

National Institute of Allergy and Infectious Diseases

Scientific Colloquium: A Scientific Partnership to enhance mRNA vaccine production

# NIH Collaboration with South Africa

**F. Gray Handley**

NIAID Associate Director for International Research Affairs

NIAID



National Institute of  
Allergy and  
Infectious Diseases

**National Institutes of Health**

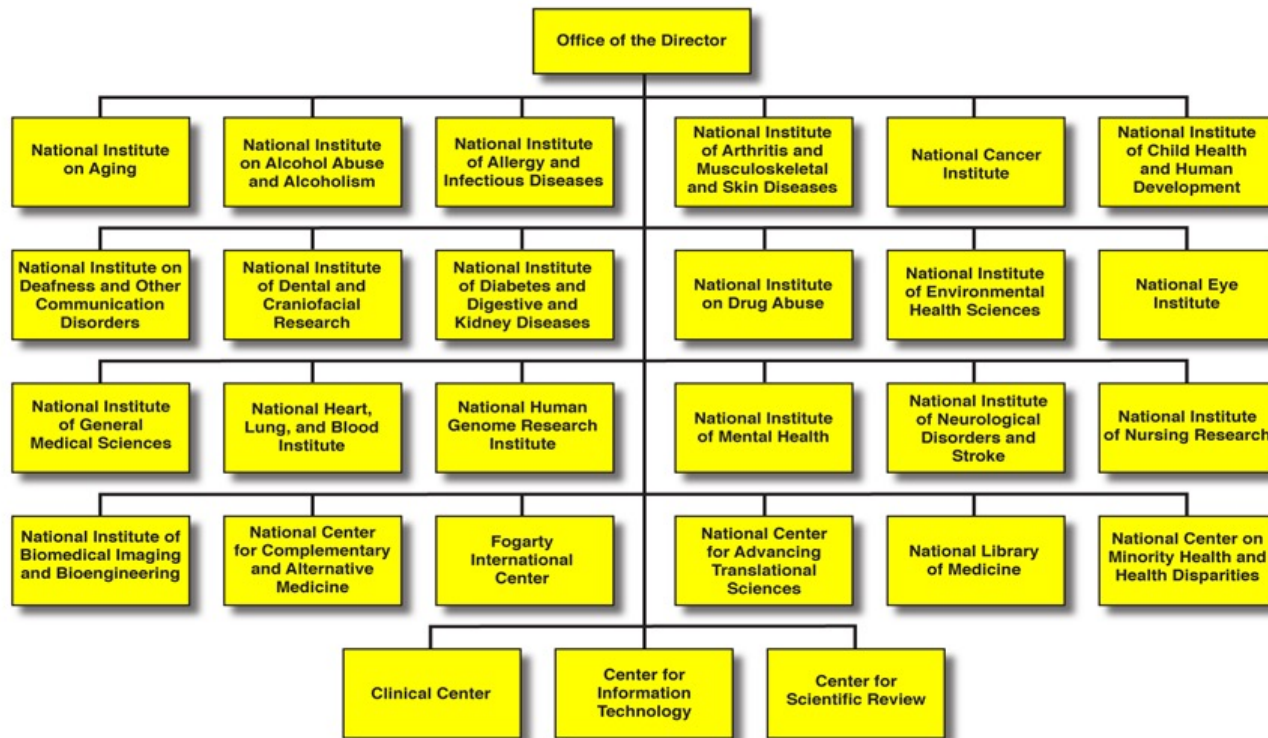
