

## Curriculum vitae

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### **C1 PERSONAL INFORMATION**

DATE OF BIRTH : April 4, 1944  
NATIONALITY : Sudanese  
MARITAL STATUS : Married, with 4 children

### **C2 QUALIFICATIONS**

1969 B Sc American University of Beirut, Lebanon

1973 M Sc American University of Beirut, Lebanon  
“The effect of carbon /nitrogen ratio in growth, Sporulation and  
production of toxins by *Fusarium equisit*”

1980 Ph D Exeter University, United Kingdom  
“A survey of seed-borne fungi of *Sorghum bicolor* from the Sudan”

#### **C2.1 Other Professional Qualifications:**

1977 Training in seed technology at the National Institute of Agriculture Botany  
(NIAB), Cambridge, UK

1977 Training in fungal taxonomy at the Imperial Mycological Institute, Kew,  
London, UK

1983 Training in biotechnology with special reference to *Rhizobium*  
biotechnology a and production in Hyderabad, India, organized by FAO,  
UNEP NifTAL (Nitrogen Fixation for Tropical Agriculture Legume) and  
ICRISAT (Intl. Crop Research Inst. for Semiarid Tropics). Certificate

1984 Training in Biotechnology - *Rhizobium* technology, University of Hawaii,  
USA

1980 Certificate 1, Seed Technology and Seed Pathology offered by  
Danish Government Institute of Seed Pathology for Dev.  
Countries. (September 1980-February 1981) by examination

1996 Certificate. Reverse Osmosis Technology (Certificate) Middle East  
Desalination Research Center

**C2.2 Employment History**

- 1970- 1973 Teaching Assistant  
Department of Biology, College of Science  
American University of Beirut, Lebanon
- 1973-1980 Teaching Assistant  
Department of Botany, College of Science  
University of Khartoum, Khartoum, Sudan
- 1980-1986 Assistant Professor  
Department of Botany, College of Science  
University of Khartoum, Khartoum, Sudan
- 1986- Associated Professor (promoted), Department of Botany  
College of Science, University of Khartoum, Khartoum, Sudan
- 1986-1991 Assistant Professor  
Department of Biology, College of Science  
Sultan Qaboos University, Sultanate of Oman
- 1991-to date Associate Professor (promoted),  
Department of Biology, College of Science  
Sultan Qaboos University, Sultanate of Oman.
- 2002-2006 Head, Department of Biology

**C3 MEMBERSHIP OF SOCIETIES**

- 1977-2000 Member, British Mycological Society  
1990-2000 Member, American Mycological Society  
1975-to date Member, Sudan Society of Conservation of Environment  
1985-to date Member, Sudan Microbiological Society

**C3.1 Ongoing International Cooperation with scientists at –**

1. The University of Barcelona, Spain, Prof. Guarro on coprophious fungi in Oman.
2. Department of Cryptogamic Botany, France, Dr. J.Mouchaca, on Thermophilic fungi in Oman.
3. Centraalbureau voor Schimmelcultures Fungal Biodiversity Centre, The Netherlands, Dr. A.Aptroot, on fungal taxonomy.
4. Instituto Nacional Investigaciones Forestales, Department of Helminthology, Mexico, Dr. P.De Gives, on nematophagous fungi.
5. Botanischer Garten and Botanisches Museum, Berlin, Germany, Dr. J.M. Sipman, on lichens.

**C4 COURSES TAUGHT****C4.1 American University of Beirut**

1st year students	General Biology (Laboratory Practicals)
2nd year students	Plant Anatomy (Laboratory Practicals)
3rd year students	Mycology (Laboratory Practicals)

**C4.2 Exeter University, U.K.**

3rd year students	Mycology (Laboratory Practicals)
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**C4.3 University of Khartoum, Sudan**

1st year students	General Botany
2nd year students	Non-vascular Plants
3rd year students	Seed Pathology
5th year students	Mycology

