

NIAID International Vaccine Research

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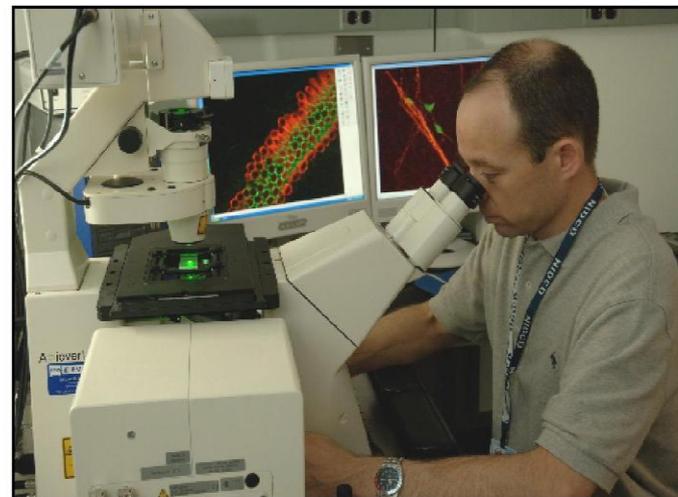
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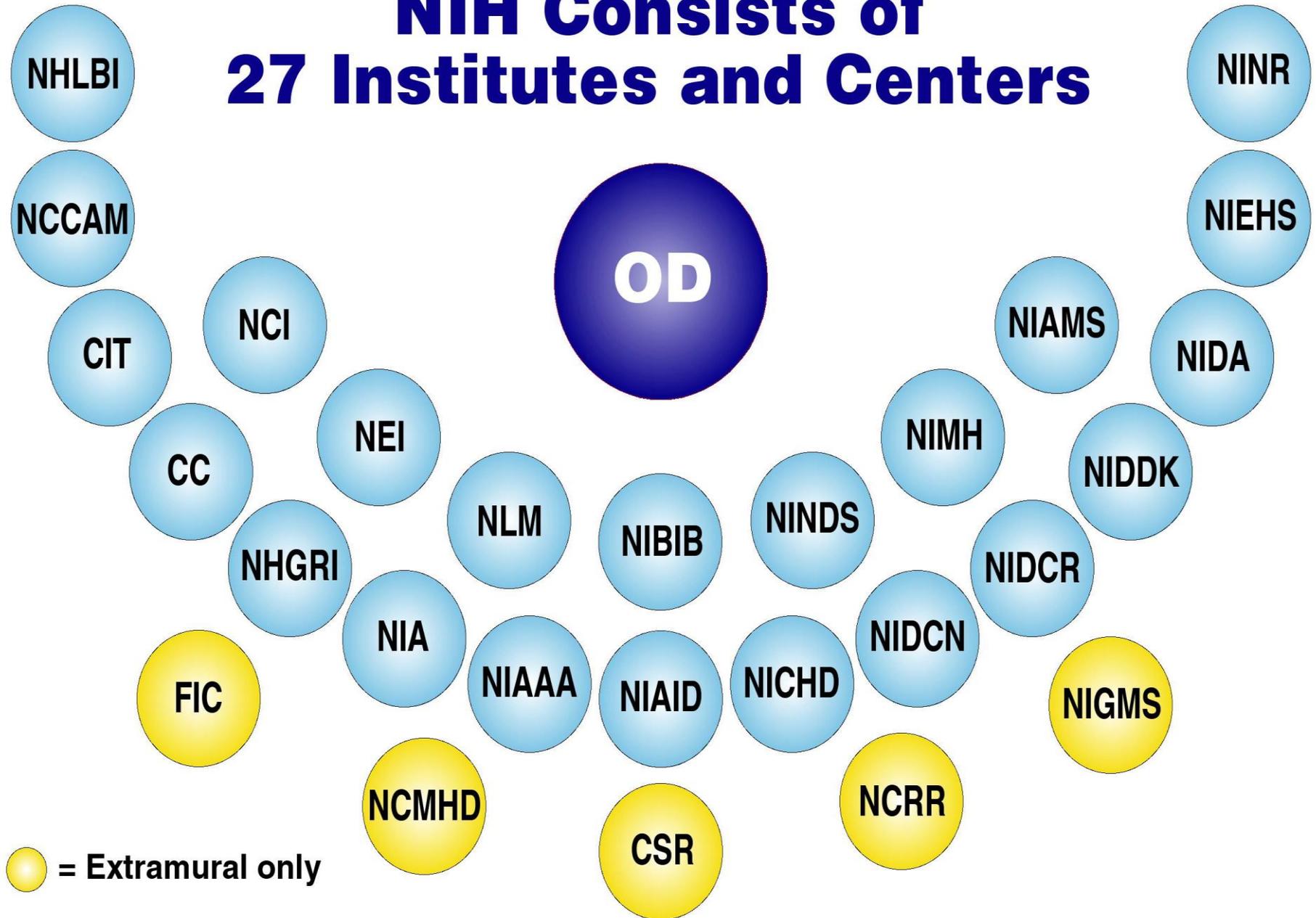
NIH: Steward of Medical and Behavioral Research for the Nation



