

Vaccine Development for Coccidioidomycosis

A Vaccine is Needed, Feasible, and Cost-Effective

The Imperative for a Stronger Public-Private
Vaccine Partnership

Crozet BioPharma LLC

94 Jackson Road Ste 108

Devens MA 01434

Contact: gray.heppner@crozetbiopharma.com

703-598-1940

A Coccidioidomycosis Vaccine is Needed

High risk groups in endemic areas

- Older adults (>65 years of age)
- Very young
- Military
- Immunocompromised / immunosuppressed
- African-Americans, Hispanics
- Prisoners
- Occupational Hazards
 - Construction
 - Mining
 - Archeology
 - Agriculture
 - Outdoors (camping, hiking, mountain biking)

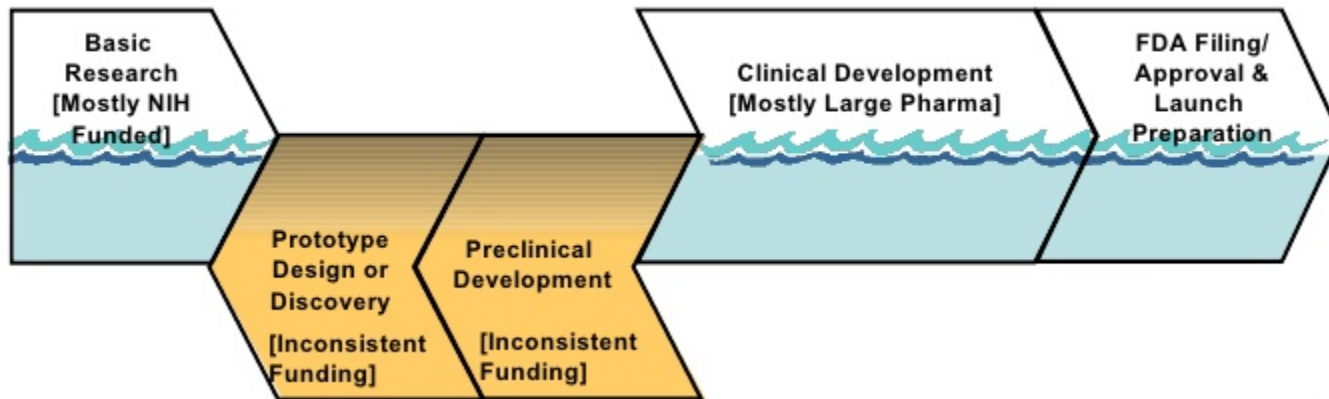
A Coccidioidomycosis Vaccine is Feasible

- Human infection with *Coccidioides spp.* is protective against subsequent infection and disease demonstrating that protective immunity is feasible.
- A live, attenuated spore-based *Coccidioides* vaccine has been developed
- The vaccine has been shown to be safe and highly protective in mice and dogs
- A public-private venture is underway to develop and commercialize the vaccine for dogs (Canine Valley Fever Vaccine Project-U Arizona and Anivive Lifesciences (Long Beach, CA), & with NIH support
- *The same vaccine is likely to be safe and effective for humans, but requires GMP manufacturing and clinical development*

A Valley Fever Vaccine

Crossing the Developmental Valley of Death

- “There may be numerous infectious diseases that regularly claim untold numbers of lives around the world, but there are few vaccine candidates for combating these ailments.... The reasons are not new – the pharmaceutical industry may deem the markets not sufficiently profitable to recover needed investments and governments have not provided sufficient incentives.” Adel Mahmoud, 2015



- Incentives are needed for industry to invest in a vaccine to protect the people at highest risk of this unpreventable and incurable disease
- Valley Fever disproportionately affects poor and marginalized populations
- The potential direct market has not catalyzed commercial vaccine efforts
- A PRV would pull industry and investors
- FDA recently rejected a proposal to add Cocci to the PRV eligible list