

Curriculum Vitae

Personal data

Name Hassan Hussein Musa
Nationality Sudanese
Major Molecular Genetics, Immunology & Stem Cells
Title Associate Professor
Language Arabic excellent, English very good, Chinese good & French fair

Address

Department of Medical Microbiology
Faculty of Medical Laboratory Sciences
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Partial Appointment

Oct 2018- Dean Darfur College, Sudan
May 2013- Fellow at University of Bahri, Sudan
Oct 2019
2013-2016 Project Manager, African Development Bank

Education

2004-2007 Ph. D., Yangzhou University, China
2000- 2002 M. Sc., University of Khartoum, Sudan
1992-1997 B. Sc., University of Kordofan, Sudan.

Postgraduate Training

6-11; 2017 Visiting Scientist, University of Nottingham, UK
2007-2009 Post doctor, Yangzhou University, China
2004-2005 Chinese language, Yangzhou University, China
2006-2008 French language, Yangzhou University, China

Awards

- 2018** Academic Excellence Award for the best Scientific achievements from (2013-2018) among the Medical & Health Science Studies staff sponsored by Dean Ship of Research, University of Khartoum, Khartoum, **Sudan**
- 2018** Academic certificate for publication in preview journals recognition of academic staff and researchers in the Medical & Health Science Studies sponsored by Dean Ship of Research University of Khartoum, Khartoum, **Sudan**
- 2015** Academic Excellence Award for recognition of academic staff and researchers in the Medical & Health Science Studies sponsored by University of Khartoum, Khartoum, Friendship-Hall, **Sudan** 18-22 Feb. 2015
- 2014** TWAS-UNESCO Associateship (Ref. 3240249783), **Italy**, Aug. 2011-Aug. 2014
- 2009** Chinese Ministry of Science and Technology donation of laboratory equipment for the African researcher, Beijing, **China**, November 24, 2009
- 2007** Chinese Postdoctoral Science Foundation Research Grant, first award (20070420201), **China**, Dec 2007
- 2007-2009** Yangzhou University, **China**, Postdoctoral fellow (July 2007-Aug 2009)
- 2004-2007** Chinese Scholarship Council, Ph.D. **China** (Sept 2004-June 2007)
- 2000-2002** Ministry of Higher Education, **Sudan**, M. Sc (2000-2002)

Memberships in Professional and Scientific Societies

- 2018 -** Member of Ethics Research Committee, Medical & Health Science Studies, UofK
- 2018 -** Member of Sudanese National Academy of Science
- 2016-** Member and founder of Darfur Educational Service Co. Ltd
- 2015 -** Member of the International Society for Stem Cell Research
- 2015 -** Member of the American Association of Immunologists
- 2015 -** Member of American Society of Human Genetics
- 2015 -** Member of European Society of Human Genetics
- 2011 -** Member of African Society of Human Genetics
- 2010 -** Member of Eastern and Southern Africa Laboratory Mangers Association

Knowledge and Skills

1. Molecular Biology, Genetics & Genomics
2. Host Pathogen Interaction
3. Gene Knocks out Technique
4. Recombinant DNA vaccine
5. Stem Cell Biology
6. Biostatistics & Experimental Design
7. Bioinformatics

Training and Academic Exchange

- 2019** Molecular Diagnosis and Pathogen Determination Techniques by China CDC (China CDC ModPad), **Beijing, China**, November 7-17, 2019.
- 2017** CTLGH Introduction to Bioinformatics organized by Center for Tropical Livestock Genetics & Health and Edinburgh Genomics, ILRI, Nairobi, **Kenya**, 13-17 Feb, 2017.
- 2016** Training on Modern Medical Technology, **Yangzhou University, China** (Nov 20-Dec 9, 2016)
- 2016** Advance Bioinformatics course, **Novogene Co., Ltd, Beijing, China** (Sept 26-30, 2016)
- 2014** Visiting Scientist Institute of Immunology, School of Medicine, **University of Pennsylvania, USA** (December 26, 2014 - Jan 25, 2015)
- 2014** Visiting Scientist International Livestock Research Institute (ILRI), **Nairobi, Kenya** (May 1-4th, 2014)
- 2012** Visiting Scientist College of Veterinary Medicine, **Yangzhou University, China** (November 4-24, 2012)
- 2012** Visiting Scientist Translation Research Center, School of Medicine, **University of Pennsylvania, USA** (March 5-26, 2012)
- 2011** Research Associateship Dept. of Medical Genetics, **National Institute of Genetic Engineering and Biotechnology, Tehran, Iran** (Dec3, 2011- Jan 31, 2012)

