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Testimony on the Transformative Power of Biomedical Research

Witness appearing before the

House Appropriations Subcommittee on Labor, HHS, Education, and Related Agencies

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Accompanied by

Good morning, Chairman Cole, Ranking Member DeLauro, and distinguished Members of the Subcommittee. I am Francis S. Collins, M.D., Ph.D., and I have served as the Director of the National Institutes of Health (NIH) since 2009. It is an honor to appear before you

fundamental biological processes has led to no fewer than 149 Nobel Prizes to our grantees, and is leading year by year to new and more effective ways to treat complex medical conditions.

As a current example, the emergence of “cryo-EM,” a new form of electron microscopy, has dramatically sped up the time needed to visualize the exquisite details of biological structures including protein-protein and protein-drug complexes. This is a major revolution in structural biology that already is transforming drug design.

Basic research is also fueling new advances in our understanding of the brain, which will be critically important for treating diseases such as Alzheimer’s disease, Parkinson’s disease, autism, epilepsy, traumatic brain injury, and others. Through the Accelerating Medicines

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made through genomic science in uncovering the cause of rare diseases, and that has led to dramatic improvements in diagnosis. But of the 6,500 identified rare and neglected diseases for which the molecular cause is now known, only about 500 have approved treatments. The private sector generally finds it difficult to mount expensive initiatives for such small markets – the risks are too high. Finding new treatments thus requires NIH to play a lead role – by investin2 ((nt)-2 t2 Tc -0.002 T

NIH is preparing to implement a new measure to allow a broader number of meritorious investigators, particularly those in early- and mid-career, to receive NIH funding through new and renewed grants. A number of recent studies have demonstrated that while NIH support is essential to ensure the productivity of an investigator, there is a point of “diminishing returns” if an investigator becomes overextended. Quality science and fiscal stewardship require time and effort, and it stands to reason that a person can be stretched too thin. We are therefore proposing to work with NIH grant applicants and their institutions to limit the total NIH support that any one principal investigator may receive through research currently funded by NIH, allowing NIH funds to be more broadly distributed. Opening up opportunities for highly meritorious investigators at all stages of career development will ensure that NIH will remain a good steward of trusted public dollars, and strengthen the biomedical research workforce for the future. We are working with stakeholders now to determine the best way to move forward on this important goal.

I have provided you with examples of how investments in bright new ideas in biomedical research are advancing human health, spurring innovations in science and technology, stimulating economic growth, and laying the groundwork for the future of the United States biomedical research enterprise. We have never witnessed a time of greater promise for advances in medicine than right now. Your support has been critical, and will continue to be.

This concludes my testimony, and I look forward to answering your questions.