

Curriculum Vitae



Personal Data:

Name: Amani Zeinelabdeen Abdelgadir Frah

Nationality: Sudanese

Date of birth: November 20, 1974

Marital Status: married with three children

Languages:

1. Arabic fluent written and spoken
2. English very good written and spoken

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Academic Title:

Assistant Professor of Molecular Genetics and Animal Breeding.

Field of Specialization:

Major: Animal Production.

Minor: Molecular Genetic and Animal Breeding.

Current Occupation:

- **Deputy Dean** of the Deanship of Distance Education and E-Learning, Omdurman Islamic University, Sudan.

- **Assistant Professor** of Molecular Genetic and Animal Breeding, Department of Animal Production, Faculty of Agriculture, Omdurman Islamic University, Sudan.

- **Assistant Professor** of Molecular Genetic and Animal Breeding, Department of Animal Production, Faculty of Agricultural Production and Processing Technology, International University of Africa, Sudan.

- **Assistant Professor** of Molecular Genetic and Animal Breeding, Department of Basic Science, Faculty of Nursing Sciences, Ibn Khaldoon College, Sudan.

Academic Background:

- Ph.D. in Genetics and Animal Breeding (Molecular Genetics), University of Khartoum, 2019. Thesis Title: *Detection of Some Fecundity Genes Mutations and Characterization of Three Desert Sheep Ecotypes*. Supervisor Prof. Mohamed-Khair A. Ahmed, Co-Supervisor Dr. Lutfi Mohamed Ahmed Musa.

- M.Sc. in Genetics and Animal Breeding, University of Khartoum, 2004. Thesis Title: *The Performance of Holstein-Friesian Cattle under Sudan Conditions*. Supervisor Prof. Mohamed-Khair A. Ahmed.
- B.Sc. Honours in Animal Production, Class Two (Division One), Faculty of Animal Production, University of Khartoum, 2001.

Software Knowledge:

Good working level in the following software programmes:

Bioinformatics software, Harvey computer programme (using to estimate genetic parameters), SPSS, Excel, Power Point, Word, EndNote, Grammarly and Graph Pad Prism.

Scientific Techniques:

Fair knowledge with Interest in Application and Tools of Molecular Techniques uses in Animal Breeding and Improvement, application of statistical techniques, mathematical models and analytical approaches for research in Animal Production, Animal Breeding and Genetics studies.

Prizes:

The Arab Organization for Agricultural Development Prize for Research and Specialized Studies in the Axes of Arab Food Security (Improvement of Sheep Breeds), 2019

Employment record and experiences:

- 1- Deputy Dean of the Deanship of Distance Education and E-Learning, Omdurman Islamic University, until now.
- 2- - ClassPoint Certified Trainer, Sudan, until now.
- 3- Assistant Professor of Molecular Genetic and Animal Breeding at the Department of Animal Production, Faculty of Agriculture, Omdurman Islamic University, until now.
- 4- Head of the Department of Animal Production, Faculty of Agriculture, Omdurman Islamic University, during Nov 2019-April 2022.
- 5- Assistant Professor of Molecular Genetic and Animal Breeding at the Department of Animal Production, Faculty of Agricultural Production and Processing Technology, International University of Africa, until now.
- 6- Assistant Professor of Molecular Genetic and Animal Breeding, Department of Basic Science, Faculty of Nursing Sciences, Ibn Khadoon College, Sudan, until now.
- 7- Member of the Faculty Board of the faculty of Agriculture, Omdurman Islamic University, during Nov 2019-April 2022.
- 8- Member of the Faculty Research Board of the faculty of Agriculture, Omdurman Islamic University, during Nov 2019-April 2022.
- 9- Member of the Board of the Senate of the Omdurman Islamic University, until now.
- 10- Trainer with Kono Training Center for Agricultural Training in field of Animal Production, until now.
- 11-Member of the Committee for Evaluating and Developing Syllabuses of the Faculty of Agriculture, Omdurman Islamic University, until now.
- 12-Member of the Committee to Update the Curricula of the Faculty of Agriculture, Omdurman Islamic University during 20 Jan-13 Oct 2020.