- 2011** Visiting Scientist Dept. of Genetics, Animal Breeding and Reproduction, **Yangzhou University, China** (Sept 5 - Oct 6, 2011)
- 2011** Visiting Scientist Dept. of Genetics, School of Medicine, **University of Pennsylvania, USA** (April 5-29, 2011)
- 2010** Visiting Scientist Institute of Immunology, School of Medicine, **University of Pennsylvania, USA** (July 7-Aug 3, 2010)
- 2004** Training on Education Development, Management and Executive Leadership, **University of Nyala, Sudan**, one month (2004)
- 2002** Training on Molecular Biology, **Trop. Med. Inst. Res., Khartoum, Sudan**, 2month (2002)

Faculty Appointments

- 2014-2018** Associate Professor: Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan (January 2014- Jan 2018)
- 2013-2014** Assistant Professor: Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan (May 2013- December 2013)
- 2012-2013** Associate Professor: Faculty of Veterinary Science, University of Nyala, Sudan (April 2012- April 2013).
- 2006-2012** Assistant Professor: Faculty of Veterinary Science, University of Nyala, Sudan (July 2006-March 2012)
- 2007-2009** Postdoctoral researcher: College of Veterinary Medicine, Yangzhou University, China (July 2007-Aug 2009)
- 2004-2007** Research associate: College of Anim. Sci. and Tech., Yangzhou University, China (Sept 2004-June 2007)
- 2002-2004** Lecturer: Faculty of Veterinary Science, University of Nyala, Sudan (Nov 2002-Aug 2004)
- 2000-2002** Research assistant: Faculty of Animal Production, University of Khartoum (July 2000-Oct 2002)
- 1998-2000** Teaching assistant: Faculty of Veterinary Science, University of Nyala, Sudan (Oct 1998-May 2000)

Administration Appointments

- 2018-** Dean Darfur College (October 2018- up to date)
- 2018-2019** Member of University of Khartoum Senate (August 2018- Oct. 2019)
- 2018-2019** Deputy Dean Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan (July 2018- Oct. 2019)
- 2014-2017** Coordinator of Master program by courses, Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan (Dec. 2014- Feb. 2017)
- 2013-2016** Consultant of the Institute of Molecular Biology, University of Nyala, Sudan (2013-2016)
- 2013-2016** Project Manager: Capacity building for scientific preservation of livestock breeds in Sudan, funded by African Development Bank (2013-2016).
- 2013-** Director of Biomedical Research Laboratory, Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan (May 2013- up to date)
- 2013-** Member of Faculty and Research Board (2013- up to date)
- 2014-2017** Member of master examinations committee, FMLS; U of K. Dec. 2014- Feb. 2017.
- 2014-2017** Member of master admission committee, FMLS; U of K. Dec. 2014- Feb. 2017
- 2016** Member of master academic curriculum reform committee, FMLS; U. of K. 2016.
- 2013** Member of B.Sc. academic curriculum reform committee, FMLS; U. of K. 2013.
- 2002-2004** Member of Edition and Publication Committee of University of Nyala Senate (Nov 2002- Aug 2004)
- 2002-2004** Member of University of Nyala Senate (Nov 2002- Aug 2004)
- 2002-2004** Head Dept. of Animal Production (Nov 2002- Aug 2004)
- 2002-2004** Member of Faculty and Research Board (Nov 2002- Aug 2004)
- 2002-2004** Member of Examination Committee (Nov 2002- Aug 2004)

Current research

- 2011** Risk factor of Cardio-metabolic Disease in Sudan (Coronary Artery Diseases, Stroke and Diabetes)
- 2011** Molecular epidemiology of Esophageal Cancer, Leukemia & Sickle Cell Anemia in Sudan
- 2013** Genome diversity and adaptation in Animal, Pathogen and Human
- 2014** Stem Cell Biology

Research grants

- 2007** Chinese Postdoctoral Science Foundation Research Grant for postdoctoral research, 2007-2009. *First award* (50,000 RMP)
- 2009** Chinese Ministry of Science and Technology, Lab equipment, 2009. (150, 000 RMP)
- 2011** PI for project funded by Sudanese Ministry of Higher Education to study the association of genetic variation in lipoprotein lipase gene with cardiovascular disease in Sudanese population, 2011-2012. (11,000\$)
- 2011** UNESCO-TWAS associateship to study cancer and stem cell biology, 2011-2014.
- 2013** Project manager: Capacity building for scientific preservation of livestock breeds in Sudan, funded by African Development Bank, 2013-2016. (479,000\$)
- 2014** Co-PI for project funded by Sudanese Ministry of Higher Education to study thyroid Cancer in Western Sudan, 2014-2015, (3,000\$)
- 2019** Co-PI for project funded by Sudanese Ministry of Higher Education for the Evaluation of Colistin as an Agent against Gram-negative Bacteria Isolated from Food-producing Animals in Khartoum State, 2019-2021, (760,000 SD)