**C4.4 Sultan Qaboos University, Muscat, Oman**

1st year students	BIOL1000 General Biology	
	BIOL2101 Consolidation Biology 1	
	BIOL2101 Introductory Biology 1	
	BIOL1091 Plant Biology for Agriculture	
2nd year students	BIOL2102 Consolidation Biology 2	
	BIOL2102 Introductory Biology 2	
3rd year students	BIOL 3441 Introductory Microbiology	
4th/5th year students	BIOL 4045 Economic Botany	
	BIOL 4401 Biological Techniques	
	BIOL 4400 Biology Teacher seminar	
	BIOL 5044 Mycology	
	BIOL 5120 Microbial Biotechnology	
	MSc students	BIOL 6205 Developmental Biology
	BIOL6204 Microbial Physiology	
BIOL 6213 Laboratory Techniques		

**C4.5 Supervisory & Examination Committees****C4.5.1 Supervision and Co-Supervision of B.Sc. Project Students**

1. A survey of aflatoxins and aflatoxigenic isolates of *Aspergillus flavus* in ground nuts (Mariam A. Al-Uremi 1992, supervisor).
2. A survey of the mycoflora of tea with special reference to *Aspergillus* spp. (Tagreed Al-Lawatia 1995, supervisor).
3. A survey of the mycoflora and aflatoxins in some animal feeds (Fatma Ahmed Al-Siyabi, 1997, supervisor).
4. A survey of the mycoflora and aflatoxins in some herbal plants used in Oman and the effect of Gamma radiation (Fatma Mohammed Al-Siyabi, 1999, supervisor).
5. A survey of the mycoflora and aflatoxins in spices (Tahiya Al-Rashdi, 2000, supervisor).
6. A survey of nematode trapping fungi in Oman with emphasis on trapping efficiency (Ratiba Al-Mueini, 2002, supervisor).

7. The effect of Aflatoxins B1 (AFB1) on the development of chick embryos (Yusra Al-Balushi, 2004, co-supervisor).
8. Aflatoxin and aflatoxigenic fungi in animal feed (Rahima Al-Anqudi, 2005, supervisor).
9. A survey of thermophilic fungi in different habitat in the Sultanate of Oman (Sara Al-Mahrouqi, 2006, supervisor).
10. Morphological changes on *Pseudomonas aurigenosa* in correlation to protein analysis (Manal Al-Khanbashi, 2006, co-supervisor).
11. Study of coliforms and variability of *E. coli* in distribution lines of TTSE used for irrigation (Amani Al-Khaifi 2006, co-supervisor).
12. Some aspects of leaf litter degradation in a mountain stream in the Sultanate of Oman (Maha Al-Riyami, 2006, co-supervisor).

#### **C4.5.2 Supervision and Co-Supervision of M. Sc. Students**

1. A survey of seed-borne fungi in some weeds in the Sudan (Sohair Abdalwahab, 1985, Botany Department, University of Khartoum, Sudan, supervisor).
2. Studies on the nodulation of some *Acaia species* by *Rhizobium* isolates (Adil Ali Elhussein, 1986, University of Khartoum, Sudan, supervisor).
3. Nodulation of chick pea by strains of *Rhizobium* (Issa Algaali, 1986, University of Khartoum, Sudan, supervisor).
4. The environmental impact in the reuse of treated sewage water for irrigation in the Sultanate of Oman (Ahmed Elshiriani, 1991, The Arab Gulf University, Al-Bahrain, co-supervisor).
5. Assessment of *Arbuscular mycorrizal* fungi inoculum potential to enhance growth of *Lycopersicon esculentum* plants in Oman (Mohammed Al-Yahiyaie, 2001, Sultan Qaboos University, co-supervisor).
6. The biology of *Diplodia theoborme* associated with mango sudden decline disease on Oman (Ali Obead Al-Adawi, 2002, Sultan Qaboos University, co-supervisor).
7. Microbial quality of drinking water in household storage tanks (Jamila Al-Hinai, 2002, Sultan Qaboos University, co-supervisor).
8. Horizontal infection of Bovian brown eggs by *Salmonella typhimurium* (Ibtisam Mustafa Juma, 2003, Sultan Qaboos University, co-supervisor).

