Dear Dr. Collins:

The American Physiological Society (APS) appreciates the opportunity to comment on the proposed NIH strategic plan framework. The framework identifies many important cross-cutting areas of focus that will help the NIH in pursuing its mission.

The emphasis on promoting fundamental science, including basic research, is an important principle that applies across all fields of biomedicine. A critical step in the integration of basic research findings is applying that knowledge in the context of a whole organism. Years of research into the molecular components of biological systems have amassed an enormous storehouse of information that can help us understand the functions of cells, tissues, organ systems, whole organisms and even populations. To translate this knowledge into therapeutic advances we must integrate these findings in the context of how they apply to organisms in all of their physiological complexity. Doing so will lead to a better understanding of human health and disease, and facilitate the development of new treatments and prevention strategies. We recommend that the strategic plan emphasize this important point. One way to do so would be to alter the data science bullet point to read: “Data science and integrative understanding of complex physiologic systems increase the impact and efficiency of research.” In the full version of the strategic plan, additional detail is also needed in this bullet point to provide a brief definition of data science and an explanation of how it can contribute to increased impact and efficiency of research.

The APS agrees that advances in clinical research methodologies can help stimulate scientific progress. However, the bullet point as written is currently restrictive in focusing only on the benefits of clinical methodology. We suggest that the bullet point might be more impactful if it read: “Advances in research methodologies stimulate scientific progress and clinical success.”

We also suggest that under the heading “Advancing Treatments and Cures” the first bullet point be broadened by changing the wording to read: “Unprecedented opportunities on the basis of all advances in Fundamental Science.”
Finally, the APS endorses NIH’s efforts to recruit, train, retain, and promote a talented and diverse research workforce. This remains a significant challenge for the research community that should be emphasized in the agency’s strategic plan.

The APS is a professional society dedicated to fostering research and education as well as the dissemination of scientific knowledge concerning how the organs and systems of the body work. The Society was founded in 1887 and now has more than 10,000 member physiologists. APS members conduct NIH-supported research at colleges, universities, medical schools, and other public and private research institutions across the U.S.

Sincerely,

Patricia Molina
President