Seminars and Invited Lectures

- 2019** Building research capacity in resource limited countries, China CDC ModPad), China National Gene Bank, **Shenzhen, China**, November 12, 2019.
- 2019** Education in Sudan. China-Sudan forum on Development of Higher Education Cooperation, *Yangzhou University*, China, November 4, 2019

- 2018** Genome diversity and adaptations of indigenous Sudanese livestock Breeds. College of Animal Science, *Yangzhou University*, China, December 20, 2018
- 2018** Introduction to Genome Bioinformatics, Faculty of Pharmacy, *University of Khartoum*, Sudan, March 8, 2018.
- 2018** Introduction to Genome Bioinformatics, Faculty of Animal Production, *University of Bahri*, Sudan, January 5, 2018.
- 2018** Genome diversity and adaptation in Agriculture. *Agricultural Research Corporation*, Wad Madani, Sudan. Feb. 27, 2018
- 2017** Phenotypic characterization of Sudanese animal breeds. Genetics, Ecology and Evolution Group Mini Symposium, School of Life Science, *Nottingham University*, 29 June, 2017, **UK**
- 2016** Stem Cells: Techniques, Application and Bioethics, Faculty of Pharmacy, *University of Gezira*, Sudan, March 6, 2016.
- 2016** Stem Cells: Techniques, Application and Bioethics. Faculty of Medical Laboratory Sciences, *Al Zaiem Al Azhari University*, Sudan, January 20, 2016.
- 2015** Molecular and Genetics Epidemiology, *National Center for Neurological Sciences*, Ibrahim Malik Teaching Hospital, Sudan, July 16, 2015
- 2015** Stem Cell & Regenerative Medicine, Faculty of Medicine and Health Sciences, *University of Kordofan*, Sudan, May 7, 2015
- 2012** Genetic Engineering, Faculty of Veterinary Sciences, *University of Nyala*, Sudan, October 2, 2012
- 2011** Application of Molecular Biology in Animal Science. Faculty of Animal Production, *University of Khartoum*, Sudan, July 12, 2011
- 2011** Interaction of avian pathogenic *E. coli* FimH adhesin with host cell and induction of immune response, Faculty of Veterinary Medicine, *Sudan University of Science and Technology*, June 30, 2011.
- 2011** Genetics and Molecular Biology for postgraduate student, Faculty of Science, *University of Khartoum*, January 16-20, 2011.

Workshops and training courses organized

- 2016** **Flow cytometer**, Sponsored by Faculty of Med. Lab. Sci., University of Khartoum, Vet. Res. Institute & International Atomic Energy Agency (IAEA), Vienna. *Faculty of Med. Lab. Sci.*, December 14-15, 2016
- 2015** **Molecular Epidemiology**, Faculty of Medical & Health Sciences, University of Kordofan, May 5-6, 2015
- 2015** **Stem Cells & Regenerative Medicine**, The 6th Annual International Conference, Postgraduate Studies and Scientific Research, Medical and Health Studies, University of Khartoum, 19th Feb 2015
- 2014** **Basic Molecular Biology & Bioinformatics**. Faculty of Medical Laboratory Sciences, University of Khartoum. 5th -6th January 2014
- 2013** **Basic Molecular Biology & Bioinformatics**. Faculty of Medical Laboratory Sciences, University of Khartoum. 24th -28th November 2013
- 2013** **Basic Molecular Biology & Bioinformatics**. Faculty of Medical Laboratory Sciences, University of Khartoum. 3th -7th November 2013

International Conferences & workshops attended

- 2018** Genomics and Human Health in Africa - 2-7 Dec. 2018, **Khartoum, Sudan**
- 2017** The 36th International Society for Animal Genetics Conference, **University College of Dublin**, 16-21th, Jul 2017, **Ireland**
- 2015** The 3th China-Arab States University Presidents Forum, Yinchuan, Ningxia, September 11-13, 2015, **China**
- 2015** The 18th Conference on Gums and Stabilizers for the Food Industry, Wrexham, June 23-26, 2015, **UK**
- 2015** The 6th Annual International Conference, Postgraduate Studies and Scientific Research, Medical and Health Studies, University of Khartoum. Friendship Hall-Khartoum, 18-22th Feb. 2015, **Sudan**.
- 2014** Sustainable African Goat Productivity Gains Improvement Workshop 8-10 December 2014, BecA-ILRI Hub, Nairobi, **Kenya**
- 2014** Quality and Safety of Agro-products, 22nd 31st Oct, 2014, Egerton University, **Kenya**.

