

# Curriculum Vitae

## Personal Data

**Name:**Sawsan Ali Omer

**Nationality:**Sudanese

**Languages:** Arabic & English

**Religion:**Muslim

**Work at:** King Saud University

**Employee number:** 78550

## General Education

1969-1974 Kassala Elementary School for Girls.

1975-1978 Khartoum North Intermediate School for Girls

1979-1982 Khartoum Secondary School for Girls.

## University Qualifications

Degree	University	Country
B.V.Sc 1987	University of Khartoum	Republic of Sudan
M.V.Sc 1990	University of Khartoum	Republic of Sudan
PhD 1997	University of Khartoum	Republic of Sudan

## Training:

Training course in Molecular Biology, Conservation Genetics Group, Institute of Zoology, Zoological Society of London, UK. During this course techniques related to DNA extraction, PCR, using PCR to diagnose bacteria and parasites, sequencing and microsatellites were learnt.

Experienced with different techniques used in haematology, blood chemistry, parasitology, microbiology and histopathology. Received training on laboratory diagnostic methods at The King Khalid Wildlife Research Centre (KKWRC).

**2010 – Date:** Assistant Professor, Department of Zoology, College of Science, King Saud University.

**2001 – 2010:** Researcher performing different research activities carried out by the Veterinary Laboratory and the genetics Laboratory at KKWRC. Working in a multidisciplinary laboratory. Routine work included: haematology, biochemistry, microbiology, parasitology, histopathology and molecular genetics work.

Teaching basic Biology Course to the first year students at Princess Nora bint Abdulrahman University, Riyadh.

**1993 - 1997:** PhD Postgraduate student, Faculty of Veterinary Science, University of Khartoum. Title of the PhD Thesis “Studies on *Commiphoramyrrha* (Morr)”.

**1988-1990:** Research Assistant at the National Centre for Research (NCR), Khartoum, Sudan, and MVSc postgraduate student.

### **Research Activities**

My research covers the following aspects:

- 1- Investigations of comparative antibacterial activity of various extracts of the plant "*Commiphoramyrrha*" with emphasis on *Candida albicans*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus albus* and *Bacillus subtilis*.
- 2- Toxic effect of plant products and feed additives in chickens, rats and small ruminants especially goats. In these studies, clinical, pathological, biological, haematological, microbiological and histological techniques have been used.
- 3- The use of the Polymerase Chain Reaction (PCR) in studying phylogenetic relationships of the endangered Arabian gazelles in the Kingdom of Saudi Arabia and in the Arabian Peninsula. I have also used the PCR techniques for detection of animal pathogens including bacteria, parasites and viruses. Of these organisms I worked with: *Brucella abortus* and *Brucella melitensis*, *Mycobacterium tuberculosis*, *Mycobacterium bovis*, *Mycobacterium avium*, *Pasteurella multocida*, *Anaplasma* spp., *Sarcocystis* spp., *Theileria* spp., *Babesia* spp., Avian Influenza (AI) and Malignant Catarrhal Fever (MCF) viruses.

## **Publications:**

### **2016 - 2017 :**

- 1- Sawsan A Omer, Ashwag A Alzuraiq, Osama B Mohammed (2017). Prevalence and molecular detection of *Sarcocystis* spp. infection in the dromedary camel (*Camelus dromedarius*) in Riyadh city, Saudi Arabia .*Biomedical Research* 28 (11): 4962-4965
- 2- Omer, S.A.1 and Alanazi, A.S. (2016). Coprologic and molecular prevalence of *Giardia duodenalis* from children in Tabuk City, Saudi Arabia.( *Tropical Biomedicine* 33(2): 320–326 .
- 3- Ebtesam M. Al-Olayan<sup>1</sup>, Manal F. El-Khadragy<sup>1,2</sup>, Sawsan A. Omer<sup>3</sup>, Mohamed Tarek M Shata<sup>4</sup>, Rami B. Kassab<sup>2</sup> and Ahmed E. Abdel Moneim (2016). The Beneficial Effect of Cape Gooseberry Juice on Carbon Tetrachloride Induced Neuronal Damage.( *CNS & Neurological Disorders - Drug Targets*, 2016, 15, 000-000.

