



SCANNER

THE OFFICIAL NEWSLETTER OF THE ACNP
March/April 2006

President's Message

Our Mission During Exciting Times!

It is my pleasure to submit my *Scanner* report during these exciting, and some say “challenging,” times. First, I would like to thank all of you for allowing me this opportunity and ask you to help make this organization stronger and more effective. One of my first tasks is to bring back into focus our organizational mission, which is printed in full on page 2. Our mission can be summarized by saying that ACNP is dedicated to the improvement and advancement of nuclear medicine practice by promoting the following: a favorable economic environment; advocacy, outreach, and education for physicians and patients; practice management; and improvements in the quality of nuclear medicine services. This is no small task, and we are the main academic college of physicians working toward these goals. We are partnering with organizations like SNM in some of these areas, especially in government relations and education. We are working with other organizations as well so that, together, we can hopefully make a difference!



Michael Middleton

ACNP recently had its 2006 meeting in Ft. Lauderdale, FL. Dr. Jay Harolds organized an exciting program. I would like to thank him for the hard work he put into this meeting. A few months ago, ACNP was asked by the SNM leadership to consider having its 2007 meeting in conjunction with the SNM 2007 Mid-Winter Meeting, and our board of regents unanimously agreed to this joint venture. We are excited about this opportunity and are planning a joint 2007 meeting with SNM in San Antonio, TX, February 16–19. In our portions of the program, we will address issues applicable to the ACNP mission.

I would also like to thank Dr. Bennett Greenspan for his service over the last year as ACNP president. He, our board of regents, and other active members have worked hard and need your thanks and support as we face new challenges. We have several committees working toward some of these goals but could use more help. If you would be willing to serve on one or more of our committees, please contact me. Our committees include the Membership, Government Affairs, Coding and Reimbursement, and Annual Program committees. Most of us wear several hats, working on several fronts in a variety of areas to advance nuclear medicine. Many work with SNM, the American Board of Nuclear Medicine, the American College of Radiology, the American College of Nuclear Medicine, the American Society of Nuclear Cardiologists, and the American Medical Association, to name just a few.

In my travels and attendance at nuclear medicine and radiology meetings, I have found that there is much to learn and do. We all know that PET is now one of our main procedures, and PET/CT is being implemented rapidly. Yes, we must lead the field by encouraging our physicians to cross-train and learn CT correlation with this exciting modality. We must continue to support the advancement of this and other nuclear imaging studies. Radioimmunotherapy is just beginning to be implemented in much of the clinical arena, and there is much work to be done to improve and promote our specialty.

Finally, I would like to encourage you all not only to maintain your membership in ACNP, but also to support its mission. We are only 350 physician members strong, and, relative to other medical organizations, we are a small, though dedicated, group of physicians. So I would like to challenge you to encourage other physicians who practice nuclear medicine to join our ranks. Your input and involvement can make a difference, and ACNP can continue to work toward a mission important to all of us.

*Michael Middleton, MD, FACNP
President, ACNP*

ACNP Mission Statement

The mission of the American College of Nuclear Physicians is to represent the practice and socioeconomic interest of those engaged in the use of radionuclides in the prevention, diagnosis, and treatment of disease and to promote the continuing competence of practitioners of Nuclear Medicine through a program of continuing medical education.

Goals

- Advocate fair reimbursement and a favorable economic environment for the practice of nuclear medicine.
- Encourage the highest quality in nuclear medicine service and consultation to patients and referring physicians.
- Promote the continuing competency of nuclear medicine practitioners.
- Maintain a forum where industry and nuclear medicine professionals interact to enhance the utilization and advancement of nuclear medicine.
- Inform the public, professionals, and government about the value of nuclear medicine.
- Communicate with other professional societies for the purpose of advancing the field of nuclear medicine.

Leadership Report: Exploring Opportunities to Grow, Collaborate

As SNM/ACNP's new chief operating officer, I have the privilege of assisting your leaders as they continue to explore ways to enhance the value of being an ACNP member.



Michael Nelson

I look forward to bringing my 20-plus years of experience in operations, finance, human resources, facilities management, marketing, strategic planning, strategic relationships, and technology to assist in developing and facilitating opportunities to bring new members to this remarkable group of dedicated molecular imaging and nuclear medicine professionals.