- 2014** Bioethics Workshop: Bioethics an interdisciplinary approach, an overview, 11th March 2014, University of Khartoum, **Sudan**.
- 2013** First International Cardiology Conference, Friendship Hall (19-20Jan 2013) Khartoum, **Sudan**.
- 2011** Genomes Environments Traits conference, April 27, 2011 in Philadelphia, **USA**
- 2011** The Annual International Conference, Postgraduate Studies and Scientific Research, Medical and Health Studies. Friendship Hall-Khartoum, 25-27th Feb. 2011, **Sudan**.
- 2010** 9TH African Laboratory Mangers Association (AFRICALMA)/ Eastern and Southern Africa Laboratory Mangers Association (E-SALAMA) workshop/Conference Dec 18-22, 2010, Khartoum/ Wad Medani, **Sudan**
- 2009** Lunch Ceremony of China-Africa Science and Technology Partnership program (CASTEP) and Donation of Equipment to African Researchers. Ministry of Science and Technology, Peoples Republic of China, November 24, 2009, Beijing, **China**
- 2009** China-Arab (10+1) Higher Education Cooperation Symposium-2009, 9-11 Nov, 2009, Khartoum, **Sudan**
- 2009** Microbiological Society of Korea's 50th Anniversary, International Symposium on Microbiology 2009 May 28-30, 2009, Jeju Island, **South Korea**
- 2008** China-Arab (10+1) Higher Education Cooperation Symposium-2008, 19-24 Nov, 2008, Yangzhou University, Yangzhou, **China**
- 2008** International Conference on Regulatory T Cells and clinical application in human diseases, 25-27 Oct., 2008, Beijing, **China**
- 2008** The 10th World Conference on Animal Production, 23-28 Nov. 2008, Cape Town, **South Africa**
- 2007** The 14th Conf. on Animal Genetics and Breeding Research in China, 8-12Oct. 2007, Huazhong Agricultural University, Wuhan, **China**
- 2007** The 12th Association of Institutions for Tropical Veterinary Medicine (AITVM) International Conference, 20-22 Aug.2007, Montpellier, **France**
- 2006** The 10th National Congress in Animal Genetic Markers, Oct. 2006, Beijing, **China**
- 2002** Second Genetics Meeting on: The Genetics of the Populations of the Sudan and East Africa 1-3 Nov. 2002. Khartoum, **Sudan**

Editorial Positions

- 2011** Reviewer for Journal of BMC Genetics
- 2011** Reviewer for Journal of Livestock Science
- 2012** Reviewer for Journal of Molecular Biology reports
- 2015** Reviewer for Journal of Indian Heart Journal
- 2015** Reviewer for African Journal of Biotechnology
- 2015** Reviewer for African J. Biochemical Research
- 2016** Reviewer for Journal of Gene
- 2015 -** Editorial board for Journal of Annals of Cardiovascular Diseases
- 2015 -** Editorial board for Journal of Hypertension & Management

Publications in Refereed Journals

- 50.** Samah A. Hassan, Alsadig F. Gassoum, Sawsan A. Aldeaf, Mohamed A. Arbab, **Hassan H. Musa.** Association between Acute Inflammatory Cells and Mutation in ICAM-1 gene with Injury Severity and Outcome among Traumatic Cerebral Hemorrhagic Contusion. *J Acute Medicine*, 2020,10(1):1-8
- 49.** Hussain Bahbahani, **Hassan H. Musa**, David Wragg, Eltahir S. Shuiep, Faisal Al mathen, Olivier Hanotte. Assessing the genomic diversity and signatures of selection for productive traits in Dromedary camel from Sudan. *Frontiers in Genetics*, 2019;10:893. **Impact Factor 4.151**
- 48.** Abulgasim Ahbara, Hussain Bahbahani, Faisal Almathen, Mohammed Al Abri, Mukhtar Omar Agoub, Ayelle Abeba, Adebabay Kebede, **Hassan Hussein Musa.** Genome-Wide Variation, Candidate Regions and Genes Associated with Fat Deposition and Tail Morphology in Ethiopian Indigenous Sheep. *Front. Genet.* 2019, 9699. **Impact 4.01**
- 47.** Radfan Saleh, **Hassan H. Musa**, Gamal Abdul Hamid, Muzamil M. Abdel Hamid. Frequencies of polymorphisms of glutathione s-transferase (Ile105Val) polymorphism and its association with acute lymphoblastic leukemia in Yemeni patients. Pan Arab Conference for Bleeding Disorders. *J Appl Hematol.* 2019, 10, Suppl S1:1-43