#### **C4.5.3 Supervision of Ph.D. students**

Survey of seed-borne fungi of some leguminous crops of the Sudan (Saif Al-Nagerabi, 1996, University of Khartoum, Ph. D. supervisor)

**Committees Member for M. Sc.**

1. Biological treatment of Omani household Greywater using sequencing Batch Reactor (SBR) Technology (Aamaa Yasser Al Abri, 2006. External Examiner).
2. Microbial and physical quality of poultry meat (Taghreed M. Jaffer, 2005, Sultan Qaboos University, external examiner).
3. Chemical investigation of *Commiphora wightii* and *Haplophylum tuberculatum* for antimicrobial and pesticidal compounds (Suad Al-Burtomani 2004, Sultan Qaboos University, external assessor).
4. Impact of the new Shatii road on the coastal environment at Qurum Nature Reserve (Muna Mohammed Al-Dalali, 2003, Sultan Qaboos University, examination committee member).
5. Melissopalynological and biochemical studies of honey from Muscat and Al-Batinah regions, Oman (Aaliah M. Ali Al-Sajwani, 2003 Sultan Qaboos University, examination committee member).
6. Studies on the external assessment of steroidal glycoalkaloids in potato varieties growing in Oman (Sana Salem Al-Sinani, 2003, Sultan Qaboos University, examination committee member).
7. Vegetation assessment in relation to grazing in the Eastern Batinah (Leila Said Al-Harhi, 2002; Sultan Qaboos University, examination committee member).
8. Variability in natural host-pathogen relations: Characterization of *Bipolaris sorokiniana* –Barley-wheat pathosystem in Oman (Abdullah M. Al-Saadi, 2002, Sultan Qaboos University, external assessor).
9. Monitoring witches broom disease of lime (WBDL) though *in vitro* and *vivo* grafting in the Sultanate of Oman (Bakhit M. Tabouk, 2001, Sultan Qaboos University, external assessor).

**C4.6 Oman Mycological Culture Collection (OMCC)**

Oman The Royal Geographical Society reported the first fungal records for Oman: Wahiba Sands Project 1985-1986, in which five fungi and eight lichens were reported. I have been working on fungal mycoflora of Oman since 1987 and since then I have established a Fungal Collection for Oman, the species have been deposited at the Biology Department, College of Science, SQU, Oman, and some were Deposited at The Commonwealth Mycological Institute, UK; Centaalbureue von Schemilculture, The Netherlands; and FMR, Facultat de Medicina Universitat de Barcelona, Spain. A total of 108 species belonging to 59 genera was identified. Except for five species, all are new records for Oman; many are new records for the Gulf, and some others are new species. This is the first Fungal Culture Collection in the Arab World and it will enrich World Database of Fungal Biodiversity. Ecologically, these fungi could be classified as, Terrestrial, Coprophilous, Nematophagous and Aquatic. They could be an important source of new chemicals, antibiotics, enzymes, biological control and sequencing of fungal genomes for industrial and phytopathological purposes (see Appendix).

**C5. DEPARTMENTAL SERVICES AND ACTIVITIES**

1993-2004 Coordinator, Education Biology Students

1995-2002	Member, Project Evaluation Committee
1988-1992	Botanic Garden Committee
1988-1995	Member, Curriculum Committee
1988-todate	Member, Academic Appointment Committee
1996-todate	Member, M Sc Biology Committee
2002-2006	Member, Student Project Evaluation Committee
2002-2006	Chairman, Departmental Academic Promotion Committee
2002-2006	Chairman, Departmental Appointments Committee
2002-2006	Chairman, Deptl. Tech. Appointments & Promotions Committee
2002-2006	Chairman, Medical Laboratories Students Board of Studies
2002-2006	Chairman, M Sc. Environmental Science Steering Committee
2002-2006	Head, Department of Biology

### **C5.1 College of Science Services and Activities**

1992-1994	Member, College Board
2002-2004	Member, College Board
1999-to date	Member, Science/Education degree program committee
2002-2006	Member, College Board
1990-1994	Coordinator, Technician Training
1998-2002	College of Science Student Society Coordinator
1998-2002	First Year Student Coordinator
1994-2000	Member, Committee for Water Research
2005-2006	Coordinated the setting up of the Biology Strategic & Work Plan
2004–2005	Coordinated the planning of the New Biology Building
2002-2005	Appointed three Omani as demonstrators, sent them for MSc MSc now they are lecturers. (Now they are lecturers)
2006	Appointed two new expatriate academic staff as Associate

