

# Curriculum Vitae

## Personal information

Name	Diaeldin Ahmed Salih Hassan
Date and place of birth	31 July 1972, Atbara, Sudan
Nationality	Sudanese
Religion	Muslim
Marital status	Married, with two daughters and one son

## Present affiliation

Assistant professor  
Ministry of Animal Resources and Fishers  
Animal Resources Research Corporation  
Veterinary Research Institute  
Khartoum– Sudan.

E-mail: [Diaeldin2000@hotmail.com](mailto:Diaeldin2000@hotmail.com)

Tel: +249-183-380015

Fax: +249-183-380011

Cell phone: +249-912649292

## **Education**

- 1978 - 1984      Gharbia Primary School – Atbara – Sudan
- 1985 - 1988      Amiria Intermediate School – Atbara – Sudan
- 1988 - 1991      Atbara Government Higher Secondary School – Atbara – Sudan
- 1992 - 1997      Faculty of Veterinary Science – University of Nyala, Sudan. B. V. Sc.
- 1997 - 1999      Faculty of Science and Technology, Computer Studies Center,  
University of Gezria, Diploma in Computer Science, Wad Madani,  
Sudan
- 2002 - 2004      Department of Parasitology – Faculty of Veterinary Medicine –  
University of Khartoum. M.V.Sc Thesis title (Epidemiological Studies  
on Tropical Theileriosis (*Theileria annulata* infection of cattle) in the  
Sudan).
- 2005 - 2008      Sudan Academy of Sciences – Animal Resources Research Council  
– PhD Thesis title (Molecular epidemiological studies on east coast  
fever (*Theileria parva* infection of cattle) in central Equatoria state,  
Southern Sudan.

## **Language skills**

Arabic: first language

English: fluent, both in speak and writing

## **Courses**

- 19/06/1999 – 15/07/1999 Course on Biostatistics and SPSS, Tropical Medicine Research Institute, National Center for Research, Khartoum, Sudan
- 17/05 – 05/07/1999 Course on Basic Immunology, Central Veterinary Research Laboratories, Khartoum – Sudan.
- 11/09/2000-06/10/2000 Group training course on Tsetse Management, International Centre of Insect Physiology and Ecology (ICIPE), Nairobi, Kenya.
- 9-14 August 2003 Practical Training course on ELISA for Diagnosis of tick-borne diseases, Central Veterinary Research Laboratories, Khartoum – Sudan
- 20-24 November 2006 Technical workshop on Molecular diagnostic tools for tick-borne diseases. Organized by the International Consortium on ticks and tick-borne diseases (ICTTD-3) Asian Component held in Pendik, Istanbul, Turkey
- 8-16 June 2008 ICTTD Bioinformatics workshop, a six day practical course on bioinformatics of ticks and tick-borne pathogens, University of South Bohemia – Faculty of Science, and Biology Centre of the Academy of Sciences – Institute of Parasitology, Czech Republic
- May 7 – May 25, 2012 Genetic Resources and Intellectual Property Rights (GRIP)  
November 19– November 23 , 2012 Funded by The Swedish International Development Cooperation Agency (Sida), held at Swedish University of Agricultural Sciences, Uppsala, Sweden,

## Research grants

April 2005

International Foundation for Science (IFS)

Research grant (36 months): “Epidemiological studies on East Coast fever (*Theileria parva* infection of cattle) in Southern Sudan.”

**12,000 US\$**

June 2006

Integrated Control of Ticks and Tick-borne Diseases (ICTTD-3).

Research visit to Research Center Borstel Department of Immunology and Cell Biology, Borstel, Parkallee 22, 23845 Borstel, Germany (3 months).

**3,000 EURO**

October 2009

International Foundation for Science (IFS)

Research grant (36 months): “Characterization of field isolates of *Theileria parva* from Southern Sudan.”

**12,000 US\$**

## Fellowships

- 14/01/2004 – 14/04/2004 International Atomic Energy Agency (IAEA) fellowship on the use of molecular biology techniques in diagnosis of tick-borne diseases. University of Pretoria – Faculty of Veterinary Science – Department of Veterinary Tropical Diseases – Pretoria – South Africa.
- 1/10/2007 – 31/12/2007 International Atomic Energy Agency (IAEA) fellowship on the Development and evaluation of a loop-mediated isothermal amplification method for diagnosis of Tropical Theileriosis Research Center Borstel Department of Immunology and Cell Biology, Borstel, Parkallee 22, 23845 Borstel, Germany
- 15 August 2011 – 5 November 2011 Research Fellow at the BecA Hub Project: “Genotyping of *Theileria parva* from cattle in Southern Sudan to support control of ECF” ILRI-Nairobi, Kenya.
- 21 November 2013 – 20 December 2013 CV Raman International Fellowship for African Researchers, Department of Veterinary Parasitology, College of Veterinary Science, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana-141004, India