### **2014:**

- 4- EBTESAM M. AL-OLAYAN, DINA M. METWALLY, DALIA FOUAD SAWSAN A. OMER,, HANAN HELMI (2014) . Molecular characterization of camel, sheep and goat *Echinococcus granulosus* isolates in Riyadh, Saudi Arabia. *MITTEILUNGEN KLOSTERNEUBURG*,64(2014) 9.ISSN 0007-5922
- 5- Sawsan Ali Omer, Mai A. Elobeid, Maha ElAmin, Promy Virk, Maha Dagestani, Nadia AlEisa, Reem AlAjami, Ebtisam AlOlayan, Albandary AlRajeh and Amira AlMahasna. (2014). Effect of various level of dietary *Commiphora myrrha* on rats *Wulffnia* vol 21,ISSN1561-882X

### **2013**

- 6- Ann Apio, Osama B. Mohammed, **Sawsan A. Omer**, Torsten Wronski (2013). Cross infection with gastro-intestinal tract parasites between domestic goat and endemic

- Farasan gazelle (*Gazella gazella farasani*) in Farasan Islands, Saudi Arabia Journal of King Saud University – Science 25: 325–329
- 7- Maha H. Elamin, Maha H. Daghestani, **Sawsan A. Omer**, Mai A Elobeid, PromyVirk, Ebtesam M. Al-Olayan, Zeinab K. Hassan, Osama B. Mohammed and Abdelilah Aboussekhra.(2013)Olive oil oleuropein has anti-breast cancer properties with higher efficiency on ER-negative cells. *Journal Food and Chemical Toxicology* 53: 310-316.
  - 8- Abdulaziz N. Alagaili,**Sawsan A. Omer**, Tim C. Bray, Osama B. Mohammed.(2013).Reference data of haematology and serum biochemistry in adult wild-caught Libyan jird (*Meriones libycus*) from central Saudi Arabia Journal of King Saud University – Science 25: 307–311
  - 9- Maha El-Amin; Promy Virk; Mai Abdel Rahman Elobeid; Zainab Mohammed Almarhoon; Zeinab Korany Hassan; **Sawsan Ali Omer**; Nada Mohammed Merghani; Maha Hassan Daghestani; Ebtisam Mohammed Al-Olayan . (2013) Anti-diabetic effect of *Murraya koenigii* (L) and *Olea europaea* (L) leaf extracts on streptozotocin induced diabetic rats. *Pak J Pharm Sci* 26, 359.
  - 10- P. Virk, M.Elobeid, Sherifa Hamad, Z. Korany, M. Al-Amin, **S. Omer**, E. AlOlayan, M. Daghestani, M. Siddiqui, Nada Mirghani.(2013).Ameliorative effects of *Embilica officinalis* and *Rosmarinus officinalis* on Cadmium-Induced Oxidative Stress in Wistar Rats . *Journal of Medicinal Plant Research*, Vol. 7(14), pp. 805-818
  - 11- Zeinab Korany Hassan<sup>1,2\*</sup>, Maha Hussein Elamin<sup>1</sup>, **Sawsan Ali Omer<sup>1</sup>**, Maha Hassan Daghestani<sup>1</sup>, Ebtesam Salah Al-Olayan<sup>1</sup>, Mai AbdelRahman Elobeid<sup>1</sup>, Promy Virk<sup>1</sup> . Oleuropein Induces Apoptosis Via the p53 Pathway in Breast Cancer Cells. DOI:<http://dx.doi.org/10.7314/APJCP.2013.14.11.6739>

## 2012:

- 12- **Sawsan A. Omer**, Ebtesam M. Al-Olayan, Maha, H. El-Amin, Zeinab K. Hassan, Maha H. Daghestani and Osama B. Mohammed. (2012). Experimental *Cassia senna* Intoxication in Lohmann Broiler Chicks. *Journal of Medicinal Plants Research*, Vol. 6(17), pp. 3306-3310.
- 13- Ibrahim Al-Khalifa,Riyadh Al-jumaah, Mansour Hussein, Osama Mohammed, **Sawsan A. Omer** and William Macasero. (2012). Serologic prevalence of *Coxiella burnetii* in captive wild ruminants in Saudi Arabia. *Journal of Comparative Clinical Pathology*, 21: 33-38.

