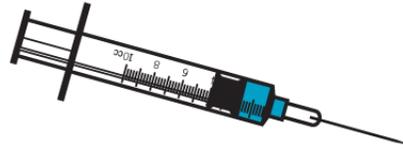


**The Role of the
National Institute of Allergy and
Infectious Diseases
in Research Addressing
Zika Virus**

**Anthony S. Fauci, M.D.
Director**

**National Institute of Allergy
and Infectious Diseases
National Institutes of Health
May 12, 2016**

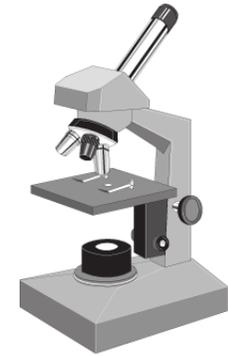




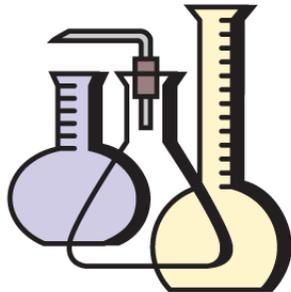
Vaccines



Therapeutics



Diagnostics



Basic Research



**Resources for
Researchers/
Industry to
Advance
Product
Development**



**Clinical
Research**

Biomedical Research Response: Basic Science

- **Molecular Virology: a) elucidate viral structure;
b) compare viruses from different outbreaks**
- **Pathogenesis of disease**
- **Studies on immune response (innate and adaptive)**
- **Establish animal models**

Biomedical Research Response: Epidemiology and Natural History

- **Epidemiology and natural history**
 - Symptomatic vs. asymptomatic
 - Frequency of sequelae
 - Cohort studies to determine incidence of adverse pregnancy outcomes in Zika-infected pregnant women

- **Pathogenesis of microcephaly**

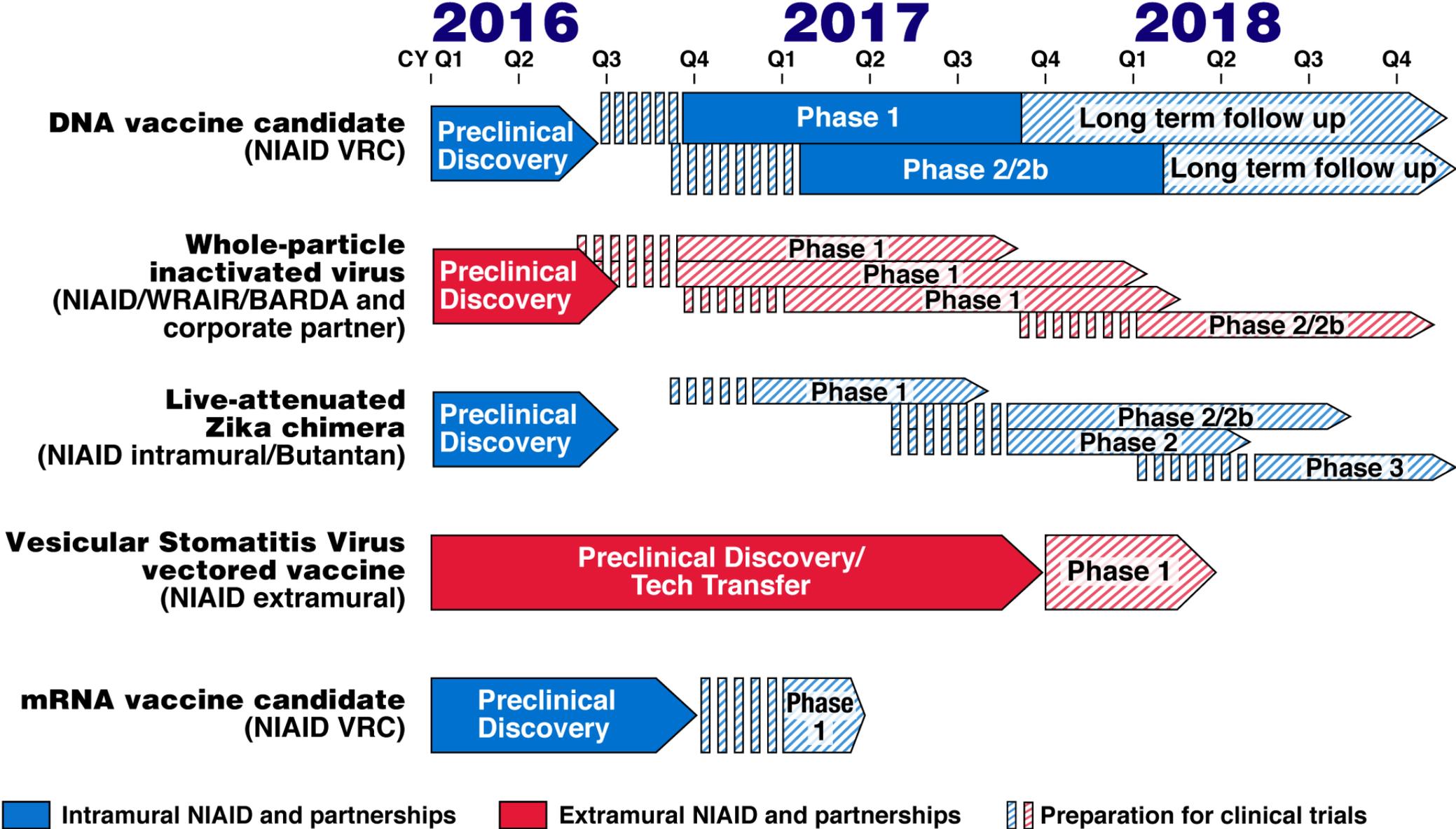
Biomedical Research Response: Diagnostics

- **CDC – Diagnostic and Reference Laboratory in Arbovirus Diseases Branch**
- **RT-PCR assay for Zika, Dengue and Chikungunya**
- **Antibody assay for acute infection that will not cross-react with other flaviviruses**

Biomedical Research Response: Countermeasures – Therapeutics

- **Developing *in vitro* antiviral screening assay**
- **Testing compounds with known activity against other flaviviruses**
- **Broad screening of compounds without known anti-flavivirus activity**

Zika Vaccine Development Timeline



DNA Vaccine Development Timeline