## **Workshops/Conferences attended**

1. International Workshop on Camel Research and Development Formulating a Research Agenda for the Next Decade. Wad Madani, Gezira State, Sudan, December 9-12, 2002.
2. Organization of the Third workshop on ticks and tick-borne diseases in the Sudan, Khartoum (August 2003) resulting in a special issue of *The Sudan Journal of Veterinary Science and Animal Husbandry*, Volume, 42, 2003
3. The 7<sup>th</sup> Scientific Conference, National Center for Research, December 2005, Friendship Hall, Khartoum, Sudan.
4. The 5<sup>th</sup> International Conference on Ticks and Tick Borne Diseases (TTP5), 29<sup>th</sup> August – 2<sup>nd</sup> September 2005 University of Neuchâtel, Switzerland.
5. Conference on Attenuated vaccines for Animal Diseases, April, 2007 Borstel, Germany
6. 10<sup>th</sup> Biennial Conference of the Society for tropical Veterinary Medicine, “One Health, One Medicine”, June 29<sup>th</sup> – July 3<sup>rd</sup> 2009, Lubeck, Germany.
7. East Coast fever Workshop, past, present and future prospective, South Sudan, 8<sup>th</sup> – 10<sup>th</sup> December 2010, Bor, South Sudan.
8. TTP7: Seventh Ticks and Tick-borne Pathogens International Conference. Zaragoza (Spain), 27 August – 3 September 2011.
9. 6<sup>th</sup> Science Conclave, A Congregation of Nobel Laureates at Indian Institute of Information Technology (IIIT), Allahabad, India, December 08-14, 2013

### **Contribution to the scientific journals**

- Assistant of scientific editor of the Sudan Journal of Veterinary Research (Vol., 18, 2003).
- Referee for several national and international peer-review journals.

### **Member of the following committees**

1. National ticks and tick- borne diseases committee.
2. Scientific committee of post-gradulation council, Universty of Kassala.
3. Scientific commity for the zoonoeses disease in Kassala State
4. Advisor Council, for the Ministry of Animal Recourses and Fisheries, Kassala State.

## List of publications

1. Majid, A.A., Goraish, I.A. and **Salih, D.A.** (2002). Camel Research and Development in the Sudan. *In* proceedings of International Workshop on Camel Research and Development Formulating a Research Agenda for the Next Decade Wad Medani, Gezira State, Sudan December 9-12, 2002.
2. **Salih, D.A.**, El Hussein, A.M., Hassan, S.M., Abdel Rahman, M.B., Abdel Rahim, A.I., Hamid, M.E. and Majid, A.M. (2003). Diagnosis of tick-borne diseases: I. Diagnosis of Theileriosis. *The Sudan Journal of Veterinary Science and Animal Husbandry*, 42: (1&2): 219-227.
3. **Salih, D.A.**, El Hussein, A.M., Majid, A.M. and Hassan, S.M. (2003). Molecular techniques in the diagnosis of tick-borne diseases in the Sudan: Overview. *The Sudan Journal of Veterinary Science and Animal Husbandry*, 42: (1&2): 207-218.
4. **Salih, D.A.**, El Hussein, A.M., Taha, K.M. and Hayat, M. (2003). Survey of *Theileria lestoquardi* antibodies among Sudanese sheep. *Veterinary Parasitology*, 111: 361-367.
5. Ahmed, B.M., El Hussein, A.M., El Ghali, A., and **Salih, D.A.** (2003). Some studies on the epidemiology of ovine theileriosis in River Nile State, northern Sudan. *Journal of Animal and Veterinary Advances*, 2(12): 681-685.



