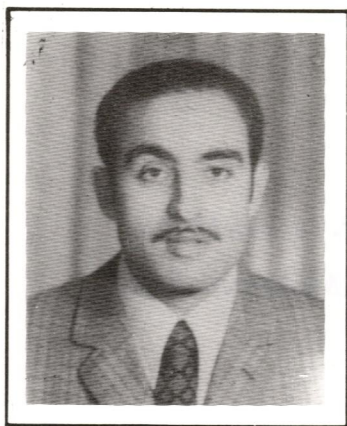
*Prof. Dr. Abdel-Halim  
Ibrahim Mohamed Rezk*

Prof. Rezk, Research Professor, Soil and Water Use Department, NRC, was born on May 1, 1943, Cairo, Egypt. Graduated from Alexandria University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in Soil and Water Sciences in 1968 and 1976, respectively.

Prof. Rezk held the following positions at NRC :

- Research Assistant, 1965-1976.
- Researcher, 1976-1982.
- Associate Research Professor, 1982-1987.
- Research Professor, since 1987.

He participated in the joint research project “Micronutrients and other plant nutrition problems in Egypt”, GTZ (FRG) and Egyptian ASRT, since 1977. Granted several post-doctoral fellowships and visits to Bari Institute, Italy (1972-1973) ; Institute of Plant Nutrition, Munich, FRG (1978) ; short visit to FRG (July 1981) ; Morocco (1984) ; and Institute of Plant Nutrition, Munich, FRG (1987). Attended several conferences held in Egypt and abroad. Offered consultancy services on micro-nutrients and plant nutrition problems in Egypt. Member of several societies : Egyptian Soil Science Society ; Association for Advancement of Agricultural Sciences in Africa (AAASA) ; Alexandria Science Exchange ; International Potash Association ; and International Plant Nutrition Association.



*Prof. Dr. Faiz Farag Asaad*

Prof. Asaad, Research Professor of Soil Chemistry, Soil and Water Use Department, NRC, was born on May, 1942, Alexandria, Egypt. Graduated from Alexandria University, with B.Sc. in Soil Science. Awarded M.Sc. and Ph.D. from the same university in Soil Chemistry in 1968 and 1976, respectively.

Prof. Asaad held the following positions at NRC :

- Research Assistant, 1965-1976.
- Researcher, 1976-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, since 1986.

He participated in several research projects at NRC and University of Alexandria, UNARC. Granted diploma in Soil Conservation from Institute Agronomico Mediterraneo, Bari, Italy, in 1972. Granted a number of post-doctoral fellowships to University of Missouri, USA (1981-1982), State Soil Laboratory, Denmark (1982-1983), and Hohenheim University, FRG (1987).

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*Prof. Dr. Said*

*Mahmoud Sayed Badr-El-Din.*

Prof. Badr-El-Din, Research Professor of Soil Microbiology, NRC, was born on August 9, 1944. Married with three daughters. Graduated from Cairo University in 1965, with B.Sc. in Agriculture (Soil). Awarded M.Sc. in Agric. Microbiology from Ain Shams Univ. in 1971, and Ph.D. in Agric. Microbiology from Cairo Univ. in 1977. Awarded State Prize in Agriculture Sciences in 1986.

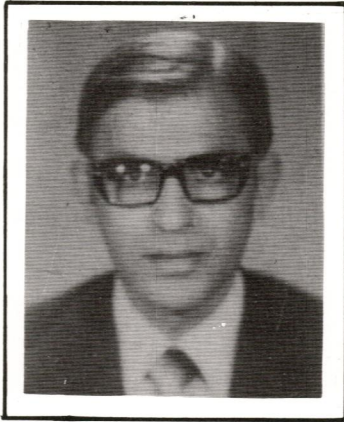
Prof. Badr El-Din held the following positions at NRC :

- Research Assistant, 1966-1977.
- Researcher, 1977-1982.
- Associate Research Professor, 1982-1987.
- Research Professor, since 1987.

He participated in research projects : “Water quality studies on the River Nile and Lake Nasser” (1977 to 1980), “The development and application of biogas technology in rural areas of Egypt” (1978 to 1984), “Microbiology and climatology of Muna valley” (1980 to 1984), “More and better food” (1982 to 1984), “Promotion of soil physical conditions and water management” (1983 to 1988), “Competitive relationships between indigenous and inoculant rhizobia nodulating broad beans and lentil” (1984 to 1988), “Improve legume productivity through maximizing symbiotic N<sub>2</sub> fixation” (since 1987), and “Conservation and development of forage resources in Sinai Peninsula”, (since 1985).

Supervised three M.Sc. and one Ph.D. Published over 45 articles in specialized journals and conferences. Participated in many conferences in Egypt, Thailand, Indonesia, Germany, and Senegal. Member of Egyptian Society for Microbiology.





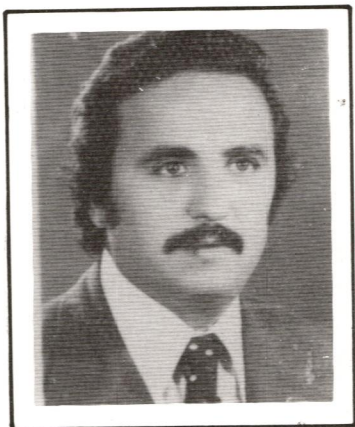
*Prof. Dr. Mohamed  
Ahmed Mohamed Wahab*

Prof. Wahab, Research Professor, Soil and Water Use Department, NRC, was born on April 5, 1943, Menoufia, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Agriculture (Soil). Awarded M.Sc. and Ph.D. from Ain-Shams University in Soil Pedology in 1969 and 1977, respectively. Granted two diplomas, the first from IAM di Bari, Italy (1974), and the second from USSR, UN Environment Programme (UNEP) in 1979.

Prof. Wahab held the following positions at NRC :

- Research Scholarship, 1965-1966.
- Research Assistant, 1966-1966.
- Researcher, 1977-1982.
- Associate Research Professor, 1982-1987.
- Research Professor, since 1987.

He participated in a number of research projects : “More and better food” ; “Promotion of soil physical conditions and water management of the Egyptian soils” ; and “Use of sulphur for soil reclamation and agricultural development in Egypt”. Granted a post-doctoral fellowship to Belgium (1983). Supervised three M.Sc. theses. Author of over 31 papers published in specialized journals and conferences. Attended several conferences held in Egypt. Member of Egyptian Society for Soil Sciences. Awarded the State Prize for Agricultural Sciences (1989).



*Prof. Dr. Aly El-Sayed M. Ghazy*

Prof. Ghazy, Research Professor of Soil Physics, Soil and Water Use Department, NRC, was born on August 10, 1941, Menoufia, Egypt. Married. Graduated from Cairo University 1964, with B.Sc. in Agricultural Sciences (Soils). Awarded M.Sc. from the same university in 1969 and Ph.D. from Ain-Shams University in 1977 in Soil Physics.

Prof. Ghazy held the following positions at NRC :

- Research Scholarship, 1965 - 1966.
- Research Assistant, 1966 - 1977.
- Researcher, 1977 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

He took part in research projects : “More and better food”, and “Promotion of soil physical conditioners and water management of Egyptian soils”. Granted post-doctoral training fellowship to USSR, training program, sponsored by UNEP (1979). Obtained Diploma on “Reclamation of saline irrigated soils”, and a scientific visit to Belgium in 1983. Supervised two M.Sc. theses. Attended many conferences held in Egypt. Author of over 32 papers published in specialized journals and conferences. Member of the Egyptian Society of Soil Science.



*Prof. Dr. Said Abdel-Azim Ibrahim*

Prof. Ibrahim, Research Professor, Soil and Water Use Department, NRC, was born on November 21, 1938, Menoufia, Egypt. Married with five children. Graduated from Ain-Shams University in 1960, with B.Sc. in Agriculture (Hon.). Awarded M.Sc. from the same university in 1964 and Ph.D. in Soil Fertility and Plant Nutrition in 1977 from Gottingen University, Institute of Soil and Plant Nutrition (FRG).

Prof, Ibrahim held the following positions at NRC :

- Research Scholarship, 1960 - 1961.
- Research Assistant, 1961 - 1977.
- Researcher, 1977 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since November 1987.

He participated in several research projects : “Micronutrients and clay mineralogy” ; “More and better food” ; “Improvement of corn plant var. Giza 2” ; “Cultivation of the soils of Aswan Lake” ; “Sugar beet”, NRC and Yugoslavian research team ; “Cultivation of Sinai soils with different crops” ; and “Promotion of physical and water characteristics of Egyptian soils”. Offered consultancy services to several governmental and private companies and sectors. Supervised graduate studies for one M.Sc. degree. Author of 49 papers and six technical reports. Granted a number of scholarships, post-doctoral fellowships and visits to FRG and Yugoslavia.



*Prof. Dr. Hussein Kamel  
Abd-El-Maksoud*

Prof. Abd El-Maksoud, Research Professor of Soil Microbiology, Soil and Water Use Department, NRC, was born on September 9, 1943, Kafr El-Sheikh, Egypt. Married. Graduated from Cairo University in 1965, with B.Sc. in Soil Science (Agriculture). Granted M.Sc. from Ain-Shams University in 1971 and Ph.D. from Cairo University in 1978, both in Soil Microbiology.

Prof. Abd-El-Maksoud held the following positions at NRC :

- Research Assistant, 1966 - 1979.
- Researcher, 1979 - 1983.
- Associate Research Professor, 1983 - 1988.
- Research Professor, since 1988.

He participated in several research projects : “More and better food” ; “Development and application of biogas technology in rural areas of Egypt (1980 - 1982)” ; “Production evaluation of field and vegetable crops (1982 - 1984)” ; “Cultivation and afforestation of shores of High Dam Lake (1982 - 1984)” ; “Breeding and cultivation of some species of salt and drought field and vegetable crops in Sinai (1985 - 1986)” ; and “Production and improvement of faba bean and lentil (1978 till now)”. Granted diploma in “Reclamation of saline irrigated soils”, UNEP, Moscow, USSR (1981) ; and diploma in “Microbiological skills of handling **Rhizobium** and the laboratory, greenhouse and field procedure for testing, producing and using **Rhizobium** in tropical agriculture”, Niftal, Hawaii University, USA (1982). Supervised one Ph.D. thesis. Attended several conferences, symposia and seminars held in Egypt and abroad in the field of agricultural, environmental and biological sciences. Published over 28 papers. Member of Egyptian Society of Applied Microbiology, and Egyptian Society of Soil Science.





*Prof. Dr. Mabrouk Salem Omar*

Prof. Omar, Research Professor of Soil Physics, NRC, was born on November 21, 1942, Behiera, Egypt. Graduated from Ain-Shams University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in Soil Physics in 1969 and 1977, respectively.

Prof. Omar held the following positions at NRC :

- Research Scholarship, 1965-1966.
- Research Assistant, 1966-1977.
- Researcher, Soil and Water Use Laboratory, 1977-1982.
- Associate Research Professor, 1982-1988.
- Research Professor, of Soil Physics, since 1988.

He participated in research projects, e.g., "More and better food". Supervised two M.Sc. theses. Granted a diploma on fixation of shifting sands, UNEP, Moscow, USSR (1980). Published over 26 papers in specialized journals. Member of Soil Science Society of Egypt.



*Prof. Dr. Ahmed Gamal  
Abdel Samie*

Born July 1921 in Damietta, Egypt where he received primary and secondary education before attending the College of Agriculture, Cairo University. After graduating in 1944 with honours he worked as demonstrator in the botany department of the same college until February 1948 when he was awarded an Egyptian government scholarship to continue his post-graduate studies in soil science abroad.

Prof. Gamal earned his M.Sc. and Ph.D. degrees in soil science from Oregon State University, U.S.A. in 1949 and 1953, respectively. He joined the staff in the soils department, College of Agriculture, Cairo University in 1953 and was selected in 1954 to establish the Desert Research Institute, set-up its plans and supervise implementation of its programs of research and investigations in the deserts of Egypt.

In 1959 he took a permanent position at the National Research Centre first as head of the soils unit and continued as head of the soils department then as chairman of the Agricultural and Biological Research Division before his appointment as Vice-President of The Academy of Scientific Research and Technology in April 1974 until retirement in July 1981.

During his career, Prof. Gamal contributed significantly to teaching, research and training in the following fields : survey and classification of desert soils, determination of consumptive-use and irrigation requirements for irrigated areas and new agricultural development projects, soil — water — plant relationships, desertification, use of remote sensing techniques in agricultural investigation, assessment, supervision and follow-up of some research proposals and implementation of approved research projects, and promotion of soil physical conditions and irrigation water-management.

In addition, he supervised many M.Sc. and Ph.D. theses in soil science and related disciplines, author and co-author of many scientific reports and

publications relevant to agriculture in general and soil science in particular.

Prof. Gamal served with FAO of The United Nations for three years in Nigeria and with the United Nations Environment Programme (UNEP) and UNESCO for short assignments in Tanzania, Kenya and Pakistan. His scientific missions included many travels to U.S.A., European Countries, Africa, Middle East, Australia and Central America where he participated in many conferences, symposia and scientific meetings.

After his retirement in 1981, Prof. Gamal continues his scientific activities to serve as scientific counsellor to the President of the Academy, part-time Research Professor at the National Research Centre, Chairman of the Advisory Board of the "Micronutrients and plant nutrition problems in Egypt" project and as national coordinator of the Egypt/EEC project on "Promotion of soil physical conditions and water management".

Furthermore, Prof. Gamal is actively participating as member of several councils and committees, namely ; The National Council for Production and Economic Affairs, The Food, Agriculture and Irrigation Council, The Environmental Research Council, The National Committee on Desertification and The Committee on Soil Development and Desert Technology.



*Prof. Dr. Amin Ismail Abdou*

Prof. Abdou, Research Professor and Head of Agricultural Economics Department, NRC, was born on December 23, 1944, Cairo, Egypt. Graduated from Cairo University in 1965, with B.Sc. in Agriculture. Awarded M.Sc. from the same university in Agricultural Economics in 1969, and Ph.D. in 1976 from Ain-Shams University.

Prof. Abdou held the following positions at NRC :

- Research Scholarship, 1965-1966.
- Research Assistant, Nutrition Unit, 1966-1970 ; and Agricultural Economics Group, 1970-1976.
- Researcher, 1976-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, since 1986.

He participated in many research projects : “Agricultural mechanization”, Ministry of Agriculture - US AID (1978) ; “A study of long-run economic model for Arab countries”, National Planning Institute (1978) ; “More and better food”, US AID (1979-1980) ; “Promotion potentials for Egyptian non-traditional agricultural exports” ; “Farm management survey and food consumption patterns for agricultural handholders”, American agricultural Ford foundation - Egyptian Ministry of Agriculture (1980-1981) ; “Evaluation of Arab statistics and agricultural institution survey”, Arab League (1981) ; “Egypt-California agricultural development system project (ADS), food consumption in rural Egyptian activity”, Ministry of Agriculture - California University (1980-1986) ; “Maize production promotion in Middle East”, NRC - Egyptian Village Reconstruction and Development Agency (1981-1983 and 1984-1985); “Food consumption impact on performance”, Egyptian Nutrition Institute - Arizona University (1983) ; and several other projects in collaboration with



USDA, FAO, US AID and NRC. Granted several fellowships and short visits to USA, Italy (FAO), Sudan, Saudi Arabia, Syria, Jordan, and Kuwait. Attended several conferences in Egypt and abroad. Supervised one Ph.D. and two M.Sc. while 14 are still underway. Author of over 40 papers published in journals and conferences. Member of International Association of Agricultural Economics (IAAE), USA ; Agricultural Professions Syndicate ; Economic and Social Scientific Society ; Egyptian Society of Nutrition ; and several committees and councils. Member of Board of Directors of Agricultural Economics Research Institute, Ministry of Agriculture.



*Prof. Dr. Mohamed Refaat Shalash*

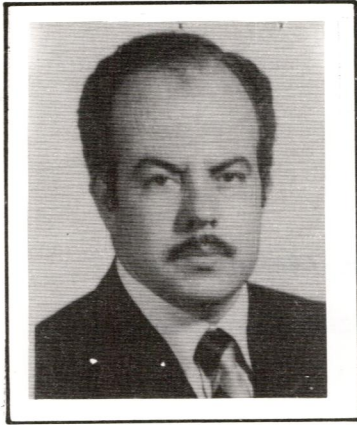
Prof. Shalash, Research Professor Emeritus, Department of Animal Reproduction and Artificial Insemination, NRC, was born on December 25, 1925. Married with two children. Graduated from Fouad 1st University (Cairo University) in 1952, with B.V.Sc. Awarded DVM & S from the same university in 1957, and FRCVS from the Royal Veterinary College, Stockholm, Sweden, in 1958. Granted a Certificate in R. Biology and RIT from Oak Ridge Institute for Nuclear Studies, USA, in 1961.

Prof. Shalash held the following positions at NRC :

- Research Scholarship, 1952 - 1956.
- Research Assistant, 1956 - 1959.
- Researcher, 1959 - 1963.
- Associate Research Professor, 1963 - 1968.
- Research Professor, since 1972.
- Head of Animal Reproduction and A. I. Department, 1959 - 1986.
- Head of Animal Physiology and Nutrition Department, 1972 - 1974.
- Head of Animal Resource Division, 1974 - 1976.

He participated in the establishment of Animal Reproduction Research Unit (NRC) the first post-graduate school in animal reproduction in Egypt, Egyptian Veterinary Association for Buffalo Development, and International Buffalo Federation. Also established scientific channels for promotion of research and post-graduate studies with Polish, German, Chinese and Austrian institutions over the years from 1961 to 1985. Author of over 220 original papers as well as six books. Attended over 50 international conferences and symposia and 21 national congress held in Egypt, Amsterdam, Mexico, Milano, Tokyo, Kracow (Poland), Madrid, Khartoum, Codollo (Hungary), Perth (Australia) and several other European, Asian, and American countries. Granted several short visits to UK, FRG, Sweden,

USA and Canada, to review the strategy and organization of livestock research institutes and to study recent livestock biotechnology development. Chief-editor of Egyptian Veterinary Science Journal, since 1981, and of Lights on Buffaloes, since 1984. Member of many committees, councils and associations organized by NRC, ASRT and different ministries, as well as membership in several international standing committees. Awarded Science Prize Medal (1955) ; Honorary Golden Medal (1976) from Italian Academy of Science ; Honorary Golden Medal (1978 and 1986) from Spanish Academy of Veterinary Science ; NRC Golden Medal (1980) ; Professional Pioneer Shield (1985) from Egyptian Veterinary Syndicate ; Prof. Bielanski's Medal (1987) from Academy of Agricultural Science, Poland ; and Honorary Doctor Degree (1972) from Italian Academy of Science ; Honorary Member of Spanish Academy of Veterinary Science (1978) ; and Honorary Member of Agricultural Academy, Kracow, Poland (1987). Biographee, Who's Who in the World (1976) ; Men of Achievement (1977) ; International Who's Who in Community Service (1979) ; DIB (1980) ; Men and Women of Distinction (1981) ; and Zootechnica.



*Prof. Dr. Mahmoud Fathi Nawito*

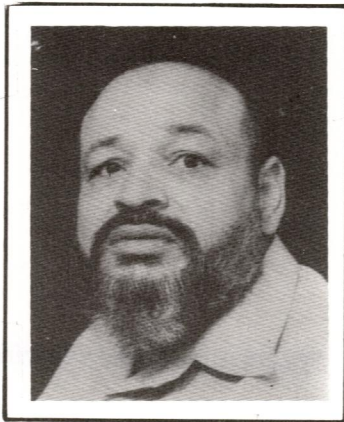
Prof. Nawito, Research Professor and Head of Animal Reproduction and Artificial Insemination Department, NRC, was born on August 14, 1939, Giza, Egypt. Graduated from Cairo University in 1961, with B. Vet. Med. Awarded Ph.D. in Veterinary Science in 1967 from Warsaw, Poland. Assumed the post of Chairman of Animal Resources Research Division from 1979 to 1981.

Prof. Nawito held the following positions at NRC :

- Research Assistant, 1961 - 1967.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor, since 1978.

He participated and headed research activities of several research projects with the aim to improve animal productivity under Egyptian village conditions. Offered consultancy and advisory services. Granted many scholar and fellowships abroad to Poland (1967 - 1968) ; FRG (1975 - 1977) ; Poland (1980) ; USA (1981) ; Saudi Arabia (1979, 1980) ; and China (1982). Member of several committees and scientific councils. Consultant to a number of organizations, ministries and companies. Supervised several graduate studies to M.Vet.Sc. and Ph.D degrees. Editorial Secretary of Journal of Veterinary Sciences of Egypt, since 1981. Member of the board of directors of Research Institute of Animal Reproduction, Agriculture Research Centre, Ministry of Agriculture, since 1980. Member of Egyptian Veterinary Association ; Veterinary Association of Buffalo Development ; Egyptian Society for Animal Reproduction and Fertility ; and National Council of Animal Reproduction, ASRT. Author of over 35 papers in the field of animal reproduction, published in specialized journals and conferences.





*Prof. Dr. Mohamed  
Abdel-Azim Mohamed Omar*

Prof. Omar, Research Professor of Animal Reproduction and Artificial Insemination, NRC, was born on May 11, 1941, Menoufia, Egypt. Graduated from Cairo University in 1965 with B.V.Sc. Awarded the Ph.D.Vet. from the same university in 1972. Married with three children. Fluent in Arabic, English, Italian and French.

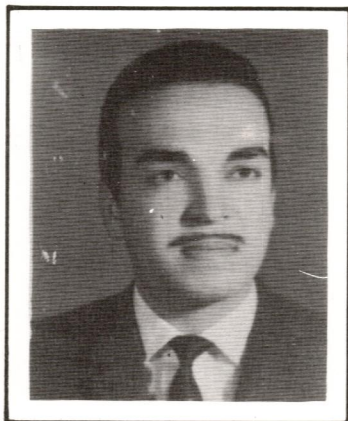
Prof. Omar held the following positions at NRC :

- Research Assistant, Department of Animal Reproduction and A.I., 1965 - 1972.
- Researcher, 1972 - 1976.
- Associate Research Professor, 1976 - 1982.
- Research Professor, since 1982.

He participated in several research projects. Granted post-doctoral fellowship to High Institute of Health, Rome, Italy (1973 - 1974). Assumed the post of Chief Livestock Research Officer, National Council for Scientific Research, Lusaka, Zambia (1984 - 1988) as Expert of Egyptian Technical Fund for African Countries, Ministry of Foreign Affairs, Cairo. Attended several training courses in scientific breeding and application of radioisotopes to laboratory animals, Nuclear Energy Association, Italy (Nov. 1973), I.C.L. Computer Training Course, NRC (1973), and application of radioisotopes, security and safety, NRC (1972, 1983, 1984). Supervised a number of graduates for M.Sc. and Ph.V.Sc. Author of over 60 papers published in national and international journals and conferences. Editor of Proceedings of International Symposium of Animal Welfare, Cairo, 1976 ; First National Livestock Conference, UNZA, Lusaka, Zambia, 1986 ; Livestock Development Training Workshop, Monze, Zambia, 1986 ; and Journal of Veterinary Association of Zambia. Member of Egyptian, Italian and Zambian Veterinary Associations ; Egyptian Veterinary Association for

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Buffalo Development, and Egyptian Society for Animal Reproduction and Fertility.



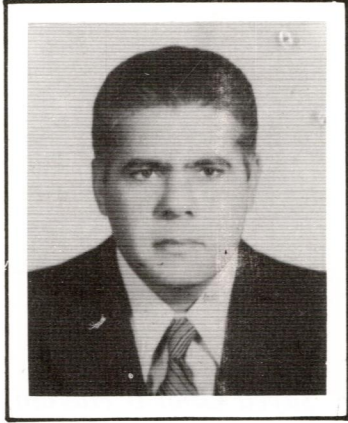
*Prof. Dr. Esam  
Mohamed Ahmed Ismail*

Prof. Ismail, Research Professor of Reproductive Diseases, Department of Animal Reproduction and A.I., NRC, was born on October 13, 1941, Souhag, Egypt. Married with two children. Graduated from Cairo University in 1965, with B.V.Sc. (Faculty of Veterinary Medicine). Awarded M.D.Vet. from the same university in 1972 in Brucellosis Disease in Sheep.

Prof. Ismail held the following positions at NRC :

- Research Scholarship, 1965 - 1967.
- Research Assistant, 1967 - 1972.
- Researcher, 1972 - 1977.
- Associate Research Professor, 1977 - 1985.
- Research Professor, since 1985.

He participated in several research projects : “Reproductive efficiency of farm animals under the Egyptian environmental conditions” ; “More and better food” ; Distribution of fish bacteria and parasites and its role in fish preservation methods” ; “Profit of the slaughtered animals during the Great Festival in Saudi Arabia” ; and “Rising the reproductive efficiency and infertility control of farm animals in Giza district”. Supervised a number of M.V.Sc. and Ph.D. theses on animal reproduction problems. Offered consultancy and advisory services to South Sinai Governorate (1982). Attended the UNEP/USSR International Workshop, Moscow (1982), on “Zoonoses Management Project”. Author of several publications in the field of specialization. Member of Egyptian Veterinary Medical Association, Cairo ; and Arab Veterinary Medical Congress, Cairo.



*Prof. Dr. Ahmed Abdel-Ghaffar  
Ahmed Younis*

Prof. Younis, Research Professor of Reproductive Hygiene of Animals, Department of Animal Reproduction and A.I., NRC, was born on July 8, 1940. Married with three daughters. Graduated from Cairo University in 1965, with B.V.Sc. (Faculty of Veterinary Medicine). Awarded M.D.Vet. from the same university in 1976 in "Some aspects of management in relation to reproductive efficiency of buffalo bulls".

Prof. Younis held the following positions at NRC :

- Research Scholarship, 1965 - 1967.
- Research Assistant, 1967 - 1976.
- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

He participated in the following research projects : "Reproductive efficiency of animals under Egyptian environmental conditions" ; "More and better food" ; "Profit of the slaughtered animals during the great Festival in Saudi Arabia" ; "Rising the productive efficiency and infertility control of farm animals in Giza district" ; and "Effect of pesticide residues on fertility of animals". Supervised several M.V.Sc. and Ph.D. theses on Hygiene, Animal Reproduction and Artificial Insemination. Attended several conferences, and symposia held in Egypt. Editor of the Proceedings of International Symposia of Animal Welfare, Cairo, 1976. Author of over 32 papers published in journals and conferences. Member of Egyptian Veterinary Association ; and the Egyptian Veterinary Association for Buffalo.





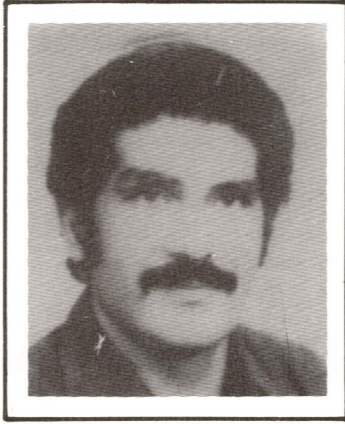
*Prof. Dr. Sayed Gharib Hassan*

Prof. Hassan, Research Professor of Physiology of Animal Reproduction, Department of Animal Reproduction and A.I., NRC, was born on April 27, 1937. Graduated from Cairo University in 1965, with M.V.Sc. (Faculty of Veterinary Medicine). Awarded the M.D. Vet. from Academy of Agriculture, Poland, in 1976.

Prof. Hassan held the following positions at NRC :

- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1986.
- Research Professor, since 1986.

He participated in several research projects : “Reproductive efficiency of farm animals under the Egyptian environmental conditions” : “More and better food” ; “Utilization of slaughtered animals during Pilgrimage, Saudi Arabia” ; and “Effect of insecticide residues on fertility of animals”. Supervised post-graduate studies for M.V.Sc. and Ph.D. degrees on topics covering metabolic disorder, reproductive hygiene and poultry reproduction. Published over 30 papers in journals and conferences. Member of Egyptian Veterinary Medical Association, and Egyptian Veterinary Association for Buffalo. Attended several conferences, symposia and meetings held in Egypt. Secretary Treasurer of the International Buffalo Federation. Manager of Abu-Rawash Experimental Farm, NRC (1979 - 1986).

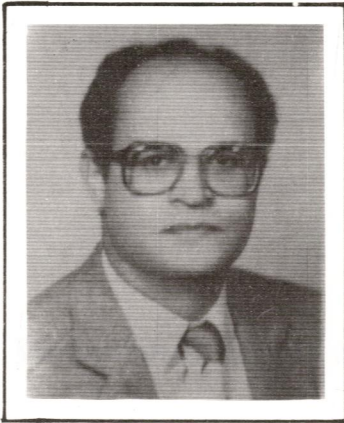


*Prof. Dr. Hatem Mohamed Ali*

Dr. Ali, Professor of Animal and Poultry Nutrition born on March 10, 1940, Egypt. Graduated from the Faculty of Agriculture, Ain Shams University 1960 with B.Sc. Agriculture, major Animal Production. Awarded M.Sc. 1965 and Ph.D. 1969 in Animal Production, Major Animal and Poultry Nutrition.

Dr. Ali obtained 4 certificates in research and development management and planning, R & D contracting and negotiated procurements from USA during 1979 - 1981. He started his academic career in 1962 at the NRC as a Research Assistant, Research Officer 1970, Associate Research Professor 1975 and Professor 1982. He was appointed Head of the Department of Animal and Poultry Nutrition and Production, NRC, 1988.

He worked with the Academy of Scientific Research and Technology (ASRT), since 1975 as manager of the Food and Agriculture Programme. Member of the technical office for the President of ASRT. He was selected as a member of the Animal Sciences Research Council of the ASRT 1982, and a member of the village development Res. Council 1988. He was also elected as a member of the board of directors of the Egyptian society for animal production. Dr. Ali is the scientific consultant to the Ministry of Agriculture for animal production sector, since 1982. He shared techno-economic studies, opinions and programme evaluation with task force groups dealing with the development of feed resources, poultry industry, dairy industry and beef industry (standards — requirements — quality control — economics). He participated actively in many research projects. He published more than 67 papers and one book. He supervised 10 Ph.D. and 12 M.Sc. Arranged 5 scientific conferences and acted as the Secretary General for 4 of them.



*Prof. Dr. Soliman Mohamed Soliman*

Prof. Soliman, Research Professor of Animal Nutrition and Forage Production, was born on January 1, 1941. Married. Graduated from Alexandria University in 1964, with B.Sc. in Agriculture. Awarded M.Sc. and Ph.D. from the same university in Animal Nutrition in 1967 and 1973, respectively.

Prof. Soliman held the following positions at NRC :

- Research Assistant, 1965-1973.
- Researcher, 1973-1978.
- Associate Research Professor, 1978-1984.
- Research Professor, since 1984.

He participated in research projects : Principal Investigator "Increasing productivity/feddan from total digestible nutrients in new lands"; NRC and ASRT ; Co-Principal Investigator of "Complete rations", NRC and ASRT ; Principal Investigator "Foliarly applied fertilizer for forage crops", funded by Laboratory of Biochemistry, Spain ; "Early weaning and rearing buffaloes calves", ASRT ; and consultant to agricultural consultative office for agri-business, Alexandria University. Offered many consultative and advisory services to governmental and private sector organizations, companies, and projects financed domestically or through foreign agencies, e.g., GTZ (FRG) ; African Bank ; and International Labour Organization (ILO). Attended several conferences, workshops and symposia held in Egypt, Jordan, and Morocco. Organized 12 meetings in his capacity as Secretary of Farmers Association for Rural Development on several vital topics covering animal and agricultural production in Egypt. Supervised several graduates for M.Sc. and Ph.D. degrees. Author of over 42 papers published in national and international journals and conferences. Granted several visits to Poland, Netherlands, FRG, Jordan and Morocco.





*Prof. Dr. Zebâ Mohamed  
Zaki Abd-Elmotagally*

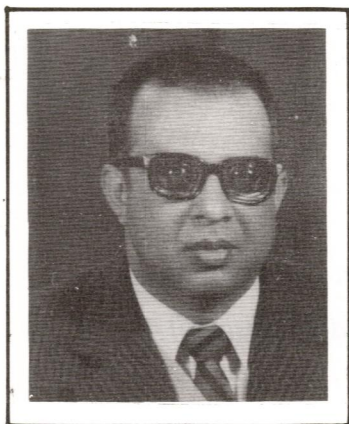
Prof. Abd-Elmotagally, Research Professor of Animal and Poultry Nutrition, NRC, was born on May 6, 1939. Graduated from Cairo University in 1961 with B.Sc. Agriculture (Animal Production). Awarded M.Sc. and Ph.D. in Animal Nutrition from the same university in 1968 and 1979 respectively.

She held the following positions at NRC :

- Research Assistant, 1961-1973.
- Researcher, 1973-1978.
- Associate Research Professor, 1978-1986.
- Research Professor since 1986.

Prof. Abd-Elmotagally actively participated in a number of research projects sponsored by NRC and other local organizations. Author of over 30 papers published in national and international journals and conferences. Supervised post-graduate studies for Ph.D. (7) and M.Sc. (9) degrees. Member of several committees and councils : Animal Production Development Committee (Giza Governorate); Training Comm. (NRC 1979-1982); Post-graduate Degrees (Registration) Comm. (NRC. 1979-1984); Animal Resources Division (ASRT since 1982) and Animal Science and Fisheries Research Council (ASRT since 1989). Elected member of the Scientific Association of Arab Women Board of Directors. She actively contributed to the establishment of the laboratory of Animal and Poultry Production and Nutrition, NRC. Granted a post-doctoral training fellowship to University of Munich (FRG) (1974-1976) and to the Royal Society of London (1979). Attended several conferences and meetings in Egypt, UK, and U.S.A. Paid short visits to USA institutions and universities in 1980 and 1986. Awarded the NRC silver Medal on the occasion of its Silver Jubilee.