There is no secret formula to increasing the numbers of ACNP members; attracting new members rests with providing genuine benefits and relevant programs. Increased collaboration with SNM will only help to raise the profile of both organizations and their missions. By growing the practice of molecular imaging and nuclear medicine, members of both SNM and ACNP will be able to provide continued quality patient

care. In addition to my SNM responsibilities of overseeing the society's marketing, information systems, and leadership staffs, I will be assisting ACNP leaders in developing an organizational model that is self-sustaining and programmatically vibrant.

I welcome your comments, so please feel free to contact me at 703-708-9000, ext. 1024, or mnelson@snm.org.

Michael S. Nelson
Chief Operating Officer, SNM/ACNP

ACNP/SNM Government Relations Update

Exciting FDA Events at SNM Annual Meeting

Continuing an exciting and highly beneficial tradition, the FDA staff, led by George Mills, MD, MBA, will host the annual CE session on FDA issues at the 2006 SNM Annual Meeting in San Diego, CA. Tentative presenters and topics include Mills, who will present Imaging Biomarkers and Imaging Standardization for Clinical Trials; Alex Gorovets, MD, who will speak about the Development of Imaging Product: Regulatory Perspective; Kaye Kang, who will discuss Highlights of Standard Meetings with the Medical Imaging Division; Tiffany Brown, who will speak on Navigating the Process of Imaging Submissions; Florence Moore, who will present Comparison of BLA and NDA Regulatory Requirements for Biotechnology Products; and Tushar Kokate, who is scheduled to speak on Exploratory IND Studies in Humans: Preclinical Requirements.

The FDA staff will host a separate business meeting on Monday morning tentatively featuring discussions from Ravindra Kasliwal, PhD, on Chemistry, Manufacturing, and Controls for PET Drugs, and Thuy Nguyen on Administrative Steps to Submitting a PET-FDG New Drug Application (NDA). An open discussion with FDA staff about the Radioactive Drug Research Committee (RDRC) process will follow these presentations.

FDA Issues in the News

A memorandum of understanding (MOU) was released on March 20 to outline an agreement between the FDA, the National Cancer Institute (NCI), and the Centers for Medicare & Medicaid Services (CMS) to develop strategic plans, set priorities, and leverage resources and expertise from multiple sources, including the private sector, toward the goal of improving the clinical utility of biomarker technologies as diagnostic and assessment tools that facilitate the development of safer and more effective cancer therapies. This collaboration among FDA, NCI, and CMS is officially termed the *Oncology Biomarker Qualification Initiative*.

Read the MOU online at <http://interactive.snm.org/index.cfm?PageID=4988>.

Health and Human Services (HHS) Secretary Mike Leavitt and the FDA released a proposed list of priority research projects designed to advance innovation in medical products. The Critical Path Opportunities List—part of the FDA's Critical Path Initiative—outlines an initial 76 projects to bridge the gap between the quick pace of new biomedical discoveries and the slower pace at which those discoveries are currently developed into therapies. The release of the list marks a starting point in identifying priorities to be accomplished under the Critical Path Initiative. Government, industry, and academic experts estimate that, if accomplished, the new tests and tools developed under the Critical Path Initiative will modernize the drug development process by 2010 and help to get new medical discoveries to patients faster and at a lower cost.

Read more about the release of the Critical Path Opportunities List on the FDA's Web site at www.fda.gov/bbs/topics/news/2006/NEW01336.html.

Concerning our NMT and RT Technologist Partners

The RadCARE Bill (S 2322) was introduced in the Senate on February 17 by Senator Mike Enzi (R-WY) and by Senator Ted Kennedy (D-MA), chair and ranking member of the Health, Education, Labor, and Pensions (HELP) Committee. This is also the committee of jurisdiction for S 2322, so the RadCARE bill is in an excellent position to move through committee. S 2322 is a companion bill to HR 1426, known as the CARE (Consumer's Assurance of Radiologic Excellence) bill in the House of Representatives.