### **C5.2 Scholarly Activities**

1. Founder and Director, Soba Biotechnology Research Station, 1981-1988.
2. Founder and Managing Editor, *Sudan Journal of Science*, 1983-1985.
3. Established a Commercial Inoculant Production (Biotech. Plant at Soba, Sudan) for the Ministry of Technology, Sudan Government, 1985.
4. Reviewed a number of papers to Sultan Qaboos Journal for Scientific Research and for SQU Agricultural Journal and reviewed a book for the Society of Economic Botany, USA, "Soil fungi in Qatar and other Arab countries" by A.H. Moubasher, 1993.
5. Member, Editorial Board of World Journal of Agricultural Science Pakistan, 2006.
6. Member, Editorial Board of Pakistan Journal of Plant Pathology, Pakistan.
7. Chairman, Session 4 Environmental Research at Sultan Qaboos University: an overview of some contribution. Center for Environmental Studies and Research (CESAR), 3-31 Jan 2005, Sultan Qaboos University, Oman.
8. Part of a team that revised The Environmental Protection and Regulation for the Ministry of Regional Municipality, Environment and Water, June 1999.

### C5.3 Community Services

1. Seminar on nitrogen fixing bacteria in legumes, Horticultural Association Oman, October 27, 1992.
2. Setting up Biology Curriculum for Teacher's Training Colleges in collaboration with the Ministry of Education. 1995.
3. Organized and conducted a workshop on Microbiology Techniques Biology Department, College of Science, Sultan Qaboos University, Oman. 1996.
4. Training of Omani officials responsible for the research laboratory at the Public Authority for Marketing Agricultural Produce in techniques and procedures for microbiological analysis of water, food, milk and soil.
5. Training of Omani staff at (i) the College of Science, SOU, (ii) Ministry of Agriculture and Fisheries and (iii) the Royal Diwan on aflatoxins determination and quantification 2002, 2003, and 2004.
6. Department of Planning and Building at SQU for identification and eradication of fungi growing on University buildings and equipment.
7. College Farm at SQU for identification of plant pathogens.
8. Student Clinic and Microbiology Department SQUH for identification of fungi isolated from patients
9. Gulf Mushroom factory Compost Composition and Formulation Yield was increased from 1.5 Kg/metersquare to 24 Kg/metre square, Royal Diwan.
10. Aflatoxins in animal feed, Ministry of Agriculture and Fisheries, and Royal Diwan, Sultanate of Oman.
11. Sudan Government on commercial production of *Rhizobium* in *Rhizobium* Biotechnology.
12. Ministry of Commerce Setting aflatoxins standards.
13. Represented the University at the workshop on the preparation of a National Conservation Strategy for the Sultanate of Oman, June 18, 1989.
14. Attended a workshop on "Reverse Osmosis Technology" sponsored by USA, Sultanate of Oman and International Desalination Association for investigating problems related to reverse osmosis technology in Oman, April 21-24, 1966.

### C.5.4 Aflatoxins

For many years I have been inspecting and surveying aflatoxins in food and feed in Oman. Aflatoxins are a group of highly poisonous fungal metabolites produced by aflatoxigenic fungi when growing in food: nuts, groundnuts, oilseeds, cereals and their products, milk and milk products and on animal feed ingredients: soybean, wheat, barley, sorghum, maize etc.

Aflatoxins have been implicated in human diseases such as Hepatocellular carcinoma. Due to their acute toxicity and carcinogenicity WHO considered aflatoxin B1 as carcinogenic. Many countries have carried out surveys and

inspection programs for aflatoxins and accordingly imposed limits of tolerance on permissible concentrations of aflatoxins in food, feed and other products. I have carried out surveys of aflatoxins levels in selected food and feed in Oman. In the

process I have taught our students in mycology and microbial biotechnology courses methods of isolation and identification of aflatoxigenic fungi and extraction and quantification of aflatoxins in different food and feed. Similar training was offered to Omani officials at the research laboratories at the Ministry of agriculture and fisheries, Ministry of Municipality, Environment and Water and the Royal Diwan where state-of-the-art equipment was used for training.

As a consultant, I have been asked to review the Omani Standard No. 703/1997 and the Gulf Standard No.841/1997 on the Limits of mycotxins (Aflatoxins) in food and feed. I am glad that these Standards are being implemented by most of the Omani regulators that I have trained.