*Prof. Dr. Mohamed*

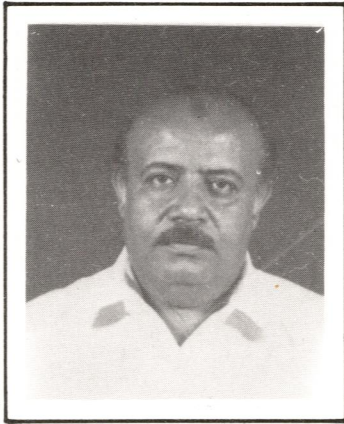
*Hamdy Madbouly*

Prof. Madbouly, Research Professor and Head of Parasites and Animal Diseases Department, NRC, was born on June 5, 1935, Qalyub, Egypt. Graduated from Cairo University in 1956, with B.Sc. in Entomology and Chemistry. Awarded M.Sc. and Ph.D. from the same university in Entomology in 1961 and 1965, respectively.

Prof. Madbouly held the following positions at NRC :

- Research Scholarship, 1957-1960.
- Research Assistant, 1960-1965.
- Researcher, Animal Physiology and Nutrition Laboratory, 1965-1971.
- Associate Research Professor, 1971-1977.
- Research Professor, since 1977.

He was granted several post-doctoral research grants : Rockefeller Foundation Grant University, Ebadan, Nigeria (1966-1969), and Tick Bionomics Research Unit, Zambia (1971-1973). Participated in a number of research projects and head of animal resources team of "More and better food". Principal investigator "Studies on some external parasites and bacterial diseases affecting livestock in Egypt", and "Improving animal feeding stuff resources". Supervised eleven M.Sc. and Ph.D. theses in the fields of Entomology, Zoology, Parasitology, Microbiology and Immunology. Published over 20 papers in national and international journals and conferences. Member of Entomological Society of Egypt, Zoological Society of Egypt, Parasitological Society of Egypt, and Saudi Biological Science Society.



*Prof. Dr. Mohamed*

*Adel Abbas Tawfik*

Prof. Tawfik, Research Professor of Parasitology and Animal Diseases, NRC, was born on May 1, 1942. Married with three children. Graduated from Cairo University in 1965, with B.V.M. & S. (Faculty of Veterinary Medicine). Awarded Ph.D. Vet. Parasitology from the same university in 1971.

Prof. Tawfik held the following positions at NRC :

- Research Scholarship, 1965-1967.
- Research Assistant, 1967-1971.
- Researcher, 1971-1976.
- Associate Research Professor, 1976-1981.
- Research Professor of Parasitology (Animal and Fish), since 1981.

He participated in several research projects. Principal Investigator of PHS/FDA project "Distribution and inactivation of parasites and bacteria pathogens in edible fish", funded by FDA, USA ; "More and better food", US AID and Egyptian ASRT ; "Biogas, anitating sludge", US AID and Egyptian ASRT ; and Principal Investigator of several internal NRC projects. Supervised over 17 M.V.Sc. and Ph.D. Vet. theses. Published over 50 papers in national and international journals and conferences. Attended many conferences, symposia and meetings held in Egypt, Finland, Spain, Canada and Australia. Granted several post-doctoral fellowships and short visits to USA, Poland and UK. Supervisor for the Animal Production Research Centre, NRC (1975-1977). Member of Egyptian Veterinary Medical Association, Egyptian Society of Parasitologists, World Society of Buffalo Development, Scandinavian Society of Parasitology, and World Association for the Advancement of Veterinary Parasitology. Awarded the NRC Prize for Scientific Contribution for 1983.







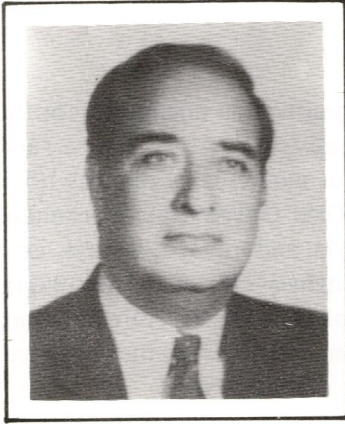


## ENGINEERING RESEARCH DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1- MECHANICAL ENGINEERING.
- 2- SOLAR ENERGY.
- 3- CHEMICAL ENGINEERING AND PILOT PLANT.



*Prof. Dr. Sherif Hussein Eissa*

Prof. Eissa, Research Professor of Chemical Engineering and Pilot Plant and Head of the Engineering Research Division, NRC, was born on September 15, 1941, Damietta, Egypt. Graduated from Cairo University, 1963, with B.Sc. in Chemical Engineering. Awarded the M.Sc. and Ph.D. from the same university in Chemical Engineering in 1966 and 1969, respectively.

Prof. Eissa held the following positions :

- Engineer, Research Assistant, NRC, 1963-1970.
- Researcher, NRC, 1970-1975.
- Associate Research Professor, NRC, 1975-1980.
- Research Professor, NRC, since 1980.

Prof. Eissa supervised and participated in several research projects, technical reports, and feasibility studies of applied nature covering building brick industries, chemical industries, water desalination and industrial waste water treatment. The holder of two patents registered at ASRT : the first under No. 12973 on Alum Production, 1977, and the second presented in 1987 on Brick Manufacture. Attended post-doctoral studies and research fellowships abroad : the first at Institute of Technical Chemistry, Technical University of Hannover (1972-1973), and the second at Goethe Institute, Freiburg, 1972, FRG. Also attended a feasibility study and project evaluation programme at AUC in 1976. He is the author of over 30 papers published in national and international journals. Participated in several national and international conferences and symposia in Egypt, India, Italy, USA, Australia, Iran, and FRG. Supervised one M.Sc. and seven Ph.D. theses in the field of specialization granted from Cairo University over the period from 1974 to 1983. Member of the Egyptian Society of Chemical Engineers and the American Institute of Chemical Engineers. Presented several

consultative services on : preparation and specification documents for the delivery of a clay brick plant (cap. 50 mil. bricks/year) (Assiut Project) and preparation of tender documents required for modernizing old clay brick factories (Giza Governorate). Member of Giza Governorate Consultant Group for Building Materials (1985-1987), and Sinai Research and Development Council (ASRT). Consultant Engineer (No. 82/5 Consultants Record, Engineering Syndicate). Secretary of the Infrastructure Program of Sinai Research and Development Council. Supervising the Technical Evaluation Division of the Egyptian Patent Office (ASRT).



*Prof. Dr. Abdullatif I. El-Sharkawy*

Professor Abdullatif I. El-Sharkawy was born on July 3, 1941 in Gharbia, Egypt. He is married with 3 children. He did all of his studies in Mechanical Power Engineering at Alexandria University in Egypt, earning a B.Sc., in 1963, M.Sc. in 1969, and Ph.D. in 1973. His professional career started in 1963 with work as a Mechanical Engineer for the "Behera Company for Land Reclamation in Alexandria". In 1967, he moved to the National Research Centre in Cairo as a Research Assistant. In 1973 he was appointed as a Researcher at the centre. In 1975, Professor El-Sharkawy went to the U.S.A. for a three-year term as a Visiting Assistant Professor at Virginia Polytechnic Institute and State University in Blacksburg, Virginia. During this period, he was involved in two research projects sponsored by NASA Langley Research Centre on Jet Engine Noise and Propulsion. Since 1983 Professor El-Sharkawy holds the position of Research Professor of Mechanical Engineering at the National Research Centre, and Head of the Mechanical Engineering Department since 1985. He held the position of Head of Engineering Research Division and Member of the Board at the NRC from 1985 to 1987.

He has been a professional member of the Egyptian Society of Mechanical Engineers, the Egyptian Society of Refrigeration and Air Conditioning, the American Institute of Aeronautics and Astronautics (AIAA), and the American Society of Mechanical Engineers (ASME). Editor of Journal of Engineering and Applied Sciences, published by Pergamon Press Inc. Has more than 40 technical papers in journals and contributed to more than 20 International Scientific Conferences. His research work is in the areas of propulsion, noise, and renewable energy. He organized and chaired the Cairo International Conference on Renewable Energy in June 1988.



For his distinguished services to the mechanical engineering profession, Professor El-Sharkawy has received biographical recognition in Who's Who in South and Southwest, Who's Who in the World, International Book of Honor, and has been recorded at the International Roll of Honor.



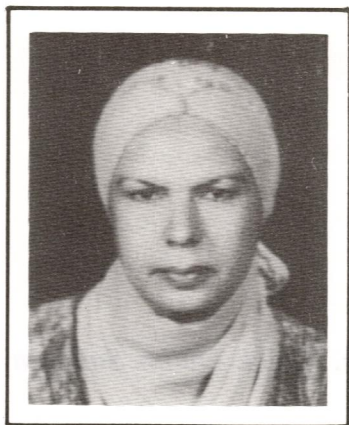
*Prof. Dr. Sadek Halim Soliman*

Prof. Soliman, Research Professor, Solar Energy Department, NRC, was born on July 13, 1931. Married. Graduated from Cairo University in 1958, with B.Sc. in Physics and Chemistry. Obtained the M.Sc. from the same university in 1963 in "Water distillation by solar energy". Awarded the Ph.D. in 1967 in the same field of Solar Energy from Keio University, Tokyo, Japan.

Prof. Soliman held the following positions :

- Scholarship, NRC, 1958 - 1959.
- Research Assistant, NRC, 1959 - 1968.
- Researcher, NRC, 1968 - 1975.
- Associate Research Professor, NRC, 1975 - 1985.
- Research Professor, Solar Energy Department, NRC, since 1985.

Prof. Soliman participated in several research projects on utilization of solar energy for water heating and desalination and other related applications. He is the author of several papers published in specialized journals.



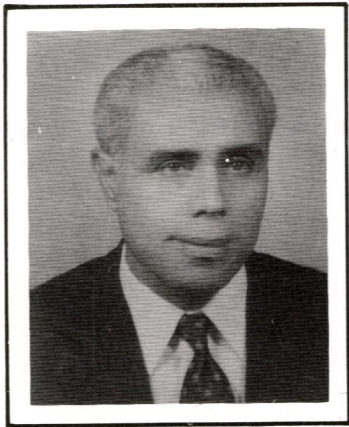
*Prof. Dr. Nawal Hassan Helwa*

Prof. Helwa, Research Professor, Department of Solar Energy, NRC, was born on July 3, 1937, Egypt. Graduated from Cairo University in 1962, with B.Sc. in Physics and Pure Mathematics. She obtained the M.Sc. in Physics from Cairo University in 1968. Awarded the Ph.D. in Physics in 1975 from the Technical University, Dresden, FRG.

Prof. Helwa held the following positions :

- Research Assistant, NRC, 1965-1975.
- Researcher, 1975-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, Solar Energy Department, NRC, since 1986.

Prof. Helwa participated in several research projects for utilization of solar energy for water desalination, heating, solar drying and so forth. She supervised several M.Sc. and Ph.D. theses in the field of specialization. Attended several national and international conferences and symposia. She is the author of more than 20 papers published in national and international journals and conferences.



*Prof. Dr. Ismail Kamal El-Din Abdo*

Prof. Abdo, Research Professor Emeritus of Fuel Technology, NRC, was born on January 1, 1924. Graduated from Cairo University in 1947, with B.Sc. in Chemical Engineering. Awarded the Ph.D. in 1953 from Fuel Technical Department, University of Sheffield, England.

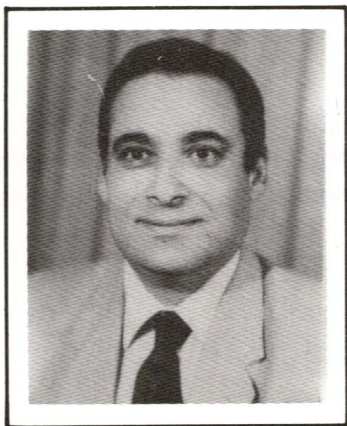
Prof. Abdo held the following positions :

- Chemical Engineer, Chemistry Division, Misr Spinning and Weaving Company, 1947 - 1948.
- Chemical Department, Ministry of Industry, 1948 - 1957.
- Researcher, NRC, 1957 - 1961.
- Associate Research Professor, NRC, 1961 - 1966.
- Research Professor, NRC, since 1966.
- Director of the project of the Egyptian Petroleum Research Institute, since its initiation till inauguration in March 1976.
- Director, Egyptian Petroleum Research Institute, 1980 - 1983.
- Research Professor Emeritus, Pilot Plant Laboratory, NRC, since 1983.

Prof. Abdo supervised the implementation of several research projects. Awarded research fellowships to : Petroleum Research Institute, Hannover, FRG (1957 - 1959), and French Petroleum Institute, Paris, France (1971 - 1972). Attended many conferences, meetings, symposia, and field visits in USA, Hungary, Kuwait, Abu-Dhabi, Austria and Egypt. Head of ASRT delegation to the joint Egyptian-Austrian executive committee meeting, Vienna (1981). Member of many national and international societies, councils and committees. Supervised over 40 M.Sc. and Ph.D. already granted from Cairo, Ain-Shams, Assiut and Al-Azhar Universities. He is the author of over 70 papers published in national and international journals and congresses in the fields of : crude evaluation, solvent refining,



hydrogen treating and hydrocracking, lube oil and lube oil additives, alkylation, isomerization and oxidation.



*Prof. Dr. Mohamed  
Mokhtar El-Halwagi*

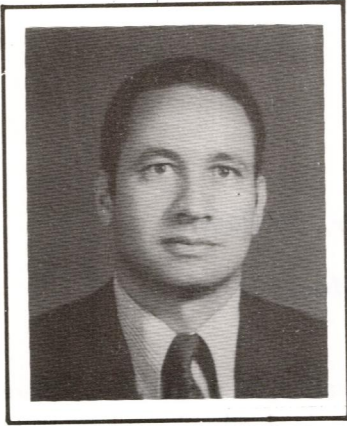
Prof. El-Halwagi, Research Professor and Head of the Chemical Engineering and Pilot Plant Department NRC, was born on May 10, 1937. Married. Graduated from Cairo University in 1958, with B.Sc. Chemical Engineering. Awarded the M.Sc. and Ph.D. from Maryland University, USA in 1962 and 1965, respectively.

Prof. El-Halwagi held the following positions :

- Researcher, NRC, 1965 - 1971.
- Associate Research Professor, NRC, 1971 -1976.
- Research Professor, NRC, since 1976.
- Head of Chemical Engineering Department and Pilot Plant Laboratories, NRC, since 1976.
- Managing Director, Technical and Technological Consulting Studies and Research Fund, Ministry of Scientific Research, 1988.

Prof. El-Halwagi is the author of over 50 market, feasibility and survey studies on national, regional and international scales. Managed several large-scale R & D and demonstration projects encompassing “National biogas project and biomass energy programme”, “The problems of sacrificial animals during the Moslem Pilgrimage”, “Development, surveys, diagnostic and engineering studies in the area of chemical industry”, “National solid waste management studies and demonstrations in Cairo, Giza, Damietta and Port-Said”, and “Alexandria waste water study”. Member of “Egyptian Syndicate for Engineers”, and “Egyptian Society of Chemical Engineers”. Supervised six Ph.D. and eight M.Sc. theses. He is the author of over 70 papers published in national and international journals, over 50 technical reports and feasibility studies, and a book on “Study and Assessment of Techno-economic Feasibility of Industrial Projects” (in Arabic). Editor of a book on “Biogas Technology, Transfer and Diffusion”,

Elsevier Applied Science Publishers, 1986. Holder of the Egyptian First Degree Science and Art Medal, Winner of NRC Prize for 1983 Scientific Contribution (for NRC Senior Scientists). Nominated for Tyler Prize for Environment Achievement in 1986.



*Prof. Dr. Mohamed A. Hamed*

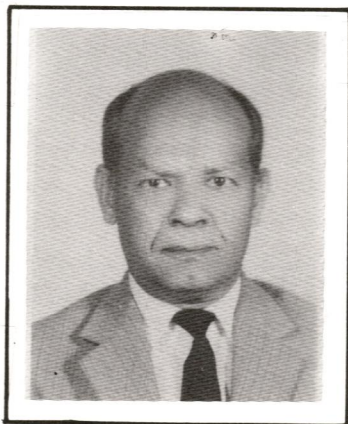
Prof. Hamed, Research Professor of Chemical Engineering, NRC, was born on April 24, 1941, Behera, Egypt. Graduated from Alexandria University in 1963, with B.Sc. in Chemical Engineering. Awarded the Ph.D. in 1970 from USSR. He is fluent in English, Russian and the mother tongue Arabic.

Prof. Hamed held the following positions :

- Researcher, Pilot Plant Laboratory, NRC, 1971 - 1976.
- Associate Research Professor, NRC, 1976 - 1982.
- Research Professor, of Chemical Engineering and Pilot Plant Department, NRC, since 1988.
- Co-Chairman of Engineering Division, NRC, since 1988.

Prof. Hamed actively participated in a number of research projects : “Increasing the nutritive value of hulls for using as animal feed”, “Desalting of Maryout clay for utilization as a raw material for cement industry”, “Production of silica ash from rice hulls”, “Biogas technology”, and “Improved biomass burning stoves and ovens”. Participated in about 15 national and international conferences in the fields of chemical engineering, waste treatment and utilization of renewable energy. Published over 50 papers in national and international journals. Distinguished by awarding : the NRC Silver Medal (1981) ; National Innovation Prize on Renewable Energy (ASRT, 1984), and Medal of Science and Art, 1st Degree (1985).





*Prof. Dr. Mohamed*

*Abdel-Mooty Arafa*

Prof. Arafa, Research Professor, Chemical Engineering and Pilot Plant Department, NRC, was born on January 1, 1940. Graduated from Alexandria University in 1962, with B.Sc. in Chemical Engineering. Awarded in 1970 the Ph.D. in Chemical Technology from Moscow Institute of Chemical Engineering, USSR.

Prof. Arafa held the following positions :

- Chemical Engineer, Suez Oil Processing Company, 1962 - 1965.
- Researcher, NRC, 1971 - 1977.
- Associate Research Professor, NRC, 1977 - 1984.
- Research Professor, NRC, since 1984.

Prof. Arafa participated in several research projects : “Extraction of corn oil from corn meal and germ”, Egyptian Company of Dextrose and Glucose, 1973 ; “Building bricks and light plain sheets from rice hulls”, Egyptian Organization of Rice Mills, 1974 ; “Use of Maryout lake clay for cement manufacturing”, General Organization of Industrialization, 1977 ; “Production of hydrated Zinc sulphate from Zn wastes” ; “Survey on production and consumption of basic chemicals in Egypt”, ASRT, 1983 - 1984 ; “Removal of pollutants from stack gases of the clay brick factory”, Arab Contractors Company — 1986 ; and “Use of some industrial wastes for the production of flouride salts for Al industry”, ASRT — 1988. During his work in Enppi (1980 - 1981), Prof. Arafa took part in the following projects : Process design of a system for reuse of industrial water in the delay-coker plant installed in Suez Oil Processing Company ; Process design for refining of a light petroleum crude and evaluation of proposals for installation of LPC Unit in Sinai for EGPC. Supervised research work of four M.Sc. and two Ph.D. theses. Published over 20 papers and eight technical and techno-economic reports. Member of a number of scientific societies and syndicates.



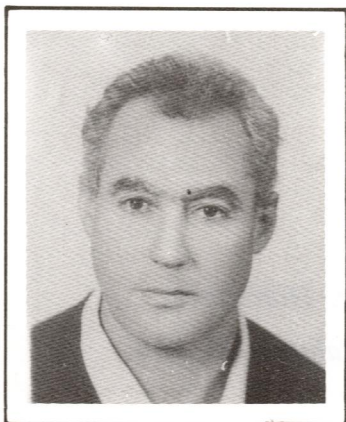
*Prof. Dr. Hammam  
Abdel Rahman El-Abd*

Prof. El-Abd, Research Professor of Chemical Engineering, Pilot Plant Department, NRC, was born on January 1, 1942, Menoufia, Egypt. Graduated from Alexandria University in 1963 with B.Sc. in Chemical Engineering. Obtained the M.Sc. from the same university in 1966. Awarded Ph.D. in Chemical Engineering from Czechoslovakia in 1970.

Prof. El-Abd held the following positions :

- Project Engineer, El-Nasr Saline Company, Alexandria, 1963-1967.
- Researcher, Pilot Plant Laboratory, NRC, 1970 - 1978.
- Associate Research Professor, NRC, 1978 - 1985.
- Research Professor, Chemical Engineering and Pilot Plant Department, Water Treatment Research Team, since 1985.

Prof. El-Abd participated in several research projects on national and international level. Visiting Professor at Chemical Engineering Department, University of Connecticut, USA. Member of International Ozone Institute, USA ; Water Pollution Control Federation, USA ; American Institute of Chemical Engineering ; and several national scientific societies, committees and syndicates. He is the author of over 22 papers published in national and international journals. Participated in preparation of a series of scientific and technical reports on : Production of white ash from rice husk, Purification of some chemical compounds, Master plan for utilization of carcasses of sacrifices in Al-Hag, Production of valuable salts from Quaron Lake, Brick industry in Egypt, Ozone application in water treatment, Production of pectin from canning waste, and Treatment of waste water effluent from canning plant (Behira). He is fluent in Arabic and English.



*Prof. Dr. Samy El-Afifi*

*Youssef El-Afifi*

Prof. El-Afifi, Research Professor, Pilot Plant Department, NRC, was born on August 13, 1939. Married. Graduated from Cairo University in 1965, with B.Sc. in Chemistry and Physics. Obtained the M.Sc. in 1970 from the same university in Inorganic Chemistry. Awarded the Ph.D. in 1975 in Technical Sciences from Moscow Institute of Steel and Alloys.

Prof. El-Afifi held the following positions :

- Research Assistant, Pilot Plant Laboratory, NRC, 1965 - 1976.
- Researcher, Pilot Plant Laboratory, NRC, 1976 - 1981.
- Associate Research Professor, Pilot Plant Laboratory, NRC, 1981 - 1986.
- Research Professor, since 1986.

Prof. El-Afifi participated in several research projects : “Recovery of metal fluorides from waste fluosilicic acid”, “Reduction of iron ores in fluidized beds”, “Evaluation of New Valley phosphate ore”, and “Agglomeration of iron ores materials”. Supervised a number of M.Sc. and Ph.D. theses. Supervisor of Analytical Laboratory for Instrumental Analysis. Participated in several training programs abroad (USA) on : “Phosphate beneficiation and chemical processing — International Fertilizer Development Centre (IFDC), USA”, “Fundamentals, applications and instrumentation of atomic spectroscopy and gas chromatography — two separate courses at Perkin Elmar Corporation, USA”, and “Chromatographic procedure for analysis of polychlorinated biphenyls, pesticides, volatile acids, biogas, and phenols — Chicago, USA”. Author of a number of papers published in national and international journals. Member of several scientific societies.



*Prof. Dr. Guzine Ibrahim El-Diwani*

Prof. El-Diwani, Research Professor of Chemical Engineering, Pilot Plant Department, NRC, was born on March 14, 1947, Cairo, Egypt. Graduated from Alexandria University in 1970, with B.Sc. in Chemical Engineering. Awarded the Ph.D. in Chemical Engineering in 1975 from Czechoslovakia Academy of Sciences, Prague.

Prof. El-Diwani held the following positions :

- Research Assistant, NRC, 1971 - 1976.
- Researcher, Pilot Plant Laboratory, NRC, 1976 - 1981.
- Associate Research Professor, NRC, 1981 - 1985.
- Research Professor, Pilot Plant Laboratory, NRC, since 1985.

Prof. El-Diwani participated in several research projects : “More and better food, Edible oil treatment”, “Use of ozone in drinking water treatment”, “Development of p-toluene sulfonic acid salt production, Kafr-El-Dawar Dye and Chemical Industry”, and “Treatment of industrial waste water for canneries and food preservation”. She is the author of over 28 papers published in international journals and conferences. Supervised three M.Sc. theses in the field of specialization. She is a member of several professional societies.





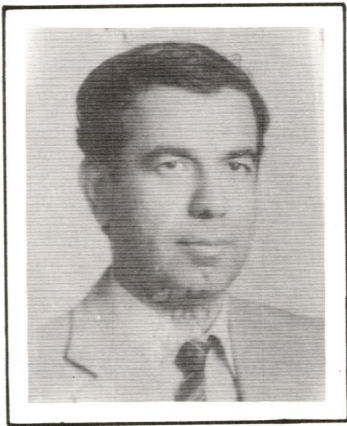
*Prof. Dr. Shirin Ibrahim  
El-Shawarby*

Prof. El-Shawarby, Research Professor of Chemical and Biochemical Engineering, NRC, was born on August 26, 1942. Graduated from Cairo University in 1965, with B.Sc. in Chemical Engineering. Awarded M.Sc. and Ph.D. from the same university in 1971 and 1977, respectively. Fluent in English, good in French and fair in German.

Prof. El-Shawarby held the following positions at NRC :

- Chemical Engineer, 1965 - 1971.
- Research Assistant, 1971 - 1977.
- Researcher, 1977 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, Chemical Engineering and Pilot Plant Department, since 1987.

She participated in R & D projects : “Preliminary study for the production of aluminium sulphate from Egyptian clays” ; “Production of Al-sulphate, filtration characteristics” ; “Development and application of biogas technology in rural areas of Egypt” ; “Production of SCP from bagasse” ; and “Purification of impure acetic acid”. Supervised four Ph.D. and one post-graduate diploma already granted by Egyptian universities. Attended a number of conferences in Egypt, Canada, DDR and China. Published over 20 papers in national and international journals and conferences. Member of Egyptian Engineering Syndicate ; and Egyptian Chemical Engineering Society.



*Prof. Dr. Ahmed Talaat El-Mallah*

Prof. El-Mallah, Research Professor and Head of the Electrochemical Research Group, Pilot Plant Department, NRC, was born on January 11, 1944. Married with two daughters. Graduated from Cairo University in 1967, with B.Sc. in Metallurgical Engineering. Awarded the M.Sc. and Ph.D. from the same university in Corrosion of Metals, Electro-plating and Surface Protection in 1971 and 1976, respectively.

Prof. El-Mallah held the following positions :

- Researcher, NRC, 1976 - 1982.
- Associate Research Professor, NRC, 1982 - 1987.
- Research Professor, since 1987.

He participated in a number of research projects in the fields of Electroless and Electrodeposition of Metals, Electroplating, and Phosphating of Metals. Has experience in erecting new equipments for electroplating workshops. Supervised a number of post-graduate research work for four M.Sc. and one Ph.D. theses in the fields of chemical and metallurgical engineering. Published over 30 papers in national and international journals. Member of several societies : Fellow of Institute of Metal Finishing "F.I.M.F.", England ; "World Electroless Ni Society", USA ; "Egyptian Engineering Council", "Deputy Manager of the Egyptian Innovators Society", and "American Electroplaters and Surface Finishers Society (USA)". He is a technical consultant for the "Agency for Innovations and Inventions of Egypt (ADII)". Awarded the State Prize of Merit in Electrochemical Engineering for 1983, and the 1st Order of Science and Arts, 1985. Won the 3rd Prize for the Technical Patent No. 11511, ASRT.



*Prof. Dr. Shadia Ragheb Tewfik*

Prof. Tewfik, Research Professor of Chemical Engineering, Pilot Plant Department NRC, was born on September 29, 1946. Graduated from Cairo University in 1967, with B.Sc. in Chemical Engineering. Obtained the M.Sc. in the same field from the same university in 1972. Awarded in 1976 the Ph.D. from Czechoslovakia Academy of Science in Chemical Engineering.

Prof. Tewfik held the following positions :

- Research Engineer, Pilot Plant Department, NRC, 1967 - 1972.
- Research Assistant, Pilot Plant Laboratory, NRC, 1972 - 1976.
- Researcher, Pilot Plant Laboratory, NRC, 1977 - 1982.
- Associate Research Professor, same Laboratory, NRC, 1982 - 1987.
- Research Professor, Pilot Plant Department NRC, since 1987.

Prof. Tewfik participated in techno-economic studies for projects in the field of chemical and allied industries at various development phases. Acted as co-principal investigator of several projects pertaining to "Municipal solid waste management" for several governorates, Cairo, Giza, Damietta and Port Said. Directed research programmes for simulation and optimization of chemical processes, membrane separation, waste water treatment and other environmental engineering applications. Supervised a number of M.Sc. and Ph.D. theses. Attended several national and international conferences. She is the author of over 30 papers published in national and international journals and 20 technical NRC reports. Member of the Egyptian Society of Chemical Engineers.







## MEDICAL SCIENCES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — BASIC MEDICAL SCIENCES.
- 2 — PHARMACOLOGY.
- 3 — CHILD HEALTH.
- 4 — COMMUNITY MEDICINE.
- 5 — HORMONES.



*Prof. Dr. Aly Abdel-Aziz El-Nofely*

Prof. El-Nofely, Research Professor of Physical Anthropology, NRC, was born on January 18, 1937, Daqahlia, Egypt. Married with two children. Graduated from Cairo University, with B.D.S. (Dental Medicine and Surgery), in 1958. Awarded the Candidate of Stomatological Sciences and Doctor of Medical Sciences from Central Institute of Advanced Medical Studies, Moscow (USSR), in 1965 and 1966, respectively.

Prof. El-Nofely held the following positions at NRC :

- Researcher, 1966 - 1972.
- Associate Research Professor, 1972 - 1977.
- Research Professor, since 1977.
- Head, Basic Medical Sciences Department, 1972-1989.
- Head of Medical Sciences Division since 1989.

He participated in several research studies : “Anthropological studies of Egyptian Nubians (1965)” ; “Studies of prevalence of malocclusions among Egyptian children, Cairo Schools, 1965” ; “Anthropological studies of a group of old-believers in area of Augostova, North-East Poland, 1967” ; “Anthropological studies of Egyptian preschool children, 1974” ; and “Anthropological studies of Egyptian children aged 6 - 18 years from Cairo and Giza area, 1980 - 1984”. Granted a post-graduate scholarship to USSR (1961 - 1965), and several post-doctoral fellowships to : Czechoslovakia (1966 - 1968) ; Oxford University, UK (1976) ; London University, UK (1977) ; and to Italy, Advanced Training Institute, NATO (1979). Assumed the post of Head of Medical Research Division (1974 - 1976 and 1983 - 1985). Granted teaching fellowship in child growth and development to the Free University of Brussels, Faculty of Science, Belgium (1980). Member of Editorial Board of Bulletin of NRC (1978 - 1987) ; Egyptian Association of Dental Surgeons ; Egyptian Society of Physiological

Sciences ; International Association of Human Biologists (council member representing Africa (1974 - 1979) ) ; British Society for Study of Human Biology ; American Council of Human Biology ; and elected Secretary General of the Egyptian Society of Bio-Anthropological Sciences. Attended several conferences held in Egypt and abroad. Author of over 40 papers published in national and international journals and conferences. Supervised ten M.Sc. in pediatrics, oral biology, oral radiology, pedodontics and epidemiology, and one Ph.D. in Anatomy, awarded by Cairo and Ain-Shams Universities. Awarded the shield of Egyptian Syndicate of Dentists, and a Certificate of Esteem (1985). Elected member of Editorial Board of the "International Journal of Anthropology" representing the Arab countries. Author of two Books (under publication) : "Biologic Basis of Dento-facial Orthopedics" ; and "A Comparative Study of Human Growth in Islamic Medical Heritage".





*Prof. Dr. Tahani H. Mikhail*

Prof. Mikhail, Research Professor, Emeritus, of Medical Physiology, NRC, was born on May 15, 1929, Mansoura, Egypt. Married. Graduated from Alexandria University, with B.Sc. in Zoology and Chemistry. Awarded the M.Sc. from the same university in Physiology and the Ph.D. in 1966 from Cairo University in the same field.

Prof. Mikhail held the following positions at NRC :

- Research Scholarship, 1961 - 1963.
- Research Assistant, 1963 - 1967.
- Researcher of Medical Physiology, 1967 - 1974.
- Associate Research Professor, 1974 - 1979.
- Research Professor, Medical Research Division, since 1979.
- Head of Medical Research Division, NRC (1988-1989).

Prof. Mikhail is the founder and Head of the Medical Physiology Unit, 1967-1988. Principal investigator for several research projects dealing with : Physiology of fatty liver ; Role of the liver on insulin secreted by the pancreas and related subjects. Awarded several post-doctoral fellowships and short visits to : Central Institute of Diabetes, Karlsburgs, DDR ; Rotock Institut für Physiologische Chemie, University of Rotock, DDR ; and University College, London, UK (Royal Society). Supervised post-graduate studies for four Ph.D. and 12 M.Sc. degrees awarded from Egyptian universities. Two M.D., one Ph.D. and nine M.Sc. are still underway. Author of over 40 papers published in national and international journals. Attended several conferences on medical and biochemical sciences. Member of several national societies. Awarded NRC Silver Medal (1982) for scientific achievement.





*Prof. Dr. Nashwa*

*Mohamed Shafik Aggour*

Prof. Aggour, Research Professor of Pathology, NRC, was born on May 24, 1941, Cairo, Egypt. Graduated from Cairo University in 1964, with M.B., B.Ch. Awarded the Diploma of Pathology in 1970 and the M.D. in 1974 from the same university.

Prof. Aggour held the following positions at NRC :

- Researcher, 1974-1979.
- Associate Research Professor, 1979-1984.
- Research Professor of Pathology, since 1985.
- Head of Basic Medical Sciences Department since 1989.

She participated in a number of research projects. Supervised several M.Sc. and Ph.D. theses. Author of over thirty papers published in specialized journals, in the field of histopathology and histochemistry. Attended several conferences held in Egypt. Member of the Egyptian Society of Histology and Cytology.



*Prof. Dr. Samia*

*Abdel-Razak Hemeida*

Prof. Hemeida, Research Professor of Public Health, Basic Medical Science Department, NRC, was born on June 1, 1943, Cairo, Egypt. Graduated from Cairo University in 1965, with M.B., B.Ch. Obtained D.G.O. and D. P.H. from the same university in 1968 and 1969, respectively. Awarded the M.D. from Al-Azhar University in 1976.

Prof. Hemeida held the following positions at NRC :

- Research Assistant, 1969-1976.
- Researcher, 1979-1981.
- Associate Research Professor, 1981-1986.
- Research Professor, since 1986.

