



IDRC · CRDI

International Development Research Centre
Centre de recherches pour le développement international

Canada



Animal Health-IDRC: CBPP projects Funding

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GF-TADs for Africa Second Meeting on CBPP, Lusaka,
Zambia

A more **sustainable** and **inclusive** world

As part of Canada's foreign affairs and international development efforts, and with five regional offices and a global network of partners and researchers, we have the breadth and experience to respond to global challenges.

IDRC champions and funds research and innovation within and alongside developing regions to drive global change. We invest in high-quality research in developing countries, share knowledge with researchers and policymakers for greater uptake and use, and mobilize our global alliances to build a more sustainable and inclusive world.





IDRC Core Objectives:

- Mobilize alliances for impact: deepen and expand our collaboration and pursue new partnerships to grow the available resources for research.
- Move solutions forward thanks to alliance with the public, private, and other actors.
- Research that considers gender with other forms of inequality. This research ensures women, girls, and other marginalized groups are not left behind.
- IDRC helps build strong scientific institutions and systems to enable an environment that encourages high-quality research and innovation.
- We work with coalitions to amplify knowledge that transforms food systems so they become more sustainable and inclusive, support healthy diets, and improve community resilience

LVIF

Livestock Vaccine
Innovation Fund
2015-2024

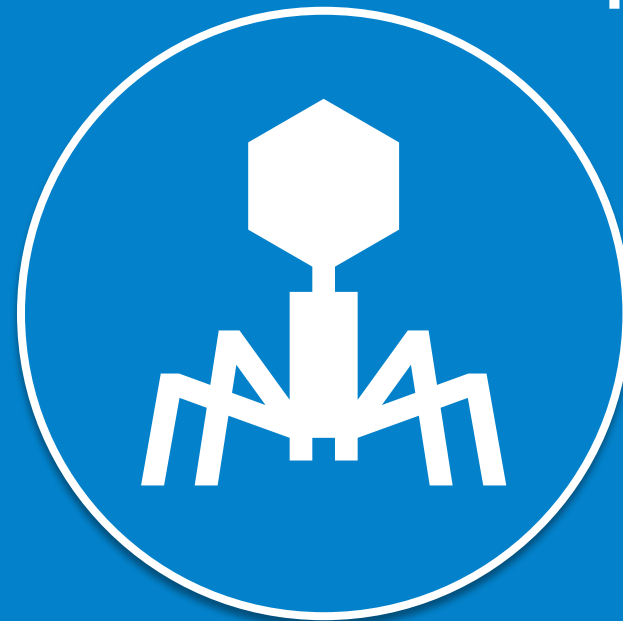


**CAD 57
million**

Global affairs Canada+BMGF+IDRC
Neglected diseases

InnoVet-AMR

Innovative Veterinary Solutions
for Antimicrobial Resistance
Phase 1.0 2018-2023
Phase 2.0 2023-2027



**Phase 1.0
CAD 30
million**

**Phase 2.0
CAD 30
million**

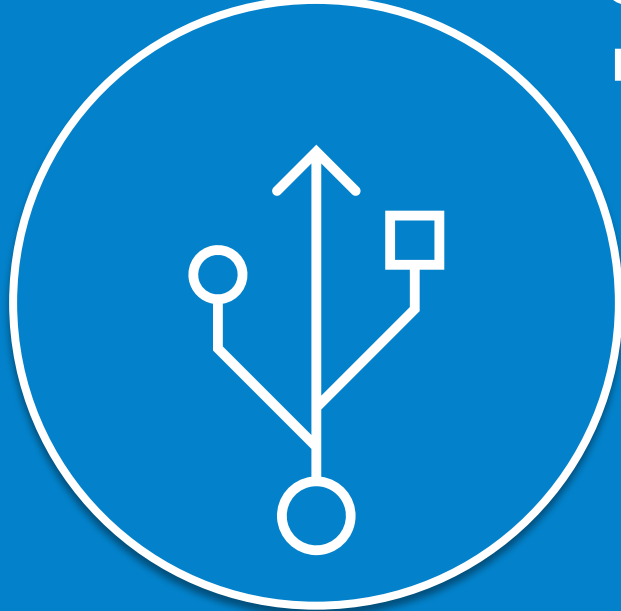
IDRC and DHSC-UK
Reduce AMR

RECAF

Climate-Resilient
Animal Fund
2023-2027



**CAD 15
million**



Climate-smart livestock
technologies
IDRC/BMGF/FCDO

AQUADAPT

Nature-based Climate Solutions
in Aquaculture in Asia-Pacific
2023-2027



**CAD 24
million**



Climate solutions in
aquaculture
IDRC and the Government of Canada

Livestock Vaccine Innovation Fund

2015 – 2024

- **Accelerate the development of new vaccines** against neglected livestock diseases by **supporting innovation and cutting-edge research**
- Increase the **efficacy, marketability and use** of existing livestock vaccines
- **Foster effective partnerships** between vaccine researchers and public and private sector actors
- **Focus on animal diseases posing the greatest risk to poor livestock keepers** in Sub-Saharan Africa, South and Southeast Asia