6. Abdel Rahman, M.B., **Salih, D.A.**, El Hussein, A.M, Hassan, S.M., Abdel Rahim, A.I., Hamid, M.E. and Majid, A.A. (2003). Diagnosis of tick-borne diseases: II. Diagnosis of Cowdriosis. The Sudan Journal of Veterinary Science and Animal Husbandry, 42: (1&2): 228 – 238.
7. Mohammad, A.A. and **Salih, D.A.** (2003). *Theileria* infection in a local goat in Red Sea State, Eastern Sudan. A case report. The Sudan Journal of Veterinary Science and Animal Husbandry, 42: (1&2): 176 – 180.
8. Sharieff, O.E., El Hussein, A.M., Hassan, S.M., Salma, K. **Salih, D.A.** and Majid. A.A. (2003). Establishment of *Theileria* cell culture system in the Sudan: A minireview. The Sudan Journal of Veterinary Science and Animal Husbandry, 42: (1&2): 147- 158.
9. Taha, K.M., El Hussein, A.M., Abdalla, H.S. and **Salih, D.A.** (2003). *Theileria lestoquardi* infection in goats in River Nile State: Comparison of serology and blood smears. The Sudan Journal of Veterinary Science and Animal Husbandry, 42: (1&2): 197- 206.
10. **Salih, D.A.**, Hassan, S.M., El Hussein, A.M. and Jongejan, F. (2004). Preliminary survey of ticks (Acari: Ixodidae) on cattle in northern Sudan. Onderstepoort Journal of Veterinary Research, 71: 319-326.
11. Bakheit, M.A., Schnittger, L., **Salih, D.A.**, Boguslawski, K., Beyer, D., Fadl, M. and Ahmed, J.S. (2004). Application of the recombinant *Theileria annulata* surface protein in an indirect ELISA for the diagnosis of tropical theileriosis. Parasitology Research, 92: 299 – 302.

12. **Salih, D.A.**, Sharieff, O.E., Lazarus, A.G., Hassan, S.M. and El Hussein, A.M. (2005). Natural infection rates and transmission of *Theileria annulata* by *Hyalomma anatolicum anatolicum* ticks in the Sudan. Onderstepoort Journal of Veterinary Research, 72: 303-307.
13. **Salih, D.A.**, Ahmed, J.S., Bakheit, M.A., Ali, E.B., EL Hussein, A.M.; Hassan, S.M., Shariff, O.E., Fadl, M. and Jongejan, F. (2005). Validation of the Indirect TaSP Enzyme-linked Immunosorbent Assay for Diagnosis of *Theileria annulata* Infection in Cattle. Parasitology Research, 97(4): 302-308.
14. **Salih, D.A.**, Aziz, A.A.A. and Omer, M.M. (2005). Diseases of Livestock in Kassala State, Eastern Sudan: A Ten-year Retrospective Study. The Sudan Journal of Veterinary Science and Animal Husbandry, 44: 136-150.
15. **Salih, D.A.**, Hassan, S., Bakheit, M., EL Hussein, A., Jongejan, F. and Ahmed, J. (2005). Application of the Indirect TaSP Enzyme-linked Immunosorbent Assay for Diagnosis of *Theileria annulata* Infection in Cattle. In: Proceedings of the 5th International Conference on Ticks and Tick Borne Pathogens, Neuchâtel, Switzerland, pp. 163-166.
16. Omer, M.M., Aziz, A.A.A. and **Salih, D.A.** (2006). Rabies in a camel (*Camelus dromedarius*) in Kassala State - Eastern Sudan. The Sudan Journal of Veterinary Research, 21:89-90.
17. Ali, E.B.M., **Salih, D.A.** and Salman M.D. (2006). Determination of the cut off for recently developed ELISA for sero-diagnosis of *Theileria annulata*. In: Proceedings of the International Symposium on Veterinary Epidemiology and Economics "ISVEE"

18. Sharieff, O.E., El Hussein, A.M., Hassan, S.M. and **Salih, D.A.** (2006). Attenuation of Sudanese schizont-infected cell lines of *Theileria annulata*. In proceedings of the 7th Scientific Conference, National Center for Research, Friendship Hall, Khartoum, Sudan 13-15 December 2005.
19. **Salih, D.A.**, Hassan, S.M. and El Hussein, A.M. (2007). Comparisons among two serological tests and microscopic examination for the detection of *Theileria annulata* in cattle in northern Sudan. Preventive Veterinary Medicine, 81: 323-326.
20. **Salih, D.A.**, EL Hussein, A.M., Seitzer, U. and Ahmed, J.S. (2007). Epidemiological studies on tick-borne diseases of cattle in Central Equatoria State, Southern Sudan. Parasitology Research, 101(4): 1035-1044.
21. **Salih, D.A.**, EL Hussein, A.M., Kyule, M.N., Zessin, K.H., Ahmed, J.S. and Seitzer, U. (2007). Determination of potential risk factors associated with *Theileria annulata* and *Theileria parva* infections of cattle in the Sudan. Parasitology Research, 101 (5): 1285-1288.
22. Seitzer, U., Bakheit, M.A., **Salih, D.A.**, Ali, A., Haller, D., Yin, H., Schnittger, L. and Ahmed, J. (2007). From molecule to diagnostic tool: *Theileria annulata* surface protein TaSP. Parasitology Research, 101: S217-S223.
23. **Salih, D.A.**, Julla, I.I., Hassan, S.M., EL Hussein, A.M. and Jongejan, F. (2008). Preliminary survey of ticks (Acari: Ixodidae) on cattle in Central Equatoria State, Southern Sudan. Onderstepoort Journal of Veterinary Research, 75: 47-53.