She participated in several research projects : “Traditional practices affecting mother’s and child’s health”, “Urban health delivery system project”, “Effect of oral contraceptives on bilharzial liver”, and “Acceptability of long acting injectables as a post-partum contraceptive in Egypt”. These projects were carried out in collaboration with Cairo Family Planning Association, Rada Barnen (Sweden), Ministry of Health (ET), US AID, and International Islamic Centre for Population Studies and Research. Attended several training programs and workshops on family planning services and management held in Washington, D.C. (USA) and Cairo. Supervised the research work for three M.Sc. Attended several local and international conferences. Published over twenty articles in national and international journals. Member of : Egyptian Society of Basic Medical Sciences ; Egyptian Fertility Case Society ; Egyptian Medical Women’s Association ; and Egyptian Association of Community Medicine.



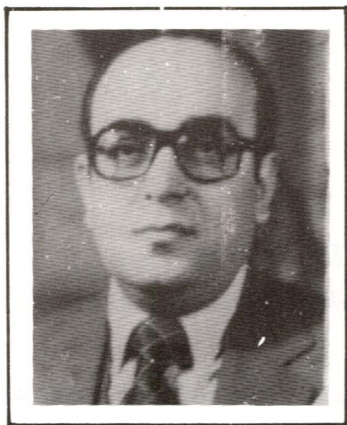
*Prof. Dr. Aly Zein El-Abedin Hussien*

Prof. Zein El-Abedin, Part-time Research Professor of Tropical Medicine & Hygiene and Director of Theodor Bilharz Research Institute since March 1988, was born on May 3, 1934, Egypt. Married with 4 children. Graduated from Cairo University with MB.Bch. in 1959. Awarded Diploma of Medicine and Diploma of Medicine and Hygiene from the same university in 1963 and 1966, respectively. Awarded M.D. in Tropical Medicine & Hygiene from Cairo University in 1969.

Prof. Zein El-Abedin held the following positions :

- House officer, Kasr El-Aini Hospitals (1960-1961);
- Resident for Internal Medicine, Gomhoria Hospital (1961);
- Research Assistant, Bilharziasis Lab., NRC (1961-1970);
- Researcher, same Lab. (1970-1975);
- Associate Research Professor and Vice-Director of Theodor Bilharz Research Institute (1975-1976);
- Director of Theodor Bilharz Research Institute (1976-1979);
- Research Professor and Head of Community Medicine Research Lab., NRC (1979-1988);
- Director of Theodor Bilharz Res. Inst. since March 1988.

Prof. Zein El-Abedin participated in many research activities. Conducted field research in rural areas in Egypt on Bilharziasis and Filariasis. Participated in research activities in tropical medicine in the Tropical Medicine Research Institute, Ministry of Public Health (1962-1970). Granted a post-doctoral fellowship to the Squibb Inst. for Medical Research, Drug Metabolism Dept., New Jersey USA (1972-1974). Supervised several post-graduate research works for Masters and Doctoral degree. Author of 43 papers published in national and international journals. Member of several scientific societies and syndicates.



*Prof. Dr. Raafat Awadallah Hanna*

Prof. Hanna, Research Professor of Physiological Chemistry, Basic Medical Science Department NRC, was born on March 23, 1943, in Mehalla El-Kobra, Egypt. Married. Graduated from Ain-Shams University in 1964, with B.Sc. Obtained M.Sc. in Applied Chemistry from Cairo University in 1970. In 1971 obtained Diploma of Medical Science (Biochemistry-Bacteriology) from Mansoura University, Faculty of Medicine. Awarded the Ph.D. in Biochemistry in 1975 from Ain-Shams University.

Prof. Hanna held the following positions :

- Scholarship, NRC, 1965-1967.
- Research Assistant, NRC, 1967-1975.
- Researcher, NRC, 1975-1981.
- Associate Research Professor of Medical Physiology, NRC, 1981-1986.
- Research Professor of Biochemistry, NRC, since 1986.

Prof. Hanna acquired scientific research experience in metabolism of serum enzymes and trace elements in clinical and experimental animals in normal and different diseases. Published over 45 papers in national and international journals. Supervised post-graduate studies for M.Sc. and Ph.D. Three M.Sc. and one Ph.D. already awarded. Attended many conferences in Egypt and Scotland in medical sciences and biochemistry.





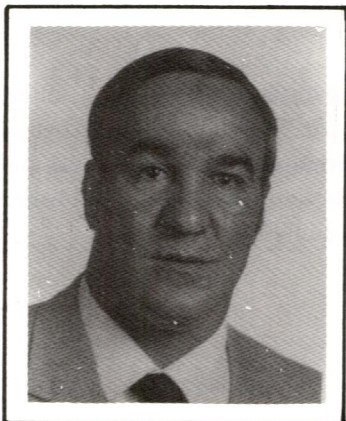
*Prof. Dr. Seham  
Abdel-Rahman Ali Negm*

Prof. Negm, Research Professor, and Head of Pharmacology Department, NRC, was born on June 15, 1936 in Cairo, Egypt. Graduated from Cairo University in 1959, with B.Sc. in Chemistry and Botany. Awarded the M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1964 and 1967, respectively. Obtained Diploma of Pharmacology and Bioassay in 1971 from Faculty of Pharmacy, Paris, France. Another Diploma she obtained in 1977 from Faculty of Medicine, University College, London, UK, in "Bioassay".

Prof. Negm held the following positions :

- Scholarship, Pharmacology Laboratory, NRC, 1959 - 1962.
- Research Assistant, same laboratory , 1962 - 1967.
- Researcher, same place, 1967 - 1973.
- Associate Research Professor, NRC, 1973 - 1979.
- Research Professor, Pharmacology Department, NRC, since 1979.
- Head of Pharmacology Department, NRC, 1977 - 1988.
- Head of Medical Research Division, NRC, 1982 - 1983.

She participated in several research programs. Her research activities cover : Bioassay of active substances from different sources, e.g., medicinal plants, synthetic chemical compounds and new pharmaceutical preparations, metabolism and drug interaction, and chemistry of natural products (cardiac glycosides and alkaloids). Attended several training courses in bioassay of drugs and in project administration, planning and marketing. Attended several conferences organized locally and abroad. Member of : Chemical Society, Society of Faculty of Science Graduates, Egyptian Society of Pharmacy and Experimental Therapeutic, and the Arabic Society of Medicinal Plants.



*Prof. Dr. Aly Mohamed Diab*

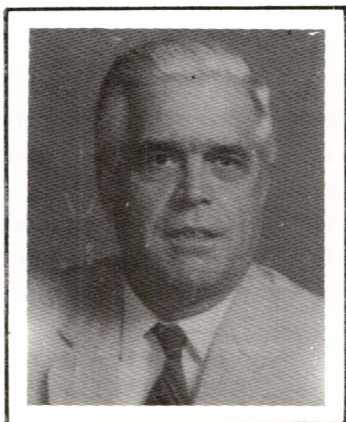
Prof. Diab, Research Professor of Forensic and Clinical Toxicology, NRC, was born on May 4, 1940, Beni-Suef, Egypt. Married, and has four children. Graduated from Alexandria University in 1964, with B.Sc. in Pharmacy and Pharmaceutical Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in Pharmaceutical Sciences in 1970 and 1973, respectively.

Prof. Diab held the following positions :

- Member of the Analytical Methodology Unit, Control Department, Drug Research and Control Centre, Cairo, 1964 - 1967.
- Research Assistant, Pharmaceutical Sciences Laboratory, NRC, 1967 - 1970, and Medical Research Department, 1970 - 1973.
- Researcher, Medical Research Department, NRC, 1974 - 1978.
- Associate Research Professor, NRC, 1978 - 1984.
- Research Professor of Forensic and Clinical Toxicology, Medical Research Department, NRC, since 1984.

Prof. Diab acted as principal investigator for several research projects in the field of forensic and clinical toxicological analysis. Granted a research fellowship abroad : Institute of Forensic Medicine, Mnster University, FRG (1978 - 1980), an Alexander von Humboldt Fellowship on "Verification of heroin and its metabolic products in body fluids of drug addicts". Supervised five M.Sc. and one Ph.D. theses in the fields of forensic and clinical toxicology, as well as biochemical analysis and drug-drug interactions. Attended an advanced course in Spectroscopy (UV, IR, NMR, ...) during his stay in Germany, organized by the Institute of Pharmaceutical Chemistry, Mnster University, FRG. Consultant to the Central Criminal Laboratory, Ministry of Interior, Egypt. Legalized Expert, Ministry of Justice, Egypt, and licensed medicinal biochemist, Ministry of Health, Egypt. Member of :

The Egyptian Pharmaceutical Society, Egyptian Society of Clinical Chemistry, and the West German Society for Toxicology and Forensic Chemistry. Attended many national and international pharmaceutical and medical conferences in Egypt, England, Schotland and FRG. Published several papers in national and international journals.



*Prof. Dr. Osman Mahmoud Galal*

Prof. Galal. Research Professor of Child Health, NRC, was born on November 10, 1931, Cairo, Egypt. Graduated from Cairo University in 1957, with M.D. Obtained DCH, diploma of Pediatrics Child Health from the same university in 1961. Awarded Ph.D. in 1967 from Institute of Child Health, University of Birmingham, UK.

Prof. Galal held the following positions at NRC :

- Research Assistant, 1960 - 1968.
- Researcher, Nutrition Department, 1968 - 1973.
- Associate Research Professor, 1973 - 1977.
- Research Professor of Child Health, and Head of Child Health Department, 1977 - 1982.

He held the position of Director of Nutrition Institute, Ministry of Health, Cairo (1982 - 1987), and Chairman of Board of Directors of the same institute, since 1987. He participated in several research projects, mostly as Principal Investigator : “More and better food” (1978 - 1985), US AID ; “International nutrition, CRSP” (1982 - 1986), US AID ; “Fetal malnutrition” (1984 - 1988) . NAS ; “Nutrient repletion in Diarrhea” (1985 - 1987), PRICOR ; “Analyses of available data in relation to child survival and nutrition” (1986 - 1988); and “Development of a community-based research and education programs in relation to child survival” (1987 - 1989), Ford Foundation. Assumed several executive responsibilities at NRC, ASRT and Ministry of Health : Head of Technical Office (1975 - 1982); Head of Medical Research Division (1984 - 1987) ; and Member of Technical Office of President ASRT. Offered many consultancy and advisory services to national and international organizations including UNICEF and FAO. Granted several scholarships, fellowships and visits to UK, USA and several foreign countries. Attended and participated in several



meetings, symposia and conferences held in Egypt, USA, UK, China, S. Korea, Brazil, Ethiopia, Chile, India and others. Supervised 33 M.Sc. and eight Ph.D. dissertations. Author of over 41 papers published in national and international conferences, eight technical reports, as well as 25 presentations in meetings and symposia. Awarded NRC Golden Medal (1980) ; First Degree Order of Science and Art (1982) and Honorary Medical Award from Egyptian Medical Union (1984). Member of several national and international societies and syndicates.

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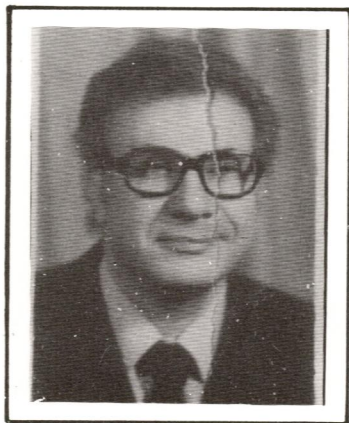
*Prof. Dr. Soheir I. Salem*

Prof. Salem, Research Professor of Biochemistry, Child Health Laboratory, NRC, was born on June 1, 1936. Graduated 1957, with B.Sc. in Chemistry. Awarded M.Sc. from University of Arizona (USA), Department of Agricultural Biochemistry and Nutrition in 1963, and the Ph.D. from Ain-Shams University in 1970.

Prof. Salem held the following positions at NRC :

- Research Assistant, Nutrition Laboratory, 1965 - 1970.
- Researcher, Food Science and Nutrition Laboratory, 1970 - 1975.
- Associate Research Professor, same laboratory, 1975 - 1980, Child Health Laboratory, 1980 - 1982.
- Research Professor, same laboratory, since 1982.

She participated in several research projects : “Environmental effect on Vitamin D requirement in Egyptian children” (NRC — Dunn Nutrition Laboratory, Cambridge) ; “Identification of malnourished pregnant women at risk to low birth weight babies” ; “Functional consequences on iron deficiency anemia” (Ministry of Health, ET and American Science Office, USA Embassy, Egypt) ; and “Child health during puberty till development”. Granted a Wellcome Trust Research Fellowship at Dunn Nutrition Laboratory, Cambridge, UK (1978 - 1980). Supervised ten M.Sc. and 13 Ph.D. theses already granted, while 20 more are underway. Attended several conferences, symposia and meetings held in Egypt, UK, Thailand, Indonesia and USA. Author of over 35 papers published in national and international journals in the field of nutritional chemistry, hormones, radio- and enzyme immunoassay.



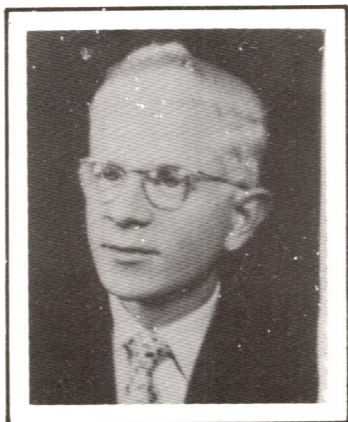
*Prof. Dr. Sinot Halim Doss*

Prof. Doss, Research Professor, Hormones Department, NRC, was born on April 23, 1939, Assiut, Egypt. Graduated from Ain-Shams University in 1959, with B.Sc. (Hons). Awarded the M.Sc. and Ph.D. from the same university in 1962 and 1965, respectively, in Hormone Chemistry. In 1961 obtained Ed. Dip. and Psy. Dip. from the same university, Faculty of Law. Awarded the LL.B. in 1966, LL.M. in 1968, and Dr. Jura in 1972 from Cairo University. Awarded the Ph.D. (Patent Law) from Ain-Shams University in 1983.

Prof. Doss held the following positions at NRC :

- Research Assistant, 1960 - 1965.
- Researcher, 1966 - 1973.
- Associate Research Professor, Bilharz Institute, 1973 - 1976.
- Research Professor, and Head of Hormones Department, 1977 - 1978 ; 1981 - 1989.

Awarded several post-doctoral fellowships : UK (1968 - 1969) ; FRG, Alexander von Humboldt St. (1970 - 1971) ; DFG (1971 - 1972) ; Saarbrucken University (1976) ; University of Hamburg (1984) ; and USA, University of Massachusetts (1985). Supervised several graduate students for Ph.D., M.S., B.A. and M.Sc. degree (over 35). Participated in six research projects. Published over 100 papers in English, German and Romanian languages, 55 in Arabic, in addition to ten books and six patents registered in Egypt, UK, and FRG. Attended several conferences of chemistry, pharmacology, photochemistry, heterocyclic chemistry, clinical biochemistry, medicine, renewable energy sources, and scientific publications held in Egypt and abroad. Member of several Egyptian and European societies and syndicates. Member of USA Society of Nuclear Medicine. Member of the editorial board of "Patent World", England.



*Prof. Dr. Selim Fahmy Estefan*

Prof. Estefan, Research Professor of Applied Physical and Radiochemistry, NRC, was born on November 10, 1936, Qena, Egypt. Graduated from Cairo University in 1960, with B.Sc. in Chemistry and Physics. Awarded the M.Sc. and Ph.D. from the same university in Physical Chemistry in 1965 and 1970, respectively.

Prof. Estefan held the following positions :

- Demonstrator, Atomic Energy Establishment, 1960 - 1962.
- Research Assistant, NRC, 1962 - 1970.
- Researcher, NRC, 1970 - 1975.
- Associate Research Professor, NRC, 1975 - 1980.
- Research Professor of Physical Chemistry, NRC, since 1980.

Prof. Estefan participated in a number of research projects. Fields of experience include radioactive tracer techniques, mineral floration by organic compounds, recovery of marine chemicals, fertilizers technology, recycling and use of industrial wastes, solvent extraction and feasibility studies. Attended the training program at Saline Processors, California, USA, and at Seawater Conversion Institute, University of California, in Berkeley (USA) for six months in 1977. Invited for short visits to Steetley Minerals Ltd., Hartel-Pool, UK, and International Fertilizer Development Centre, Alabama, USA, in 1981. Attended several conferences in Egypt and Canada. Author of more than 70 scientific papers published in local and international journals. Member of several societies, e.g., Canadian Institute of Mining and Metallurgy, Egyptian Chemical Society, Egyptian Society for Solid State Sciences and Applications and Society of Egyptian Scholars Abroad.







## ENVIRONMENTAL SCIENCES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — WATER POLLUTION.
- 2 — AIR POLLUTION.
- 3 — OCCUPATIONAL HEALTH AND INDUSTRIAL MEDICINE.





*Prof. Dr. Fatma El-Gohary*

Prof. El-Gohary, Research Professor of Water Pollution Control, and Head of Environmental Sciences Division, NRC. Born in Cairo, Egypt. Graduated from Ain-Shams University in 1957, with B.Sc. in Chemistry and Botany. In 1961, she obtained the M.Sc. in Inorganic Chemistry. Awarded the Dr. Eng. (Ph.D.) in 1965 from the Technical University, Hannover, FRG.

Prof. El-Gohary held the following positions :

- Research Assistant, Inorganic Chemistry Laboratory, NRC, 1957 - 1962.
- Researcher, Water Pollution Laboratory, NRC, 1966 - 1973.
- Associate Research Professor, the same laboratory, NRC, 1973 - 1977.
- Research Professor, Water Pollution Laboratory, NRC, since 1977.
- Head of Water Pollution Control Laboratory, NRC, 1976 - 1988.
- Consultant for the UNESCO HQ — Paris, in the Water Sciences Division, 1978. .

Prof. El-Gohary took major part in the following research projects : “River Nile and Lake Nasser project”, sponsored by ASRT and University of Michigan, USA, “The development and application of biogas technology in rural areas of Egypt”, ASRT and US-AID. She is the Principal Investigator of the following two joint projects : “Multidisciplinary environmental studies”, NRC and EPA (USA), and “Waste water treatment for land application”, NRC and University of Karlsruhe, FRG. Participated in many national and international conferences in the field of environment. Supervised twenty M.Sc. and Ph.D. in the field of specialization. She is the President of National Egyptian Committee on Water Pollution Research and Control, Vice-President of Environmental Research Council, ASRT, and was in charge of the Egyptian Focal Point of the International Referral



System "INFOTERRA" in ASRT. Published fifty papers in international scientific journals. Awarded the State Prize in Environmental Sciences for 1979, the NRC Prize for Scientific Contribution (for senior scientists) for 1985 and the Eisenhower Fellowship for 1986 (USA).



*Prof. Dr. Mohamed Anwar El-Dib*

Prof. El-Dib, Head of Water Pollution Department, NRC, was born on March 20, 1932. Married. Graduated from Cairo University in 1954, with B.Sc. in Chemistry. The M.Sc. and Ph.D. he obtained from the same university in 1964 and 1969, respectively.

Prof. El-Dib held the following positions :

- Chemist. Water Department, Ministry of Public Health, 1956 - 1965.
- Research Assistant, Water Pollution Control Laboratory, NRC, 1965 - 1969.
- Researcher, Water Pollution Control Laboratory, NRC, 1969 - 1974.
- Associate Research Professor, Water Pollution Control Laboratory, NRC, 1974 - 1979.
- Research Professor, Water Pollution Laboratory, NRC, since 1979.

Prof. El-Dib participated in several research projects. He was the Principal Investigator of : “Water treatment technology in Greater Cairo”, in cooperation with ASRT, Egypt, and “Impact of pesticide pollution on man, water resources and plants”. Also he participated in the evaluation of the efficiency of water treatment plants and in the research activities on water treatment and pesticide pollution.

He is the author of more than 30 papers published in national and international journals in the field of water pollution. He supervised three M.Sc. and three Ph.D. theses. He is a member of several committees and councils, e.g., Environmental Committee, Ministerial Cabinet (1983 - 1986), Environmental Research Council, ASRT (1983), and Secretary of National Committee of IAWPRC.



*Prof. Dr. Ahmed Sayed Moursy*

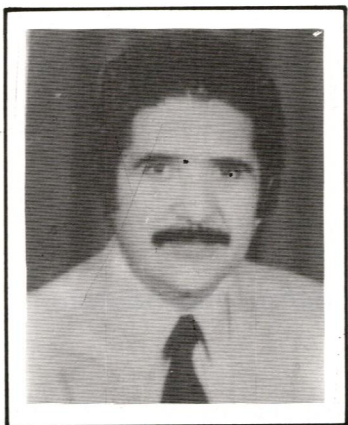
Prof. Moursy, Water Pollution Department, NRC, was born on October 22, 1940, Sohag, Egypt. He graduated from Assiut University in 1964, with B.Sc. in Chemistry and Geology. His Ph.D. in Technology of Water Pollution by Oil, granted in 1973 from Institute of Civil and Building Engineering, Moscow, USSR.

Prof. Moursy held the following positions :

- Research Assistant, Petroleum Research Unit, NRC, 1965 - 1968.
- Researcher, Water Pollution Laboratory, NRC, 1973 - 1978.
- Associate Research Professor of Water Pollution, NRC, 1978 - 1983.
- Research Professor, Water Pollution Laboratory, NRC, since 1983.
- Head of Environmental Sciences Division, NRC, 1984 - 1986.

Prof. Moursy participated in a number of research projects, e.g., "River Nile pollution by oil", administered jointly by ASRT, Egypt, and Michigan University, USA, "Removal of hydrocarbons from water and waste water", sponsored by NRC and Environmental Protection Agency, USA, 1979 - 1982, and "Oil pollution studies on Egyptian Red Sea coast", ALECSO, 1978.

He published over 30 papers in national and international journals in the field of water pollution. He is a member of several societies, committees and councils : "Standing Committee for Combating Marine Pollution by Oil", "National Committee of Oceanography, ASRT", and "Environmental Research Council, ASRT". Prof. Moursy awarded the ASRT Award for "Environmental Research" for the year 1983. He attended several conferences and symposia in Egypt, Canada, USA, UK, India, Kuwait, Greece and UAE.



*Prof. Dr. Sami El-Hossaini Fayed*

Prof. Fayed, Research Professor, Water Pollution Department, NRC, was born on October 25, 1935, El-Mehalla El-Kobra. Graduated from Cairo University in 1955, with B.Sc. in Chemistry and Botany. Obtained Diploma in Sanitary Chemistry from Alexandria University in 1963. Awarded the M.Sc. in Chemistry from Cairo University in 1970, and the Ph.D. in 1975 from Czechoslovakia in the field of Water and Waste Water Technology.

Prof. Fayed held the following positions :

- Water Chemist, Ministry of Municipal and Rural Affairs, 1956 - 1959.
- Water Chemist, Ministry of Public Health, 1959 - 1965.
- Research Assistant, NRC, 1965 - 1975.
- Researcher, NRC, 1975 - 1980.
- Associate Research Professor, NRC, 1980 - 1985.
- Research Professor, NRC, since 1985.

Prof. Fayed participated in several research projects : “Water quality studies on the river Nile and Lake Nasser (1975 - 1981)” ; “Studies on the effect of organic and inorganic pollutants on the water quality of Ismailia Canal” ; “Utilization of algae in purification of water and its potential nutritional value and as a source of energy” ; besides several other projects sponsored by NRC, ASRT and EPA (USA), US AID. Supervised one Ph.D. and seven M.Sc. theses awarded from Egyptian and Arab Universities. Provided scientific and technical services to local governmental and private establishments and organizations. Member of several committees established by NRC, and ASRT. Program Manager ASRT Foreign S & T Department. Attended several conferences, symposia and meetings held in Egypt and some foreign countries. Member of several scientific societies and syndicates. Author of several papers published in national and international journals.





*Prof. Dr. Salwa Anis Shehata*

Prof. Shehata, Research Professor of Hydrobiology, Water Pollution Department, NRC, was born on June 25, 1944, Sohag, Egypt. She graduated from Assiut University in 1964 with B.Sc. in Chemistry and Botany. She obtained her M.Sc. and Ph.D. from Cairo University in 1969 and 1975 respectively.

Prof. Shehata held the following positions at NRC :

- Scholarship, Water Pollution Control Laboratory, 1965 - 1966.
- Research Assistant, the same laboratory, 1966 - 1975.
- Researcher, Water Pollution Research Laboratory, 1975 - 1980.
- Associate Research Professor, the same laboratory, 1980 - 1986.
- Research Professor of Hydrobiology, Water Pollution Laboratory, since 1986.

Prof. Shehata participated in several research projects, e.g., "Pilot plant studies on algal removal from Rod El-Farag water works", sponsored by ASRT, NRC and General Organization for Greater Cairo Water Supply, 1974 - 1976, "Assessment of the impact of organic and inorganic pollutants on water quality of Ismailia Canal", "Application of Algae for pollution removal, energy and food production", "Impact of El-Gabal El-Asfar sewage discharge on water quality of Bahr El-Baquar drain", "Water quality studies on Lake Nasser and River Nile", sponsored by the Ford Foundation and University of Michigan (USA) jointly with ASRT (Egypt), 1975 - 1982, and "Fate and effect of heavy metals on algae ponds", sponsored by the EPA (USA) and NRC (Egypt), 1980 - 1983.

Prof. Shehata is the author of more than 30 papers published in national and international journals. She attended many conferences, symposia and meetings in USA, FRG and Egypt. She is a member of the National Association on Water Pollution Research and Control, ASRT, Egypt. She was awarded the ASRT Prize for Environmental Sciences for 1985.



*Prof. Dr. Mohamed  
Ragaei Lasheen*

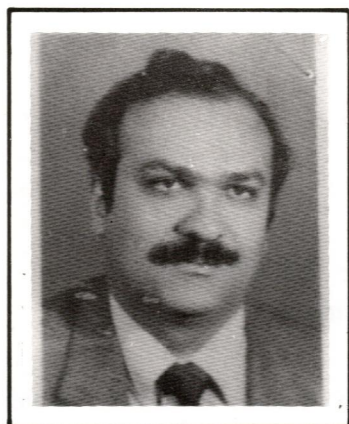
Prof. Lasheen, Research Professor of Aquatic Chemistry, Water Pollution Department, NRC, was born on October 29, 1947 in Cairo, Egypt. Graduated from Ain-Shams University in 1969, with B.Sc. in Chemistry and Biochemistry. Awarded the M.Sc. and Ph.D. in Environmental Health Sciences from the University of Michigan at Ann Arbor, USA, in 1971 and 1974, respectively.

Prof. Lasheen held the following positions :

- Research Assistant, University of Michigan, Department of Environmental Chemistry, 1970 - 1974.
- Researcher, Water Pollution Control Laboratory, NRC, 1975 - 1980.
- Associate Research Professor, same laboratory, NRC, 1980 - 1986.
- Research Professor, same laboratory, NRC, since 1986.

Prof. Lasheen participated in several research projects such as : “Assessment of the impact of organic and inorganic pollutants on water quality”, “Application of algae for removal of pollution and production of food and energy”, “Water treatment plant evaluation”, “Technology of drinking water treatment” and “Assessment of water quality in storage tanks”. Ford Foundation and Michigan University (USA) with ASRT, sponsored the project on “Water quality studies on Lake Nasser and River Nile”, while US EPA sponsored “Fate and effect of heavy metals on waste water”, in which Prof. Lasheen actively participated.

He attended several conferences and symposia in Egypt, Netherlands, U.K., Canada and India. Published 30 professional papers and chapters in specialized periodicals and books. Supervised five M.Sc. and Ph.D. Member of the National Association of Water Pollution Research and Control, ASRT and member of SCOPE, the Metals sub-committee.



*Prof. Dr. Helmy Tawfik El-Zanfaly*

Prof. El-Zanfaly, Research Professor of Water and Sewage Microbiology was born on September 15, 1942, Zifta, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Microbiology (Agriculture). He obtained his M.Sc. and Ph.D. in Microbiology from the same university in 1969 and 1974, respectively. In 1976, awarded the Diploma of International Institute of Environmental Science and Technology, Delft, Netherlands.

Prof. El-Zanfaly held the following positions :

- Research Assistant, Water Pollution Control Laboratory, NRC, 1965 - 1974.
- Researcher, same laboratory, NRC, 1974 - 1980.
- Associate Research Professor, same laboratory, NRC, 1980 - 1986.
- Research Professor, Water Pollution Control Laboratory, NRC, since 1986.

Prof. El-Zanfaly participated in several research projects, e.g., "Assessment of the impact of organic and inorganic pollutants on water quality of Ismailia Canal", "Evaluation of the efficiency of water treatment plants at Greater Cairo for the removal of pollutants", "Technology of drinking water treatment in Greater Cairo", "Assessment of water quality in storage tanks", "Water quality studies on Lake Nasser and River Nile", sponsored by Ford Foundation and University of Michigan (USA) together with ASRT (Egypt), "Development and application of biogas technology in rural areas of Egypt", ASRT and US-AID, "Waste water treatment for land application", NRC and University of Karlsruhe (FRG), and "Evaluation of coliphage and the presence/absence tests as simple rapid economical method for screening potable water sources and water supplies in Egypt", IDRC (Canada) and NRC.

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Prof. El-Zanfaly is the author of 30 professional papers published in national and international journals. Attended several conferences, symposia and meetings in Netherlands, Canada, Italy, USA and Egypt. Supervised a number of M.Sc. and Ph.D. Member of "Study Group on health-related water microbiology" IAWPRC, London, England. Referee for the "Journal of Water, Air and Soil Pollution", Lockheed Palo Alto Research Laboratory, CA, USA.





*Prof. Dr. Samira Soliman Nawar*

Prof. Nawar, Research Professor, Water Pollution Department, NRC, was born on January 30, 1942. Graduated from Ain-Shams University in 1962, with B.Sc. in Chemistry and Zoology. Awarded the M.Sc. and Ph.D. from Cairo University on Water Pollution in 1966 and 1974, respectively.

Prof. Nawar held the following positions at NRC :

- Scholarship, Water Pollution Control Laboratory, 1962 - 1965.
- Research Assistant, same laboratory, 1965 - 1974.
- Researcher, 1974 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor, Water Pollution Control Department, since 1986.

Prof. Nawar took part in ten research projects sponsored by EPA (USA), AID, Michigan University, ASRT and NRC. Published 25 professional papers in international journals. Participated in a number of training courses abroad, "Marine pollution in relation to protection of living resources, Sweden, FAO (UN), 1973", "Environmental management, UNEP, 1978", "Treatment and disposal of industrial waste water, British Council, UK, 1981", and "Water and waste water, Institute of Water and Waste Water, Technical University of Vienna, Austria, 1983".

Prof. Nawar participated in several conferences, seminars, symposia in Yugoslavia, Austria, Turkey and Egypt. Awarded the National Prize for Environmental Sciences, 1985.



*Prof. Dr. Mohamed M. El-Abagy*

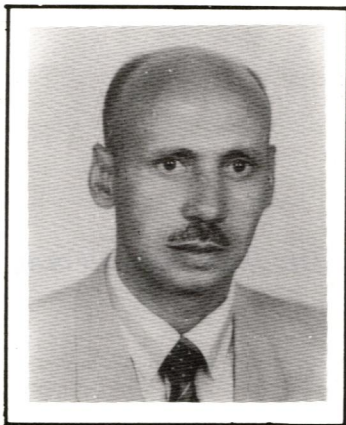
Prof. El-Abagy, Research Professor of Water and Sewage Microbiology, NRC, was born on February 4, 1944. Graduated from Cairo University in 1964, with B.Sc. in Biochemistry, Agriculture. He obtained the M.Sc. and Ph.D. in Microbiology from the same university in 1972 and 1977, respectively.

Prof. El-Abagy held the following positions at NRC :

- Scholarship, Water Pollution Control Laboratory, 1965 - 1966.
- Research Assistant, Water Pollution Control Laboratory, 1966 - 1977.
- Researcher, same laboratory, 1977 - 1981.
- Associate Research Professor, same laboratory, 1981 - 1986.
- Research Professor of Water and Sewage Microbiology, since 1986.

Prof. El-Abagy took part in a number of research projects :  
“Assessment of the impact of organic and inorganic pollutants on the water quality of Ismailia Canal”, “Application of algae for pollution removal, energy and food production”, “Impact of El-Gabal El-Asfar sewage discharge on water quality of Bahr El-Baquar drain”, “Evaluation of the efficiency of water treatment plants at Greater Cairo for the removal of pollutants”, “Technology of drinking water treatment in Greater Cairo”, “Assessment of water quality in storage tanks”, “Water quality studies on Lake Nasser and River Nile”, sponsored by Ford Foundation and Michigan University (USA) and ASRT (Egypt), “Biodegradation of hydrocarbons in refinery waste water”, EPA (USA) and NRC (Egypt), “Development and application of biogas technology in rural areas”, US AID, and “Evaluation of coliphage and presence/absence tests as simple economic procedures for screening potable water supplies in Egypt”, IDRC (Canada).

He attended several conferences and symposia in Egypt, Canada, and Thailand. Member of the “National Association of Water Pollution Research and Control, ASRT”, and “Environmental Protection Division, Environmental Research Council, ASRT”. Published more than 30 papers in national and international journals. Supervised five M.Sc. and Ph.D. theses.



*Prof. Dr. Shawky  
El-Said El-Hawaary*

Prof. El-Hawaary, Research Professor, Water Pollution Department, NRC, was born on August 14, 1941. Graduated from Faculty of Agriculture, Cairo University in 1964, with B.Sc. Awarded the M.Sc. from the same university in 1969, while the Ph.D. he obtained from Ain-Shams University in 1977 in Bacteriology.

Prof. El-Hawaary held the following positions at NRC :

- Research Assistant, 1965 - 1977.
- Researcher, 1977-1983.
- Associate Research Professor, 1983 - 1988.
- Research Professor, since 1988.

Prof. El-Hawaary took part in several research projects covering “Water quality studies for River Nile and Lake Nasser”, sponsored by ASRT and University of Michigan, USA, “Environmental studies”, sponsored by US EPA and NRC, “Biogas technology in rural areas of Egypt”, sponsored by ASRT, US AID and US NAS, “Effect of sewage disposal on Bahr-El-Baquar drain”, “Water treatment plants”, and “Technology of drinking water treatment”.

