

Improving the thermotolerance of cattle in hot climates

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Context

Tropical cattle

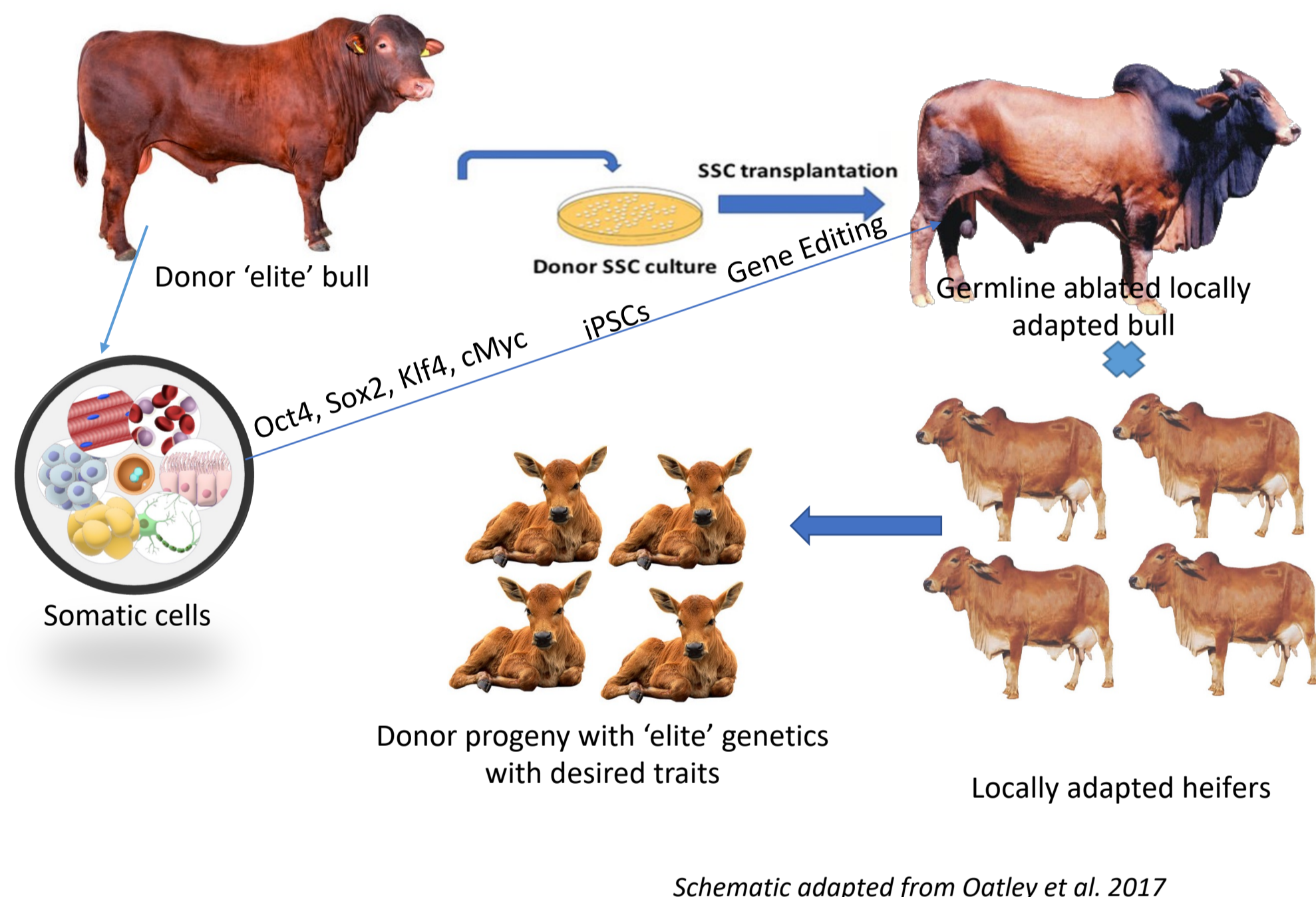
- Climate is changing, temperatures are rising.
- 2.5 M livestock perished during the recent drought
- Heat tolerant livestock in the tropics will improve the animals' health, welfare and booster their productivity
- More productive animals reduce the livestock carbon footprint.



