

FY 2021 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, TITLE X, AND CENTERS
FOR DISEASE CONTROL AND PREVENTION

The Endocrine Society thanks the Subcommittee for the opportunity to submit the following testimony regarding Fiscal Year (FY) 2021 federal appropriations for biomedical research and public health programs. The Endocrine Society is the world's oldest and largest professional organization of endocrinologists representing approximately 18,000 members worldwide. The Society's membership includes basic and clinical scientists who receive support from the National Institutes of Health (NIH) for research on endocrine diseases that affect millions of Americans, such as diabetes, thyroid disorders, cancer, infertility, aging, obesity and bone disease. Our membership also includes clinicians who depend on new scientific advances to better treat and cure these diseases. Our organization is dedicated to promoting excellence in research, education, and clinical practice in the field of endocrinology.

The Endocrine Society offers the following recommendations for FY 2021:

- **At least \$44.7 billion for the NIH to support necessary advances in biomedical research to improve health;**
- **At least \$8.2 billion for the CDC to facilitate the translation of these advances to improve public health; and**
- **\$400 million for the Title X program to ensure that women have access to appropriate health services.**

The current COVID-19 pandemic is a compelling illustration of why we must sustain funding for the NIH and CDC to protect the public's health. In addition to a strong annual appropriation for these agencies, emergency supplemental funding is required to achieve research goals to understand, treat, and prevent future outbreaks.

Endocrine Research Improves Public Health

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 diseases. 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 our nation's biomedical research enterprise and are 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. The multiple body functions 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, and bone and muscle strength. Endocrinologists also study interrelated systems, for

example how hormones produced by fat can influence the development of bone disease and susceptibility to infections.

With the emergence of the COVID-19 pandemic, endocrinology has taken on a new role in understanding how endocrine systems and endocrine disease intersect with the virus and infection pathways. The presence of diabetes is a critical risk factor impacting outcomes for patients with COVID-19 and understanding shared pathophysiology and therapeutic implications of treatments for both diseases remains an important area of active research¹. As we learn more about the virus and implications for patients with endocrine disease, funding for public health agencies is more important than ever.

Endocrine Research is Supported by Numerous NIH Institutes

Many endocrine diseases and disorders are addressed by the missions of multiple NIH Institutes and Centers (ICs); research on all biological systems and disease states is necessary to advance effective therapies for these diseases. For example:

- Endocrine researchers funded by the National Institute of Aging (NIA) help us understand how hormonal treatment for menopause might improve stress responses in women². Other NIA-funded researchers are investigating how the loss of ovarian hormones due to surgery affects overall aging, physical and cognitive function, and risk for Alzheimer's disease pathophysiology.
- Researchers funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) are discovering how hormones influence the gut microbiome, which in turn can influence the development of polycystic ovarian syndrome (PCOS)³.
- Endocrine oncologists supported by the National Cancer Institute developed a new drug with a unique mechanism that could inhibit the growth of drug-resistant prostate cancer⁴.
- Diabetologists funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) are advancing knowledge of how insulin-producing cells develop so that we can apply this knowledge towards regenerative medicine and cell-based approaches to the treatment of diabetes⁵.
- National Institute of Environmental Health Science (NIEHS)-funded researchers are investigating how per- and polyfluoroalkyl substances can disrupt endocrine systems resulting in reproductive and cognitive health effects⁶.
- Neuroendocrine researchers funded by National Institute of Mental Health (NIMH) are discovering how overexposure to glucocorticoids early in life can cause anxiety- and

¹ Daniel J Drucker, *Endocrine Reviews*, Volume 41, Issue 3, June 2020, bnaa011,

<https://doi.org/10.1210/edrv/bnaa011>

² <https://www.endocrine.org/news-room/press-release-archives/2017/treating-menopausal-symptoms-can-protect-against-stress-negative-effects> Accessed March 11, 2018.

³ Torres, PJ, et al., *The Journal of Clinical Endocrinology & Metabolism*, jc.2017-02153.

⁴ <https://www.endocrine.org/news-room/press-release-archives/2013/new-medication-treats-drug-resistant-prostate-cancer-in-the-laboratory>. Accessed March 11, 2018.

⁵ Sharon, N, et al., *Cell*. 2019 Feb 7;176(4):790-804.e13. doi: 10.1016/j.cell.2018.12.003. Epub 2019 Jan 17.