Prof. El-Hawaary acted as Principal Investigator for the following projects : “Fate and effects of organic pollutants in natural and drinking water”, “Determination of water quality at Damietta Province”, and “Enumeration and identification of some pathogenic forms at the intake of some water treatment plants at Greater Cairo”. He is the author of 25 professional papers published in national and international journals.





*Prof. Dr. Saad Awad Farag*

Prof. Farag, Research Professor and Deputy Head of Environmental Research Division, NRC, was born on May 6, 1937. Married with three children. Graduated from Ain-Shams University in 1959, with B.Sc. in Physics and Mathematics. In 1963, he obtained D.I.C. (Meteorology) from the Imperial College of Science and Technology, London University. His Ph.D. in Air Pollution Climatology he obtained from Sheffield, England in 1967.

Prof. Farag held the following positions :

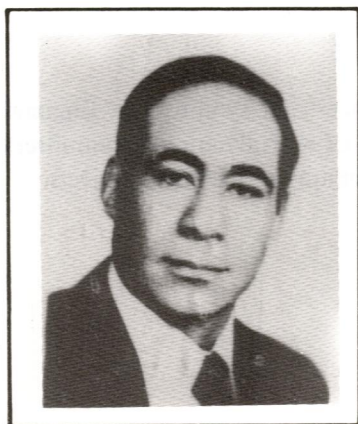
- Demonstrator, Physics Department, Assiut University, 1959 - 1962.
- Researcher, Air Pollution Laboratory, NRC, 1968 - 1973.
- Associate Research Professor, same Laboratory, NRC, 1973 - 1979.
- Research Professor, Air Pollution Laboratory, NRC, since March 1980.
- Head of Environmental Research Division, NRC, 1981 - 1982.
- Head of Air Pollution Research Department 1980 - 1988.

Prof. Farag participated in a series of research projects, e.g., "Air pollution in the industrial area of Helwan", sponsored by the General Organization for Industrialization, Egypt, 1970 - 1974, "Dust emission and cement losses from the chimneys of Helwan Portland Cement Factory, 1973", and "Effect of man-made and natural air pollutants on the deterioration of the Sphinx, the Egyptian Archaeological and Antiquities Organization, 1982 - 1983". Also he joined advisory research teams to study a number of environmental issues such as choice of residential areas and air pollution in some industrial areas.

He is the author of 28 papers published in national and international journals. He supervised seven Ph.D. and three M.Sc. awarded from Egyptian

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universities. He attended several conferences and symposia in England, France and Egypt. Prof. Farag is a member of several national committees, councils and advisory boards on environmental and related subjects.



*Prof. Dr. Mahmoud  
Mohamed Nasralla*

Prof. Nasralla, Research Professor of Air Pollution, NRC, was born on April 6, 1946. Married with three children. Graduated from Assiut University in 1964, with B.Sc. in Chemistry. In 1969, he obtained the M.Sc. from Ain-Shams University in Air Pollution. The Ph.D., also in Air Pollution, was awarded from Leeds University, Fuel and Combustion Department, U.K. in 1975.

Prof. Nasralla held the following positions :

- Chemist, Modern Textile Company, Alexandria, 1964 - 1965.
- Research Assistant, Air Pollution Unit, NRC, 1965 - 1971.
- Researcher, Air Pollution Laboratory, NRC, 1976 - 1979.
- Associate Research Professor, Air Pollution Research Department, NRC, 1981 - 1986.
- Research Professor, Air Pollution Department, NRC, since 1986.
- Head of Air Pollution Research Department, NRC, since 1988.

Prof. Nasralla participated in several research projects, e.g., "Air pollution in Leeds streets (U.K.), Shoubra El-Kheima (ASRT), Helwan (Ministry of Industry), Suez (Ministry of Housing and UN), and Greater Cairo", "Environmental factors in grain storage (Ministry of Agriculture and US Government)", "Atmospheric pollution in holly places (Saudi Arabia)", "Air quality and deterioration of Sphinx, EGOM", "Air pollutants around cement industry, Port Said, ASRT", "Metal corrosion and air pollution in Belbeis (Telecomm. Dept.), and "Control of particulate and fumes indoor industry".

He supervised six M.Sc. and two Ph.D. in the field of specialization. He is the author of 38 papers published in national and international journals on air pollution chemistry, monitoring, dispersion modelling, emission

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control and impacts. He is a member of several consultative committees, professional societies and syndicates. He attended several conferences, symposia and meetings in U.K., Saudi Arabia, France, Hungary, Spain, Canada, Greece, FRG and Egypt. Awarded the First Class Medal of Science and Art (1984), and State Prize for Environmental Sciences (1982).





*Prof. Dr. Nadia*

*Badawy Abdel-Gawad Badawy*

Prof. Badawy, Research Professor of Industrial Medicine, Occupational and Environmental Health, NRC, was born on December 6, 1942. Married with three children. Graduated from Ain-Shams University, Faculty of Medicine, with AB. B.ch. She obtained the Diploma of Industrial Medicine and Occupational Health from Cairo University in 1968. In 1969, she obtained "Diploma of Medicine" from Ain-Shams University. Awarded the M.D. from the same university in 1977 in Industrial Medicine and Occupational Health.

Prof. Badawy held the following positions :

- General Practitioner, Ministry of Health, 1966.
- Medical Doctor, NRC, 1967 - 1970.
- Research Assistant, NRC, 1970 - 1977.
- Researcher, NRC, 1977 - 1982.
- Associate Research Professor, NRC, 1982 - 1987.
- Research Professor, Air Pollution Department, NRC, since 1987.

Prof. Badawy participated in a number of research projects, supervised a number of post-graduate students for M.Sc. and Ph.D. Attended several conferences and symposia in Egypt, UK, USA, Japan and Netherlands, on medical sciences, occupational medicine, allergology and clinical immunology. She is a member of several medical associations, societies and syndicates. Awarded the NRC Prize for Scientific Contribution (for NRC young scientists), in the field of Environmental Sciences for 1986. She is the author of 39 papers published in national and international journals.



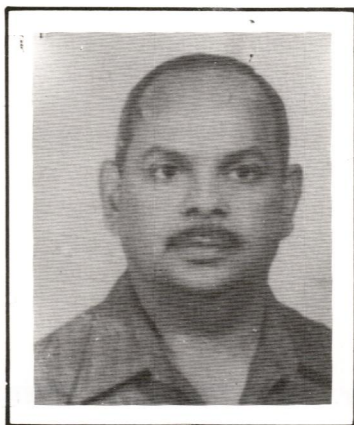
*Prof. Dr. Noha Mohamed Hegazi*

Prof. Hegazi, Research Professor and Head of Occupational Medicine Department, NRC, was born in Egypt. Graduated from Ain-Shams University in 1963, with Bachelor of Surgery and Medicine. She obtained the Diplomas of Occupational Medicine and General Medicine from the same university in 1967 and 1968, respectively. In 1974, she was awarded the M.D. in Occupational Medicine.

Prof. Hegazi held the following positions at NRC :

- Research Assistant, Occupational Medicine Unit, NRC, 1965 - 1974.
- Researcher, (1974).
- Associate Research Professor, and Head of O.M. Unit, NRC, 1980 - 1984.
- Research Professor, Occupational Medicine Department, NRC, since 1984.

Prof. Hegazi participated in several research projects, e.g., "Health hazards of PVC exposed workers", "Clinical and biochemical studies on wood dust and wood spirit in Woodco-Company", "Biological and clinical changes in Mn-exposed workers in dry-battery industry", "Pesticide residue effects (clinical part)", and "Effects of industrial pollution on health at Greater Cairo". She participated in many national conferences, symposia and meetings. She is the author of several papers published in specialized journals, and member of a number of national societies, committees and syndicates.



*Prof. Dr. Ahmed Hussein  
Abdel-Kerim*

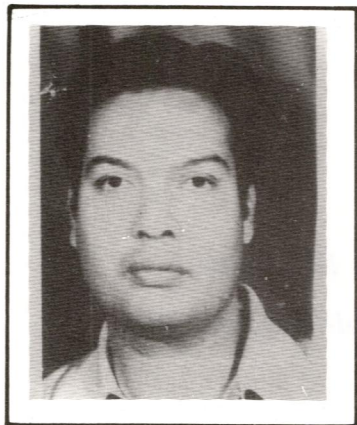
Prof. Abdel-Kerim, Research Professor of Industrial Medicine, NRC, was born on September 18, 1940. Married with two children. Graduated from Ain-Shams University in 1964, with B.Sc. in Chemistry. In 1971, he obtained his M.Sc. from Cairo University in Applied Chemistry and, in 1975 the Ph.D. from Al-Azhar University in Environmental and Occupational Health .

Prof. Abdel-Kerim held the following positions at NRC :

- Research Assistant, 1965-1975.
- Researcher, 1975 - 1980.
- Head of Industrial Medicine Laboratory, 1977 - 1980.
- Associate Research Professor, 1980 - 1985.
- Research Professor of Industrial Medicine, since 1985.

Prof. Abdel-Kerim participated in several research projects, e.g., "On the effect of air pollution in Helwan area", "Survey on dust concentration and its health effects in Aswan iron crusher and Baharia Oases". "Survey on dust concentration and its health effects in phosphate mines, in Sebaeia and Red Sea area", "Survey on silica dust among glazed pipes and fire bricks plant", and similar studies in Abou-Zabel Basalt crusher, Rayon Industries, Menofia and Shoubra El-Kheima Textile Plants, Electronics industry, and others.

He supervised several M.Sc., Ph.D. and M.D. theses granted from different Egyptian universities on community, environmental industrial medicine and biochemical topics. He attended many meetings, symposia and conferences in Yugoslavia, Finland, Ireland and Egypt. Member of many national and international societies and committees on Occupational Medicine and Health, Community Medicine, Industrial Safety and Prevention. He is the author of many papers published in national and international journals.



*Prof. Dr. El-Sayed*

*Abbas El-Dessoukey*

Prof. El-Dessoukey, Research Professor of Biochemistry, Industrial Medicine Department, NRC, was born on April 26, 1944, Mansoura, Egypt. Married. Graduated from Ain-Shams University in 1964, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from Cairo University, in Applied Chemistry and Biochemistry in 1971 and 1976, respectively.

Prof. El-Dessoukey held the following positions at NRC :

- Research Scholarship, 1965 - 1967.
- Research Assistant, 1967 - 1976.
- Researcher, 1976 - 1982.
- Associate Research Professor, 1982 - 1987.
- Research Professor, since 1987.

He participated in several research programs and projects covering metabolism of serum enzymes, protein, fat, carbohydrates and trace elements in clinical and experimental practice in normal and different occupational diseases. Supervised seven Ph.D. and one M.Sc. theses already granted, while two more M.Sc. are still underway. Author of over 55 papers published in national and international journals and conferences. Member of a number of professional societies, and Syndicate of Scientific Professions of Egypt.





*Prof. Dr. Sanaa*

*Aboul-Makarem Rizk*

Prof. Rizk, Research Professor of Industrial Medicine and Occupational Health, NRC, was born on March 15, 1943. Graduated from Cairo University, Faculty of Medicine, with MB. B.ch. in 1965. She obtained D.I.M.O.H. and D.M. from the same university in 1968 and 1969, respectively. Awarded the M.D. from Ain-Shams University in 1977.

Prof. Rizk held the following positions :

- House Officer, Cairo University Hospitals, 1965 - 1966.
- General Practitioner, Ministry of Health, 1966.
- Research Assistant, NRC, 1966 - 1977.
- Researcher, NRC, 1977 - 1982.
- Associate Research Professor, NRC, 1982 - 1987.
- Research Professor, NRC, since 1987.

Prof. Rizk participated in a number of research projects : "Evaluation of pollution effects on human health at Helwan and Shoubra El-Kheima industrial areas, Egypt", "Study on the effect of insecticides on health of agricultural workers, Kaha, Egypt", "Effect of noise on health", "Heavy metals in the Egyptian environment and effect on residents of Cairo", and "Clinical investigation of cable workers exposed to environmental pollution".

She participated in several conferences, meetings held in Egypt and Italy. She is the author of more than thirty one papers published in specialized journals. Member of the Egyptian Society of Industrial Medicine and Occupational Health and the Medical Syndicate.





## APPLIED ORGANIC CHEMISTRY DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — ORGANIC CHEMISTRY.
- 2 — BIOCHEMISTRY.
- 3 — CHEMISTRY OF FLAVOURING AGENTS AND RELATED SUBSTANCES.



*Prof. Dr. Issa Mohamed  
Imam Fakhr*

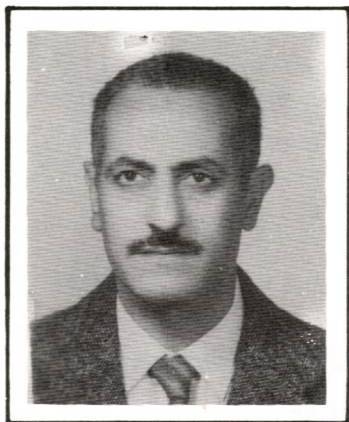
Prof. Fakhr, Research Professor of Organic Chemistry, and Head of Applied Organic Chemistry Division, NRC, was born on May 24, 1938, Qalioubia, Egypt. Married with two children. Graduated from Cairo University in 1961, with B.Sc. in Chemistry. Obtained the M.Sc. and Ph.D. from the same university in Applied Organic Chemistry in 1964 and 1968, respectively.

Prof. Fakhr held the following positions at NRC :

- Research Assistant, 1961 - 1969.
- Researcher, 1969 - 1974.
- Associate Research Professor, 1974 - 1981.
- Research Professor, since 1981.

Prof. Fakhr participated in several research projects in the field of organic synthesis, isolation and characterization of organic natural products, analysis and biochemistry of organophosphorus insecticides, sex attractant of cotton leaf worm moths, and cytogenetic effects of pesticides on cell culture (with EPA, USA). Supervised eight M.Sc. and Ph.D. theses in applied organic chemistry. Published over 40 papers in national and international journals and conferences (Japan). Participated in combined research program (FAO/IAEA) for Food and Agricultural Development. Awarded NRC Prize for Scientific Contribution in Chemistry (1981), and the NRC Gold Medal in the occasion of NRC Silver Jubilee (1982). Member of a number of scientific professional societies and syndicates.





*Prof. Dr. Salah Mohamed  
Abdel Dayem Zayed*

Prof. Zayed, Research Professor of Organic Chemistry, and Head of Organic Chemistry Department, NRC, was born on February 13, 1932, Menoufia, Egypt. Married. Graduated from Cairo University in 1951, with B.Sc. in Special Chemistry. Awarded the M.Sc. and Ph.D. from the same university in Organic Chemistry in 1954 and 1957, respectively.

Prof. Zayed held the following positions :

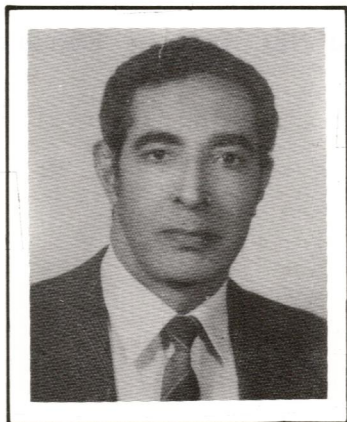
- Demonstrator, Chemistry Department, Faculty of Science, Cairo University, 1951 - 1957.
- Post-Doctoral Fellowship at “Max-Planck Institut” for Biochemistry, Munich, FRG, 1958 - 1961.
- Researcher, NRC, 1961 - 1963.
- Associate Research Professor, NRC, 1963 - 1968.
- Research Professor, NRC, since 1968.

Prof. Zayed acted as Principal Investigator for a number of internal and external research projects, e.g., joint project with US Environmental Protection Agency (US-EPA) (1979 - 1986) entitled “Cytogenetic studies of pesticides on cell culture”. Supervised 12 M.Sc. theses and 10 Ph.D. theses in applied organic chemistry. Attended a number of conferences in Egypt, FRG, Switzerland, Japan and Canada. Member of “Pesticide Science Society of Japan”, and “Council for Basic Sciences — ASRT”. He is also a member of the Advisory Editorial Board of the American periodical “Journal of Biochemical Toxicology”, and member of the Editorial Secretariat of “Bulletin of NRC”. Member of several committees concerned with different activities at NRC.

Prof. Zayed was awarded the “Egyptian State Prize in Chemistry (1965), NRC Golden Medal, Silver Jubilee (1982), NRC Prize for Scientific

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Contribution in Chemistry for 1984, and NRC Prize for Scientific  
Appreciation in Chemistry for 1989.



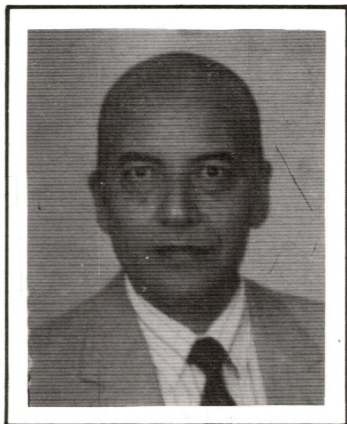
*Prof. Dr. Youssef Argaliouss  
Gawargious*

Prof. Gawargious, Research Professor of Analytical Chemistry, NRC, was born on September 2, 1933, Qena, Egypt. Married with two sons. Graduated from Cairo University in 1956, with B.Sc. in Chemistry and Botany (Hons.). Awarded M.Sc. and Ph.D. from Birmingham University (U.K.), in Analytical Chemistry in 1961 and 1963, respectively.

Prof. Gawargious held the following positions at NRC :

- Researcher and Head of Organic Microanalysis Unit, 1964 - 1971.
- Associate Research Professor, 1971 - 1974.
- Research Professor, since 1974.

Before he left to UK in 1960 for post-graduate studies, he joined the Government Chem. Lab. as a trainee (Chemist) and then was engaged in analysis and restoration of Antiquities, till 1959. Tutor, for one year (1959 - 1960), Biochemistry Dept., Fac. Medicine, Ain-Shams University. Prof. Gawargious participated in several research projects and activities. Assumed the post of Head of Applied Organic Chemistry Division for two years. Member of NRC Board of Directors for two years. Supervised 12 M.Sc. and Ph.D. dissertations (two through scientific channels with Erlangen-Nurnberg Univ., FRG). Awarded Alexander-von-Humboldt research grant, Univ. Saarbrücken, FRG (1970 - 1972). Author of over 72 papers published in specialized international journals, single author of an international monograph on Organic Analysis. Attended many national and international conferences. Member of several societies, and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Abd El-Hamid Attia*

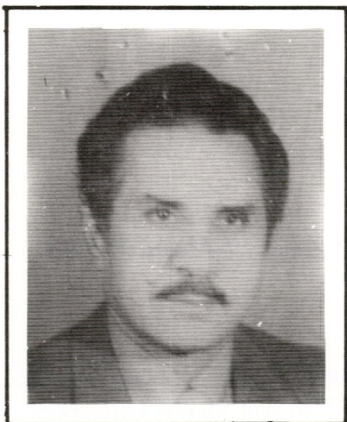
Prof. Attia, Research Professor of Applied Organic Chemistry, NRC, was born on November 3, 1938. Graduated from Ain-Shams University in 1959, with B.Sc. & Ed. degree. Awarded Min. Candidate (M.Sc.) and Candidate of Science (Ph.D.) from Prague Institute of Chemical Technology, Czechoslovakia, in 1970 and 1972, respectively.

Prof. Attia held the following positions at NRC :

- Researcher, 1973 - 1979.
- Associate Research Professor, 1979 - 1984.
- Research Professor, since 1984.

He participated in a number of research projects. Contributed to the joint research project "Synthesis of ylidene nitromethenes and their molluscicidal, antimicrobial and related activities" in cooperation with the office of Naval Research, USA. Manager of the national project sponsored by the Ministry of Scientific Research, "Formation of expertise to more effective contribution in the development plans in Egypt". Technical advisor for the Department of International Cooperation for Development, Ministry of Foreign Affairs, Egypt and UNDP, Cairo, to Egyptian TCDC Inter-Governmental Programming Exercise (1988). Offered several consultancy and advisory services to different governmental and private organizations and companies. Selected by UN-ESCWA/UNSTD (1984) as consultant for S & T for Development. Paid field visits to several Arab, African and Asian countries within the UN missions for preparation of technical reports and recommendations within S & T programs. Supervised several M.Sc. and Ph.D. theses. Author of over 35 papers published in national and international journals and conferences. Fluent in English, French and Spanish. Awarded the NRC Prize for Scientific Contribution in Chemical Sciences and Applications (1983).





*Prof. Dr. Abou El-Fotooh  
Gaballa Hammam*

Prof. Hammam, Research Professor of Organic Chemistry, NRC, was born on August 3, 1935, Sohag, Egypt. Married. Graduated from Cairo University in 1962, with B.Sc. in Chemistry and Physics. Obtained the M.Sc. and Ph.D. from the same university in Organic Chemistry in 1971 and 1973, respectively.

Prof. Hammam held the following positions :

- Chemist, Ministry of Industry, 1962 - 1971.
- Chemist, NRC, 1971 - 1973.
- Researcher, NRC, 1974 - 1979.
- Associate Research Professor, NRC, 1979 - 1984.
- Research Professor, NRC, since 1984.

Prof. Hammam participated in a number of research projects. Attended several national and international conferences in Egypt and U.K. Supervised two M.Sc. and two Ph.D. theses in the field of S-hetero-cyclic chemistry. Author of over 25 papers published in national and international journals. Member of a number of societies and syndicates.



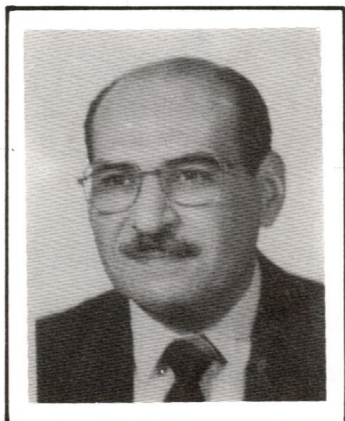
*Prof. Dr. Madiha Farghaly*  
*Mohamed Farghaly*

Prof. Farghaly, Research Professor of Organic Chemistry, NRC, was born on March 5, 1942, Giza, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Geology (Hon.). Awarded both M.Sc. and Ph.D. in Organic Chemistry from the same university in 1967 and 1973, respectively.

Prof. Farghaly held the following positions at NRC :

- Scholarship, 1965.
- Research Assistant, 1966.
- Researcher, 1973.
- Associate Research Professor, 1979.
- Research Professor, since 1986.

She participated in many research activities among which is the preparation of pesticides and studying the fate and persistence of labelled insecticide residues, in/on agricultural, environmental and biological samples. The metabolism of labelled insecticides in the adult larvae of cotton leaf worm in vivo and vitro. Supervised three M.Sc. and one Ph.D. theses. Author of several papers published in specialized journals.



*Prof. Dr. Kamal Ibrahim  
Fayek Megaly*

Prof. Megaly, Research Professor and Head of Biochemistry Department, NRC, was born on August 1, 1931, in Fayoum, Egypt. Graduated from Cairo University in 1955, with B.Sc. in Chemistry and Zoology. Obtained M.Sc. from the same university in 1965, thesis entitled "Biochemical lesions in diabetes". His Ph.D. "Hormonal control of lipid metabolism" was awarded from Cairo University in 1968.

Prof. Megaly held the following positions :

- Scholarship, Biochemistry Department, Faculty of Medicine, Cairo University, 1957 - 1960.
- Research Assistant, NRC, 1960 - 1968.
- Researcher, NRC, 1968 - 1974.
- Associate Research Professor, NRC, 1974 - 1980.
- Research Professor, NRC, since 1980.
- Head of Biochemistry Department, NRC, since 1982.

Prof. Megaly participated in several research projects. Supervised nine M.Sc. and seven Ph.D. in the fields of diabetes and atherosclerosis, proteasis, fibrinolytic enzymes and pediatrics. Attended several conferences in Cairo, Aberdeen (Scotland, U.K.), and Sydney (Australia). Member of Egyptian Chemical Society, Egyptian Physiology Society and Egyptian Biochemistry Society. Author of several scientific articles published in national and international journals.



*Prof. Dr. Ekram Zaki Khafagy*

Prof. Khafagy, Research Professor of Biochemistry, NRC, was born on February 3, 1935, Beni-Suef, Egypt. Married. Graduated from Cairo University in 1957, with B.Sc. in Chemistry. Obtained M.Sc. from the same university in 1961. Awarded Ph.D. in Biochemistry in 1966 from Nebraska University, USA. She is fluent in English and Arabic.

Prof. Khafagy held the following positions :

- Chemist, Memphis Chemical Company, Cairo, 1957 - 1961.
- Researcher, Biochemistry Department, NRC, 1968 - 1974.
- Associate Research Professor, NRC, 1974 - 1983.
- Research Professor, Biochemistry Department, NRC, since 1983.

Prof. Khafagy participated in several research projects, e.g., joint research with CID laboratory on the "Side effect of bilharcid and tartar-emetic on cell biology". Published over 33 papers in national and international journals. Supervised seven M.Sc. and Ph.D. theses granted by Egyptian universities in the field of biochemistry. Attended eight West Central Coast Biochemistry Conferences during her stay in USA for Ph.D. studies. Other conferences she attended in Egypt and Japan. Member of a number of societies and Syndicate of Scientific Professions of Egypt.





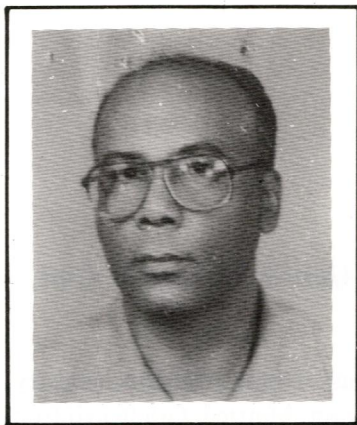
*Prof. Dr. Etidal Wissa Jwanny*

Prof. Jwanny, Research Professor of Biochemistry, NRC, was born on August 30, 1935, Assiut, Egypt. Married. Graduated from Ain-Shams University in 1959 with B.Sc. in Chemistry and Zoology. Obtained the M.Sc. and Ph.D. in Applied Organic Chemistry from Cairo University in 1965 and 1970, respectively.

Prof. Jwanny held the following positions at NRC :

- Scholarship, 1960 - 1962.
- Research Assistant, Biochemistry, 1962 - 1970.
- Researcher, 1970 - 1975.
- Associate Research Professor, 1975 - 1983.
- Research Professor, Biochemistry Department, since 1983.

Prof. Jwanny participated in a number of research projects. Author of over 28 publications in the field of biochemistry and yeast fermentation for production of single cell proteins, lipids and carbohydrates from non-conventional carbon sources. Attended several conferences, symposia and meetings. Received post-doctoral research fellowships to French Petroleum Institute, Paris (1967 - 1968) and U.K. Universities (1985, 1986 and 1987). She is a member of the Egyptian Chemical Society and the Egyptian Biochemical Society.



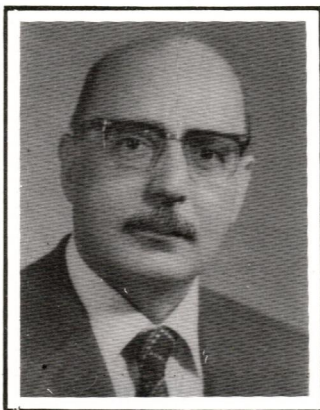
*Prof. Dr. Ahmed Mohamed  
Ibrahim*

Prof. Ibrahim, Research Professor of Biochemistry, NRC, was born on August 31, 1937, Cairo, Egypt. Married. Graduated from Ain-Shams University in 1964, with B.Sc. in Biochemistry and Chemistry. Awarded the M.Sc. and Ph.D. in Biochemistry from Cairo University in 1970 and 1975, respectively.

Prof. Ibrahim held the following positions at NRC :

- Research Assistant, 1965 - 1975.
- Researcher, Biochemistry Department, 1975 - 1981.
- Associate Research Professor, 1981 - 1987.
- Research Professor, since 1987.

Prof. Ibrahim participated in a number of research projects. Granted a number of research fellowships to : Institute of Protein Chemistry, Horsholm, Denmark (1973 - 1975) ; Central Laboratory, Hospital Roskilde, Denmark (1979 - 1980) ; Physiological Chemistry Department, University of Saarlands, Hamburg Saar, FRG (1982) ; and Institute of Biological Sciences, Constantine University, Algeria (1984 - 1986). Attended several conferences in Egypt, Syria, Turkey, Italy, Tunisia, France, Singapore, and Netherlands. He is the author of several papers published in local and international journals. Member of several scientific societies and syndicates.



*Prof. Dr. Ahmed Mohamed Gad*

Prof. Gad, Research Professor Emeritus of Industrial Biochemistry, NRC, was born on November 1925, Cairo, Egypt. Married. Graduated from Cairo University in 1946, with B.Sc. (Hons.) in Chemistry. Awarded the M.Sc. from the same university in 1950 in Organic Chemistry. Awarded the Ph.D. in 1954 from Manchester University, Faculty of Technology in the field of Industrial Biochemistry.

Prof. Gad held the following positions :

- Assistant, Chemistry Department, Faculty of Science, Cairo University, 1946 - 1950.
- Research Scholarship, NRC, 1950 - 1954. (West Germany and U.K.).
- Researcher, Research Unit of Fats and Oils, NRC, 1954 - 1960.
- Associate Research Professor, same unit, NRC, 1960 - 1964.
- Research Professor, same unit, NRC, 1964 - 1985.
- Head of Fats and Oils Department, NRC, 1954 - 1985.
- Professor Emeritus, NRC, since 1985.

Prof. Gad supervised about 30 M.Sc. and Ph.D. theses. Acted as consultant for : National and foreign companies dealing with manufacture and processing of fats, oils and their products ; Central Agency for Public Mobilization and Statistics (CAPMOS), 1955 ; and Department of Scientific Statistics of the Academy (1973). Took the responsibility as Director of NIDOC (1976 - 1985). Visited research institutes in India, USSR (1966), DDR, (1967) ; Information centres and libraries in USA, U.K., France, FRG and Austria. Shared in a project to "Establish a nation-wide network for scientific and technical information in Egypt", 1979 - 1985 (ASRT and US AID). Attended national and international meetings and conferences in the field of "Scientific and Technical Information". Member of : NRC Board

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of Directors ; Research Centre for Computation and Statistics, Cairo University ; Egyptian Chemical Society ; National Committee for Pure and Applied Chemistry, ASRT ; National Representative Commission of Fats and Oils, IUPAC ; Committee for Assessment of Scientific Man-Power CAPMOS ; Technical Secretariat (Information), UNESCO, Egypt ; Executive committee for the project of "More and better food" NRC., and several other societies and councils. From 1970 to 1973 contracted with the National Research Council of Zambia to establish the Food Technology Dept., Lusaka and to train Zambian officers.





*Prof. Dr. Fouad Osman*  
*Mohamed Osman*

Prof. Osman, Research Professor of Applied Organic Chemistry, and Head of Chemistry of Flavouring Agents and Related Materials Department, NRC, was born on May 6, 1932. Married with two children. Graduated from Cairo University in 1955, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in Chemistry in 1960 and 1965, respectively.

Prof. Osman held the following positions NRC :

- Research Assistant, 1962.
- Researcher, 1965 - 1970.
- Associate Research Professor, 1970 - 1976.
- Research Professor, since 1976.
- Supervisor of Scientific Affairs, NRC, 1981 - 1987.

Prof. Osman participated in a number of research projects, and translation of a book of Organic Chemistry from English to Arabic (Hart and Schuetz, 4th Ed., 1972). Supervised seven M.Sc. and five Ph.D. theses in Applied Organic Chemistry. Granted a number of Post-doctoral fellowships and training programs : India (1966 - 1967), R & D Marketing, Denver, Colorado, USA (1979), and several local programs sponsored by ASRT, Academy of Sadat for Administrative Sciences (ASAS) (1983), and NRC. Member of the NRC Board of Directors (1981 - 1987), Chemical Society of Egypt, and Syndicate of Scientific Professions (ET). Visited many universities and research institutes in : India, U.K., FRG, USA, Spain, Iraq, Kuwait, Saudi Arabia and Syria. Participating in activities of many scientific committees of NRC and ASRT.





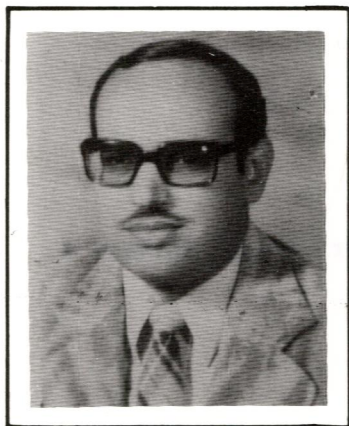
## APPLIED INORGANIC CHEMISTRY DIVISION



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### RESEARCH DEPARTMENTS ( RD )

- 1 — INORGANIC CHEMISTRY.
- 2 — PHYSICAL CHEMISTRY.



*Prof. Dr. Abdel-Ghany  
Abdel-Azeem El-Hosary*

Prof. El-Hosary, Research Professor of Physical Chemistry, and Head of Applied Inorganic Chemistry Division, NRC, was born on August 1, 1939, Menoufia, Egypt. Married with three children. Graduated from Cairo University in 1962, with B.Sc. in Chemistry and Physics. Awarded the M.Sc. and Ph.D. from the same university in Physical Chemistry in 1965 and 1968, respectively.

Prof. El-Hosary held the following positions :

- Research Assistant, Physical Chemistry Department, NRC, 1962 - 1969.
- Researcher, same department, 1969 - 1974.
- Associate Research Professor, same department, 1974 - 1979.
- Research Professor, NRC, since 1980.

He acted as the principal investigator of the project "Corrosion in petroleum refining", supported by US AID, and "Production of a corrosion inhibitor from local materials", currently used in some national industries instead of the imported inhibitor. Published over 60 papers in national and international journals, and contributed with one chapter in the book "Ionic Liquids", Plenum Press, N.Y., 1981. Supervised post-graduates for M.Sc. and Ph.D. degrees (three each). Member of several post-doctoral leaves and field visits to India and USA. Attended a number of conferences in Egypt, India, USA and Italy. Member of : National Association of Corrosion Engineers, USA (NACE), Society for Advancement of Electrochemical Science and Technology, India (SAEST), Egyptian Society of Chemistry, and Egyptian Corrosion Society.