13- Trainer with AOAD (Arab Organization for Agricultural Development). Training Courses in field of Animal Breeding, Genetics Improvement in Farm Animal, Conservation and Biodiversity, during 2013-2017.

14- Part-Time Lecturer, Bahr El Ghazal University, College of Veterinary Sciences. Teaching Course: Animal Breeding. During 2007-2011.

15- Part-Time Lecturer, University of Neelain, Faculty of Agricultural Technology and Fish Sciences. Teaching Courses: Quantitative Genetics, Applied Animal Breeding, Poultry Technology. During 2008-2009.

16- Part-Time Lecturer, University of AL ZAIEM AL-AZHARI, Faculty of Agriculture Teaching Course: Poultry and Animal Breeding. During 2003-2005.

Work undertaken that best illustrates capability to handle tasks assigned:

Name of assignment or research project: Introgression of the Booroola gene into Sudanese Desert Sheep.

Year: Started 2021

Location: Sudan

Client: El-Nuhood and El-Huda Research Stations

Main project features:

1- The introgression of FecB allele in no prolific ecotypes with high bodyweight can significantly increase the potential of the Sudanese sheep industry for export and will benefit rural farmers, help alleviate poverty and improve selection efficiency

2- After the establishment of the high fecundity strain in about 4 years the project will be handed over to the Livestock Research Authority.

Positions held: Head of the research group.

Activities performed: Supervising the group, laboratory supervision and Bioinformatics analysis, reviewing statistical analysis and writing papers.

Name of assignment or research project: Introgression of the Callipyge Mutation to The Hamari Sheep breed.

Year: Started 2021

Location: Sudan

Client: El-Nuhood Research Stations

Main project features:

1- The project aims to create an integrated system and marketing value chain for the Hamari breed of sheep for the benefit of small farmers. The Ram line carrying the Callipyge gene will be formed through gene introgression. The Callipyge genetic mutation causes postnatal muscle hypertrophy in lambs rumps and pelvic limbs.

2- The aim is to improve growth performance and the efficiency of meat production through faster growth rate with lower feed consumption leading to reduced cost of production and increased profits for farmers. This will significantly contribute to the development of livestock production in Sudan.

Positions held: Principal Investigator.

Activities performed: DNA Extraction, PCR-RFLP, Morphometric measurements analysis, Bioinformatics analysis and writing papers.

Name of assignment or research project: Genetic Variation in Calpastatin and Myostatin Genes and their Association with Growth and Carcass Traits in Sudanese Desert Sheep. .

Year: Started 2021

Location: Sudan

Client: Gezira and Kordofan States.

Main project features: Estimation of possible association between Calpastatin and Myostatin Genes and Growth and Carcass Traits in Sudanese Desert Sheep.

Positions held: Alternate Head of Research Group.

Activities performed: Collection of meat and blood samples, DNA Extraction, PCR-RFLP, Association analysis, Bioinformatics analysis and writing papers.

Feasibility study: Technical and economic vision for raising calves for meat production.

Year: 2020

Location: Sudan

Client: Administration of Planning, Development and Investment, Omdurman Islamic University.

Positions held: Member of study team

Activities performed: Survey of the present status of meat production and markets in Sudan, identifying the suitable Breed (Baggara Cattle), estimation of flock structure, data collection and economic analysis.

Feasibility study: Technical and economic vision for raising cows for dairy production.

Year: 2021

Location: Sudan

Client: Faculty of Agriculture farm, Omdurman Islamic University.

Positions held: Member of study team

Activities performed: Survey of the present status of dairy production and markets in Khartoum state, identifying the suitable genotype (Kenana *Frisian), estimation of flock structure, data collection and economic analysis.

Teaching Experience:

Undergraduate courses:

Responsible for teaching the following undergraduate courses:

Omdurman Islamic University:

Population Genetics, Quantitative Genetics, Animal Breeding and Genetics Improvement, Applied Animal Breeding.

