JNM and *JNMT* Begin "Ahead of Print" Publication

The SNM announced on May 17 that *The Journal of Nuclear Medicine* (*JNM*) and the *Journal of Nuclear Medicine Technology* (*JNMT*) are now publishing articles online in advance of print to bring new research to readers at the earliest possible date. SNM members and journal subscribers will be able to read the latest research 1 or 2 months in advance of print publication, and abstracts of these materials will now appear earlier in the National Library of Medicine PubMed database.

"SNM believes it is vital to publish and disseminate important new scientific and clinical information at the earliest possible date to those in the molecular imaging and therapy and nuclear medicine community," said SNM President Martin P. Sandler, MD. "*JNM*—the profession's most important and influential international journal—will now deliver significant, scholarly, peer-reviewed research faster. This is increasingly important as we see rapid advancements in molecular imaging and technology."

"Time matters, and expedited, online, ahead-of-print publishing is important to bring to scientists and clinicians valuable information about molecular and nuclear imaging and therapy," added Heinrich R. Schelbert, MD, editor-in-chief of *JNM*. "Researchers need to quickly communicate their discoveries so that others may benefit from their results and cite their publications. *JNM*'s acceptance-to-publication turnaround is already quite short, and publishing ahead of print shortens it even further."

All published-ahead-of-print articles are considered officially published for purposes of scientific priority. Each article may be cited using its unique digital object identifier (DOI), which the article will retain when released in print. *JNM* and *JNMT* ahead-of-print articles will be available on the journals' Web sites (jnm.snmjournals.org and tech.snmjournals.org, respectively), hosted by HighWire Press.

Society of Nuclear Medicine

NIDA Director Highlights New Approaches in Addiction

Nora Volkow, MD, director of the National Institute on Drug Abuse (NIDA), has challenged psychiatrists to learn more about the importance of substance abuse as a factor in the diagnosis and treatment of mental illnesses. Speaking on May 21 at the American Psychiatric Association Annual Meeting in San Diego, CA, Volkow addressed the topic "Substance Abuse in Your Patients: Beyond What is Taught in Your Residency" and emphasized new diagnostic technologies that have expanded the understanding of substance abuse and mental illness.

"Research has shown us that addiction is a disease that can be successfully treated, but not if the problems go undiagnosed," she said. "By looking at what we now know about the neurobiological underpinnings of addiction, we are developing new, more effective addiction treatments."

Participants also heard from Alan I. Leshner, PhD, CEO, American Association for the Advancement of Science and former NIDA director, who spoke on "The Evolving Climate for Neuroscience and Society." The session was the first in 3 days of a special track focusing on the neurobiology and treatment of compulsive behaviors. Volkow also spoke on "The Neurobiology of Free Will Gone Awry," an in-depth look at the science of addiction and its implications for prevention and treatment. The third day of the session focused on neuroimaging research and its applications in the diagnosis and treatment of substance abuse, development of medications for the treatment of cocaine addiction, exploration of the adolescent brain and implications of drug use, and prenatal nicotine exposure. PET and other functional imaging techniques were prominently featured at the meeting. The full program for the sessions is available on the NIDA Web site at www.drugabuse.gov.

National Institute on Drug Abuse

New IAEA Gamma Camera Laboratory

The International Atomic Energy Agency (IAEA) announced on May 25 the opening of a new gamma camera laboratory that will be used to train medical personnel from developing countries. The launch of the state-of-the-art facility, located at IAEA laboratories in Seibersdorf, Austria, is part of the agency's ongoing effort to transfer life-saving technologies to developing countries through its technical cooperation program. The gamma camera equipment was donated under a public/private partnership by Mediso Medical Imaging Systems (Budapest, Hungary).

Because of their expense and complexity, gamma cameras are not always readily available to medical practitioners in developing countries, particularly for training and hands-on experience with newer technologies. During the inauguration ceremony, Werner Burkart, Deputy Director General for the IAEA Department of Nuclear Sciences and Applications, highlighted the importance of training personnel in countries that receive IAEA technical assistance.

"The reason why we have the gamma camera laboratory here is that we have taken a holistic approach to transferring technology," he said. "This state-of-the-art equipment will be used to give specialists from recipient countries the quality assurance they need to run this technology effectively. We are not just sending a machine with

a manual: we want to make sure that the specialists really understand this technology."

