

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

**Breaking Down Silos: The Convergence of  
Infectious Diseases and Noncommunicable Diseases**  
*A Workshop*

**Agenda**  
**JUNE 11-12, 2019**

The Rockefeller Foundation  
420 Fifth Avenue  
New York, NY

Objectives:

This 1.5-day public workshop will explore the growing understanding of how the interplay between humans and microbes affects host physiology and causes chronic diseases. The workshop will allow participants to gain a deeper understanding of the continuum between infectious and noncommunicable diseases, including how it provides new opportunities for prevention and treatment.

Specifically, this workshop will feature invited presentations and discussions including the following:

- Current knowledge on the known and suspected causal associations between micro-organisms and chronic diseases and conditions, as well as associated issues.
- The evolving understanding of how the microbiome affects the normal physiological functioning in humans and how these interactions vary depending on the population, geographic location, and other biological or environmental factors;
- Research needed to further understand the relationship between micro-organisms and chronic diseases and physiological functions;
- Opportunities for developing new approaches to prevent, detect, and mitigate chronic diseases and to reduce their public health impact and burden;
- Cutting edge methods and tools as well as study designs being used to explore links between chronic diseases and infectious diseases; and
- Mechanisms to leverage cross-sectoral collaborations and break down silos among various stakeholders from research to practice.

Workshop speakers and discussants will contribute perspectives from government, academia, private, and nonprofit sectors.

DAY 1 – TUESDAY, June 11, 2019

---

1:00pm ET **Welcome Remarks**

NAVEEN RAO

Managing Director for Health and Senior Advisor to the President

The Rockefeller Foundation

**Workshop Overview and Goals**

PETER DASZAK, *Chair of the Forum on Microbial Threats and Workshop*

President

EcoHealth Alliance

**Keynote Addresses**

**The Current State of the Dual Global Collision and Burden of Infectious Diseases and Noncommunicable Diseases**

TOLULLAH ONI

Clinical Senior Research Associate, MRC Epidemiology Unit

University of Cambridge

**The Global Syndemic of Infectious Diseases and Noncommunicable Diseases:  
A New Approach to Tackling the Global Burden**

EMILY MENDENHALL

Provost's Distinguished Associate Professor

Georgetown University

1:50pm **Q&A**

**Session I: Current State of the Science and Emerging Research**

2:05pm Session I Part A Objectives:

- Examine emerging and novel research on possible associations between infections and NCDs, knowledge gaps, and overall implications for further research and practice
- Explore cutting edge methods and tools as well as study designs being used to explore links of emerging associations between infectious diseases and chronic diseases
- Understand methods and standards to identify causal links and their temporal relationships while minimizing the risks of interventions against unproven etiologies

*Moderator:* Julie Parsonnet, Stanford University

**Part A Case Studies**

**Alzheimer's Disease and *P. gingivalis***

CASEY LYNCH

CEO & Cofounder

Cortexyme, Inc.

## WORKSHOP ON THE CONVERGENCE OF INFECTIOUS & NONCOMMUNICABLE DISEASES

### **Epstein-Barr Virus and Autoimmune Diseases**

JOHN B. HARLEY

Founding Director of the Center for Autoimmune Genomics and Etiology  
Cincinnati Children's Hospital Medical Center

### **The Role of the Microbiome in Food Allergies**

CATHRYN R. NAGLER

Bunning Food Allergy Professor and Professor of Pathology, Medicine, and Pediatrics  
The University of Chicago

2:50pm **Q&A**

3:20pm **Break**

3:35pm Session I Part B Objectives:

- Understand the current knowledge on the known and suspected risk that chronic diseases pose to the development and severity of infectious diseases
- Discuss the implications of this association on public health policy and practice and how they can inform other research exploring the convergence

*Moderator:* Kent Kester, Sanofi Pasteur

### **Part B Case Studies**

#### **Metabolic Syndrome and the Risk for Enteric Infection**

CHRISTOPH A. THAISS

Assistant Professor of Microbiology  
University of Pennsylvania – Perelman School of Medicine

#### **Diabetes Mellitus and Tuberculosis**

JULIA CRITCHLEY

Professor of Epidemiology in the Population Health Research Institute  
St. George's University of London

#### **Nutrition and Influenza**

MELINDA BECK

Associate Chair for Academics and Professor of Nutrition  
University of North Carolina, Chapel Hill

4:20pm **Plenary Presentation**

#### **A Microbial Dimension to Human Development and the Potential for New Approaches to Human Well-Being**

ROB KNIGHT

Founding Director of the Center for Microbiome Innovation  
University of California, San Diego