46. Nihad E. Babiker, Alsadig Gassoum, Mohamed A. Arbab, Sawsan A. ALDeaf, Imad Fadl-Elmula, Nahla E. Abdelraheem, Mohamad A. El-Sheikh, **Hassan H. Musa**. Production of insulin-producing cells from cord blood mesenchymal stem cells and their potential in cell therapy. *J Drug Delivery Therapeutics*, 2019, 19:65-71.
45. Tamiris S. Aguiar, Rafaela B. Torrecilha, Marco Milanese, Adam T Utsunomiya, Beatriz B. Trigo, Abdulfatai Tijjani, **Hassan H. Musa**. Association of Copy Number Variation at Intron 3 of *HMGA2* with Navel Length in *Bos indicus*. *Front. Genet.* 2018, 9:627. **Impact 4.01**
44. Adriano Mollica, Azzurra Stefanucci, et al., Taha H. Musa, **Hassan H. Musa**, Abdelkareem A. Ahmed. Polyphenolic composition, enzyme inhibitory effects *ex-vivo* and *in-vivo* studies on two Brassicaceae of north-central Italy. *Biomedicine & Pharmacotherapy* 2018; 107(11): 129-138. **Impact 3.457**.
43. Taha H. Musa, Wei Li Rong Gao, Wonmongo L. Soro, Wei X. Wang. Xian S. Li, Yue Song, He Yan, Lei Hong, **Hassan H. Musa**, Pingmin Wei. Prevalence of dental caries profile in children and adolescents in Rural Jiangsu Province. *Arch Dis Child* 2018 10.1136/archdischild-2018-315016. **Impact Factor 3.258**
42. **Hassan H. Musa**, Elbagire A. Elbashir, Idriss H. Musa. Clinical and Socio-demographic Characteristics of Cardiovascular Disease in Sudan. *Polish Annals of Medicine*, 2018; 25(1) :11–16
41. Nihad E. Babiker, Alsadig Gassoum, **Hassan H. Musa**, Sawsan A. ALDeaf, Imad Fadl-Elmula, Nahla E. Abdelraheem, Mohamad A. El-Sheikh, Mohamed A. Arbab. In vitro differentiation of adipose-derived mesenchymal stem cell into insulin-producing cells. *Int J Stem Cell Res Transplant*, 2018, 6(1): 287-293
40. Taha H. Musa, Rehab I. Kambo, Abdelkareem A. Ahmed, **Hassan H. Musa**. Epidemiology of measles cases in a community of South Darfur state, Sudan, 2011-2015. *Biomed Environ Sci*, 2017; 30(12): 917-921. **Impact 2.518**
39. Rahma H. Ali, Nuha Y. Ibrahim, Asrar M. A. Elegail, Naziha A. M. Eltohami, Rasha S.M. Ebraheem, Salma F. M. Ahmed, Huda H.H. Ahmed, Eman O.M. Nour, Muataz M. Eldirdery, **Hassan H. Musa**. Evaluation of GeneXpert MTB/RIF Assay and Line Probe Assay for Rapid Diagnosis of *Mycobacterium Tuberculosis* in Sudanese Pulmonary TB patients. *Asian Pac J Trop Dis* 2017; 7(7): 426-429.