- 14- **Sawsan A. Omer**, Torsten Wronski, Azzam Alwash, Maha H. Elamin, Osama B. Mohammed, and Hannes Lerp. Evidence for persistence and a major range extension of the Arabian Smooth-coated Otter, *Lutrogale perspicillata maxwelli* (Mustelidae, Carnivora) in Iraq. **Folia Zoologica**, , **61**: 172-176.
- 15- **Sawsan A. Omer**, Mai A. Elobeid, Dalia Fouad, Maha H. Daghestani, Ebtesam M. Al-Olayan, Maha H. Elamin, Promy Virk, Ameera El-Mahassna. Cadmium Bioaccumulation and Toxicity in Tilapia Fish (*Oreochromis niloticus*). *Journal of Animals and Veterinary Advances*,
- 16- Osama B. Mohammed , **SawsanA. Omer**, Abdulaziz N. Alagaili andM. F. Hussein. Parasites of the Arabian oryx (*Oryxleucoryx*, Pallas, 1777) and their Prevalence in the Kingdom of Saudi Arabia. *Comparative Parasitology*. Comparative Parasitology 79(2):288-292
- 17- Osama B. Mohammed, **Sawsan A. Omer** and Abdulaziz N. Alagaili. Redescription of *Eimeriadorcadis* Mantovani, 1966 (Apicomplexa: Eimeriidae) from the Dorcas Gazelle (*Gazella dorcas*) in Saudi Arabia. *Folia Parasitologica* Folia parasitologica 02/2012; 59(1):27-31..
- 18- Maha H.Elamin, Ebtesam M. Al-Olyan, **Sawsan A. Omer** and Osama B. Mohammed. (2012). Molecular Detection and Prevalence of *Toxoplasma gondii* in Pregnant Women in Sudan. *African Journal of Microbiology Research*. 6: 308-311.
- 19- **Sawsan A. Omer**, Ebtesam M. Al-Olayan, Maha, H. El-Amin, Zeinab K. Hassan, Maha H. Daghestani and Osama B. Mohammed. (2012). Experimental *Cassia senna* Intoxication in Lohmann Broiler Chicks. *Journal of Medicinal Plants Research*.
- 20- Mai A Elobeid, Zainab M Almarhoon, Promy Virk, Zeinab K Hassan, **Sawsan A Omer**, Maha ElAmin, Maha H Daghestani and Ebtisam M AlOlayan. (2012). Bisphenol A Detection in Various Brands of Drinking Bottled Water in Riyadh, Saudi Arabia Using Gas Chromatography/Mass Spectrometer.*Tropical Journal of Pharmaceutical Research*,13: 455-459.
- 21- Maha H. Daghestani, ArjumandWarsy, Mazin H. Daghestani, Ali N. Al-odaib, Abdelmoneim Eldali, Nadia A. Al-Eisa, **Sawsan A. Omer**, and ZeinabK. Hassan. (2012). Arginine 16 Glycine Polymorphism in  $\beta$ 2-AdrenergicReceptor Gene is Associated with Obesity, Hyperlipidemia, Hyperleptinemia, and Insulin Resistance in Saudis. *International Journal of Endocrinology*, doi:10.1155/2012/945608
- 22- **Sawsan A. Omer**, Mai A. Elobeid, Maha H. Elamin, Zeinab K Hassan, Promy Virk, Maha H. Daghestani, Ebtesam M. Al-Olayan. (2012). Toxicity of Olive leaves (*Olea*

*europaea* L.) in Wistar albino rats. *Asian Journal of Animal and Veterinary Advances*, 7:1175-1182.