4:55pm **Q&A**

## WORKSHOP ON THE CONVERGENCE OF INFECTIOUS & NONCOMMUNICABLE DISEASES

- 5:25pm **Observations from Day 1**  
PETER DASZAK, *Chair of the Forum on Microbial Threats and Workshop*  
President  
EcoHealth Alliance
- 5:30pm **Adjourn**
- 5:35pm **Reception**

## DAY 2 – WEDNESDAY, June 12, 2019

---

- 8:30am **Welcome and Recap Day 1**  
PETER DASZAK, *Chair of the Forum on Microbial Threats and Workshop*  
President  
EcoHealth Alliance

### Session II: Confronting “The Blind People and the Elephant” Metaphor to Bridge the Silos

- 8:40am Session II Objectives:
- Understand priorities and concerns about the convergence from the respective fields of infectious disease and NCDs
  - Examine how to link and leverage disparate information produced by each field to address the convergence
  - Discuss and explore critical actions that can bridge silos and be used to accelerate progress that the respective fields of infectious disease and NCDs have already achieved

*Moderator:* Bridget B. Kelly, Burke Kelly Consulting

#### **Panel Discussion**

NELSON SEWANKAMBO  
President  
African Medical Schools Association

RACHEL NUGENT  
Vice President, Chronic Noncommunicable Diseases Global Initiative  
RTI International

DENNIS CARROLL  
Director, Emerging Threats Division  
U.S. Agency for International Development

GENE BUKHMAN  
Director, Program in Global NCDs and Social Change  
Harvard Medical School

9:20am **Q&A**

10:00am **Break**

**Session III: Integrating and Revamping Health Care Delivery Models and Interventions**

10:15am Session III Objectives:

- Discuss how health systems are responding to the dual burden and how to leverage existing structures and build local capacity
- Present examples where integration of care has been successful in increasing quality and access of care through innovative models that incorporate community-based and people-centered approaches
- Explore how primary care can help address the convergence in low- and middle-income countries
- Highlight new approaches needed for prevention and control at the local and country levels

*Moderator:* Marcos Espinal, Pan American Health Organization

**Presentations and Panel Discussion**

**HIV/NCD Integration Platforms**

MIRIAM RABKIN

Associate Professor of Medicine and Epidemiology  
Columbia University Mailman School of Public Health

**The AMPATH model**

SYLVESTER KIMAIYO

Executive Director  
AMPATH, Kenya

**Addressing the Convergence with Integration Science**

GENE BUKHMAN

Director, Program in Global NCDs and Social Change  
Harvard Medical School

**Mass Administration of Antibiotics as an Intervention to Reduce Child Mortality**

CATHERINE OLDENBURG

Assistant Professor, Francis I. Proctor Foundation  
University of California, San Francisco

11:15am **Q&A**

12:00pm **Lunch**

**Session IV: Moving Forward – Implications for Research and Public Health Practice**

1:00pm

Session IV Objectives:

- Explore opportunities for developing new research and approaches to public health practice to prevent, detect, and mitigate the convergence between infections and chronic diseases that would help to reduce public health impact and burden
- Synthesize priority actions that could have a significant impact on this convergence and how efforts might synergize with global health initiatives such as Universal Health Coverage and the Sustainable Development Goals
- Discuss strategies to leverage cross-sectoral collaborations and break down silos among various stakeholders from research to practice

*Moderator:* Bridget B. Kelly, Burke Kelly Consulting

**Part A: Table Group Discussion**

The workshop presentations have covered a range of issues on the convergence of infectious diseases and NCDs, including the link between infectious diseases and the development of NCDs; the new understandings of how changes in the microbiome along the life course may lead to chronic diseases; and the increased risk and severity that emerging infections pose in populations with high burden of NCDs.

Taking those into consideration, each table group will reflect on the following questions:

- What strategies and actions need to be prioritized
  - 1) to fill the research gaps and advance the research agenda for the convergence of infectious diseases and NCDs, and
  - 2) to effectively translate research into policy and practice?

1:50pm

**Report Back and Discussion**

*Moderator:* Mosa Moshabela, University of KwaZulu-Natal, South Africa

2:45pm

**Part B: Visionary Statements on the Top Priorities for Next Steps**

JAY K. VARMA

Senior Advisor

Africa Centres for Disease Control and Prevention

K. SRINATH REDDY

President

Public Health Foundation of India

PATRICIA J. GARCIA

Professor

Cayetano Heredia University - School of Public Health, Peru

AGNÈS SOUCAT

Director for Health Systems, Governance, and Financing

World Health Organization

**WORKSHOP ON THE CONVERGENCE OF INFECTIOUS & NONCOMMUNICABLE DISEASES**

3:40 pm **Final Synthesis and Discussion with Audience**

4:20pm **Closing Remarks**

PETER DASZAK, *Chair of the Forum on Microbial Threats and Workshop*

President

EcoHealth Alliance

4:30pm **Adjourn**