

JUNE 2024

THE LEADING MAGAZINE FOR ENDOCRINOLOGISTS

Endocrine news

Endocrine PRIDE

Endocrine News Celebrates the Endocrine Society's LGBTQ+ Members

- **PRIDE WITHOUT PREJUDICE:** Bruno Ferraz-de-Souza, MD, PhD, and Stephen M. Rosenthal, MD, discuss the impact of being openly gay in the world of endocrinology as well as their challenges, successes, mentors, and more.
- **A PROFILE IN COURAGE:** How **Julie Ann Sosa, MD,** is using her past to create a better future for LGBTQ+ medical professionals.
- **BODY POSITIVE:** Sean Iwamoto, MD, and John M. Taormina, MD, discuss BMI standards for gender-affirming surgery.



Julie Ann Sosa, MD
Department of Sur

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ANDREWS, PHD
When Zane Andrews, PhD, published his very first scientific paper while working on his PhD in 2001, it was on the pages of the *Endocrine Society's Endocrinology*. This month, he assumes his newest role as *Endocrinology's* editor-in-chief.

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Hormone Science to Health



Meet New Endocrine Society President, John Newell-Price, MD, PhD



In April, Newell-Price attended SICEM 2024 in Seoul, Korea, to sign a Memorandum of Understanding between the Endocrine Society and the Korean Endocrine Society's president Yoon-Sok (Martin) Chung, MD, PhD.

The Endocrine Society is pleased to welcome its president for 2024 – 2025, John Newell-Price, MD, PhD, FRCP, who took office during ENDO 2024 in Boston.

Newell-Price is professor of endocrinology at the University of Sheffield in Sheffield, United Kingdom. He also is head of the Endocrinology Service at the Sheffield Teaching Hospitals NHS Foundation Trust and of the ENETS European Centre of Excellence for Neuroendocrine Tumors.

Newell-Price's clinical expertise includes pituitary and adrenal disorders, genetic endocrine disease, and neuroendocrine tumors and cancer. His research group focuses on glucocorticoid excess and deficiency, with discoveries that have resulted in new paradigms of diagnosis and treatment. Newell-Price succeeds Stephen Hammes, MD, PhD, who handed over the gavel in Boston during a formal ceremony. "I feel truly honored and humbled to be elected, especially as I will be the first non-U.S. president, itself a testament to the outward-looking and global nature of the Society," Newell-Price says. "Inevitably my emotions on hearing the results of the election last year included some feelings of trepidation and a healthy dose of imposter syndrome!"

Newell-Price goes on to credit Hammes and Hammes's predecessor Ursula Kaiser, MD, as well as the Society's board of directors, executive team, and staff for their support in turning those initial feelings into those of excitement and confidence to be taking up the role.

A Patient-Centered Career

Newell-Price attended the University of Cambridge, where, in addition to medicine, he also studied for his undergraduate degree in "Social and Political Science," saying that what he learned in that discipline has carried with him, both inside and outside of medicine. He went on to qualify in medicine at the University of Cambridge in 1990, undertook his clinical endocrine specialist training at St Bartholomew's Hospital in London, and was awarded his PhD from the University of London.

"After qualifying, I worked in London for 10 years," he says. "During my initial years of internal medicine training I presented as a guest at the St.



Newell-Price discussing how the new agreement between the two societies will strengthen the collaboration among endocrinologists worldwide.

Bartholomew's Hospital ('Barts') Grand Round and had what I can only describe as a thorough grilling from Mike Besser! The discussion was phenomenal, and this experience led me to target a job to work at Bart's in endocrinology."

From there, Newell-Price worked for and trained with luminaries of clinical endocrinology — Mike Besser, John Wass, Ashley Grossman, and John Monson — with three of those years as a Medical Research Council Training Fellow for his PhD in Adrian Clark's molecular biology lab, where he worked on the epigenetic regulation of POMC expression. "I learnt so much, and to this day I remain indebted to the exceptional training across the entire breadth of endocrinology," he says. "All the while, the patient was at the center of everything we did, and we maintained a strong emphasis on research and teaching — an approach to which I will always adhere."

In 2000, Tony Weetman and Richard Ross recruited Newell-Price to Sheffield, where, along with his colleagues, he aimed to build the endocrine service in Sheffield into the exceptional center it is today. "We are one of the busiest centers in the U.K. for pituitary, and adrenal disorders and neuroendocrine tumors, and, since 2015, have been an ENETS (European Neuroendocrine Tumor Society)

“

I learnt so much, and to this day I remain indebted to the exceptional training across the entire breadth of endocrinology," he says. "All the while, the patient was at the center of everything we did, and we maintained a strong emphasis on research and teaching — an approach to which I will always adhere.

”

European Centre of Excellence for Neuroendocrine Tumors," Newell-Price says.

"Over the last two decades, I have also worked at national and international levels in roles where I felt that I could make a difference," he continues. "Primarily, this has been directly related to the science, practice, and training of endocrinology, with the Endocrine Society and other societies, but also in health policy, service design, and service delivery at a national level with NHS England and the Society for Endocrinology in the U.K. A very important aspect for me has been close working with, and for, Patient Support Charities, where I have held Trustee and advisor roles over many years."

An Early Fascination with Endocrinology

Newell-Price tells *Endocrine News* that endocrinology fascinated him as a medical student, that the interplay between hormones and their effect on human physiology all just made sense. His current interests in endocrinology were sparked years ago: The long case in his medical finals was a patient who had Cushing disease and Nelson syndrome, and a few years later, the long case in his membership exam for the Royal College of Physicians was a patient with a metastatic insulinoma. His



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“
We need to continue to embrace and improve diversity in the Society, and ensure basic scientists truly see the Society as their ‘home’. Having the patient voice heard is crucial and we need to embrace and integrate advanced care practitioners and nurse specialists who are so crucial for patient care.
 ”

first published case report during internal medicine training, before specializing in endocrinology, was of a patient with ectopic gastrin secretion from an ovarian carcinoma causing Zollinger-Ellison syndrome.

“When training at Barts, there was, and still is, a major interest in pituitary and adrenal disorders, genetic endocrine disease, and neuroendocrine tumors,” Newell-Price says. “In Sheffield, I have a very busy clinical practice in all these areas, with increasing amounts of ‘onco-endocrinology’. Over the past two decades there has been an explosion in our understanding of these conditions that has translated into better diagnostics and therapies. The landscape has really improved for patients over this short timescale, and that is truly exciting.”

ENDO 1995: Breath-taking and Nerve-wracking


Newell-Price remembers his first ENDO in 1995 in Washington, D.C., as “nerve-wracking,” as he was presenting an oral communication of a study on the use of desmopressin in the diagnosis of ACTH-dependent Cushing’s syndrome. “I was just a junior fellow and representing Barts, but I had lots of support and interest from senior members of the Endocrine Society whose famous ‘names’ I had only read about, but reassuringly they were all so ‘human!’” he says. “I was amazed by the sheer range and scale of the meeting. There were thousands of people with clinical and science

presentations and Meet the Professor sessions being incredible and inspiring. The huge poster hall was quite breathtaking and there was a buzz of discussions — I had never experienced anything like it.”

That experience galvanized his interest in the Endocrine Society, and he was asked to join the writing group for the Society’s first Clinical Practice Guidelines for diagnosis of Cushing’s syndrome that came out in 2008 and then that for treatment of Cushing’s syndrome in 2015, as well as the Annual Meeting Steering Committee for three years where he became lead for both pituitary and adrenal themes. “Lynnette Nieman then asked me to be the overall chair of the ENDO meeting in Chicago in 2018, which was an amazing and rewarding experience, albeit a lot of work!” he says. “I have had many other roles for the Endocrine Society, including on the Governance Task Force, Clinical Practice Guidelines Committee, and most recently being on the Board of Directors. It has been, and is, such a privilege to work with the many super-smart friends, colleagues, and staff.”

No Shortage of Inspiration

Still, among all the committees and boards and his new role as Society president, Newell-Price says that he is humbled every day by the experiences and extraordinary resilience of the patients and families he sees, which inspires him to continually seek to improve care. “Their stories provide focus for research questions aimed at improving diagnosis and treatment,” he says. “More inspiration comes from working with phenomenal colleagues, and together we pull in the same direction and by working in teams we solve problems, be these at a clinical or research level, or at a structural level, for example in healthcare delivery or medical and postgraduate education.”

And that inspiration is what Newell-Price says drives him toward achieving his goals for his presidential tenure: working closely with sister endocrine societies globally, and championing those in the early stages of their careers while seeking to understand and the solve pipeline issues for endocrinology. “We need to continue to embrace and improve diversity in the Society, and ensure basic scientists truly see the Society as their ‘home,’” he says. “Having the patient voice heard is crucial and we need to embrace and integrate advanced care practitioners and nurse specialists who are so crucial for patient care.” 

– Derek Bagley



FROM THE **EDITOR**

JUNE 2024

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The Rainbow Connection: Honoring LGBTQ+ Endocrine Society Members

It appears that this year, *Endocrine News* is having a number of firsts in terms of themed issues: in January we devoted an issue to thyroid cancer, and last month was the first time we devoted an issue to our Asian American members to commemorate Asian American and Pacific Islander Heritage Month. This month we mark another first: to commemorate LGBTQ+ Pride Month, we are highlighting Endocrine Society members who belong to the LGBTQ+ community.

On page 18, Kelly Horvath had a very congenial conversation with two of the Society's most prominent gay members, Bruno Ferraz-de-Souza, MD, PhD, and Stephen M. Rosenthal, MD, in "**Pride Without Prejudice.**" They discuss everything from coming out professionally, the impact of their mentors throughout their careers, and their many challenges and successes,

Extra! Extra! Endocrine Society Headlines!

By the time you're holding this issue in your hands, the latest Endocrine Society Clinical Practice Guideline would have been released on June 3 during **ENDO 2024** in Boston, Ma., and that, as you know, is big news. On page 44, Eric Seaborg does due diligence in "**To D or Not To D?**" as he looks into "Vitamin D for the Prevention of Disease: An Endocrine Society Clinical Practice Guideline." While this new guideline suggests supplements might benefit specific populations and questions the need for testing, it also states that more research is needed to determine optimal levels for specific health benefits.

There's even more news from the Endocrine Society as Derek takes a closer look at two of the Society's journals. First, in "**A Relentless Pursuit**" on page 38, he looks at an editorial in the *Journal of the Endocrine Society* that calls for collaborative research to combat obesity. And on page 56 he speaks to the new editor-in-chief of *Endocrinology*, Zane Andrews, PhD, in "**Full Circle**" who takes over the reins of the journal from Carole Lange, PhD, who is taking on the role as the Endocrine Society's president-elect.



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as well as the importance of the Endocrine Society in their professional lives and what impact being openly gay has had on their work. “I need to be out because I want to be giving this example that you can be gay and be someone who contributes to the Society and be in leadership positions and help others as a doctor and researcher. Being completely out at work gives you a sense of freedom and not having to be safeguarding,” Ferraz-de-Souza says, adding that, “when you obscure that part of your life, you become defensive about a lot of things, and it impacts how you relate to people.” And while we had to cut some of this article for the print magazine, the full-length, unabridged conversation is on our website!

Glenda Fauntleroy Shaw talked to Julie Ann Sosa, MD, MA, FACS, for “**A Profile in Courage**” on page 26, where Sosa explains why she views being female, Latina, and LGBTQ+ as her superpower rather than a hindrance in her role as the Leon Goldman MD Distinguished Professor of Surgery at the University of California San Francisco (UCSF) where she has served as chair of UCSF’s Department of Surgery since 2018. She discusses how being out helps her understand the lives of many of her trainees and junior colleagues a little more, and thus connect with them. “In the end, our legacy is measured not by citations, publications, and presentations, but rather by people whose lives we impact,” Sosa explains. “If I can share my life experience, and others can learn from my mistakes without having to make them, I will have had a lasting impact, hopefully.”

For “**Body Positive: A Closer Look at BMI Criteria for Gender-Affirming Surgery**” on page 32, senior editor Derek Bagley speaks with Sean Iwamoto, MD, and John M. Taormina, MD, openly gay clinicians who were two of the co-authors of a recent *Journal of Clinical Endocrinology & Metabolism* paper that discusses the need to re-evaluate body mass index (BMI) requirements for transgender and gender-diverse people prior to undergoing gender-affirming surgeries. They discuss not only how these requirements can present an obstacle to the surgery, but also the need for a more multidisciplinary approach to these patients. For his part, Taormina explains that

he wants to bring awareness that simply using BMI alone is not enough to determine someone’s medical risk. “Surgical risks must be weighed against the risks of delaying surgery and the risks of forcing weight loss to access lifesaving care,” he says. “For many, gender-affirming surgeries are lifesaving surgeries.”

We hope that these articles give you a little bit more insight to the lives, careers, and work of just a handful of the Endocrine Society’s members who are members of the LGBTQ+ community. Personally, I would like to applaud these members for being so open and forthright with their stories. Honestly, it takes a lot of courage to be one’s true self in a professional environment, and I truly appreciate their contributions, not just to this issue of *Endocrine News*, but to the success of the Endocrine Society as well as the practice and science of endocrinology.

Feel free to let me know what you think of this issue recognizing our LGBTQ+ members and what sort of suggestions you have for future issues. You can always contact me at: mnewman@endocrine.org. 

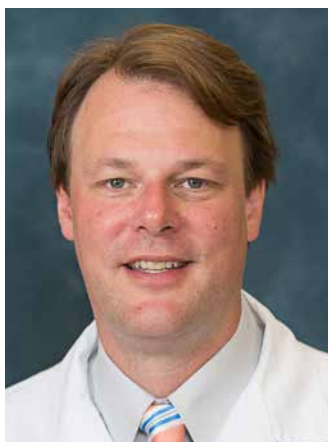
— **Mark A. Newman**, Executive Editor, *Endocrine News*



Correction

In last month’s AAPI roundtable, “**Applauding our Asian American Members**,” we listed a previous position for **Alan Malabanan, MD, CCD**, in the text of the story. His current titles and affiliations are clinical associate professor of medicine at the Boston University School of Medicine and Endocrine Clinic director at Boston Medical Center in Boston, Ma.

Endocrine Society and ESE Publish Joint Guideline on Glucocorticoid-Induced Adrenal Insufficiency



Tobias Else, MD



Felix Beuschlein, MD

To kick off a new guideline-writing partnership between the Endocrine Society and the European Society of Endocrinology (ESE), a new guideline on glucocorticoid-induced adrenal insufficiency has just been released.

The joint guideline, which was published in the societies' respective journals, is designed to help clinicians manage patients who have, or are at risk of developing, glucocorticoid-induced adrenal insufficiency. At least 1% of the global population uses chronic glucocorticoid therapy as anti-inflammatory or immune-suppressive agents.