*Prof. Dr. Zeinab Mohamed  
Hanafi*

Prof. Hanafi, Research Professor, Emeritus, Inorganic Chemistry Department, NRC, was born on October 21, 1927, Cairo, Egypt. Married with two daughters and one son. Graduated from Cairo University in 1951, with B.Sc. in Chemistry (Hon.). Awarded the M.Sc. and Ph.D. from the same university in Chemistry and Solid State Chemistry in 1956 and 1960, respectively.

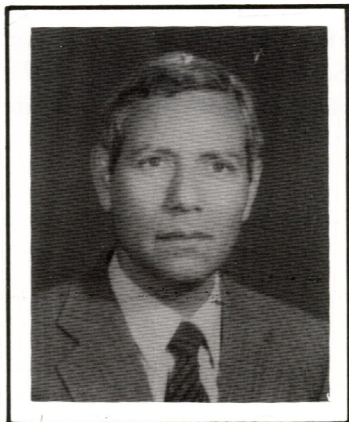
Prof. Hanafi held the following positions at NRC :

- Student Grant, NRC, Inorganic Chemistry Laboratory, 1955 - 1957.
- Research Assistant, same laboratory, 1957 - 1960.
- Researcher, same laboratory, 1960 - 1964.
- Associate Research Professor, 1964 - 1970.
- Research Professor, same laboratory, 1970 - 1987.
- Professor, Emeritus same laboratory, since 1987.
- Head of Physical Chemistry Laboratory, 1957 - 1960.
- Head of Inorganic Chemistry Laboratory, 1957 - 1987.
- Chairman of Inorganic and Physical Chemistry Department, for five years.

She participated in many research projects in the field of solid state chemistry, electrochemistry, and extraction of metals. Published over 65 papers in national and international specialized journals. Supervised 22 M.Sc. and Ph.D. graduate students granted their degrees from Egyptian universities. Founder of solid state chemistry in NRC for the first time in Egypt. She is a member of many committees and councils, NRC. Editorial Secretary of the Egyptian Journal of Chemistry, since 1979. Member of the editorial board of NRC Bulletin since 1983. Granted many post-doctoral fellowships and visits to UK, FRG, Japan. Actively participates in many social activities of NRC. Awarded the State Prize of Chemistry, 1973 ; NRC

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Prize for Scientific Appreciation for 1985 ; First Class Medal for Science and Technology, 1974 ; First Class Medal for Science and Technology, 1983 (from Syndicate of Scientific Professions of Egypt) ; and NRC Medal in the occasion of its Silver Jubilee (1982).



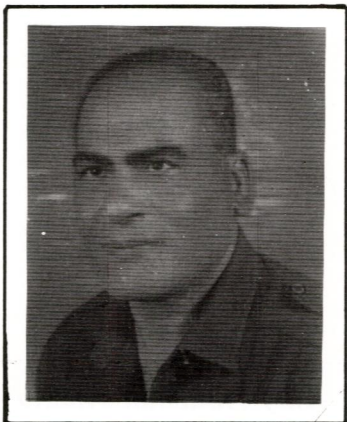
*Prof. Dr. Mahmoud Mohamed  
Hassanein*

Prof. Hassanein, Research Professor, Department of Inorganic Chemistry, NRC, was born on September 1, 1933, El-Mansoura, Egypt. He studied at Cairo University and obtained in 1956 B.Sc. in Chemistry, and in 1960 the M.Sc. from the same university in Inorganic Chemistry. Awarded the Ph.D. degree in Inorganic Chemistry from Bonn University, West Germany in 1963.

Prof. Hassanein held the following positions :

- Demonstrator, Department of Chemistry, Faculty of Science, Cairo University, 1956 - 1959.
- Researcher, Department of Inorganic Pigments, NRC, 1963 - 1968.
- Associate Research Professor of Physical and Inorganic Chemistry, Department of Inorganic Chemistry, NRC, 1968 - 1974.
- Research Professor of Inorganic Chemistry (Solid-State), the same department, NRC, since 1974.
- Head of the Department of Inorganic Chemistry, NRC, 1987-1988.

Prof. Hassanein participated in a number of research projects. He was chosen for a number of post-doctoral research grants and fellowships in West Germany, England, and USA. He published a number of papers in national and international journals and conferences, and supervised a number of M.Sc. and Ph.D. theses in the field of specialization. He was honoured in 1986 and granted the NRC Prize for Scientific Contribution, in the field of Applied Inorganic Chemistry. Passed away in 1989.



*Prof. Dr. Kamal Abd El-Kawi  
Al-Zewel*

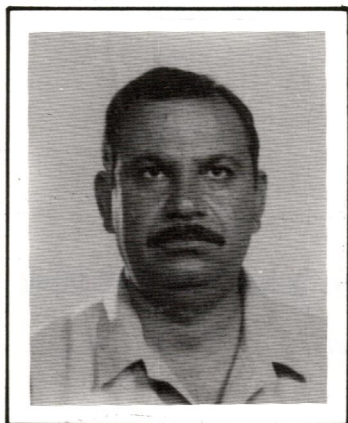
Prof. Al-Zewel, Research Professor, Department of Inorganic Chemistry, NRC, was born on September 30, 1936, Al-Menoufia, Egypt. He studied at Ain-Shams University and obtained his B.Sc. in Chemistry - Physics in 1960, the M.Sc. from Cairo University in Inorganic Chemistry in 1964. Awarded the Ph.D. degree in Inorganic Chemistry of Solids from the same University in 1967.

Prof. Al-Zewel held the following positions at NRC :

- Researcher, Department of Inorganic Chemistry, 1967.
- Associate Research Professor of Solid State in Inorganic Chemistry, 1974.
- Research Professor of Inorganic Chemistry (Solid State) Department of Inorganic Chemistry 1983.
- Head of the Department of Inorganic Chemistry, Since 1988.

Professor Al-Zewel participated in a number of research projects. He was chosen for a number of post-doctoral research grants and fellowships in Egypt, West Germany and Algeria. He published a number of papers in national and international journals and conferences and supervised a number of M.Sc. and Ph.D. theses in the field of specialization.





*Prof. Dr. Adly Abdellah Hanna*

Prof. Hanna, Research Professor, Inorganic Chemistry Department, NRC, was born on May 2, 1943 in Assiut, Egypt. Married with three children. Graduated from Assiut University in 1965, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D., both in Physical Chemistry from Cairo University in 1969 and 1973, respectively.

Prof. Hanna held the following positions at NRC :

- Research Assistant, Inorganic Chemistry Laboratory, 1966 - 1973.
- Researcher, same laboratory, 1973 - 1978.
- Associate Research Professor, same laboratory, 1978 - 1984.
- Research Professor, same laboratory, since 1984.

He is the author of over 30 papers published in national and international journals. Supervised the research work of three post-graduates for M.Sc. degrees. Member of a number of societies and Syndicate of Scientific Professions of Egypt. His fields of interest cover : dielectric and thermal properties of liquids, polymers and inorganic materials.



*Prof. Dr. Ahmed Medhat*

*Shams El-Din*

*Ph.D., D.Sc., D.Sc.*

Prof. Shams El-Din, Research Professor of Physical Chemistry, NRC, was born on April 1, 1931, Tanta, Egypt. Graduated from Cairo University in 1951, with B.Sc. sp. Chem. (Hons.). Awarded M.Sc. and Ph.D. from the same university in Electro-Chem. in 1954 and 1956, respectively. Granted two Diploma in Chem. Eng. and Tech. Wissen from Zurich, Switzerland in 1959 and 1960, respectively. Awarded D.Sc. from Cairo University in 1966 and from Ain-Shams University in 1979, both in Physical Chemistry.

Prof. Shams El-Din held the following positions at NRC :

- Researcher, 1958 - 1964.
- Associate Research Professor, 1964 - 1968.
- Research Professor, since 1968.

He supervised and participated in many research activities and projects covering electrode kinetics, electro-analytical techniques, electro-chemistry of fused slats, and corrosion and materials performance. Supervised many research students for M.Sc. and Ph.D. degrees. Author of over 156 papers published in national and international journals and conferences. Granted several scholarships, fellowships and scientific visits to Switzerland, USA, Sweden, FRG, UK and a number of Arab countries. Member of Egyptian Chemical Society, since 1951 ; International Society of Electrochemistry since 1959 ; ASRT and a member of Advisory Editorial Board of *Electrochimica Acta*. Editor of *Egyptian Journal of Chemistry* (1968 - 1972) and (1976 - 1980). Awarded State Prize for Chemistry (1965), Order of Science and Literature 1st Rank (1965), Order of the Republic, 2nd Rank (1982), and the NRC Prize for Scientific Appreciation for 1983.



*Prof. Dr. Venice Kamel Gouda*

Prof. Gouda, Research Professor of Physical Chemistry, NRC, was born on October 7, 1934. Widow with two daughters. Graduated from Cairo University in 1956 with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1959 and 1962, respectively.

Prof. Gouda held the following positions at NRC :

- Research Assistant, Chemist, 1956 - 1962.
- Researcher, Physical Chemistry Laboratory, 1962 - 1966.
- Associate Research Professor, 1966 - 1974.
- Research Professor, since 1974.
- Head of Physical Chemistry Laboratory, and Chairman of Applied Inorganic Chemistry Department, 1978 - 1980.
- Head of Physical Chemistry Laboratory, 1982 - 1984.

Prof. Gouda acted as Principal Investigator and Co-principal Investigator of several research projects (over 15 projects) covering : Corrosion of reinforcing steel ; Failure of concrete reinforcements ; Organic inhibitors for inhibiting corrosion in petroleum distillation towers and condensers ; Electroless plating on various metals ; Corrosion cracking of stainless steel (Corrosion Centre, Ohio State Univ., USA) ; Corrosion monitoring in petroleum refinery (R & D Project financed by US AID) ; Corrosion and corrosion cracking of materials used in Egyptian industries (financed by National Science Foundation, USA'' ; as well as several other projects with Oil Refineries and Desalination Water Plants in Kuwait. Attended several national and international conferences, symposia and meetings. Granted two Post-doctoral research fellowships in Corrosion Centre, Ohio State University, USA (1974 - 1975), and Clarkson College of Technology, USA (1966 - 1968). Member of several national and international societies and syndicates : Chemical Society of Egypt ; Egyptian

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Corrosion Society (Founder Member and the Secretary General) ; Society of Graduates of the Faculties of Sciences, Egypt ; Representative of Egypt in the International Corrosion Council ; National Association of Corrosion Engineers (USA) ; Technical Practice Committee, NACE, USA ; The Metals Society (England) ; and Australian Corrosion Association (Honorary Member). Awarded : Kuwait Foundation for the Advancement of Science Award (1986) ; NRC Prize for Scientific Contribution (for Senior Scientists, 1983) ; Decoration and Medal of Sciences and Arts — 1st Order, Egypt (1976) ; and the ASRT State Prize (1974). Supervised several M.Sc. and Ph.D. theses on fields of specialization. Author and Co-author of over 78 papers and two patents.



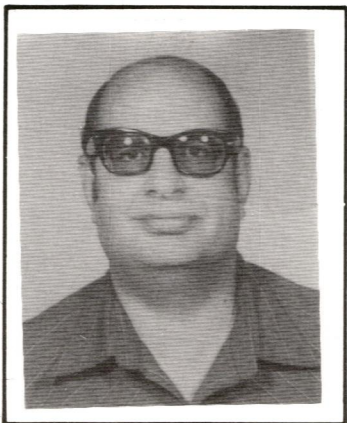
*Prof. Dr. Talaat Mohamed Hussein Saber*

Prof. Saber, Research Professor, Physical Chemistry Department, NRC, was born on May 1, 1935 in Cairo, Egypt. Graduated from Cairo University in 1958, with B.Sc. in Chemistry (Hons.). Awarded the Ph.D. in Chemistry in 1965 from New York Polytechnic University, Brooklyn, USA.

Prof. Saber held the following positions :

- Demonstrator, Faculty of Science, Cairo University, 1958 - 1960.
- Research Assistant, NRC, 1965.
- Researcher, Laboratory of Physical Chemistry, NRC, 1965 - 1971.
- Associate Research Professor, same laboratory, 1971 - 1977.
- Research Professor, same laboratory, since 1977.
- Head of Inorganic Chemistry Division, 1982 - 1984.
- Head of Physical Chemistry Department, 1984-1988.

Prof. Saber participated in a number of research projects : “Corrosion in petroleum refining”, financed by US AID (1980 - 1984), where he supervised two main items dealing with combating galvanic corrosion in the systems Cu-Al and St. St.-Al, and establishing standard tests to evaluate the corrodibility of reinforcing structural steel. Another project : “The mechanism of dezincification of brass used in heat exchangers”. In general, Prof. Saber’s research activities fall in two main fields : The first is surface analysis using XPS and AES for problems of metallic corrosion and catalysis, and the second is electrochemistry in general and electrodes kinetics in particular. Participated in a number of conferences, meetings and symposia held in Egypt and abroad. Author of several papers published in national and international journals. Member of : Egyptian Chemical Society, Egyptian Corrosion Society, and Egyptian Analytical Chemistry Society. Supervised several M.Sc. and Ph.D. theses.



*Prof. Dr. Gamil Ali El-Shobaky*

Prof. El-Shobaky, Research Professor and Co-Chairman of Applied Inorganic Chemistry Division, NRC, was born on November 25, 1937. Married. Graduated from Cairo University in 1959, with B.Sc. in Chemistry. Awarded the Ph.D. "Doctorat Es Sciences Physiques, Chimie Physique" from Lyon University, France in 1966.

Prof. El-Shobaky held the following positions :

- Assistant, Nuclear Chemistry Department, Atomic Energy Establishment, 1959 - 1961.
- Research Assistant, NRC, 1961 - 1966.
- Researcher, NRC, 1966 - 1973.
- Associate Research Professor, NRC, 1973 - 1980.
- Research Professor, NRC, since 1980.
- Head of Applied Inorganic Chemistry Department, NRC, 1984 - 1986.

He participated in a number of research projects. Refereed some research projects sponsored to prepare some industrial catalysts from available local raw materials. Granted a post-graduate fellowship to France, USSR, UK, Spain, Bulgaria, Saudi Arabia and Egypt. Supervised several graduate students awarded the M.Sc. and Ph.D. degrees from Egyptian universities. Published over one hundred papers in specialized journals in the fields of surface chemistry and catalysis, and solid state chemistry. Author of two patents on the preparation of ash-free active carbons used in some pharmaceutical industries and preparations of some catalysts from local iron oxide ores that could be used in nitrogenous fertilizer industries. Biographee : International Chemistry WHO's WHO (1987), and Reference Asia's WHO's WHO (1988). Member of Chemical Society of Egypt, Chemical Society of France, and Syndicate of Scientific Professions of Egypt.



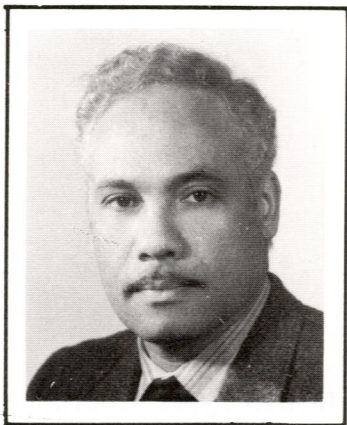
*Prof. Dr. Badie Salama Girgis*

Prof. Girgis, Research Professor and Head Physical Chemistry, department NRC, was born on October 9, 1936, Shebin El-Kom, Egypt. Married, with two children. Graduated from Cairo University in 1957, with B.Sc. in Special Chemistry. Awarded the M.Sc. and Ph.D. in Chemistry an Physical Chemistry from Ain-Shams University in 1961 and 1966, respectively.

Prof. Girgis held the following positions :

- Research Assistant, NRC, 1958-1967.
- Researcher, NRC, 1967-1974.
- Associate Research Profesor, NRC, since 1980.
- Research Professor, NRC, since 1980.

He participated in two research projects : "Production of active charcoal used in gas masks", and "Preparation and modification of Ni catalyst" - research contract with El-Nasr Company Company for Fertilizers and Chemical industries, Talkha. Supervised a number of post-graduate students for M.Sc. and Ph.D. degrees (two M.Sc. and four Ph.D.). Granted two study and research leaves to Norway (28 months), and FRG, Von Humboldt fellowship (17 months). Published over 45 papers in national and international journals. Fields of interest cover : physical chemistry of catalysts, adsorbents and other solids, applying physical techniques such as : X-ray, thermal analysis, gas adsorption and IR, catalytioc testing, bleaching efficiency and metal recovery. Member of a number of professional societies and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Mohamed Mohamed  
Selim*

Prof. Selim, Research Professor of Physical Chemistry, NRC, was born on June 19, 1938, Alexandria. Married with two children. Graduated from Alexandria University in 1961, with B.Sc. (Special Chemistry). Awarded the Ph.D. in 1968 from Moscow State University, Faculty of Chemistry. He is fluent in Russian, English and Arabic.

Prof. Selim held the following positions :

- Demonstrator, Alexandria University, Chemistry Department, 1961-1963.
- Study Leave, USSR, 1963-1968.
- Researcher, NRC, 1969-1974.
- Associate Research Professor NRC, 1974-1980.
- Research Professor, NRC, since 1980.

He participated in a number of research projects in the field of Catalysis and Solid State Chemistry. Supervised several M.Sc. and Ph.D. theses. Member of two post-doctoral fellowships to USSR. Member of the Chemical Society of Egypt, and Syndicate of Scientific Professions of Egypt. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1982.

Published over 90 papers on Heterogeneous catalysis on zeolites and mixed oxides, activated carbon and animal carbon, nitrogenous fertilizers, solid-solid interaction, effect of  $\gamma$ - and neutron reaction on solids and a Patent dealing with nitrogenous fertilizers. He is now concerned with industrial research work in the field of catalytic hydrogenation of fatty oils, oxidation of sulfur dioxide and carbon monoxide shift reaction.





*Prof. Dr. Wedad Effat Mourad*

Prof. Mourad, Research Professor of Physical Chemistry, NRC, was born on September 10, 1935, Cairo, Egypt. Married, with one child. Graduated from Ain-Shams University in 1959, with B.Sc. in Physical Chemistry. Awarded both M.Sc. and Ph.D. from the same university in 1964 and 1969, respectively.

Prof. Mourad held the following positions :

- Research Assitant, NRC, 1959-1969.
- Researcher, NRC, 1969-1975.
- Associate Research Professor, NRC, 1975-1980.
- Research professor, NRC, since 1980.

She participated in a number of research projects, e.g., "Production of active charcoal used in gas masks", and "Preparation and modification of Ni catalyst", sponsored by El-Nasr Company for Fertilizers and Chemical Industries, Talkha. She is the author of over 27 publications in national and international journals. Supervised the research work of post-graduate students for one M.Sc. and two Ph.D. Member of an exchange program with Royal Society of England, where she spent two weeks visit to the corresponding laboratories and institutions. Member of a number of scientific societies and Syndicat of Scientific Professions of Egypt.



*Prof. Dr. Jilan Monir  
Abd-El-Kader*

Prof. Abd-El-Kader. Research Professor, Division of Applied Inorganic Chemistry, NRC was born on February 15, 1936. Married. Graduated from Cairo University, with B.Sc. in 1960. Awarded M.Sc. and Ph.D. from the same university in Chemistry in 1965 and 1968, respectively.

Prof. Abd-El-Kader held the following positions at NRC :

- Research Scholarship, 1960 - 1963.
- Research Assistant, 1963 - 1969.
- Researcher, 1969 - 1975.
- Associate Research Professor, 1975 - 1980.
- Research Professor, since 1980.

She participated in the research project “Corrosion in oil refining” sponsored jointly by the Egyptian ASRT and USA AID (1979 - 1982). Member of a number of scholarships and research fellowships to Institute of Physical Chemistry, Hochschule Bamberg (FRG) (1966 - 1967) ; Royal Society (UK) (1979) ; and Institute of Dental Surgery, Department of Biochemistry, University of London (1979 - 1980). Attended several conferences in Egypt, India, FRG, and Bulgaria. Author of over 35 papers published in national and international journals and conferences.



*Prof. Dr. Kawther Mohamed  
El-Sobki*

Prof. El-Sobki, Research Professor of Electrochemistry, NRC, was born on August 4, 1939. Married. Graduated from Cairo University in 1960, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from the same university in 1964 and 1970, respectively.

Prof. El-Sobki held the following positions at NRC :

- Research Assistant, 1960 - 1970.
- Researcher, 1970 - 1975.
- Associate Research Professor, 1975 - 1981.
- Research Professor, since 1981.

She participated in a number of research projects, e.g., "Evaluation of some organic inhibitors used in petroleum refining", sponsored by Suez Petroleum Company ; "Effect of metallic coating on the corrosion of C-steel in NaCl solutions", sponsored by Iron and Steel Company ; "Corrosion and corrosion cracking of materials used in petroleum and chemical industry", sponsored jointly by NRC and NSF (USA) ; and "Corrosion in petroleum industry", sponsored by US AID. Participated in a number of conferences in Egypt and Bahrein. Author of over 35 papers published in national and international journals. Supervised the research work of one Ph.D. thesis granted from Ain-Shams University in 1976. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1983. Contributed to the work of the "Lead Committee" for defining the specification of lead and its alloys. Member of Egyptian Chemical Society, and Egyptian Corrosion Society. Granted 6-months scholarship to Nottingham University (UK), on "Corrosion products of metals and alloys used in desalination plants using scanning electron microscope".



*Prof. Dr. Magdy Wadie Rophael*

Prof. Rophael, Research Professor of Physical Chemistry, NRC, was born on December 1, 1936, Dakahlia, Egypt. Married with three children. Graduated from Cairo University in 1960, with B.Sc. in Chemistry and Physics. Awarded both M.Sc. and Ph.D. from the same university in Physical Chemistry in 1965 and 1969, respectively.

Prof. Rophael held the following positions at NRC :

- Research Assistant, 1960 - 1970.
- Researcher, 1970 - 1975.
- Associate Research Professor, 1975 - 1982.
- Research Professor, since 1982.

He participated in several research activities including dry battery research industry and solar energy research applications to synthesise organic compounds used as fuel additives. Supervised one M.Sc. and one Ph.D. theses, awarded the degrees from Cairo University. Granted three post-doctoral research fellowships to UK, each for two years period in 1971, 1978 and 1985. Attended several national and international conferences, meetings and symposia in Egypt, UK, Spain, USA, Italy and Hungary. Author of over 43 papers published in international journals and conferences.





*Prof. Dr. Afaf Abdulla  
Mahmoud Ismail*

Prof. Ismail, Research Professor of Electrochemistry, NRC, was born on August 9, 1943. Married with two children. Graduated from Ain-Shams University in 1963, with B.Sc. in Chemistry. Awarded the M.Sc. and Ph.D. from Cairo University in 1968 and 1971.

Prof. Ismail held the following positions at NRC :

- Research Assistant, 1964 - 1971.
- Researcher, 1971 - 1975.
- Associate Research Professor, 1975 - 1982.
- Research Professor, of Electrochemistry since 1982.

She participated in several research projects : “Study of organisms of disease and fouling and corrosion in marine environment and protective measures”, sponsored by NRC and US Office of Naval Research, US Navy ; “Effect of metallic coating on the corrosion of C-steel in NaCl solution”, Iron and Steel Company ; “Evaluation of organic inhibitors used in petroleum refineries”, Suez Petroleum Company ; and “Corrosion in petroleum refining”, US AID and NRC. Granted a 9-months scholarship to UMST Centre (UK) on atmospheric corrosion. Participated in several conferences held in Egypt. Published over 34 papers in specialized periodicals. Supervised one M.Sc. and another Ph.D. theses, both already granted. Member of the Egyptian Chemical Society, and Egyptian Corrosion Society.



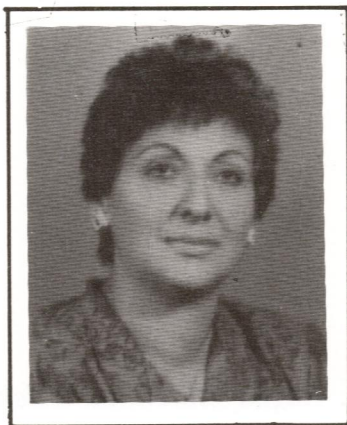
*Prof. Dr. Ragaa Mahmoud Saleh*

Prof. Saleh, Research Professor, Physical Chemistry Department, Applied Inorganic Chemistry Division, NRC, was born on January 1, 1940, Tanta, Egypt. Married with three children. Graduated from Cairo University in 1961, with B.Sc. in Chemistry and Physics. Awarded the M.Sc. and Ph.D. in Physical Chemistry from the same university in 1965 and 1970, respectively.

Prof. Saleh held the following positions :

- Research Assistant, Physical Chemistry Department, NRC, 1961 - 1971.
- Researcher, same department, 1971 - 1976.
- Associate Research Professor, same department, 1976 - 1983.
- Research Professor, same department, since 1983.

She took active part in research projects : “Corrosion in petroleum refining”, sponsored by the US AID (1979 - 1983) ; and “Production of corrosion inhibitors from cheap local materials”. She is the author of over 32 papers published in national and international journals. Supervised the research work of one M.Sc. thesis on corrosion. Member of some societies and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Safia Hilmy Sanad*

Prof. Sanad, Research Professor of Electrochemistry NRC, was born on March 15, 1941. Married. Graduated with B.Sc. in 1963 from Ain-Shams University. Awarded the M.Sc. and Ph.D. from Cairo University in 1967 and 1971, respectively.

Prof. Sanad held the following positions :

- Research Assistant, 1964.
- Researcher, 1971 - 1976.
- Associate Research Professor, 1976 - 1984.
- Research Professor, since 1984.

She participated in a number of research projects : “Evaluation of some organic inhibitors used in petroleum refineries” — Suez Petroleum Company; “Study of metallic coating on the corrosion of C-steel in NaCl solutions” — Iron and Steel Company ; and “Corrosion in petroleum refining” — US AID jointly with NRC. Published over 29 papers in national and international journals. Supervised a post-graduate research work for M.Sc. degree. Member of Egyptian Chemical Society, and Egyptian Corrosion Society. Attended several conferences in Egypt. Awarded the NRC Prize for Scientific Contribution in Chemistry for 1984.



*Prof. Dr. Ferial M. Abdel-Wahab*

Prof. Abdel-Wahab, Research Professor of Physical Chemistry, NRC, was born on November 19, 1939, Cairo, Egypt. Married with three children. Graduated from Cairo University in 1961, with B.Sc. in Chemistry and Physics. Granted the M.Sc. and Ph.D. in Physical Chemistry from the same university in 1965 and 1970, respectively.

Prof. Abdel-Wahab held the following positions :

- Research Assistant, Laboratory of Physical Chemistry, NRC, 1961 - 1970.
- Researcher, same laboratory, 1970 - 1978.
- Associate Research Professor, same laboratory, 1978 - 1984.
- Research Professor, same laboratory, since 1984.

She participated in the project "Corrosion in petroleum refining", supported by US AID (1978 - 1983). Supervised one M.Sc. thesis entitled "An electrochemical and X-ray photoelectron study on the sulphide formation of some metals". Published over 27 publications in national and international journals. Member of the Egyptian Chemical Society, Egyptian Corrosion Society, and Syndicate of Scientific Professions. Awarded the NRC Prize for Scientific Contribution for 1983.





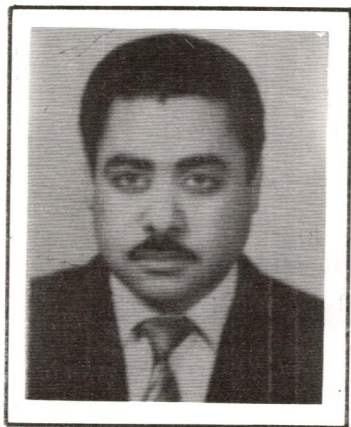
*Prof. Dr. Mohamed Gamal Khedr*

Prof. Khedr, Research Professor, Physical Chemistry Department, NRC, was born on December 12, 1944, in Cairo, Egypt. Married with three children. Graduated from Cairo University in 1964, with B.Sc. in Chemistry and Applied Chemistry with "Distinction". Awarded in 1968 the M.Sc. in Chemistry from the same university. Awarded the Doctorat és Sciences in 1975 from the Centre of Research on Macromolecules, Department of Selective Membranes, Strasbourg, France.

Prof. Gamal El-Din held the following positions at NRC :

- Research Assistant, 1965 - 1975.
- Researcher, Department of Physical Chemistry, 1975 - 1980.
- Associate Research Professor, 1980 - 1985.
- Research Professor, since 1985.

Prof. Gamal Khedr participated in a number of research projects. Senior investigator of the research group responsible for the operation and maintenance of the experimental semi-industrial unit of water desalination by reverse osmosis in El-Khanka Desert, Kaliobia, sponsored jointly by NRC and GKSS Research Centre, FRG. Awarded a post-doctoral research fellowship to GKSS Research Centre, Department of Water Treatment, Geesthacht, FRG (1976 - 1977). Later in 1981, he returned to the same GKSS Research Centre on a short visit to evaluate the results of the joint project of El-Khanka desalination unit. He attended several conferences, symposia and meetings in Egypt and several European countries, e.g., France, Italy and FRG. Member of the French Chemical Society, Egyptian Chemical Society, and Egyptian Society of Corrosion and Protection of Metals and Alloys. Supervised the research work of several post-graduates for seven M.Sc. and three Ph.D. theses. Published several scientific articles in national and international journals.



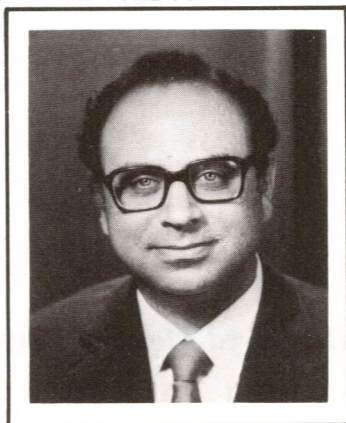
*Prof. Dr. Sayed Moustafa Sayed*

Prof. Sayed, Research Professor, Department of Physical Chemistry, NRC, was born on May 11, 1943, Assiut, Egypt. Married with three children. Graduated from Assiut University in 1964, with B.Sc. in Chemistry. Granted the M.Sc. from the same university in 1968. Awarded the Ph.D. from Ain-Shams University in 1973.

Prof. Sayed held the following positions at NRC :

- Research Assistant, 1966 - 1973.
- Researcher, 1973 - 1980.
- Associate Research Professor, 1980 - 1986.
- Research Professor, Physical Chemistry Laboratory, since 1986.

He participated in research projects : “Corrosion and corrosion cracking of materials used in Egyptian industries”, financed by the National Science Foundation, USA (1978 - 1981) ; and “Corrosion in petroleum refineries”, financed by US AID (1979 - 1983). Published over 26 papers in specialized national and international journals. Participated in the 17th International Seminar of Physical Chemistry and Chemical Engineering, University of Karlsruhe, FRG. Member of Egyptian Corrosion Society, Chemical Society of Egypt, Society of Graduates of Faculties of Sciences, and Syndicate of Scientific Professions. Awarded the NRC Prize for Scientific Contribution, 1983.



*Prof. Dr. Hassan*

*Abd El-Kader El-Shayeb*

Prof. El-Shayeb, Research Professor of Electrochemistry and Corrosion, NRC, was born on January 9, 1940, Cairo, Egypt. Graduated from Cairo University in 1963, with B.Sc. in Chemistry and Geology. Awarded the M.Sc. in Inorganic Chemistry and Ph.D. in Physical Chemistry from the same university in 1970 and 1974, respectively.

Prof. El-Shayeb held the following positions :

- Chemist, The Central Laboratories for Mining Research, Ministry of Industry, Egypt, 1963 - 1965.
- Research Assistant, NRC, 1965 - 1974.
- Researcher, Laboratory of Electrochemistry and Corrosion, NRC, 1974 - 1981.
- Associate Research Professor, same laboratory, 1981 - 1986.
- Detached as Associate Professor of Physical Chemistry, University of Minia, Minia, Egypt, 1981 - 1983.
- Research Professor, same laboratory, NRC, since 1986.

He is the author of over 27 papers published in national and international journals. Member of a number of societies and Syndicate of Scientific Professions of Egypt. Fluent in Arabic and English.



*Prof. Dr. Thoraya*

*Abd-El-Kader El-Nabarawy*

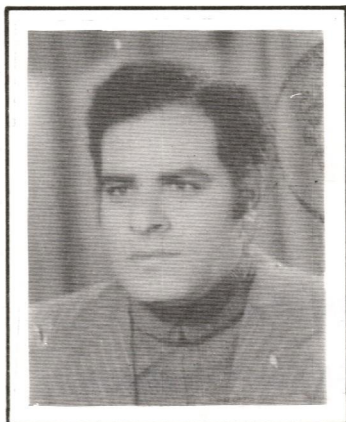
Prof. El-Nabarawy, Research Professor, Applied Inorganic Chemistry Division, NRC, was born on June 16, 1943. Married. Graduated from Ain-Shams University in 1966, with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. in Chemistry from the same university, in 1971 and 1976, respectively.

Prof. El-Nabarawy held the following positions at NRC :

- Research Assistant, 1967 - 1976.
- Researcher, 1976 - 1981.
- Associate Research Professor, 1981 - 1988.
- Research Professor, 1988.

She participated and supervised several graduate students awarded the M.Sc. and Ph.D. degrees from Egyptian Universities. Author of patent on the preparation of ash-free active carbons used in some pharmaceutical industries. Published 38 papers in specialized journals in the fields of surface chemistry, catalysis and solid state chemistry.





*Prof. Dr. Mohamed*

*Hamouda Askar*

Prof. Askar, Research Professor of Inorganic Chemistry, Applied Inorganic Chemistry Division, NRC, was born on April 3, 1938, Gharbia, Egypt. Graduated from Ain-Shams University in 1960, with B.Sc. in Chemistry and Physics. Awarded the M.Sc. and Ph.D. from Cairo University in Inorganic Chemistry, in 1966 and 1970, respectively.