This in-depth training is essential to securing service quality assurance in the countries where gamma cameras are deployed. "Typically, medical personnel would come here for a 1-month course, get a full understanding of the strengths of this technology and, maybe as important, its limitations and weaknesses," Burkart said. "We take many things for granted, but the task of running a gamma camera in a developing country is hard. Often, these machines are used for 10s of years in a dusty, sandy, and hot environment where people do not have a service company to call up. That's a considerable task."

The facility is expected to serve as a training center for physicians and specialized personnel from developing countries. "The number of doctors and technicians trained in this facility will very much depend on the needs of member states, but we anticipate hundreds of people getting training in this laboratory and then applying at home what they have learned here," Burkart said. He also stressed that this project represents a successful example of an "IAEA one-house approach," i.e. a joint effort from different departments of the agency. In 2004, the IAEA launched its Programme of Action for Cancer Therapy, which was established to address the developing world's growing cancer crisis. In addition, the IAEA donated the monetary award that came with its 2005 Nobel Peace Prize to a project aimed at training cancer therapy specialists in developing countries. Participants from these programs contributed to the gamma camera laboratory effort.

International Atomic Energy Agency

NRC Announces a New Medical-Related List Server

On May 23, the Nuclear Regulatory Commission (NRC) announced the opening of a new list server designed to send automatic e-mail notifications of medical-related "generic communications," *Federal Register* notices, and Nuclear Material Safety and Safeguards/Federal and State Materials and Environmental Management newsletters to stakeholders. Individuals may subscribe to the new list server by sending an e-mail to medical-gc@nrc.gov with "Subscribe" in the subject line. Questions pertaining to the list server should be sent to Medlistserverquestions@nrc.gov.

Nuclear Regulatory Commission

NRC Approves Final Rule on Byproduct Material

The Nuclear Regulatory Commission (NRC) has approved a final rule expanding the definition of radioactive materials subject to its regulatory authority, implementing provisions of the Energy Policy Act of 2005. The Commission approved the rule by a 5–0 vote on May 14. The final rule will be published in the *Federal Register* later this year, after NRC staff incorporates changes to the text and obtains approval from the Office of Management and Budget for information collection requirements. As noted previously in Newsline, the Energy Policy Act of 2005 expanded the definition of byproduct material subject to NRC's authority to include discrete sources of ^{226}Ra, material made radioactive in a particle accelerator, and other radioactive material that the Commission determines could pose a threat to public health and safety or the common defense and security. These materials were previously regulated by the states.

Although the legislation made NRC's authority over these new materials effective immediately, the agency issued a waiver allowing states to continue to regulate them while the agency drafted regulations to implement the new requirements. Over the summer, the NRC will publish a transition plan for assuming new authority over these materials. The 34 Agreement States—which regulate byproduct material in their states under agreements with the NRC—will maintain authority over the new materials under their agreements with the NRC.

The draft text of the final rule was posted on the NRC Web site last month at: www.nrc.gov/reading-rm/doc-collections/commission/secys/2007/secy2007-0062/2007-0062scy.pdf. The Commission's Staff Requirements Memorandum, which details the edits and revisions directed by the Commission to be incorporated in the rule is at: www.nrc.gov/reading-rm/doc-collections/commission/srm/2007.

Nuclear Regulatory Commission

NRC Appoints New ACMUI Member

The Nuclear Regulatory Commission (NRC) announced on May 21 the appointment of Bruce R. Thomadsen, PhD, as the "medical physicist in radiation therapy expert" on the Advisory Committee on the Medical Uses of Isotopes (ACMUI). He is board certified by the American Board of Radiology in radiologic physics, the American Board of Health Physics in comprehensive health physics, and the American Board of Medical Physics in radiation oncology physics. He holds a master of science degree in physics from Michigan State University (Lansing) and a PhD in medical physics from the University of Wisconsin (Madison). He is an associate professor of medical physics and of biomedical engineering at the University of Wisconsin.

Thomadsen is a fellow of the American Association of Physicists in Medicine (AAPM) and has served on and chaired several AAPM committees, including the Radiation Safety Committee. He has also been active in the American Brachytherapy Society and served on panels for the International Commission on Radiation Units and Measures and the National Council on Radiation Protection and Measurements. He has been active in the Commission on Accreditation of Medical Physics Education Programs and with the American Board of Radiology both as an examiner and with the maintenance of certification program.