### C5.5 Nematode - trapping fungi

Nematode trapping fungi include a wide and diverse range of fungi which trap and parasitize nematodes. They are commonly found in agricultural soils and have been poorly studied in arid and desert habitats. Because they had not been previously been investigated in Oman, our study has given better understanding of the correlation between the distribution, diversity and morphological variation within Oman and differences with known temperate and tropical species.

With the increasing concern over environmental pollutants, some nematocides have been banned and others are threatened to be banned. This resulted in an increase on search for potential biological control agents of nematodes. We worked closely with the Department of Nematology, Al-Rumais Agriculture Research Centre, Ministry of Agriculture and Fisheries in testing the trapping efficiency of our isolates on different parasitic nematodes obtained from infested soils in Al-Batinah region. We obtained good results.

### C5.6 Coprophilous Fungi

Coprophilous fungi are associated with herbivore dung. They play an important role in ecosystems and are responsible for recycling the nutrients in animal faeces. This group is an important source of antibiotics, enzymes, and biological control agents. No work has been conducted on their taxonomy and ecology in Oman before. I have initiated a database for this group that included 45 species belonging to 25 genera distributed across different sites in Oman from a range of animal dung types. All the recorded species were new record for Oman and twenty-one are new records for the Arabian Peninsula. Three species new to science were discovered (*Thecotheus harasisus*, *Coprotus dhofarensis* and *Chaetomidium khodense*).

## C6. DISCOVERIES

Discovered **eight** novel fungal species that are new to science, three of them were from the Sultanate of Oman, namely:

1. *Setospheria khartoumensis* Etymol. after Khartoum capital of Sudan. Isolated from *Sorghum bicolor* as seed-borne pathogen.
2. *Exerohilum Khartoumensis* Etmol. After Khartoum capital of Sudan. Isolated from *Sorghum bicolor* as seed-borne pathogen.

3. ***Drechselera gedarifensis*** Etmol. after Gedarif, a town in Sudan. Isolated from *Sorghum bicolor* as seed-borne pathogen.
4. ***Derechslera curvispora*** Etmol. Latinized for curved spores. Isolated as seed-borne from *Triticum aestivum* grains obtained from Paraguay. The fungus causes leaf spots on *T. aestivum*.
5. ***Thecotheus harasisus*** Etymology; Latinized from Harsusi, a member of a Bedouin tribe in Oman where Arabian oryx was reintroduced. The fungus was isolated from Oryx dung, from Yaloni, Jidat Al-Harasis, Al-Dakhilia province, Sultanate of Oman, and from cow dung from Salalah. Worldwide 13 species were described: Six from North America, two from Taiwan, two from East Africa, one each from Oman, France and Himalayas. The ability of the species to produce novel bioactive substances has not yet been investigated.
6. ***Coprotus dhofarensis*** Etymology: after Dhofar province in Oman. This species was isolated from goat dung obtained from Hashir, Dhofar Province, and Sultanate of Oman. Species of this genus are distributed in East Africa, North America, and Asia.
7. ***Chaetomidum khodense*** Etymology: after Al-Khod, a town in Oman where Sultan Qaboos University is located. Isolated from cow dung collected from Wadi Hinna, Dhofar Province, by Dr. Taher Ba-Omar. In this genus there are seven species described from North America and Europe. The genus is related to *Chaetomedium*, which is well known for its production of cellulose digesting enzymes. The ability of this species to produce cellulose has not been investigated.
8. ***Navicella costaricaensis*** Etymology: after Costa Rica. Isolated from rainforest soil and plant debris in Costa Rica while attending a conference. There are only five described species, two from North America, and two from Europe and one from Oman. The capacity of this species to produce novel bioactive substances is under biotechnological investigation.

### C6.1 Research Interest

1. Surveys and taxonomic studies on the seed-borne, terrestrial, nematophagous and coprophilous fungi.
2. Mycotoxins in food and feed with special reference to aflatoxins.
3. Biofertilizer and *Rhizobium* biotechnology.
4. Thermophilic fungi, their taxonomy and enzyme production.