24. Ahmed, J.S., Glass, E.J., **Salih, D.A.** and Seitzer, U. (2008). Innate immunity to tropical theileriosis: Review. *Innate Immunity*, 14 (1): 5-12
25. **Salih, D.A.**, Hassan, S.M., Julla, I.I., Kyule, M.N., Zessin, K-H. and EL Hussein, A.M. (2008). Distribution and Application of ELISA for the Seroprevalence of Tick-Borne Diseases in Central Equatoria State, Sudan. *Transboundary and Emerging Diseases*, 55: 257–262.
26. **Salih, D.A.**, Liu, Z., Bakheit, M.A., Ali, A.M., EL Hussein, A.M., Unger, H., Viljoen, G., Seitzer, U. and Ahmed, J.S. (2008). Development and evaluation of a loop-mediated isothermal amplification method for diagnosis of Tropical Theileriosis. *Transboundary and Emerging Diseases*, 55: 238–243.
27. Liu, Z., Hou, J., Bakheit, M.A., **Salih, D.A.**, Luo, J., Yin, H., Ahmed, J.S. and Seitzer, U. (2008). Development of loop-mediated isothermal amplification (LAMP) assay for rapid diagnosis of ovine theileriosis in China. *Parasitology Research*, 103(6): 1407-1412.
28. Ali, A.M., **Salih, D.A.**, Bakheit, M.A., EL Hussein, A.M., Hassan, S.M., Mukhtar, M.M., Ahmed, J.S. and Seitzer, U. (2008). Comparison of the molecular structure of the TaSP gene of *Theileria annulata* from Sudanese isolates. *Ann. N. Y. Acad. Sci.* 1149: 218–220.
29. Ali, A.M., Beyer, D., Bakheit, M.A., Kullmann, B., **Salih, D.A.** Ahmed, J.S., Seitzer, U. (2008). Influence of sub culturing on gene expression in a *Theileria lestoquardi*-infected cell line. *Vaccine* 26S: G17–G23

30. **Salih, D.A.**, Abdel Rahman, M.B., Mohammed, A.S., Ahmed, R., Kamal, S. and EL Hussein A.M. (2009). Sero-prevalence of tick-borne diseases antibodies among cattle in the Sudan. *Parasitology Research*, 104 (4): 845-850
31. Al-Saeed, A.T.M., Omer, L.T., Abdo, J., Habibi, G., **Salih, D.A.**, Seitzer, U., Ahmed, J. (2010). Epidemiological studies on tropical theileriosis (*Theileria annulata* infection of cattle) in Kurdistan Region, Iraq. *Parasitology Research*, 106: 403-407.
32. Liu, Z., Wang, Z., Yin, H., Luo, J., Zhang, B., Kullmann, B., Abdo, J., **Salih, D.A.**, Ahmed, J. and Seitzer, U. (2010). Identification of *Theileria uilenbergi* immunodominant protein for development of an indirect ELISA. *International Journal of Parasitology* 40(5):591-598.
33. **Salih, D.A.**, EL Hussein, A.M., Ahmed, J., Seitzer, U. (2010). Comparison between Reverse Line Blot and Enzyme-linked Immunosorbent Assay in Diagnosis of Major Tick-borne Diseases of Cattle in Southern Sudan. *Transboundary and Emerging Diseases*, 57: 61–62.
34. Müller, H., Selek, N., Liu, Z., **Salih, D.A.**, Karagenc, T., Beyer, D., Kullmann, B., Ahmed, J.S., Seitzer, U. (2010). Development of a Loop-mediated Isothermal Amplification (LAMP) Assay for Rapid Diagnosis of *Babesia canis* infections. *Transboundary and Emerging Diseases*, 57: 63–65.
35. Taha, K.M., **Salih, D.A.**, Ahmed, B.M., Enan, K.A., Ali, A.M., El Hussein, A.M. (2011). First confirmed report of outbreak of malignant ovine theileriosis among goats in Sudan. *Parasitology Research*, 109:1525–1527.