“Science in pursuit of **fundamental knowledge** about the nature and behavior of living systems . . .and **the application of that knowledge** to extend healthy life and reduce the burdens of illness and disability.”



NIH Consists of 27 Institutes and Centers



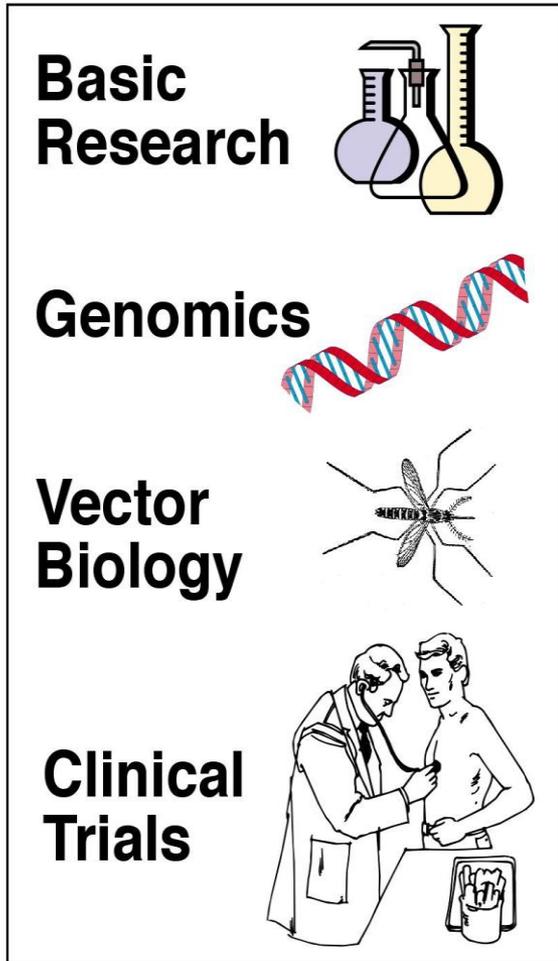
NIAID Mission

- To understand, treat, and ultimately prevent the myriad of infectious, immunologic, and allergic diseases that threaten millions of human lives.
- Within NIAID, the Division of Microbiology and Infectious Diseases (DMID) research portfolio includes 300 pathogens, many of which are included in the international program.



