

CURRICULUM VITAE



*Name :Abdelmalik Ibrahim **Khalafalla**, M.V.Sc., Ph.D, AvH

*Nationality: Sudanese

*Date of birth: February 6, 1960.

* Marital status: Married with Four children

*Qualifications: B.V.M& S (Baghdad; 1984) ; M V Sc. (Khartoum, 1987) ; PhD (Khartoum, 1997); AvH Fellowship (Germany; 2001).

* Present title: Professor of Veterinary Virology

* Present Job: Professor, Microbiology Specialist, Veterinary laboratories Division, Animal Wealth Sector, Abu Dhabi Agriculture and Food Safety Authority (ADAFSA), Abu Dhabi, UAE

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EMPLOYMENT RECORD:

Designation	Nature of work	Organization	College/Department	Period From to	Duration
Microbiology Specialist	consultant	Abu Dhabi Agriculture and Food Safety Authority (ADAFSA)	Microbiology & Molecular Biology	21.07.2016 to continue	3 Year 4 months
Principal Research Scientist	Research	King Faisal University	Camel Research Centre	15.06.2012 to 20.07.2016	4 year & 1 months
Expert	Research and Development	Arab Centre for Studies on Arid Zones and Dry Lands (ACSAD)	Animal Resources	06.01.2010 - 14.06.2012	3 Years 6 months
Director	Management/ Research/ Teaching	University of Khartoum	Camel Research Centre	11.03.2007 - 05.01.2010	2 year 2 months
Head Department/ University Professor	Management/Teaching/ Research	University of Khartoum	Dept. of Microbiology, Faculty of Veterinary Medicine	04.04.2004 - 10.03.2007	3 years 11 months
Associate Professor	Teaching and Research	University of Khartoum	Dept. of Microbiology, Faculty of Veterinary Medicine	02.04.2005 - 03.04.2007	2 years
Assistant Professor	Teaching and Research	University of Khartoum	Dept. of Microbiology, Faculty of Veterinary Medicine	01.04.2005 - 03.04.2001	4 years
Post-Doctoral fellow	Research	Federal Research Center for	Department of Immunology	04.04.2001 - 21.12.2003	1 year 8 months

		Virus Diseases of Animals, Tuebingen, Germany			
Assistant Professor	Teaching and Research	University of Khartoum	Dept. of Microbiology, of Veterinary Medicine	26.05.1995 - 03.04.2001	5 years 11 months
Research Assistant/Researcher	Research	Veterinary Research Institute, Sudan	Dept. of Virology	06.05.1989 - 25.05.1995	6 year
MSc student	Research	University of Khartoum	Dept. of Microbiology, Faculty of Veterinary Medicine	06.07.1985 - 231.08.1987	2 year

Selected research achievements

	Title	Year	Role
1	First molecular characterization of camel contagious ecthyma viruses from the Sudan	2015	Principle investigator
2	Development of the first multiplex PCR method for the diagnosis and differentiation of three camel diseases (Camel pox, contagious ecthyma and Papillomatosis)	2015	Principle investigator
3	Development of a live attenuated camel pox vaccine	2012	Supervisor of Ph.D. student
4	Detection of a Novel NSP1 genotype characterized in an African camel G8P[11] rotavirus strain	2013	Co-investigator
5	First characterization of the complete genomes of <i>Camelus dromedarius</i> papillomavirus	2011	Co-investigator
6	First detection of BVD, BHV-1, PI3, RSV, PPR and Adeno respiratory viruses in dromedary camels.	2009-2010	Co-investigator
7	First use of Polymerase chain reaction (PCR) for rapid diagnosis and differentiation of para-and orthopox virus infections in camels	2003	Principle investigator
8	First isolation and characterization of camel pox virus in the Sudan	1996	Principle investigator
9	First detailed epidemiological study on pox and pox-like diseases of camels	1994-1997	1999

