FASEB
Federation of American Societies for Experimental Biology

Representing Over 130,000 Researchers

P.O. Box 2288, Rockville, MD 20847 | faseb.org

February 2, 2021

Advisory Committee to the Director
Working Group on Enhancing Rigor, Transparency, and Translatability in Animal Research
National Institutes of Health
One Center Drive, Room 126
Bethesda, MD 20982-0147

RE: ACD Working Group Second Interim Report

Submitted electronically via e-mail: Rigor-AnimalModels@od.nih.gov

Dear Working Group Members,

The Federation of American Societies for Experimental Biology (FASEB) appreciates the efforts of the Working Group on Enhancing Rigor, Transparency, and Translatability in Animal Research to address the multifaceted issue of rigor and reproducibility in animal research and develop recommendations that aim to strengthen research practices. As a federation comprised of 29 member societies across a wide range of biology disciplines, we recognize the complex array of factors contributing to poor research reproducibility and commend your commitment to carefully consider the assorted elements of animal research rigor and reproducibility before issuing a final report. As part of FASEB's commitment to strengthening research conduct, we encourage the Working Group to consult with stakeholders as needed to ensure final recommendations are scientifically informed and do not significantly increase the administrative burden for institutions and individual researchers.

FASEB applauds the Working Group's thorough and substantive second interim report presented during the December Advisory Committee to the Director (ACD) meeting. Several themes of the report were commensurate with FASEB's recommendations to the Working Group earlier this year, as well as the FASEB 2016 report on *Enhancing Research Reproducibility*. Specifically, we were pleased to see the Working Group's emphasis on the importance of recording and reporting extrinsic and husbandry factors throughout the lifespan of the research project. Given their role in reproducibility and external validity, FASEB appreciates the Working Group's suggestion to establish a task force that provides both long-term oversight and dedicated funds for controlled randomized trials studying the effects of extrinsic variables. For further impact, as mentioned in our previous comments, we encourage NIH or this task force to issue supplemental guidance to help fill existing knowledge gaps concerning best practices in methodology, animal care, and husbandry for investigators and animal care staff.

Ensuring preclinical research is translatable to human biology and disease remains a fundamental priority to FASEB and numerous animal research stakeholders. Recognizing the fidelity of large animal models is appreciated, and we strongly urge the Working Group to specifically recommend policies and funding opportunities that accommodate the longer timeframes and higher budgets large animal studies require, particularly infrastructure support (e.g., G20 mechanism) to ensure optimal animal care. Nevertheless, FASEB acknowledges that all animal models possess limitations and recognize the emerging research on non-animal modeling systems. Considering this field of study is in its nascent stages, we applaud the Working Group's co-chair, Barbara Wold, PhD, for commenting that the state of scientific research cannot afford to exclusively rely on non-animal models and

especially not for the discovery of biomedical treatments and cures to diseases. To this end, while we understand the purpose of the Working Group's recommendation to charter a high-level task force focused on non-animal models in biomedical research, we encourage the Working Group to ensure this task force is populated with appropriate expertise including in large animal models, comparative anatomy, translational research, and veterinary medicine. Engaging with interested stakeholders throughout the task force's tenure will also provide additional insight and accountability.

Insufficient attention to certain details of experimental design remains a key challenge in achieving a higher standard of research conduct. FASEB concurs with the Working Group's conclusion that strong compliance is necessary for checklists and guidelines to be most effective. One strategy to enhance investigator compliance offered by stakeholders involved strengthening requirements for the Vertebrate Animal Section (VAS). However, we recognize that the primary purpose of the VAS is addressing animal welfare concerns rather than study design, and we appreciate the Working Group's decision to revise the VAS and require details on animal care extrinsic factors such as room temperature and humidity, environmental complexity, sex as a biological variable, among several others. To specifically address scientific rigor, we recommend incorporating a new, one-page section supplementary to the Research Strategy component in which investigators will report key elements such as inclusion/exclusion criteria, sample size estimation, randomization, and blinding strategies as applicable to the research design. This approach will support investigator attention to these elements of scientific rigor at the outset of study design. Furthermore, in keeping with the goal to minimize administrative burden, limiting this separate section to one page will allow reviewers to easily find and assess whether rigor and reproducibility are appropriately considered.

Finally, FASEB wishes to thank the Working Group for discussing preregistration of animal studies in more detail, particularly acknowledging the need for stakeholder education and awareness about this process. However, we are concerned that a program designed to build further understanding of this topic will not fully address the many nuances and challenges associated with preregistration including increased administrative burden, delayed completion of studies, and compromised confidentiality. Therefore, in addition to this educational program, we encourage the Working Group to issue a separate RFI on this topic, as requested in our previous comments. Fielding further suggestions from outside stakeholders ensures reciprocity of information that will facilitate the Working Group to form a scientifically based recommendation.

FASEB appreciates the opportunity to offer comments on the Working Group's second interim report and looks forward to future updates in the coming year. Enhanced rigor, reproducibility, and translatability is central to scientific progress and we encourage the Working Group to carefully balance improved policies with consideration for level of administrative burden for researchers in its future endeavors.

Sincerely,

Louis B. Justement, PhD
FASEB President