



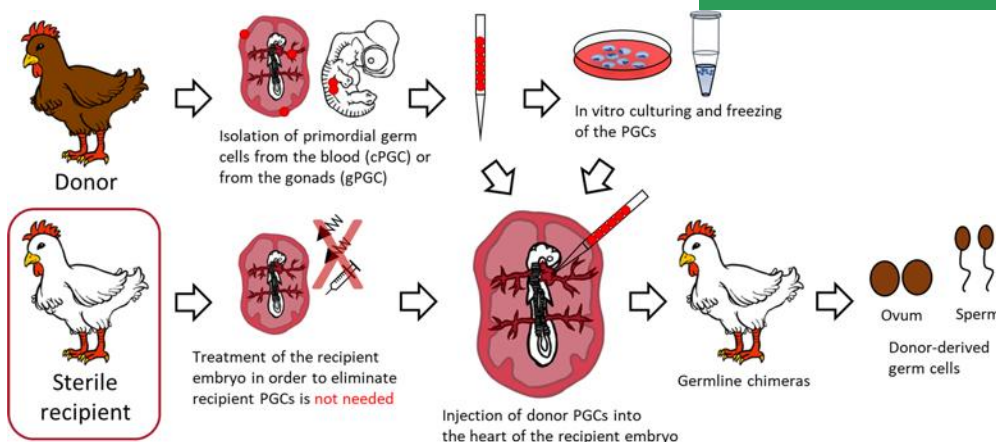
NUTRITION & FOOD SECURITY

Biobanking African poultry breeds for the future

Context

- We are losing genetic diversity of African poultry.
- Conserving and valuing indigenous chicken genetic resources is important for future sustainable poultry production in Africa.
- Primordial germ cells (PGCs) offer an alternative method to cryopreserve avian gametes.

Our innovative approach



CKT, 2020

- Primordial germ cells are the precursor cells of semen and ova in poultry.
- Cryopreserving these cells enables us to preserve the entire genetics of a bird, safeguarding its future.
- Indigenous poultry stock can be regenerated using these cells.



RESEARCH PROGRAM ON Livestock

LIVESTOCK GENETICS

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Outcomes

- **15 African indigenous breeds** (466 individual genotypes) sampled and cryopreserved at ILRI Nairobi
- **Kenya:** 7 ecotypes and 128 PGC lines
- **Tanzania:** 5 ecotypes and 236 PGC lines
- **Ethiopia:** 3 ecotypes and 102 PGC lines

Future steps

- Cryoconservation of indigenous chicken from Central, West and Eastern Africa.
- Development of local surrogate chickens.
- Genome-wide association studies and exploration of candidate genes for genome editing.
- **Scale the approach** throughout Africa in collaboration with the five regional genebanks established by AU-IBAR.

Partners

- Roslin Institute
- AU-IBAR



Centre for Tropical Livestock Genetics and Health



INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE



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