Institution Building Activities

	Activities	Level of Involvement
1	While working at Camel Research Centre, King Faisal University (2012-2016) established a research unit for molecular diagnosis of camel diseases; supervised purchase, installation and operation of various lab equipment.	Major role
2	While working at the Arab Centre for Studies on Arid Zones and Dry Lands (ACSAD, 2010-2012), established a training and camel research farm including pens design, purchase of animals, ration formulation and health program that involve disease control measures.	Leading role
3	While working at the Camel Research Centre, University of Khartoum (2005-2009) established a training and research farm of camels	Leading role
4	While working at Dept. of Microbiology, Faculty of Veterinary Medicine, University of Khartoum (2002-2006) established a molecular diagnostic laboratory with a donation from Alexander von Humboldt Foundation, Germany	Major role

Trainings attended in the relevant field of specialization

Title	Duration	Institution	Techniques learned
Biosafety and Biosecurity in Veterinary labs and animals house facilities	Oct 3, to Oct 18, 2019	IZSLER, Brescia, Italy	Quality Management, Biosecurity Measures, Animal House BSL3 Design and Operation, BioRisk Analysis and management
Molecular Characterization of Camel	June 5, 2001 to December 14, 2002	Federal Research Center for Virus Diseases of Animals,	Viral Nucleic acid extraction, gel-based and real time Polymerase chain

Contagious Ecthyma Virus		Tuebingen, Germany	reaction [PCR], Restriction enzyme analysis, Southern hybridization, western hybridization, sequencing and phylogenetic analysis
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***Professional experience:**

Job title	Place/ duration	Activities
Principal Research Scientist/ Associate Professor	King Faisal University, Camel Research Centre/ 2012 to now	Research: conduct research on diseases of camels and participate in the diagnosis of camel diseases of cases brought to the King Faisal Veterinary Hospital. Consultation: provide consultation to the veterinary authorities at Al-Ahsa province on camel diseases
Expert on camel development and diseases	Arab Centre for Studies on Arid Zones and Dry Lands (ACSAD), January 2010 to June 2012	Responsible for executing and follow up of camel developmental projects in Arab countries including a technical and feasibility study for the establishment of a Camel ranch in republic of Algeria and a project entitled Assessment and improving camel milk production and marketing in Sudan, Algeria and Morocco, funded by the International Fund for Agricultural Development (IFAD). Besides, I also conducted research on camel production systems and diseases in Syria and fattening camel calves with agricultural byproducts. I was also responsible for the Animal Health and Trans-boundary diseases project at ACSAD. Duties involve set up and monitoring Health Programs to control diseases and making routine health status examinations of sheep, goats and camels in two research stations in Syria.

Director	Camel Research Centre, University of Khartoum/2007-2010	Oversee the management of staff in the center, develop research strategies to deliver high quality research, manage financial, staffing and other resources, contribute to setting objectives and priorities for research, develop interdisciplinary activities with other departments and institutions
Department Head	Department of Microbiology, Faculty of Veterinary Medicine, 2005-2007	Provide academic leadership in Veterinary Microbiology, promote the interests and reputation of the department, develop departmental research strategies, manage applications for research funding, assure academic quality and standards, develop interdisciplinary activities with other departments and institutions and allocate teaching and administrative duties appropriately
University staff member	Department of Microbiology, Faculty of Veterinary Medicine, November 1995-2010	<p>Teaching: Teaching Advance General Virology and Advance Special Virology courses to Master students, Department of Microbiology, Faculty of Veterinary Medicine, University of Khartoum, 2003-2009. Teaching Molecular Biology course to Master students, Department of Microbiology, Faculty of Veterinary Medicine, University of Khartoum, 2003-2009.</p> <p>Diagnosis: Fully engaged in the diagnosis of animal diseases in animals and management of cases brought into the Faculty Hospital as well as routinely participated in carrying out hospital rotations. As shown in the list of publications below many diseases affecting camels, sheep, goats, cattle and poultry were investigated and</p>