Michael Peters
Assistant Director of Public Affairs, SNM/ACNP

Resident Education for NRC Licensing

The issue of resident education for NRC licensing to use radioactive materials was raised at the Nuclear Medicine Program Directors meeting, February 10 in Tempe, AZ. I believe there are two issues: 1) training of nuclear medicine residents, and 2) training of radiology residents. I assume that most programs train both, and some programs also train cardiology residents. Since we do not know where these residents may go to practice, it is necessary to train all residents to meet the criteria for licensing in all states.

Currently the NRC has no specific requirements under CFR 35.390 for basic science education didactic hours, but under their guidelines for 2005, they do recommend a total of 80 hours of basic science instruction. However, many (all?) Agreement States (33 total) still have specific didactic requirements for 200 hours of "basic radioisotope handling techniques." The Tennessee License Requirements read as follows:

(a) Training in basic radioisotope handling techniques consisting of lectures, laboratory sessions, discussion groups or supervised experience in a nuclear medicine laboratory in the following areas: (200 hours)

1. Radiation physics and instrumentation (approx. 100 hours)
2. Radiation protection (approx. 30 hours)
3. Mathematics pertaining to the use and measurement of radioactivity (approx. 20 hours)
4. Radiation biology (approx. 20 hours)
5. Radiopharmaceutical chemistry (approx. 30 hours)

This is probably similar, if not identical, for all Agreement States (if not, please let me know). For nuclear medicine residents, the issue of training is addressed (again in Tennessee) by the statement:

(e) In lieu of the requirements in 1200-2-10-.33(1)(a), (b), and (c), certification by the American Board of Nuclear Medicine or the American Board of Radiology in Diagnostic Radiology with Special Competence in Nuclear Radiology will be accepted as evidence that a physician has had adequate training and experience to use Groups I, II, and III.

By this statement, only nuclear medicine and nuclear radiology residents are covered in the state of Tennessee by virtue of their training and board certification. I believe this is also true for other agreement states. At the meeting, Dr. Miller suggested that we consider naming nuclear medicine residents as authorized users in the spring of their final year in order to facilitate them getting licensed in other states. This may work; however, in Tennessee, our attempt to do so 10 years ago was denied by the state.

For radiology (and cardiology) residents, however, board certification is not accepted as "evidence of adequate training" (the exception being nuclear radiology "fellowships"). Therefore, it is necessary to document adequate training in the basic sciences for these residents. In our program, it is proving more and more difficult to provide this training for radiology residents, since they now rotate on nuclear medicine for only four months

(i.e., 700 hours as required by NRC). This amounts to over an hour per day of basic science didactic teaching, even after they take a 90-hour physics course in the first year, since lectures on how to read clinical scans do not satisfy these requirements. For cardiology residents, this may prove even more difficult.

Note that these requirements are independent of the recent notice sent out by the ABR for radiology resident attestation for nuclear medicine training in order to sit for the ABR examination (which requires only signature by the radiology residency program director). The NRC/Agreement State form NRC313A still requires signature by the nuclear medicine preceptor/authorized user for all residents who apply for license to use radioactive materials.

Finally, the ACGME requirements for nuclear medicine currently require 20 hours of computer science didactic training (with 20 fewer hours required for the combination of radiation protection/radiation biology). I understand that this is to be dropped in the 2007 Nuclear Medicine Program Requirements. There is no specific basic science “total hour” requirement in the new ACGME Radiology (or Cardiology) Program Requirements.

I hope this summarizes the current status for nuclear medicine and radiology (and cardiology) resident training in basic sciences required by the NRC, Agreement States, and the ACGME. For a list of Agreement States, please see: www.hsrp.org/nrc/rulemaking.htm.

Gary Smith, MD

What's New in the Nuclear Medicine Industry?