International University of Africa:

Quantitative Genetics, Animal Breeding, Molecular Genetics and Modern technologies in animal production, Applied Poultry Breeding, The fundamentals of evaluating and selecting poultry Breeds , Biostatistics, Experimental Design, and Statistical Analysis, Research Methodology.

Ibn Khadoon College:

Genetic Science (Fundamentals Genetics and Molecular Genetics)

Training courses and workshops:

A- Courses

- 1- Reproducibility in Scientific Research Course (40 hours of course work, lectures, analysis of case studies, and group projects), AFRICAN SCIENCE FRONTIERS INITIATIVES (ASFI) , 2022
- 2- Introduction to Bioinformatics (IBT) Course (92 contact hours), Pan African Bioinformatics Network for H3ABioNet, 2021 covering:
 - Module 1: Databases and Resources (16 hours).
 - Module 2: Linux (16 hours).
 - Module 3: Sequence Alignment Theory and Application (12 hours).
 - Module 4: Multiple Sequence Alignment (12 hours).
 - Module 5: Genomics (20 hours).
 - Module 6: Molecular evolution and phylogenetics (16 hours).
- 3- Project Management Professional {PMP}, Arab Open University (Ability Training Center), 15-22-Sep 2020.
- 4- Converting to E-learning, Sudanese Researchers Group, 4-15 July 2020.
- 5- Beef Cattle Fattening, Inmaai Center for Agricultural Training, 26/6-3/7 2020.
- 6- DNA Sequence Analysis, Department of Molecular Biology and Bioinformatics, College of Veterinary Medicine, University of Bahri, 29/2-5/3 2020.
- 7- Golden Eggs Training, International University of Africa, 10 Dec 2019.
- 8- Biomedical Research Writing & Statistical Analysis Tools, Applied Bioinformatics Center, Africa City of Technology, 20-25 October 2018.
- 9- Bioinformatics and Advanced Genomics, Applied Bioinformatics Center, Africa City of Technology, 9-14 May 2015.
- 10- Teaching English as Foreign Language (TEFL) DIPLOMA, Sudan National Center for Languages during July 2005-July 2006.
- 11- Molecular Biology Course, Ministry of Health, National Health Laboratory, 28 Sep-15 Dec 2003.

B- Workshops

- 1- Basic Statistics Using Google Sheet, Applied Digital Skills (Grow with Google), July 2022.
- 2- How Elsevier Solutions can help researchers make a difference, organized by Almayzab Digital Library, 10 October, 2021.
- 3- Grammarly Plagiarism and Grammar Correction Program for Scientific Papers, organized by Almayzab Digital Library, 15 Sep 2021.
- 4- Optimize the use of MS Teams platform, organized by Almayzab Digital Library 8-12 Sep. 2021.
- 5- Samples in Social Research, organized by Almayzab Digital Library, 1 Sep 2021.
- 6- Comment trouver les articles pertinents pour mon projet de recherche (how to find articles relevant to your research project), Researcher Academy, ELSEVIER, 28 August 2021.
- 7- Electronic Applications for Scientific Researcher, organized by Almayzab Digital Library, 15 Aug 2021.
- 8- Internet of Things Applications in our lives, organized by Almayzab Digital Library, 11 Aug 2021.

- 9- Strategies to Strategies to Search for Digital Information Sources, organized by Almayzab Digital Library, 4 July 2021.
- 10- The Role of the Information Specialist in Sharing Knowledge, organized by Almayzab Digital Library, 23 June 2021.
- 11- Google Scholar, organized by Almayzab Digital Library, 17 March 2021.
- 12- Quality of Education, Faculty of Agriculture, Omdurman Islamic University 12-16 Jan 2020.

Publications:

A- Conferences

Abdelgader, A.Z., Musa, L.M., Tsubo, M., El-Hag, F.M., Saleem, A.O., Kurosaki, Y., Jawasreh, K.I. and Ahmed, M.K.A., 2020. Galway Point Mutation (FecXG) in the Bone Morphogenetic Protein 15 Gene (BMP15) Is Associated With Prolificacy in the Sudanese Desert Sheep Ecotypes.

