Scientific Colloquium: A Scientific Partnership to enhance mRNA vaccine production

NIH Collaboration with South Africa

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NIH’s Mission:
Science in Pursuit of Knowledge to Improve Health
National Institutes of Health

Office of the Director

- National Institute on Aging
- National Institute on Alcohol Abuse and Alcoholism
- National Institute of Allergy and Infectious Diseases
- National Institute of Arthritis and Musculoskeletal and Skin Diseases
- National Cancer Institute
- National Institute of Child Health and Human Development

- National Institute on Deafness and Other Communication Disorders
- National Institute of Dental and Craniofacial Research
- National Institute of Diabetes and Digestive and Kidney Diseases
- National Institute on Drug Abuse
- National Institute of Environmental Health Sciences
- National Eye Institute

- National Institute of General Medical Sciences
- National Heart, Lung, and Blood Institute
- National Human Genome Research Institute
- National Institute of Mental Health
- National Institute of Neurological Disorders and Stroke
- National Institute of Nursing Research

- National Institute of Biomedical Imaging and Bioengineering
- National Center for Complementary and Alternative Medicine
- Fogarty International Center
- National Center for Advancing Translational Sciences
- National Library of Medicine
- National Center on Minority Health and Health Disparities

Clinical Center
Center for Information Technology
Center for Scientific Review
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

**H3Africa**

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

**DS-1 Africa**

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

**IeDEA**

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

**IMPAACT**

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

**CFAR**

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

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.COV2.s**
Phase 3 vaccine study

**CoVPN 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.