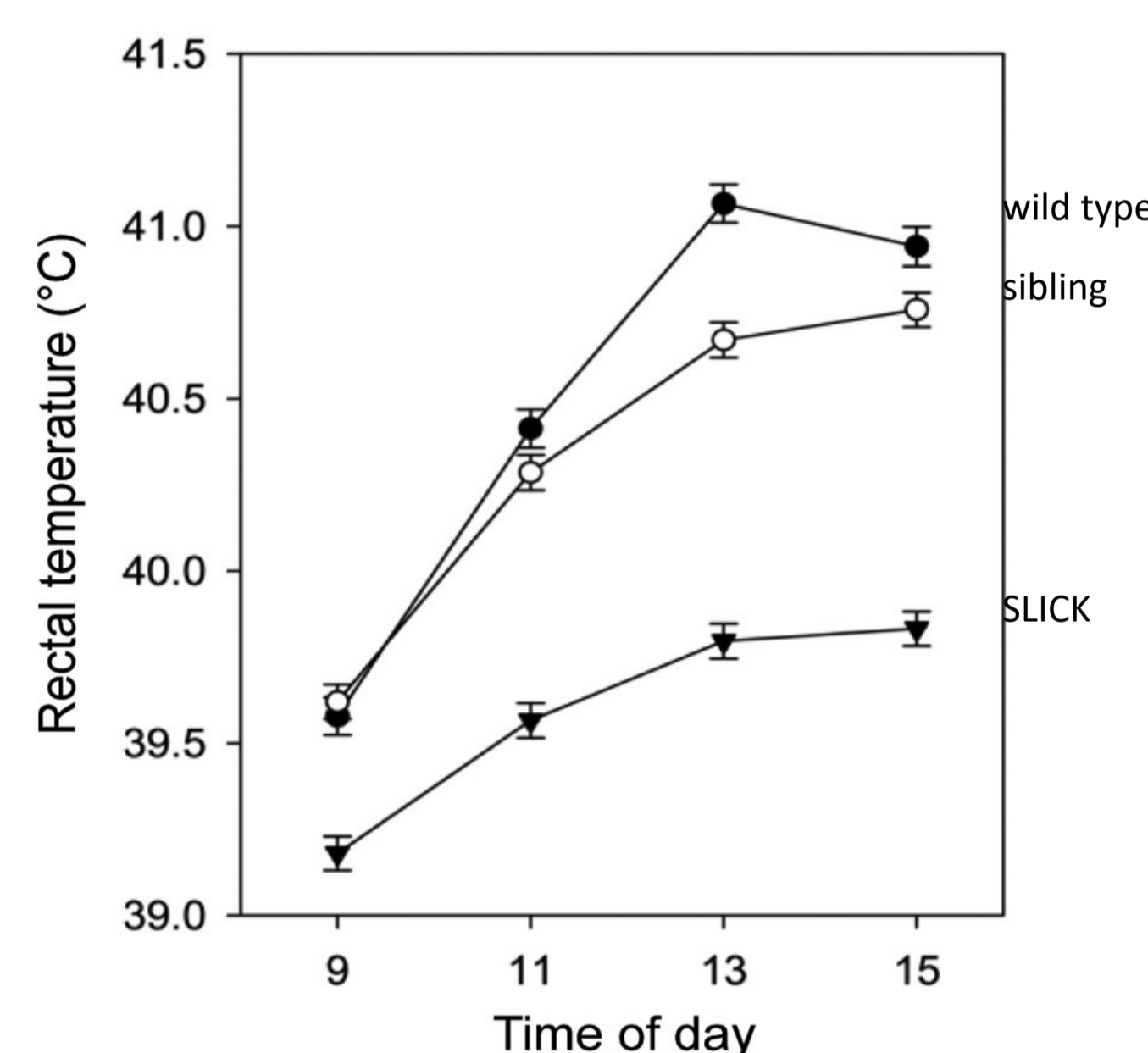
Credit: REUTERS/Thomas Mukoya

The new technology could contribute to improved climate resilience in cattle living in the tropics

