

## **PERSONAL PROFILE**

### **Personal data:**

**Ahmed Ali Ahmed Mahdi**

**Date and place of birth:** 1950, Um Ruwaba, Sudan

**Nationality:** Sudanese

**Marital status:** Married and father

**Present status:** Professor, microbiologist

**Languages:** Arabic, English

**Address:** Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, Sudan.

**Phone:** (+249) 912565833

**E-mail:** aamahdi@uofk.edu

### **Education and qualifications:**

1. 1962 -1966: Khor Taqqat Secondary School, Sudan: Sudan School Certificate, Division 1.
2. 1966 – 1971: Faculty of Agriculture, University of Khartoum, Sudan: B.Sc. (Honours) class 1.
3. 1972 -1975: Faculty of Agriculture, University of Khartoum: M.Sc. (Agric. Microbiology).
4. 1976 – 1980: University of Liverpool, United Kingdom: Ph.D. (Microbiology).

### **Academic titles:**

1. Teaching Assistant, Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, 1972 -1976.
2. Senior Scholar, Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, 1976 -1980 (scholarship to study for Ph.D. at the University of Liverpool, U.K.).
3. Assistant Professor, Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, 1980 -1993.
4. Associate Professor, Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, 1993.
5. Professor, July, 2004.

### **On-Job training:**

1. Certificate of Achievement, jointly awarded by the International Crops Research Institute for the Semi-arid Tropics (**ICRISAT**), India, Project for Nitrogen Fixation by Tropical Agricultural Legumes (**NifTAL**), USA, Food and Agriculture Organization (**FAO**) of the United Nations, and the United Nations Environment

Program (**UNEP**), Nairobi, after participation in the "Rhizobium Technology and Legume Inoculant Production Training Course", Hyderabad, India, Sept.-Oct.1993.

2.Certificate of Participation in the " International Training Course on Endomycorrhizas", Cairo Microbiological Resource Center (**MIRCEN**), 15-31 Jan. 1985.

3.Training on "Deoxyribonucleic Acid (DNA) Hybridization Technology", **Queen's University of Belfast**, March-May 1989.

4.Certificate of participation in the workshop on "Writing and Editing for Distance Education", **SOLO** and International Extension College, London (**IFC**), 1999.

5.Certificate of "Specialized Training on DNA Molecular Marker Techniques", awarded by the International Center for Agric. Research in the Dry Areas (**ICARDA**) and the National Center for Research (**NCR**), Feb. 2001.

## **PROFESSIONAL AND ACADEMIC EXPERIENCE**

### **Teaching:**

I taught, and am still teaching, the following courses to undergraduate and postgraduate students at the Faculty of Agriculture, University of Khartoum:

- 1.General Microbiology
- 2.Microbial Genetics
- 3.Microbial Physiology
- 4.Virology
- 5.Biofertilizer Technology and Water Recycling

### **Training and advisory services:**

1. Organized training course for extension workers and Khartoum State farmers on legume inoculation techniques, Faculty of Science, University of Khartoum, Sept.1987.
2. Provided training to scientists at the National Center for Research, Khartoum during the period 1989-1990 (when I was part-time director of the National Laboratory for Inoculant Production).
3. Provided advisory services to private Sudanese enterprises (e.g. the Sudanese Guar Company) on legume inoculant production.
4. Organized training course to members of staff (Faculties of Applied Sciences, University of Khartoum) on "Writing of Modules for Distance Education", 7-16 Dec. 1999, Faculty of Technological and Developmental Studies, University of Khartoum.
5. Supervised the training of many postgraduate students.

## **Supervision of postgraduate students:**

I supervised the research projects of the following postgraduate students who successfully obtained their academic degrees:

1. Abu Naib, Sayda Ahmed (1982). Studies on Root-nodule Bacteria of some Leguminous Plants and Inoculum Production in the Sudan. M.Sc., University of Khartoum.
2. Karrar, Kamal Ibrahim Mohamed (1984). Studies on Grain Legume Responses to Rhizobium Inoculation at Khartoum Province and Tokar Delta. M.Sc. University of Khartoum.
3. Abdalla, Izzeldin Osman (1984). Studies on the Suitability of Locally-available Materials as Carriers for Rhizobium. M.Sc. University of Khartoum.
4. Atabani, Ishraq Mohamed Abdel Gadir (1988). Interaction Between Root-nodule Bacteria and Endomycorrhizal Fungi in Soybean [*Glycine max* (L) Merrill] and Hyacinth Bean [*Lablab purpureus* (L) Sweet]. M.Sc. University of Khartoum.
5. Abdel Aziz, Mona Osman (1988). Influence of Certain Environmental Factors on the Nodulation and Yield of Soybean in the Sudan. M.Sc. University of Khartoum.
6. Mohamed Ahmed, Tag Elsir Hassan (1992). Influence of pH, Aluminium and Calcium on Rhizobium leguminosarum bv viciae and its Symbiosis with Faba Beans (*Vicia faba* L.). M.Sc., University of Khartoum.
7. Hamadto, Omayma Abdel Aziz (1993). Effects of Seed Source, Soil Type and Bradyrhizobium Strain Origin on Nodulation and Dry Matter Yield of *Acacia senegal*. M.Sc., University of Khartoum.
8. Galal El Din, Ikhlas Mohamed (1993). Effects of Inoculation with VA-Mycorrhizal Fungi on the Nodulation and Dry Matter Yield of Bradyrhizobium-inoculated Cowpea. M.Sc., University of Khartoum.
9. Ali, Huda Hassan (1993). Ethanol Production from Sugarcane Molasses. M.Sc., University of Khartoum.
10. Diab, Mai Mohamed Osman (1999). Utilization of Antibiotic Resistance Markers and Serological Techniques (Agglutination) in Assessing the Ecological Performance of Rhizobial Inocula. M.Sc., University of Khartoum.
11. Mohamed, Hanan Hassan (1999). Microbiological Examination of Gum Arabic (*Acacia senegal* Willd.) and its Degradability by Bacteria and Fungi. M.Sc., University of Khartoum.
12. Nour Eldaim, Amani Beshir (2001). Influence of Biofertilization and Chemical Fertilizers on Soybean. M.Sc., University of Khartoum.
13. Arbab, Amal Abdel Wahab (2001). Bradyrhizobium Inoculation of Soybean, and the Effects of Nitrogen and Phosphorus Fertilization. M.Sc., University of Khartoum.

14. Awouda, Eiman Abdalla (2001). Microbiological Assessment of the Performance of Soba Wastewater Stabilization Ponds. M.Sc., University of Khartoum.
15. Mustafa, Eiman Mohamed Ali (2002). Response of Cluster Bean to Bacterial Inoculation and to Nitrogen and Phosphorus Fertilization. M.Sc., University of Khartoum.
16. El Shoush, Sohair Gamal El Din Abdalla (2002). Studies on the Saprophytic Survival of Groundnut-nodulating Bacteria in the Sandy Soils of Western Sudan. M.Sc., University of Khartoum.
17. El Yass, Mona El Dissougi (2004). Biochemical, Serological and Entomopathogenic Characterization of *Bacillus thuringiensis* Isolates from Various Environments. M.Sc., University of Khartoum.
18. Hamza, Abdel Halim Abdalla (2004). Use of RAPD-PCR Fingerprinting for Clustering of Lactic Acid Bacteria from Sour Milk. M.Sc. University of Khartoum.

#### **Supervision underway:**

1. Mohamed, Somaya Beshir: Ph.D. candidate.
2. Galal El Din, Ikhlas Mohamed: Ph.D. candidate (co-supervisor).
3. Ahmed, Ibn Auf Mohamed: M.Sc. candidate.
4. Mohamed, Limya Sir Elkhatim: M.Sc. candidate.

#### **Books**

##### 1) Translation:

Translation of the book: Buxton A. and Fraser G. (1977). **Animal Microbiology**. Blackwell Scientific Publications. Translated into Arabic (1182 pp.):

2) Authorship: **A.A. Mahdi** (2004). **Basic General Microbiology** (355pp. in Arabic, University of Khartoum Press).

3) Authorship: **A.A. Mahdi** (2004). **Practical General Microbiology** (165 pp. in Arabic, University of Khartoum Press, in press).

4) Authorship: **A.A. Mahdi (2004). Biofertilization**. In arrangement between the University of Khartoum and the author (in preparation, in Arabic).

#### **VII. Affiliation to academic and professional societies:**

- 1.Member, the British Phycological Society, 1977-
- 2.Founding member, Sudanese Microbiology Society, 1987-
- 3.Founding member, Sudanese Biotechnology Society, 2001-
- 4.The Sudanese Agricultural Society.
- 5.The Sudanese Environment Conservation Society.
6. The Sudanese Agricultural Engineers Union.
- 7.The Sudanese Agricultural Council.