The guideline, titled "Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency," appeared in the May 2024 issues of *The Journal of Clinical Endocrinology & Metabolism* and the *European Journal of Endocrinology*. Patient-facing materials on glucocorticoid-induced adrenal insufficiency are also in development.

This is the first guideline developed and published jointly by the Endocrine Society and the ESE. The societies are planning to publish a new joint guideline each year to maximize outreach as well as to cover potential differences in clinical practice between Europe and the United States.

As focal points for endocrinology and hormone research, both the Endocrine Society and ESE regularly produce clinical guidelines with recommendations for patient care, either in collaboration with other societies or independently.

Guideline development at each society is overseen by a clinical committee, and all guidelines are subject to a rigorous review process before being published. This is undertaken by society members and relevant parties, such as patient advocacy groups.

Where it is considered beneficial, patient support literature is prepared alongside the guidelines to provide patients with assistance in understanding and managing their condition.

The working group behind this joint guideline was led by co-chairs Tobias Else, MD, of the University of Michigan in Ann Arbor, Mich., and Professor Felix Beuschlein, MD, of the University Hospital Zurich in Zurich, Switzerland.

"The Endocrine Society and ESE collaborative guidelines on glucocorticoid-induced adrenal insufficiency are an important step toward a global collaboration in guideline development. Despite having differences in access to medications and other clinical resources, the evidence for diagnosing and treating a condition is the same," Else says. "I believe the future will bring us closer to true global guidelines, which integrate the global diversity in culture and



medical practices and can be adapted locally in accordance with resources. The work on the combined guidelines brought a tremendous learning experience for me personally, and hopefully they will be a useful resource for medical providers worldwide!”

“Our starting point was to define the clinical problem and knowledge gaps that come with glucocorticoid-induced adrenal insufficiency, for which we set out to provide some guidance — even in the absence of strong scientific evidence. We also wanted to make sure that we had good representation both from Europe and the U.S. to cover potential differences in clinical practice. In this, we were privileged to gather an excellent team of specialists with great knowledge, diligence, and enthusiasm — all of which is required to get through the

process of writing a guideline from scratch,” says Beuschlein. “The discussions between the panel members during the writing of the guideline, and the review process, which included all members of both societies, has resulted in a level of consensus that has not been reached before. I hope that the global reach of this joint guideline goes beyond what either society could reach independently.”

In 2025, the societies plan to publish a joint guideline on diabetes in pregnancy; in 2026, a joint guideline on arginine vasopressin resistance and arginine vasopressin deficiency; and in 2027, a joint guideline on male hypogonadism.

Funding for the development of these joint guidelines is provided by the societies. No other entity provides financial or other support.

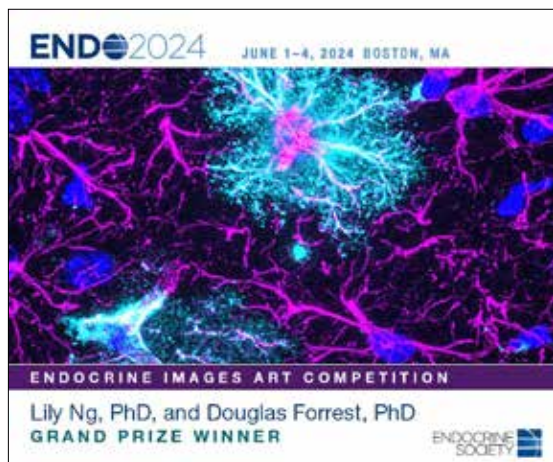
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Winners Announced for the Endocrine Society's 2024 Endocrine Images Art Competition



Lily Ng, PhD, and Douglas Forrest, PhD, have won the Endocrine Society's 2024 Endocrine Images Art Competition for their image of the astrocyte cell that expresses type 2 deiodinase.

Now in its third year, the Art Competition celebrates the beauty of endocrine science as seen through the lens of a microscope. This year's 19 entries were judged by a panel of Society members who based their assessments on aesthetic value of the images and their significance to endocrine research.

Ng and Forrest work at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), which is part of the National Institutes of Health (NIH) in Bethesda, Md. Ng is a staff scientist, and Forrest is chief of the Nuclear Receptor Biology Section at NIDDK.

In submitting their image to the competition, the two noted that one of the most important functions of thyroid hormone is to promote the development of the brain. Deiodinase enzymes in the brain can modify the level of active thyroid hormone available for neurons. The image shows an astrocyte cell that expresses type 2 deiodinase, a thyroid hormone-amplifying enzyme. The astrocyte projects an extensive network of fibers for signaling to neighboring cells.

One member of the grand prize-winning team will receive complimentary registration to **ENDO**, the Society's annual meeting.

Two other winners also were announced in this year's competition.

The second-place winner is the team of Federico Salas-Lucia, PhD, and Sergio Escamilla, MSc, PhD candidate, of the University of Chicago in Chicago, Ill., for an image of the mechanisms of thyroid hormone action in brain organoids.

The third-place winner is Celeste Laporte, HBSc, of McGill University in Montreal, Canada, for an image of vasopressin neurons in the rat paraventricular nucleus.

All three winners had their art displayed at **ENDO 2024**, June 1 – 4 in Boston, Mass. The display was seen by thousands of endocrine scientists and researchers from all over the world.

Visit the Endocrine Images Art Competition website for more information and to view this year's top endocrine images along with previous year's winners.



Henry M. Kronenberg, MD

Henry Kronenberg Elected to NAS

Endocrine Society past-president Henry M. Kronenberg, MD, has been elected to the National Academy of Sciences (NAS), which recognizes achievement in science and provides science, engineering, and health policy advice to the federal government and other organizations.

Kronenberg, who served as Endocrine Society president from 2016 to 2017, has been chief of the Endocrine Unit at Massachusetts General Hospital in Boston, Ma., for over 34 years and is a professor of medicine at Harvard Medical School.

His research group studies the actions of parathyroid hormone (PTH) and parathyroid hormone-related protein (PTHrP), with a particular emphasis on bone development, bone biology, calcium homeostasis, and the roles of osteoblast-lineage cells in hematopoiesis. His biggest accomplishment is bringing molecular biology to the bone and mineral field with the cloning of PTH. Kronenberg's laboratory in recent years has used several genetically altered strains of mice to establish the role of signaling by the PTH/PTHrP receptor in bone.

Aside from his presidential term, Kronenberg has served on many other Society committees over the years, most notably as vice president, Basic Science, and as the Endocrine Society's representative on the Federation of American Societies for Experimental Biology (FASEB) Board of Directors.

In 2022, Kronenberg received the Society's highest award, the Fred Conrad Koch Lifetime Achievement Award. At the time, when he was asked about the impact the Endocrine Society had on his career, Kronenberg said that the Society was the first national society to welcome him and that from that moment he has relied on the Society to make him aware of new ways of thinking about endocrinology, both at the basic and clinical levels.

"The annual meeting and journals, in particular, have defined current endocrinology for me," Kronenberg continued. "Equally importantly, the Endocrine Society has been the vehicle for my meeting people in the field from whom I have learned a lot and gained lasting friendships."

Kronenberg joins 119 members and 24 international members in recognition of their distinguished and continuing achievements in original research. The NAS is a private, nonprofit institution that was established under a congressional charter signed by President Abraham Lincoln in 1863.



Laurence Katznelson, MD



Laurence Katznelson, MD, Named Vice Dean, Medical Education at Cedars-Sinai

Laurence Katznelson, MD, a national leader in graduate medical education and a distinguished physician-scientist in endocrinology and metabolism, joined Cedars-Sinai as vice dean of Medical Education on May 1.

Katznelson will oversee Cedars-Sinai's Graduate Medical Education, Continuing Medical Education, the Women's Guild Simulation Center for Advanced Clinical Skills, the Chuck Lorre School of Allied Health, and the Medical Library.

"In the newly created role, Dr. Katznelson will expand and strengthen Cedars-Sinai's interdisciplinary education and training for physicians, academic clinicians, and allied health professionals while fostering the integration of medical education with research," says fellow Endocrine Society member Shlomo Melmed, MB, ChB, executive vice president of Academic Affairs and dean of the Medical Faculty.

An active member of the Endocrine Society, Katznelson received the 2017 Endocrine Society Outstanding Educator Laureate Award and has served on a variety of Society committees including the Publications Core Committee, Nominating Committee, and on the Board of Directors, among other activities.


Previously at the Stanford University School of Medicine, Katznelson was a professor of neurosurgery and medicine and was associate dean of Graduate Medical Education. He also served as chair of the Graduate Medical Education Committee for Stanford Health Care, where he was medical director of the Pituitary Center.

In his capacity as associate dean of Graduate Medical Education, Katznelson centralized access to innovative curricula, enhancing

education in quality improvement and fostering grassroots engagement among residents and fellows. He established the Resident Safety Council to develop high-impact quality improvement projects, spearheaded the Stanford GME Diversity Committee to expand recruitment and opportunities, and championed well-being and safety initiatives to cultivate a healthier clinical learning environment.

"Dr. Katznelson is known to lead by example with kindness, grace, humility, professionalism, and humor, and we look forward to him bringing these wonderful characteristics to Cedars-Sinai," says Jeffrey A. Golden, MD, executive vice dean of Research and Education at Cedars-Sinai. "We look forward to his many contributions as a key leader in our growing education enterprise."

Katznelson has published research in the highest-impact peer-reviewed journals and has been recognized for his academic education leadership. He received his bachelor's degree in genetics from the University of California, Berkeley, and his medical degree from UCLA. He completed his internship and residency in internal medicine at the Hospital of the University of Pennsylvania in Philadelphia, followed by a fellowship in endocrinology and metabolism at Massachusetts General Hospital in Boston.

"Cedars-Sinai is a national leader in medical education," Katznelson says. "I am eager to join the team and advance this exciting work. I look forward to developing new strategies and programs to train and educate new generations of clinicians and investigators. 



BY DEREK BAGLEY
Senior Editor

Low Testosterone in Men Associated with Higher Mortality Risk

A systematic review and meta-analysis found that a low baseline serum testosterone concentration in men is associated with increased risk for all-cause mortality, and a very low baseline testosterone with increased risk of cardiovascular death. According to the authors, this study clarifies previous inconsistent findings on the influence of sex hormones on key health outcomes in aging men. The findings are published in *Annals of Internal Medicine*.

Researchers led by Bu Beng Yeap, MBBS, FRACP, PhD, of the University of Western Australia, collaborating with researchers from Australia, Europe, and North America, reviewed 11 studies comprising more than 24,000 participants to clarify associations of sex hormones with mortality and cardiovascular disease (CVD) risk in aging men. Eligible studies were prospective cohort studies, previously identified in a published systematic review, of community-dwelling men with total testosterone concentrations measured using mass spectrometry and at least five years of follow-up.

Individual patient data (IPD) was used to summarize relationships between baseline hormone concentrations (total testosterone; sex hormone-binding globulin [SHBG], luteinizing hormone [LH], dihydrotestosterone [DHT], and estradiol) and relative risk for CVD events, CVD deaths, and all-cause mortality. The data showed that only men with low total testosterone concentrations had higher risks for all-cause mortality. A key finding was that men with a testosterone concentration below 7.4 nmol/L (<213 ng/dL) had higher risk for all-cause mortality, regardless of LH concentration. Men with a

testosterone concentration below 5.3 nmol/L (<153 ng/dL) had increased risk of cardiovascular death.

“Men with low testosterone, high LH, or very low estradiol concentrations had increased all-cause mortality,” the authors conclude. “SHBG concentration was positively associated and DHT concentration was nonlinearly associated with all-cause and CVD mortality.”

The author of an accompanying editorial, Bradley D. Anawalt, MD, of the University of Washington School of Medicine in Seattle, suggests that this meta-analysis is particularly valuable because of its rigorous methodology. The study is the first of its kind to perform IPD meta-analysis of major prospective cohort studies that used



TESTOSTERONE

mass spectrometry, the most accurate method of testosterone measurement that can also be used to measure DHT and estradiol accurately. In addition, to perform the IPD meta-analysis, the authors obtained raw data from nine of the included studies and then reanalyzed the combined data. This method allowed for more sophisticated analysis of combined data from multiple studies and provided more robust testing for associations.



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This study lays the groundwork for understanding the sex differences orchestrated by androgens and provides important evidence for targeting the androgen pathway as a broad therapeutic strategy for sex-biased diseases.

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Researchers Explore Role of Androgens in Shaping Sex Differences

Sex differences are widespread across human development, physiological processes, and diseases, making it important to characterize the impact of sex differences in these areas. Understanding the regulatory mechanisms associated with these differences, including the role of androgens, is also vital for clinical translation — especially for diseases more prevalent in one sex.

To answer these questions, researchers from the Center for Excellence in Molecular Cell Science, Shanghai Institute of Biochemistry and Cell Biology of the Chinese Academy of Sciences, Peking University, and Shenzhen Bay Laboratory, explored the role of androgens in shaping sex differences at the molecular and cellular levels and published their findings in *Nature*.

The researchers developed a detailed single-cell transcriptomic map from 17 different tissues of the mouse (*Mus musculus*). Using this dataset, they analyzed sex differences in depth and investigated how androgens influence these differences through specific molecular pathways and cell types. They also explored the implications of their findings on sex-biased diseases.

They then pinpointed the genes (i.e., *AASB-DEGs*) among these various tissues and cell types whose expression is sex-biased and directly influenced by androgens. These genes, including *Egfr*, *Fos*, and *Il33*, were highlighted as potential targets for precision medicine by modulating the androgen pathway.

The researchers also detailed how androgens affect the prevalence of certain cell types across sexes in various tissues, notably within immune cell populations. A key finding was the identification of group 2 innate lymphoid cells (ILC2s), which play a role in inflammation and enhancing PD-1

blockade therapy. Interestingly, ILC2s exhibited the highest androgen-receptor (Ar) expression levels among the major immune cell types. The presence of these cells was notably affected by androgen levels, suggesting a mechanism by which androgens influence immune responses and disease susceptibility.

By integrating their findings with data from the UK Biobank, the researchers discovered that the most common risk genes for multiple sex-biased diseases were major histocompatibility complex (MHC) genes, some of which showed sex differences or were androgen responsive. Cross-species analyses based on this atlas also identified associations between cell types and sex-biased diseases.

Overall, this study sheds light on the intricate ways in which androgens contribute to sex differences at the cellular and molecular levels and provides the



foundation for developing targeted therapies for sex-biased diseases by modulating the androgen pathway. “This study lays the groundwork for understanding the sex differences orchestrated by androgens and provides important evidence for targeting the androgen pathway as a broad therapeutic strategy for sex-biased diseases,” the authors write.