- 23- Zeinab K. Hassan, Maha H. Elamin, Maha H. Daghestani, **Sawsan A. Omer**, Ebtesam M. Al-Olayan, Mai A Elobeid, Promy Virk, Osama B. Mohammed. (2012). Oleuropein induces anti-metastatic effect in breast cancer. *Asian Pacific Journal*, 13:4555

**2011:**

- 24- **Sawsan A. Omer**, Wafa A. Al-megrin, Abdulaziz N. Alagaili, Mai A. Elobeid and Osama B. Mohammed. (2011). A new protocol for the treatment of *Brucella melitensis* in Neumann's gazelle (*Gazella erlangeri*) from Saudi Arabia using oxytetracycline and streptomycin. *African Journal of Biotechnology*, 10: 11075-11080.
- 25- Abdulaziz N. Alagaili, Osama B. Mohammed and **Sawsan A. Omer** (2011). Gastrointestinal parasites and their prevalence in the Arabian red fox (*Vulpes vulpes arabica*) from the Kingdom of Saudi Arabia. *Veterinary Parasitology*, 180: 336-339.
- 26- Timothy Wachter , Torsten Wronski , Robert L. Hammond , Bruce Winney, Mark J. Blacket , Kris J. Hundertmark, Osama B. Mohammed, **Sawsan A. Omer**, William Macasero, Hannes Lerp , Martin Plath, Christoph Bleidorn. (2011). Phylogenetic analysis of mitochondrial DNA sequences Reveals polyphyly in the goitred gazelle (*Gazella subgutturosa*). *Conservation Genetics*, 12: 827-831.
- 27- Mohammed S. Al Saggaf, **Sawsan A. Omer**, Abdulla S. Khaliel, Abdulaziz N. Alagaili and Osama B. Mohammed. (2011). Normal Bacterial Flora from Idmi (*Gazella gazella*) and Reem Gazelles (*Gazella subgutturosa marica*) in Saudi Arabia. *African Journal of Microbiology Research*, 5: 5090-5096.
- 28- **Sawsan A. Omer**, A. Apio, T. Wonski and O.B. Mohammed. (2011). A new Coccidian Parasite (*Eimeria farasanii* n. Sp.) Indicates Parasite-Host Specificity in Endemic Farasan Gazelle. *International journal of Zoological Research*, 7: 85-92.
- 29- **Sawsan A. Omer**, S.E.I. Adam and O.B. Mohammed (2011). Antimicrobial Activity of *Commiphora myrrha* against some Bacteria and *Candida albicans* Isolated from Gazelles at King Khalid Wildlife Research Centre. *Research Journal of Medicinal Plants* 5: 65-75.
- 30- Mohammed, O. B., **Omer, S. A.** and Macasero W. V. and Kock, R. A. (2011). Serum biochemistry reference range values for Arabian Mountain gazelle (*Gazella gazella*) and Arabian Sand gazelles (*Gazella subgutturosa marica*) at King Khalid Wildlife Research Centre. *Journal of Comparative Clinical Pathology*, 20: 187-191.

#### 2010:

- 31- Wronski T., Wachter T., Hammond R. L., Winney B., Hundertmark K., Mark J. Blacket., Mohammed O. B., Flores. B., **Omer. S. A.**, Macasero. W., Plath. M., Ralph Tiedemann, R. and Bleidorn, C. (2010). Two reciprocally monophyletic
- 32- mtDNA lineages elucidate the taxonomic status of Mountain gazelles (*Gazella gazella*). *Systematics and Biodiversity*, 8: 119-129. DOI: 10.1080/14772001003613192.
- 33- Hussein., M. F., Al-Jumaah, R. S., Al-Haidary, A., Mohammed. O. B., **Omer. S. A.**, Gar Elnabi. A. And Macasero. W. V. (2010). Platelet indices and their relation to red cell parameters in the dromedary camel (*Camelus dromedarius*). ***Veterinarski Arhiv*80: 375-382.**
- 34- Hussein., M. F., Al-jumaah, R. S., Homeida A. M., Al haidary., A. A., Alshaikh., M. A., Gar Elnabi. Mohammed. O. B., **Omer S. A.**, Macasero, W. V. (2010). Coagulation profile and platelet parameters of the Arabian Sand gazelle (*Gazella Subgutturosa marica*): comparison with human and camels. ***Journal of wild life diseases*46: 1165-1171**