36. Gumaa, M.M., Sarah Abusalab, Omer, M.M., **Salih, D.A.**, Mulla, S.A., Omer, E.A. and Ahmed, A.M. (2011). A two year study on bovine trypanosomosis in Kassala State, Eastern Sudan (2007-2008). International Research Journal of Agricultural Science, 1(3): 96-97.
37. Marcellino, W.L., **Salih, D.A.**, Julla, I.I. and EL Hussein, A.M. (2011). Economic impact of East Coast fever in Central Equatorial State of South Sudan. International Research Journal of Agricultural and Soil Science, 1(6): 218-220.
- 38.. Marcellino, W.L., Julla, I.I., **Salih, D.A.** and EL Hussein, A.M. (2011). Ticks infesting cattle in Central Equatoria region of South Sudan Onderstepoort Journal of Veterinary Research. 78(1), <http://dx.doi.org/10.4102/ojvr.v78i1.336>
39. **Salih, D.A.**, Ali, A.M., Liu, Z., Bakheit, M.A., Taha, K.M., EL Imam, A.H., Kullmann, B., El Hussein, A.M., Ahmed, J.S. and Seitzer, U. (2012). Development of a loop-mediated isothermal amplification method for detection of *Theileria lestoquardi*. Parasitology Research, 110(2):533-538.
40. Hussien, M.O., El Fahal, A.M., Enan, K.A., Taha, K.M., Mohammed, M.S., **Salih, D.A.**, Mohammadain, S.I., Saeed, A.A. and El Hussein, A.M. (2012). Seroprevalence of Q fever in goats in the Sudan. Veterinary World 5(7):394-397
41. El Hussein, A.M., Hassan, S.M. and **Salih, D.A.** (2012). Current situation of Tropical theileriosis in the Sudan. Parasitology Research 111:503-508.

42. Marcellino, W.L., **Salih, D.A.**, Julla, I.I. and EL Hussein A.M. (2012). Sero-prevalence of East Coast fever in Central Equatoria State, South Sudan. *Veterinaria Italiana* 48 (4): 379-85.
43. Taha, K.M., **Salih, D.A.**, Ali, A.M., Omer, R.A. and El Hussein, A.M. (2013). Naturally occurring infections of cattle with *Theileria lestoquardi* and sheep with *Theileria annulata* in River Nile State, Sudan. *Veterinary Parasitology* 191: 143-145.
44. Elfahal, A.M., Hussien, M.O., Enan, K.A., Taha, K.M., **Salih, D.A.**, Halfawi, R.H., Mohammed, Z.A. and El Hussein, A.M. (2013). Investigation of caprine arthritis-encephalitis virus in Sudan using competitive enzyme-linked immunosorbent assay. *Vet. World* 6 (8):.558-562
45. Hassan, S.M., and **Salih, D.A.** (2013). Factors affecting geographic distribution of livestock ticks in the Sudan. *Sokoto Journal of Veterinary Science*, 11 (2):1-9.
46. Renneker, S., Abdo, J., **Salih, D.A.**, Karagenç, T., Bilgiç, H., Torina, A., Oliva, A.G., Campos, J., Kullmann, B., Ahmed, J. and Seitzer, U. (2013). *Can Anaplasma ovis* in small ruminants be neglected any longer? *Transboundary and Emerging Diseases* (60) s2: 105–112.
47. **Salih, D.A.**, Ali, A.M., Hassan, S.M., Mukhtar, M.M., El Hussein, A.M., Seitzer, U. and Ahmed J. (2013). Tropical theileriosis (*Theileria annulata* infection of cattle) in Khartoum State, Sudan: Risk factors. *Sudan J. Vet. Res.* 28: 69-70.

48. Ayman, E.A., **Salih, D.A.** Gumaa, M.M. and Omer, M.M. Fatima Abbas and Ahmed, A.M., (2014). Prevalence of Bovine tuberculosis in Kassala State, Eastern the Sudan. *International Journal of Advanced Scientific and Technical Research*, 4(1): 238-249.
49. El Imam, A.H., Hassan, S.M., Gameel, A.A., El Hussein, A.M., Taha, K.M. and **Salih, D.A.** (2014). Susceptibly of different Sudanese sheep ecotypes to malignant ovine theileriosis (*Theileria lestoquardi* infection of sheep). *Korean Journal of Parasitology*. (In press)
50. Vaumourin, E., Vourc'h, G., Telfer, S., Lambin, X., **Salih, D.**, Seitzer, U., Morand, S., Charbonnel, N., Vayssier-Taussat, M., Gasqui. P. (2014). To be or not to be associated: power study of four statistical modeling approaches to identify pathogen associations in cross-sectional studies. *Frontiers in Microbiology* (In press)