Serotonin Neurons Improve Fertility by Sensing Energy Availability, Suggesting Treatment for Depression-Related Infertility

Scientists from Nagoya University in Japan have clarified the relationship between energy levels and fertility in animals and humans. They identified signaling from serotonin neurons as important for maintaining reproductive function by sensing glucose availability and subsequently enhancing the release of the reproductive hormone gonadotropin. Their findings also provide an explanation and possible treatment for the decreased fertility observed in people with depression. The results were published in *Scientific Reports*.


Researchers led by Hiroko Tsukamura, PhD, and Satoshi Ohkura, PhD, as well as designated associate professor Sho Nakamura, PhD, point out that it is well known that malnutrition suppresses reproductive function in several mammalian species, including humans. According to this study, one of the main factors that affect a person's reproductive health is glucose availability. "This study examined whether dorsal raphe (DR) serotonergic neurons sense high glucose availability to upregulate reproductive function via activating hypothalamic arcuate (ARC) kisspeptin neurons (=KNDy neurons), a dominant stimulator of gonadotropin-releasing hormone (GnRH)/gonadotropin pulses, using female rats and goats," the authors write.

Nakamura, Tsukamura, Ohkura, and their colleagues from the Graduate School of Bioagricultural Sciences at Nagoya discovered that elevated glucose availability in rat brains stimulates serotonergic neurons. This causes the release of serotonin in the brain. Serotonin is an important neurotransmitter that affects the body and mind. It influences functions such as mood and behavior, and physiological processes such as bone health and metabolism.

When the researchers administered serotonin to goat brains, it triggered the activation of the kisspeptin neurons, which are the primary stimulator for the release of key reproductive hormones, such as GnRH and gonadotropins. "We used rats and goats as models because rats are a useful human model, whereas goats serve as a livestock model," says Tsukamura.

Their findings indicate that serotonergic neurons can release serotonin when they sense high levels of glucose. By interacting with serotonin receptors in the kisspeptin neurons, they can improve reproductive functions. The use of inhibitors for serotonergic signaling also allowed the researchers to establish that the opposite was true. This important finding sheds light on why mammals with a poor diet face problems associated with fertility.

Depression can often be attributed to malfunctioning serotonergic neurons in the brain, which are often targeted for treatment. The dysfunction of serotonin neurons often observed in individuals with depression suggests that low serotonergic activity might be a part of its cause. Nakamura's research lays the groundwork for treating depression-induced infertility in humans and reproductive disorders in livestock, which implies a possible underlying connection and a potential treatment.

"Since selective serotonin reuptake inhibitors (SSRIs) are commonly prescribed to treat depression in patients, studies indicate that these drugs may also have potential benefits for addressing depression-related infertility and treating animals," says Tsukamura. She proposes that SSRIs could potentially be used in the future for human and animal reproduction, or in combination with diet treatments for people with depression. 



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Since selective serotonin reuptake inhibitors (SSRIs) are commonly prescribed to treat depression in patients, studies indicate that these drugs may also have potential benefits for addressing depression-related infertility and treating animals.

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2024 Clinical Endocrinology Update/Endocrine Board Review

EBR 2024

ENDOCRINE BOARD REVIEW

Sept. 6 – 8, 2024/Virtual Only



EBR is an intensive online learning program for fellows, practicing endocrinologists, and other healthcare professionals preparing for the American Board of Internal Medicine's (ABIM), Endocrinology, Diabetes, and Metabolism Certification Exam.

In use for more than a decade, EBR stands out as a leading program for invaluable insights directly

from medical experts involved in developing the exam. These specialists understand the exam's nuances and will share essential strategies for success. EBR features case-based questions aligned with the ABIM blueprint, complemented by highly effective tools to bolster your confidence as you gear up for your board exam.

You will receive the latest Endocrine Board Review (EBR) 16th Edition book and access to our interactive practice exam sessions on August 5, 2024. Additionally, participants will have the opportunity to interact with our faculty during the Topical Live Q&A Sessions on September 6 – 8.

Join us for an immersive review of endocrinology to advance your knowledge and succeed in your board certification exam!.

<https://ebr2024.endocrine.org/>

CEU 2024

CLINICAL ENDOCRINOLOGY UPDATE

Sept. 19 – 21, 2024/Virtual Only

Join endocrinologists and other healthcare professionals for updates on how to treat various endocrine conditions based on the latest expert guidelines in hormone care. With recent breakthroughs in different areas of the ever-evolving field of endocrinology, staying abreast of innovative practices is essential for optimal patient treatment.

CEU 2024 provides a convenient solution for busy professionals by delivering first-rate education they can immediately implement into their practice. For over a decade, our program has been led by renowned endocrinologists, offering a case-based agenda and evidence-based disease management strategies to equip practitioners with the tools they need to address daily clinical challenges.

CEU is virtual, ensuring accessibility through our online platform. Our expert faculty will cover important endocrinology topics, including adrenal, calcium and bone, diabetes, pituitary, obesity and lipids, female reproduction, male reproduction, transgender care, and thyroid.

With Meet the Professor sessions and a symposium filled with expert insights, this program offers a valuable learning experience for endocrinologists worldwide. Do not miss this opportunity to enhance your knowledge and skills in hormone care. Join us online and stay ahead in the field of endocrinology!

<https://ceu2023.endocrine.org>

Endocrine Society Webinars

The Endocrine Society holds webinars throughout the year on many topics, from clinical practice and basic research to career development, advocacy, and more. Check below for information on upcoming webinars and links to previous events. Visit our Center for Learning for a full list of Society educational offerings.

Past webinars have included The Complexities of Cushing's Syndrome: Diagnosing and Managing Patients; Utilizing Nurse Practitioners and Physician Assistants to Optimize Patient Care: How to Build Effective Teams; Genetics in Pituitary Disease; Facts and Controversies of Testosterone Replacement Therapy in Male Hypogonadism; and so much more! Most of the webinars are free for Endocrine Society members, but some do require a small registration fee.

<https://education.endocrine.org/Public/Catalog/Main.aspx>



ENDOCRINE ITINERARY

ADA 84th Scientific Sessions

**Orlando, Florida
June 21 – 24, 2024**

The American Diabetes Association's (ADA) Scientific Sessions offers researchers and healthcare professionals the unique opportunity to share ideas and learn about the significant advances and breakthroughs in diabetes. Participants will receive exclusive access to more than 190 sessions and 2,000 original research presentations, take part in provocative and engaging exchanges with leading diabetes experts, expand their professional networks, and so much more.

<https://professional.diabetes.org/scientific-sessions>

ADCES24

**New Orleans, Louisiana
August 9 – 12, 2024**

The Association of Diabetes Care & Education Specialists (ADCES) Annual Conference is the premier diabetes care and educational event of the year. More than 3,000 diabetes care and education specialists and other healthcare professionals are expected to participate at ADCES24 in New Orleans, La. Connect, collaborate, and educate yourself and others on the latest in diabetes care and education.

<https://www.diabeteseducator.org/home>

ASBMR 2024

**Toronto, Ontario, Canada
September 27 – 30, 2024**

The ASBMR Annual Meeting boasts nearly 100 education sessions and 1,100 poster presentations in four information-filled days. The conference includes hands-on workshops focused on the latest technologies and research tools using model data sets, meet-the-professor sessions, the ASBMR Discovery Hall, an exhibition hall that provides attendees with a truly immersive experience, with access to new science, new knowledge, new tools, and new contacts all in one location.

<https://www.asbmr.org/annual-meeting>

Neuroscience 2024

**Chicago, Illinois
October 5 – 9, 2024**

Each year, scientists from around the world congregate to discover new ideas, share their research, and experience the best the field has to offer. Attend so you can present research, network with scientists, attend sessions and events, and browse the exhibit hall. Join the nearly half a million neuroscientists from around the world who have propelled their careers by presenting an abstract at an SfN annual meeting – the premier global neuroscience event.

<https://www.sfn.org/meetings/neuroscience-2024>

American Thyroid Association 2024 Annual Meeting

**Chicago, Illinois
October 30 – November 4, 2024**

The ATA Annual Meeting is the world's preeminent event for those interested in thyroid diseases and disorders and provides an opportunity for peer-to-peer learning and collaboration through lectures, interactive discussions, meet-the-professor sessions, and abstracts. This year, the ATA will celebrate its centennial anniversary with a culmination of the celebration and the largest gathering of thyroidologists in the world. Whether you're an endocrinologist, a surgeon, an advanced practice provider,

a fellow in training, or a medical student, the topics covered during the meeting will provide in-depth information about thyroid diseases and disorders. With a diverse program planned, attendees can customize their experience by attending sessions that are most important to their professional development.

<https://www.thyroid.org/>

ObesityWeek 2024

**San Antonio, Texas
November 3 – 6, 2024**

The preeminent international conference for obesity researchers and clinicians, ObesityWeek® is home to the latest developments in evidence-based obesity science: cutting-edge basic and clinical research, state-of-the-art obesity treatment and prevention, and the latest efforts in advocacy and public policy. Overcoming obesity requires multidisciplinary approaches. This is the conference that encompasses the full spectrum of obesity science: from basic science research to translational research and clinical application, to public policy; from diet, exercise, lifestyle, and psychology to medical and surgical interventions; from pediatric to geriatric to underserved populations.

<https://obesityweek.org/>

INTERNATIONAL ITINERARY

2024 Mammalian Reproduction Gordon Research Conference

**Barcelona, Spain
July 21 – 26, 2024**

The Mammalian Reproduction Gordon Research Conference (GRC) provides a unique forum for young doctoral and post-doctoral researchers to present their work and discuss new methods, cutting-edge ideas, and pre-published data, as well as to build collaborative relationships with their peers. Experienced mentors and trainee moderators will facilitate active participation in scientific discussion to allow all attendees to be engaged participants rather than spectators.

<https://www.grc.org/mammalian-reproduction-grs-conference/2024/>

PRIDE

WITHOUT PREJUDICE

A conversation with Bruno Ferraz-de-Souza, MD, PhD,
and Stephen M. Rosenthal, MD

BY KELLY HORVATH



Bruno Ferraz-de-Souza, MD, PhD



Stephen M. Rosenthal, MD

As part of *Endocrine News* LGBTQ+ Pride Month coverage, we caught up with Bruno Ferraz-de-Souza, MD, PhD, and Stephen M. Rosenthal, MD, who had a lot to say about being openly gay in the world of endocrinology, both in the U.S. and abroad, as they discuss their various challenges, successes and mentors as well as the role the Endocrine Society has played in their careers.



In observance of LGBTQ+ Pride Month, *Endocrine News* sat down for a Q&A with two well-known endocrinologists (and friends) to discuss their careers, how being gay has influenced those careers, and what being members of the Endocrine Society has meant for them.

Bruno Ferraz-de-Souza, MD, PhD, is an associate professor and chair of the Basic & Clinical Sciences Domain at the University of Notre Dame Australia School of Medicine in Fremantle, Western Australia, and honorary principal investigator and postgraduate supervisor in endocrinology at the University of Sao Paulo School of Medicine, in Sao Paulo, Brazil. Stephen M. Rosenthal, MD, is professor of pediatrics and medical director of the Child and Adolescent Gender Center (CAGC) at the University of California, San Francisco (UCSF), as well as director of the World Professional Association for Transgender Health; past vice president and director of the Endocrine Society, and past president of the Pediatric Endocrine Society.

Rosenthal, a pediatric endocrinologist for 45 years as of next month, currently focuses on gender-diverse/transgender adolescents and young adults both clinically and in the research realm. Ferraz-de-Souza is an adult endocrinologist whose current area of clinical focus is bone metabolism, with a research focus on the genetic basis of metabolic bone disorders.

Endocrine News: What milestones in your career stand out?

ROSENTHAL: The first was being accepted in 1979 into a fellowship program at UCSF run by three icons in pediatric endocrinology: Melvin Grumbach, a past-president (1981 – 1982) of the Endocrine Society, Selna Kaplan, and Felix Conte. It was a great highlight of my life to move from the East Coast, where I had spent all my life, to the city I fell in love with on a vacation a year prior.

I later was part of the team, along with my colleagues Stephen Gitelman, Brian Feldman, and Walter Miller, that discovered a new disorder of water balance. In 2005, within just a few months of each other, two unrelated male infants presented with severe hyponatremia and laboratory profiles that were suggestive of syndrome of inappropriate antidiuretic hormone (SIADH) secretion, yet they had undetectable ADH levels. In the first patient, Gitelman suspected an activating mutation in the V2 vasopressin receptor, a G protein-coupled receptor. In fact, it turned out that both patients had activating mutations in this receptor, but they were different from each other, even though they occurred in the same codon for this receptor, and the constitutive activity of these mutant receptors was demonstrated by Feldman in Miller's lab. So, we described the first cases of what we called nephrogenic syndrome of inappropriate antidiuresis, and it was very exciting to be part of that.



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I'm a cis man, so I have some advantages in the world, but, at the same time, I'm gay, and this will sometimes put me at a disadvantage in certain contexts. So I think being gay shapes my view to be inclusive and accepting — and celebrate diversity.

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Bruno Ferraz-de-Souza,

MD, PhD,

associate professor, chair, Basic & Clinical Sciences Domain, University of Notre Dame Australia School of Medicine, Fremantle, Western Australia; honorary principal investigator, postgraduate supervisor, endocrinology, University of Sao Paulo School of Medicine, Sao Paulo, Brazil

Then, at some point in my evolving career I realized that I needed to spend some time in the lab. I worked with a very stimulating and supportive group in Ira Goldfine's lab that was focused mostly on the insulin receptor. They gave me a project to clone a cDNA for the insulin-like growth factor-1 (IGF-1) receptor. At that time, I didn't even know what cDNA was, but with some wonderful support from the people around me, I was able to clone the cDNA and use that tool to study a new and evolving area, the role of IGF-1 in skeletal muscle cell differentiation, which led to a very exciting chapter in my life. I got my first NIH independent funding, and we made some very interesting observations about opposing effects of IGFs on proliferation and differentiation, which are typically thought of as mutually exclusive actions. We got to immerse ourselves in trying to understand that dilemma, and that was really fun. But I had my challenges trying to compete as a cell biologist while simultaneously being an almost full-time clinician.

Later, I became director of the general pediatric endocrine clinic as well as the program director for endocrine fellowship training for pediatric endocrinology at UCSF. In 2009, a 12-year-old designated female at birth who identified as male had gone to a public health clinic that catered primarily to the LGBT community in San Francisco. As an openly gay person, I had the experience of understanding what it was like to be different in a particular aspect of the human experience, and that contributed to who I am and my wanting to be supportive of others who might not fit into mainstream categories, such as people with diverse gender identities. I realized that even though being transgender or gender diverse was not a disease, there was a role for pediatric endocrinologists trained in the nuances of hormone treatments.

