

FY 2018 SENATE APPROPRIATIONS COMMITTEE PUBLIC TESTIMONY
SUBMITTED BY THE ENDOCRINE SOCIETY
FOR THE SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, EDUCATION, AND
RELATED AGENCIES
ADDRESSING THE NATIONAL INSTITUTES OF HEALTH
June 2, 2017

The Endocrine Society thanks the Subcommittee for the opportunity to submit the following testimony regarding Fiscal Year (FY) 2018 federal appropriations for biomedical research. The Endocrine Society is the world's largest and most active professional organization of endocrinologists representing more than 18,000 members worldwide. Our organization is dedicated to promoting excellence in research, education, and clinical practice in the field of endocrinology. The Society's membership includes basic and clinical scientists who receive federal support from the NIH to fund endocrine-related research focusing on, among other challenges, diabetes, cancer, fertility, aging, obesity and bone disease. Our membership also includes clinicians who depend on new scientific advances to better treat and cure their patients' diseases. To support necessary advances in biomedical research to improve health, the Endocrine Society asks that the NIH receive at least \$36.1 billion in FY 2018, representing an increase of at least \$2 billion above the FY 2017 final appropriated amount.

Endocrine Research Improves Public Health and Reduces Healthcare Costs

Sustained investment by the United States Federal Government in biomedical research has dramatically advanced the health and improved the lives of the American people. The United States' NIH-supported scientists represent the vanguard of researchers making fundamental biological discoveries and developing applied therapies that advance our understanding of and ability to treat human disease. Their research has led to new medical treatments, saved innumerable lives, reduced human suffering, and launched entire new industries.

Endocrine scientists are a vital component of the biomedical research enterprise and integral to the healthcare infrastructure in the United States. Endocrine Society members study how hormones contribute to the overall function of the body, and how the glands and organs of the endocrine system work together to keep us healthy. Consequently,



endocrinologists have a unique approach to and understanding of how the various systems of the human body communicate and interact to maintain health. The areas governed by the endocrine system are broad and essential to overall wellbeing; endocrine functions include reproduction, the body's response to stress and injury, sexual development, energy balance and metabolism, bone and muscle strength, and others. Endocrinologists study glands such as the adrenal glands, pancreas, thyroid, and specific sections of the brain, such as the hypothalamus, that control these glands. Endocrinologists also study interrelated systems, for example how hormones produced by fat can influence the development of bone disease.

In addition to the improvements in public health, quality of life, and longevity that medical research delivers, substantial cost savings may be realized by the translation of breakthrough research into applied therapies. As NIH Director Francis Collins, MD, PhD, mentioned in testimony to Congress, the development of the artificial pancreas could result in substantial cost savings for the treatment of patients with diabetes. Enabling coverage for this breakthrough technology early in the course of the disease could result in savings to Medicare of nearly \$1 billion over 25 years due to a reduction in life-threatening diabetes-related complications.¹

NIH Requires Steady, Sustainable Funding Increases

The Endocrine Society was encouraged by the \$2 billion increase for NIH in the FY 2016 Omnibus Appropriations bill and further \$2 billion increase in FY 2017. These much-needed increases will help the NIH address critical research gaps to improve public health; however, the biomedical research community requires steady, sustainable increases in funding to ensure that the promise of scientific discovery can efficiently be translated into new cures. Equally important, consistent increases must be provided to the NIH's base appropriation, so that the NIH has the flexibility to support emerging research areas and can empower scientists to pursue innovative projects. Despite recent increases, NIH grant success rates are predicted to remain at historically low averages, meaning that highly skilled scientists will continue to spend more time writing highly meritorious grants that

¹ Michael J. O'Grady, et. Al., "Substantial Medicare Savings May Result If Insurers Cover 'Artificial Pancreas' Sooner For Diabetes Patients." *HealthAffairs*. August, 2012 31:8; 1822-29.



will not be funded. Young scientists will also continue to be driven out of biomedical research careers due to the lack of funding.