The Research Path

Global and Domestic Research



**Vaccines and Other
Prevention Tools**



Therapeutics



Diagnostics



**Improved Global
Health**

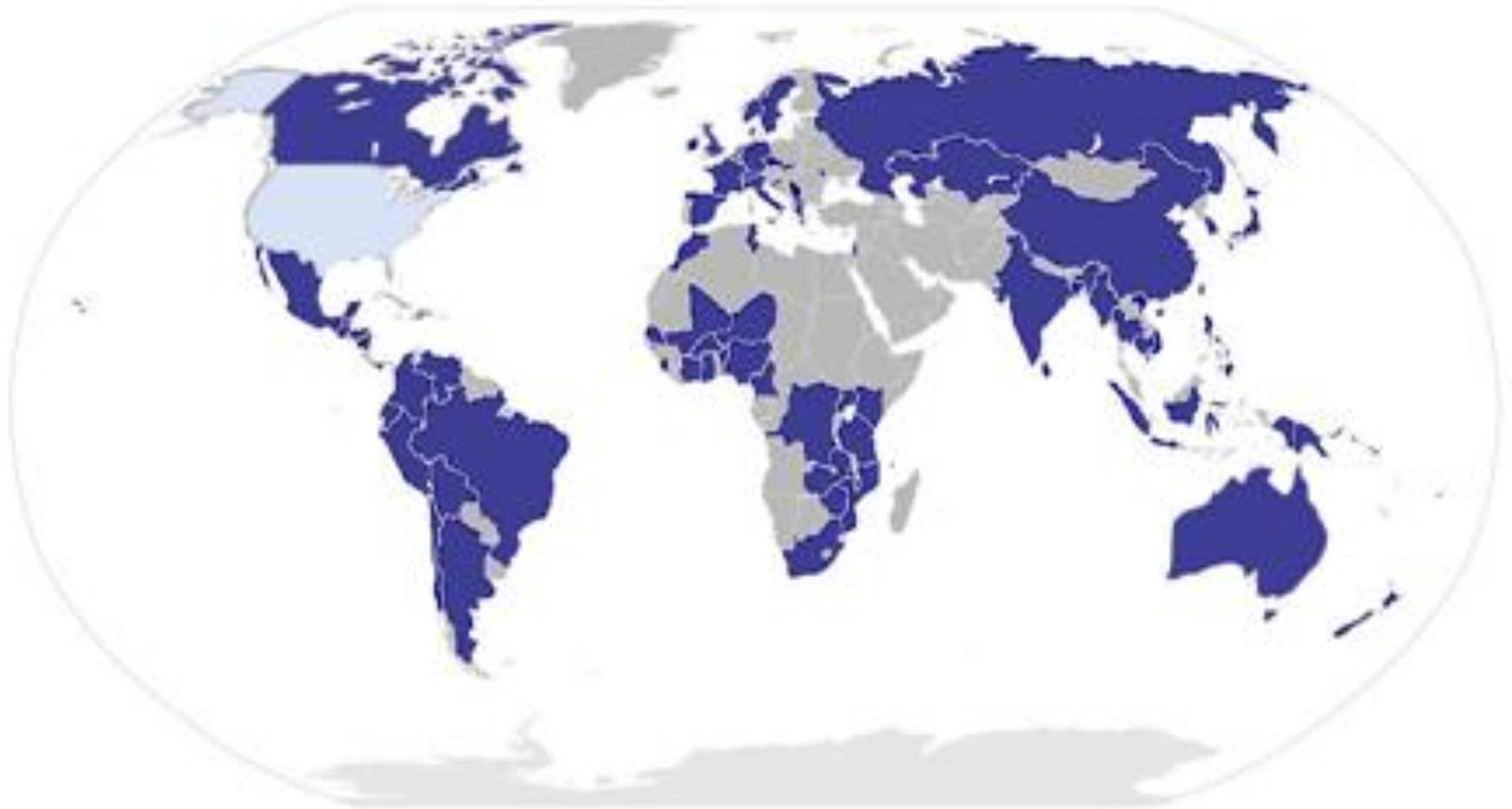


Goals of the Vaccine Research and Development Program

- Identification of new vaccine candidates to prevent or ameliorate diseases for which no vaccines currently exist;
- Improvement in the safety and efficacy of existing vaccines;
- Design of novel vaccine approaches and strategies, such as DNA vaccines and strategies based on protein conjugation;
- Development of innovative technologies such as new delivery methods, stabilization techniques, and adjuvants.



DMID Global Health Research 2010



■ Countries with DMID-supported research

DMID International Research: Guiding Principles

- A solid base of diverse research activities provides a strong foundation that can be readily adapted to emerging diseases and changing needs.
- Targeted research programs to address scientific priorities or gaps in the portfolio complement investigator-initiated research.
- Research should be conducted in endemic settings as appropriate.
- International research must be held to the same standards and oversight as domestic research.
- International research can inform policy making and improve public health.