At that time (2009), there was not much published — even the Endocrine Society's first transgender clinical practice guideline hadn't come out until June of that year. I saw an opportunity to contribute to the clinical care of transgender adolescents, and I felt really drawn to it, but almost nobody was doing this kind of medical work like what was being done in the Netherlands. So, we invited Norman Spack from Boston Children's Hospital, who had gone to the Netherlands to learn their approach and was really the father of adolescent gender-affirming care in the United States, to mentor our program.

I was really the new kid on the block in terms of working in adolescent transgender medicine, but I could bring to the table my almost 30 years of experience working with puberty blockers, so, along with collaborators Diane Ehrensaft, a world-renowned child and developmental psychologist; Joel Baum, education and advocacy specialist; and Asaf Orr, an attorney focused on LGBT issues, we created the interdisciplinary Child and Adolescent Gender Center (CAGC), of which I became the medical director and still serve in that capacity. We've now served over 2,000 families. As you can see, over the years, my career has taken so many different twists and turns that no one would ever call me "straight."

FERRAZ-DE-SOUZA: I had three career-defining moments as an endocrinologist. The first was, as Steve mentioned, being accepted in the program that I was in. I did my clinical training in Brazil, and the program I entered is arguably the best in the country and collects the best people in endocrinology in Brazil. I was really proud — it's a competitive program. In seeing the work they did both clinically and in research really stimulated me to do more. When I entered medical school, I didn't have much ambition to be a researcher or furthering my career besides patient care, but it was really seeing

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Yes, there were the personal challenges in coming out, perhaps some of the rejections, of course, fortunately balanced by positive experiences and also learning to believe in yourself — but finding this opportunity where I felt I could give back to the LGBT community was so important because I felt that there really was a role for physicians who are trained in the nuances of endocrine treatments. It made me feel drawn in large part to that part of my career, so the last 15 years have certainly been influenced by all of my prior experiences including coming to terms with who I am in terms of my sexual orientation.”

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Stephen M. Rosenthal, MD,

professor of pediatrics, medical director, Child and Adolescent Gender Center (CAGC), University of California, San Francisco; director, World Professional Association for Transgender Health



people who were clinical and basic researchers that inspired me to pursue that avenue.

The second milestone would be when I went to the U.K. to do a PhD, which was hugely transformational for me. I was exposed to a whole different culture, in many senses, in terms of academia and research, and also in life. It's really when I lived in the U.K. and was perhaps away from my background and my friends and family that I allowed myself to live a full gay life, and this was important as well. I will always remember that period with joy. I was doing research for a great group, and I was also living my life to the fullest.

The third milestone I want to mention is, really by chance, I got involved with the Endocrine Society leadership. I was invited to participate on the Committee on Diversity and Inclusion (CoDI), and, to this day I don't know really why. I think it was a lucky coincidence because I had no inroads with anyone in the Society leadership, and I was probably flying under the radar. But I got lucky to have this opportunity, and this really showed me another aspect of professional growth, in terms of meeting amazing people like Steve and learning about leadership and about how we can have multiple roles in multiple realms. This contributes to our growth and also gives us an opportunity to give back. Sometimes it's easier to give back through societies such as the Endocrine Society than it is in our day-to-day jobs in which what you give back is more limited to the people with whom you interact.

These three moments were really defining of how I ended up where I am right now.

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I need to be out because I want to be giving this example that you can be gay and be someone who contributes to the Society and be in leadership positions and help others as a doctor and researcher. Being completely out at work gives you a sense of freedom and not having to be safeguarding. When you obscure that part of your life, you become defensive about a lot of things, and it impacts how you relate to people.

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Bruno Ferraz-de-Souza,

MD, PhD,

associate professor, chair, Basic & Clinical Sciences Domain, University of Notre Dame Australia School of Medicine, Fremantle, Western Australia; honorary principal investigator, postgraduate supervisor, endocrinology, University of Sao Paulo School of Medicine, Sao Paulo, Brazil



EN: Who were some of your other important mentors along the way?

FERRAZ-DE-SOUZA: We have mentors all the time. For instance, when I served on CoDI, I met Steve, Beverly Biller, Sherrri-Ann Burnett-Bowie, Alicia Diaz-Thomas, and Cherié Butts; so many people influenced and formed me in a way. I carry that with me.

But two people have been really fundamental. One of them is Berenice Bilharinho de Mendonca. When I joined my training program in Brazil, Berenice was one of the faculty and is a very rigorous researcher and someone who is very sensible and has a sense of fairness and equity. She not only instigated my love of research, but she was also the first person that I saw in an academic hospital in a very rigorous situation, offering care for transgender people. This was the early 2000s, and we didn't even learn about transgender in medical school in Brazil, except for maybe one lecture in psychiatry. It was very different from what we offer our students these days. It opened my mind to all the realms in which an endocrinologist can be of help to people in need, and it was through her work that I saw scientific validation of this care and of getting to know the patients. Transgender is such a hot topic, and there's so much theoretical discussion, [but] being close to the people who live through that and hearing of their plight, of their life, their journey is really transformative. So, I credit Berenice as a mentor in general, but also in particular in this area. Besides advocacy, my direct work does not really touch much of the care of transgender people, but this experience left a great impression.

The second mentor I would like to mention was my PhD supervisor, John Achermann. John is a pediatric endocrinologist, and he's just the best person. He's a great human being and a great researcher, and he taught me a lot about being inclusive and seeing the world through the lens of inclusivity. John was really the first example of an enlightened person of a different cultural background I met. He introduced me to a lot of the language that years later would become familiar to me through CoDI, but John was the first person providing that besides everything else that he did.

ROSENTHAL: Not only do we have the opportunity to play a role as mentors, but we all have mentors at all stages of our careers. In addition to those I already mentioned, one thing I want to add is that I had a very similar experience to Bruno of being asked to join a particular Endocrine Society Committee, which in my case, was the Society's Special Programs Committee by Dolores Shoback, an adult endocrinologist at UCSF. She's one of those people you meet and recognize right away how incredibly special they are, like Beverly Biller, like Bruno — people who are first-class human beings. Through the committee, I met some wonderful people, in particular some incredible staff from the Endocrine Society who made me feel so welcome.

But it all started with Dolores and many other wonderful [Endocrine Society] staff I met along the way. Just like Bruno was saying, on these committees, I suddenly had personal connections with people who had significant leadership roles, and I felt acknowledged and that I could contribute. It is a wonderful experience and is really one of the hallmarks of the Endocrine Society — the inclusiveness, not just in all the ways we've been talking about, but in really encouraging the participation of people who are at all levels of their careers. That's something that I'll always be very grateful for.

EN: This segues perfectly into the next question: what has the Endocrine Society meant to you?

FERRAZ-DE-SOUZA: I second every word that Steve has said. I'm a member of other societies, and I have participated in leadership of other societies, but I don't find the same environment, necessarily, and I think the tone is set very much by staff. The staff creates this welcoming environment and provides an institutional memory that allows us for the short periods that we serve to thrive in what we do, see our ideas implemented, and have a result with the programs that the Society runs. This is unique to the Endocrine Society, and Kate Fryer is carrying it forward as CEO. I think this support and inclusivity is why we and others stay engaged with the Society. I've been chair of two committees, and I'm joining the Board now. It's a lot of work and a big time commitment, but I do it because I love it. You see change happening, and you get to meet wonderful people, which is so much more than we sometimes get from our day-to-day jobs, and that really makes it valuable.

ROSENTHAL: It all starts with feeling that you are appreciated and encouraged to contribute in a meaningful way. In the LGBT context now, I did mention that the Endocrine Society put out its first



Rosenthal was recognized for his work on the Endocrine Society's Annual Meeting Steering Committee and is pictured with then-Endocrine Society President Ursula B. Kaiser, MD.

clinical practice guideline in June of 2009 focused on transgender individuals. That they jumped into that field with a commitment to clarifying evidence-based care was very meaningful to me, and it helped me feel encouraged and supported in the work I was just getting started in. I had the incredible opportunity starting in 2015 to be on the writing committee that updated the guideline for 2017 publication. I now have the wonderful opportunity to be on the committee that's just embarking on the next revision, which is under the leadership of both Josh Safer and Vin Tangpricha with Maureen Corrigan on the staff.

The commitment that the Endocrine Society has, in a very calm, methodical way, to not run away from a politically charged issue is very reassuring to me. Mila Becker, the Society's chief policy officer, has also been such a wise colleague and contributor. She has been extremely involved in the role that the Society would take in some of the legislation in the U.S. in terms of writing amicus briefs and in enlisting the support of colleagues to thoughtfully consider the content of these cases and to participate in how the Society, in the most thoughtful and effective way, could contribute to underscoring the importance of an evidence base in policy decisions. These things have really deepened my appreciation and respect for the Society.

EN: Has being a member of the LGBTQ+ community influenced your career path? If so, in what way?

FERRAZ-DE-SOUZA: It certainly influences my worldview and the way I see people. For minoritized individuals, there is a sense of collegiality, where you tend to better understand the hurdles

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As an openly gay person, I had the experience of understanding what it was like to be different in a particular aspect of the human experience, and that contributed to who I am and my wanting to be supportive of others who might not fit into mainstream categories, such as people with diverse gender identities.

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Stephen M. Rosenthal, MD,

professor of pediatrics, medical director, Child and Adolescent Gender Center (CAGC), University of California, San Francisco; director, World Professional Association for Transgender Health



During ENDO 2022 in Atlanta, Ga., Rosenthal (far left) and Ferraz-de-Souza (far right) reconnected with their colleagues from around the world for the first time post-pandemic. Pictured between them are (l to r): Camille Powe, MD; Alicia Diaz-Thomas, MD; Marina Fernandez, MSC, PhD; Sarah Nadeem, MD; and Zeynep Madak Erdogan, PhD.

other minorities go through. Steve mentioned, and this is something that Sherri-Ann Burnett-Bowie taught me too, is that we all belong to minorities and majorities. I'm a cis man, so I have some advantages in the world, but, at the same time, I'm gay, and this will sometimes put me at a disadvantage in certain contexts. So, I think being gay shapes my view to be inclusive and accepting — and celebrate diversity.

I come from a background where it was hard for me to come out to my family and friends. Then I had a sort of second coming out to the endocrinology world. I had to sit down with my colleagues like Berenice in Sao Paulo and John in the U.K. and have conversations, which felt very weird, almost like coming out to my parents. But it's how these things perhaps still operate. For a while I thought, do I need to come out professionally? I'm sure there is some detriment that can come with that because, at some point in career progression, decisions are still made at a clubby level where people relate to people that are similar to them, and if they see you as different, they might not relate to you initially or be as open.

But there was a point when learning through CoDI how important representation is that really makes sense to me. I need to be out because I want to be giving this example that you can be gay and be someone who contributes to the Society and be in leadership positions and help others as a doctor and researcher. There is a degree of tokenism that I've come to terms with. If I am the token gay, at least I'm representing in this and other forums. Being completely out at work gives you a sense of freedom and not having to be safeguarding. When you obscure that part of your life, you become defensive about a lot of things, and it impacts how you relate to people. So, there is a degree of freedom that you can really appreciate, but also, I think a lot about representing and making this space seen as a space that is welcoming to people of diverse sexual orientations.

ROSENTHAL: I want to address something that Bruno said. He gets these opportunities not because he's gay or a token gay but because of the kind of person he is. I think that really comes across in his response.



I was coming out in the mid 70s, which was a different time. When I was a medical student in New York at Columbia University and just coming to terms with it myself, I was very much in the closet about it, enduring some of the experiences that gay people endure. You find people who support you, but you also find people who reject you. Reflecting back on that, I remember that when I was accepted into the fellowship program in San Francisco, part of what drew me there was not only the academic excellence of the mentors but also the feeling that it would be easier for me to feel free to be who I am there. So that influenced my choice of location for training. It's always been important to me to try to have a work/life balance, to feel that I'm working in a program where I can feel happy to be contributing but also that I can be myself. I felt incredibly fortunate to land in San Francisco and to land in pediatric endocrinology because I really fell in love with the field. I would say that my sexual orientation didn't really influence my choice of focus, until I had the situation in 2009 that I discussed earlier.

I want to underscore that. Yes, there were the personal challenges that both Bruno and I have talked about in coming out, perhaps some of the rejections, of course, fortunately balanced by positive experiences and also learning to believe in yourself — but finding this opportunity where I felt I could give back to the LGBT community was so important because I felt that there really was a role for physicians who are trained in the nuances of endocrine treatments. It made me feel drawn in large part to that part of my career, so the last 15 years have certainly been influenced by all of my prior experiences including coming to terms with who I am in terms of my sexual orientation.

EN: What lies ahead, research or career-wise?

ROSENTHAL: I'm in various stages of my semi-retirement, but I became emeritus professor in 2015, and I have continued to be active clinically as the medical director of CAGC. I will be stepping down from that role at the end of June and will be the emeritus medical director, and I'm just delighted that two of the junior faculty (Janet Lee and Abby Cobb-Walch) that I fortunately had the wonderful opportunity to mentor are assuming the role of co-medical directors. I hope to continue to be a contributor in our research as well as through my work with the

clinical practice guideline. I'm also on the board of directors of the World Professional Association for Transgender Health (WPATH). I'm still involved in writing book chapters for the *Williams Textbook of Endocrinology*, and I'm about to start co-authoring a chapter in *Sperling Pediatric Endocrinology*.

I'm at a point in my life where I should probably start to shift that work/life balance, but it's hard for me to walk away from all of this. I'm going to be 74, and I can't do everything I used to be able to do, but I try to remember how lucky I am that I can still go ice skating several days a week. So that's what's next.

FERRAZ-DE-SOUZA: You save *this* detail for last, Steve?

I'm super excited about joining the board of the Endocrine Society in June. This is a tremendous honor and an opportunity to make a contribution at a different level, so I'm really looking forward to that. About my career in general, I moved to Australia in 2022 because my husband, who is Australian, wanted to move back (we were living in Brazil), and we're still finding our ground here, but so far, it's been very good. Sometimes I think of how my career will progress here and how close to endocrinology I'll be in five to 10 years. I'm involved with a lot of medical education and in leadership roles in medical school, and I'm finding that interesting. But I'm pleased that the Endocrine Society will always be my anchor point, and the main thing I'm excited about now is this upcoming role on the board. **EN**

—HORVATH IS A FREELANCE WRITER BASED IN BALTIMORE, MD. IN THE MAY ISSUE, SHE WROTE THE COVER STORY ON JOY Y. WU, MD, PHD.

