ENDOCRINE SOCIETY
Hormone Science to Health

Douglas M. Sheeley, Sc.D.
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RE: NOT-GM-15-118

Dear Dr. Sheeley,

The Endocrine Society appreciates the opportunity to comment on "Innovative Approaches to Technology Development for the Biomedical Research Community". Technological change has long been recognized as one of the main drivers of scientific discovery, and it often lays the groundwork for applied medical advances.

Founded in 1916, the Endocrine Society is the world's oldest, largest and most active organization devoted to research on hormones and the clinical practice of endocrinology. We have over 18,000 members who are basic researchers, clinical researchers, and clinicians in practice. Endocrine Society members use technology to improve human health. In our comments, we identify several challenges that researchers face in the generation, development, and application of new technologies. We also propose areas where NIH could help facilitate the efficient and effective utilization and translation of technology.

Our members report that the rapid pace of technology development necessitates that investigators continuously update their equipment and expertise. Advances in gene editing, microscopy, and single-cell analysis, coupled with new "–omics" technologies and the rise of "big data", force investigators to regularly redesign their labs. A further challenge is the availability of multiple tools and approaches that can be used to conduct similar experiments. With significant resource limitations it can be expensive and time consuming to evaluate multiple technologies for a proposed experiment. In addition, the new technologies result in a tremendous amount of data, but detailed analysis can be relatively slow to follow. The proliferation of databases, biobanks, and similar resources requires time and expertise to navigate and apply to research questions.

The Endocrine Society commends the NIH in its development of centralized resources, such as dkNET and the type2diabetesgenetics.org knowledge portal, which help researchers quickly access new databases and analyze data. As the largest funder of biomedical research, we urge NIH to continue to develop and encourage the use of these resources. We also recommend that NIH seek ways to foster connections between basic and clinical researchers to help translate fundamental research findings to clinical practice. In addition, public-private partnerships can significantly accelerate the development of new technologies. We recommend that NIH continue to explore using partnerships with the private sector to create user-friendly data mining tools and support applied biomedical research.

The Endocrine Society appreciates the important role of the NIH in supporting fundamental research that results in new technologies. We share the Institutes' interest in exploring new approaches to support technology development and application. Thank you for considering the Endocrine Society's comments. If we can be of any further assistance in your efforts, please do not hesitate to contact Dr. Joseph Laakso, Associate Director of Science Policy, at jlaakso@endocrine.org.

Sincerely,

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