Countries of Impact – LVIF

 Institution Location
 Research Activities Location

CA\$ **57** million

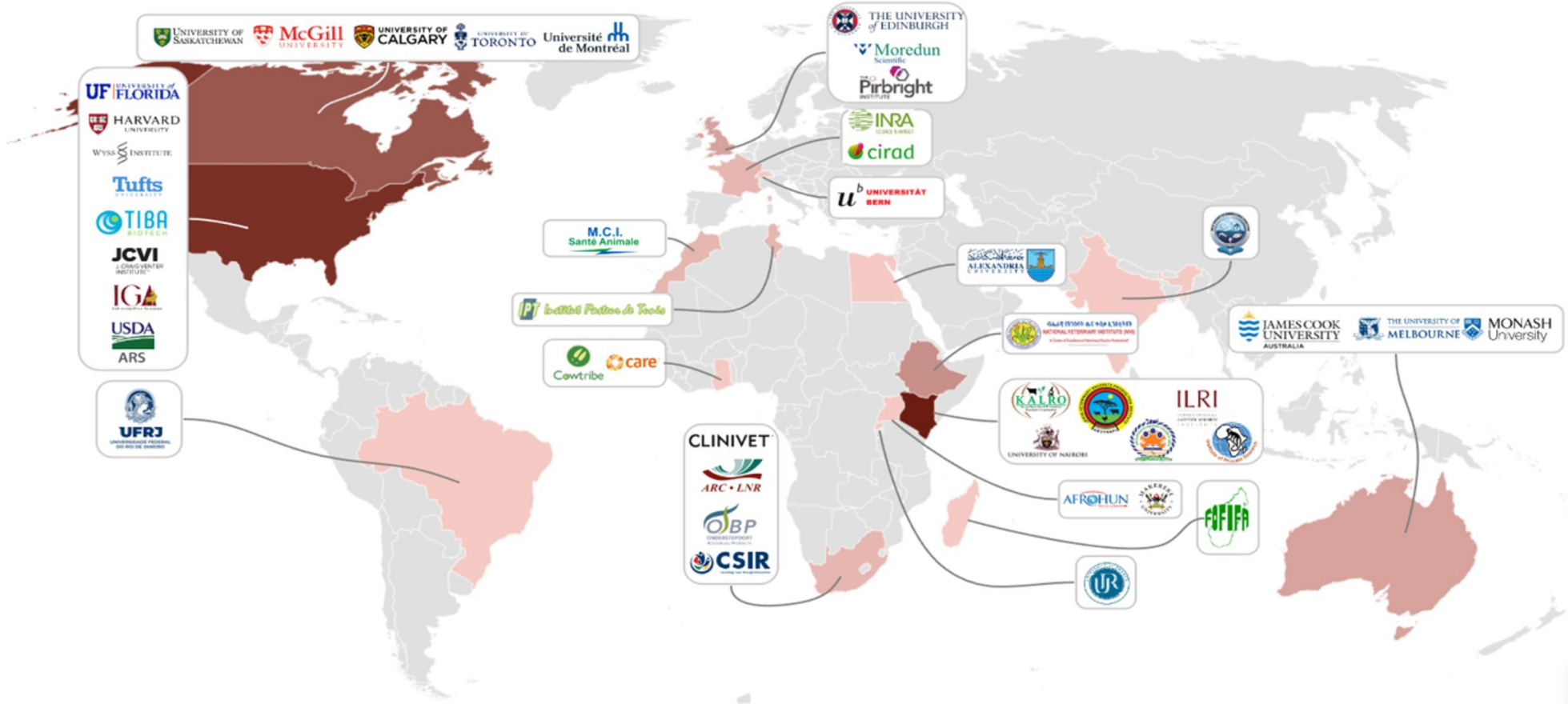
28 Projects (Phase 1 and 2)

16 Infectious Diseases

17 Countries



Partnerships



Geographical spread of institutions within the evaluation sample

		Upstream				Midstream				Downstream				
		109212/ 108514	108525/ 109475	108705	108706	108516/ 109271	108627/ 109261	109080	108632	108628	109275	109061	109062	109063
Location of Institution	HIC	JCVI J CRAIG VENTER INSTITUTE	MONASH University JAMES COOK UNIVERSITY AUSTRALIA	USDA ARS	Moredun Scientific TIBIA	WYSS INSTITUTE HARVARD UNIVERSITY UNIVERSITY OF SASKATCHEWAN	UNIVERSITY OF CALGARY UNIVERSITY OF TORONTO	McGill University UNIVERSITY OF SASKATCHEWAN			cirad	Tufts University	Tufts University	UF UNIVERSITY OF FLORIDA
	LMIC	ILRI		ARC-LNR		UNIVERSITY OF TORONTO	AFROHUN AFRICAN VETERINARY RESEARCH AND TRAINING CENTRE	ILRI KALRO	M.C.I. Santé Animale	KALRO		AFROHUN		KALRO UNIVERSITY OF NAIROBI

