AGENDA – DECEMBER 5

11:00 AM – 11:30 AM Welcome and Ushering in a New Era of Responsible Innovation
Francis S. Collins, MD, PhD

11:30 AM – 11:45 AM Introduction of Committee Members
Richard Whitley, MD

SESSION I: PATHWAYS FOR RESPONSIBLE INNOVATION IN EMERGING BIOTECHNOLOGY
Discuss successes and challenges of different approaches to governance, oversight, and public engagement.

11:45 AM – 12:30 PM Panel Discussion
Moderator: Carrie D. Wolinetz, PhD

Gary Marchant, JD, PhD and Larisa Rudenko, PhD, DABT

- What lessons have been learned from previous experiences with oversight, and public engagement for earlier emerging biotechnologies (e.g., RAC with rDNA)?

- What approaches should be considered for current emerging biotechnologies and their applications?

- How can approaches be developed that evolve to adapt to future emerging biotechnologies and their applications?

12:30 PM – 1:30 PM Lunch Break
SESSION II: IDENTIFYING AN “EMERGING” BIOTECHNOLOGY
Define key features of novel and/or exceptional technologies in biomedical science and discuss potential strategies for proactively scanning the research landscape to anticipate their development and application.

1:30 PM – 2:00 PM The Case for Horizon Scanning
Richard M. Murray, PhD

2:00 PM – 3:15 PM Lessons from Current Technologies
- Gene Editing in the Clinic – Matthew Porteus, MD, PhD
- Gene Drives – James P. Collins, PhD
- Neurotechnology – Kafui Dzirasa, MD, PhD
- Synthetic Biology – Christina Smolke, PhD

3:15 PM – 3:30 PM Break

3:30 PM – 4:45 PM Panel Discussion with Presenters
Moderator: Alan I. Leshner, PhD

- Are there defining scientific or technical characteristics of an emerging biotechnology? Are these characteristics similar for biotechnologies across disciplines?
- What features of emerging biotechnologies make them scientifically transformative? Are the new capabilities of emerging biotechnologies game changers or do they represent an incremental advance in our capabilities?
- What are potential strategies for identifying new biotechnologies and their applications on the horizon, and how can we anticipate these new developments?
- When has a biotechnology “emerged”?

4:45 PM Adjournment
AGENDA - DECEMBER 6

SESSION III: FORECASTING IMPLICATIONS OF EMERGING BIOTECHNOLOGIES
Define the specific risks, benefits, and implications of emerging biotechnologies and discuss strategies for anticipating and addressing these issues proactively.

9:00 AM – 9:30 AM  The Case for Proactive and Adaptive Consideration of Risks and Benefits
Kenneth Oye, PhD

9:30 AM – 10:00 AM  Weighing Risks and Benefits: Lessons from Biosafety
Zach N. Adelman, PhD

10:00 AM – 10:30 AM  Stakeholder Engagement
Cinnamon Bloss, PhD

10:30 AM – 10:45 AM  Break

10:45 AM – 12:00 PM  Panel Discussion with Presenters
Moderator: Margaret F. Riley, JD

• What ethical and social issues do emerging biotechnologies and their applications have in common with established technologies? What issues are different?

• How can we identify emerging biotechnologies that may pose novel risks, benefits, and oversight challenges?

• How do we engage the public effectively in discourse, especially at early stages when specific applications or safety challenges may not be known?

12:00 PM – 12:15 PM  Public Comments

12:15 PM – 12:30PM  Charge to the NExTRAC
Francis S. Collins, MD, PhD

12:30 PM – 1:00 PM  Discussion and Next Steps
Carrie D. Wolinetz, PhD and Richard Whitley, MD

1:00 PM  Adjournment