Brookhaven National Lab 75th Anniversary

The U.S. Department of Energy (DOE) Brookhaven National Laboratory (BNL; Upton, NY) on January 27 held a live-streamed seminar as a launch event in celebration of its 75th y. The virtual event featured a panel discussion, including Haiyan Gao, PhD, Associate Lab Director, Nuclear and Particle Physics; John Hill, PhD, Director, National Synchrotron Light Source II; and Allison McComiskey, PhD, Chair, Environmental and Climate Sciences, who shared their visions for the future of particle physics, climate science, quantum information science, and more. The panel answered questions from a virtual audience through YouTube, Facebook, and Twitter.

Primarily supported by the DOE Office of Science, BNL is a multidisciplinary laboratory with 7 Nobel Prize–winning discoveries, 37 R&D 100 Awards, and 75 y of pioneering research. The lab was founded in 1947 with a post–World War II goal to explore peaceful applications of atomic energy. BNL today applies its expertise and world-class facilities to a wide range of scientific questions, from the fundamental forces of physics to complex interactions of ecosystems and the environment. The laboratory's almost 3,000 scientists, engineers, and support staff are joined each year by more than 5,000 visiting researchers from around the world. ^{99m}Tc was first developed at BNL in the 1950s, and in 1976 the lab synthesized and developed ^{18}F-FDG for initial medical imaging. The Brookhaven Linac Isotope Producer today produces many medical isotopes for both imaging and therapy research and continues to develop new ones. Learn more about BNL research initiatives at https://www.bnl.gov/science/.

Brookhaven National Laboratory

CMS Funding 1,000 New Residency Slots

The Centers for Medicare & Medicaid Services (CMS) on December 17 issued a final rule that includes funding for additional medical residency positions in hospitals serving rural and underserved communities. The Fiscal Year (FY) 2022 Inpatient Prospective Payment System final rule established policies to distribute 1,000 new Medicare-funded physician residency slots to qualifying hospitals, phasing in 200 slots per year over 5 y. CMS estimates that funding for the additional residency slots, once fully phased in, will total approximately $1.8 billion over the next 10 y. As part of implementation of the Consolidated Appropriations Act (CAA, 2021), this is the largest increase in Medicare-funded residency slots in more than 25 y. Additional sections of the CAA being implemented promote increased training in rural areas and graduate medical education payments to hospitals meeting certain criteria. In allocating these new residency slots, CMS will prioritize hospitals with training programs in areas demonstrating the greatest need for providers, as determined by Health Resources and Services Administration data. The first round of 200 residency slots was announced at the end of January and will begin with the start of the academic year on July 1, 2023.

"Doctors are most likely to practice in the areas where they do their residencies. Having additional residents train in the very areas that need the most support can not only bolster the numbers of providers in these underserved areas but also train them with a unique understanding of the specific needs of these communities," said Meena Seshamani, MD, PhD, Director of the CMS Center for Medicare.

For the relevant CMS fact sheet, see https://www.cms.gov/newsroom/fact-sheets/fiscal-year-fy-2022-medicare-hospital-inpatient-prospective-payment-system-ipps-final-rule-comment.

Centers for Medicare & Medicaid Services

FDA CDRH Health of Women Strategic Plan

On January 18, Terri Cornelison, MD, PhD, Chief Medical Officer and Director of the Health of Women Program at the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration (FDA) shared the CDRH Health of Women Program Strategic Plan. Originally proposed for public feedback in 2019, the plan lays out the framework to advance the FDA mission by protecting and promoting the health of women, strengthening regulatory science, and identifying and addressing current and emerging issues in medical device research and regulation for the health of all women.

"Now, more than ever, we need to understand the implications sex and gender present for the performance of medical devices in all individuals," said Cornelison. "The CDRH Health of Women program is a comprehensive, collaborative, landmark program built on the premise that both sex and gender have a considerable impact on a woman's overall health, not just their reproductive or sexual health. With patients at the heart of this initiative, and with the strategic plan as a blueprint for the center's priorities, Health of Women intends to ensure all women have access to innovative, safe, and effective medical devices."

The CDRH Health of Women program was created in 2016 to address the steadily growing importance of sex- and gender-specific issues arising from medical technology design and development, clinical trial design, and other medical device–related matters. The new plan prioritizes the patient experience and leverages partnerships across CDRH to establish a portfolio of women-specific device efforts and strategize around gap areas to inform research. Cornelison outlined 3 main priorities: sex- and gender-specific analysis and reporting, an integrated approach for current and emerging issues related to the health of women, and creation of a research roadmap.

FDA Center for Devices and Radiological Health

DOE Isotope R&D Training

The U.S. Department of Energy (DOE) announced in December $2 million in funding to establish a first-of-its-kind traineeship program in isotope research and development, production, and processing. The effort will be led by Texas A&M University (College Station) serving as the

Isotope Traineeship Coordination (ITC) site in collaboration with a team of 17 institutions—14 institutions of higher education (8 of which are Minority Serving Institutions) and 3 DOE/National Nuclear Security Administration national laboratories (Argonne National Laboratory, Lemont, IL; Lawrence Livermore National Laboratory, CA; and Los Alamos National Laboratory, NM). This investment is intended to boost exposure to the field of isotope science and accelerate the time usually required for a junior scientist to enter the workforce.

The workforce bolstered through this investment makes contributions daily by supporting the activities of the DOE Isotope Program, a key federal program that produces critical isotopes in short supply. The isotopes produced have applications in medicine, national security, domestic and global industry, and discovery research.

"The DOE Isotope Program supports novel isotope production and processing activities at a suite of world-class facilities throughout the federal complex and at universities," said Jehanne Gillo, PhD, Director of the DOE Isotope Program. "To ensure a strong and innovative program in the future, it is critical to nurture a broad and diverse workforce."

The ITC collaboration aims to promote innovative and transformative approaches to isotope production and processing through leveraging advances in manufacturing, artificial intelligence, machine learning, and robotics. The team will recruit a diverse population of ~20 undergraduate and 10 graduate students from the 14 degree-granting sites, develop a collaborative network and variety of in-person and virtual training mechanisms, establish peer-support groups and peer-to-peer mentoring, provide training for mentors, and assist in trainee career advancement. The program will train participants in isotope science through coursework as well as research and isotope production experiences within the DOE Isotope Program.

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shortened curricula to increase the size of the workforce. Such training may have limitations if it is not cancer focused. Our colleagues in interventional radiology have recently evolved into an independent specialty, and those who do more oncology-focused practice identify themselves as "interventional oncologists." We could take the same approach with a self-designated "nuclear oncologist" moniker for those nuclear medicine physicians who function in the radiopharmaceutical therapy/oncologic imaging domain. But for a comprehensive understanding of nuclear oncology, a cancer-focused training curriculum—which could include an additional year of training in the form of a nuclear oncology fellowship—may be necessary. A specific certification could also help set nuclear oncologists apart, recognizing them for their excellence.

Should we take these steps to ensure our place in the future of radiopharmaceutical therapy? If we do not, our role in radiopharmaceutical therapies may become limited and possibly entail only a brief interaction with a patient. If we do take these steps, we can feel confident that the nuclear oncologist's body of knowledge is sufficient to deliver the best care to patients with cancer. As well-qualified nuclear oncologists, we can ensure our continued seat at the cancer therapy table—in many instances sitting at the head of that table. Nuclear medicine physicians have long been and will, with appropriate action, remain the innovators in radiopharmaceutical therapies, defining therapy into the future and advancing the relevance of our field. If we evolve as nuclear oncologists, we will drive this important field forward for our profession and, most important, for our patients.