

Animal biosciences program



The animal biosciences program focuses on genetics, genomics, epidemiology and diagnostics of important livestock species (cattle, pigs, camel, sheep, and goats) and diseases (trypanosomiasis, East Coast fever, African swine fever, peste des petits ruminants and zoonosis). Most of the research is done in Africa and has the potential to impact the rest of the world with the aim of improving food and nutritional security. Majority of staff are based primarily in Nairobi and Beijing and fall in the following categories: 7 scientists, 4 post-doctoral scientists, 2 long-term visiting scientists, 2 joint appointments, 1 seconded scientist, 1 biorepository manager, 10 research technicians and 2 administrative staff.

Research activities

Current research activities of the program include:

- Pathogen discovery.
- Genomics.
- Bioinformatics.
- Trait measurement technologies.
- Gene discovery and use.
- Reproductive technology development.
- Epidemiology—observational and intervention.
- Vaccine thermostabilization research including PPR.
- Research on the progressive control of PPR.
- Biobanking.

Funding

With a 2013 budget of close to USD 5.55 million the funders of the project are:

- Biotechnology and Biological Sciences Research Council (BBSRC)
- Boehringer Ingelheim Vetmedica GmbH, Germany
- Rural Development Administration, Korea
- UK Medical Research Council (MRC)
- Government of China
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) through BecA–ILRI Hub
- United States Department of Agriculture
- National Science Foundation—BREAD program
- CGIAR research programs on Livestock and Fish as well as Agriculture for Health and Nutrition.

Partners

The program works closely with:

- The Roslin Institute, University of Edinburgh, UK.
- Royal Veterinary College, University of London, UK.
- African Union–Interafrican Bureau for Animal Resources (AU–IBAR), Kenya.
- Ministry of Agriculture Animal Industry and Fisheries (MAAIF), Uganda.
- Ministry of Livestock Fisheries and Rangelands (MAL–FR), Sudan.
- Forschungszentrum Borstel, Germany.
- Instituto Nacional de Innovación Agraria (INIA), Spain.
- University of Liverpool, UK.
- University of Edinburgh, UK.
- Hunter College, the City University of New York, USA.
- Participatory epidemiology Network for Animal and Public Health.
- Chinese Academy of Agricultural Sciences (CAAS), China,

Research outputs

Some of the major outputs of the program include:

- Cattle resistant to trypanosomiasis.
- Novel diagnostic tools.
- Novel, low cost phenotyping systems.
- Identification and mapping of livestock functional biodiversity.
- Pathogen distribution and diversity data.
- Biorepositories and matching data sets.

Contact

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The International Livestock Research Institute (ILRI) works with partners worldwide to enhance the roles that livestock play in food security and poverty alleviation, principally in Africa and Asia. The outcomes of these research partnerships help people in developing countries keep their farm animals alive and productive, increase and sustain their livestock and farm productivity, find profitable markets for their animal products, and reduce the risk of livestock-related diseases.

ILRI's mission is to improve food and nutritional security and to reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock—ensuring better lives through livestock. Working closely with its partners, ILRI's three strategic objectives are:

- develop, test, adapt and promote science-based practices that—being sustainable and scalable—achieve better lives through livestock.
- provide compelling scientific evidence in ways that persuade decision-makers—from farms to boardrooms and parliaments—that smarter policies and bigger livestock investments can deliver significant socioeconomic, health and environmental dividends to both poor nations and households.
- increase capacity among ILRI's key stakeholders and the institute itself so that they can make better use of livestock science and investments for better lives through livestock.

ILRI's skills and expertise include our three main pillars for animal production—animal health, feeds and genetics—as well as, and more specifically: biology, molecular biology, microbiology, epidemiology, biotechnology, diagnostics and vaccine development; ecology, agricultural systems and agricultural value chains; sociology, gender and poverty analysis, participatory research and impact assessment; market economics; and development communications and knowledge sharing.

ILRI is a not-for-profit institution with a staff of about 700 and, in 2013, an operating budget of about USD 74 million. A member of the CGIAR Consortium working for a food-secure future, ILRI has its headquarters in Nairobi, Kenya, a principal campus in Addis Ababa, Ethiopia, and offices in other countries in East, West and Southern Africa and in South, Southeast and East Asia.

ILRI leads the CGIAR Research Program on Livestock and Fish, leads a component of a CGIAR Research Program on Agriculture for Nutrition and Health on the prevention and control of agriculture-associated diseases, and contributes to seven other CGIAR research programs. Staff members work in integrated sciences and biosciences programs that develop and deliver science-based practices, provide scientific evidence for decision-making and develop capacities of livestock-sector stakeholders. With the African Union/New Partnership for Africa's Development Planning and Coordination Agency, ILRI also hosts and manages the Biosciences eastern and central Africa (BecA)—ILRI Hub.



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better lives through livestock
ILRI is a member of the CGIAR Consortium

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