		<p>documented, that resulted in a broad-based clinical experience.</p> <p>Fully engaged in the diagnosis of animal diseases and management of cases brought into the lab. A number of viral diseases affecting camels, sheep, goats, cattle and poultry were investigated and documented, that resulted in a broad-based clinical experience</p> <p>Research: conduct research and supervise post-graduate research</p>
Research Scientist	Veterinary Research Institute (CVRL), 1989-1995	<p>Duties involved writing and submitting applications and progress reports to funding bodies, planning and conducting experiments and analyzing/interpreting the results, sharing the results of research with colleagues through presentations or discussions, attending scientific meetings and conferences</p>

Research Grants received (Successful history of securing international and local funds for research)

	Funding organization	Project title	Date	Total fund received	Role
1	Alexander von Humboldt Foundation / Germany	Introduction of Molecular Biology Techniques for Improving Diagnosis of Animal Viral Diseases in Sudan	Started 2002- ended 2005	20,000 Euros	Principle investigator
2	FAO/IAEA	Assessment of Effectiveness of	Started 1999-	20,000 USD	Research grant

		Vaccination against Newcastle Disease in Village Poultry in Africa	ended 2004		holder
3	International Foundation for Science (IFS)	Pox and pox-like diseases of camels.	Started 1994- ended 1997, renewed 1998- ended 2001.	24,000 USD	Research grant holder
4	Ministry of Higher Education and Scientific Research, Sudan.	Production and use of a killed vaccine against Infectious bursal disease (IBD) from a recent local isolate	Started 2004- ended 2005	450, 000 Sudanese Dinars.	Principle investigator
5	Ministry of Higher Education and Scientific Research, Sudan.	Improving Diagnosis of Animal viral Diseases in Sudan through Application of Molecular Biology Techniques.	Started 2004- ended 2005	600, 000 Sudanese Dinars	Research grant holder
6	The Arab Organization for Agricultural Development (AOAD)	Improving diagnosis of Foot and Mouth Disease in Sudan by Introduction of ELISA and PCR	Started 2003- ended 2004	2,000 USD	Research grant holder

7	University of Khartoum	Role of <i>Passeriformes</i> Birds in Transmission of Newcastle Disease, MVSC. Research project funded by University of Khartoum, 1985.	Started 1985- ended 1987	1000 Sudanese Pound	Research grant holder
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Linguistic Skills

	language	Proficiency
1	Arabic	Mother tongue
2	English	Excellent command
3	German	Good command

Work experience with international organizations

Organization	Activity	Duration	Description
World Animal Health Organization (OIE)	1-Member of the ad hoc group on camelids diseases 2- Member of the ad hoc group on MERS-CoV	2011-to continue	Group duties involve discussing bacterial, parasitic and viral disease of camelids including dromedary camels, bactrian camels and South American camelids, identify the priority diseases for each of the three categories of camelidae and availability of diagnostic tests validated for camelids and provide consultations to OIE
International Fund for Agricultural Development (IFAD)/ ACSAD	Project manager	2011-2012	Management of ACSAD/IFAD project entitled ` Assessment and Improving Camel Milk Production and Marketing in Some Arab Countries`
FAO/IAEA	Researcher	1999-2002	FAO/IAEA Project on Assessment of Effectiveness of Vaccination Against

			Newcastle Disease in Village Poultry in Africa
International Foundation for Science (IFS)	Researcher	Started 1994 ended 1997, renewed 1998 ended 2001	Project on Pox and pox-like diseases of camels.

***Research Experience**

Diversified practical and research experience in Microbiology, with emphasis on viral diseases of animals.