Bio-Tech Systems Announces a New Report: World Market For Therapeutic Radiopharmaceuticals

Feb. 28, 2006—News Release

Bio-Tech Systems Inc. www.biotechsystems.com announces the publication of a comprehensive report with detailed analysis of the markets for therapeutic radiopharmaceuticals. This includes both current and emerging applications for lymphoma, colon cancer, lung cancer, prostate cancer, breast cancer, endocrine cancer, myeloma, brain cancer, liver cancer, pancreatic cancer, and other cancers resistant to traditional therapies. There has been a surge in research activity to expand applications for therapeutic radiopharmaceuticals employing more sophisticated targeting methodologies and more appropriate therapeutic isotopes for the tumors being treated. There is also more confidence with respect to the prospects for FDA approval of these drugs. As interest in new therapeutic radiopharmaceuticals has grown, it has prompted investigators to utilize different isotopes with more appropriate energy levels and half-lives for specific applications. The objective has been to minimize toxicity and reduce the bystander effect on neighboring healthy cells. There is also considerable research involving alpha emitters, where the shorter particle range and high-energy deposition can be used to advantage to destroy DNA directly. There are a number of products in development employing bismuth 212, bismuth-213, astatine-211, radium-223 and polonium-210. The report has a strong focus on new products and technology and emerging market opportunities. The prospects for therapeutic radiopharmaceuticals are on a major threshold with the approval of Zevalin and Bexxar for treating non-Hodgkins lymphoma. This will be followed by other radioimmunotherapy products for both circulating and solid tumors, which should form a sound base for continued investment in this field. As these products enter the mainstream, there will be others in the pipeline for treating a variety of cancers. One motivator is the potential return on investment. The high pricing of these products is justified by their unique status and is indicative of future market opportunities, even in the presence of competition.

Positive Findings from Clinical Studies of QUADRAMET® in Prostate Cancer Patients with Metastatic Bone Disease

Feb. 27, 2006—PR Newswire

PRINCETON, NJ—Cytogen Corporation today announced the presentation of data from several clinical studies of Quadramet® (samarium Sm-153 lexidronam injection) in prostate cancer patients with metastatic bone disease. The findings were presented this week at the second Prostate Cancer Symposium in San Francisco, a multidisciplinary meeting co-sponsored by the American Society of Clinical Oncology, the American Society for Therapeutic Radiology and Oncology, the Prostate Cancer Foundation, and the Society of Urologic Oncology.

Siemens and Subsidiary PETNET Pharmaceuticals, Inc., Acquire PETNET Radiopharmacy; Manufacturing and Distribution Center

Feb. 27, 2006—Business Wire

Siemens Medical Solutions with its subsidiary PETNet® Pharmaceuticals, Inc., announced today it has acquired full ownership of New England PETNet Manufacturing & Distribution Center, LLC in Woburn, Mass. The acquisition, a result of continuing efforts of expansion, enables Siemens and PETNet to provide biomarkers for clinical and preclinical positron emission tomography (PET) imaging to the New England region through PETNet's SafetyNet™ international network of more than 45 manufacturing and distribution centers. PETNet, Siemens' distribution channel for biomarkers, is the world's leading producer and distributor of PET biomarkers, with the largest U.S. network of cyclotron-equipped radiopharmacies.

AECL and MDS Enter Into Long-term Supply Agreement for Medical Isotopes

Feb. 22, 2006—Canada Newswire

MISSISSAUGA, ON—Atomic Energy of Canada Limited (AECL) announced today that it has successfully completed mediation with MDS Inc. and its subsidiary MDS Nordion on issues related to the construction, commissioning and operation of the Maple reactors and associated New Processing Facility (NPF) in Chalk River, Ontario. Collectively, these facilities are called the Dedicated Isotope Facilities (DIF).

The resolution includes a 40-year isotope supply agreement between AECL and MDS Nordion. Under this agreement, AECL will assume ownership of the DIF, which will be dedicated to the production and supply of isotopes to MDS Nordion. AECL will continue to supply radioisotopes to MDS Nordion from its existing facilities until DIF is operational.

U.S. Health Agencies Seek Biomarkers for Better Cancer Therapies

Feb. 15, 2006—Xinhua English Newswire

WASHINGTON, DC—U.S. federal health agencies on Tuesday announced a project to seek biological markers that will show the effect of therapies on cancer patients in order to predict tailored treatments.

The three U.S. federal agencies, the FDA, National Cancer Institute, and Medicare, will collaborate to find better biomarkers for cancer or better ways to measure and use them.