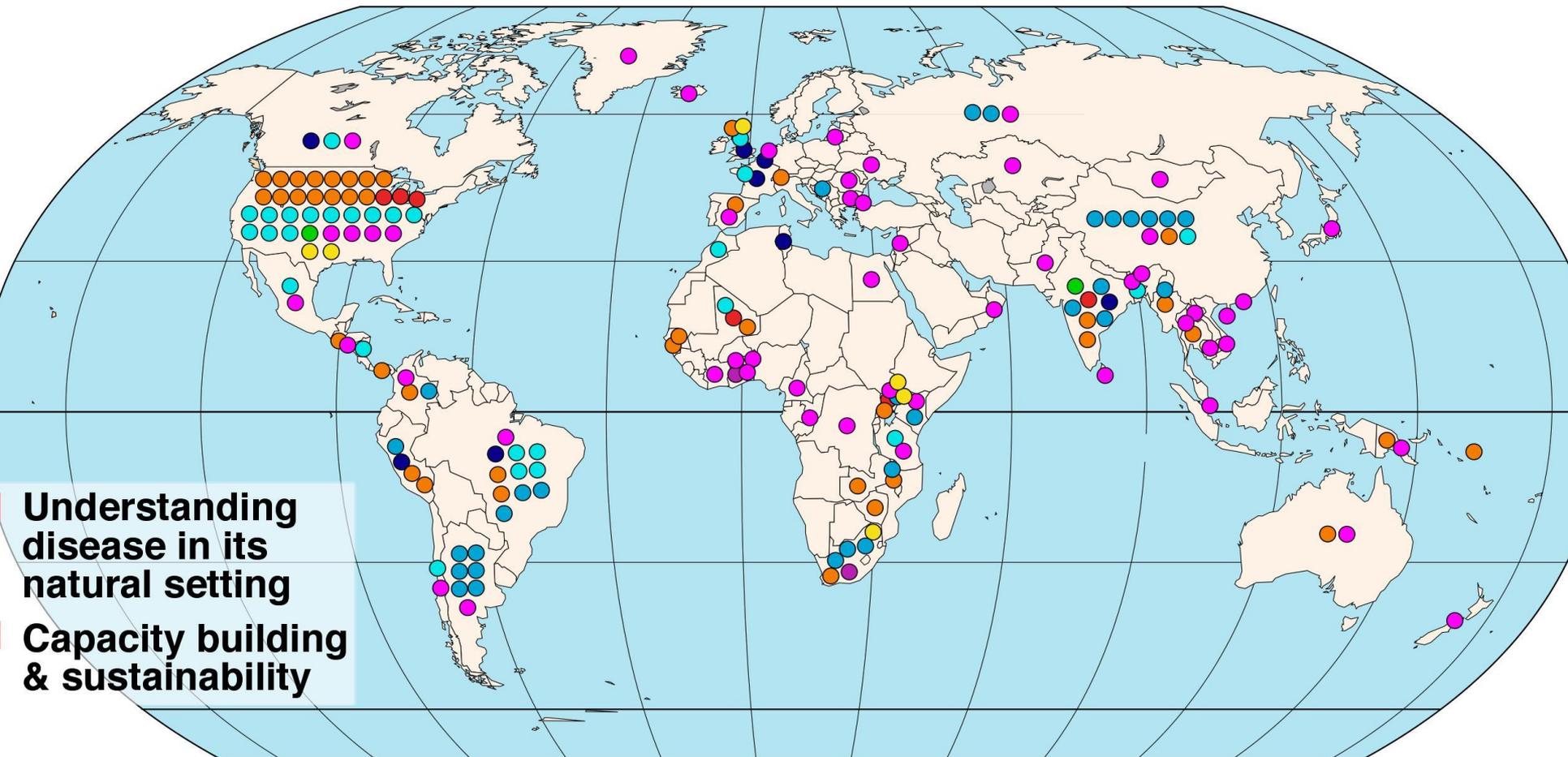


DMID International Research: Programs

- **International Collaborations in Infectious Disease Research (ICIDR)**
- **Tropical Medicine Research Centers (TMRC)**
- **International Research in Infectious Disease including AIDS (IRIDA)**
- **International Centers of Excellence for Malaria Research (ICEMR)**



NIAID DMID Commitment to International Research



- International Centers for Excellence in Research (ICER)
- Tropical Medicine Research Centers (TMRC)
- International Collaborations in Infectious Disease Research (ICIDR)
- International Centers of Excellence in Malaria Research (ICEMR)
- International Research in Infectious Diseases Including AIDS (DMID ONLY)

- Malaria Vaccines: Clinical Research and Trial Sites
- Indo-US Vaccine Action Program (VAP)
- NIAID Centers of Excellence for Influenza Research and Surveillance (CEIRS)
- Tuberculosis Research Unit and Tuberculosis Clinical Diagnostics Research Consortium

Partnerships are Essential for:

- Developing and delivering interventions in the absence of a commercial market
- Risk sharing for development of novel interventions
- Leveraging different types of expertise