A PROFILE IN Courage

How Julie Ann Sosa is using her past to create a better future for LGBTQ+ medical professionals

BY GLENDA FAUNTLEROY SHAW

Pursuing a career in medicine is no easy accomplishment, but when faced with discrimination because of your sexual identity, the road to success is even more difficult. For persons who identify as lesbian, gay, bisexual, transgender, queer, or other sexual and gender minority (LGBTQ+), a prominent endocrine surgeon and educator aims to make the path in one specialty a smoother one.

Julie Ann Sosa, MD, MA, FACS, is the Leon Goldman MD Distinguished Professor of Surgery at the University of California San Francisco (UCSF) and has served as chair of UCSF's Department of Surgery since 2018. With a clinical interest in endocrine surgery and a focus in thyroid cancer, Sosa has authored more than 400 peer-reviewed publications and 80 book chapters and reviews, all largely focused on outcomes research, healthcare delivery, hyperparathyroidism, and thyroid cancer.

Two of Sosa's articles published in 2022, however, were of a much more personal nature to Sosa and have garnered the attention of

many. The articles in *The American Surgeon* and *JAMA Surgery* focused not on the endocrine specialty but on the environment in the surgical community for LGBTQ+ surgical residents and Sosa's career as an LGBTQ+ medical professional.

In *The American Surgeon* article, "Path to Academic Success: Perspectives of a LGBTQ+ Chair of Surgery," Sosa and her co-author examined the challenges faced by those who identify as LGBTQ+. The article cited her *JAMA Surgery* study "Experiences of LGBTQ+ residents in US general surgery training programs," that surveyed 6,381 general surgery residents, in which the learners who were LGBTQ+ reported higher rates of discrimination, harassment, and bullying than their non-LGBTQ+ peers. The survey revealed that 4.8% of the residents identified as LGBTQ+, and, of those, 59% experienced discrimination, 47.5% sexual harassment, and almost 75% experienced bullying. LGBTQ+ women were targeted more than their male counterparts. This mistreatment, of course, has a significant impact on young residents in an already stressful learning environment.

Instead of viewing being female, Latina, and LGBTQ+ as a hindrance in the realm of surgery, Julie Ann Sosa, MD, MA, FACS, instead proudly asserts that these are actually “superpowers.” And she is determined to harness those powers so that future generations will have an easier path.



“LGBTQ+ residents experienced more discrimination, harassment, and bullying, and, almost certainly as a result, more frequently considered leaving their training programs and contemplating suicide,” Sosa explains. “This is beyond distressing, and it should be a call to action for all, especially since attending surgeons were the most common overall source of mistreatment. We need to work on repairing our culture and ensuring an inclusive and welcoming community.”

The discrimination problem is not limited to general surgery, however. A recent literature review in the January issue of *BMC Medical Education* by Mauricio Danckers, et al., revealed that general surgery was among several specialties viewed by LGBTQ+ trainees as being less inclusive. Other specialties on the list were orthopedics, neurosurgery, thoracic surgery, and colorectal surgery. According to the review, the surgical field has traditionally been perceived as a training field with a predominantly white heterosexual trainee population that lacks diversity. Some medical trainees described the surgical field as a “boys club” or “fraternity.” For comparison, the specialties

perceived as more inclusive were psychiatry, family medicine, pediatrics, preventative medicine, and internal medicine.

Sosa writes about how closeted LGBTQ+ friends and colleagues feel estranged inside and outside the classroom. Declining invitations to social events to avoid uncomfortable discussions that might expose your sexual identity can be the norm for many. All of this can create loneliness and isolation. Sosa says she, too, was not open about her sexuality early in her school career but doesn't like to wonder if she's experienced any delays in her career success due to her now-open sexuality.

“I was not open early in my career, but I tend to not look backward a lot since I can't change the past,” she says. “I really think that we need to be squarely focused on the present — and, more importantly, the future. I feel blessed to be where I am, with the friends, colleagues, and collaborators that I have, doing my dream job as the chair of the Department of Surgery at UCSF!”



Sosa, in her scrubs, chats with her team as she prepares for surgery at UCSF.

“ In the end, our legacy is measured not by citations, publications, and presentations, but rather by people whose lives we impact. If I can share my life experience and others can learn from my mistakes without having to make them, I will have had lasting impact, hopefully.”

— JULIE ANN SOSA, MD, MA, FACS, LEON GOLDMAN MD DISTINGUISHED PROFESSOR OF SURGERY; CHAIR, DEPARTMENT OF SURGERY, UNIVERSITY OF CALIFORNIA SAN FRANCISCO, SAN FRANCISCO, CALIF.

Finding a Safe Place

For any student pursuing a medical degree, factors to be considered when choosing a medical school includes geography, finances, and lifestyle. But for many LGBTQ+ trainees, finding a welcoming and diverse school community is also crucial to their application.

LGBTQ+ learners may be more limited in personal and professional growth opportunities in more conservative states that have supported anti-LGBTQ+ laws in recent years. Florida, for example, passed the “Don’t Say Gay” bill in 2022 that now bans any classroom discussion on sexual orientation and gender identity up to the 12th grade. The *BMC Medical Education* article reported that the law has raised concerns due to its “implications that threaten to worsen an existing hostile school climate for LGBTQ+ youth.”

The article makes the point that restrictions like those within the “Don’t Say Gay” law and similar legislations send a message that being LGBTQ+ is wrong and stigmatizes both LGBTQ+ youth and the community at large. LGBTQ+ students in states like Florida may choose to pursue their medical education in a traditionally more accepting location rather than save money with in-state tuition costs.

Sosa encourages LGBTQ+ students, residents — and even faculty — to be open about their identities during the admissions and recruitment processes. She says it is better to know before accepting a position whether you may experience belonging or bullying in a potentially new professional home.

“It is not uncommon now for me to get emails from trainees and junior faculty members around the country asking for advice,” says Sosa. “In the fall, for example, I receive questions from residency applicants asking if they should be truthful about

their identities during interviews. Some say they have been advised by mentors and senior colleagues to even lie about their identities.”

Sosa, instead, tells them to be honest and ask questions.

“If a community is unwelcoming, it is important to know that before becoming a member of it for five to seven years, which is the length of general surgery residency training,” she explains. “At the same time, if the culture fosters personal and professional belonging, that might be a priority that trumps other factors when deciding how to rank programs.”

Sosa is grateful that the climate toward LGBTQ+ people in her home state of California is an accepting one.

“I’m very glad that I live and work in San Francisco, and that UCSF is a culture that abides by the PRIDE values of professionalism, respect, integrity, diversity, and excellence,” she says. “I’m not sure what it is like to live elsewhere, but when I moved to California [from Duke University in North Carolina], it definitely felt like we had ‘come home,’ personally and professionally.”

“To be successful professionally, you have to be happy personally,” Sosa adds. “Increasingly, I hear from young and old recruits that living in a place where women’s rights, reproductive rights, and indeed, human rights, are best protected is very important if not the most important factor they and their families weigh when considering a place to work and live.”

For the LGBTQ+ members of the surgery specialty, the future for them looks brighter as there is a growing number of leaders in the field who are now open to their LGBTQ+ identity. The Association of Out Surgeons and Allies (AOSA) (outsurgeons.org) was founded with a mission that “promotes acceptance, inclusion, and equity in the surgical specialties to further learner engagement, support individual clinicians and researchers, and build a community.”

“AOSA is vibrant and growing, with a large and diverse leadership team, mission statement, and expanding membership,” Sosa says. “There are 26 institutional members; a website with a job board; and secure membership access to foster support, networking, and discussion. I’m proud that UCSF was the inaugural institutional sponsor for AOSA.”

Paying it Forward

Sosa says a lot of progress has been made in making work and learning environments more accepting to the LGBTQ+ community. She notes that it was not until June 2020 that the mistreatment of LGBTQ+ Americans in the workplace became illegal when the Supreme Court ruled in the *Bostock v Clayton County* decision, that the 1964 Civil Rights Act protects employees against discrimination because of sexuality or gender equality. The 6-3 ruling has been hailed as one of the most important legal decisions regarding LGBTQ rights in the U.S.

To extend the progress on creating more inclusive and safe spaces, Sosa suggestions including following:

- Use pronouns (e.g., she/her/hers) to introduce yourself to colleagues and patients.
- When talking to friends, colleagues, or patients ask about “partners” rather than assuming there is a wife or husband.



Sosa (bottom row, third from right) is pictured here with her colleagues at a UCSF Department of Surgery Faculty Retreat that took place on May 4, 2024.



Julie Ann Sosa, MD, MA, FACS

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If a community is unwelcoming, it is important to know that before becoming a member of it for five to seven years, which is the length of general surgery residency training. At the same time, if the culture fosters personal and professional belonging, that might be a priority that trumps other factors when deciding how to rank programs.

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— JULIE ANN SOSA, MD, MA, FACS, LEON GOLDMAN MD DISTINGUISHED PROFESSOR OF SURGERY; CHAIR, DEPARTMENT OF SURGERY, UNIVERSITY OF CALIFORNIA SAN FRANCISCO, SAN FRANCISCO, CALIF.

- Enforce healthcare institutional systems for confidential reporting and addressing instances of mistreatment.
- Work to create educational content and a curriculum on LGBTQ+ health that is mandatory for learners as well as staff and faculty at all levels.

Sosa hopes to persuade other senior faculty in the surgical specialty at institutions across the country to mentor junior colleagues.


“Mentorship and, perhaps even more important, sponsorship, are critical,” she says. “It is something that I didn’t have a lot of when I was a trainee and junior faculty member. And now I see my role as one driven by ‘paying it forward.’”



At ENDO 2019 in New Orleans, La., Sosa was part of a panel that covered "The Year in Thyroid Healthcare Delivery," where she discussed various clinical practice guidelines.

“Being a woman, a Latina, and LGBTQ+ in surgery is potentially a superpower, so hopefully there are a number of trainees and junior colleagues whose lives I can understand a little more and with whom I can connect,” Sosa adds. “In the end, our legacy is measured not by citations, publications, and presentations, but rather by people whose lives we impact. If I can share my life experience and others can learn from my mistakes without having to make them, I will have had lasting impact, hopefully.”

There’s no debate on whether Sosa’s career and life successes have made an impact. Ascending to the position of chair of a major medical department is no small feat. Sosa is also happily married to her co-author on *The American Surgeon* article, Sanziana A. Roman, MD, FACS, a fellow surgeon. They share that they both were told “innumerable times” by supervisors and bosses that they would never make it in surgery or in life.

“After 20 years together, we can proudly say, we are courageous. We have persevered in living our truth and have pushed forward even when we were afraid,” they write. 

—SHAW IS A FREELANCE WRITER BASED IN CARMEL, IND. SHE’S A REGULAR CONTRIBUTOR TO *ENDOCRINE NEWS* AND WRITES THE MONTHLY LAB NOTES COLUMN.



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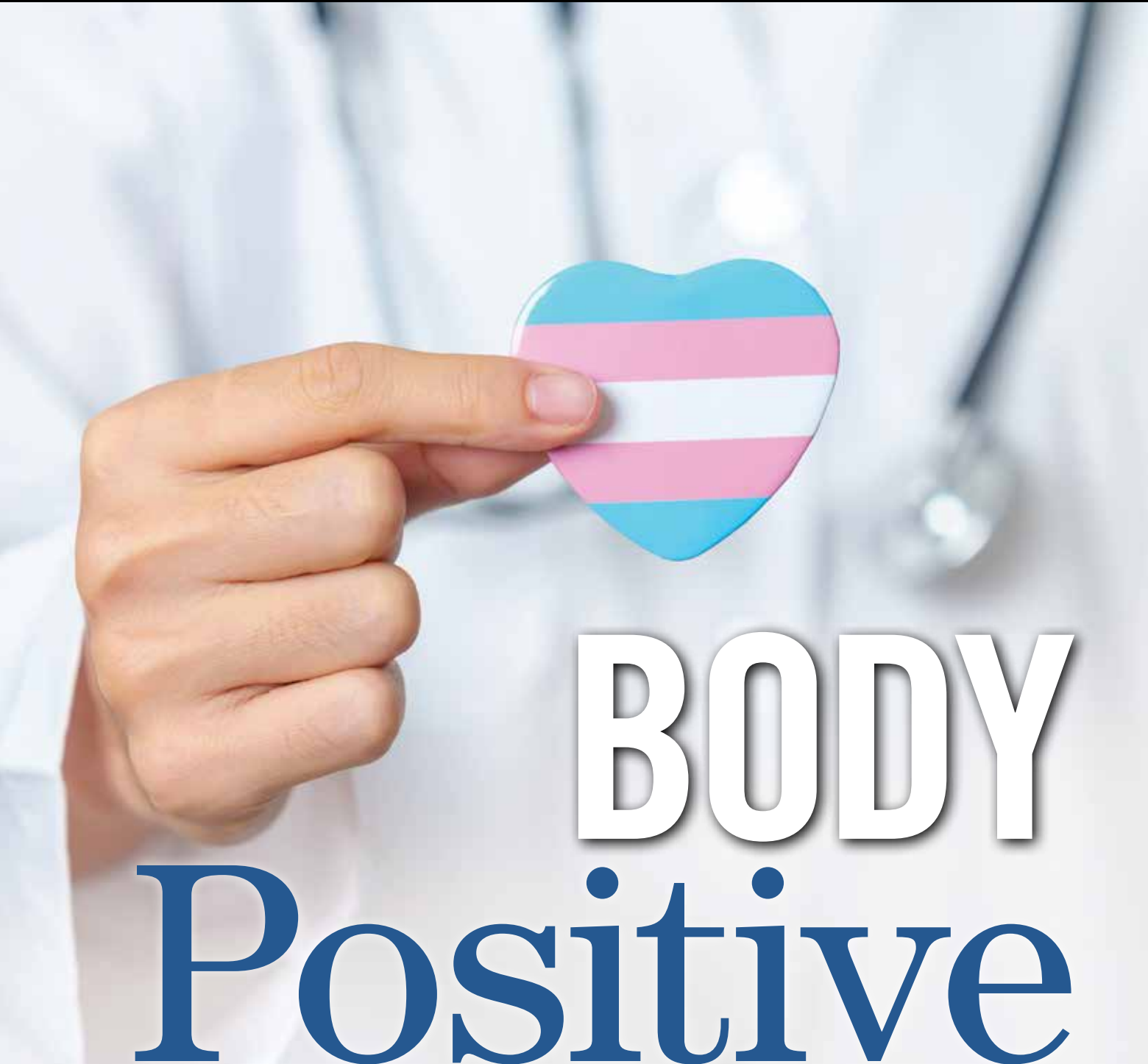
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BODY Positive

BY DEREK BAGLEY

A closer look at body mass index criteria
for gender-affirming surgery

Body mass index requirements for gender-affirming surgeries can sometimes present an obstacle to gender transition surgery for many transgender and gender-diverse people. Sean Iwamoto, MD, and John M. Taormina, MD, two of the authors of a recent *Journal of Clinical Endocrinology & Metabolism* paper, discuss the need for a multidisciplinary approach for these patients.