Cytogen Announces Publication of Peer Reviewed Preclinical Data Demonstrating Anticancer Activity of QUADRAMET®

Jan. 24, 2006—PR Newswire

PRINCETON, NJ—Cytogen Corporation (Nasdaq: CYTO) announced today the publication of preclinical data from studies involving the use of Quadramet® (samarium Sm-153 lexidronam) both as a monotherapy and in combination with the novel first-in-class proteasome inhibitor bortezomib (Velcade®, Millennium Pharmaceuticals, Inc.) for the treatment of multiple myeloma. In results prepublished online as a first edition paper in the peer-reviewed journal *Blood* (<http://www.bloodjournal.org/>), Quadramet demonstrated broad and synergistic activity when administered in combination with bortezomib in a murine myeloma model.

Highlights from the ACNP 2006 Annual Meeting



Bennett Greenspan (left), outgoing president of ACNP, with two new ACNP fellows, Hussein Abdel-Dayem and Munir Ghesani

Each year, ACNP honors the outstanding nuclear medicine physician members who have made great contributions to the field of nuclear medicine and to the college with the ACNP Fellowship Award. This year two outstanding ACNP members were elected to fellowship in the college. The plaques were presented at the award ceremony on February 19 in Ft. Lauderdale, FL, by 2005 ACNP President Bennett Greenspan, MD. Congratulations and best wishes to new ACNP fellows:

Hussein Abdel-Dayem, MD, St Vincent Medical Center, New Medical College, New York, NY.

Munir Ghesani, MD, St Luke's Roosevelt Hospital Center, New York, NY.

ACNP 2006 Abstract Award Winners

ACNP would like to congratulate the winners of the ACNP travel grant and the Best Essay Award, which were given to individuals who presented abstracts at the 2006 ACNP Annual Meeting.



Hans Jacobsson and Gethin Williams

Hans Jacobsson was awarded a \$750 travel grant for "Reduction of FDG-Uptake in brown adipose tissue at clinical examinations by a single dose of propranolol," by Hans Jacobsson, Veli Soderlund and Stig A. Larsson, Karolinska University Hospital, Stockholm, Sweden.

Gethin Williams accepted the \$500 Best Essay Award for "Modified Chassard-Lapine view using a dual-head camera for evaluation of the sacral area by bone scintigraphy," by Gethin Williams, Thomas C. Hill, M. Stokes, J. Anthony Parker, and Gerald Kolodny, Beth Israel Deaconess Medical Center, Boston, MA.

ACNP 31st Annual Meeting Paper Selected for *JNM*

Congratulations to Thomas F. Heston, MD, and Daniel Sigg, MD, PhD, from the Northwest Molecular in Kellog, Idaho for the inclusion of their paper titled, "Quantifying Transient Ischemic Dilation Using Gated SPECT," in the December 2005 issue of *The Journal of Nuclear Medicine*. The abstract of this paper was originally presented at the ACNP 31st Annual Meeting in January 2005, and it won a \$500 Best Essay Award.

Best Mentor of the Year 2006 Award



Abass Alavi accepting the Best Mentor of the Year award for 2006.

At the recent ACNP Annual Meeting in Ft. Lauderdale, Abass Alavi, MD, was nominated as the Best Mentor of the Year by one of his previous nuclear medicine residents, J. Q. Michael Yu, MD, director of nuclear medicine at the Fox Chase Cancer Center. At the award ceremony, Dr. Simin Dadparvar read the nomination letter from Dr. Yu and presented the recognition plaque to Dr. Alavi.

ACNP established the mentorship program two years ago, and each year the Best Mentor of the Year will be honored at the ACNP annual meeting. For further details, please read the January/February issue of *Scanner*.

Share Your News and Information

We would appreciate it if you would share any information about your institution or practice with *Scanner*. If you have received a grant from NIH, DOE, the U.S. Army, etc.—or if you have successfully passed a milestone such as an NRC inspection, the Nuclear Medicine Residency Review, or practice accreditation—please let us know. We will publish your experience and help you share your wealth of knowledge with ACNP members. Please e-mail your information to the editor at sdadparvar@aol.com.

Membership Renewal 2006

If you have not already renewed your membership for 2006, please renew your membership online by going to: www.acnponline.org.