Prof. Askar held the following positions :

- Research Assistant, Inorganic Chemistry Department, NRC, 1960 - 1970.
- Researcher, Metallurgical Department, 1970 - 1976.
- Associate Research Professor, Metallurgical Department, 1976 - 1982.
- Associate Research Professor, Inorganic Chemistry Department, 1982 - 1988.
- Research Professor, NRC, 1989.

He acted as the Principal Investigator of the project "Utilization of local manganese dioxide ores in dry battery industry". Published over 23 papers in national and international journals. Supervised post-graduates for M.Sc. and Ph.D. degrees. Attended a number of conferences in Egypt, India and Poland.



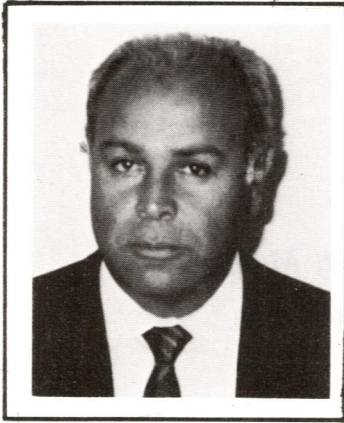


## BASIC SCIENCES DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — MICROBIAL CHEMISTRY.
- 2 — CYTOLOGY AND GENETICS.
- 3 — EARTH SCIENCES.
- 4 — PHOTOCHEMISTRY.
- 5 — FLORA AND PLANT TAXONOMY.



*Prof. Dr. Ali Abdo Ismail*

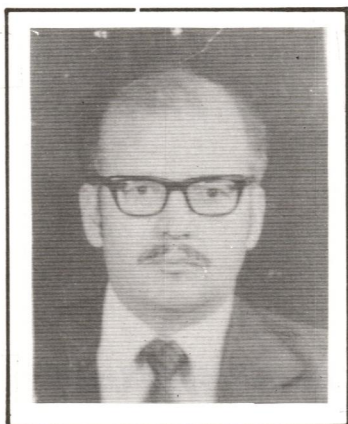
Prof. Ismail, Research Professor of Genetics and Head of Basic Research Division, NRC, was born on Nov. 5, 1934, Dakahlia, Egypt. Married with one son and one daughter, Graduated from Cairo University in 1958 with B.Sc. Agriculture. Awarded M.Sc. (Plant Breeding) from Ain Shams University in 1964 and Ph.D (Genetics) from Cairo University in 1968.

He held the following positions at NRC : Research Assistant (1960-1968), Researcher, Genetics Lab. (1968-1974), Associate Research Professor (1974-1979) and Research Professor since Aug. 1979.

Prof. Ismail participated in several research projects. Supervised several post-graduates for M.Sc. and Ph.D. degrees granted from Egyptian Universities (8 Ph.D. and 10 M.Sc.). Granted a one-year post-doctoral fellowship to Czechoslovakia (1970-1971). Participated as a lecturer to the UNESCO training course on fermentation technology held in Cairo in Nov. 1979. Attended the training course on application of radio - isotopes held at the Regional Centre for Radio-isotopes in Cairo (Mar. - Jul. 1968). Author of over 30 papers published in national and international journals. Member of several NRC committees since 1979. Assumed the post of Head of Basic Sciences Division (June 1987 - March 1988) by direct nomination and since April 1988 by election.

Member of several scientific and professional societies : Egyptian Society for Genetic Sciences, Egyptian Botanical Society and Egyptian Society for Applied Microbiology.





*Prof. Dr. Mohamed*

*Salah Ali Foda*

Prof. Foda, Research Professor of Applied Microbiology, NRC, graduated from Ain-Shams University in 1961, with B.Sc. in Agriculture. Obtained the Ph.D. in Microbiology in 1969 from the University of California, Davis, CA, USA.

Prof. Foda held the following positions :

- Teaching Assistant, Ain-Shams University, 1961-1963.
- Teaching Assistant in Microbiology at University of California, 1965-1967.
- Post-doctorate, Department of Epidimiology and Preventive Medicine, University of California, 1967-1969.
- Researcher in Microbiology, NRC, 1970-1975.
- Associate Research Professor, NRC, 1975-1980.
- Research Professor of Applied Microbiology, NRC, since 1980.
- Member, NRC Board of Directors, 1985-1987.
- Head of Microbial Chemistry Laboratory, 1985-1988.

Prof. Foda participated in several research projects. Editorial Secretary of "Egyptian Journal of Microbiology", and of "Cairo MIRCEN", the Microbiological Newsletter of the "Microbiological Resource Centre" of Cairo. Awarded the State Prize in Biological Sciences (1983), State Medal in Arts and Sciences of the First Class (1985) and NRC Prize for Scieintific Contrloution for 1988. He is the author of more than seventy papers published in international scientific journals in the field of applied microbiology, microbial enzymes and biological control. Member of several national and international scientific societies and syndicates.



*Prof. Dr. Samir M. Badr-Eldin*

Prof. Badr-Eldin, Research Professor of Microbiology, Department of Microbial Chemistry, NRC, was born on July 5, 1936, Cairo, Egypt. Graduated from Cairo University in 1957, with B.Sc. in Agriculture (Hons.). The M.Sc. and Ph.D. in Microbiology he obtained from University of Maryland, USA, in 1963 and 1966, respectively.

Prof. Badr-Eldin held the following positions :

- Teaching Assistant, Faculty of Agriculture, Cairo University, 1958-1960.
- Research Assistant, NRC, 1960.
- Teaching and Research Assistant, Microbiology and Chemistry Department, Maryland University, USA, 1964-1966.
- Post-doctorate Research Associate, Chemistry Department, Maryland University, USA, 1966-1967.
- Researcher, NRC, 1967-1974.
- Associate Research Professor, NRC, 1974-1982.
- Research Professor, Department of Microbial Chemistry, NRC, since 1982.

Prof. Badr-Eldin is a member of : Sigma XI Society, University of Maryland, American Microbiological Society, American Chemical Society, Egyptian Society for Applied Microbiology, and several national scientific societies and syndicates. Published several papers in national and international journals.



*Prof. Dr. Osama Hamed El-Sayed*

Prof. El-Sayed, Research Professor of Biochemistry, Microbial Chemistry Department, NRC, was born on November 25, 1942. Graduated from Cairo University in 1964, with B.Sc. in Biochemistry. Awarded the M.Sc. and Ph.D. from the same university, Faculty of Agriculture in 1968 and 1973, respectively.

Prof. El-Sayed held the following positions :

- Scholarship trainee, Medicinal and Aromatic Plant Laboratory, NRC, 1965-1966.
- Research Assistant, the same laboratory, NRC, 1966-1968.
- Research Assistant, Microbial Chemistry Laboratory, NRC, 1968-1973.
- Researcher, same lab., 1973-1978.
- Associate Research Professor, same laboratory, 1978-1983.
- Research Professor, Microbial Chemistry Department, NRC, since 1983.

Prof. El-Sayed participated in several research projects on medicinal plants. Attended several training courses and research fellowships abroad : "Modern problems in biology", sponsored by UNESCO at Institute of Microbiology, Prague, Czechoslovakia (1972-1973) ; and three fellowships granted from UNESCO to Czechoslovakia and Danish International developing Agency (DANIDA) at Technical University of Denmark. Supervised 3 M.Sc. and one Ph.D. theses already granted and 5 more are still underway. He attended several national and international conferences and symposia. Published several papers in specialized journals. Member of several scientific societies and syndicates.



*Prof. Dr. Soheir*

*Mahmoud Mohamed Amer*

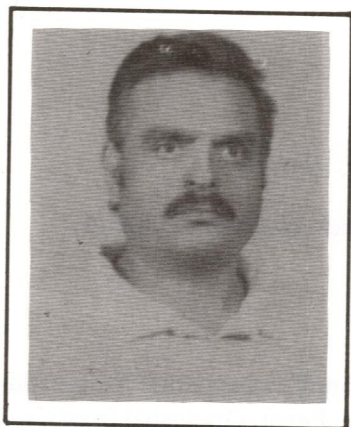
Prof. Amer. Research Professor of Plant Cytology and Cytogenetics, NRC, was born on January 1, 1934, in Cairo, Egypt. Graduated from Cairo University in 1956, with B.Sc. in Chemistry and Botany (Hons.). Awarded the Ph.D. in Cytology in 1960 from the Botanical Institute, Munich, FRG.

Prof. Amer held the following positions :

- Research Scholarship, Botany Department, Faculty of Science, Cairo University, 1956-1957.
- Demonstrator, Botany Department, same university, 1957-1962.
- Researcher, NRC, 1962-1968.
- Associate Research Professor, NRC, 1968-1973.
- Research Professor, NRC, since 1973.

She took part in several research projects since 1978 sponsored by NRC. She acted as the Principal Investigator of the project sponsored by US EPA on "Cytogenic studies of pesticides on cell culture". Supervised ten M.Sc. and nine Ph.D. theses in the field of plant cytology, plant cytogenetics, and animal cytogenetics. Published over 54 papers. Attended several conferences in Egypt, Japan, Canada, and FRG.





*Prof. Dr. Ibrahim*

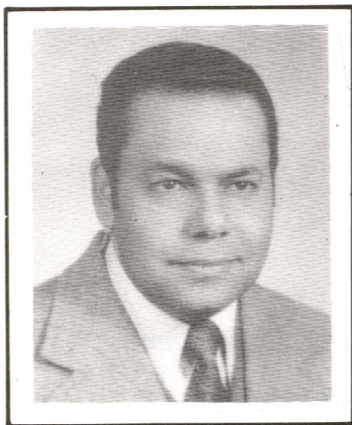
*Mostafa Mahmoud*

Prof. Mahmoud, Research Professor of Genetics and Plant Breeding, NRC, was born on October 25, 1939. Graduated from Cairo University, Faculty of Agriculture, in 1960, with B.Sc. Obtained the M.Sc. from Assiut University, in Vegetable Crops Breeding in 1965. Awarded the Ph.D. from Cairo University in 1973 in Crop Field Breeding.

Prof. Mahmoud held the following positions at NRC :

- Researcher, 1973-1978.
- Associate Research Professor, 1978-1984.
- Research Professor of Genetics and Plant Breeding, since 1984.
- Head of Department of Cytology and Genetics, since 1988.

Prof. Mahmoud is an active participant of the research project "Development of maize production in Egypt", and "Growing varieties of field and vegetable crops tolerating salinity and drought in Sinai". His scientific interest covers : genetic studies and plant breeding on wheat, barley, bean, maize and cotton, and experimental design, statistical analysis and designing computer programming. Member of a number of scientific societies.



*Prof. Dr. Ali Hassan Mohamed*

Prof. Hassan, Research Professor of Cytology and Genetics Department, NRC, was born on March 5, 1936 in Alexandria. Married with two daughters. Graduated from Alexandria University, Faculty of Agriculture in 1961, with B.Sc. in Agronomy. Obtained the M.Sc. and Ph.D. in Genetics from Cairo University in 1967 and 1971, respectively.

Prof. Hassan held the following positions :

- Specialist, Maize Department, Ministry of Agriculture, 1961 - 1962.
- Scholarship, NRC, 1962 - 1963.
- Research Assistant, NRC, 1963 - 1971.
- Researcher, NRC, 1971 - 1978.
- Associate Research Professor, NRC, 1978 - 1985.
- Research Professor, Cytology and Genetics Department, NRC, since 1985.

Prof. Hassan acted as Vice Principal Investigator for the research project "Improvement of biological value of seeds potent ingredients of food and drugs", and participated in "Plant cell and tissue culture" project. Supervised three M.Sc. and four Ph.D. theses already granted with three M.Sc. and two Ph.D. still underway. Published 20 papers. Member of the "Egyptian Society of Genetics and Cytology", "Managing Committee of the Egyptian Society of Genetic Engineering", and the Agriculture Professions Syndicate.



*Prof. Dr. Abdel-Hamid*

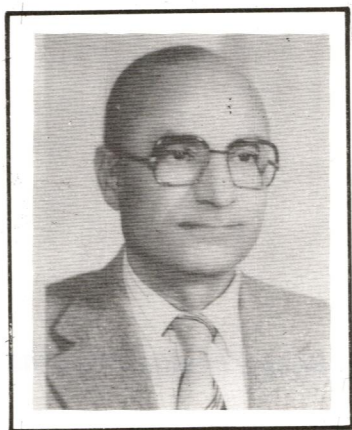
*M. Abdel-Hamid*

Prof. Abdel-Hamid, Part-time Research Professor of Plant Breeding, NRC, was born on May 2, 1936. Graduated from Cairo University in 1958 with B.Sc. Agriculture. Awarded Ph.D. in Biology from the Uzbek Academy of Science (USSR) 1963.

Prof. Abdel-Hamid held the following positions :

- Assistant, Agronomy, High Inst. of Agriculture, Shebin El-Kom (1958);
- Specialist, National Inst. of Planning, (1964);
- Researcher, NRC (1964).
- Associate Research Professor, NRC (1971);
- Research Professor, NRC (1977-1985);
- Under Secretary of State for Scientific Research since 1985.
- First Under Secretary of State, for Scientific Research since 1989.

Prof. Abdel-Hamid participated in several research activities, supervised five Ph.D. and M.Sc. theses. Author of a number of scientific papers published in specialized journals in the field of plant breeding. Member of the Board of Directors of the National Institute of Oceanography and Fisheries; Council of Development of Sinai-ASRT and Council of Food, Agriculture and Irrigation-ASRT. Offered consultancy and advisory services to several ministries and organizations. Attended a training course on project management in Denver, USA (1983); and several conferences held in Egypt and abroad.



*Prof. Dr. Mahmoud  
Lotfy A. Kabesh*

Prof. Kabesh, Research Professor Emeritus of Geology, was born on January 14, 1923, Cairo, Egypt. Graduated from Cairo University in 1944, with B.Sc. in Geology and Chemistry. Awarded M.Sc. and Ph.D. in Geology from the same university in 1960 and 1963, respectively.

Prof. Kabesh occupied several positions at Geological Survey of Egypt and its counterpart in Sudan before he joined the Desert Institute of Egypt for three years (1963-1966). He held the following positions at NRC : Associate Research Professor, Head of Petrology Unit (1967-1968) and Head of Earth Science Laboratory (1968-1972) ; Research Professor and Head of Earth Science Laboratory (1972) and (1978-1981). Also he assumed the positions of : Head of Petroleum and Mining Division, NRC (1972-1974) ; Head of Basic Sciences Division (1978-1980) ; and Professor, Emeritus, NRC, since 1982.

Prof. Kabesh participated in the detailed studies of basement rocks in the Eastern Desert, Egypt, the Sudan Republic and the Yemen Arab Republic. These studies on the basement rocks comprise petrographical, petrochemical and geological aspects besides the classification, petrogenesis and geological setting. He supervised 15 M.Sc. and 12 Ph.D. theses. Published over 95 papers in national and international journals and conferences. Member of several committees and Egyptian Academy of Sciences. Also member of the Editorial Board, Bulletin NRC (1979-1985). Awarded the Golden Medal on the occasion of the Silver Jubilee of NRC.





*Prof. Dr. Bahga Hanna Moawad*

Prof. Moawad, Research Professor Emeritus, Earth Science Department, NRC, was graduated from Cairo University in 1956, with B.Sc. in Physics and Chemistry. Awarded both M.Sc. and Ph.D. from the same university in Physics in 1959 and 1967, respectively.

Prof. Moawad held the following positions at NRC :

- Research Assistant, 1957-1967.
- Researcher, 1967-1973.
- Associate Research Professor, 1973-1982.
- Research Professor, 1982-1986.
- Professor Emeritus, since 1986.

She participated in several research activities such as Development of electrical properties branch (Geophysical Measurements) at the Department of Earth Science. Granted one year post-doctoral research fellowship to I.F.P. (France, 1970-1971). Supervised five M.Sc. and one Ph.D. theses, awarded the degrees from Egyptian universities. Author of 17 papers published in journals and conferences.



*Prof. Dr. Esam El-Hinnawi*

Prof. El-Hinnawi, Research Professor of Geochemistry and Mineralogy, NRC, was born on November 13, 1936, in Cairo, Egypt. Graduated from Alexandria University in 1956, with B.Sc. in Chemistry and Geology. Obtained M.Sc. in Mineralogy and Ph.D. in Geochemistry and Mineralogy from Cairo University in 1959 and 1962, respectively.

Prof. El-Hinnawi joined the National Research Centre since its establishment in 1956. He created the first mineralogical research unit at NRC in that year. The unit was later integrated with other research units to form the Earth Sciences Laboratory in 1968 ; in 1988 the laboratory was renamed the Department of Earth Sciences. He was appointed as Researcher in 1962 and as Associate Research Professor in 1966 then Research Professor in 1973, a position he still holds. He assumed charge of the Earth Sciences Department since 1982.

Prof. El-Hinnawi worked as visiting researcher and professor at the Technical University of Hannover and at the University of Frankfurt/M. through an Alexander von Humboldt Fellowship. From 1976 to 1982, he took leave of absence and joined the United Nations Environment Programme as Director of the State of the World Environment Office and as supervisor of the Energy-Environment Programme. During his work with UNEP, he supervised more than 12 global projects and several field projects in some developing countries. He was responsible for the preparation of the annual state of the environment report and for all assessments related to energy production and use.

In addition to his supervision of several research projects at the Department of Earth Sciences, NRC, Dr. El-Hinnawi is also Senior Adviser to the United Nations Environment Programme, member of the African Academy of Sciences and its Special Committee on Africa, and member of

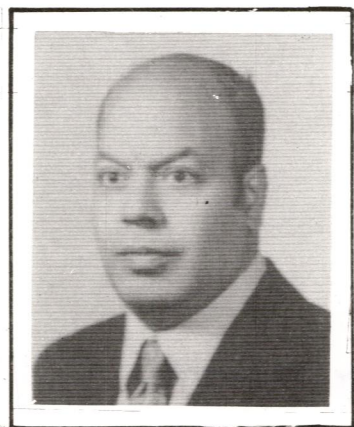
the Board of Directors of the International Institute of Environment and Development (PANOS), London.

Prof. El-Hinnawi is member of several scientific societies and of the editorial board of "Environment International" published by Pergamon Press, Oxford. He is also member of the editorial board of a series of books on "Environment and Natural Resources" published by Cassell-Tycooly, London. He attended many local, regional and international conferences and visited more than 40 countries on official missions. He acted as adviser to several of these countries on environmental and energy issues.

Prof. El-Hinnawi was awarded the following :

- The Egyptian State Prize in Science for 1967.
- The Egyptian Science Order of the First Rank in 1970.
- Certificate of Merit from the Dictionary of International Biography, London, 1975.
- Certificate of nomination as one of 5000 personalities of the world by the American Biographical Institute in 1980.
- Dr. El-Hinnawi was nominated by several organizations to a number of international prizes including the Albert Einstein, Sasakawa and the Japan Prize in Science and Technology.

Prof. El-Hinnawi supervised 15 M.Sc. and 14 Ph.D. theses in the fields of mineralogy, petrology, geochemistry and natural resources. He published more than 100 papers in these areas and in energy and environment. He wrote and edited 10 books in these fields, published by international publishers in the United Kingdom. Some of his books were translated into other languages.



*Prof. Dr. Mokhtar Rasmy  
Nashed Shehata*

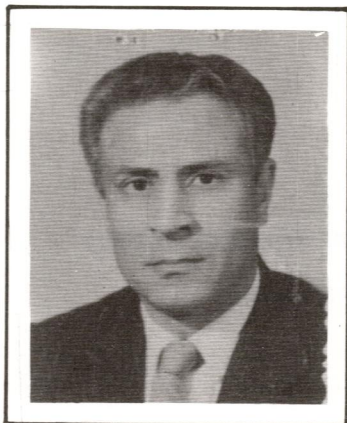
Prof. Shehata, Research Professor of Geochemistry, Department of Earth Sciences, NRC, was born on March 1, 1938, in Cairo, Egypt. Married with three children. Graduated from Cairo University in 1960, with B.Sc. in Chemistry and Geology. Obtained M.Sc. in Geology from Cairo University in 1965 and Ph.D. in Geology from Ain-Shams University in 1970. His field of interest is the geochemistry of ore deposits.

Prof. Shehata held the following positions at NRC :

- Research Assistant, 1960 - 1970.
- Researcher, Earth Sciences Laboratory, 1970 - 1976.
- Associate Research Professor, 1976 - 1983.
- Research Professor, since 1983.

Prof. Shehata participated in a number of research projects, supervised one M.Sc. on "Geochemistry of Ranga Pb-Zn Ores", and partially supervised another M.Sc. submitted to Ain-Shams University. He is the author of 27 papers published in national and international journals. Attended training courses on "Prospection and petrology" in Austria (1966 - 1968). Member of research fellowship in Vienna University (1972 - 1974). Member of a number of national scientific societies and syndicates.





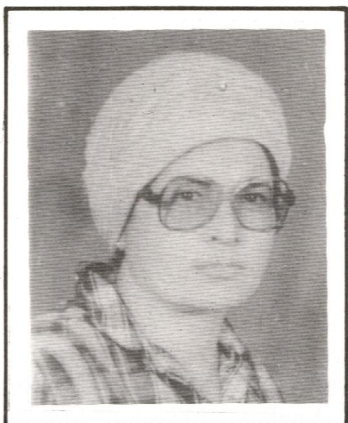
*Prof. Dr. Mohamed  
Ibrahim Sayed Ahmed*

Prof. Ahmed, Research Professor, Earth Sciences Department, NRC, was born on July 15, 1938, Dakahlia, Egypt. Graduated from Cairo University in 1964, with B.Sc. in Geology and Physics. Obtained the M.Sc. and Ph.D. in Geology from Cairo University in 1969 and 1973, respectively.

Prof. Ahmed held the following positions at NRC :

- Research Assistant, 1965 - 1973.
- Researcher, 1973 - 1978.
- Associate Research Professor, 1978 - 1986.
- Research Professor, Earth Sciences Department, since 1986.

Prof. Ahmed acted as Principal Investigator for the “Carbonate rocks project” since 1983. Spent one year 1972 - 1973, a research fellowship to Japan. Consultant to UNEP from January to May 1980; from January to March 1983, and from November 1986 to February 1987. Expert to ALECSO from 1978 to 1979. Published 20 papers in Geology, Applied Geology and Natural Resources in national and international journals. Supervised three M.Sc. theses and one Ph.D. Awarded the NRC Prize in 1984 in the area of Natural Resources and Energy. Member of a number of national scientific societies and syndicates.



*Prof. Dr. Mowafia*

*Abdel Rahman Mohamed Salama*

Prof. Salama, Research Professor of Organic Chemistry, NRC, was born on July 18, 1937. Married with four children. Graduated from Ain-Shams University in 1961, with B.Sc. in Chemistry. Obtained the M.Sc. from Cairo University in 1966 in Organic Chemistry. Awarded the Ph.D. in 1970 from Poona University (India). She is fluent in English, French and Arabic.

Prof. Salama held the following positions at NRC :

- Scholarship, Organic Chemistry Laboratory, 1961 - 1964.
- Research Assistant, 1964 - 1971.
- Researcher, Organic Chemistry Laboratory, 1971 - 1976.
- Associate Research Professor, 1976 - 1987.
- Research Professor of Organic Chemistry, since 1987.

Prof. Salama participated in research projects sponsored by NRC. Supervised four M.Sc. theses on the synthesis of organic compounds of biological activities. Attended several conferences on national and regional level. Author of 29 papers published in specialized national and international journals. Member of a number of scientific societies and syndicates.



*Prof. Dr. Nabil Abdel-Magied  
M. Saleh*

Prof. Saleh, Research Professor of Chemistry (Natural Products), NRC, was born on August 12, 1938, in Liverpool, England. Egyptian. Married with two children. Graduated from Cairo University in 1960 ; with B.Sc. in Chemistry. Awarded M.Sc. and Ph.D. from the same university in 1964 and 1967, respectively.

Prof. Saleh held the following positions at NRC :

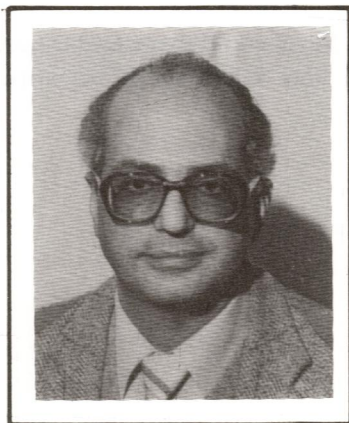
- Research Assistant, 1960 - 1967.
- Researcher, 1967 - 1973.
- Associate Research Professor, 1973 - 1978.
- Research Professor since 1978.

He participated in several research projects : The chemosystematics of *Medicago radiata*”, financed by International Foundation of Science. Sweden (1978 - 1980) ; “Natural products contaminating edible foods”, financed by FDA/USA (1979 - 1981) ; “The chemosystematics of Zygophyllaceae”, financed by the Program of University Linkages (1983 - 1986) ; “Natural colouring food additives”, financed by Egyptian ASRT (1984) ; and “The chemosystematics of the Compositae”, NRC (since 1980). Supervised ten M.Sc. and eight Ph.D. students. Published over 86 papers in specialized journals and conferences in the field of flavonoids and chemosystematics of the families Compositae, Zygophyllaceae and Euphorbiaceae. Granted several fellowships to England (1969), Canada (1969 - 1972), FRG (Alexander von Humboldt, 1975 - 1977), England (1979), FRG (Alexander von Humboldt, 1982), and Canada (1986). Attended several conferences, symposia and meetings in Egypt, Canada, FRG, Belgium, USA, FRG and Kenya. Member of Technical Office, NRC (1974 - 1975 and 1978 - 1983). Supervisor of Material Testing Laboratory (1980 - 1987). Head of Technical Office (1983 - 1987) Member of many

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scientific and managerial committees of NRC. Member of Egyptian Chemical Society, European Phytochemical Society, and Syndicate of Scientific Professions of Egypt.





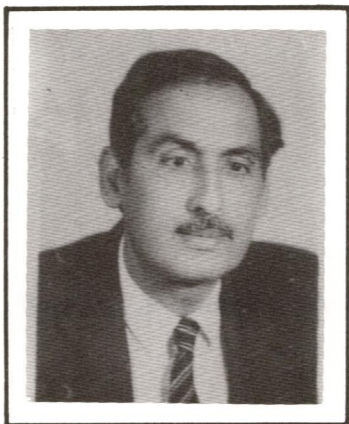
*Prof. Dr. Loutfy Boulos*

Prof. Boulos, Research Professor of Plant Taxonomy and Flora of Egypt, NRC. Married with two sons. Graduated from Cairo University in 1954, with B.Sc. in Chemistry and Botany. Awarded M.Sc. in Botany from Cairo University in 1960, and Dr. es Sc. d'Etat from University of Montpellier, France, In 1963. Fluent in Arabic, English and French.

Prof. Boulos held the following positions at NRC :

- Researcher and Head of Plant Taxonomy Unit, 1963 - 1966.
- From 1966 to 1978 on leave.
- Research Professor, since 1978.

He participated in several research projects and activities. Headed and participated in many botanical expeditions and excursions since his graduation in 1954. Field visits covered Egypt, Lybia, Saudi Arabia, Kuwait, Sudan, Tunisia, Morocco, Jordan, Qatar, Bahrain, U. Arab Emirates, S. Yemeñ, European countries and a number of African countries. Offered many consultancy and advisory services. Invited lecturer to universities in some Arab countries, Norway, Sweden, USA and Denmark. Contributed to the collection and edition of national Herbaria in some countries, e.g., Lybia, Jordan, Kuwait, NRC (Egypt) and OAU (Ethiopia). Attended over 20 national, regional and international conferences. Supervised several M.Sc. and Ph.D. theses. Some of the newly discovered plants in many Arab countries and Australia were named after him, e.g., *Crocus boulosii*, *Fagonia boulosii* and *Atractylis boulosii*. Author of over 75 papers published in journals and conferences. Published nine books and seven articles in Arabic, English and French.



*Prof. Dr. Mohamed*

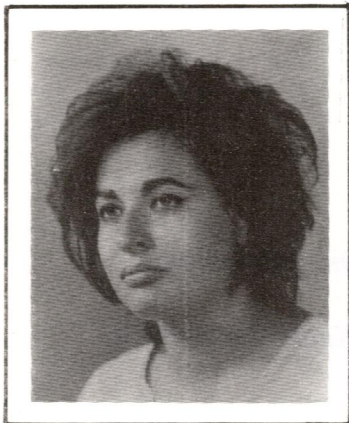
*Abdel-Kader Moharram*

Prof. Moharram, Research Professor of Spectroscopy, was born on March 30, 1937, married, with three children. He studied at Cairo University where he obtained his B.Sc. degree in Physics and Geology in 1962. He obtained his M.Sc. and Ph.D. from the same university in the field of Molecular Absorption Spectroscopy in 1965 and 1968, respectively.

Prof. Moharram held the following positions at NRC :

- Assistant Researcher, Spectroscopy Laboratory, 1962 - 1969.
- Researcher, the same laboratory, 1969 - 1975.
- Associate Research Professor, 1975 - 1980.
- Research Professor of Molecular Spectroscopy, Spectroscopy, Laboratory, since 1980.
- Head of Physics Division, NRC, since 1987.

Prof. Moharram actively participated in a number of research projects by supervising the research team work related to the molecular absorption spectroscopy side of the problem. He is the author of more than 50 publications in national and international journals. He also supervised three M.Sc. and four Ph.D. in the field of absorption spectroscopy. His current field of interest covers the investigation of the structure of polymers and metal-polymer complexes and the induced changes in the structure due to the effects of gamma-irradiation and heat treatment. The application of spectroscopic techniques for the identification of mineral constituents of soils, ore minerals and some organic materials also constitutes one important side of his activity.



*Prof. Dr. Naima A. Ahmed*

Prof. Ahmed, Research Professor of Solid State Physics, X-Ray Crystallography, was born on March 3, 1937. She obtained her B.Sc. in Physics from Ain-Shams University in 1957. The M.Sc. and Ph.D. degrees were granted from Cairo University in Physics in 1960 and 1965, respectively.

Prof. Ahmed held the following positions at NRC :

- Research Assistant 1957.
- Researcher, 1966.
- Associate Research Professor, 1971.
- Research Professor, 1978 till now.
- Head of Physics Department, NRC, 1976 - 1978.
- Head of Solid State Laboratory, NRC, since 1985.

Prof. Ahmed has been engaged in a number of research projects in the field of X-Ray crystallography. She is the author of a number of papers published in national and international journals and conferences. She was granted a number of fellowships abroad : Sweden, 1963 - 1964 ; Academy of Science, USSR, 1967 - 1972 ; and Imperial College, London, 1976.

Prof. Ahmed is a member of the National Committee of Crystallography, Academy of Scientific Research and Technology, Egypt ; and the International Union of Crystallography. Head of the Permanent Committee of Scientific Promotions of Physics of the NRC. She is a member of the Syndicate of Scientific Professions, Egypt. Awarded the Amin Lotfy Prize of Physics, 1974.



*Prof. Dr. Talat Gad Hussein*

Prof. Hussein, Research Professor of Solid State Physics (Semi-conductors), was born on July 12, 1937, El-Menia, Egypt. He obtained his B.Sc. in Physics and Mathematics from Ain-Shams University, 1958. His Ph.D. degree in Solid State Physics was granted from Moscow State University, Faculty of Physics, USSR, in June, 1967.

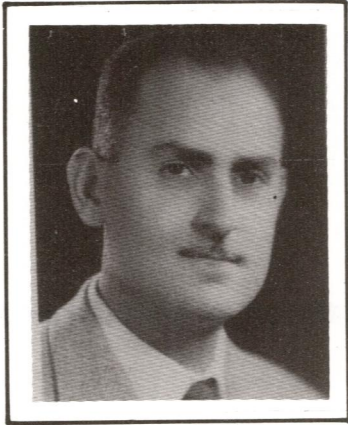
Prof. Hussein held the following positions :

- Research Assistant at Physics Department, Assiut University, 1958 - 1959.
- Researcher, Solid State Physics Laboratory, NRC, 1967 - 1973.
- Associate Research Professor, NRC, 1973 - 1978.
- Research Professor, NRC, 1978 till now.

Prof. Hussein actively participated in a number of research projects in the field of photovoltaic conversion of solar energy, through which the surface and photoelectric phenomena and cathodo-luminescence of semi-conductors have been studied. He was granted a number of research fellowships abroad, Moscow State University, Institute of Semi-conductors (USSR, Academy of Science, Leningrad), Institute of Semi-conductors (USSR, Academy of Science, Kiev), 1968 ; International Centre for Theoretical Physics, Winter Course, Trieste, Italy, 1974 ; Lebedev Physics Institute, Soviet Academy of Science, Moscow, USSR, 1974 - 1976 ; Max Planck Institute, Stuttgart, West Germany, 1976 - 1977 ; International Centre for Theoretical Physics, Italy, 1977. He participated in training programmes on Alternative Energy Technologies, Solar Energy Laboratory, University of Florida, USA, 1981. He is the author of more than 50 scientific articles published in national and international journals. He attended a number of scientific conferences in Egypt, Italy, USSR, West Germany, Bulgaria, Algeria, Turkey, and Holland. Awarded the NRC Prize for



scientific contribution in physics, 1982. Member of a number of scientific and managerial NRC committees as well as Professional Syndicates.



*Prof. Dr. Tawfick Hanna Youssef*

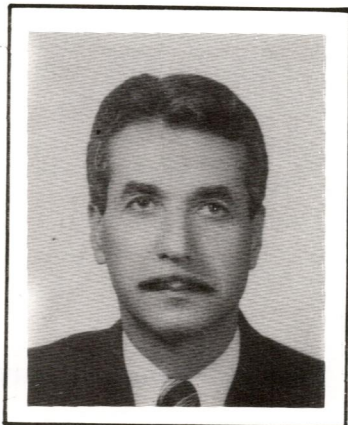
Prof. Youssef, Research Professor of Metal Physics, Solid State Department, was born on January 1, 1934, married. He studied at Ain-Shams University where he obtained his B.Sc. degree in 1957. His M.Sc. and Ph.D. degrees have been granted from Cairo University, Faculty of Science in 1963 and 1967, respectively.