***Practical Skills**

Cell culture technology:

- Preparation of primary cell culture
- Expanding mammalian cells cultures using standard aseptic techniques
- Dealing with different types of cell lines.
- Various virus assays in cell culture

Virus assays:

- Virus isolation and propagation.
- Infectivity titration
- Plaque assay.
- Transfection
- Immunocytochemistry

Electron microscopy:

- Negative contrast electron microscopy
- Ultra-thin section of tissues; preparation, staining and examination

Molecular biology work:

- DNA and RNA extraction
- Gel-based PCR and qPCR.
- Agarose and polyacrylamide gel analysis
- Molecular cloning techniques
- Restriction enzyme analysis
- Molecular cloning
- DNA sequence analysis
- Construct a phylogenetic tree
- Loop-mediated isothermal amplification (LAMP)
- Next generation sequencing

Protein:

- Protein analysis using SDS-polyacrylamide gels and Western blotting.

Serology, immunology and biological assays:

- ELISA
- Immunofluorescence
- Serum Neutralization Assay
- Hemagglutination and Hemagglutination Inhibition assays
- Agar Gel Precipitation Test

Microbiology:

- Light microscopy
- Bacterial culture identification

***Consultancy activities:**

- 1- Member of the Consultancy Committee on Control of Infectious Diseases of The Ministry of Animal Resources and Fisheries, Sudan, 2007-2009
- 2- Member of the High Emergency Committee on Avian Influenza of the Ministry of Animal Resources and Fisheries, Sudan 2005-2007.
- 3- Headed the Consultancy Group on Foot and Mouth Disease of The Ministry of Animal Resources and Fisheries, Sudan, 2006-2009.

- 4- Member of the *ad hoc* group on diseases of camelids, Office International of Epizootics (OIE), Paris, France (Oct 2011-now)
- 5- Member of the *ad hoc* group on MERS-CoV, Office International of Epizootics (OIE), Paris, France (Nov 18-now)

***Teaching:**

- 1- Teaching Veterinary Microbiology Course to 3rd class Veterinary undergraduate students, Faculty of Veterinary Medicine, University of Khartoum. I have taught this course from 1996 until 2009.
- 2- Teaching Advance General Virology and Advance Special Virology courses to Master students, Department of Microbiology, Faculty of Veterinary Medicine, University of Khartoum, 2003-2009.
- 3- Teaching Molecular Biology course to Master students, Department of Microbiology, Faculty of Veterinary Medicine, University of Khartoum, 2003-2009.
- 4- Teaching Human Virology course to Master students, Faculty of Basic Medical Laboratories, Omdurman Islamic University, 2006-2008.
- 5- Teaching Human Virology course to undergraduate students, Faculty of Medical Sciences, Ahlia University, Omdurman, Sudan, 2007-2009.
- 6- Teaching Microbiology and Molecular Biology courses to under and post graduate students at many universities and institutes in Sudan, 1995-2009.

***Conferences and workshops:**

- 1- Poultry Viral Vaccines in Africa. FAO workshop, Central Veterinary Research Laboratories, Soba. 1-5 September 1989.
- 2- The eighth Arab Veterinary Conference, March 24-28, 1998. Friendship Hall, Khartoum, Sudan
- 3- The Third Annual Meeting for Animal Production Under Arid Conditions. May 2-3, 1998 Intercontinental Hotel, Al Ain, United Arab Emirates.
- 4- The Fourth Scientific Conference, National Centre for Research. April 8-10, 1999. Friendship Hall, Khartoum, Sudan.
- 5- The International Workshop on: The Young Camel, Future of Camel Stock. 24-

26 October 1999, Palais des Congrès, Ouarzazate, Morocco.

6-The Second Coordination Meeting of the FAO/IAEA Co-Ordinated Research Program on Assessment of the effectiveness of vaccination strategies against Newcastle Disease and Gumboro Disease using immunoassay-based technologies for increasing farmyard poultry production in Africa. 4-8 September 2000, Morogoro, Tanzania.

7- The ninth Arab Veterinary Conference, 14-16 November 2000, Baghdad, Iraq.

8- The 10th International Conference of the Association of International Tropical Veterinary Medical Institutes, August 20-23, 2001, Copenhagen, Denmark.

9-FAO/IAEA International Symposium on Application of Gene-based Technologies for Improving Animal Production and Health in Developing Countries, 6-10 October 2003, Vienna, Austria.