#### 2009:

- 35- Hussein, M. F., Al-Jumaah, R. S., Al-Haidary, A., Alshaikh, M. A., Gar Elnabi, A., Mohammed, O. B., **Omer S. A.** and Macasero, W. V. (2009). Blood platelet indices and parallel red cell parameters in the Arabian mountain gazelle. *Research Journal of Biological Sciences*, 4: 785-788.

#### Before 2009:

- 36- Alshaikh , M. A. A., Al-Haidry, A. I., Al-Jumaah, R. S., Mohammed, O. B., Al-Korashi, M. M., **Omer, S. A.**, Gar Elnabi, A. R. and Hussein, M. F. (2007). First detection of *Brucella abortus* in camel serum in Saudi Arabia using the Polymerase Chain Reaction. *Journal of Applied Animal Research*, 31: 149-152.
- 37- Mohammed, O. B., **Omer, S. A.** and Sandouka, M. A. (2007). The efficacy of Ivermectin and Levamisole against natural *Nematodirus pathiger* infection in the Arabian Sand Gazelle (*Gazella subgutturosa marica*) and the Arabian Mountain Gazelle (*Gazella Gazella*) In Saudi Arabia. *Veterinary Parasitology*, 150: 170-173.
- 38- Mohammed, O. B., **Omer, S. A.**, Macasero W. V. and Hundertmark, K. J. (2005). Molecular Characterization of *Brucella* infecting Arabian Sand gazelle (*Gazella subgutturosa marica*) in Saudi Arabia. Proceedings of the 3<sup>rd</sup> Annual Meeting of Wildlife Disease Association (Africa and Middle East section). Abu Dhabi. 10-13 December 2004.

- 39- **Omer, S. A.**, Adam. S. E. I. and Khalid, H. E. (1999). Effects on rats of *Commiphoramyrrha* extract given by different routes of administration. *Veterinary and Human Toxicology*, 41: 193-196.
- 40- **Omer, S. A.** and Adam, S. E. I. (1999). Toxicity of *Commiphoramyrrha* to goat. *Veterinary and Human Toxicology*, 41: 299-301.
- 41- Ibrahim, I. A., **Omer, S. A.**, Khalid, S.A. and Adam, S. E. I. (1993). On the toxicology of *Azadirachta indica* leaves. *Journal of Ethnopharmacology*, 35: 293.
- 42- **Omer, S. A.**, Ibrahim, F. H., Khalid, S.A. and Adam, S. E. I. (1992). Toxicological interactions of *Abrus precatorius* and *Cassiasenna* in the diet of *Lohmann* broiler chick. *Veterinary and Human Toxicology*, 34: 310-313.
- 43- Ibrahim, I. A., **Omer, S. A.**, Ibrahim, F. H., Khalid, S. A. and Adam, S. E. I. (1992). Experimental *Azadirachta indica* toxicosis in chick. *Veterinary and Human Toxicology*, 34: 221-224.
- 44- Ibrahim IA, Khalid, SA., **Omer SA**, Adam SEI. Effects of the ripe fruit of *Azadirachta indica* on chicks. *Veterinary and Human Toxicology*.

#### **Under publication**

- 1- **Sawsan A. Omer**, Amal .S.A, Maha El-Amin. Prevalence and Molecular Characterization of *Giardia duodenalis* among Primary School Children in Tabuk City.
- 2- **Sawsan A. Omer** .Toxic effect of *Commiphoramyrrha* oleo-gum resin on rats
- 3- Omer, S. A., Adam, S. E. I. Response of pregnant Nubian goat to oral administration of *Commiphora myrrha* oleo-gum resin.
- 4- Osama B. Mohammed, **Sawsan A. Omer**, William V Macasero, *et al.* Tropical theileriosis in the Arabian oryx (*Oryx leucoryx*) in Saudi Arabia.