### C6.2 Research Grants

1. B1/96/05 1996. College of Science. Project title: Biodegradation of crude Oil and n-Alkanes by Fungi isolated from Oman.
2. Middle East Desalination Centre April 1998. Project Title: Identification of critical flux and crossflow conditions for control of bacterial and organic fouling of seawater reverse osmosis membranes. Biology Department, College of Science and College of Agriculture, SQU, as a Subcontractor in collaboration with Fairleigh Dickinson University, USA; UNESCO Centre for Membranes Science and Technology,

University of New South Wales, Sydney, Australia; Osmonics Inc., Rockland, MA, USA, Ministry of Electricity and Water. Muscat, Sultanate of Oman (as a Research Partner and Principle Investigator for SQU).

3. HM Project SR/SCI/CHEM/01/01 Chemistry Department as Principal Investigator, Biology Department as co-investigator. Project title: Bioactivity-Driven chemical investigation of Omani biodiversity for medicinally and agronomically valuable compounds: The development of Omani national product (co-investigator).
4. HM Project SR/ENG/CAED/04/01 Environmental Assessment of Muscat Area: Water dumping sites and health risks to population living in their vicinity. Civil Engineering Department as Principal Investigator and Department of Biology as Co-investigator.
5. IG/ SCI/BIOL/06/02.2006. Project title: Thermophilic Fungi in different Habitats in the Sultanate of Oman. In collaboration with Dr. J. Mouchaca of Lab. Cryptogamie, Museum Natural Historie Naturelle, France (Principal Investigator).

### C6.3 Research Publications

#### Field of Research : Mycology/Microbiology

#### C6.3.1 Books

Dissogi, L.A. & **Elshafie, A.E.** (1975). Botany Bibliography of the Sudan up to 1975. National Council for Research, Khartoum, Sudan.

#### C6.3.2 Journals

1. Habish, A.A. & **Elshafie, A.E.** (1974). Aflatoxin content of oilseed cakes and poultry feed mixtures. *Sudan J. Vet. Sci. & Anim. Husb.* 5: 61-69.
2. **Elshafie, A.E.** & Webster, J. (1979). *Trichometasphaeria turcica* as a root pathogen of *Sorghum bicolor* var. *Feterita* *Plant Disease Reporter* 63: 424-426.
3. **Elshafie, A.E.** & Webster, J. (1979). *Curvularia* species as parasites of *Rhizopus* and other fungi. *Trans. British Mycol. Soc.* 72(1): 352-353.
4. **Elshafie, A.E.** & Webster, J. (1980). Ascospore liberation in *Cochliobolus cymbopogonis*. *Trans. British Mycol. Soc.* 75(1): 141-146.
5. **Elshafie, A.E.** (1980). *Drechslera gedarefensis* a new species from *Sorghum* grain. *Trans. British Mycol. Soc.* 74: 437-438.
6. **Elshafie, A.E.** & Webster, J. (1981). A Survey of Seed-Borne Fungi in *Sorghum bicolor* from the Sudan. *Trans. British Mycol. Soc.* 77(1): 756-760.
7. **Elshafie, A.E.** & Webster, J. (1981). *Setosphaeria khartoumensis* Sp. nov., and its *Exserohilum conidial* state, *Trans. British Mycol. Soc.* 77(2): 28-32.
8. **Elshafie, A.E.** (1982). Ascospore liberation in *Cochliobolus miyakei*. *Trans. British Mycol. Soc.* 78(2): 366-367.
9. **Elshafie, A.E.** (1982). *Drechslera curvispora*: a new species from seeds of *Triticum aestivum*. *Trans. British Mycol. Soc.* 78(3): 545-547.
10. **Elshafie, A.E.** (1985). Taxonomic studies on the seed-borne fungi of the Sudan. 1. *Drechslera*. *Sudan Journal of Science*, 1: 62-84.
11. **Elshafie, A.E.** (1986). Taxonomic studies on the seed-borne fungi of the Sudan. 2. *Curvularia*. *Sudan Journal of Science* 2: 51-69.
12. **Elshafie, A.E.**, K.M. Abdelbasit & M.H. Abdalla (1991). Aflatoxin production and morphological characters of *Aspergillus flavus* isolates from Sudan. *Indian Journal Microbiol. Ecol.* 2: 79-85.