The ACMUI was established in 1958 and advises the NRC on policy and technical issues related to the regulation of the medical use of radioactive material.

Nuclear Regulatory Commission

DOE Invites Supercomputing Use Proposals

The U.S. Department of Energy (DOE) announced on May 16 that it is inviting proposals for innovative, large-scale computational science projects at DOE national laboratories. The advanced computers available at the labs are not usually available in academia or the private sector. The DOE Office of Science expects to award up to 250 million processor hours in 2008, nearly 3 times the amount awarded in 2007. The allocations of supercomputing and data storage resources, along with technical support, will be made under the DOE Innovative and Novel Computational Impact on Theory and Experiment (INCITE) program for computationally intensive, large-scale research projects. The 5-year-old program encourages proposals from universities, other research institutions, and industry. Industry is specifically solicited to propose challenging problems that may be solved using high-performance computing systems.

"The demand for access to INCITE supercomputing resources has far exceeded what is available, even though total allocations have soared from just 3 million hours in 2004 to 250 million hours next year," said Raymond L. Orbach, PhD, DOE Under Secretary for Science. "The breadth of proposals—from industry, academia, and national labs—illustrates both the demand for such resources and the contributions computational science are making to our economic and scientific competitiveness."

For 2008, the INCITE program provides the only opportunity for researchers to request allocations on the Leadership Class Cray supercomputers at Oak Ridge National Laboratory (TN) and the IBM Blue Gene supercomputer at Argonne National Laboratory (IL). Other available computers are the Cray XT4 supercomputer at Lawrence Berkeley National Laboratory (Berkeley, CA) and the Hewlett-Packard massively parallel system at Pacific Northwest National Laboratory (Richland, WA).

In 2007, 45 projects, including several with direct relevance to molecular medicine, were awarded a total of 95 million processor hours of computing time. Fact sheets describing previous projects are available at www.science.doe.gov/ascr/incite/INCITEPreviousAwards.html. Information on submitting proposals is available at: http://hpc.science.doe.gov. The deadline for applications is August 8, and awards will be announced in December.

U.S. Department of Energy

Educational Expenses for Residents

Radiology residents use about 15% of their average annual salary for educational expenses, according to a recent study conducted by radiologists from New Jersey Medical School (Newark, NJ), and presented on May 7 at the annual meeting of the American Roentgen Ray Society in Orlando, FL. One hundred and seventy-five senior radiology residents who attended a week-long New Jersey Medical School board review course in 2006 completed questionnaires documenting the number and source of financial support for review courses that they attended/planned to attend (including the Armed Forces Institute of Pathology [AFIP] course in radiologic pathology) and information on the amount of additional financial allowances paid to them by their programs. The questionnaire also asked about funding sources for the radiology board examinations.

The results indicated that for many residents, nonreimbursed educational expenses constitute a significant portion of annual salaries. The AFIP course, including tuition, room and board, and travel, cost $3,441.52, of which an average of 44% was paid by the residents themselves. Residents attended an average of 2 review courses at a total of $4,116, with residents paying an average of 77% of costs. Total board expenditures of $3,120, including fees and travel, were paid entirely by the residents. Total out-of-pocket expenses for these activities averaged $7,515, amounting to 15% of average annual salaries.

"I've spent 27 years as a program director, and I realized that residents have to pick up their own costs for a lot of things," said Baker. "There is a debt problem that needs to be addressed. There are many residents that are in debt from college and medical school. Maybe we should consider reducing the initial board exam payment and increasing it during recertification when they have a higher salary so that they don't have to endure such high costs as residents." The authors will extend the study for at least 5 years to gather additional data and identify trends.

American Roentgen Ray Society

Oak Ridge High Flux Isotope Reactor Back On Line

After $70 million in renovations and more than a year of system checks, the Oak Ridge National Laboratory (ORNL) High Flux Isotope Reactor (HFIR; Oak Ridge, TN) was recently restarted, taken to 10% power, and reached its peak power of 85 megawatts on May 18. "The restart has gone well," said Kelly Beierschmitt, HFIR executive director. "This reactor's design is rigorous and robust. Its performance has been stellar from both an operational and a safety perspective. We still have work to do, but we are extremely pleased with our progress so far."