### **Conference and workshop participation**

- 1.The 25<sup>th</sup> annual conference of the British Phycological Society, Royal Holloway College, University of London, Jan. 1977 (attendance).
- 2.The 3<sup>rd</sup> International Conference on Photosynthetic Prokaryotes, Oxford University, Jan. 1979 (Joint contribution by Pearson, Howsley and **Mahdi** ).
- 3.First Coordination Meeting, Nile Valley Project of the International Center for Agricultural Research in the Dry Areas (ICARDA), Khartoum, Sept. 1981 (Joint contribution by Habish, **Mahdi** and Khairi).
- 4.The 2<sup>nd</sup> Coordination Meeting, ICARDA/IFAD Nile Valley Project, Khartoum, Sept. 1982 (Joint contribution by Habish and **Mahdi**).
- 5.The 3<sup>rd</sup> Coordination Meeting, ICARDA/IFAD Nile Valley Project, Sakha, Egypt, Sept. 1983 (Joint contribution by **Mahdi**, Mohamed and Mukhtar).
- 6.The 2<sup>nd</sup> Conference of the African Association for Biological Nitrogen Fixation (AABNF), Cairo, Egypt, Dec. 1986 (Participation in discussion).
- 7.Symposium of the British Institute of Biology, North Ireland branch, on "New Developments in the Production and Processing of Food", Belfast, April 1989 (Participation in discussion).
- 8.The 8<sup>th</sup> Conference of the African Association for Biological Nitrogen Fixation, Pretoria, South Africa, 23-27 Nov.1998 (Joint contribution by El Amin, **Mahdi** and Mekki).
- 9.The Workshop on "Writing and Editing for Distance Education", Khartoum, April 1999 (Training and award of certificate).
- 10.The Workshop on "DNA Molecular Marker Techniques for Crop Improvement", organized by ICARDA and the Commission for Biotechnology and Genetic Engineering, Khartoum, Feb.2001 (Training and award of certificate).

### **Administrative record**

1. Head, Department of Botany and Agricultural Biotechnology, Faculty of Agriculture, University of Khartoum, Dec.1984-March 1987.

2. Member, Faculty of Agriculture Board (U. of K.) for various periods, including: Nov.1981-Jan.1983, Dec.1984-March 1987, Sep.1992-March1993, Jan.2000-to date.
3. Member, University of Khartoum Senate, Dec.1984-March 1987.
4. Member, Faculty of Agriculture Research Board, Dec. 1984-March 1987.
5. Secretary, Faculty of Agriculture Research Board, 1992-1993.
6. Member, Graduate College Board (U. of K.), 1985-1987.
7. Member, Staff Affairs Committee (Shambat Campus), 1985-1993.
8. Member, Faculty of Agriculture Examinations Committee, 1981-1982.
9. Member, Faculty of Agriculture Computer Board, 1992-1993.
10. Member, Board of the Faculty of Technological and Developmental Studies (U. of K.), Feb.1999- Oct. 2002.
11. Coordinator, Intermediate Diplomas (Faculty of Agriculture), Feb.1999- Oct. 2002.
12. Care-taker Manager, University of Khartoum Farm, June 2001-Feb. 2002.
13. Member of Editorial Board, University of Khartoum Journal of Agricultural Sciences, July 2003- to date
14. Established the present Soil Microbiology and Biofertilizer Laboratory (Faculty of Agriculture) through personal initiative and contacts.
15. Professor (prima facie), August 2004.

### **C. EXTRA-CURRICULAR ACTIVITIES**

- 1.Scientist-in-charge, microbiology research, ICARDA/IFAD Nile Valley Project, 1981-1984.
- 2.Leader, Scientific Team for Implementation of the National Grain Legume Inoculation Program, National Council for Research, 1981-1985.
3. Scientist-in-charge, Project for Improvement of Legume Protein Production, United Nations Environment Program (UNEP) and the National Council for Research, 1984-1988.
4. Director (part-time), the National Laboratory for Legume Inoculant Production and Research, National Council for Research, 1989-1990.
- 5.Consultant, Microbiology Research, Sudan-Finland Forest Rehabilitation Program,1989-1991.
- 6.External Examiner for postgraduate degrees at many Sudanese and foreign universities.
- 7.Designed and implemented Microbiology Curricula for the Faculty of Science, Omar El Mukhtar University, Libya, during the period March 1993-Nov. 1997.