#### **Teaching Activity**

1. Teaching basic biology course and molecular biology at Princess Nora bint Abdulrahman University, 2009.
2. Gave a seminar on the toxicity and the antimicrobial activity of the *Commiphoramyrrha* to the Riyadh Biochemistry Group at King Faisal Specialist Hospital, Riyadh, 1996.

#### **Conferences:**

- 1- Celebrating 50 years in Parasitology in the UK University of Strathclyde, Glasgow, Scotland (10-5-1433 to 13-5-1433) with a special programme of speakers and events Spring Meeting includes our biennial Trypanosomiasis and Leishmaniasis Seminar
- 2- 14th International Conference Functional Foods and Bioactive Compounds in the Management of Chronic Inflammation: Science and Practical Application. at University of California, Los Angeles August 20-22, 2013



3- THE 15<sup>TH</sup> NAPRECA SYMPOSIUM. Sudan Khartoum University.

**Conferences, Seminars and Symposia attended:**

1. 14th International Conference Functional Foods and Bioactive Compounds in the Management of Chronic Inflammation: Science and Practical Application. University of California, Los Angeles August 20-22, 2013
2. THE 15<sup>TH</sup> NAPRECA SYMPOSIUM. Sudan Khartoum University.
3. Celebrating 50 years in Parasitology in the UK University of Strathclyde, Glasgow, Scotland(10-5-1433to13-5-1433) with a special programme of speakers and events Spring Meeting includes our biennial Trypanosomiasis and Leishmaniasis Seminar
4. Symposium of the Faculty of Veterinary Science, University of Khartoum, Sudan on occasion of the Golden Jubilee, Friendship Hall, Khartoum,1987.
5. International Symposium on the development of Animal Resources, Friendship Hall, Khartoum, 1988.
6. The 6<sup>th</sup> International Conference of Wildlife Diseases Association, Berlin, Germany, 1990.
7. Workshop on priorities of Research on Tick and Tick-borne Diseases in Sudan, Central Veterinary Research Laboratory, Khartoum, Sudan, 1990.
8. The First Scientific Conference, National Centre for Research, Friendship Hall, Khartoum, 1993.
9. The International Conference on the Arabian Oryx in the Arabian Peninsula, the 23<sup>rd</sup> Annual Meeting of the Saudi Biological Society. King Fahad Cultural Centre, Riyadh, 21<sup>st</sup> – 23<sup>rd</sup> April 2007.
10. Impact of Emerging Zoonotic Diseases on Human Health Workshop. King Faisal Specialist Centre and Research Centre,Postgraduate Centre. Riyadh, 15<sup>th</sup> – 16<sup>th</sup> May 2007.

**11. Workshop at King Saud University 1.2.3.4 by Sawsan A. Omer**

- 1- Agarose Gel Electrophoresis  
Wednesday: 11/11/2012 --- 29/12/1433
- 2- Agarose Gel Electrophoresis (Princes Noura bin Abdourhman University)  
Wednesday 5/12/2012 --- 21/1/1434
- 3- Extraction of DNA from a clinical material for detection of pathogens  
Wednesday: 17/12/2012 --- 6/2/1434
- 4 - Enzyme-Linked Immunosorbent Assay ( ELISA)  
Saturday: 15/12/2012 --- 2/2/1434
- 4- Basics of Cancer Biology

Monday : 24/12/2012 --- 11/2/1434

**Memberships**

- 1- Academic Society for Functional Foods and Bioactive Compounds (ASFFBC) (UCLA) USA
- 2- Member of the Sudan Veterinary Association since 1987.
- 3- Member of the Arab Veterinary Teacher and Research Workers, 1987-present.
- 4- Member of the Saudi Biological Society.

**Present Address**

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