Our Approach

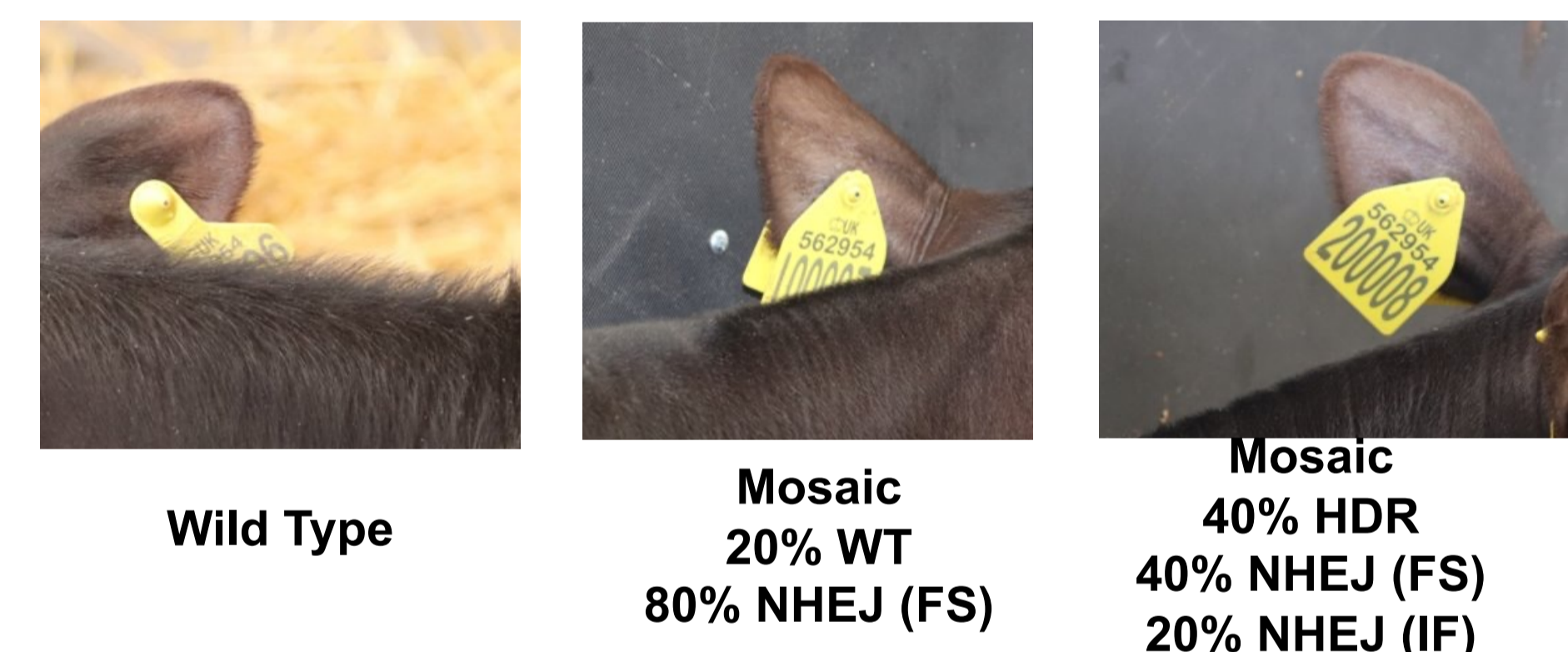


Progress/Outcomes



B. taurus: D Q H A L K A ... Prolactin receptor
Senopol: D Q H V *

Two months old



CTLGH researchers have developed a technique to successfully reproduce a naturally occurring gene mutation that can improve the thermotolerance of cattle living in hot countries.

Challenges

But

- Poor genetic potential of existing populations means less milk and meat, and slow growth
- With correspondingly high adverse environmental impact of unproductive animals
- Genetic improvement can achieve rapid gains, but there is no infrastructure to enable this

Moving Forward

The CTLGH team at the Roslin Institute have shared their methodologies with CTLGH colleagues based at the International Livestock Research Institute (ILRI) in Nairobi, who will look to mirror the approach in native Kenyan cattle breeds.

Partners