July 8, 2022

# National Institutes of Health

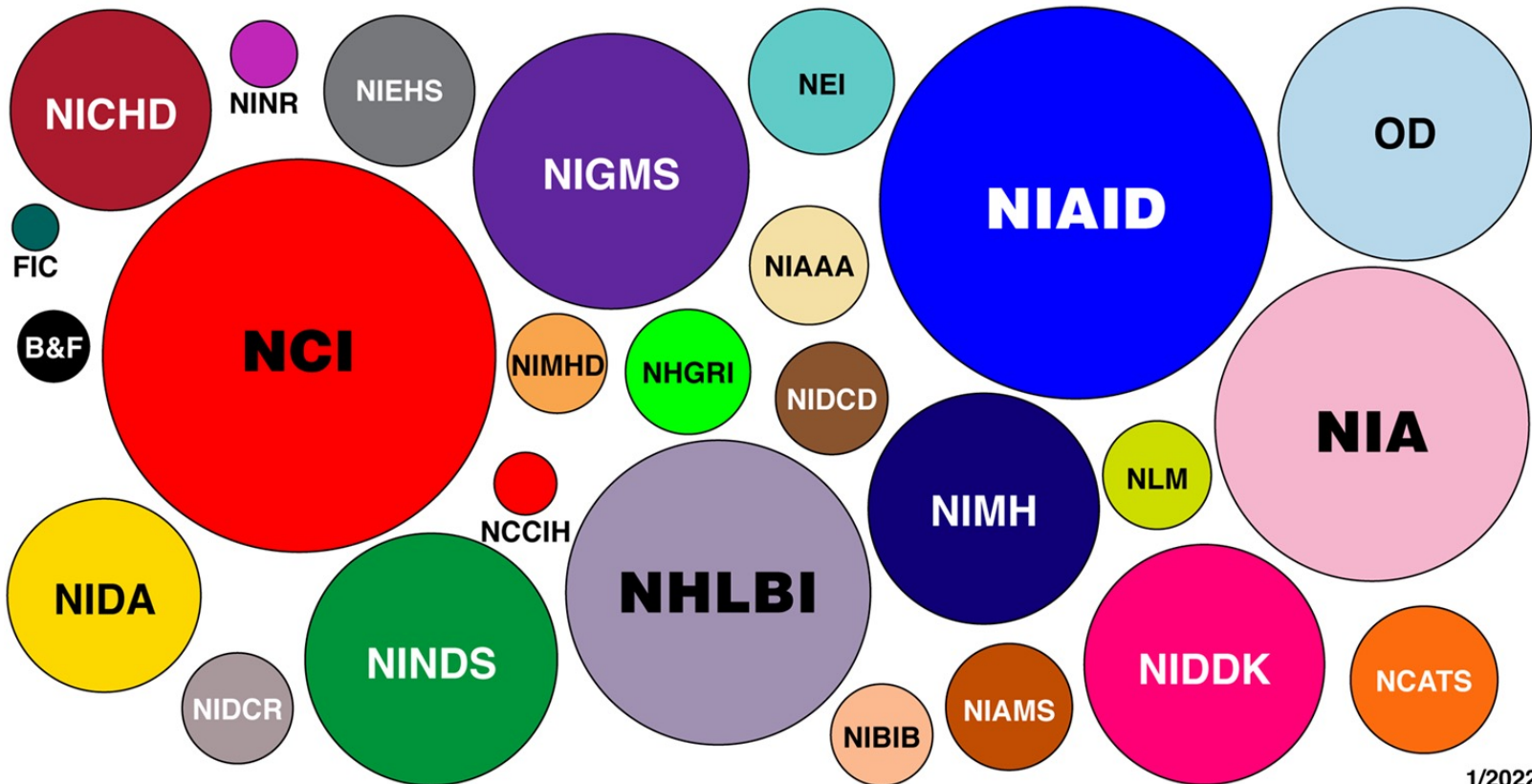


**NIH's Mission:**  
**Science in Pursuit of Knowledge  
to Improve Health**

# National Institutes of Health

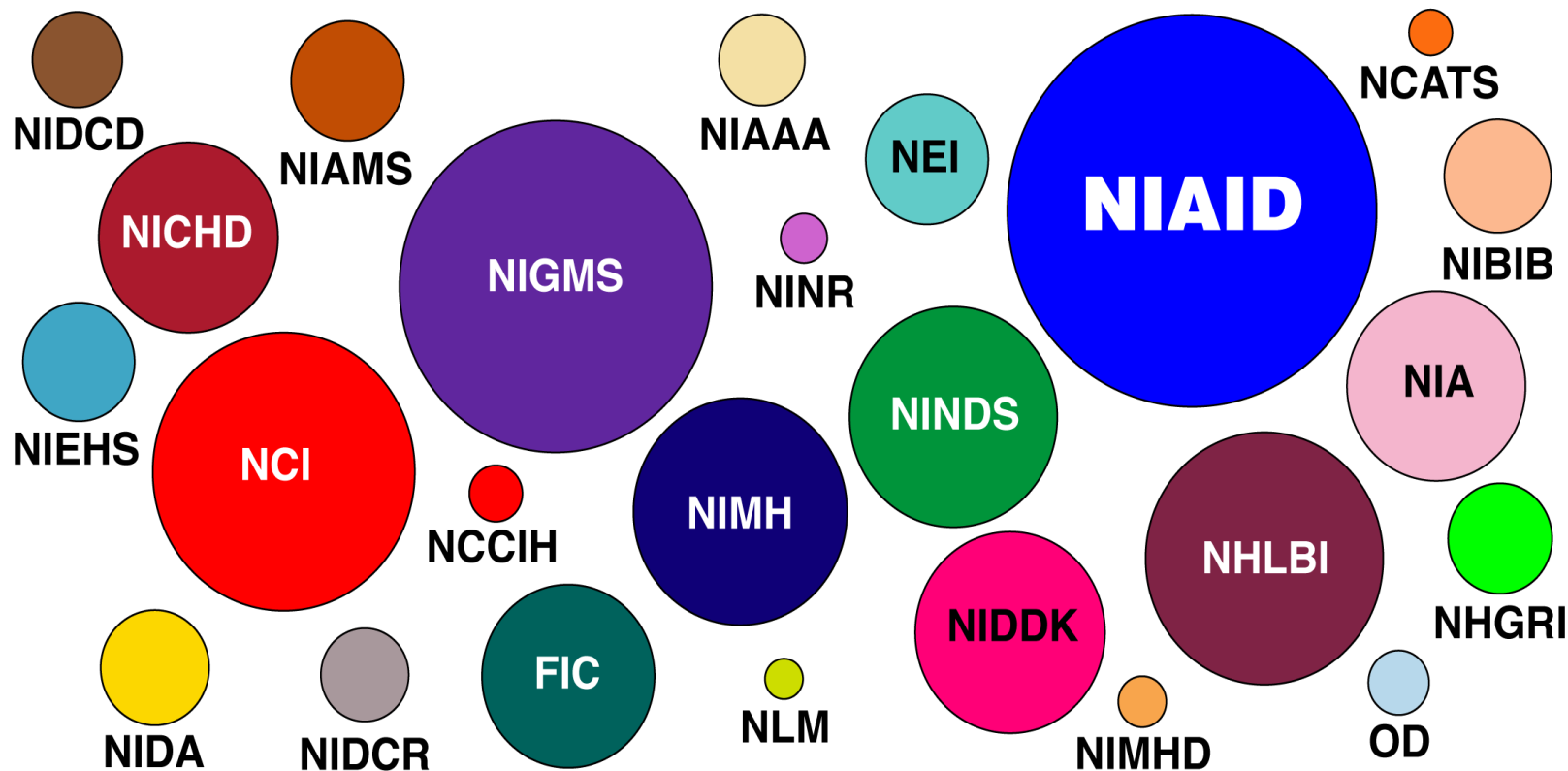


# NIH Budget by Institute/Center, FY 2021



1/2022

# NIH Awards with International Components by Institute/ Center, FY21



# NIH-Supported Research In South Africa

- > 30 years of research collaboration
- >440 ongoing research projects
- 21 NIH ICs fund research in South Africa
- Ongoing projects related to:
  - HIV/AIDS
  - TB
  - Sexually transmitted infections
  - Cancer
  - Maternal and child health
  - Mental health
  - COVID-19
  - Other emerging and re-emerging infectious diseases