Partnerships



INDO-U.S. Vaccine Action Program

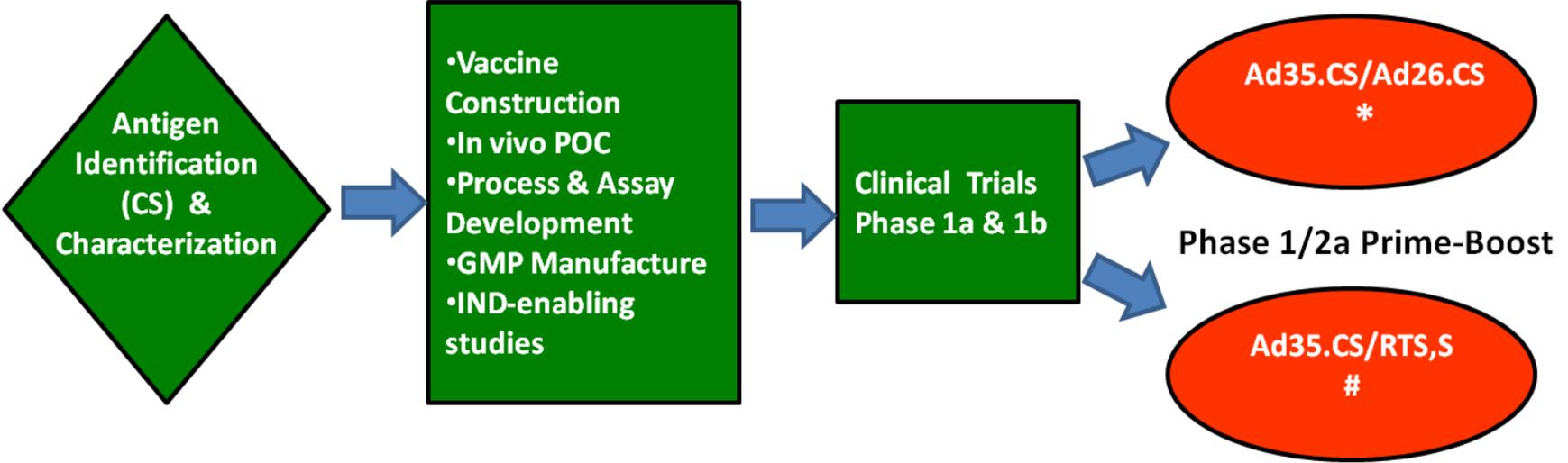
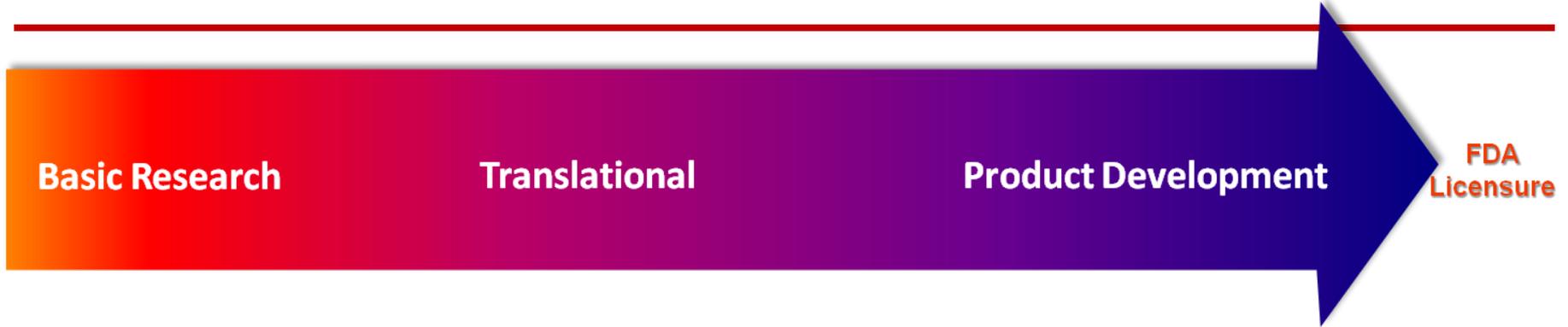


Examples of Current Public-Private Product Development Partnerships

- **PATH Malaria Vaccine Initiative (MVI)**
- **Aeras – Tuberculosis Vaccine Development**
- **Pediatric Dengue Vaccine Initiative**



Malaria Vaccine Development



FUNDING SOURCE

NIAID/DMID

Follow-on support

* MVI/Crucell/USAID
Crucell/GSK



Gambia Pneumococcal Vaccine Trial

Trial: randomized, double-blind trial to test efficacy of nine-valent pneumococcal conjugate vaccine in rural Africa

Volunteers: 17,437 infants in The Gambia

Results: vaccine reduced childhood mortality by 16 percent and number of cases of pneumonia by 37 percent [Lancet 365:1139 (2005)]

Partners: NIAID Gambian Government

MRC USAID

WHO CVP/PATH

London School of Hygiene
and Tropical Medicine

Wyeth-Lederle Vaccines



Resources for Researchers



- ▶ Funding opportunities
 - ▶ Research tools and technologies
 - ▶ Preclinical and clinical services to facilitate product development

Collaborative Vaccine Development