⁶ Vuong, A., et al., *Environmental research*. 2019 Feb 16; 172 :242-248

depressive-like behaviors in adults in response to stress, and how these behaviors may differ between males and females.

Moreover, multiple ICs are prepared to use rapidly use emergency supplemental funds to prioritize critical endocrine-related research on COVID-19 such as:

- Helping us understand how endocrine-disrupting chemicals (EDCs) contribute to chronic diseases that are comorbidities for COVID-19.
- Understanding the short and long-term impacts of COVID-19 infection on pregnant women and pediatric patients.
- Understanding how health disparities contribute to COVID-19 disease risk and outcomes.

An effective biomedical research enterprise therefore requires a strong base appropriation for the NIH and sustained support for all ICs in addition to emergency supplemental funding to study COVID-19 and impacts on patients with endocrine disease.

NIH Requires Steady, Sustainable Funding Increases

The Endocrine Society appreciates increases to the NIH budget in recent fiscal years; 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. NIH grant success rates are predicted to remain close to historically low averages, meaning that highly skilled scientists will continue to spend more time writing highly meritorious grants that will not be funded. Young scientists will also continue to be driven out of biomedical research careers due to the lack of funding. We know that when laboratories lose financing; they lose people, ideas, innovations and new patient treatments⁷.

Adequate Funding of CDC Programs Is Necessary to Protect the Public's Health

The CDC plays a critical role in protecting the public's health by applying new knowledge to the promotion of health and prevention of diseases, including diabetes. The Division of Diabetes Translation administers the National Diabetes Prevention Program (National DPP), which addresses the increasing burden of prediabetes and Type 2 Diabetes in the United States. The National DPP creates public and private partnerships to provide evidence-based, cost-effective interventions that prevent diabetes in community-based settings. Through structured lifestyle change programs at local YMCAs or other community centers, individuals with prediabetes can reduce the risk of developing diabetes by 58% in those under 60 and by 71% in those 60 and older⁸. In addition to supporting public health and prevention activities, CDC's Clinical Standardization Programs in the Center for Environmental Health are critical to improving accurate and reliable testing of hormones, appropriate diagnosis and treatment of disease, and reproducible public health research. Adequate funding is critically important to ensure that CDC has the capacity to address existing and emerging threats to public health in the United States and around the world.

Title X Funding Provides Necessary Services and Reduces Healthcare Costs

Title X is an important source of funding for ensuring reproductive health benefits including both contraceptive and preventive services to women. In 2015, a study found that Title X-funded health centers prevented 822,000 unintended pregnancies, resulting in savings of \$7 billion to

⁷ Teresa K. Woodruff "Budget Woes and Research." *The New York Times*. September 10, 2013.

⁸ The Diabetes Prevention Program (DPP) Research Group *Diabetes Care*. 2002 Dec;25(12):2165-71.

federal and state governments. Offering affordable access to contraception can have a measurable impact on these costs. For every public dollar invested in contraception, short-term Medicaid expenditures are reduced by \$7.09 for the pregnancy, delivery, and early childhood care related to births from unintended pregnancies, resulting in savings of \$7 billion to federal and state governments⁹.

Title X is the main point of care for low income, under- or un-insured, adults and adolescents for affordable contraception, cancer screenings, sexually transmitted disease testing and treatment, and medically-accurate information on family planning options. However, to provide these services to the over 4 million people who depend on Title X-funded centers, Title X is significantly underfunded.

FY 2021 Funding Requests

In conclusion, to avoid loss of promising research opportunities, allow budgets to keep pace with inflation, support our public health infrastructure, and assure high-quality, evidence-based, and patient-centered family planning care while also addressing the COVID-19 pandemic, the Endocrine Society recommends that the Subcommittee provide at least the following funding amounts through the FY 2021 Labor, Health and Human Services, Education, and Related Agencies appropriations bill:

- **\$44.7 billion for the National Institutes of Health, as well as additional emergency supplemental funds needed to study COVID-19**
- **\$8.2 billion for the Centers for Disease Control and Prevention in addition to emergency supplemental funds**
- **\$400 million for Title X**

⁹ Frost JJ, et al., Publicly Funded Contraceptive Services at U.S. Clinics, 2015, New York: Guttmacher Institute, 2017.