Members have the following advantages:

- ▶ Attending the annual meeting at a discounted rate
- ▶ Receiving the online bimonthly newsletter, *Scanner*
- ▶ Receiving *Scanner* twice per year in print
- ▶ Learning updated information regarding regulatory issues
- ▶ Receiving periodic updates on PET and PET/CT reimbursement
- ▶ Getting involved in leadership roles in various ACNP committees

Membership is free for residents and fellows in nuclear medicine, supported by generous contributions from industry.

ACNP Residents Organization

ACNP Resident Organization New Officers

The election of the officers for ACNP Residents Organization was held on February 17. The following new officers were elected for one-year terms.

President: David Ng, MD, Emory University Hospital, Atlanta, GA

Vice President: Gethin Williams, MD, PhD, Beth Israel Deaconess Medical Center, Boston, MA

Secretary/ Treasurer: Ben Wince, MD, Emory University Hospital, Atlanta, GA

Congratulations to all the officers. We are looking forward to a very productive year.

Meet the New President

I did my medical training at Loma Linda University, and I did my internal medicine residency at Wright State University–Kettering Medical Center in Dayton, OH. I am currently serving in a nuclear medicine fellowship at Emory University in Atlanta, GA. I decided to take medical management courses during my internal medicine residency when I realized that physicians were being told what to do by MBAs. I knew that I needed to know the language of business and finance to be an advocate for my patients and to show the different payers how the management of my patients was effective and based on scientific principles.

During my term as president, I hope to increase the membership of the Residents Organization, and I will encourage more resident involvement in the activities of ACNP. I also hope to create a mechanism for nuclear medicine residents to log the number of correlative modalities and hybrid modalities (CT, MRI, PET/CT, PET/MRI) interpreted so that we can document our training in these modalities to various organizations.

*David Ng, MD
President, ACNP Residents Organization*

President's Message

Hello Residents and Fellows,

We just had a very successful American College Nuclear Physicians Residents Organization annual meeting in Ft. Lauderdale. Dr. Abass Alavi was named mentor of the year by the Residents Organization. We also had the election/installation of the 2006 officers. I would like to introduce the officers: Dr. Gethin Williams was elected vice-president; Dr. Ben Wince was installed as secretary/treasurer.



David Ng

Gethin Williams, PhD, is a graduate of the University of Tasmania (Australia) and is in the Harvard Joint Program In Nuclear Medicine. Ben Wince, MD, is currently completing combined postgraduate medical training in internal medicine and nuclear medicine at Emory University in Atlanta, GA. He will be the first individual to complete the ACGME-certified, four-year combined internal medicine/nuclear medicine residency training program. Beginning in July 2006, Ben will continue his postgraduate medical training in cardiology at Vanderbilt University in Nashville, TN. Ben has a strong interest in cardiovascular imaging and hopes to serve as a liaison between ACNP and the American College of Cardiology in the future. I am a nuclear

medicine resident at Emory University, and I did an internal medicine residency at Wright State University–Kettering Medical Center before starting my nuclear medicine fellowship. We are your officers and are here to serve. We are the voice of the residents and fellows-in-training, but we can only know what projects to embark on if we have your input.

An organization is strong only if we have members who are active and committed to it. Our first project for the year is a membership drive. Our goal is to get every nuclear medicine resident/fellow—as well as nuclear radiology fellows—to join. Membership is free, thanks to the support of industry. We hope to start an ACNP Residents Organization chapter in every nuclear medicine/radiology training program in the country. We need volunteers to be chapter presidents. The role of the chapter president is to:

- Assist the program director.
- Set up correlative imaging lectures in multidetector computed tomography (MDCT) and MRI to make use of the new three-year curriculum that requires four months in correlative imaging in MDCT and MRI.
- Liaise with industry so they can assist by providing lecturers for MDCT and MRI topics and possibly offer CME credits.
- Promote ACNP membership to all nuclear medicine faculty and residents.

We hope all nuclear medicine/nuclear radiology residents and fellows-in-training will join the ACNP Residents Organization. The benefits are enormous: a mentorship program, a chance to unite to present our voice to the leaders of nuclear medicine, and opportunities for networking. If you need to contact me, I can be reached at davidngmd@gmail.com.

*David Ng, MD
President, ACNP Residents Organization*

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