# NIH-Supported Research In South Africa

- Longstanding collaborations with institutions in South Africa, including:
  - University of Cape Town
  - Stellenbosch University
  - University of Witwatersrand
  - Center for Aids Program of Research in South Africa (CAPRISA)
  - Desmond Tutu Foundation
- NIH's successful relationship with South Africa stems from:
  - Shared scientific interests in infectious diseases and priority chronic diseases in South Africa
  - Dedicated and well-trained South African investigators
  - Capable South African biomedical research institutions
  - Long-term commitment on both sides

# Selected NIH Programs In South Africa



Aims to facilitate a contemporary research approach to study genomics and environmental determinants of common diseases



Leverages data science to develop solutions to the continent's most pressing public health problems



Generates large data sets to address the high priority research questions and streamline HIV/AIDS research.



Global collaboration for evaluating interventions to treat and prevent HIV infection and its consequences in infants, children, adolescents and pregnant/postpartum women



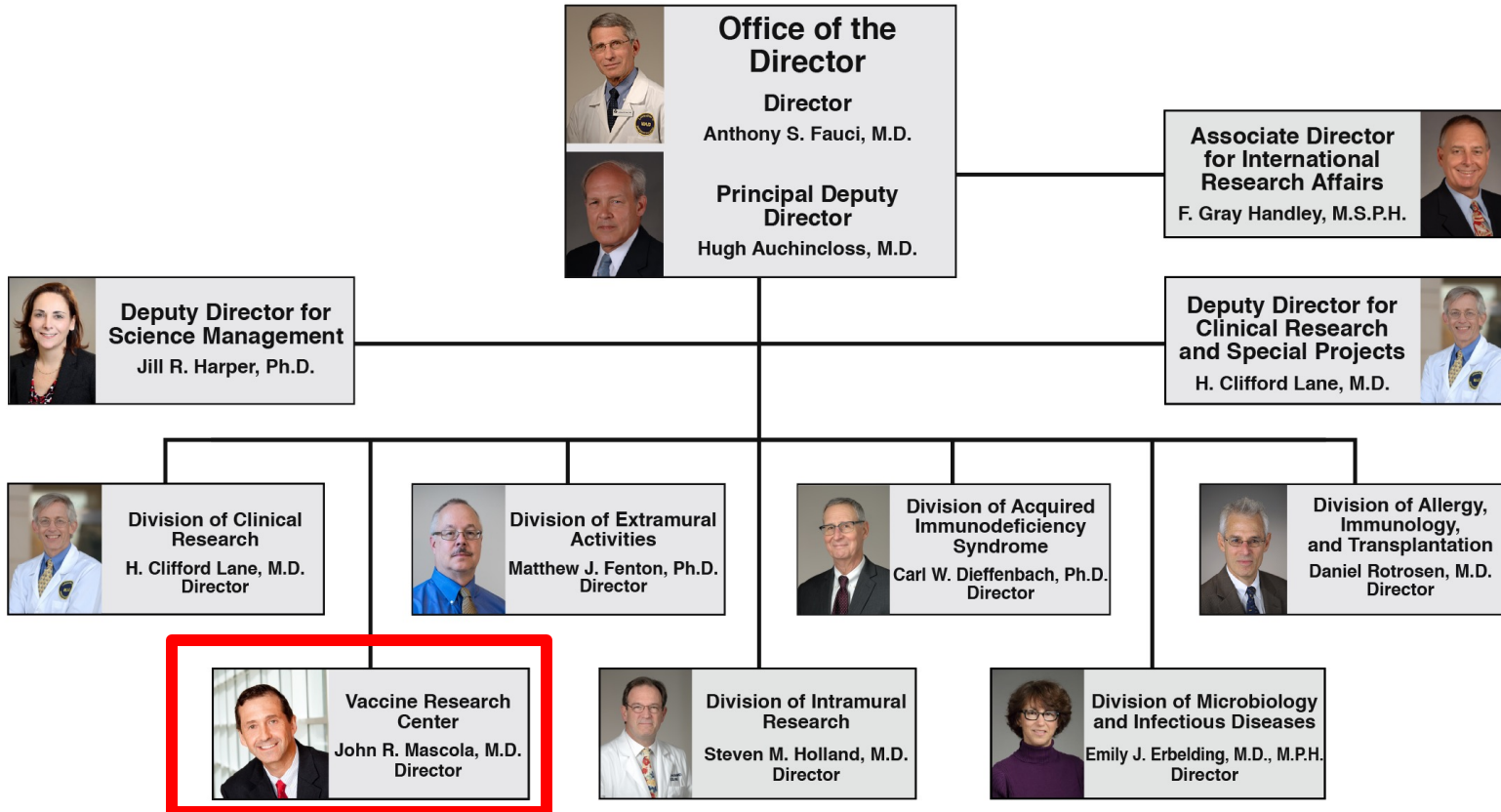
Strengthens capacity for HIV/AIDS research in developing countries by supporting new scientists in HIV/AIDS research with small one-year pilot grant funding



