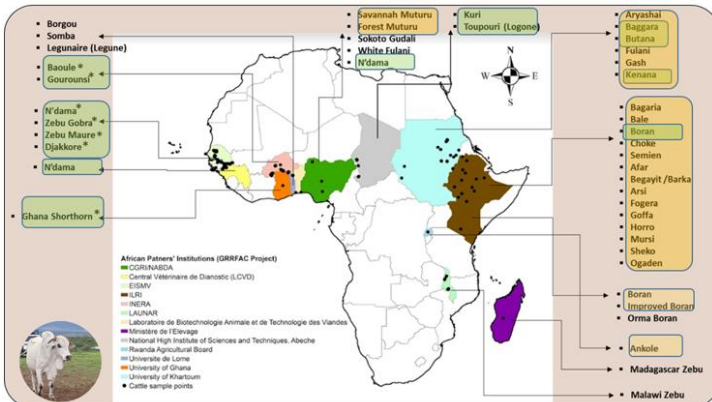


Background

- The cost of genomics study still a limiting factor for researches towards the genetic improvement of indigenous African cattle
- A collated set of sequence and genotype information on indigenous African cattle breeds is currently not available
- This project aims to facilitate the collation of a set of sequences and genotype information on African cattle, for use by African and international research communities in cattle genomics and breeding



African countries and indigenous breeds for which samples have been collected. Whole genome sequences of 193 samples in green are newly generated under the GRRFAC project.

Future steps

- Sequencing of more representative breeds of indigenous African cattle and *de novo* sequencing of African indigenous cattle
- Availability of high-quality reference panel for the imputation of the genotypes of African cattle
- opportunity towards a complete characterization of the diversity of indigenous African cattle including CNV detection and pan-genome analysis.



NUTRITION & FOOD SECURITY

Genomic Reference Resource for African cattle

- An initiative of the dairy genomics program of the Centre for Tropical Livestock Genetics and Health and African partners, and with support from AU-IBAR
- Generation of high coverage whole genome sequences of diverse representative breeds of indigenous African cattle, most of which have never been genotyped or sequenced
- Up to 500 sequences have been collated so far, including 193 newly generated sequences in this project
- Resource will be useful for the design and application of genomics tools for the acceleration local breed improvement and for the conservation of indigenous genetic resources



RESEARCH PROGRAM ON Livestock

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Indigenous breeds being sequenced for the first time, including Gourounsi from Burkina Faso (left), Ethiopia Boran (middle) and Kuri from Chad (right).

Partners

- Central Vétérinaire de Diagnostic (LCVD), Conakry, Guinée
- Institut de l'Environnement et de Recherches Agricoles (INERA), Ouagadougou, Burkina-Faso
- Ecole Inter-états des Sciences et de Médecine Vétérinaires de Dakar, Sénégal
- University of Khartoum, Khartoum, Sudan
- University of Accra, Ghana
- Laboratoire de Biotechnologie Animale et de Technologie des Viandes, Abomey-Calavi, Bénin
- Ministère de l'Agriculture, de l'Élevage et de la Pêche, Antananarivo, Madagascar
- Université de Lomé, Togo
- Institut National supérieur des Sciences et Techniques d'Abéché-INSTA/TChad
- Centre for Genomics Research and Innovation, NABDA, Abuja, Nigeria
- Rwanda Agricultural Board, Kigali, Rwanda



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