We may never be able to quantify the opportunities we have missed to improve the health and economic status of the United States due to persistent underinvestment in research. We do know however, that when “laboratories lose financing; they lose people, ideas, innovations and patient treatments.”² Based on the personal stories of researchers who have been forced to curtail research programs, we know that research programs to understand how genetics can influence heart disease, develop therapeutic treatments for Parkinson’s disease, and evaluate the effect of metal contaminants on reproductive health, among many others, are delayed or terminated.³

Many endocrine researchers are also physician-scientists who treat patients and conduct research. A restricted funding environment exacerbates many of the unique challenges facing this important group of scientists, who make critical contributions in the translation of basic research to applied clinical practice, given their understanding of both the complicated research and practice landscape. As detailed in the NIH Physician-Scientist Workforce Working Group Report, without steady, sustainable increases in funding, endocrine physician-scientists will increasingly be driven out of the research pipeline, and the nation will lose a valuable component of the research enterprise.⁴

Prevention Research Requires Support

Without adequate support, meritorious programs struggle to complete objectives that would have significant public health impact. Prevention of disease remains one of the most important strategies for reducing health care costs and improving public health worldwide. New research is shedding light on how environmental exposures to common chemicals may raise the risk of thyroid cancer and contribute to the increased incidence of thyroid cancer in the United States. Meanwhile, more research is needed to develop strategies to reduce the risk of developing endocrine and hormone-sensitive cancers, such

² Teresa K. Woodruff “Budget Woes and Research.” *The New York Times*. September 10, 2013.

³ Sequester Profiles: How Vast Budget Cuts to NIH are Plaguing U.S. Research Labs. *United for Medical Research*. http://www.unitedformedicalresearch.com/advocacy_reports/sequestration-profiles/ Accessed March 20, 2014.

⁴ The Physician-Scientist Workforce Working Group Report. https://acd.od.nih.gov/documents/reports/PSW_Report_ACD_06042014.pdf Accessed May 24, 2017



as breast, thyroid, and pancreatic cancer, in addition to research that will result in better treatments and therapies.^{5,6}

One example of the NIH's critical role in efforts to prevent disease is the Cancer Monographs program of the International Agency for Research on Cancer (IARC). Through this program, the National Cancer Institute and the National Institute for Environmental Health Sciences jointly support a rigorous and robust scientific review process evaluates environmental factors, including manufactured chemicals, for their ability to increase the risk of cancer in humans. By identifying carcinogenic chemicals, NIH contributes to public health efforts and improvements in medical practice that directly impact everyone in the United States and worldwide.

Type-1 Diabetes Research is Threatened in FY 2018

The Endocrine Society is particularly concerned about the future of the Special Diabetes Program (SDP). The SDP was created in 1997 to advance research for type 1 diabetes and to address the disproportionate burden of type 2 diabetes on American Indians and Alaska Natives. Research funded by the SDP has made outstanding contributions to our understanding of, and ability to treat diabetes in the United States. The SDP has advanced research in islet cell transplantation, beta cell therapy, treatment for diabetic retinopathy, and the development of an artificial pancreas.⁷ Without reauthorization, the SDP is set to expire in 2017. We urge the congress to continue to support this valuable program and renew the SDP for an additional two years.

FY 2018 NIH Funding Request

The Endocrine Society recommends that the Subcommittee provide at least \$36.1 billion for NIH in the FY 2018 Labor-HHS-Education Appropriations bill, representing a \$2 billion

⁵ Sosa, JA, et al., "Exposure to Flame Retardant Chemicals and the Occurrence and Severity of Papillary Thyroid Cancer: A Case-Control Study" Presented at: ENDO 2017, the Endocrine Society's Annual Meeting; 2017, April 1 – April 4; Orlando FL.

⁶ Glenda Fauntleroy "Cautiously Optimistic: The Future of Pancreatic Cancer Treatments." *Endocrine News* October 2016. <http://endocrinenews.endocrine.org/cautiously-optimistic-the-future-of-pancreatic-cancertreatments/> Accessed May 24, 2017

⁷ "Special Diabetes Program Reauthorization" *Endocrine News* <http://endocrinenews.endocrine.org/specialdiabetes-program-reauthorization/>. Accessed February 27, 2017.



increase in funding over the FY 2017 amount. This funding recommendation is the minimum investment necessary to avoid further loss of promising research and at the same time allows the NIH's budget to keep pace with biomedical inflation. We fully understand that the Appropriations Committee faces challenging decisions in FY 2018; however, we assert that additional cuts to the NIH and other non-defense discretionary programs is not the way to solve the budgetary issues facing the United States.

The Endocrine Society remains deeply concerned about the future of biomedical research in the United States without sustained support from the federal government. Flat funding levels in 2018 and beyond would imperil the nation's world-class scientific enterprise. The Society strongly supports increased federal funding for biomedical research to provide the additional resources needed to enable American scientists to address scientific opportunities and maintain the country's status as the world's preeminent research engine.