Last November, Sean Iwamoto, MD; John M. Taormina, MD; and their team of colleagues comprising providers from across the country, presented a talk titled, “A Closer Look at Body Mass Index Requirements for Gender-Affirming Surgeries” during a plenary session at the U.S. Professional Association for Transgender Health Scientific Symposium in Colorado, during which a gender-diverse patient shared their own

experience facing barriers to a gender-affirming surgery (GAS) because of body mass index (BMI) requirements.

Soon after, Iwamoto, Taormina, and their co-authors were invited by the editors of *The Journal of Clinical Endocrinology & Metabolism* to submit a different but similar case as an Approach to the Patient article. For this paper, the authors detailed the case of a 20-year-old White non-Hispanic



John M. Taormina, MD

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A multidisciplinary approach to patient management provides more holistic care than can be provided by one person. It allows adequate time and focus to address all aspects of patient care. This is important in perioperative planning and risk assessment, as there are risks beyond traditional surgical complications, including nutritional risks and mental health risks.

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— JOHN M. TAORMINA, MD, ASSISTANT PROFESSOR, FAMILY MEDICINE,
UNIVERSITY OF COLORADO DENVER – ANSCHULTZ MEDICAL CAMPUS, DENVER, CO.

nonbinary patient designated female at birth. The patient, who uses they/them pronouns, presented to the endocrinology clinic because they wanted to discuss weight management for gender-affirming bilateral mastectomy.

Multiple surgical centers had already turned the patient away, either because a center did not perform GAS, or because a center required the patient to lower their BMI. The patient initially tried lifestyle modifications — counting calories, exercise — but their chest caused back pain (the reason for seeking the mastectomy) and limited activity, so they resorted to more extreme forms of dietary restrictions, hoping to quickly shed the weight. Weight loss was ultimately unsuccessful, which meant the patient couldn't access GAS, and their depression worsened to including thoughts of self-harm. In the case presentation, the authors write, “[The patient] presented to the clinic frustrated and asked for support.”

The authors go on to point out that this case is representative of a transgender or gender-diverse (TGD) person's experience with barriers to GAS. What's more, there's a dearth of actual evidence to support these BMI requirements as a requisite to GAS. “This paper grew out of a recognition of the complexity of weight management and weight recommendations for TGD people and concerns regarding the lack of literature supporting presurgical BMI cutoffs,” says Taormina, who identifies as gay, and is an assistant professor of family medicine at the University of Colorado Denver – Anschutz Medical Campus as well as an obesity medicine specialist at the Anschutz Weight Management and Wellness Clinic.

Acknowledging Patient Barriers

Global interest in GAS has increased in the past two years, according to the authors of the JCEM paper, and that has led to an increase in procedures in the U.S. Taormina says that the reason for the increased interest is multifactorial, but the largest contributor to this shift is the increased access to the procedures. More surgeons are offering GAS, and more insurance carriers are paying for them.

As that interest grows, so too does the need to be aware of the obstacles TGD patients face beyond BMI restrictions — insurance, legislative, and geographical barriers. “Some endocrinologists may only manage gender-affirming hormone therapy (GAHT), but others may end up also taking care of non-GAHT concerns such as primary care, pre-exposure prophylaxis (PrEP), mental health, and also advocating for patients in accessing GAS,” says Iwamoto, who also identifies



as gay and is an assistant professor of medicine at the University of Colorado Denver – Anschutz Medical Campus, and a staff endocrinologist at the Rocky Mountain Regional VA, Denver, Co. “Thus, it is increasingly important for endocrinologists to be aware of the barriers that their patients face in accessing all aspects of gender-affirming care.”

But again, as the JCEM authors write, these BMI requirements (usually set between 30 and 35 kg/m²), are a significant barrier to TGD people, since these patients are more likely to have obesity than cisgender people, and, as in the case above, recommendations to lose weight could lead to disordered eating.

And since disordered eating can help alleviate gender dysphoria in many TGD patients by leading to body changes that can be affirming, such as a desired body shape or menstrual cessation, it is important for providers to be aware of this, because eating disorders are prevalent among TGD people. “Providers should screen patients for a history of disordered eating before discussing weight management and should refer appropriate patients to qualified eating disorder specialists when indicated,” Taormina says.

A Need for a BMI Standard

Neither the Endocrine Society nor the World Professional Association of Transgender Health identify BMI requirements,

and the JCEM authors write, “BMI requirements for GAS run counter to current efforts by the American Medical Association to understand health outcomes and risk beyond BMI.”

Taormina tells *Endocrine News* that BMI requirements are typically enforced due to concerns about patient safety (e.g., wound infection, venous thromboembolism) and aesthetic outcomes. And while available retrospective studies do not support that these outcomes are significantly different among patients with obesity compared to those without obesity, surgical centers may have multiple reasons for continuing to enforce BMI criteria.

“These concerns can include a surgeon’s skill and experience operating on larger bodies, access to appropriately sized equipment (e.g., tables, instruments), and anesthetic concerns regarding proper ventilation and medication dosing,” Taormina says. “Expanding medical/surgical training to the care of patients with obesity and increasing availability of appropriate equipment can alleviate many of these concerns. Prospective and multi-site studies are also needed to further investigate the perioperative risks of GAS in patients with obesity.”

Iwamoto, a former co-chair of the Endocrine Society’s Transgender Medicine and Research Special Interest Group, says that there have been recent calls among clinicians, scientists, and patients to include TGD patients from the very beginning when thinking about research studies, clinical

care optimization strategies, quality improvement projects, etc. “It is equally important to work with and promote TGD clinicians and scientists who are also working hard on studies to ultimately improve TGD patients’ healthcare experiences and health outcomes,” he says.

“This movement is in response to a recognition that TGD people know what is important to TGD people better than the medical or scientific community at large,” Taormina says. “GENDER-Q is one example of such a tool being developed in collaboration with TGD people to assess outcomes among TGD people” (see box).

Until those studies are completed, centers like the UHealth Integrated Transgender Program at University of Colorado Anschutz Medical Campus are caring for many transgender and gender diverse patients who are denied GAS due to strict BMI criteria. “We have implemented weight management services into our multidisciplinary gender-affirming program to try to meet this need,” Taormina says.

Iwamoto points to an article he co-authored from June 2022 in *Transgender Health* that further describes the multidisciplinary model of care espoused by the UHealth Integrated Transgender Program that’s housed within the broader endocrinology clinic where patients may have appointments on the same day with endocrinology, weight management, primary care, gynecology, plastic surgery, psychiatry, psychology, and social work. “A multidisciplinary integrated clinic is a feasible and desired step toward improving health care for the TGD population,” the authors of that paper write.

A Need for Multidisciplinary Care

For TGD people, the multidisciplinary approach is paramount. The patient from the JCEM report agreed to pursue medical weight management to qualify for GAS, but they were concerned about calorie counting and their history of disordered eating, so they were referred to an affirming psychotherapist who specializes in addressing gender dysphoria and disordered eating. “A multidisciplinary approach to patient management provides more holistic care than can be provided by one person,” Taormina says. “It allows adequate time and focus to address all aspects of patient care. This is important in perioperative planning and risk assessment, as there are risks beyond traditional surgical complications, including nutritional risks and mental health risks.”

Patients Are a Virtue

GENDER-Q, is a new treatment tool that gets input from the most important participants: the patients.

The GENDER-Q is a patient-reported outcome measure (PROM) that has been in development for the last six years. The work has been led by Anne Klasse, D.Phil, a professor of medicine at McMaster University in Hamilton, Ontario, Canada, and Manraj Kaur, PhD, a Canadian Institutes of Health Research (CIHR) funded Postdoctoral Fellow at Brigham and Women’s Hospital.



The team used life stories of 84 TGD people from Canada, Denmark, the Netherlands, and the U.S. who were seeking or had already undergone some form of GAS to develop the GENDER-Q. They then took feedback from 50 clinical experts and 14

patient participants before conducting a pilot field test study of 602 TGD participants. The GENDER-Q international field test study is ongoing.

“[PROMS] such as the GENDER-Q can be used to educate patients, align patients’ goals and preferences with realistic expectations about the surgical procedures’ purposes and outcomes, and conduct comparative effectiveness research,” the team wrote in a 2023 paper in the *AMA Journal of Ethics*. “PROM data can contribute to evidence-based, shared decision-making and just access to gender-affirming surgical care.”

“For me, as a surgeon, the most important outcome after gender-affirming surgery is the impact we had on a patient, and patient-reported outcomes gather these data,” says Shane Morrison, MD, MS, a plastic surgeon with the University of Washington in Seattle who specializes in GAS and helped develop the GENDER-Q. “Because we are interested in understanding what are important outcomes to individuals undergoing gender-affirming surgery, we were deliberate in having individuals undergoing gender affirmation participate in its development. Without collaboration with TGD individuals in the development of GENDER-Q, the instrument would not be valid for the TGD population and would not gather clinically meaningful data.”



Sean Iwamoto, MD

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Some endocrinologists may only manage gender-affirming hormone therapy, but others may end up also taking care of non-GAHT concerns such as primary care, PrEP, mental health, and also advocating for patients in accessing GAS. Thus, it is increasingly important for endocrinologists to be aware of the barriers that their patients face in accessing all aspects of gender-affirming care.

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— SEAN IWAMOTO, MD,
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And that multidisciplinary approach should incorporate shared decision-making. Some patients may not wish to lose weight — they may feel more comfortable in a larger body, or they may have struggled with an eating disorder, or they simply aren't ready to start lifestyle modifications or don't have the means to do so. Taormina says that TGD people might find a larger body more affirming; transfeminine people may desire larger breasts. On the other hand, transmasculine people may want to conceal their breasts.

“I discuss postoperative goals with patients before surgery to develop post-op behavior and medication plans and to preemptively address anticipated challenges,” Taormina says. “I encourage weight maintenance in the immediate pre- and postoperative periods for improved recovery and wound healing. My overall focus is to listen to patient preferences while also promoting lifelong healthful behaviors and monitoring for changes in health markers (i.e., glycemic control, lipid profile, blood pressure). Weight changes can occur quickly, so I generally see patients four to six weeks after their procedure and then continue to see patients at least every three months for the next year or so to continue to monitor behaviors and adjust medications as needed.”

For now, Iwamoto says he hopes the medical community understands the importance and benefits of multidisciplinary care, as it relates to holistic gender-affirming care and weight loss/weight management strategies for TGD patients. “Patient voices are even more important in these types of projects and publications,” he says. “Also, the appreciation we have for our UCHHealth Integrated Transgender Program Community Advisory Board's input in clinical and research activities of the program, including those related to BMI requirements for gender-affirming surgeries, cannot be understated.”

Taormina goes on to say he wants to bring awareness that BMI alone is insufficient to determine an individual's surgical or medical risk. While adiposity can certainly affect health and surgical outcomes, each individual's risk must be assessed on a case-by-case basis. “Surgical risks must be weighed against the risks of delaying surgery and the risks of forcing weight loss to access lifesaving care,” he says. “For many, gender-affirming surgeries are lifesaving surgeries.” ^{EN}

A RELENTLESS PURSUIT



BY DEREK BAGLEY

The Journal of the Endocrine Society Invites Collaborative Obesity Research

As the Endocrine Society continues to be a thought leader in the realm of treating and combatting the burgeoning epidemic of obesity, the *Journal of the Endocrine Society* recently published an editorial discussing various treatments and what the next steps are for endocrine clinicians and scientists.



Three editors of the *Journal of the Endocrine Society* (JES) recently published an editorial titled “From Fundamentals to the Clinic: Advancing Obesity Research in Endocrinology,” recognizing that the landscape of obesity research has rapidly evolved in the past five years, and that sharing scientific data is an important step toward addressing the growing global obesity epidemic.

Zeynep Madak-Erdogan, PhD, associate professor of nutrition in the Department of Food Science and Human Nutrition at the University of Illinois Urbana-Champaign in Urbana, Ill., and editor-in-chief of JES; Stephen Hammes, MD, PhD, the Louis S. Wolk Distinguished Professor of Medicine, chief of the Division of Endocrinology, Diabetes and Metabolism, and executive vice-chair of the Department of Medicine at the University of Rochester in Rochester, N.Y., president of the Endocrine Society and deputy editor of JES; and M. Furkan Burak, MD, instructor in Medicine at Brigham and Women’s Hospital and Harvard Medical School in Boston, and associate editor of JES, write that they’re issuing “a strong call to action for the scientific and medical communities to pursue the boundaries of obesity research and treatment relentlessly.”

“The obesity epidemic is not going away any time soon, so continued research that allows us to better understand the pathophysiology of weight gain will undoubtedly lead to better health care options for everybody,” Hammes says. “This editorial is key for the Endocrine Society, as it reiterates our commitment to obesity research, and emphasizes the important leadership role



The popularity of anti-obesity medications such as semaglutide has had an impact on treating people with obesity, as well as providing a number of safe, effective pharmacological treatment options.



ZEYNEP MADAK-ERDOGAN, PHD

ASSOCIATE PROFESSOR OF NUTRITION, DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION, UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN, URBANA, ILL.; EDITOR-IN-CHIEF, JOURNAL OF THE ENDOCRINE SOCIETY

“Obesity and related health concerns disproportionately affect underserved populations. This condition often leads to increased medical expenses due to associated health conditions like diabetes, heart disease, and cancer. While new drugs offer hope, their high costs restrict access significantly.”

that we hope the *Journal of the Endocrine Society* can take in this important field.”

Endocrine News caught up with Madak-Erdogan and Burak to discuss the editorial, the current dynamic landscape in obesity research, and what they would like to see over the course of the next five years.

Endocrine News: First off, tell me a little about the origins of this editorial. What made you want to sit down and write it?

Zeynep Madak-Erdogan: We were inspired by the rising prevalence of obesity and obesity-related issues, current health trends, and increasing research and clinical attention to new drugs that target obesity. With our new associate editor for obesity, Furkan Burak, MD, joining our team, it was the right time to write this editorial.

