

Brasilia, June 14 2017.

To whom it may concern,

This is to attest that **Mr. Zemelak Sahle Goraga**, researcher at the Ethiopian Institute of Agricultural Research in co-leadership with researchers at the Brazilian Agricultural Research Corporation (Embrapa) was competitively selected and awarded by the Agricultural Innovation Marketplace – MKTPlace Steering Committee research for development grants as follows:

- Project title:** Swine Improvement in Ethiopia through Socio-Economic and Production Characterization and Development of a Production System
This project was submitted, selected and awarded the grant in the Africa-Brazil Call for Proposals 2011/12
Co-leaders: Mr. Zemelak Goraga & Mr. Gustavo Lima from Embrapa Swine and Poultry. Mr. Goraga took over the project co-leadership in 2013, the project was initially submitted by Mr. Mammo Mengesha.
Duration: July 7 2012 - May 7 2015
Budget: US\$ 54,540.00 to the Ethiopian Institute of Agricultural Research and US\$ 25,460.00 to Embrapa Swine and Poultry. Total project budget US\$ 80,000.00.
- Project title:** Initiating data recording system at Ethiopian dairy farmers' level and improving farm data management
This project was submitted, selected and awarded the grant in the Africa-Brazil Call for Proposals 2014/15
Co-leaders: Mr. Zemelak Goraga & Mr. Geraldo Carvalho from Embrapa Mid-North
Duration: December 9 2014 – June 9 2017
Budget: US\$ 62,000.00 to the Ethiopian Institute of Agricultural Research and US\$ 18,000.00 to Embrapa Mid-North. Total project budget US\$ 80,000.00.
- Project title:** Improving poultry production in Ethiopia through production system studies, breed characterization and implementation of improved practices
This project was submitted, selected and awarded the grant in the Africa-Brazil Call for Proposals 2014/15
Co-leaders: Mr. Zemelak Goraga & Mr. Luizinho Caron from Embrapa Swine and Poultry
Duration: December 9 2014 – June 9 2017
Budget: US\$ 62,000.00 to the Ethiopian Institute of Agricultural Research and US\$ 18,000.00 to Embrapa Swine and Poultry. Total project budget US\$ 80,000.00.

Further details of this initiative can be found at <http://www.mktplace.org>.

Sincerely Yours,



Francisco J. B. Reifschneider

MKTPlace Focal Point
Francisco J. B. Reifschneider
Secretaria de Relações Internacionais
Embrapa/Mat, 092004



CERTIFICATE OF AWARD


THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA MINISTRY OF SCIENCE AND TECHNOLOGY

Hereby awards this
CERTIFICATE OF AWARD
To

Dr. Zemelak Sahle

For having won the 2009 National Research Funding Competition on the Project Title "Adaptation and
Performance Evaluation of Brazilian Dairy Cattle Technologies for Adoption in Arid and Semi-Arid Agro
climatic Zones of Ethiopia"

MAY 10, 2017


H.E. Dr. Ing. Getahun Mekuria
Minister, Ministry of Science and Technology

ADDIS ABABA, ETHIOPIA

Ref. No.17.2/6782/2021

May 4, 2021



6782



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The Federal Democratic Republic of Ethiopia
• Ethiopian Institute of Agricultural Research

To: Dr. Zemelak Sahle

Dr. Yifru Abera

Debre Zeit Agricultural Research Center

Debre Zeit

Subject: **Notification of Integrated Project Grant Winners**

It is recalled that the Ethiopian Institute of Agricultural Research has announced a call for integrated project grant competition early this year. Based on a two-phase rigorous evaluation of the project proposals including the open defense evaluation, your project mentioned in the below table has been selected for the grant duration of three years (2021-2023). Due to the limited budget, we have this year a grant amount of 1.5-million-birr is allocated for the execution of your activities during the year-1 implementation period.

Since the budget is from the government treasury, the grant should be used for the intended project implementation based strictly on the government financial rules and regulations. You should communicate details of the project activities you are going to execute during the upcoming season to **Dr. Tesfaye Balemi**, coordinator, Integrated Project Program office and do the same regarding project reporting as well.

