

Committee on the State of the Science and Future Needs for Nonhuman Primate Model Systems – Public Workshop

August 25, 2022, 8:30 am – 5:30 pm (ET)

WORKSHOP AGENDA

Link to view Workshop live Webcast: <https://www.nationalacademies.org/event/08-25-2022/committee-on-the-state-of-the-science-and-future-needs-for-nonhuman-primate-model-systems-meeting-3-public-workshop>

OBJECTIVES

This workshop, convened by the National Academies of Sciences, Engineering, and Medicine's Committee on the State of the Science and Future Needs for Nonhuman Primate Model Systems, will feature invited presentations and discussions to:

- Engage diverse stakeholders in exploring the landscape for nonhuman primate research supported by the National Institutes of Health, including opportunities, challenges, and projections for future needs; and
- Explore emerging technologies and innovative applications of current methodologies that have the potential to refine, reduce, and replace nonhuman primates in NIH-supported biomedical research, including issues of translatability, validation, and benchmarking requirements

THURSDAY, AUGUST 25, 2022

8:30 am WELCOME AND OPENING REMARKS

KENNETH RAMOS, *Committee Chair*
Texas A&M University

8:45 am SESSION I – LANDSCAPE ANALYSIS AND FUTURE PROJECTIONS FOR NONHUMAN PRIMATE USE IN RESEARCH TO ADVANCE HUMAN HEALTH AND SAFETY

Purpose:

- Explore current strengths and weaknesses of NIH-supported biomedical research using nonhuman primates (NHPs), current and future research priorities, and opportunities to improve human health;
- Consider the current state of nonhuman primate availability and implications for biomedical research and public health; and
- Reflect on the infrastructure investments that are needed to address current challenges and pursue future opportunities related to NHP research, including supply issues.

8:45 am Opening Panel Session Remarks from Committee Moderator
ELIZA BLISS-MOREAU, *Committee Member*
University of California, Davis

8:50 am Panel 1: NIH Perspectives
(20 min)

ROBERT EISINGER
Acting Director of the Division of Program Coordination,
Planning, and Strategic Initiatives
National Institutes of Health

RICHARD WYATT
Deputy Director, Office of Intramural Research
National Institutes of Health

STEPHEN DENNY
Director, Office of Animal Care and Use
Office of Intramural Research
National Institutes of Health

9:10 am Committee Q&A
(20 min)

9:30 am Panel 2: Other Federal Agency Perspectives
(15 min)

Perspective from the FDA
NAMANDJÉ BUMPUS
Chief Scientist
Food and Drug Administration

Perspective from ASPR/BARDA
APRIL BRYN
Director of Nonclinical Development
Biomedical Advanced Research & Development Authority
Administration for Strategic Preparedness and Response

9:45 am Committee Q&A
(20 min)

10:05 am
(20 min)

Panel 3: Industry and Research Advocacy Organization Perspectives

SEAN MAGUIRE

Comparative & Translational Sciences Director & Associate Fellow

GlaxoSmithKline

3Rs Translational and Predictive Sciences Leadership Group

International Consortium for Innovation and

Quality in Pharmaceutical Development

JOEL PERLMUTTER

Elliot Stein Family Professor of Neurology

Head of Movement Disorders

Professor of Radiology, Neuroscience, Physical Therapy and Occupational Therapy

Washington University in St Louis

Scientific Director, Dystonia Medical Research Foundation

MATTHEW BAILEY

President

National Association for Biomedical Research

10:25 am
(20 min)

Committee Q&A

10:45 am

BREAK (10 min)

10:55 am

SESSION II – PERSPECTIVES FROM NATIONAL PRIMATE RESOURCES

Purpose:

- Reflect on the strengths, opportunities, and challenges of NHP research from the perspective of the national primate resource centers;
- Explore priorities driving the investments in NHP research and infrastructure at these centers; and
- Discuss approaches to overcoming NHP supply issues (overall NHP numbers, species type, genetic variability) and other challenges.

10:55 am

Opening Panel Session Remarks from Committee Moderator

RICARDO CARRION, JR., *Committee Member*

Texas Biomedical Research Institute

11:00 am
(45 min)

Panel 1: National Primate Research Center Perspectives (Moderated Discussion)

MICHELE A. BASSO

Director, Washington National Primate Research Center

NANCY HAIGWOOD

Director, Oregon National Primate Research Center

PAUL JOHNSON

Director, Yerkes National Primate Research Center

JON LEVINE

Director, Wisconsin National Primate Research Center

JOHN MORRISON

Director, California National Primate Research Center

JAY RAPPAPORT
Director, Tulane National Primate Research Center

CORINNA ROSS
Associate Director of Research, Southwest National Primate Research Center

11:45 am
(45 min)

Panel 2: Perspective from Other National Nonhuman Primate Resource Centers (Moderated Discussion)

WILLIAM HOPKINS
Director, Michale E. Keeling Center for Comparative Medicine and Research
MD Anderson Cancer Center

ERIC HUTCHINSON
Director of Research Animal Resources
Johns Hopkins University School of Medicine

MATTHEW JORGENSEN
Director, Wake Forest Vervet Research Colony

MELWEEN MARTINEZ
Director, Caribbean Primate Research Center

FRANCOIS VILLINGER
Director, New Iberia Research Center

GREG WESTERGAARD
President and CEO, Alpha Genesis Inc.