M. Furkan Burak: Seventy to 75% of the entire U.S. is either overweight or obese, and it’s basically out of control; it has become a new normal. The treatment of obesity has been problematic for more than a hundred years, with lots of medications withdrawn, patients and providers changing their perceptions, and a lack of specialists. Then there is all the stigma; obesity is unfortunately stigmatized, and this has created a lot of problems.

It’s time to increase awareness, reverse all the mistakes and the bad reputation of obesity treatment, and show people that this is a chronic disease like other chronic diseases. Because of recent developments that have given us more tools, this is the time to go full force. We must increase the awareness of patients, the public, governments, industry, academia, everyone, to address this worldwide problem.

EN: You point out that obesity intersects with economic burdens and social disparities. Can you speak a little more about those disparities and why addressing them is crucial to addressing obesity as a whole?

ZME: Obesity and related health concerns disproportionately affect underserved populations. This condition often leads to increased medical expenses due to associated health conditions

like diabetes, heart disease, and cancer. While new drugs offer hope, their high costs restrict access significantly. Additionally, there are ongoing issues with access to nutritious food, safe places to exercise, preventive healthcare, and targeted education programs, all of which are essential for mitigating the disparate negative impacts of obesity.

MFB: Obesity comes as a package. Obesity leads to diabetes; it's very hard to treat diabetes patients because many have lower socioeconomic status. They cannot get the best tools for chronic disease management, and this only makes things worse. How they live, how they eat, how they treat the disease are all becoming more and more problematic, so we need to address that first, create equity, and teach them. It's not easy to address this, but at the end of the day, this costs the world trillions of dollars. It takes a big portion of the world gross domestic product, if you think about all of obesity and its related problems. I think it's critical to address and treat obesity in everyone who wants treatment, and to create tools to reach out and improve the disparities so treatment is available to everyone.

EN: Can you speak a little more about the dynamic and changing landscape of obesity research?

ZME: Very exciting developments are happening in this field. Obesity research is rapidly evolving, incorporating advances in molecular mechanisms, the gut microbiome, and pharmacology to develop personalized treatments. There's also a growing focus on the psychological and behavioral factors contributing to obesity, alongside the use of personal devices and wearables in monitoring and managing health. Additionally, interdisciplinary approaches and public health policies are being explored to create environments that support healthier lifestyle choices on a community-wide scale.

MFB: The U.S. Food and Drug Administration (FDA) has approved anti-obesity medications before, but they were very limited, although commonly prescribed. For example, phentermine is an amphetamine substitute. It was approved in 1959 and was the most commonly prescribed anti-obesity medication until recently. But this medication increases blood pressure, the oxygen requirement of the heart, and anxiety

and arrhythmia risk, all things that can be very problematic in obesity patients. It is not ideal, and you can use it for, at most, one year. And in a chronic disease, you then regain weight, and then you get discouraged, and all the stigmatization continues, so you just give up. Gain, lose, gain. This weight cycling is much more problematic than even having obesity.

We started to understand what is really changing in obesity, in adipose tissue, in the heart, in the vasculature, in the brain. And knowing the biology really helped us, so we understood what is missing or changing. We are replacing what is missing; we are mimicking the body's own mechanism with biological treatments for obesity. We have started getting huge successes, almost to the surgical level of weight loss.

For example, I have patients [on glucagon-like peptide (GLP)-1 agonists] losing 30% of total body weight, which is like a surgical weight loss, while treating their heart attacks, while treating their diabetes, while treating their asthma, obstructive sleep apnea, and chronic kidney disease. Now, we are at the stage of the optimal treatment paradigm, which we didn't have for hundreds of years. Because if you understand the biology, you can treat the disease.

That's why the landscape is dynamic — it's changing from problematic, repurposed drugs to highly targeted drugs, biological drugs that address obesity as a whole, rather than just causing weight loss — an approach that creates all kinds of other problems.

EN: What has caused this recent surge in obesity research in the past five years?

ZME: We can list several factors. Of course, there is the rising global prevalence of obesity, new drugs being approved and developed, and innovations in technology, which allow for more detailed data analysis and new treatment methods. There is also increased public awareness, and there are more opportunities for interdisciplinary collaboration, as well as enhanced public and private funding, in this space. They have significantly contributed to this surge.

EN: You also point out the recent popularity of drugs



M. FURKAN BURAK, MD

INSTRUCTOR IN
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“Research is very valuable, and the best research comes from collaborations. We need to collaborate all around the world, put the resources into it, bring the previous data in, and create new data in a collaborative way. Sharing resources really makes an impact.”

like Ozempic, as well as many other digital health tools to augment diet and exercise. In your opinion, are there any therapies you're most excited about? Any you're still wary of?

ZME: Several drugs are in the clinical pipeline that have dual/triple activities towards GLP-1 and other clinically relevant targets, such as retatrutide, survodutide, etc. Oral GLP-1 receptor agonists like orforglipron are also very exciting.

EN: On that note, how can we make sure these medications and therapies are available to anyone who needs them?

ZME: The new research findings are very important. Hopefully, new research will inform policy regarding limiting out-of-pocket costs to improve affordability, negotiating fair prices for coverage by Medicare and Medicaid, and potential patent reform to address high drug prices due to incremental innovation.

MFB: Data works. I think everybody wants to know that this is a cost-effective treatment, and this is really helping the people. It's not just a cosmetic problem, so you lose weight, then you feel great. It's more than that. The outcome trials are producing more data, and because we are scientists, we are physicians, we go by the data. I think the cardiovascular outcome trials have shown such huge success that even insurance companies have started understanding this.

For example, I am on the MassHealth Drug Utilization Review board; it's very progressive. It's federal insurance, but they're really thinking about how we can help people, the new science, and what should we do? And they are thinking about cost-effectiveness. MassHealth started covering these anti-obesity drugs, including Wegovy.

I think insurance companies understand that this is a cost-effective treatment. If somebody doesn't have a heart attack, get chronic kidney disease (CKD) or sleep apnea; feels better; does not lose their job; feels lighter; does not have diabetes; and none of the complications happen, it's very cost-effective. We are more and more understanding of this, which will likely make the coverage increase. We are not there yet, but we are happy about the pace of understanding from the payer's standpoint.

EN: As obesity research continues to expand, what is your ideal landscape in this field over the next five years?

ZME: I can mention two things: Increased funding not only from the private sector but also from the National Institutes of Health (NIH), and improved access to new therapies.

MFB: One unmet need is muscle mass preservation, so I really want to see muscle-preserving agents in the market, and then all these other lifestyle modifications focusing on muscle mass preservation might be better utilized.

Second, we have patients with a BMI of 50, 60, 70, more, and 15% weight loss is not enough. We have more drugs coming down the pipeline that we are excited about, other gastrointestinal (GI) peptides, and there may be synergistic and additive effects. I am thinking of amylin, gastric inhibitory polypeptide, GLP, glucagon. And all these GI peptide combinations show that you can normalize the liver fat, help nonalcoholic steatohepatitis (NASH), and achieve 25% to 30% of total body weight loss in some individuals.

EN: Finally, what's the main thing you hope readers take away from your editorial and this piece?


ZME: This is a very exciting time for individuals with obesity as well as for the scientific community. With a recently added curated collection of high-quality obesity articles, online at JES – open access, as are all JES articles — we are keeping an eye on new developments and opportunities. We encourage submissions from prospective authors, including research articles, technical resources, reviews, and clinical studies to be considered for publication. Our areas of publishing interest include genetic associations, hormones related to obesity, obesity disparities, obesity-related conditions, pediatrics and obstetrics, therapies, environmental factors, and diabetes.

MFB: Research is very valuable, and the best research comes from collaborations. We need to collaborate all around the world, put the resources into it, bring the previous data in, and



create new data in a collaborative way. Sharing resources really makes an impact.

It's a huge patient population; different market segments are tempting for different companies. They should be very cautious about drug development discipline and principles. All the basic science and translational work has to be of the highest quality. You cannot just do simple experiments, pick up something from a genetic screen, and go straight to humans. That would create very flawed obesity research again.

If we see horror stories, if we see bad side effects, that will also discourage patients, or even the scientific community. We need to be cautious in both drug development and obesity research, and never leave the basic principles behind just because there's a race to bring something to the clinic. We should be thinking about those principles — first, do no harm — and be cautious in terms of translation from animal to humans. But at the same time, go full force, collaborate, and fight obesity from different angles. 

[EDITOR'S NOTE: A special thanks to Timothy Beardsley, DPhil, executive editor, Endocrine Society Journals, for his help and expertise in crafting this article.

JES editorial is available at: <https://academic.oup.com/jes/article/8/6/bvae066/7644942>.]

– BAGLEY IS THE SENIOR EDITOR OF ENDOCRINE NEWS. HE WROTE ABOUT THE RECENTLY FDA-APPROVED DEVICE TO TREAT POSTMENOPAUSAL WOMEN WITH OSTEOPENIA IN THE MAY ISSUE.



To D *or not*

What questions does the latest Endocrine Society guideline answer about vitamin D supplements?

On June 3, during ENDO 2024 in Boston, “Vitamin D for the Prevention of Disease: An Endocrine Society Clinical Practice Guideline” was officially released. While this new guideline suggests supplements might benefit specific populations and questions the need for testing, it also suggests that more research is needed to determine optimal levels for specific health benefits.

BY ERIC SEABORG

To D?

In the face of the growing popularity of vitamin D supplements in recent years, a new Endocrine Society clinical practice guideline suggests that there is a limited role for vitamin D supplementation and little reason for testing in the prevention of disease.

The guideline suggests supplements be used for specific populations and specific reasons: for children and adolescents ages 1–18 to prevent rickets and potentially lower the risk of respiratory tract infections; for those aged 75 years and older to potentially lower mortality risk; for those who are pregnant to potentially lower the risk of pre-eclampsia and other conditions; and for those with high-risk prediabetes to reduce the risk of progression to diabetes.

It does not recommend a dosage in any of these cases because “the optimal doses for empiric vitamin D supplementation remain unclear for the populations considered.”

The guideline suggests against empiric vitamin D supplementation above the recommended dietary reference intake with the goal of lowering the risk of disease in healthy adults younger than 75 years.

“If you are a healthy adult younger than 75 and taking the dietary reference intake recommended by the Institute



Marie B. Demay, MD, (above) and Anastassios G. Pittas, MD, MS (right) co-chaired the guideline committee



The panel suggests against routine laboratory testing for blood levels of 25-hydroxyvitamin D (25[OH]D) in all the age groups and populations it studied.

“If you are a healthy adult younger than 75 and taking the dietary reference intake recommended by the Institute of Medicine, which is now known as the National Academy of Medicine, then you don’t need any additional vitamin D if you don’t have risk factors for vitamin D deficiency or increased vitamin D metabolism.”

— MARIE B. DEMAY, MD, PHYSICIAN, MASSACHUSETTS GENERAL HOSPITAL; PROFESSOR OF MEDICINE, HARVARD MEDICAL SCHOOL, BOSTON, MA.; CHAIR, GUIDELINE WRITING COMMITTEE. “VITAMIN D FOR THE PREVENTION OF DISEASE: AN ENDOCRINE SOCIETY CLINICAL PRACTICE GUIDELINE”

of Medicine, which is now known as the National Academy of Medicine, then you don’t need any additional vitamin D if you don’t have risk factors for vitamin D deficiency or increased vitamin D metabolism,” according to Marie B. Demay, MD, of Massachusetts General Hospital and Harvard Medical School, who chaired the committee that wrote the guideline.

“We are not saying don’t take vitamin D,” says Anastassios G. Pittas, MD, MS, of Tufts Medical Center in Boston and co-chair of the guideline-writing panel. “We are saying that we did not find evidence that taking additional vitamin D above and beyond the recommended daily allowance would be of benefit in prevention of disease in this age range.”

Questions about Testing

The panel suggests against routine laboratory testing for blood levels of 25-hydroxyvitamin D (25[OH]D) in all the age groups and populations it studied, including adults with prediabetes, dark complexion, or obesity, as well as during pregnancy.

That was in large part because “there really is no data telling us what target vitamin D level should be aimed for to prevent disease,” Demay says.

A 2010 Institute of Medicine expert panel considered a 20-ng/mL (50 nmol/L) serum 25(OH)D concentration to be generally adequate for bone and overall health in the

general population, whereas a 2011 Endocrine Society clinical practice guideline said that a concentration of more than 30 ng/mL (75 nmol/L) is needed to maximize the effect of vitamin D on calcium, bone, and muscle metabolism. But the current Endocrine Society panel did not find adequate evidence to confirm these thresholds.

“There is no data that really tells you that a level of 20 ng/mL is fine, or a level of 30 ng/mL is fine,” Demay says. “A big problem is that we don’t have a biomarker for vitamin D adequacy. A second challenge is that the target level may differ for different outcomes.”

A Timely Topic

With so many people taking supplements and having tests for their 25(OH)D levels, Pittas says that it was time for a new guideline because a great deal of clinical trial data has accumulated since the previous Endocrine Society vitamin D guideline more than 10 years ago.

The previous guideline focused on the care of patients at risk for deficiency, whereas this expert panel focused on the use of vitamin D to lower the risk of disease in individuals without established indications for vitamin D treatment or 25(OH)D testing. “These guidelines do not apply to individuals with underlying conditions that substantially alter vitamin D physiology, such as intestinal bypass surgery or inflammatory bowel disease,” Demay says.

The panel began by identifying the most important outstanding clinical questions that needed answers, and the guideline covers 14 of them, with the questions focusing on whether supplementation or testing for a particular age group or particular population should be recommended. Despite the accumulation of clinical trial evidence, the panel found that the evidence base is still limited when it comes to answering many questions, hence the use of the terminology “suggestions” that the supplements offer “potential” benefits in many uses.

“Most of the large trials over the last decade were done in populations whose vitamin D status at baseline would be considered adequate,” Pittas says. “So, giving a small additional dose of vitamin D may not have an effect because the participants had an adequate vitamin D status for the studied outcomes. This was a key limitation of the included trials that limited the panel to making ‘suggestions,’ which are conditional recommendations according to the GRADE guideline-writing methodology.”

Supplemental Evidence

When vitamin D supplementation is indicated, the guideline recommends daily, lower-dose vitamin D rather than administration of intermittent, higher dose in adults 50 years and older, and did not identify any evidence on the topic for those under 50.

The guideline does not suggest any specific dosages because the panel could not find backing evidence, according to Pittas: “We do not know the optimal vitamin D dose because there is such a wide range of supplementation doses in the clinical trials



AT A GLANCE

- ▶ A new Endocrine Society guideline on vitamin D for the prevention of disease suggests additional supplementation above established recommended daily intakes only for specific populations and specific purposes, including people under 18 years, over 75 years, who are pregnant, or who have high-risk pre-diabetes.
- ▶ The guideline panel found no clear evidence defining an optimal target level of 25-hydroxyvitamin D for disease prevention, so suggests against routine testing in those without conditions that alter vitamin D physiology in all the populations it considered.
- ▶ The guideline panel found that more research is needed to determine optimal 25(OH)D levels for specific health benefits.