# U.S. – South Africa Program for Collaborative Biomedical Research

- Bilateral program between NIH and the South African Medical Research Council (SAMRC)
- Equal funding from NIH and SAMRC
- Initiated in 2013 to foster and/or expand basic, translational, behavioral and applied research
- **Purpose:** To advance scientific discovery among U.S. and South African researchers
- **Phase 1 (2015-2019)**
  - Resulted in 34 co-funded projects, 190 publications, and support of 130 students/post/docs
  - Noteworthy accomplishments
    - Organ transplantation between HIV+ patients
- **Phase 2 (2020-2024)**
  - Resulted in 18 co-funded projects
  - Inclusion of HDIs and underrepresented scientists
  - Expanded Research Areas
  - Foster regional collaborations in Africa
  - Training/career development component

# NIAID Organization



# NIAID Mission

**Conduct and support basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases**



# NIAID Research: A Dual Mandate

Maintain and “grow” a robust basic and applied research portfolio in microbiology, infectious diseases, immunology and immune-mediated diseases



Respond rapidly to new and emerging disease threats

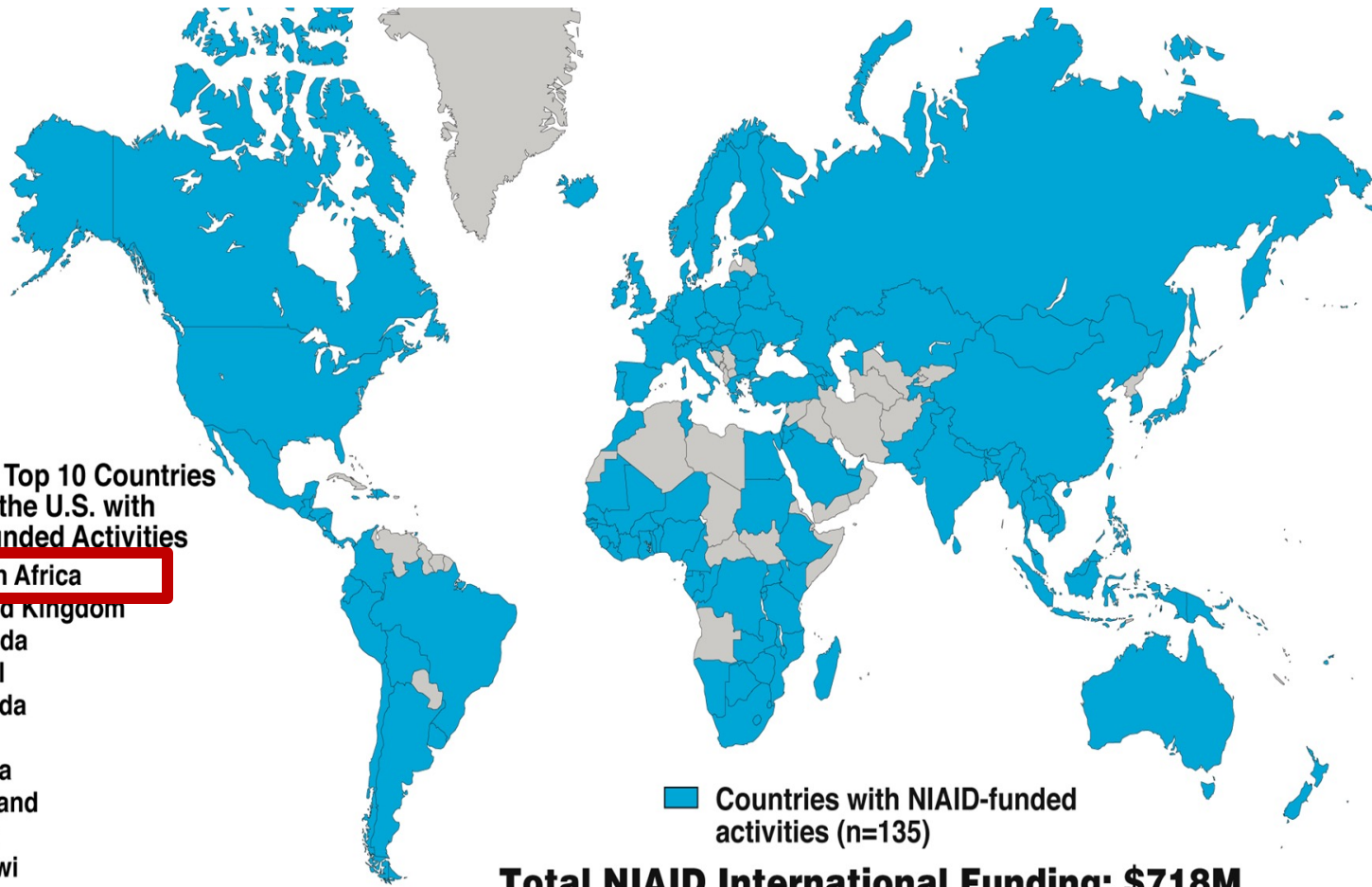


**New/Improved Interventions**

# NIAID Vision for Global Research

- Seek scientific opportunities and identify shared priorities
- Develop capacity through research cooperation
- Support domestic grantees to expand international collaborations and engage with investigators
- Engage partnerships among scientists and with governments, companies, and non-government organizations