BILL YATES
Vice Chancellor of Research Protections, University of Pittsburgh

12:30 pm

LUNCH BREAK (1 hour)

1:30 pm

SESSION III – VALIDATION AND TRANSLATABILITY OF EMERGING TECHNOLOGIES AND INNOVATIVE METHODOLOGIES

Purpose:

- Explore the potential for emerging technologies and innovative applications of existing methods to refine, reduce, and replace NHPs in NIH-supported biomedical research;
- Discuss the validation and benchmarking needs for such technologies for specific contexts of use; and
- Consider the opportunities for collaboration between NHP researchers and those developing emerging technologies.

1:30 pm

Opening Panel Session Remarks from Committee Moderator

MYRTLE DAVIS, *Committee Member*
Bristol Myers Squibb

1:35 pm
(50 min)

Panel 1 Presentations: Emerging Technologies and Innovative Applications of Existing Methodologies

Cell-Based Models

JOSEPH WU
Director, Stanford Cardiovascular Institute
Simon H. Stertzer, MD, Professor of Medicine and Radiology
Stanford University

Artificial Intelligence and Machine Learning, from Behavioral to Neuroimaging

JAN ZIMMERMANN
Assistant Professor, Department of Neuroscience
University of Minnesota Medical School

Genetic Engineering and Imaging

AFONSO SILVA
Endowed Chair Professor of Translational Neuroimaging and Neurobiology
University of Pittsburgh

Behavioral Management

MARK PRESCOTT
Director of Policy and Outreach
National Centre for the Replacement, Refinement and Reduction of Animals in Research

2:25 pm
(20 min)

Panel 2 Presentations: Translatability and Validation of Models to Refine, Reduce, and Replace NHPs in NIH-Supported Biomedical Research

US FDA Perspective

NAKISSA SADRIEH
Associate Director for New Alternative Methods, Office of New Drugs
Center for Drug Evaluation and Research
Food and Drug Administration

European Experiences

SONJA BEKEN
Non-clinical Working Party
European Medicines Agency

2:45 pm
(45 min)

Committee Q&A with Panels

3:30 pm

BREAK (10 min)

3:40 pm

SESSION IV – NONHUMAN PRIMATE RESEARCHER PERSPECTIVES ON THE RESEARCH LANDSCAPE AND EMERGING TECHNOLOGIES

Purpose:

- Explore areas of emerging science that may benefit from NHP research;
- Discuss opportunities to promote rigorous science and to maximize the potential of NHP models;
- Discuss the impact of NHP availability on future NHP research in the field; and
- Consider the opportunities for collaboration between NHP researchers and those developing emerging technologies that may contribute to the 3Rs.

3:40 pm

Opening Panel Session Remarks from Committee Moderator

KELLY METCALF PATE, *Committee Member*
Massachusetts Institute of Technology

3:45 pm
(60 min)

Perspectives from NHP Researchers (Moderated Discussion)

NHP Use in Infectious Disease Research

DAN BAROUCH
Director, Center for Virology and Vaccine Research
Beth Israel Deaconess Medical Center
Professor of Medicine
Harvard Medical School

JOANNE FLYNN
Department of Microbiology and Molecular Genetics
University of Pittsburgh School of Medicine

NHP Use in Transplantation Research

CHRISTIAN LARSEN
Professor of Surgery, Division of Transplantation, Department of Surgery
Emory University School of Medicine

NORMA SUE KENYON
Professor of Surgery, Microbiology & Immunology, Biomedical Engineering, Biochemistry &
Molecular Biology
Diabetes Research Institute
Miller School of Medicine
University of Miami

NHP Use in Neuroscience and Aging Research

GUOPING FENG
Poitras Professor of Neuroscience
McGovern Institute for Brain Research
Massachusetts Institute of Technology

CAROL BARNES
Regents' Professor of Psychology, Neurology and Neuroscience
Director, Evelyn F. McKnight Brain Institute
University of Arizona

NHP Use in Reproductive Health Research

SHAWN CHAVEZ
Associate Professor
Division of Reproductive & Developmental Sciences
Oregon National Primate Research Center
Departments of Obstetrics & Gynecology and Molecular & Medical Genetics
Oregon Health & Science University

4:45 pm

SESSION V – REFLECTIONS ON FUTURE NEEDS RELATED TO NHPs IN BIOMEDICAL RESEARCH

Purpose:

- Reflect on future needs and priorities for nonhuman primates in light of opportunities and challenges discussed throughout the day.

Opening Panel Session Remarks from Session V Moderator

KENNETH RAMOS, *Committee Chair*
Texas A&M University

Session Highlights from Previous Session Moderators

ELIZA BLISS-MOREAU, *Committee Member*
University of California, Davis

RICARDO CARRION, JR., *Committee Member*
Texas Biomedical Research Institute

MYRTLE DAVIS, *Committee Member*
Bristol Myers Squibb

KELLY METCALF PATE, *Committee Member*
Massachusetts Institute of Technology

Reflections from Invited Participants

5:25 pm WRAP UP DISCUSSION AND CLOSING REMARKS

KENNETH RAMOS, *Committee Chair*
Texas A&M University

5:30 pm ADJOURN

FRIDAY, AUGUST 26, 2022

9:00 am – 3:00 pm CLOSED SESSION COMMITTEE DISCUSSION

3:00 pm ADJOURN MEETING