The guideline does say that “due to the scarcity of natural food sources rich in vitamin D, empiric supplementation can be achieved through a combination of fortified foods and supplements that contain vitamin D.”


“ We are not saying don’t take vitamin D. We are saying that we did not find evidence that taking additional vitamin D above and beyond the recommended daily allowance would be of benefit in prevention of disease in this age range.”

— ANASTASSIOS G. PITTAS, MD, MS, CHIEF, ENDOCRINOLOGY, DIABETES, AND METABOLISM; CO-DIRECTOR, DIABETES AND LIPID CENTER, TUFTS MEDICAL CENTER; PROFESSOR, TUFTS UNIVERSITY SCHOOL OF MEDICINE, BOSTON, MA.; CO-CHAIR, GUIDELINE-WRITING PANEL, “VITAMIN D FOR THE PREVENTION OF DISEASE: AN ENDOCRINE SOCIETY CLINICAL PRACTICE GUIDELINE”.

we looked to for evidence. Treat-to-target trials are needed to establish the most appropriate doses for specific populations and conditions.”

The guideline does say that “due to the scarcity of natural food sources rich in vitamin D, empiric supplementation can be achieved through a combination of fortified foods and supplements that contain vitamin D. The panel judged that, in most situations, empiric vitamin D supplementation is inexpensive, feasible, acceptable to both healthy individuals and healthcare professionals and has no negative effect on health equity.”

“Vitamin D for the Prevention of Disease: An Endocrine Society Clinical Practice Guideline” was co-sponsored by the American Association of Clinical Endocrinologists, European Society of Endocrinology, Pediatric Endocrine Society, American Society for Bone and Mineral Research, Vitamin D Workshop, American Society of Nutrition, Brazilian Society of Endocrinology and Metabolism, American College of Obstetricians and Gynecologists, Society of General Internal Medicine, and Endocrine Society of India.

“Vitamin D for the Prevention of Disease: An Endocrine Society Clinical Practice Guideline,” was published online and will appear in the August 2024 print issue of *The Journal of Clinical Endocrinology & Metabolism*. 

— SEABORG IS A FREELANCE WRITER BASED IN CHARLOTTESVILLE, VA. IN THE MARCH ISSUE, HE WROTE ABOUT RECENT STUDIES THAT FURTHER EMPHASIZE THE DANGERS OF OBESITY IN ADOLESCENCE



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Q&A with New *Endocrinology* Editor-in-Chief, Zane Andrews, PhD



Zane Andrews, PhD

Full Circle

When Zane Andrews, PhD, published his very first scientific paper while working on his PhD in 2001, it was on the pages of the Endocrine Society's *Endocrinology*. This month, he assumes his newest role as *Endocrinology*'s editor-in-chief.

BY DEREK BAGLEY

This month, Zane Andrews, PhD, of Monash University in Melbourne, Australia, will begin his tenure as editor-in-chief of *Endocrinology*, as the previous editor-in-chief (EIC), Carol Lange, PhD, of the University of Minnesota in Minneapolis, Minn., steps down to transition into her new position as the Endocrine Society's president-elect.

Andrews is a professor in the Department of Physiology at Monash University and deputy head of the Metabolism, Diabetes, and Obesity Program at the Monash Biomedicine Discovery Institute. His research interests include neuroendocrinology, obesity, and metabolism and diabetes. His current research focuses on understanding neuroendocrine control of metabolism, mood, and motivation, with particular attention to the neuroendocrine actions of ghrelin and ghrelin-target cells in the brain.

Endocrine News caught up with Andrews to discuss his new role, publishing his first PhD paper as first author in *Endocrinology*, his current research, and his vision for the future of the Society's flagship basic science journal.

***Endocrine News:* How does it feel to be appointed editor-in-chief of *Endocrinology*?**

Zane Andrews: It feels great. I'm extremely proud and humbled to be the EIC (even to be asked, actually), especially considering that I work at Monash University in Australia. My first first-author publication was in *Endocrinology* in 2001 when I was still a PhD student, so it feels like I have come full circle.

***EN:* Can you tell me a little about your path to endocrinology?**

ZA: It's a little hard to remember all the way back, but I'll try. I was a physiology and

anatomy major, and I always got good marks for the endocrinology parts. I'm not sure why, but something about hormones resonated with me. I was also particularly intrigued with how the brain — and more specifically the hypothalamus — controlled hormone release from the pituitary. It kind of felt like studying neuroscience without the complexity of studying neuroscience. I completed my undergraduate degree at the University of Otago in New Zealand and went to do honors, which is a one-year, research-intensive course, with a new lecturer in the department (Dave Grattan). He was really into hormones and the brain (neuroendocrinology) and if I was going to do a PhD, then I wanted it to be with someone I got on with. Together we looked at how the brain regulated prolactin release during pregnancy, understudied but critically important.

During the PhD, I was fortunate to attend quite a few international conferences, including the International Congress of Endocrinology in Sydney in 2000 and the International Congress of Neuroendocrinology in Bristol and the Society for Neuroscience, both in 2002. It was so stimulating and interesting for a kid from medium-town NZ (still only 100,000 people).

At this point, I knew I wanted to make this my career, so I started looking to go to the U.S. to do a post doc; science in little New Zealand was pretty small and all of the professors spoke about getting experience overseas, so after my PhD (from Uni of Otago in New Zealand) I went to the U.S. to explore options. I lined up four interviews and lab visits and ended up going to Yale University to work with Tamas Horvath. A key reason was to diversify my exposure to different sciences, but still in the neuroendocrinology space. Here, I studied how ghrelin from the stomach acts in the brain to regulate food intake.

EN: And that's what led to your current research on understanding neuroendocrine control of metabolism, mood, and motivation?

ZA: Ghrelin from the stomach is increased during hunger (sometimes it's referred to as the hunger hormone). Obviously when you're hungry, you want to eat, and there are ghrelin receptors in parts of the brain that control food intake (the hypothalamus for example). But there are ghrelin receptors also expressed in many different brain regions that were not important for food intake (at least at the time). As a signal of hunger, it quickly dawned on us that ghrelin does much more than simply want to make you eat; plus, you can only eat if food is available. We recognized that ghrelin did different things whether food was present during experiments.

Looking back now it seems obvious that ghrelin would have many diverse roles in physiology, behavior, and metabolism, because it signaled many behavioral and physiological changes that help you deal with hunger. It increases your motivation, it regulates mood and the stress axis to enhance exploration, it can increase learning and memory — calorie restriction increases the generation of new brain cells, for

“ I wanted to represent a journal that serves its community.

Endocrinology is the basic research journal for the Endocrine Society, and the Society does so much for the research community (both basic and clinical, as well as clinical practice) through advocacy, training, mentorship, conferences, travel award — the list goes on. As scientists looking to the future of the field, we should all support and publish in journals that give back to their societies and members, that foster trainees, and that prioritize science first.”

— ZANE ANDREWS, PHD, EDITOR-IN-CHIEF, *ENDOCRINOLOGY*

example. When you look deeper it's easy to see that metabolic dysfunction — like that seen in obesity, diabetes, anorexia, or binge eating — is often accompanied by many mood-related disorders like depression and anxiety. We are still working on ghrelin actions in the brain, amongst other things. But the major theme is to understand how the metabolic hormones communicate with multiple brain regions to coordinate the control of metabolism and behavior.

EN: You published your first paper as first author in *Endocrinology* in 2001. What was the paper on? Can you point to some other of your proudest moments while being involved with this journal?

ZA: The first paper was titled “Dissociation of prolactin secretion from tuberoinfundibular dopamine activity in late pregnant rats.” Instant classic — it didn't get that many citations, but I remember the reviewer saying they thought the discussion was insightful and well written. As a second year PhD student, that gave me a buzz to think that I wrote something insightful and gave me some confidence.

Another highlight was joining the editorial board. In 2016 and I received an award for recognition as an outstanding reviewer for *Endocrinology*. I was proud of that, and I still have the certificate in my office. I remember smiling to myself thinking I was just doing what a reviewer should, reading the paper and writing what I thought was good and not. I actually thought, “If I was rated as outstanding, what were other people doing?”

I think that was an important moment, as I was asked to join the academic editor team in 2017. I remember travelling at the time in Europe for work, so I wasn't keeping up with emails. I saw one from Tim Beardsley at the Endocrine Society and thought, I'll get to that later. Turns out it was an invitation to be an associate editor for *Endocrinology*, and I overlooked it for about five days. When I finally saw it, I was on a train from Swansea to London to fly back home to Melbourne, and I jumped at the chance and saw it as a natural progression.

EN: What attracted you to the role of EIC of *Endocrinology*?

ZA: Firstly, as deputy editor for three years I saw how the behind-the-scenes team functioned. The journal office is amazing: Maggie Haworth, Tim Beardsley, Richard O'Grady,

everyone was so helpful. I remember thinking before being asked, this would definitely be the best journal to be EIC.

I saw the hard work from Carol Lange, the outgoing EIC, and I have a great working relationship with her.

I wanted to represent a journal that serves its community. *Endocrinology* is the basic research journal for the Endocrine Society, and the Society does so much for the research community (both basic and clinical, as well as clinical practice) through advocacy, training, mentorship, conferences, travel award — the list goes on. As scientists looking to the future of the field, we should all support and publish in journals that give back to their societies and members, that foster trainees and that prioritize science first.


EN: What's your vision for the future of *Endocrinology*?

ZA: I want to see it as the first-choice journal for fundamental research in endocrinology, providing a smooth, fast, seamless publishing experience for all authors, from submission to acceptance to publication. I hope to build upon the strength of *Endocrinology* from North American authors and publish more research articles from around the world.

EN: What do you feel sets *Endocrinology* apart from other peer-reviewed journals in this field?

ZA: What sets it apart are free publication charges for Endocrine Society members under a standard license, unlimited article pages and figures so authors can share the entire story, and a strong, large, and diverse reviewer pool, ensuring expert reviewers from scientists in the field.

EN: Do you have any plans to expand the scope of *Endocrinology's* subject matter?

ZA: *Endocrinology* has been a leading journal for decades so its fundamentals and tried and true, but we will set down and plan a strategic future path for the journal to discuss issues like these. 

Andrews will serve as editor-in-chief beginning June 1, 2024, until December 31, 2025.



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NIH Announces Changes Consistent with Endocrine Society Recommendations to Simplify Fellowship and Grant Applications, Peer Review Process


The National Institutes of Health (NIH) has announced changes to fellowship applications and the review process as part of a more comprehensive set of updates to grant application and review that will go into effect on January 25, 2025. These changes are intended to reduce administrative burden and facilitate the identification of highly qualified candidates that may be excluded through the current application and review processes through more focused criteria and reduced sponsor and institutional bias.

The new application process refines the original five scored criteria to three scored criteria: a) Candidate's goals, preparedness and potential; b) Research training plan; and c) Commitment to candidate. A candidate will be evaluated through four personal statements on their potential to benefit from the fellowship based on factors such as their preparedness, training stage, and opportunities available for their training. Importantly, a candidate's grades will no longer be required or allowed for applications.

The research training plan will emphasize the development of professional and scientific goals and the role of the mentor and research project, as well as showcase any resources that are available to support the training program. The commitment to candidate selection will require the sponsor and any co-sponsors to submit five personal statements focusing on the role of the research mentor and mentoring plan to support the candidate's research training plan and career goals.

National Service Research Award (NRSA) Training Program applications will also undergo changes for applications due on or after January 25, 2025. Training and outcomes will be emphasized and reflected in the overall score. Under the new process, applicants will be asked to refine expectations for the training of mentors and to clarify positive outcomes related to preparing trainees for research and related careers. Additionally, Responsible Conduct of Research and Recruitment Plan to Enhance Diversity will now factor into the overall scoring of an application. Lastly, NRSA Data Tables will be updated to reduce applicant and reviewer burden. The full description of changes can be reviewed in the NIH Grants Guide, noting that additional details are forthcoming.

Broader application and review changes are planned to take effect on January 25, 2025, including the new simplified review framework for most NIH grant applications. Instructions for reference letters will be updated this fall to provide more structure that will allow reviewers to better evaluate applicants applying for F and K awards. The NIH will introduce the requirement to use the new "FORMS-1" application package for grants, which encapsulates the new changes to fellowship and grant applications, the adoption of the Biographical Sketch Common Form, and the Current and Pending (Other) Support Common Form to standardize information gathering across federal agencies and comply with policies related to national security.

The Endocrine Society submitted recommendations to the NIH as they developed the revised framework for grant and fellowship applications, and we welcomed the simplified review framework and efforts to reduce implicit bias in review. We will be on the lookout for additional guide notices related to these changes and share updates in future *Endocrine News* articles. 

Society Advocates for Access to Diabetes and Obesity Medications; Meets with FDA to Discuss Current Prescription Drug Shortages

Photo: Tada Images/Shutterstock.com



Over the past several months, the Endocrine Society has advocated for improving access to diabetes and obesity medications amid ongoing drug shortages that have impacted the country.

The Society has heard from our members that they are experiencing limited availability of Ozempic, a GLP-1 agonist used to treat type 2 diabetes, and Wegovy, a GLP-1 used to treat obesity. In May, the Society held two meetings with the US Food and Drug Administration (FDA) to discuss the ongoing shortages. We met with FDA Commissioner Robert Califf and the FDA's Chief Medical Office to learn more about what they are doing to address this crisis. During our meetings, we pressed the FDA to provide more communication to the Society on when shortages occur and what regions of the country are being impacted.

While the FDA has reported that the Ozempic shortage has been resolved, it acknowledged there can be lag periods after a shortage ends. There also have been some limited shortages of

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During our meetings, we pressed the FDA to provide more communication to the Society on when shortages occur and what regions of the country are being impacted.

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insulin reported in recent months and we discussed this with the FDA. In addition, we have had conversations about GLP-1 shortages with Eli Lilly & Company and have reached out to Novo Nordisk about this issue.

If you are currently experiencing a shortage of GLP-1 medication, please contact: advocacy@endocrine.org.

The Endocrine Society is Advocating for You

The Endocrine Society advocates for its members in the United States and globally on a range of important policy issues including: access to care, research funding, regulation of endocrine-disrupting chemicals, women's health, and Medicare physician payment.

To learn about our recent advocacy accomplishments and our member advocacy champions, please visit: <https://www.endocrine.org/advocacy/accomplishments-and-champions>.

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