10-The Final Research Co-ordination Meeting on the FAO/IAEA Co-ordination Research Program on the Assessment of the effectiveness of vaccination strategies against Newcastle Disease and Gumboro Disease using immunoassay-based technologies for increasing farmyard poultry production in Africa, 24-28 May 2004, IAEA, Vienna.

11-The 11th International Conference of the Association of Institutions of Tropical Veterinary Medicine, August 23-27, 2004, Sunway Lagoon Resort Hotel, PJ, Malaysia.

12- The International Conference on Emerging Infectious Diseases. Faculty of Medicine United Arab Emirate University, Al Ain, UAE, 26 March- April 1, 2005.

13-First Conference of the International Society of Camelids Research and Development (ISOCARD), Al –Ain Rotana Hotel, Al Ain, United Arab Emirates, April 15 -17, 2006.

14- The International Conference on Camels, Al Gasseem University for Agriculture and Veterinary Medicine, Al Gasseem, Saudi Arabia, May 10-12, 2006.

15- The 12th International Conference of the Association of Institutions of Tropical Veterinary Medicine, Montpellier, France 20-22 August 2007,

16-Second Conference of the International Society of Camelids Research and Development (ISOCARD), Djerba, Tunis, March 11 -14, 2009.

17-Third Conference of the International Society of Camelids Research and Development (ISOCARD), Muscat, Sultanate of Oman, January 28 –February 1, 2012.

18-The XIII International Conference on Veterinary and Biomedical Sciences organized by the World Academy of Science, Engineering and Technology (WASET), March 23-24, 2015, Prague, Czech Republic

19-The Fourth Conference of International Society of Camelids Research and Development (ISOCARD) “Silk Road Camel: The Camelids, Main Stakes For Sustainable Development” June 8-12, 2015 Almaty, Kazakhstan

20-MERS-CoV Surveillance and Research in The Emirate of Abu Dhabi, organized by Department of Health, Abu Dhabi in collaboration with Organized in collaboration with Abu Dhabi Food Control Authority (ADFCA) and Centers for Disease Control and Prevention / United States, 14 March 2018, Abu Dhabi, UAE

21- The 3rd CAMENET Steering Committee Meeting and the 2nd Regional Seminar for OIE Focal Points for Veterinary Laboratories, Abu Dhabi, UAE 7-10 October 2018

21- The 10th International Conference on Emerging Infectious Diseases (ICEID), August 26–29, 2018, Atlanta, GA, USA

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22- The International Symposium on quality managements in Veterinary laboratories, 3-4 July 2019, Abu Dhabi, UAE

Consultancy activities:

- 1- Was member of the High Emergency Committee on Avian Influenza of the Ministry of Animal Resources and Fisheries, Sudan 2005-2007?
- 2- Was member of the Consultancy Committee on Control of Infectious Diseases of The Ministry of Animal Resources and Fisheries, Sudan, 2007-2009
- 3- Headed the Consultancy Group on Foot and Mouth Disease of The Ministry of Animal Resources and Fisheries, Sudan, 2006-2009.
- 4- Member of the *ad hoc* group on diseases of camelids, Office International of Epizootics (OIE), Paris, France.
- 5- Member of the *ad hoc* group on MERS-CoV, Office International of Epizootics (OIE), Paris, France

Editorials:

- 1- Member of editorial board of The Open Veterinary Journal
- 2- Member of editorial board of The Arab Journal for Arid Environment published by The Arab Centre for Studies on Arid Zones and Dry Lands (ACSAD).
- 3- Member of editorial board of Trends in Clinical Research
- 4- Member of editorial board of Pathogen and Infectious Disease
- 5- Member of editorial board of SciFed Journal of Virology Research

Reviewer:

- 1- Elsevier
- 2- The Onderstepoort Journal of Veterinary Research

***List of publications:**

1. Abdelwahab1 GE, El Tigani-Asil1 E, Yusof MF, Zayed Saud Abdullah ZS, Rifat JF, Al Hosani MA, Almuhairi SS and Khalafalla AI (2019). Salmonella enterica and Theileria co-infection in dromedary camels (*Camelus dromedarius*) in UAE. Open Veterinary Journal 9 (3):263-268.
2. Khudhair K, Killerby M, Al Mulla M, Abou Elkheir K, Ternanni W, Bandar Z, Weber S, Khoury M, Donnelly G, Al Muhairi S, Khalafalla A, John Watson Gerber S, Al Hosani F, Hall A (2019). Risk Factors for MERS-CoV Seropositivity among Animal Market and Slaughterhouse Workers, Abu Dhabi, United Arab Emirates, 2014–2017. Emerging Infectious Diseases, Volume 25, Number 5—May 2019 (in press).
3. Khalafalla AI, Rector A, Elfadl AK (2018). Papillomavirus Infection in Humans and Dromedary Camels in Eastern Sudan. Vector Borne Zoonotic Dis. 2018 Aug; 18(8):440-444.

4. Elbashir, M.H.M; Agab.H; Khalafalla, A.I; Sijoud. F. Elhassan (2018). Characterization of Camel Milk Marketing and Opportunity for Market Orientation in East and Central of Sudan. *International Journal of Science and Research (IJSR)*. Vo. 7 (1), 1518-1523.
5. Paden CR, Yusof MFBM, Al Hammadi ZM, Queen K, Tao Y, Eltahir YM, Elsayed EA, Marzoug BA, Bensalah OKA, Khalafalla AI, Al Mulla M, Elkheir KA, Issa ZB, Pradeep K, Elsaleh FN, Imambaccus H, Sasse J, Weber S, Shi M, Zhang J, Li Y, Pham H, Kim L, Hall AJ, Gerber SI, Al Hosani FI, Tong S, Al Muhairi SSM (2018). Zoonotic origin and transmission of Middle East respiratory syndrome coronavirus in the UAE. *Zoonoses Public Health*, May; 65(3):322-333.
6. Yusof MF, Queen K, Eltahir YM, Paden CR, Al Hammadi ZMAH, Tao Y, Li Y, Khalafalla AI, Shi M, Zhang J, Mohamed MSAE, Abd Elaal Ahmed MH, Azeez IA, Bensalah OK, Eldahab ZS, Al Hosani FI, Gerber SI, Hall AJ, Tong S, Al Muhairi SS. Diversity of Middle East respiratory syndrome coronaviruses in 109 dromedary camels based on full-genome sequencing, Abu Dhabi, United Arab Emirates. *Emerg Microbes Infect.* 2017 Nov 8;6(11):e101. doi: 10.1038/emi.2017.89.
7. Li Y, Khalafalla AI, Paden CR, Yusof MF, Eltahir YM, Al Hammadi ZM, Tao Y, Queen K, Hosani FA, Gerber SI, Hall AJ, Al Muhairi S, Tong S (2017). Identification of diverse viruses in upper respiratory samples in dromedary camels from United Arab Emirates. *PLoS One*. 2017 Sep 13;12(9): e0184718. doi: 10.1371/journal.pone.0184718. eCollection 2017.
8. Khalafalla AI, Ramadan RO, Rector A, Barakat S (2017). Investigation on papillomavirus infection in dromedary camels in Al-Ahsa, Saudi Arabia. *Open Vet J*. 2017;7(2):174-179. doi: 10.4314/ovj.v7i2.16. Epub 2017 Jun 24.
9. Khalafalla AI, Abdelazim F. Human and Dromedary Camel Infection with Camelpox Virus in Eastern Sudan. *Vector Borne Zoonotic Dis.* 2017 Apr;17(4):281-284. doi: 10.1089/vbz.2016.2070. Epub 2017 Jan 5.
10. Khalafalla AI, Al Eknah MM, Abdelaziz M, Ghoneim IM (2017). A study on some reproductive disorders in dromedary camel herds in Saudi Arabia with