No	Project Proposal title	PI	Evaluation Result (%)	Center
1.	Improving dairy value chain in milk shed areas of East Shoa Zone to enhance income, asset, nutrition, access to market and job opportunity for farmers.	Dr. Zemelak S.	86	Debre Zeit
2.	Integrated soil, water and crop management interventions to enhance climate resilience, productivity and nutritional quality of durum wheat in Ethiopia.	Dr. Yifru A.	81	Debre Zeit

With regards,

Diriba Gelet (PhD)
Deputy Director General

Copy:

- DG office
 - Planning, Monitoring and Evaluation Directorate
 - Debre Zeit Agricultural Research Center
 - Natural Resource Research Directorate
 - Livestock Research Directorate
 - Integrated Project Program Office
- EIAR





MISSISSIPPI STATE
UNIVERSITY.

**DEPARTMENT OF
ANIMAL AND DAIRY SCIENCES**

P.O. Box 9815
Mississippi State, MS 39762
P. 662.325.2802
F. 662.325.8873

February 11, 2019

Zemelak Sahle Goraga, PhD
Senior researcher and Coordinator of dairy research program
Debre-Zeit Agricultural Research Center (DZARC),
Ethiopian Institute of Agricultural Research (EIAR)
Debrezeit, ETHIOPIA

Dear Dr Zemelak,

Please accept this letter as my commitment to collaborate with you on your proposal ***“Building-up knowledge and technology transfer on USA origin dairy, adoption and research partnership in Ethiopia”*** for The Partnerships for Enhanced Engagement in Research (PEER) program which is supported by the United States Agency for International Development (USAID) and implemented by the U.S. National Academies of Sciences, Engineering, and Medicine (NAS). I have discussed and planned the proposed research and educational activities with Prof. Worku and you. We then developed the collaborative proposal together. Thus, if funded, our proposed activities will enhance both science and technology and education in Ethiopia through our strategic partnership in science and education. This preproposal complements the competitive grant “Identifying Metabolomic Markers of Bull Fertility: Proposal Number: 2017-67016-26507” that I have been awarded by the United States Department of Agriculture/ National Institute of Food and Agriculture (USDA/NIFA).

I am a professor of animal reproduction, development and functional genomics, and am the director of the Laboratory of Animal Functional Genomics in the Department of Animal and Dairy Sciences at Mississippi State University (MSU) in USA. I have over 22 years of research experience and have mentored more than 56 researchers including postdoctoral, graduate, high school students as well as international visiting scholars. To students in my laboratory I provide high quality mentoring stemming from my experiences at the University of Wisconsin-Madison, Harvard University, and Mississippi State University, and Cornell University. Some of the research results from our research have been published in the highest caliber scientific journals including SCIENCE, Proceedings of the National Academy of Sciences USA, BMC Genomics, and Biology of Reproduction (CV). I have the knowledge, experience and skills in international collaborations. For example, I have active research and educational collaborations with researchers in Brazil, Indonesia, and Turkey. I have been honored to be plenary speaker in international conferences in Brazil, France, Indonesia, Pakistan and South Korea.

The overall aim of our collaborative project is to improve Ethiopian smallholders’ dairy production and contribute towards food security through transfer of sexed semen of improved dairy cattle breeds for different agro-ecologies. We will test critical data on sexed semen adoption rate and dissemination approaches as well as strengthen knowledge and skills on advanced reproductive biotechnology and molecular genetic tools. If funded, in the PEER program, I will communicate with you (the Ethiopian PI) and Prof. Mulumebet Worku of North Carolina A&T State University to monitor the progress, and develop strategic planning for targeted success in the proposed research. I will host the researchers from your institution for intensive research training at MSU for six months, will be happy to visit and give training or workshops in Ethiopia, develop joint research and



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extension articles with you and your researchers, and expand our collaborations in future studies in animal science and technology. I will oversee all aspects of the complementary experiments and will coordinate monthly and as needed conference calls with the Ethiopian team and Prof. Worku to discuss research progress, solutions for any challenges, timelines, presentations and publications, and the budget.