Built in 1966, HFIR is internationally known as a neutron source for materials studies and isotope production. The reactor returns with a suite of new experiment instruments, beam lines to channel neutrons, a new beryllium reflector, and other upgrades. In October, powerful refrigeration systems were added to cool the reactor's neutron beams to –425°F. The intense cold slows the neutrons and lengthens their wavelength, allowing scientists to study "soft" materials such as proteins and polymers and to analyze materials with certain magnetic properties. The restart marks HFIR's 408th cycle. Each cycle represents about 25 days, the time it takes for the reactor to use up its uranium fuel.

Greg Smith, who leads ORNL's Low Q Neutron Scattering Group, said

"We anticipate eventually providing neutron beams for 8 to 10 reactor cycles per year and no major shutdown for a beryllium reflector replacement until after 2020," Smith said. "In the meantime, HFIR users will soon be able to access thermal and cold neutron beams of world-class brightness." HFIR's cold source will complement the capabilities of ORNL's recently completed Spallation Neutron Source, the world's premier neutron science facility.

The fully instrumented HFIR will include 15 state-of-the-art neutron-scattering instruments, 7 designed exclusively for cold neutron experiments; new computer control systems; and a new guide hall facility. Particularly prominent in the guide hall are the 2 new small-angle neutron scattering instruments, each terminating in a 70-foot long evacuated cylinder containing a large moveable neutron detector. The reactor also produces radioisotopes used in nuclear medicine.

Oak Ridge National Laboratory

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ensuring that the best treatment is given to the right patient at the right time. Our own Clinical Trials Group will facilitate the development of imaging biomarkers and new probes, and SNM has been involved in preliminary dialogues with officers at the U.S. Food and Drug Administration on this subject.

SNM is taking the lead in molecular imaging—through its "Bench-to-Bedside" fundraising campaign—to ensure high-quality, individualized care for patients and to prepare our members for the future. MICoE members have developed standard definitions and terminology; created a new Web site to provide online information, education, and training in molecular imaging; established a dialogue with funding agencies; hosted an expert/industry summit; created a "road show" that explains molecular imaging and what it means to the society; initiated outreach to referring physicians, patient groups, federal agencies, regulators, and the public; and launched proactive lobbying for reimbursement, research funding, and related issues. These educational activities are in addition to the long-standing educational and advocacy services it offers to all SNM members. MICoE also showcased the society's Molecular Imaging Gateway at its Annual Meeting to demonstrate the collaborative approach that is necessary to take breakthroughs in molecular imaging into the clinical environment—and to bring these advances to a wider audience.

As always, the society continues its outreach to Capitol Hill, increasing dialogue with government and regulatory officers to provide guidelines for the development and use of current and new radiopharmaceuticals, our role in therapeutic drug development, and the creation of new diagnostics. SNM continues to dialogue with physicians, scientists, and technologists in related associations, including the National Coalition for Cancer Research, the American Society of Clinical Oncology, the American Society for Therapeutic Radiation and Oncology, and the American Association of Physicists in Medicine. Such relationships will significantly help advance our mission.

The society provides a unique knowledge base, and membership in SNM remains an essential part of our practice. SNM's educational offerings are unparalleled, and its advocacy activities ensure that you are at the forefront of the profession as well as on the cutting edge of patient care. As always, SNM continues to ensure that every educational course offered (including our maintenance of certification programs), every message delivered to legislators and regulators, every product and service developed, every action taken to promote credentialing and standards is thoughtfully and intentionally provided to serve you, advance your value, and improve the quality of patient care.

Alexander J. McEwan, MD
President, SNM

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that is vital, credible, collaborative, influential, and evolving. Our redesigned logo, Web site, and e-mail and print communications honor the society's 50-plus years of history—capturing many important aspects of our diverse community. In addition, SNMTS has drafted a strategic plan, thinking not only about the future but also examining the past to focus our energy, ensure that members are working toward the same goals, and assess and adjust our direction in response to a changing environment. *Have you considered volunteering to help?*

It is a great privilege to serve as your new president. I want to do all that I can during my term to move our society forward with new and greater energy—to do more. I invite all members to provide feedback and suggestions, get involved in our society, and take interest in its governance. Together, if we pump long enough, hard enough, and enthusiastically enough, sooner or later the effort will bring forth the reward. I want to hear from you; you can contact me via e-mail at dgilmore@bidmc.harvard.edu. *How can we do more?*

David Gilmore, MS, CNMT, NCT, RT(R)(N)
President, SNMTS