- special references to uterine infections and abortion. *Trop Anim Health Prod.* Jun;49(5):967-974. doi: 10.1007/s11250-017-1284-x
11. Al-Busadah KA, El-Bahr SM, Khalafalla AI. Serum biochemical profile and molecular detection of pathogens in semen of infertile male dromedary camels (*Camelus dromedarius*). *Anim Reprod Sci.* 2017 Mar 9. pii: S0378-4320(16)30495-X. doi: 10.1016/j.anireprosci.2017.03.003. [Epub ahead of print]
 12. Intisar KS, Ali YH, Haj MA, Sahar MA, Shaza MM, Baraa AM, Ishag OM, Nouri YM, Taha KM, Nada EM, Ahmed AM, Khalafalla AI, Libeau G, Diallo A. Peste des petits ruminants infection in domestic ruminants in Sudan. *Trop Anim Health Prod.* 2017 Mar 20. doi: 10.1007/s11250-017-1254-3. [Epub ahead of print]
 13. Khalafalla AI (2017). Emerging Infectious Diseases in Camelids. In: Emerging and Re-emerging Infectious Diseases of Livestock. **Bayry J** (Ed.). ISBN 978-3-319-47426-7, SPRINGER, pp 425-441.
 14. Elmardi NA, Bakheit MA, Khalafalla AI (2016). Phylogenetic analysis of some Newcastle disease virus isolates from the Sudan. *Open Vet J.* 2016;6 (2):89-97. doi: 10.4314/ovj.v6i2.4. Epub 2016 Jun 17.
 15. Elbashir MHM, Agab H, Khalafalla AI, Elhassan SF (2016). Characterization of Camel Milk Marketing and Opportunity for Market Orientation in East and Central of Sudan. *International Journal of Science and Research.* 7 (1), 1518-1523.
 16. Mahmoud, AZE, Khalafalla AI, Abdellatif MM (2016). An epidemiological study of sheep and goat pox outbreaks in the Sudan. *Food Biology,* 5: 1-5
 17. Khalafalla AI, Al-Busadah KA, El-Sabagh IM (2015). Multiplex PCR for rapid diagnosis and differentiation of pox and pox-like diseases in dromedary Camels. *Virology Journal* 7; 12:102. doi: 10.1186/s12985-015-0329-x.
 18. Khalafalla AI, Xiaoyan Lu, Abdullah I.A. Al-Mubarak, Abdul Hafeed S. Dalab, Khalid A.S. Al-Busadah, and Dean D. Erdman (2015). MERS-CoV in Upper Respiratory Tract and Lungs of Dromedary Camels, Saudi Arabia, 2013–

2014. *Emerging Infectious Diseases*. 2015 Jul; 21(7):1153-8. doi:10.3201/eid2107.150070.
19. Khalafalla AI, El-Sabagh E, Khalid Al-Busada, Abdullah Al-Mubarak, Yahia Ali (2015). Phylogenetic analysis of eight Sudanese camel contagious ecthyma viruses based on B2L gene sequence. *Virology Journal* 2015, **12**:124 (12 August 2015).
 20. Saeed IK, Ali YH, AbdulRahman MB, Mohammed ZA, Osman HM, Taha KM, Musa MZ, Khalafalla AI (2015). Mixed infection of peste des petits ruminants virus (PPRV) and other respiratory viruses in dromedary camels in Sudan, an abattoir study. *Trop Anim Health Prod*. Jun;47(5):995-8. doi: 10.1007/s11250-015-0798-3. Epub 2015 Apr 24.
 21. Abdellatif, M.M, Ibrahim, A.A. & Khalafalla A.I (2014). Development and evaluation of a live attenuated camelpox vaccine from a local field isolate of the virus. *Rev. sci. tech. Off. int. Epiz.*, 2014, 33 (3), 831-838
 22. Ali, Y.H., Intisar, K. S and Khalafalla, A. I (2014). Outbreaks of Peste des petits ruminants in two different localities in Sudan. *Journal of Veterinary Medicine and Animal Health* Vol.6 (6), 174-177.
 23. Intisar KS, Ali, YH, Taha, K M, Musa, MZ and Khalafalla, AI (2014). Isolation of some respiratory viruses from camels. *Int. J. Livest. Prod*. Vol.5 (1), 1-5.
 24. Jere KC, Esona MD, Ali YH, Peenze I, Roy S, Bowen MD, Saeed IK, Khalafalla AI, Nyaga MM, Mphahlele J, Steele D, Seheri ML (2013). Novel NSP1 genotype characterised in an African camel G8P[11] rotavirus strain. *Infect Genet Evol*. 21C:58-66.
 25. Awadalkareem A. Mohammed Adam, Ibrahim F. Ahamed, Abdelmalik I. Khalafalla (2013). Prevalence of IgG and IgM antibodies to human cytomegalovirus among Sudanese renal transplant recipients and haemodialysis patients. *Sudan Medical Monitor* 8(4): 183-185