38. Nihad Elsadig Babiker, Alsadig Gassoum, Nahla E. Abdelraheem, Mohamed A.R. Arbab, Sawsan A.H ALDeaf, Mohamad Ahmed Ali El-Sheikh, **Hassan H. Musa**. The progress of Stem cells in the treatment of diabetes mellitus type 1. *Progress Stem Cell* 2017, 4(1): 175-188
37. Ibtihal Omer, Dalia Salahddin, **Hassan H. Musa**, Mona Ahmed, Hosham abdalrahman. Association of Epstein-Barr virus with gastric carcinoma among Sudanese patients. *J Cancer Genetics Biomarker*, 2016. Vol-1 Issue 1 Pg. no.- 46
36. Mohammed Abubaker Altayeb, Shamsaldin Ibrahim Mokhtar, Mona Eltahir Adam, Salahaldeen Ismail Mohammed, **Hassan H. Musa**. Detection of primary CMV infection in Sudanese pregnant women by IgG Avidity test. *Asian Pacific J. Tropical Disease*, 2016; 6(10): 816-818.
35. Abdelkareem Ahmed, **Hassan H Musa**, Amal Sifaldin, Taha H Musa. Epigenetic events in male urogenital organs cancers. *Journal of Cancer Research and Practice* 2016, 3(4):104-112.
34. Jaafar S. Fedail, Abdelkareem A. Ahmed, **Hassan H. Musa**, Elsadik Ismail, Amal Z. Sifaldin, Taha H. Gum Arabic improves semen quality and oxidative stress capacity in alloxan induced diabetes in rats. *Asian Pacific Journal of Reproduction*, 2016; 5(5): 434-441
33. Ahmed A. Ibrahim, Musa A. Mohamed, Babiker A. Babiker, Mohamed B Musa, **Hassan H. Musa**. Serological Markers of Epstein Barr Virus in Renal Transplant Recipients. *Asian Pac J Trop Dis* 2016; 6(7): 509-512.
32. Gao W, Sun W, Su R, Lv XY, Wang QZ, Li D, **Musa HH**, Chen L., Zhou H, Xu HS, Hua WH. Sheep YAP1 temporal and spatial expression trend and its relation with MyHCs expression. *Genet Mol Res*. 2016, 15(2). doi: 10.4238/gmr.15027260. **Impact 0.78**
31. Abdelkareem A. Ahmed, **Hassan H. Musa**, Jaafar S. Fedail, Taha H. Musa, Amal Z. Sifaldin. Gum Arabic suppress diet-induced obesity by alteration mRNA levels of genes Involved in lipid metabolism in mouse liver. *Bioactive Carbohydrates and Dietary Fibre*, 2016, 7(1):15-20.
30. Abdelkareem Ahmed, Jaafar Fedail, **Hassan H. Musa**, Taha Musa, Amal Sifaldin. Gum arabic supplementation improved antioxidant status and alters expression oxidative stress

- gene in ovary of mice fed high fat diet. *Middle East Fertility Society Journal*. 2016, 21(2):101-108.
29. Abdelkareem A. Ahmed, Jaafar S. Fedail, **Hassan H. Musa**, Asghar Ali Kamboh, Amal Z. Sifaldein, Taha H. Musa. Gum Arabic extracts protect against hepatic oxidative stress in alloxan induced diabetes in rats. *Pathophysiology*, 2015 22(4):189-94.
 28. Abdelkareem A. Ahmed, **Hassan H. Musa**, Jaafar S. Fedail, Amal Z. Sifaldin, Taha H. Musa. Gum arabic decreased visceral adipose tissue associated with downregulation of 11 β - Hydroxysteroid dehydrogenase type I in liver and muscle of mice. *Bioactive Carbohydrates and Dietary Fibre*, 2015, 6(1):31-36.
 27. Muzamil M. Abdel Hamid, Safa Ahmed, Awatif Salah, Etayeb M. A. Tyrab, Lemya M. Yahia, Elbagire A. Elbashir, **Hassan H. Musa**. Association of lipoprotein lipase gene with coronary heart disease in Sudanese population. *J Epidem. Global Health*. 2015, (5): 405- 407
 26. **Hassan H. Musa**, Abdelkareem A. Ahmed, Taha H. Musa, Jafaar S. Fedail. Gum arabic down regulates PPAR-g and SCD mRNA expression in mice. *Polish Annals Med*. 2015 (22):11-17.
 25. Lv XY, W. Sun, R. Su, D. Li, Q.Z. Wang, **Hassan H. Musa**, L. Chen, "Y.F. Zhang, W.Z. Wu. Correlation between sheep YAP1 temporal and spatial expression trends and MSTN and MyoG gene expression. *Genet. Mol. Res*. 2015; 14(2):3244-3256. **Impact 0.78**
 24. Sun W, Li D, Su R, **Musa HH**, Chen L, Zhou H. Construction, characterization and expression of full length cDNA clone of sheep YAP1 gene. *Mol Biol. Report*. 2014, 41 (2):947-56. **Impact 1.889**
 23. **Hassan H. Musa**, Wei-Juan Zhang, Jing Lv, Xiao-Li Duan, Yang Yang, Chun-Hong Zhu, Hui-Fang Li, Kuan-Wei Chen, Xia Meng, Guo-Qiang Zhu. The molecular adjuvant mC3d enhances the immunogenicity of FimA from type I fimbriae of Salmonella enterica serovar Enteritidis. *J Microbiol Immunol Infect*. 2014, 47:57-62. **Impact 2.094**
 22. Sun W, Su R, Li D, **Musa HH**, Kong Y, Ding JT, Ma YH, Chen L, Zhang YF, Wu WZ. Developmental changes in IGF-I and MyoG gene expression and their association with meat traits in sheep. *Genet Mol Res* 2014,13(2):2772-2783. **Impact 0.78**

