





The Brucellosis Vaccine Prize: an incentive for innovation in Animal Health

Report on current status

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Veterinary Vaccinology Network Conference - Stirling

18 January 2018



BILL&MELINDA

The AgResults initiative is a partnership between:



Department of Foreign Affairs and Trade









THE WORLD BANK

About AgResults

- A \$122m multi-donor, multi-lateral initiative creating incentives for / rewarding high-impact agricultural innovations that promote global food security, health and nutrition
- Pull mechanism projects rather than grant funding or aid
- Introduced at the 2010 G20 Summit a commitment to explore innovative, results-based methods of leveraging private sector innovation in developing countries.

Objectives

- Overcome market failures which impede agricultural innovations
- Test the effectiveness and efficiency of pull financing





Uganda legume seeds pilot (6 yr \$1.6m)

- Aim: incentivise seed companies to produce and make available quality verified bean/soybean varieties
- Impact: stronger industry competition, increased sales, up to 60% inc. yield

Kenya on-farm grain storage (4 yr \$7.75m)

- Aim: incentivise private sector to develop & sell affordable solutions to reduce post harvest losses
- Impact: reduction in the \$1.6bn annual losses (~13.5% of total value of crop)

Zambia bio fortified maize (5 yr \$7m)

- Aim: incentivise seed companies and millers to increase demand (awareness) and supply of biofortified pro-vitamin A maize.
- Impact: reduce mortality (500,000p.a.) and morbidity caused by Vit A deficiency





Brucellosis Vaccine Prize

About the Prize

- \$30 million allocated to competition
- Aim: provide incentives for development of an improved vaccine against *Brucella melitensis* in small ruminants

Why Brucellosis?

- An infectious disease causing reproductive losses and decreased milk production. Impact on <u>smallholder farmers</u> in East Asia, South Asia and Sub-Saharan Africa, est. \$500 million per year
- Zoonotic impact approximately 500,000 new human cases reported p.a.
- Current vaccines (first introduced in 1957) inadequate safety in pregnant animals and efficacy







Brucellosis Vaccine Prize: structure and prize timeline

Eligible Solvers could receive three milestone prizes at different stages of the contest that could add up to US \$26.1 million for one entrant



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* New solvers may apply beyond Nov '17 but will cannot be considered for a MS1 payment



Protecting Livestock - Improving Human Lives

Brucellosis Vaccine Competition – Current Status





- Response: 39 credible applications;
 - ✓ interest and response exceeded expectations
- Diverse applications
 - Technical approaches
 - Geographical distribution
 - Organisation type / structure
- 10 applications have been awarded a Milestone 1 prize of \$100,000
- 10 further applications assessed as meeting criteria to progress to Phase 2 of the competition





Diversity of Engagement



Protecting Livestock – Improving Human Lives

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Brucellosis Vaccine Competition – Next Steps



- Solvers progress development towards Milestone 2
- Strengthen collaborations
- New Solvers still welcome
- Consider parallel activities to develop the policy & market landscape for an improved vaccine







Website Email

in Y

AND DELIVERY

www.brucellosisvaccine.org brucellosis@galvmed.org

GALVmed

@GALVmed #brucellosisprize





Minimum Viable Product (MVP) – Full Requirements are available in the Competition Rules, posted on www.brucellosisvaccine.org

	Species/Animal	• <i>B. melitensis</i> in sheep or goats , with a potential to add the second target animal species to the label later (small ruminant category)
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Animal Safety	• Safety in pregnant animals: In all stages of gestation, no more than 5% of the vaccinated animals should abort due to the vaccine strain
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	Efficacy* of the vaccine in pregnant sheep or goats against a B. melitensis challenge in all
	stages of gestation such that:
	• The vaccine demonstrates 80% or higher protection** compared with unvaccinated
Efficacy*	animals in controlled trial conditions; in these trials the challenge dose should be stringent
	enough that at least 90% of unvaccinated challenged animals abort
	**For all trial results, animals are considered to be protected when no abortion, no excretion of
	the challenge strain and no infection at slaughter (in carcasses) occurs

	Shelf Life	No less than 18 months under controlled conditions
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Duration of Protection	• Single vaccination annually or duration of protection lasts for at least two gestations with a single vaccination.
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An additional <u>\$5 million in Prize money</u> for vaccine that meets the Best in Class requirements



*Product performance for B.abortus in cattle should be on par with currently available commercial vaccines.