Presented in The 2nd International Conference for Animal Production Science and Technologies, during 17-18 March, 2021, Department of Animal Production, College of Agricultural Engineering Sciences, University of Baghdad (Iraq).

B- Journals

1- **Abdelgadir, A.Z.**, Musa, L.M., Jawasreh, K.I., Saleem, A.O., El-Hag, F. and Ahmed, M.K.A., 2021. G1 point mutation in growth differentiation factor 9 gene affects litter size in Sudanese desert sheep. *Veterinary World*, 14(1), p.104.

2- **Abdel-Gader, A.Z.**, Ahmed, M.K., Musa, L.A. and Peters, K.J., 2007. Milk yield and reproductive performance of Friesian cows under Sudan tropical conditions. *Archives Animal Breeding*, 50 (2), pp.155-164.

3- **AMANI Z. ABDELGADIR**, IBRAHIM A. ISHAG, LUTFI M.-A. MUSA, SAFAA A. ABDALLA, MOHAMED A. ELKHALIFA, MOHAMED-KHAIR A. AHMED (**Accepted**). A survey Study on some Sudanese Desert Sheep Management system in Gezira, Sinnar and Blue Nile States. *Sudan Journal of Animal Production*.

C- Sequenced Genes in the GenBank (NCBI)

1- Growth Differentiation Factor 9 Gene (*GDF9*) sequence of A-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862511).

2- Growth Differentiation Factor 9 Gene (*GDF9*) sequence of B-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862512).

3- Growth Differentiation Factor 9 Gene (*GDF9*) sequence of C-Shugor Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862513).

4- Growth Differentiation Factor 9 Gene (*GDF9*) sequence of D-Watish Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862514).

5- Bone Morphogenetic Protein 15 Gene (*BMP15*) sequence of E-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862515).

6- Bone Morphogenetic Protein 15 Gene (*BMP15*) sequence of F-Shugor Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862517).

7- Bone Morphogenetic Protein 15 Gene (*BMP15*) sequence of G-Watish Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862516).

8- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-1B*) Gene (*FecB*) sequence of H-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862518).

- 9- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of I-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862519).
- 10- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of J-Dubasi Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862520).
- 11- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of K-Shugor Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862521).
- 12- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of L-Watish Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862522).
- 13- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of M-Watish Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862523).
- 14- Bone Morphogenetic Protein Receptor Type 1B (*BMPR-IB*) Gene (*FecB*) sequence of N-Watish Ecotypes of Sudanese Desert Sheep Breed (Available in the GenBank with accession ID MN862524).

D. Under preparation

- 1- Molecular Characterization of a Novel Mutation in the Coding Region of Exon 8 of *BMPR-IB* Gene in Dubasi, Shugor and Watish Sudanese Desert Sheep Breeds, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.
- 2- Characterization of Production System of Dubasi, Shugor and Watish Sudanese Desert Sheep Breeds, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.
- 3- The Growth and Reproductive Performance of Dubasi, Shugor and Watish Sudanese Desert Sheep Breeds under EL-Huda National Sheep Research Station , **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.
- 4- Phenotypic characterization and description of Dubasi, Shugor and Watish Sudanese Desert Sheep Breeds, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED
- 5- In Silico Analysis of a Novel Mutation in *FecB* Gene in Dubasi, Shugor and Watish Sudanese Desert Sheep Breeds, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.
- 6- Characterization of Production System of Some Sudanese Goats Breeds, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.
- 7- The Environmental Factors That Influence Pre and Post- Pregnancy Weights Gain of Some Sudanese Desert Sheep, **AMANI Z. ABDELGADIR**, LUTFI M.-A. MUSA, AUBAI. O. SALEEM, MOHAMED-KHAIR A. AHMED.

References:

1- Prof. Mohamed-Khair Abdalla Ahmed (My M.Sc. And Ph.D. Supervisor) Department of Animal Breeding and Genetics, Faculty of Animal Production, University of Khartoum.

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2- Dr. Lutfi Mohamed Ahmed Musa (My Ph.D. Co- Supervisor) Department of Animal Breeding and Genetics, Faculty of Animal Production, University of Khartoum.

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