Prof. Youssef held the following positions at NRC :

- Research Assistant, 1958 - 1967.
- Researcher, Metal Physics, 1967 - 1973.
- Associate Research Professor, 1974 - 1980.
- Research Professor, Metal Physics, Solid State Department, NRC, 1980 till now.
- Head of Solid State Physics Laboratory, 1981 - 1985.
- Head of Physics Division, 1985 - 1987.

Prof. Youssef actively participates in a number of research projects ; “Increasing the yield of ingot steel in rolling mills in the iron and steel works”, “Production of aluminium foils of good quality and thickness”, “Effect of cold working on pitting corrosion in petroleum refining”, and “Improving the electrical and mechanical properties of aluminium cables”.

Prof. Youssef is the author of 50 paper published in national and international journals. He supervised the research work of several post-graduates for M.Sc. and Ph.D. (17). He participated in national conferences held under the topic of Solid State Physics. Visiting Professor at the Institute of Metallurgy, Krakow, Poland, 1984. He attended a training program for one year at the Institute of Metallurgy, Brno, Czechoslovakia, 1967 - 1968.



*Prof. Dr. Ahmed Abdel-Rahman Fakhry*

Prof. Fakhry, Research Professor and Head of the Spectroscopy Department, was born on March 22, 1938, Damanhur, Egypt, married with two children. He studied at Alexandria University where he obtained his B.Sc. in Geochemistry in 1960. He was granted the Ph.D. in 1966 from Moscow State University (USSR). He is fluent in three languages (Arabic, English, Russian).

Prof. Fakhry held the following positions :

- Demonstrator, Department of Geology, Alexandria University 1960-1961.
- Post-graduate Scholarship to the USSR, 1961-1966.
- Geochemist, Geological Survey of Egypt, 1966-1967.
- Researcher, Spectroscopy Laboratory, NRC, 1967-1974.
- Associate Research Professor, NRC, 1974-1979.
- Research Professor NRC, same laboratory since 1979.
- Head of Spectroscopy Lab. since 1984.
- Member of NRC Board of Directors, 1983-1985.

Prof. Fakhry has been engaged in a number of research projects such as “development of improved and high sensitive spectroscopy technique and its applications for exploration of natural ore deposits”, “assessment of Egyptian phosphate deposits on the basis of their rare earth elements content, VW Foundation, FRG”, “investigation of uranium yellow cake and local crude oil for impurity elements content”, and “environmental studies, EPA, USA”.

He is the author of a number of publications in local and international journals and conferences. Attended several conferences in Egypt, FRG, Turkey, UK and U.S.A. Supervised several post-graduate studies for M.Sc. and Ph.D. degrees.

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Prof. Fakhry is a member of the Geological Society of Egypt, Egyptian Mineralogical Society, Egyptian Society for Optical Sciences and the Egyptian Physical Society. Member of a number of national committees and councils at the NRC and Academy of Scientific Research and Technology (ASRT). He is the Editor-in-Chief of the NRC News. Biographee : Dictionary of International Biography, 12 Ed., 1975, and Marquis Who's Who, 4th Ed., 1979.





*Prof. Dr. Fawzy Miligy*

*Abdel Kerim*

Prof. Abdel Kerim, Research Professor of Spectroscopy NRC, was born on February 2, 1936, in Cairo. Married with three children. He graduated from Cairo University in 1959 with B.Sc. in Physics and Chemistry. He obtained his M.Sc. in Spectroscopy in 1963 from Cairo University. He obtained his Ph.D. (Dr. Rer. Nat.) in 1967 in Molecular Spectroscopy from the Technical Braunschweig University, FRG.

Prof. Abdel Kerim held the following positions :

- Research Assistant Spectroscopy Laboratory, Physics Department, NRC, 1959-1968.
- Researcher, NRC, 1968-1973.
- Associate Research Professor, NRC, 1973-1978.
- Research Professor, Spectroscopy Laboratory, Physics Department, NRC, since January 1979.
- Head of Spectroscopy Department, 1979-1983.
- Head of Physics Division 1981-1983.

Prof. Abdel Kerim participated in several research projects : “Black spots in Egyptian cotton textile”, “Study of phosphate minerals by IR spectroscopy”, and the joint Egypto-American project sponsored by the EPA of USA, entitled “Physical methods of waste characterization”. He is the author of about 70 papers published in national and international journals. Supervised 10 Ph.D. and 8 M.Sc. post-graduate students awarded the degrees from Cairo, Ain-Shams, Al-Azhar, Assiut, Menia and Zagazig universities. He attended several conferences in Egypt, Canada, G.B. and Saudi Arabia. He was awarded the NRC Prize for scientific contribution in physical sciences (for NRC young scientists) in 1983. Member of several scientific societies and syndicates.





## PHYSICS DIVISION



### RESEARCH DEPARTMENTS ( RD )

- 1 — SOLID STATE PHYSICS.
- 2 — SPECTROSCOPY.
- 3 — MICROWAVE.
- 4 — THEORETICAL PHYSICS.
- 5 — ELECTRON MICROSCOPY AND THIN FILMS.



*Prof. Dr. Mohamed A. Eid*

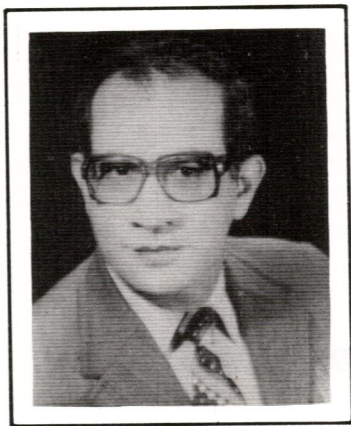
Prof. Eid, Research Professor of Spectroscopy, Physics Division, NRC, was born on June 1, 1937, Egypt. He graduated from Ain-Shams University with B.Sc. in Physics and Chemistry in 1957. He obtained the M.Sc. in Physics from Cairo University in 1961 under the supervision of Prof. Dr. Eng. R. Kollath (from Physics Institute, Mainz, FRG), entitled "Field Emission Microscope". His Ph.D. degree was granted in 1967 in Experimental Physics from the Institute of Experimental Physics, Kiel University, FRG.

Prof. Eid held the following positions at NRC :

- Research Assistant, Physics Department 1961 to 1967.
- Researcher, Spectroscopy Laboratory, 1967 to 1977.
- Associate Research Professor, Spectroscopy Laboratory, 1977 to 1983.
- Research Professor, Spectroscopy Laboratory, Physics Department, NRC, since 1983.

Prof. Eid has been engaged in a number of research projects on the national level, covering topics such as "Development of spectroscopic optical emission techniques for trace element determination" and "Utilization of plasma spectroscopic excitation sources for determination of REE in phosphates". The latter is a joint Egypto-German research project financed by the VW Foundation, FRG. He is the author of several papers published in national and international journals. He is fluent in English, German and Arabic. He supervised the research work of six M.Sc. and five Ph.D. in the field of OES and AAS. He attended a number of meetings and conferences in Canada, Germany, Saudi Arabia, Lybia and Egypt. Prof. Eid is a member of several national scientific societies and syndicates.





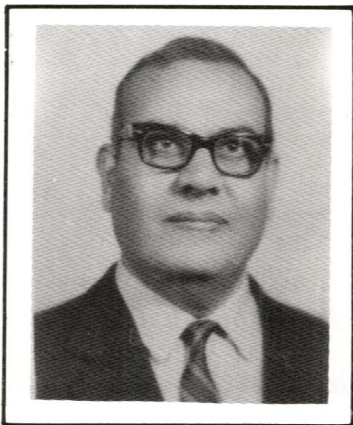
*Prof. Dr. Khairi Iskander Grais*

Prof. Grais, Research Professor, Spectroscopy Department, Physics Division, NRC, was born on January 3, 1935. He finished his studies at Ain-Shams University where he obtained his B.Sc. in Physics and Chemistry in 1957. In 1961. Granted the M.Sc. from Cairo University under the supervision of the Visiting Prof. Dr. Ing. R. Kollath, from Physics Institute, Mainz, West Germany, the thesis entitled "Secondary electron emission from pure and oxidised metals". He obtained his Ph.D. From Mainz University, FRG in 1965.

Prof. Grais held the following positions at NRC :

- Research Assistant, Physics Department, 1957 - 1962.
- Post-graduate Scholarship, FRG. 1962-1965.
- Researcher, the same department, 1965 - 1976.
- Associate Research Professor, 1976 - 1986.
- Research Professor, Spectroscopy Laboratory, since 1986.

Prof. Grais's field of interest, is the secondary electron emission from metallic surfaces, nuclear emulsions as ion detectors in mass-spectrometers. He is the author of a number of publications in national and international journals. He spent about one year on a research fellowship to "Max Planck Institut fur Chemie, Mainz", FRG (1977 - 1978) and granted another fellowship to the Physics Institute, Zurich, Switzerland, 1983. He is a member of several national societies and syndicates.



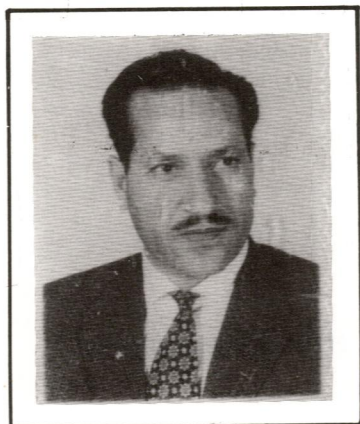
*Prof. Anis Bishay Basily*

Prof. Basily, Research Professor of Spectroscopy, NRC, was born on July 28, 1935. Married. He graduated from Cairo University with B.Sc. in Physics and Pure Mathematics in 1959. He obtained the M.Sc. and Ph.D. degrees in Atomic Emission Spectroscopy from the same university in 1964 and 1969, respectively.

Prof. Basily held the following positions at NRC :

- Research Assistant, Spectroscopy Laboratory, 1960 to 1970.
- Researcher, 1970 to 1978.
- Associate Research Professor, 1978 to 1986.
- Research Professor, Spectroscopy Laboratory, Physics Department, NRC, since 1986.

He is fluent in English and Arabic. Participated in several national and regional conferences and meetings on spectroscopy and environmental sciences. He is the author of a number of papers published in national and international scientific journals. He supervised four M.Sc. and four Ph.D. in the field of optical atomic emission spectroscopy. Member of a number of national scientific syndicates and societies. Granted a research fellowship to the Institute of Inorganic Chemistry and Spectroscopy, Wroclaw Polytechnic, Poland, 1984.



*Prof. Dr. Mohamed  
Ibrahim Nasser*

Prof. Nasser, Part-time Research Professor of Atomic & Molecular Physics and Spectroscopy, was born on April 2, 1917, married. He graduated from Cairo University with B.Sc. in Physics in 1945. He obtained the D.I.C. (Diploma of the Imperial College of Science and Technology), London, in 1951. In 1954, he obtained his Ph.D. in Physics from London University, (Imperial College of Science & Technology).

Prof. Nasser held the following positions :

- Demonstrator of Physics, Cairo University, 1945.
- Lecturer of Physics, Cairo University, 1954.
- Associate Research Professor, NRC, 1960.
- Research Professor, NRC, 1964.
- Head of Physics Department, NRC, 1966.
- Part-time Research Professor of Physics, Spectroscopy Laboratory, Physics Department, NRC, since 1978.

Prof. Nasser was involved in a number of research projects in the field of atomic & molecular physics and spectroscopy. He supervised the research work of several post-graduate students for the M.Sc. and Ph.D. degrees (12 M.Sc. and 5 Ph.D.). He is the author of 24 papers published in national and international journals. He spent one year as a visiting Research Professor at Alberta University, Canada, 1968 - 1969. He is a member of several scientific societies, committees and syndicates.



*Prof. Dr. Faika Fahmy Hanna*

Prof. Hanna, Professor of Physics, Emeritus was born on November 27, 1926 in Benha, Egypt. She graduated from Cairo University in 1948 and obtained her B.Sc. in Physics (Hons.). In 1955, she was granted the M.Sc. in Physics from the same university. Her Ph.D. degree (Dr. Rer. Nat.) was granted from Mainz University, West Germany, in 1962.

Prof. Hanna held the following positions :

- Demonstrator, Physics Department, Faculty of Science, Cairo University, 1948 - 1957.
- Researcher, Physics Department, NRC, 1962 - 1966.
- Associate Research Professor, NRC, 1966 - 1973.
- Research Professor, Physics Department, NRC, 1973 - 1986.
- Head of Microwave Physics Laboratory, NRC, 1962 - 1986.
- Head of Physics Department, NRC, 1971 - 1976.

Prof. Hanna actively participated and supervised a number of research projects such as the research project with ASRT on "Improving of electrical properties of locally manufactured insulator" from 1972 to 1979. Another project with the Microwave Physics Department, Johannes Gutenberg Universität, Mainz, through the Internationales Büro der Kernforschungsanlage, KFA, Julich, FRG, involving the cooperation of the two sides to explore the application possibilities of microwaves to molecular physics and electrical insulators.

Prof. Hanna is the author of more than 70 papers published in national and international journals and conferences. She is a member of a number of societies and syndicates : The Physics and Electronic Research Council (Deputy Chairman) ; member of the subcommittee assigned by the mentioned council for physics applications ; and member of the International Scientific Radio Union Committee. She established the first Microwave



Physics Research Laboratory in Egypt and the Middle East, in 1962.  
Supervised about 13 M.Sc. and Ph.D. theses.



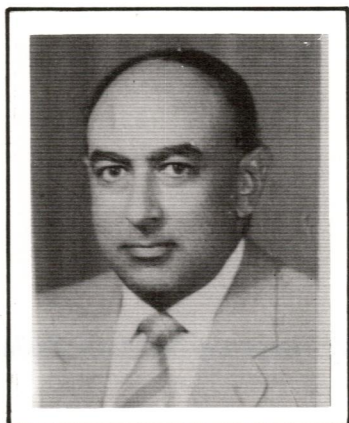
*Prof. Dr. Augenie Mikhail Bishai*

Prof. Bishai, Microwave Physics Department, NRC, was born on December 7, 1927, Assiut, Egypt. She graduated from Ain-Shams University in 1958 with B.Sc. in Physics and Chemistry. She obtained the M.Sc. and Ph.D. in Experimental Physics from Cairo University in 1965 and 1971, respectively.

Prof. Bishai held the following positions :

- Research Assistant, Physics Department, NRC, 1959 - 1971.
- Researcher, the same department, 1972 - 1978.
- Associate Research Professor, NRC, 1978 - 1987.
- Research Professor, Emeritus NRC, 1987.

Prof. Bishai participated in the following research projects : “Improvement of electrical properties of locally manufactured insulators” and “Application of microwave physics to molecular physics”. The later is in collaboration with the Microwave Physics Department, Mainz University, FRG. She is the author of 26 papers published in national and international journals. She attended a number of conferences held in Egypt. She was granted the Prize of Prof. Dr. Shehata Farag for the best published papers on Solid State Physics for the year 1984.



*Prof. Dr. Kamal Nasr*

*Abd-El-Nour*

Prof. Abd-El-Nour, Research Professor and Head of Microwave Physics Department, was born on December 1, 1940 in Luxor, Egypt, married. He studied at Cairo University where he obtained his B.Sc. in "Physics and Chemistry" in 1962. In 1966, he was granted his M.Sc. from the same university in "Absorption and Scattering of Microwave in Media". The research work on his Ph.D. degree which he obtained in 1970 from Cairo University, has been jointly conducted in cooperation with Princeton University, USA. The thesis entitled "Microwave absorption in liquids in relation to molecular structure".

Prof. Abd-El-Nour held the following positions :

- Research Assistant, Microwave Physics Department, NRC, 1962 - 1970.
- Researcher, the same department, 1970 - 1975.
- Associate Research Professor, NRC, 1975 - 1983.
- Research Professor, Microwave Physics Department, NRC, since 1983.

He has been engaged in a number of research projects such as studies of "Microwave absorption in liquids" and "Improvement of the physical properties of polymers of important industrial uses". He published 44 papers in national and international journals in the field of "Electrical properties of insulators and applications of microwaves in molecular physics". Under his supervision several M.Sc. and Ph.D. have been granted in the field of microwave physics. He spent one year fellowship in Princeton University, USA, 1967 - 1968. He had the chance to attend several conferences in USA, Iraq and Egypt covering topics such as solid state physics in general and electrical insulators and dielectric phenomena in particular.



*Prof. Dr. Itedaal Hakim*

Prof. Hakim, Microwave Physics Department, NRC, was born on February 22, 1936, Qena, Egypt. She graduated from Ain-Shams University in 1958 with B.Sc. in Physics and Chemistry. She obtained the M.Sc. and Ph.D. in Physics from Cairo University in 1964 and 1972, respectively.

Prof. Hakim held the following positions at NRC :

- Research Assistant, Physics Department, 1958 - 1972.
- Researcher, Physics Department, 1972 - 1981.
- Associate Research Professor, 1981 - 1988.
- Research Professor, Microwave Physics Department, Physics Division, NRC, since 1988.

Prof. Hakim participated in the following research projects : “Improvement of electrical properties of locally manufactured insulators” and “Application of microwave physics”. The later is a contract between the Microwave Physics Laboratory, NRC, and its counterpart from Mainz University, FRG. She published 28 papers on “Dielectrics and application of microwaves and high frequency to molecular physics” in national and international journals. She supervised one M.Sc. and another Ph.D. granted in the field of microwave physics. She participated in several national conferences. She was distinguished by the Prof. Dr. Shehata Farag Prize for the best published papers in Solid State Physics during the year 1983. She is a member of a number of national societies and syndicates.





*Prof. Dr. Sawsan Sayed*

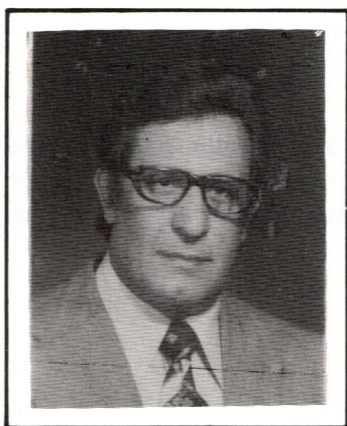
*Abdel Zaher*

Prof. Abdel Zaher, Research Professor Theoretical Physics Department, was born on December 9, 1937 in Cairo. Married with three children. She studied at Cairo University where she obtained the B.Sc. degree in Physics and Chemistry in 1958. The Ph.D. in Theoretical Physics has been granted to her from London University in 1964.

Prof. Abdel Zaher held the following positions :

- Demonstrator, Physics Department, Faculty of Science, Cairo University, 1958 - 1961.
- Researcher, Theoretical Physics Laboratory, NRC, 1965 - 1971.
- Associate Research Professor, NRC, 1971-1979.
- Research Professor since 1979.

Prof. Abdel Zaher actively participates in a number of research projects and supervises the research work of a number of post-graduates for M.Sc. and Ph.D. degrees, a number of which have already been granted. She attended a number of national and international conferences and participated in several meetings and schools at the International Centre of Theoretical Physics, Trieste — Italy during the years 1967, 1971 ; Nancy — France, 1980 ; and Ericie, Sicily — Italy, 1981. She is the author of a number of papers published in national and international journals. Prof. Abdel Zaher has been honoured in 1981 in the occasion of NRC Silver Jubilee.



*Prof. Dr. Mohamed Tag El-Din  
Ahmed Kamal*

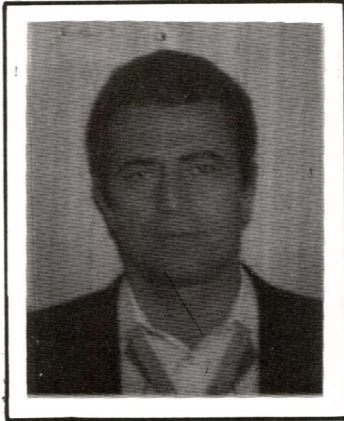
Prof. Kamal, Research Professor and Head of the Theoretical Physics Department, NRC, was born on Sept. 8, 1937, married. He obtained his B.Sc. in Physics and Pure Mathematics from Faculty of Science, Ain-Shams University in 1960. The same university granted him the M.Sc. degree in Applied Mathematics in 1966. In 1974, he obtained his Ph.D. in Theoretical Physics from Von Humboldt University, Berlin, GDR.

Prof. Kamal held the following positions at NRC :

- Research Assistant from 1960 to 1969.
- Researcher, Theoretical Physics Laboratory, from 1974 to 1981.
- Associate Research Professor, the same laboratory, from 1981 to 1987.
- Research Professor of Theoretical Physics, Physics Department, 1987.
- Head of Theoretical Physics Department, Physics Division, since June 1988.

Prof. Kamal actively participated in research projects “Theoretical studies in the field of physics and mathematics” and “Improvement of the physical properties of polymers of important industrial uses”. His field of interest covers gas-phase reaction kinetics and dynamical studies of reaction processes between atoms and molecules with special interest in chemical lasers, molecular models and the transport properties of gases and other related topics. He is the author of 27 articles published in national and international journals. He attended seminars, schools, workshops, conferences and scientific visits in Egypt, GDR, FRG, Sweden, Poland, Hungary, Italy, Czechoslovakia, Iraq, Greece and Lebanon. The topics discussed in these meetings range from atomic and molecular physics to reaction kinetics to laser physics and pure mathematics.

He is a member of a number of scientific and educational societies and syndicates. Prof. Kamal was distinguished by the honour-title "Collective of the Socialist Work" from the German Academy of Sciences, Berlin, German Democratic Republic in 1974.



*Prof. Dr. Ahmed  
Mahmoud Radwan*

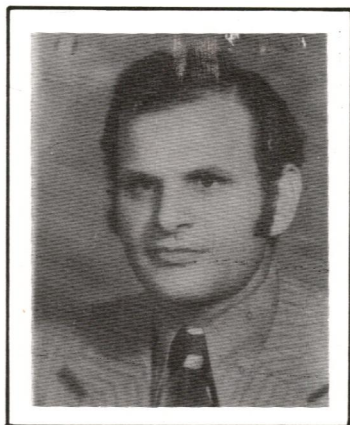
Prof. Radwan, Theoretical Physics Department, NRC, was graduated from Ain-Shams University with B.Sc. in Physics and Applied Mathematics in 1965. He obtained his M.Sc. in Theoretical Physics from Cairo University in 1970. He was granted the Ph.D. degree in Theoretical Solid State Physics from the Technical University, Dresden, GDR, in 1976.

Prof. Radwan held the following positions at NRC :

- Research Assistant 1968 - 1972.
- Researcher, Theoretical Physics Laboratory, 1976 - 1982.
- Associate Research Professor, the same laboratory, 1982 - 1988.
- Research Professor of Theoretical Physics, Department of Theoretical Physics, Physics Division, from February 1988 till now.

Prof. Radwan participated in research project : “Theoretical studies in the field of physics and mathematics”. He is the author of several scientific articles published in national and international journals. He attended a number of meetings and conferences in Germany and Egypt. He was granted a visiting research fellowship for one year to one of the institutes affiliated to the Atomic Energy Agency in FRG (1988 - 1989).





*Prof. Dr. Abdel-Hamid  
El-Sayed Eid*

Prof. Eid, Professor of Solid State Physics and Head of Physics of Thin Films and Electron Microscopy Department, was born on October 1, 1938. He obtained his B.Sc. degree in Physics from the Faculty of Science, Assiut University, 1961. He obtained the Ph.D. in Physics of Thin Films from England, 1965.

Prof. Eid held the following positions :

- Demonstrator at Atomic Energy Establishment, 1961.
- Demonstrator at Assiut University, 1961 - 1962.
- Research Assistant at NRC, 1965 - 1966.
- Researcher at the NRC, Electron Microscope Laboratory, 1966 - 1972.
- Associate Research Professor, 1972 - 1978.
- Research Professor of Solid State Physics, Head of Physics of Thin Films and Electron Microscope Department, 1979 till now.

Prof. Eid attended several meetings and conferences on solid state physics and physics of thin films in USSR, Switzerland and Egypt. Principal Investigator of several research projects. Supervised post-graduate research work for over 30 M.Sc. and Ph.D. theses. Author of over 100 papers published in national and international journals and conferences. Member of the National Committee of Crystallography (ASRT) and Syndicate of Scientific Professions of Egypt.



*Prof. Dr. Siham Mahmoud Salem*

Prof. Salem, Research Professor at the Electron Microscopy and Thin Films Department, was born on May 16, 1944, Cairo. Married with two children. She studied at Ain-Shams University where she obtained her B.Sc. M.Sc. and Ph.D. in Physics and Mathematics.

Prof. Salem held the following positions :

- Demonstrator, Mathematics Department, Faculty of Engineering, Ain-Shams University.
- Scholarship, NRC, 1966 - 1968.
- Research Assistant Electron Microscopy Laboratory, 1968 - 1976.
- Researcher, NRC, 1976 - 1982.
- Associate Research Professor at the same laboratory, 1982 - 1988.
- Research Professor of Solid State Physics and Physics of Thin Films, since 1988.

Prof. Salem has participated in a number of research projects. She is a member of the Egyptian Physical Society, and gained wide experience in the field of application of electron microscope in different fields of industry, agriculture, biology, ... etc. She published over 32 scientific articles in national and international journals and conferences. She supervised a number of M.Sc. and Ph.D. theses in the field of specialization.





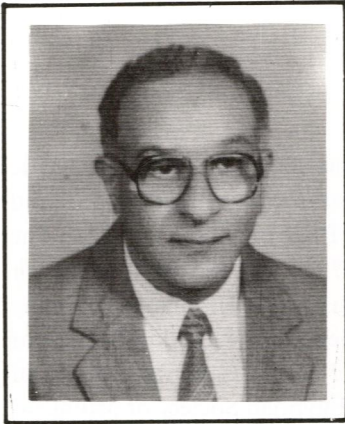




**GENETIC ENGINEERING  
AND BIOTECHNOLOGY DIVISION**

**RESEARCH DEPARTMENTS ( RD )**

- 1 — CELLULAR BIOLOGY
- 2 — HUMAN GENETICS.
- 3 — MOLECULAR BIOLOGY.
- 4 — PLANT CELL AND TISSUE CULTURE.
- 5 — MICROBIAL BIOTECHNOLOGY.
- 6 — MICROBIAL GENETICS.



*Prof. Dr. Assem Mohamed M. Ali*

Prof. Ali, Research Professor of Microbial and Biochemical Genetics, and Head of Genetic Engineering and Biotechnology Division, NRC, was born on August 24, 1936. Married with four children. Graduated from Alexandria University in 1957, with B.Sc. in Agronomy. Granted the M.Sc. in 1961 from the same university in Genetics. Awarded the M.Sc. in Microbial Genetics and Ph.D. from Birmingham in 1963 and 1964, respectively. Granted Certificate of the International Workshop of Mycotoxin Analysis (September 9 - 16, 1981, Cairo), and the Diploma of the World Cultural Council as an incentive to his activities.

Prof. Ali held the following positions :

- Teacher, Agricultural Secondary Schools, 1958 - 1961.
- Specialist, Genetics and Cytology Unit, NRC, 1961 - 1965.
- Researcher, Microbial Genetics, Head of Microbial Genetics Research Unit, NRC, 1965 - 1971.
- Associate Research Professor, same unit, 1971 - 1976.
- Research Professor, NRC, since 1976.
- Head of Genetics and Cytology Laboratory, NRC, 1976 - 1977.
- Head of Basic Science Division, NRC, 1977 - 1978.

Prof. Ali is the President of the Egyptian Society of Genetic Engineering and the Editor of its journal. Member of the Managing Committee of the Genetics Society, Egypt, 1969 and for several successive years. Member of the editorial board of the Egyptian Journal of Genetics and Cytology, since 1972. Principal Investigator and Vice-Principal Investigator of some national research projects. Supervised over 25 M.Sc. and 23 Ph.D. theses already granted the degrees, besides 20 more M.Sc. and Ph.D. are still underway. Published over 200 scientific papers in national and international journals. Author of "Genetic Engineering and its Applications", a book in Arabic

selected by the Higher Committee of ASRT and State Minister of Scientific Research. Attended several conferences and workshops in Egypt, USSR and India. Awarded the National Encouragement Prize in Biology (1972) ; The Plaque of Science and Arts (First Class) (1972) ; and the NRC Prize for Scientific Contribution (for Senior NRC Scientists) (1984). Member of many societies, committees : Egyptian Society of Genetics ; Egyptian Society of Applied Microbiology ; Egyptian Society of Plants ; Egyptian Society of Pest Control and Environmental Protection ; Egyptian Society of Mutagens and Carcinogens ; and the Indian Society of Genetics and Breeding.



*Prof. Dr. Samia Ali Temtamy*

Prof. Temtamy, Research Professor, and Head of Human Genetics Department, NRC, Division of Genetic Engineering and Biotechnology, graduated from Cairo University in 1957, with M.B. B.Ch. in Medicine and Surgery. Obtained the D.C.H. in Pediatrics in 1960 from the same university. Awarded the Ph.D. in Human Genetics in 1966 from Johns Hopkins University, Baltimore, Maryland, USA.

Prof. Temtamy held the following positions :

- Intern., Cairo University Hospitals, 1958 - 1959.
- Pediatric Resident, Cairo University, Children Hospital, 1959 - 1961.
- Research Assistant NRC, and Fellow in Division of Medical Genetics, John Hopkins University, USA, 1961 - 1966.
- Researcher, NRC, 1966 - 1971.
- Associate Research Professor, NRC, 1972 - 1977.
- Research Professor of Human Genetics, NRC, since 1979.
- Head, Department of Medical Research, NRC, 1977 - 1979.
- Head, Department of Human Genetics, NRC, since 1977.
- Head, Division of Genetic Engineering and Biotechnology, NRC, 1985 - 1987.

Prof. Temtamy participated in several research projects covering clinical genetics, genetic studies in birth defects, mutagenesis, dermatoglyphics and human DNA technology. Awarded several post-doctoral fellowships in universities of USA, Austria, UK and Kuwait. Attended many conferences, seminars and symposia in USA, Spain, FRG, Philippines, UK and Egypt. Awarded the NRC Golden Medal, NRC Silver Jubilee (1982), and the NRC Prize for Scientific Contribution (for NRC Senior Scientists) in Medical, Environmental and Pharmaceutical Sciences (1988). Granted a joint research



grant from Stiftung Volkswagenwerk for a project in collaboration with Prof. Passarge, Essen, FRG (1983) on "Chromosomal aberrations in Egyptians". Supervised a great number of post-graduate studies for Ph.D., M.D. and Master's Degrees in Medicine and Science in the fields of human genetics, experimental mutagenesis, pediatrics, ophthalmology, pathology, andrology, internal medicine, gynecology and obstetrics, biochemistry, dentistry and clinical pathology. She is a member of several societies, associations, councils, advisory boards of Egyptian, American and British scientific bodies. Published over 97 papers in national and international journals and conferences.



*Prof. Dr. Fawzia Helmy Hussien*

Prof. Hussien, Research Professor of Physical Anthropology, Human Genetics Department, NRC, was born on January 15, 1934. Graduated from Ain-Shams University in 1960, with M.B.C.Ch. (Medicine). Awarded Diploma of Child Health from the same university in 1964 and Ph.D. in Physical Anthropology in 1973 from Faculty of Natural Sciences, Komensky University, Bratislava, Czechoslovakia.

She held the following positions at NRC : Research Scholarship, Pediatric Unit (1962 - 1965) ; Research Assistant, Physical Anthropology Unit (1965 - 1973) ; Researcher, same unit, (1973 - 1977), and at Human Genetics Department (1977 - 1979) ; Associate Research Professor (1979 - 1985) ; and Research Professor, since 1985.

Prof. Hussien participated in several research projects : Co-Principal Investigator of "Clinical, genetic and biochemical studies of congenital malformations" ; Principal investigator of "Study of ancient Egyptians human remains" ; Co-Principal Investigator of "Child health during puberty" ; "Face and head appearance in Egyptians" ; and "Study of the Royal Mummies — joint research project of Egyptian Antiquities Organization and Michigan University (USA), since 1982. Delegated for organising the section of Ancient Egyptians Human Remains in the Museum for the history of medicine and pharmacy, since 1974. Member of several committees at the NRC and Egyptian Antiquities Organization. Attended several conferences in Egypt, Poland, Czechoslovakia, France, Belgium, Canada and FRG. Supervised over 10 M.D. and Ph.D. and 20 M.Sc. theses in the fields of physical anthropology, human genetics, pediatrics, and dentistry. Published over 33 papers in local and international journals. Member of several scientific associations : Slovak Anthropological Society ; International Association of Egyptologists ; International Association of

Human Biologists ; International Union of Anthropological and Ethnological Sciences ; Paleopathological Association ; and Egyptian Society of Biological Anthropology.



*Prof. Dr. Mouchira  
Abdel-Salam Mohamed*

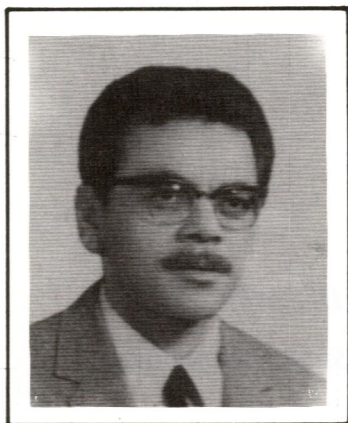
Prof. Mohamed, Research Professor of Human Genetics, NRC, was born on August 17, 1935. Graduated from Ain-Shams University, Faculty of Medicine in 1960, with M.B.B.Ch. in Medicine. Awarded the "Diplome Internal Medicine" and "Member of Doctors Internal Medicine" from the same university in 1964 and 1977, respectively.

She held the following positions :

- House Officer, Ain-Shams University Hospitals, 1961 - 1962.
- Physician, Ministry of Health, 1962.
- Physician, Laboratory of Basic Sciences, NRC, 1962 - 1965.
- Research Assistant, same laboratory, 1965 - 1977.
- Researcher, Human Genetics, Human Genetics Department, NRC, 1977 - 1982.
- Associate Research Professor, same department, 1982 - 1987.
- Research Professor of Human Genetics, NRC, since 1987.