21. Taha H. Musa, **Hassan H Musa**, Elrasheed A. Ali, Nazik E Musa. Prevalence of malnutrition among children under five years old in Khartoum State, Sudan. *Polish Annals of Medicine*, 2014, 21:1-7.
20. **Hassan H. Musa. et al.** Cloning and expression of FimA-C3d conjugated protein expressed in prokaryote expression system. *J Genet Eng and Biotech*, 2014, 12:55-59
19. Su R., Sun W, Li D, Wang QZ , Lv XY, Musa HH, Chen L, Zhang YF, Wu WZ. Association between *DLK1* and *IGF-I* gene expression and meat quality in sheep. *Genet. Mol. Res.* 2014, 13 (4): 10308-10319. **Impact 0.78**
18. **Hassan H. Musa**, Tyrab EM, Muzamil M. AbdelHamid, Elbagire A. Elbashir, Lemya M. Yahi and Nihad M. Salih. Characterization of lipid profile in coronary heart disease patients in Sudan. *Indian heart Journal*, 2013, 65:232-233.
17. Wei Sun¹, Rong Ni, Jin Feng Yin, **Hassan H. Musa**, Tong jia Ding, Ling Chen. Genome Array of Hair Follicle Genes in Lambskin with Different Patterns. *PLoS ONE* 2013, 8(7): e68840. **Impact 2.806**
16. Sun Wei, Chang Hong, **Hussein H. Musa**, Liao Xin-jun, Chu Ming-xing, Kija James. Microsatellite-based genetic differentiation and phylogeny of Sheep breeds in Mongolia sheep group of China. *J Integrative Agri.* 2011, 10 (7): 1080-1087. **Impact 1.042**
15. Zhu CH, Wu J, Chen WW, **Hassan H. Musa**, Zhu GQ. Difference and variation of the sef14 operon gene clusters in *S. pullorum*. *J. Basic Microbiol.*, 2010, 50 (1): 120-123. **Impact 1.58**
14. Wei Sun, Hong Chang, Yuehui Ma, Kenji Tsunoda, Zhangping Yang, **Hassan H. Musa**. The phylogenetic system survey of native sheep breeds in the Eastern and Southern Central Asia. *Anim. Breed. Genet.*, 2010, 127(4): 308-17. **Impact 1.941**
13. Wei Sun, H. Chang, Tsunoda Kenji, **H.H. Musa**, Y. H Ma, W.J Guan. Analysis of Geographic and pairwise genetic distance among sheep population. *Biochem. Genet.* 2010, 48:376-384. **Impact 1.927**
12. **Hassan H. Musa**, Jun Zhu, Zhi Ni Zhang, Guo Qiang Zhu. Immune response of peripheral blood mononuclear cells to avian pathogenic *E. coli*. *Annals of Microbiology*, 2009, 59 (3): 587-592. **Impact 1.407**

11. **Hassan H. Musa**, S.F. He, S. L. Wu, C. H. Zhu, Z. H. Liu, Z.N. Zhang, V.S. Raj, R.X. Gu, G. Q. Zhu. Genetic engineering of avian pathogenic E. coli to study the functions of FimH adhesion. *Indian J. Exper. Biology*, 2009, 47 (11): 916-920. **Impact 1.475**
10. **Musa, H. H.**, Chen G. H., Cheng J. H., Li B.C., Suleiman A. H. Single strand conformation polymorphism in intron I of chicken apoVLDL-II gene and its relation with triglyceride and very low density lipoprotein. *Turk. J. Vet. Anim. Sci.* 2009, 33 (33): 175-177. **Impact 0.489**
8. **Hassan H. Musa**, W.B. Bao, K.H. Wang, G.H. Chen, G.Q. Zhu. Genetic Diversity, Genetic Distance and Phylogeny of Functional ApoVLDL-II and Lipoprotein Lipase Genes. *J. Appl. Anim. Res.* 34 (2008): 143-147. **Impact 0.826**
7. Bao, W.B., S.L. Wu, **H.H. Musa**, G.Q. Zhu, G.H. Chen. Genetic variation at the alpha-1-fucosyltransferase (FUT1) gene in Asian wild boar and Chinese and Western commercial pig breeds. *Anim. Breed. Genet.* 2008, 125:427-430. **Impact 1.941**
6. **Musa, H. H.**, Chen, G. H., Bao, W. B., Cheng, J. H., Mekki, D. M. Association of SNPs in intron 8 of avian lipoprotein lipase gene with cholesterol, triglyceride and lipoprotein concentration. *J. Appl. Anim. Res.* 2007, 32: 155-159. **Impact 0.826**
5. Sun, W., Chang, H., Yang, Z. P., Geng, R. Q., Tsunoda, K. J., Ren, Z.J., Chen, H.Y., **Musa, H. H.** 2007. Analysis on the origin and phylogenetic status of Tong sheep using 12 blood protein and non-protein markers. *J. Genet. Genomics* 34(12):1097-1105. **Impact 4.066**
4. Li, B.C., Yu, F., Xu, Q., Ni, L.G., Chen, G. H., **Musa, H.H.**, Lui, T.Z. Relationship between Spermatogonium and testicular development in early chicken embryos. *J. Biol. Sci.* 2007, 7 (8): 1331-1338.
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Master and PhD Mentorships