26. Abdellatif MM, Salim B, Ibrahim AA, Asil T, Khalafalla AI (2013). Analysis of TK and C18L genes of wild-type and cell culture passaged camelpox virus. *Virology* 28(4):239-241.
27. Sagr, I., Khalafalla, A.I., Mahmoud, M.S.A., Abdo, Z., Hemsy, O & Hussein, A (2013). Socio- economic Study on Camel Breeders in Syria (Book in Arabic). Published by The Arab Center for Studies on Arid Zones and Dry Lands (ACSAD), Damascus.
28. Khalafalla, A.I (2013). Camel Production Prospects in the Arab Countries. In: Agab, H & Al Asaad, A (editors): Deliberations and Papers Presented to the Second Coordination Meeting of the Project Assessment and Improving Camel Milk Production and Marketing in Some Arab Countries, Rabat, Morocco, 29 April -3 May, 2012. Published by The Arab Center for Studies on Arid Zones and Dry Lands (ACSAD), Damascus, pp 6-15.
29. Mahmoud, M.S.A., Khalafalla, A.I & El Bashier, M.E.M (2013). Socio-economic Characteristics of Camel Milk Consumers in Sudan. In: Agab, H & Al Asaad, A (editors): Deliberations and Papers Presented to the Second Coordination Meeting of the Project Assessment and Improving Camel Milk Production and Marketing in Some Arab Countries, Rabat, Morocco, 29 April - 3 May 2012. Published by The Arab Center for Studies on Arid Zones and Dry Lands (ACSAD), Damascus, pp 16-47.
30. Khalafalla, A.I and Bornstein, S (2012). Emerging Infectious Diseases of Camelids. Proc. Third Conference of the International Society of Camelids Research and Development (ISOCARD), Muscat, Sultanate of Oman, January 28 –February 1, 2012, Keynote Presentation, pp.65-74.
31. Abdellatif, M. M; Mysaa, A. M; Khalafalla, A. I and EL Tigani-Asil, E. A (2012). Improving Thermostability of A Candidate Live Attenuated *Camelpox* Vaccine. *Sudan Journal of Science and Technology* Vol. 13, No.1, 6-11.
32. Ure, A. E. , Elfadl, A.K. , Khalafalla, A. I , Gameel, A. A. R. , Dillner, J. and O. Forslund (2011). Characterization of complete genomes of *Camelus*

- dromedarius papillomavirus 1 and 2. Journal of General Virology. 2011 92(8):1769-77.
33. Kwiatek, O, Ali, Y.H , Intisar, K. Saeed, Khalafalla ,A.I, Ishag, O, Abu Obeida, A , Abbas,Z , Albina, E, Lancelot, R, Libeau, G (2011). Asian lineage of peste des petits ruminants virus, Africa. Emerging Infectious diseases. 2011 Jul;17(7):1223-31.
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