Animal Health product pipeline



Stages of research and development of a product in the pharmaceutical industry

Discovery ► Proof of Concept ► Exploratory Development ► Full Development ► Regulatory Submission ► Stewardship

Research support



LVIF Approach

Private sector approach

Target product profiles
Private sector evaluations
Two-phased funding approach (go/no go funding)

Cohort approach & cross learning

Integrating gender in research
knowledge translation & amplification
Environmental assessment

Wraparound support

Intellectual property
Assessing gaps in project sustainability

LVIF's Contribution



Advanced
vaccine research



Technology
transfer to LMIC



Increase availability
of vaccines



One Health
Health



Improved
food security



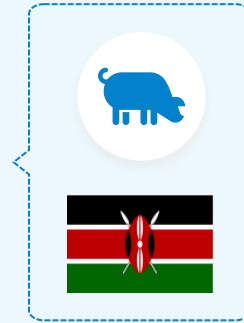
Gender equity

Synthetic vaccine for African Swine Fever

Discovery ▶ Proof of Concept ▶ Exploratory Development ▶ Full Development ▶ Regulatory Submission ▶ Stewardship

Why is this necessary?

- ASF is the largest animal disease outbreak in the world.
- There is currently no vaccine or treatment against ASF.



Main Achievement

- Successfully used synthetic biological tools to modify and assemble a new synthetic ASF virus genome.

Benefits

- Demonstrated that CRISPR technology (gene editing) could produce virus mutants that are protective against ASF.
- A potential new vaccine candidate is underway.

Women Rear

Discovery ▶ Proof of Concept ▶ Exploratory Development ▶ Full Development ▶ Regulatory Submission ▶ Stewardship

Why is this necessary?

- Women smallholders are not having equitable access to vaccine.



Main Achievement

- Proof of concept reached for gender-inclusive vaccine delivery model. Model included audio messages through a mobile app, and drone delivery to health centres.
- Collaboration between 3 partner critical for success (expert in gender transformative farmer trainings/ private service provider/ research partner)

Benefits

- Reduced vaccine wastage by 30%.
- Based on post-vaccination survey in March 2023, 82.5% of farmers reported having healthier livestock due to vaccinations.
- Current plans to expand to other districts in Ghana and other countries



DeLiVa project | Piloting a sustainable CCPP vaccine value chain in Borena Zone- Ethiopia through public-private Franchise model



Institutions: Tufts university

Budget
CA\$ 2,3 mil

Outcomes:

- ✓ The project has successfully designed and tested an alternative, private sector model of CCPP vaccine delivery that has improved availability, accessibility, and demand for CCPP vaccine.
- ✓ A project baseline assessment reported that the government operational budget for veterinary services for the four woredas in 2022 was **535,000 birr**. In contrast, the income received by the four franchisees was **2,677,491 birr**, approximately **5 times** the government's annual operational budget for 2022
- ✓ this result shows an important part of the economic rationale for private sector involvement in vaccine delivery, and the willingness of pastoralists to pay for the service
- ✓ The project has also generated new knowledge about the factors that influence the uptake of CCPP vaccine by pastoralists, the role of women in CCPP vaccine delivery, and the potential for private sector delivery of CCPP vaccine

CBPP Subunit vaccine development

Discovery

▶ Proof of Concept

▶ Exploratory Development

▶ Full Development

▶ Regulatory Submission

▶ Stewardship

Why is this necessary?

- Clinical trials to develop a subunit vaccine for contagious bovine pleuropneumonia in Kenya



**VIDO &
KALRO**



Main Achievement

1. Key achievements include the development of a novel infection model for contagious bovine pleuropneumonia (CBPP) by VIDO scientists and Kenyan experts. This advancement significantly contributes to an Enhanced Disease Modeling.
2. The recombinant vaccine and Contavax™ showed similar protective efficacy, approximately 52% and 51%, respectively.

Benefits

- A potential new vaccine candidate is underway.

CBPP future funding TAHSSL: Transforming Animal-Health Solutions and Services for Low-and middle-income countries



\$CA 2 mil, to support TAHSSL in future project on CBPP

- **Development and testing of a feasible and scalable CBPP control program in pastoral farming systems**
- *Partnership: ILRI, GALVMed, University of Cambridge, State Department of Veterinary Services, Kenya, Kenya Agricultural and Livestock Research Organization (KALRO).*

03 WP out of 07 will be funded by IDRC.

Thank you for your attention