Our Department and laboratory at MSU have the structure and means necessary for the research focused on molecular markers of fertility, using cutting-edge approaches in transcriptomics, proteomics, metabolomics and functional genomics. Mississippi State University (<https://www.msstate.edu>) is one of the largest land grant universities in the United States. The US National Science Foundation ranks MSU among the nation's top 100 research institutions (<https://www.msstate.edu/newsroom/article/2017/12/nsf-survey-msu-remains-highest-ranked-research-university-state/>). The University is ranked 6th in the USA in agricultural science. In addition to our Laboratory of Animal Functional Genomics, Mississippi State also has advanced microscopy center, Institute for Imaging and Analytical Technologies (<http://www.i2at.msstate.edu/index.php>), Institute for Genomics, Biocomputing, and Biotechnology (<https://www.igbb.msstate.edu/>), and well-equipped research resources in the College of Veterinary Medicine (<http://www.cvm.msstate.edu/academics/degree-programs-research/office-of-research-graduate-studies-orgs/research-resources>), for all of which our laboratory has access to pursue original and transformative research.

Looking forward to pursuing our collaborative research and empowering the next generation including women and minorities which will strengthen our collaborations and make positive impact on science and society in the global scale.

Sincerely,

Erdoğan Memili, DVM, Ph.D.
Professor
Functional Genomics of Animal Reproduction and Development
Department of Animal and Dairy Sciences
Mississippi State University
4025 Wise Center
Mississippi State, Mississippi 39762
Phone: (662) 325-2937
E-mail: em149@ads.msstate.edu
Web: <http://www.ads.msstate.edu/associate.asp?id=112>



February 4, 2019

Dr. Zemelak Sahle Goraga, PhD
Senior researcher and Coordinator of dairy research program
Debre-Zeit Agricultural Research Center (DZARC),
Ethiopian Institute of Agricultural Research (EIAR)

Dear Dr Zemelak,

The objective of this letter is to indicate my enthusiastic commitment to collaborate with you on the projected titled "Building-up on USA origin dairy technology transfer, adoption and research partnership in Ethiopia" for the Partnerships for Enhanced Engagement in Research (PEER cycle 8)" opportunity. With experience in molecular genetics and genomics of dairy cattle.

My research program specializes in genomic and molecular understanding of dairy cattle and small ruminants and development of intellectual capital for global food security. My research is funded through the USDA. I agree to serve with Prof. Endogen from Mississippi State University to help fill the identified fill critical gaps in the application of genomic tools for dairy cattle breeding. Specifically working 'to build knowledge and skills on standard laboratory protocols and procedures related to application of genomics, providing training in molecular genetic tools and conducting a workshop on importance of genetic selection for dairy production and animal health. This effort will contribute to development of intellectual capital for food security.

Collaborations such as the one proposed between the Department of Animal Sciences and North Carolina A&T State University Mississippi State University and the EIAR are needed for sustained efforts in animal production and food security. I look forward to working with you and commend you on the initiative. Please feel free to contact me for any further information at worku@ncat.edu

Sincerely,

Mulumebet(Millie) Worku PhD
Professor of Animal Sciences/Biotechnologist
Graduate Coordinator Integrated Animal Health Systems
Undergraduate Biotechnology Certificate Adviser



WORLD WIDE SIRES, LTD.

February 7, 2019

Partnerships for Enhanced Engagement in Research (PEER) – Cycle 8

Subject: Support letter

Dear Sir/Madam,

The Ethiopian Institute of Agricultural Research (EIAR) would like to collaborate with World Wide Sires, Ltd. (WWS) in the project titled 'Building-up on USA origin dairy technology transfer, adoption and research partnership in Ethiopia' which is to be submitted to the PEER-Cycle 8 call for proposal. The rationale for collaboration is to strengthen research partnerships and dairy cattle sexed semen transfer to the Ethiopian smallholder farmers.

WWS has a long history of working in Ethiopia in the provision of conventional and sexed semen supply and providing need based training to stakeholders. The WWS partner in Ethiopia is Addis Livestock Production and Productivity Improvement Service (ALPPIS). ALPPIS serves as the distributor of WWS bovine genetic material in Ethiopia.

World Wide Sires desires to collaborate with EIAR, particularly in transfer of the WWS bovine genetic materials into Ethiopia and in providing support in market promotion interventions for sexed semen in the country. The proposed project will expand opportunities for Ethiopian cattle breeders and WWS export of genetics from the USA.

Sincerely,

Rebekah Mast / RS

Rebekah Mast
Genetic Director and Area Director of Marketing
World Wide Sires, Ltd., Visalia, CA
Email: rmast@wwsires.com
+1-559-750-7463

