



**ISAG**  
**CONFERENCE 2014, Xi'an, China**

**Livestock genomics for developing countries workshop report**

STANDING COMMITTEES / WORKSHOPS      Information will be posted online

**Organised by a standing committee no**

**Date and meeting time:** 29th of July 2014, 14 -17:30

**Chair:** Ntanganedzeni Mapholi, Agricultural Research Council, Irene, 0062, South Africa  
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**Agenda:**

**Background:** The 'Livestock genomics for developing countries' workshop is being conducted as part of the 2014 ISAG Conference to highlight the economic, social and environmental benefits that genetic and genomic technologies can deliver to livestock production in developing countries, and the often-different approaches which are necessary to ensure the technologies are effective in the low-input systems of those countries. The workshop will specifically focus on a number of issues and provide examples of applications from a range of livestock species relevant to developing countries. The issues to be addressed in the workshop include:

- i) Genomic applications to livestock breeding and improvement and conservation of scarce genetic resources – this will include genomic selection, its potential in developing countries and challenges and progress to date;
- ii) Genomic applications to characterization of indigenous livestock genetic resources;
- iii) The value of SNP chips for use in extensively raised indigenous populations in the developing world; and
- iv) Opportunities to pool genomic resources, including funding and animal resource populations.

**Speakers:**

1. Francois Pompanon: Characterizing indigenous livestock genetic resources by using whole genome data: the case of sheep and goats (40mins)
2. Abdulfatai Tijjani: Genetic diversity of East and West African cattle: A genome-wide comparison (15mins)
3. Han Jianlin: Identification and close of a gap covering the last three exons of an active porcine Y-linked oral-facial-digital syndrome 1 gene (OFD1Y) (15mins)
4. Farai Muchadeyi: Linkage disequilibrium and population structure of South African indigenous goat populations using genome wide SNP data (15mins)
5. Mostafa K Nassar: Genetics of complex phenotypes in chicken(15mins)
6. Satish Kumar: Genetic evidence for domestication of sheep in India(15mins)
7. Tadelle Dessie: A whole–genome approach unlocks the genetic diversity and structure of Ethiopian cattle populations (15mins)

8. Yuandan Zhang: Use of genomic information to predict of breed composition in Australian beef cattle(15mins)

## **Number of participants at meeting: 135 people**

### **1. Summary of the meeting:**

- It was agreed that the livestock genomics for developing countries workshop should continue at future ISAG conferences.
- Collaboration should be initiated amongst developing countries and focus on training and capacity building using new genomics applications via ISAG committee.
- Dr Max Roschild and Dr Francois Pompanon were more willing to collaborate and to host researchers from developing countries if there is funding available to support the travel of those researchers.
- Members of the current workshop committee who agree to stay on the committee will remain
- Three additional volunteered members to the committee
- **Comment:** The support from the workshop coordinators and ISAG Committee was outstanding. Attendance at the workshop exceeded original expectations. The workshop successfully addressed all the objectives of the workshop

## **Committee members**

1. **Ntanganedzeni Olivia Mapholi**, Researcher, Animal Breeding and Genetics, Agricultural Research Council, Irene Pretoria, South Africa, [ntanga@arc.agric.za](mailto:ntanga@arc.agric.za) (CHAIR – next 2 years)
2. **Heather Burrow**, University of New England, Armidale NSW 2351, Australia, [heather.burrow@une.edu.au](mailto:heather.burrow@une.edu.au)
3. **Farai C Muchadeyi**, Senior Researcher, Biotechnology Platform, Agricultural Research Council, 100 Old Soutpan Rd, Ondersteport 0110, South Africa, [muchadeyif@arc.agric.za](mailto:muchadeyif@arc.agric.za)
4. **Paul Boettcher**, Animal Production Officer, FAO, Vaile delle Terme di Caracalla 00153 Rome [paul.boettcher@fao.org](mailto:paul.boettcher@fao.org)
5. **Olivier Hanotte**, Professor of Population and Conservation Genetics, The University of Nottingham, School of Life Sciences, University Park;NG7 2RD Nottingham;United Kingdom, [Olivier.Hanotte@nottingham.ac.uk](mailto:Olivier.Hanotte@nottingham.ac.uk)
6. **Max F. Rothschild**, Distinguished Professor at Iowa State University, Des Moines, Iowa Area, [mfrothsc@iastate.edu](mailto:mfrothsc@iastate.edu)
7. **Victor M. O. Okoro**, Researcher, Animal Genetics and Breeding Unit, Department of Animal Science and Technology, Federal University of Technology, Owerri, Nigeria, [victor.okoro@futo.edu.ng](mailto:victor.okoro@futo.edu.ng)