She was granted a post-graduate fellowship, through the American Ford Association, to Geneva for a training course on "Modern trends in human genetics research (6 months). She is a member in the agreement of scientific exchange between NRC and Essen University, FRG, 1983. Participated in many conferences, symposia and meetings on biochemistry, environmental chemical mutagens, genetics and cytogenetics held in Egypt and FRG. Supervised over 13 Doctor's and 12 Master's theses in the field of human genetics, medicine, science and dentistry. Member in many committees (NRC) for management, planning, marketing, public health and preventive medicine. Senior Physician in charge of NRC Clinic for periodic examination of staff members and employees, since 1986. Awarded the NRC Medale (Bronze), 1980, and Medale of Physicians, 1982 from Medicine and Doctors Syndicate in its Annual Day.





*Prof. Dr. Mamdouh*

*Yehia H. Kamel*

Prof. Kamel, Research Professor of Biochemistry, NRC, was born on June 29, 1933 Cairo, Egypt. Graduated from Cairo University in 1954, with B.Sc. (Hon.). Awarded M.Sc. from the same university in 1957 and Ph.D. in Biochemistry from Michigan State University (USA) in 1963.

Prof. Kamel held the following positions at NRC. : Research Assistant, Chemical Microbiology Research Unit (1954-1957) ; and Biochemistry Research Unit (1957-1959) ; Researcher, Biochemistry Lab. (1967-1973) ; Associate Research Professor, Biochemistry Dept. (1974-1978) ; and Research Professor, since 1978. He assumed the post of Head of Biochemistry Lab. (1979-1981) ; and Head of Molecular Biology Lab., since 1985.

Prof. Kamel participated in several research activities. Principal Investigator of research projects : "Enzyme preparation for industrial and diagnostic application" ; and "Biochemical and physiological studies of certain tick vectors of disease agents (1977-1985) between National Institute of Health (USA) and NRC. Offered advisory and consultancy services to Egyptian and foreign establishments and companies, e.g., Drug and Control Research Centre, Cairo ; National Centre of Social and Criminological Research ; and NAMRU-3 Tick Physiology and Biochemistry Project (1971-1975). He acted as R & D group leader at Sigme Chemical Company, St. Louis (USA) (1965-1967). Supervised nine Ph.D. and nine M.Sc. in the field of enzymology, microbial and plant metabolism, as well as biochemistry of ticks. Granted scholarship (Predoctorat fellow, (1960-1965) to Michigan State University for Ph.D. Participated in arrangement of two courses on : "Frontiers in molecular biology" organized by Fed. of European Bioch. Soc., Intern. Union of Biochem. and Egyptian Biochem. Soc., Cairo, 1987, and "Biotin labelling and detection of nucleic acids" organized by Intern.

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Biosc. Network. Comm. on Genetic Experimentation and NRC, Cairo, 1987.  
Author of over 55 original papers published in national and international journals and conferences.

- Attended two workshops “Feasibility studies and project evaluation”, American University Cairo, and “Research and development marketing workshop”, University of Denver, Colorado, USA.



*Prof. Dr. Mohyi El-Din*

*Abd-El-Samie*

Prof. Abd-El-Samie, Research Professor, Emeritus, Microbial Biotechnology Department NRC, was born on November 9, 1928, Cairo, Egypt. Graduated from Cairo University in 1949, with B.Sc. in Agriculture. Obtained Diploma in Education in 1950 from Ain-Shams University. Granted the M.Sc. in Bacteriology in 1956 from Cairo University. Awarded in 1971 the Ph.D. in the same field from Ain-Shams University.

Prof. Abd-El-Samie held the following positions :

- Science Teacher, Training High Schools, 1951 - 1957.
- Study Leave, NRC, 1957 - 1959.
- Research Assistant, NRC, 1959 - 1973.
- Researcher, NRC, 1973 - 1978.
- Associate Research Professor, 1978 - 1987.
- Research Professor, Microbial Chemistry Laboratory, NRC, 1987 till November 1988.
- Emeritus Research Professor, NRC, since November 1988.

Prof. Abd-El-Samie actively participated in consultancy and training activities with industry, e.g., consultancy and training during the establishment of the acetone-butanol fermentation plant "Organic Chemical Industries, Hawamdia"; consultancy and training for the penicillin production plant "Pharmaceutical Chemical Industries, Abu-Zaabal"; consultancy for the production of bacteriological agar "Edfina Company for Preserved Foods"; and consultancy for the quality control of veniger production "Sugar and Distillation Company". Supervised the post-graduate studies for over 21 M.Sc. and Ph.D. degrees. Participated in a number of research projects : "Retting of cotton stalks bast" ; "Production of agar at Edfina Company for Canning and Preserved Foods" ; "Pilot plant studies on algal removal from Rod El-Farag Water Works" ; "Lake Nasser

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Project” ; “Baggasse utilization project ; and “Biogas project”. Published several papers in national and international journals. Member of several scientific societies.





*Prof. Dr. Tahany Mohamed Abou*

*El-Fath El-Kawokgy*

Prof. El-Kawokgy, Research Professor of Microbial Genetics, NRC, was born on August 4, 1939. Cairo, Egypt. Widow, with two children. Graduated from Cairo University in 1959 with B.Sc. in Agriculture (Horticulture). Obtained from the same university in 1961, B.Sc. in Agronomy. Awarded in 1964 the M.Sc. in Agronomy and Cytology from the same university. Granted Ph.D. in Genetics from Cairo University in 1971.

Prof. El-Kawokgy held the following positions at NRC :

- Scholarship, Agronomy Unit, 1959-1961.
- Research Assistant, Genetics and Cytology Unit, 1961-1971.
- Researcher, Microbial Genetics, same unit, 1971-1978.
- Associate Research Professor, Genetics and Cytology Laboratory, 1978-1985.
- Research Professor of Microbial Genetics, Microbial Genetics Department, Genetic Engineering and Biotechnology Division, since 1985.
- Deputy Chairman of Genetic Engineering and Biotechnology Division, since 1988.

She is a member of many societies and syndicates : Managing Committee of the Egyptian Society of Genetic Engineering ; Agricultural Professions Syndicate ; Egyptian Society of Genetics ; and Egyptian Society of Mutagens and Carcinogens. Supervised four M.Sc. theses while two M.Sc. and three Ph.D. are still underway. Published over 23 articles in specialized journals.



## **OPHTHALMIC DISEASES DIVISION**

### **RESEARCH DEPARTMENTS ( RD )**

**1 - BASIC MEDICAL**

**2 - CLINICAL MEDICAL**



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### *Prof. Dr. Magdoline Yehia El-Gammal*

Prof. El-Gammal, Research Professor of Microbiology of the Eye and Medical Ophthalmology, Head of the Research Division of Ophthalmology, NRC, was born on February 15, 1939 in Cairo, Egypt. Graduated from Cairo University in 1960, with M.B. B.Ch. in Medicine and Surgery. Granted the Diploma of Microbiology and Pathology (D.B.) in 1964 from Ain-Shams University. Later in 1967, she was awarded the Diploma of Ophthalmic Medicine and Surgery (D.O.M.S.) from Cairo University in 1967. Awarded in the same year the Ph.D.B. from Ain-Shams University.

Prof. El-Gammal held the following positions :

- House Officer, Kasr El-Ainy Hospital, Cairo University, 1961 - 1962.
- Research Assistant, Ophthalmology Laboratory, NRC, 1962 - 1967.
- Researcher, same laboratory, NRC, 1967 - 1973.
- Associate Research Professor, same laboratory, NRC, 1973 - 1978.
- Research Professor, Head of Ophthalmology Laboratory, and Head of Medical Division, NRC, 1978 - 1980.
- Director of Research Institute of Ophthalmology, NRC, 1980 - 1988.
- Chairman of Research Division of Ophthalmology, NRC, since 1988.

Prof. El-Gammal supervised the research work of many post-graduate students for Master Degree (18) and Doctor Degree (23). Published over 40 papers in specialized journals in fields of immunology and medical ophthalmology, microbiology of the eye and experimental ophthalmology. Responsible for the supervision of construction work of the new Research Institute of Ophthalmology in Giza, Participated in several conferences, meetings and symposia in Egypt, Lebanon, India, Hungary, France and USA. Paid scientific visits to specialized hospitals in UK, Spain, FRG and Czechoslovakia. Member of several societies and committees : Vice-President of the Board of Directors of Medical Syndicate, member of B.D. of Egyptian Society of Biophysics, member of Medical Board of Science and Technology, Ophthalmology Society of Egypt, Microbiology Society of Egypt, and Barraques Institute (Spain). Member of the NRC Board of Directors. Awarded the State Prize of Science and Art (1st Grade) (1982), Certificate of Honour given by the NRC Board of Directors (1986), and the Golden Medal and Certificate of Honour for the Ideal Doctor by the Giza Medical Syndicate, 1986.



USA. Paid scientific visits to specialized hospitals in UK, Spain, FRG and Czechoslovakia. Member of several societies and committees : Vice-President of the Board of Directors of Medical Syndicate, member of B.D. of Egyptian Society of Biophysics, member of Medical Board of Science and Technology, Ophthalmology Society of Egypt, Microbiology Society of Egypt, and Barraques Institute (Spain). Member of the NRC Board of Directors. Awarded the State Prize of Science and Art (1st Grade) (1982), Certificate of Honour given by the NRC Board of Directors (1986), and the Golden Medal and Certificate of Honour for the Ideal Doctor by the Giza Medical Syndicate, 1986.



*Prof. Dr. Zeinab Mahmoud Osman*

Prof. Osman, Research Professor and Head of the Department of Clinical Sciences, Research Division of Ophthalmology, NRC. Graduated from Ain-Shams University in 1958, with M.B. B.Ch. in Medicine and Surgery. Obtained Diploma of Medical and Surgical Ophthalmology from the same university in 1962. Awarded the Diploma of General Surgery, and M.D. in Medical and Surgical Ophthalmology from the same university in 1965 and 1968, respectively.

Prof. Osman held the following positions :

- House Officer, Ain-Shams University Hospitals, 1960 - 1961.
- General Practitioner, Ministry of Health, 1960 - 1961.
- Acting Resident, Department of Ophthalmology, Ain Shams University Hospitals, 1961 - 1963.
- Specialist in the Ophthalmic Giza Hospital, Ministry of Health, 1963.
- Research Assistant, Ophthalmic Laboratory, NRC, 1963 - 1970.
- Researcher, same laboratory, NRC, 1970 - 1975.
- Associate Research Professor, same laboratory, NRC, 1975 - 1980.
- Research Professor of Ophthalmology, Institute of Ophthalmology, NRC, since 1980.

She attended training courses in Moorfields's Eye Hospital in London, and paid short visits to eye hospitals in UK. Attended several conferences in Egypt, Lebanon, Netherlands, and Scotland. Supervised a great number of post-graduate research work for M.Sc. (7) and Ph.D. (37) degrees. Published over 25 papers covering fields of : Diabetes mellitus and the eye, laser photocoagulation, glaucoma, neuro-ophthalmology, squint, errors of refraction and toxoplasmosis and the eye. Member of Egyptian Society of Ophthalmology, and the Rehabilitation Centre for the Blind.



*Prof. Dr. Elmeya Hassan Safar*

Prof. Safar, Research Professor, and Head of the Parasitology Department, Research Division of Ophthalmology, NRC. Graduated from Cairo University in 1963, with M.B. B.Ch. Obtained the Diploma of Ophthalmic Medicine and Surgery from the same university in 1967. Granted the Diploma of Medical Science (Parasitology) D.M.Sc. from the same university in 1970. Awarded the Ph.D. (Parasitology) from Czechoslovak Academy of Sciences in 1975.

Prof. Safar held the following positions :

- House Officer, Kasr El-Ainy Hospital and Public Health Hospitals, 1963 - 1964.
- Resident, Ministry of Public Health, 1964.
- Scholarship, NRC, 1965 - 1967.
- Research Assistant, NRC, 1967 - 1975.
- Researcher, NRC, 1975 - 1980.
- Associate Research Professor, NRC, 1980 - 1985.
- Research Professor of Parasitology, Research Institute of Ophthalmology, NRC, since 1985.

Prof. Safar participated in preparing and developing a new well-equipped unit of parasitology at the NRC, since 1975. Granted post-graduate training scholarship from Czechoslovak Academy of Science, Parasitology Laboratories, Ministry of Public Health, and a post-doctoral short visit to the same country to follow the new methods in diagnosis of toxoplasmosis. The mission also included visits to Immunology, Parasitology and Pathology Laboratories of Czechoslovak Ministry of Public Health. Member of : Egyptian Society of Ophthalmology, Egyptian Society of Parasitology, Society of Academic Medical Science, and Society for Prevention of Blindness. Attended several conferences in Egypt and Czechoslovakia.

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Published over 36 papers in the field of parasitology and related eye diseases.  
Awarded the NRC Prize of Scientific Contribution for 1985.





*Prof. Dr. Laila Mohamed*

*Rashed Abdel-Khalek*

Prof. Abdel-Khalek, Research Professor, and Head of the Department of Histopathology and Electron Microscopy, Research Division of Ophthalmology, NRC, was graduated from Cairo University in 1964, with M.B. B.Ch. Obtained Diploma in Ophthalmology from Ain-Shams University in 1968. Awarded the Ph.D. in Ophthalmic Pathology and Electron Microscopy from University of London in 1976.

Prof. Abdel-Khalek held the following positions :

- House Officer, Cairo University Hospitals, 1964 - 1965.
- Resident, Ministry of Health, 1965 - 1966.
- Research Assistant, Ophthalmology Department, NRC, 1966 - 1978.
- Researcher, same department, NRC, 1978 - 1983.
- Associate Research Professor, histopathology and electron microscopy, Research Institute of Ophthalmology, NRC, 1983 - 1988.
- Research Professor of Histopathology and Electron Microscopy, Research Division of Ophthalmology, NRC, since 1988.

She has 25 publications in the field of Histopathology and Electron Microscopy with special reference to diseases related to the eye. Co-supervised the research work of post-graduate students for M.Sc. and Ph.D. degrees.



## **ELECTRONICS DIVISION**

### **RESEARCH DEPARTMENTS ( RD )**

- 1 — MICROWAVE ENGINEERING.**
- 2 — COMPUTERS AND SYSTEMS.**
- 3 — SCIENTIFIC CONSULTATION FOR COMPUTATION  
AND STATISTICS.**





*Prof. Dr. Esmat*

*Abdel-Fattah Abdallah*

Prof. Abdallah, Research Professor of Electrical Engineering, and Head of the Electronics Research Division, NRC, was born on July 7, 1946. Married. She graduated from Cairo University, with B.Sc. degree of Electrical Engineering in 1968. She obtained the M.Sc. and Ph.D. degrees in Electrical Engineering (Microwaves) from Cairo University in 1972 and 1975, respectively.

Prof. Abdallah held the following positions :

- Engineer, Radio and Television Organization, 1968 - 1969.
- Research Assistant, NRC, 1969 - 1975.
- Researcher, NRC, 1975 - 1980.
- Associate Research Professor, NRC, 1980 - 1985.
- Research Professor, Microstrip Department, Electronics Research Division, NRC, since 1985.

Prof. Abdallah has been engaged in a number of research projects and contracts for design and implementation of payroll system for NRC, feasibility study on using microstrip components in radar systems, adjustment of the communication system of Balaem Oil Company, and fabrication of microstrip components and antennas for research purposes. She is the author of more than 35 papers published in national and international journals and conferences. She participated in several meetings, symposia and conferences in Egypt, USA, and Kuwait. She is a member of the National Union of Radio Science URSI, ASRT, Engineering Committee of the Radio and Television Union and Consultant Committee for the Industrialization of Electrical and Electronic Equipment, Ministry of Industry. Supervised the research work of three Ph.D. and five M.Sc. in the field of microstrip components and antennas. Fields of interests are microwave components, microstrip circuits and components and technology of hybrid integrated circuits.





*Prof. Dr. Mahmoud*

*Abdel-Halim Saleh*

Prof. Saleh was born in Cairo, 28 February, 1936. B.Sc. Electrical Engineering, Cairo University (1956). Ph.D. Electromechanical Components for Servomechanisms, Moscow Institute (1963). Lecturer in Military Technical College, Cairo (1964). Assistant Professor and Head of Electrical and Electronics, Engineering Research Laboratory, NRC (1968). Professor of Electrical Engineering NRC (1973). Consultant UNIDO, UNDEP, UNECWA (1978, 1980). Member Board of Directors, Telecommunications Research Centre (1979). Regional Advisor, New and Renewable Energy UNECWA (1980). Director, Electronic Research Institute, ERI (1981). Senior, Economic Affairs Officer, UNECWA (1982). Regional Technical Advisor on New and Renewable Energy Sources, UNECWA (1984 - 1988).

Published more than 50 scientific and technical papers in international and local periodicals and conferences. Supervised more than 20 Ph.D. and M.Sc. theses in Cairo, Ain-Shams, Al-Azhar, Assiut, Helwan and Menoufia Universities (1969 - 1984). Lecturer more than twenty years under-graduate and post-graduate courses on electrical machines, electric circuit theory, energy conversion, aircraft power systems in military technical colleges of Egypt and Iraq, and different Egyptian Universities and High Institutes (1956 - 1982). Supervised the establishment of Electronics Research Institute in NRC, Egypt (1967 - 1980). Fields of interest are electromechanical energy conversion, power electronics, applications in control of electric machines, special electric machines, new and renewable energy systems, energy conservation.

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*Prof. Dr. Elhilaly Mohamed Ahmed Eid*

Prof. Eid, born in June 1936, Cairo, got the B.Sc. in 1959 from Electrical Engineering Dept., Faculty of Engineering, Cairo University, M.Sc. in 1964, Engineering Dept., Glasgow University, Scotland and the Ph.D. in 1964 from University College, London University, London.

In 1959 he was appointed as a demonstrator in Electrical Engineering Dept., Assiut university, Egypt. In 1968 and 1975 he became a researcher and an associate professor respectively at the Electrical and Electronics Engineering Laboratory, National Research Centre, Egypt. At present he is a professor and head of microwaves Engineering Dept., Electronics Research Division, National Research Centre.

His interests are in the fields of microwave devices and components, antenna and general diffraction problems. Measurements at microwave and lower frequencies are also of attractive nature to him.

He took part in teaching activities in different Egyptian Universities (microwave theory and measurements). He also took the responsibility of establishing a microwave research laboratory for the armed forces (1970 - 1974).



*Prof. Dr. Dawoud  
Shenouda Dawood*

Prof. Dawoud, Research Professor, and Head of Computer and Systems Department, Electronics Research Division, NRC, was born on July 23, 1943, Cairo, Egypt. He graduated from Cairo University in 1965, with B.Sc. in Electrical Engineering and obtained in 1969 his M.Sc. in Communication Theory. His Ph.D. was granted to him in 1973 from USSR in the field of Digital Computer Design.

Prof. Dawoud held the following positions :

- Project Executive Engineer, Egyptian Railway Organization, 1965 - 1966.
- Research Assistant, NRC, 1967 - 1969.
- Researcher, NRC, 1973 - 1978.
- Associate Research Professor, NRC, 1978 - 1986.
- Research Professor, NRC, from 1986 till now.

His fields of interest are computer hardware, digital signal processing and speech analysis and synthesis. He participated in several joint research projects with Cairo University and IBM Cairo Centre. His activities in technical consultation covers the Ministry of Interior for Identification Cards, and the National Number, Ministry of Information on a feasibility study for the establishment of direct broadcasting satellite system, ASRT advisory committee on computer science, and NRC, for designing the technical specification of the new digital telephone system (microprocessor based system). He attended several national and international conferences and published more than 40 papers in specialized journals. He supervised six Ph.D. and nine M.Sc. theses. He is a member of several scientific societies and syndicates.



*Prof. Dr. Nadia  
Hamed Mahmoud Hegazi*

Prof. Hegazi, Research Professor of Computer Engineering, NRC. Graduated from Cairo University, Faculty of Engineering in 1965, with B.Sc. in Electrical Engineering. In 1967, she obtained Diploma of Communications from Al-Azhar University, followed by the M.Sc. in Electrical Engineering in 1972 from the same university. Awarded the Ph.D. in Computer Engineering from Cairo University in 1976.

Prof. Hegazi held the following positions :

- Research Assistant, NRC, 1965-1976.
- Researcher, NRC, 1976-1981.
- Associate Research Professor, Electronic Research Institute, NRC, 1981-1986.
- Research Professor, NRC, since 1986.
- Head of Consultation Laboratory for Computation and Statistics, Electronic Research Division, since 1981.
- Head of the Central Data Processing Department, NRC, since 1986.

Prof. Hegazi participated in several research projects covering the establishment of the computer centre in NRC, microcomputer and automation research laboratory in the Electronic Research Institute, and the introduction of computers in the clerical work of NRC. She also contributed in the research activities for design and implementation of : the first information systems for NRC, computerized project control system for NRC, the Payroll for NRC and data-base for scientific research carried by NRC staff. She also took part in many other related activities such as consultations, training programs and supervision of M.Sc. and Ph.D. She is the author of several professional papers published in national and international journals. Member of many societies, committees and specialized councils. Attended many conferences held in Egypt, USA, FRG. Awarded the Silver Medal, in the occasion of NRC Silver Jubilee.







**II. ASSOCIATE RESEARCH  
PROFESSORS  
AND RESEARCHERS**

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## CHEMICAL INDUSTRIES DIVISION

### Paper and Cellulose Dept.

#### Dr. Sohir A.M. El-Meadawy

Associate Research Professor of Applied Organic Chemistry, 1983; Researcher, 1977-1983; B.Sc. Chem.-Phys., Cairo Univ., 1965; M.Sc. Appl. Org. Chem., Cairo Univ., 1971; Ph.D., Appl. Org. Chem., Cairo Univ., 1977.

#### Dr. Nadia Shoukry Hanna

Associate Research Professor of Applied Organic Chemistry, 1985; Researcher, 1978-1985; B.Sc., Chem.-Geol., Ain Shams Univ., 1965; M.Sc., Cell. Chem., Ain Shams Univ., 1971; Ph.D., Appl. Org. Chem., DDR, 1978.

#### Dr. Zeenat Adeeb Nagib

Associate Research Professor of Applied Organic Chemistry, 1987; Researcher, 1982-1987; B.Sc., Appl. Chem., Ain Shams Univ., 1965; M.Sc., Appl. Org. Chem., Ain Shams Univ., 1975; Ph.D., Appl. Org. Chem., Ain Shams Univ., 1982.

### Tanning Materials and Protein Chemistry Dept.

#### Dr. Mohamed A.M. Zoweel

Associate Research Professor of Protein Chemistry, 1976; Researcher, 1971-1976; B.Sc., Special Chem., Cairo Univ., 1963; Ph.D., Protein Chem., USSR, 1971.

#### Dr. Mohamed A.I. El-Ansary

Associate Research Professor of Applied Organic Chemistry, 1980; Researcher, 1970-1980; B.Sc., Chem.-Geol., Cairo Univ., 1962; M.Sc., Org. Chem., Cairo Univ., 1966; Ph.D., Appl. Org. Chem., Cairo Univ., 1970

#### Dr. Ragaa M.A. Mansour

Associate Research Professor of Organic Chemistry, 1984; Researcher, 1979-1984; B.Sc., Chem.-Geol., Cairo Univ., 1964; M.Sc., Org. Chem., Cairo Univ., 1970; Ph.D., Appl. Org. Chem., Cairo Univ., 1978.

#### Dr. Nabil H.E. Khamies

Associate Research Professor of Organic Chemistry, 1987; Researcher, 1983-1987; B.Sc., Chem., Cairo Univ., 1971; M.Sc., Appl. Org. Chem., Cairo Univ., 1977; Ph.D., Appl. Org. Chem., Romania, 1983.

#### Dr. Ahmed M.S. Yousef

Associate Research Professor of Organic Chemistry, 1988; Researcher, 1982-1988; B.Sc., Chem.-Geol., Cairo Univ., 1964; M.Sc., Org. Chem., Al-Azhar Univ., 1978; Ph.D., Org. Chem., Al-Azhar Univ., 1982.

#### Dr. Heba H. Barakat

Researcher, Plant Chemistry, 1985; B.Sc., Chem., Cairo Univ. 1974; M.Sc. Chem., Cairo Univ. 1981; Ph.D. Chem. Cairo Univ. 1985.

#### Dr. Mamdouh M.M. Ahmed

Researcher, Applied Organic Chemistry, 1987; B.Sc., Chem., Cairo Univ., 1979; M.Sc., Chem. Nat. Prod., Al-Azhar Univ., 1984; Ph.D., Org. Chem., Cairo Univ., 1987.

#### Dr. Mohamed H. Abou-Ghalia

Researcher, Applied Organic Chemistry, 1987; B.Sc., Chem., Cairo Univ., 1971; M.Sc., Appl. Org. Chem., Cairo Univ., 1979; Ph.D., France, 1987.



## **Polymers and Pigments Dept.**

### **Dr. Fawzeya M.F. Abdel-Mohsen**

Associate Research Professor of Polymer Chemistry, 1976 ; Researcher, 1971-1976 ; B.Sc., Chem.-Phys., Cairo Univ., 1962 ; M.Sc., Appl. Org. Chem., Cairo Univ., 1966 ; Ph.D., Appl. Org. Chem., Cairo Univ., 1970

### **Dr. Nienet Latif Doss**

Associate Research Professor of Applied Organic Chemistry, 1977 ; Researcher, 1972-1977 ; B.Sc., Sp. Chem., Cairo Univ., 1957 ; M.Sc. Org. Chem., USA, 1965 ; Ph.D., Appl. Org. Chem., Ain Shams Univ., 1971.

### **Dr. Nadia A.M. Rizk**

Associate Research Professor of Applied Organic Chemistry, 1978 ; Researcher, 1973-1978 ; B.Sc., Sp. Chem. Cairo Univ., 1964 ; M.Sc., Appl. Org. Chem., Cairo Univ., 1968, Ph.D., Appl. Org. Chem. Cairo Univ., 1973.

### **Dr. Monir M. Abdel Malek**

Associate Research Professor of Paint Technology, 1979 ; Researcher, 1973-1979 ; B.Sc., Chem.-Geol., Ain Shams Univ., 1963 ; M.Sc., Inorg. Chem., Cairo Univ., 1968 ; Ph.D., Appl. Org. Chem., Cairo Univ., 1973.

### **Dr. Ragia M. Mohsen**

Associate Research Professor of Chemical Engineering, 1983 ; Researcher, 1977-1983 ; B.Sc., Chem. Eng., Alexandria Univ., 1967 ; M.Sc., Chem. Eng., Cairo Univ., 1971 ; Ph.D., Chem. Eng., Cairo Univ., 1977.

### **Dr. Mahmoud A. Abdel-Ghaffar**

Associate Research Professor of Applied Inorganic Chemistry, 1984 ;

Researcher, 1979-1984 ; B.Sc., Chem., Ain Shams Univ., 1972 ; M.Sc., Appl. Chem., Al-Azhar Univ., 1976 ; Ph.D., Inorg. Chem., Al-Azhar Univ., 1979.

### **Dr. Ahmed S.B. Adsah**

Associate Research Professor of Organic Chemistry, 1986 ; Researcher, 1982-1986 ; B.Sc., Sp. Chem., Ain Shams Univ., 1971 ; M.Sc., Org. Chem., Al-Azhar Univ., 1978 ; Ph.D., Org. Chem., Ain Shams Univ., 1982.

### **Dr. Sanaa M.A. El-Sawy**

Associate Research Professor of Anticorrosive Paints, 1986 ; Researcher, 1979-1986 ; B.Sc., Chem.-Phys., Cairo Univ., 1967 ; M.Sc., Inorg. Chem., Cairo Univ., 1972 ; Ph.D., Inorg. Chem., Cairo Univ., 1979.

### **Dr. Abou El-Fotouh A. Abdel Hakim**

Associate Research Professor of Applied Organic Chemistry, 1987 ; Researcher, 1982-1987 ; B.Sc., Appl. Chem., Assiut Univ., 1970 ; M.Sc., Appl. Org. Chem., Ain Shams Univ., 1976 ; Ph.D., Appl. Org. Chem., Hungary, 1982.

### **Dr. Fahima M.A. Hillaly**

Associate Research Professor of Applied Organic Chemistry, 1988 Researcher, 1982-1988 ; B.Sc., Appl. Chem., Ain Shams Univ., 1965 ; M.Sc., Org. Chem., Al-Azhar Univ., 1977 ; Ph.D., Appl. Org. Chem., Mansoura Univ., 1982.

### **Dr. Nagwa I.H. El-Awady**

Researcher, Organic Chemistry, 1977 ; B.Sc., Chem. - Phys., Ain Shams Univ., 1966 ; M.Sc., Appl. Org. Chem., Cairo

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Univ., 1970; Ph.D., Appl. Org. Chem.,  
Cairo Univ., 1976.

**Dr. Zeinab H. Abdel Lattif**

Researcher, Applied Chemistry, 1980;  
B.Sc., Chem. Phys., Cairo Univ., 1962;  
M.Sc., Appl. Chem., Cairo Univ., 1966;  
Ph.D., Appl. Chem., Cairo Univ., 1971.

**Dr. Mahmoud M.A. El-Awady**

Researcher, Analytical Chemistry,  
1982; B.Sc., Chem. Geol., Alexandrai  
Univ., 1965; M.Sc., Appl. Chem., Cairo  
Univ., 1972; Ph.D., Anal. Chem., Cairo  
Univ., 1981.

**Dr. Bothyna M.A. Abdel-Hady**

Researcher, Chemical Engineering,  
1985; B.Sc., Chem. Eng., Cairo Univ.,  
1972; M.Sc., Chem. Eng., Cairo Univ.,  
1984.

**Dr. Soheir Yousef Tawfik**

Researcher, Applied Organi

Chemistry, 1984; B.Sc., Chem., Ain  
Shams Univ, 1973; M.Sc., Org. Chem.,  
Ain Shams Univ., 1978; Ph.D., Appl.  
Org. Chem., Ain Shams Univ., 1984.

**Dr. Magdy M.H. Ayoub**

Researcher, Polymers and Paints,  
1985; B.Sc., Chem., Cairo Univ., 1975;  
M.Sc., Marin Paints, Al-Azhar Univ.,  
1981; Ph.D., Polymers, Ain Shams  
Univ., 1985.

**Dr. Adel F. Younan**

Researcher, Applied Organic  
Chemistry, 1986; B.Sc., Chem., Cairo  
Univ., 1972; M.Sc., Appl. Org. Chem.,  
Mansoura Univ., 1980; Ph.D., Appl.  
Org. Chem., Ain Shams Univ., 1986.

**Dr. Samir H.B. Beshara**

Researcher, Chemistry, 1988; B.Sc.,  
Chem., Phys., Cairo Univ., 1972; M.Sc.,  
Appl. Org. Chem., Cairo Univ., 1979;  
Ph.D., Appl. Org. Chem., Cairo Unvi.,  
1988.

## Chemistry of Pesticides Dept.

### Dr. Bahiga M.A. Haggag

Associate Research Professor of Synthetic Organic Chemistry, 1985 ; Researcher, 1977 - 1985 ; B.Sc., Chem.-Phys., Ain Shams Univ. 1962 ; M.Sc., Org. Chem., Ain Shams Univ., 1968 ; Ph.D., Org. Chem., Ain Shams Univ., 1977.

### Dr. Ibtisam T. Hinnawy

Associate Research Professor of Applied Organic Chemistry, 1987 ; Researcher, 1980-1987 ; B.Sc., Chem.-Phys., Cairo Univ., 1963 ; M.Sc., Org. Chem., Cairo Univ., 1970 ; Ph.D., Org. Chem., Cairo Univ., 1980.

### Dr. Taghrid S. M. Hafiz

Associate Research Professor of Chemistry, 1988 ; Researcher, 1982 - 1988 ; B.Sc., Chem.-Phys., Ain Shams Univ., 1966 ; M.Sc., Org. Chem., Ain Shams Univ., 1975 ; Ph.D., Org. Chem., Cairo Univ., 1982.

### Dr. Naeim B. Hanna

Researcher, Organic Chemistry, 1984 ; B.Sc., Chem., Assiut Univ., 1972 ; M.Sc., Org. Chem., Ain Shams Univ., 1977 ; Ph.D., Org. Chem., Czechoslovakia, 1982.

### Dr. Galal A. M. Nawar

Researcher, Organic Chemistry, 1984 ; B.Sc., Chem., Cairo Univ., 1974 ; M.Sc., Org. Chem., Ain Shams Univ., 1980 ; Ph.D., Org. Chem., Ain Shams Univ., 1983.

### Dr. Yehia O. A. El-Khashaba

Researcher, Organic Chemistry, 1984 ; B.Sc., Sp. Chem., Cairo Univ., 1968 ; M.Sc., Org. Chem., Cairo Univ., 1973 ; Ph.D., Org. Chem., France, 1984.

### Dr. Wahid M. M. Bassyouni

Researcher, Organic Chemistry, 1988 ; B.Sc., Chem., Cairo Univ., 1978 ; M.Sc., Org. Chem., Cairo Univ., 1983 ; Ph.D., Chem., Ain Shams Univ., 1988.

## Glass, Refractories and Building Materials Dept.

### Dr. Nabil M. M. Ghoneim

Associate Research Professor of Chemical Industries, 1984 ; Researcher, 1976-1984 ; B.Sc., Chem.-Geol., Ain Shams Univ., 1965 ; M.Sc., Inorg. Chem., Cairo Univ., 1969 ; Ph.D., Inorg. Chem., Hungary, 1976.

### Dr. Ahmed W.A.M. El-Shennawy

Associate research Professor of Science and Technology of Glass, 1984 ; Researcher, 1978 - 1984 ; B.Sc., Chem.-Geol., Assiut Univ., 1965 ; M.Sc., Inorg. Chem., Cairo Univ., 1970 ; Ph.D., Appl. Phys. Chem., Cairo Univ., 1978.

### Dr. Ahmed S. M. Taha

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### Pretreatment and Finishing of Cellulosic Fibres Dept.

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