# NIAID Global Health Research, FY 2021



FY 2021 Top 10 Countries outside the U.S. with NIAID-funded Activities

- South Africa
- United Kingdom
- Uganda
- Brazil
- Canada
- Peru
- Kenya
- Thailand
- India
- Malawi

■ Countries with NIAID-funded activities (n=135)

**Total NIAID International Funding: \$718M**

**NIAID Funding for South Africa: \$77.9M**

# NIAID-Supported COVID-19 Clinical Trials Involving South Africa

## **ACTIV-2**

Adaptive trial designed to test promising, investigational agents in outpatients

## **ACTIV-3**

Therapeutics for Inpatients With COVID-19 (TICO)

## **Janssen Ad26.COVS.s**

Phase 3 vaccine study

## **CoVNP 5001**

Study of Immune Responses to the Virus That Causes COVID-19

**Characterizing SARS-CoV-2-specific Immunity in Individuals Who Have Recovered From COVID-19**

# NIAID Partnerships for COVID-19 Vaccine R&D in South Africa

- **CoVPN 3008 (Ubuntu Study)**
  - Efficacy Study of COVID-19 mRNA Vaccine in Regions With SARS-CoV-2 Variants of Concern
  
- **Afrigen/ VRC Partnership**
  - Collaboration to develop mRNA vaccines for COVID-19 and other priority infectious diseases



# Conclusion

- NIH's research portfolio in South Africa generates outstanding scientific advances while also strengthening bilateral cooperation.
- NIH values South Africa's investment in biomedical research which has fostered investigators who are world-experts in HIV/AIDS, TB, COVID-19, and other diseases.
- NIH looks forward to continuing this mutually beneficial partnership with South Africa through the research collaboration with Afrigen Biologics and Vaccines on mRNA vaccine production processes