13. **Elshafie, A.E.** & Elhussein, A.A. (1991). An evaluation of *Rhizobium* survival in two carriers new to Sudan. *Expl. Agric.* 27: 319-321.
14. Gene, J., **Elshafie, A. E.** & J. Guarro (1993). Two new *Coprophilous pezizales* from the Sultanate of Oman. *Mycotaxon XLVI*: 275-284.
15. Cano, J., J. Guarro & **Elshafie, A.E.** (1993). A new chaetomidium from Oman. *Mycotaxon* 1994.
- 16 **Elshafie, A.E.**, Victor,R. and Al-Mugbali, N. (1997). Nodulation of *Medicago sativa* L. by different *Rhizobium* strains in the Sultanate of Oman. *Science and Technology* 2:1-4.
17. El-Nagerabi, S.A.F., **Elshafie, A.E.** & Abdalla A.H. (1998). Incidence of fungi and aflatoxins in Sudanese cowpea seeds. *Univ. Khartoum J. Agri. Sci.* 6(2): 61-73.
18. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (1998). Taxonomic studies of seed-borne mycoflora of the Sudan. I: *Aspergillus* and their teleomorphs. *Taiz Univ. Res. J.* 1: 96-133.
19. **Elshafie, A.E.** & A-Shally, N.S. (1998). Mycoflora and mycotoxigenic moulds of pistachio nuts for human consumption in the Sultanate of Oman. *Sci. Technol.* 3:1-6.
20. Esechie, H., Rodriguez, V. & **Elshafie, A.E.** (1998). Biomass production, nodulation and acetylene reduction activity of alfalfa grown under stress condition. *J. Plant Nutrition* 21(3): 489-503.
21. **Elshafie, A.E.** & Sipman, H.J.M. (1999). Mediterranean lichens of the mist oasis of Erkwit, Sudan, *Tropical Bryology* 16: 103-108.
22. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (1999). Taxonomic studies on seed-borne mycoflora of the Sudan II: *Alternaria* and *Cladosporium*. *Taiz Univ. Res. J.* 2:1-22.
23. **Elshafie, A.E.**, Al-Lawatia, T. & Al-Bahry, S.N. (1999). Fungi associated with black tea and tea quality in the Sultanate of Oman. *Mycopathologia* 145: 89-93.
24. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (2000). Incidence of seed-borne and aflatoxins in Sudanese lentil seeds. *Mycopathologia* 149:151-156.
25. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (2000). Taxonomic studied on the seed-borne mycoflora of the Sudan IV: *Curvularia* and *Drechslera*. *Taiz Univer. Res. J.* 3:1-22.
26. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (2000). Composition of mycoflora and aflatoxins in lupine seeds from the Sudan. *Phytopathol. Mediterr.* 39:257-262.
27. El-Nagerabi, S.A.F., **Elshafie, A.E.** & Abdalla A.H. (2000). Composition of mycoflora and aflatoxins in pea seeds from the Sudan. *Kuwait J. Sci. Engg.* 27(10): 109-121.
28. El-Nagerabi, S.A.F., **Elshafie, A.E.** & Abdalla, A.H. (2000). Studies on mycoflora and aflatoxins of soybean seeds from the Sudan. *Sudan J. Sci. Res.* 7(1): 55-74.
29. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (2001). Determination of seed-borne fungi and aflatoxins in Sudanese Guar seeds. *Trop. Sci.* 41: 31-35.
  
30. **Elshafie, A.E.** & Ba-Omar, T. (2001). First report of *Albizia lebbck* dieback caused by *Scyalidium dimidiatum* in Oman. *Mycopathologia* 154: 37-40.
31. El-Nagerabi, S.A.F., **Elshafie, A.E.** & Abdalla, A.H. (2001). Incidence of fungi and aflatoxins in Sudanese faba bean seeds. *Univ. Khartoum J. Agri. Sci.* 9(1): 82-95.

32. El-Nagerabi, S.A.F. & **Elshafie, A.E.** (2001). Seed-borne mycoflora of some leguminous crops of Sudan. *Sudan Notes & Records* 5:169-180.
33. **Elshafie, A.E.**, Al-Rashdi, T.A., Al-Bahry, S.N. & Bakheit, C.S. (2002). Fungi and aflatoxins associated with spices in the Sultanate of Oman. *Mycopathologia* 155: 155-160.
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