PhD Student Advisor

1. Nihad Elsadig Babiker. *In-Vitro* Differentiation of Mesenchymal Stem Cells to Pancreatic Islet B- Like Cells with *In Vivo* Insulin Secretion. *Ph.D.* in Hematology and Immunohematology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan, **Finished 2018**
2. Radfan Saleh Abdullah. Epidemiological and Molecular Studies of Acute Lymphoblastic Leukemia in Yemeni population. *Ph.D.* in Hematology and Immunohematology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan, **Finished 2018**
3. Hajir Sir Elkhatim Hamid Mukhtar. Association of Cell receptors with Susceptibility to Tuberculosis among Sudanese patients. *Ph.D* in Medical Microbiology, Faculty of Medical Laboratory Sciences, **Al Neelain University**, Sudan. **Finished 2018**

4. Tarig Abderhaman Gamer Mohamed. Comparison between molecular detection and conventional method for detection of *stroglyoides stercoralis* in stool samples in food handlers attending to public health laboratories in Khartoum, State. **Ph.D.** in Medical Parasitology. Faculty of Medical Laboratory Sciences, **University of Science & Technology**. **Finished 2018**
5. Salma Hussein Abdalla Elhassan. ApolipoproteinE, interleukin-6 and tumor necrosis factor alpha genes polymorphisms among Sudanese patients with intracerebral hemorrhage. **Ph.D** in Clinical Chemistry. Faculty of Medical Laboratory Sciences, **Al Neelain University**, Sudan. **Finished 2019**
6. Samah Abdelrahman Hassan Ibrahim. Association of Polymorphism in Inflammatory Genes with Hemorrhagic Stroke in Sudan. **Ph.D** in Medical Microbiology, 2015-2018. Faculty of Medical Laboratory Sciences, **Al Neelain University**, Sudan. **Finished 2019**
7. Ganim Eltahir Ahmed, Molecular identification and Characterization of Hepatitis B virus in selected States, Sudan, **Ph.D.** in Medical Microbiology, 2016-2019. Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan.
8. Mansour Mohamed Omer El-Sharief. Epidemiological and Molecular Studies of Sickle Cell Anemia in Kordofan States, Sudan. **Ph.D.** in Hematology and Immunohematology, Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan, 2017-2020.

MSc Student by Research Advisor

1. Mawada Mohammed Yahia. Associations of polymorphism in Pro-Inflammatory Cytokines genes with Coronary Artery Disease patients in Sudan. **M.Sc.** in Medical Microbiology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan, 2014-2016. **Finished 2016**
2. Haifa Alhaj Babiker Ahmed. Association of IL-16 gene polymorphism with Ischemic Stroke in Sudanese Patients. **M.Sc.** in Hematology and Immunohematology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan. **Finished 2018**
3. Huda Yousef Othman Fadl Allah. Evaluation and comparison different blood clot methods in the diagnosis of Enteric fever. **M.Sc.** in Medical Microbiology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan. **Finished 2018**

4. Abdalhmed Ahmed Abdalhmed. Molecular characterization of *Helicobacter pylori* in Human gastric adenocarcinoma tissues. *M.Sc.* in Medical Microbiology, Faculty of Medical Laboratory Sciences, **University of Gezira**, Sudan. **Finished 2018**
5. Layla Ahmed Mohammed. The effect of Macrophage on *coli* form Human Adherent-Invasive Escherichia Inflammatory Bowel Disease. *M.Sc.* in Medical Microbiology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan, 2017-2019. **Finished 2019**
6. Sara Jamal Gubara Mohamed Saleh. Whole Genome Sequencing of Multidrug-resistant *Mycobacterium Tuberculosis* Isolates from Sudanese Patients. *M.Sc.* in Medical Microbiology, Faculty of Medical Laboratory Sciences, **University of Khartoum**, Sudan, 2017-2019. **Finished 2019**