

7T MRI Scanner Will Enhance Research Efforts

Researchers at the Feinberg School of Medicine will have enhanced imaging capabilities thanks to a \$2 million grant from the National Institutes of Health (NIH) High End Instrumentation (HEI) grant program. The NIH funding will be used to purchase a 7T Bruker ClinScan MRI scanner, which provides high-resolution in vivo anatomic and functional MR scanning of small animals such as mice, rats, and rabbits.

Debiao Li, PhD, director of cardiovascular MRI research in the Department of Radiology, the principal investigator of the HEI proposal, also is a professor of radiology and biomedical engineering and collaborated extensively with faculty across Northwestern University in submitting the proposal.

“This was a multidisciplinary effort,” he says. “In particular, I want to extend great appreciation for the key roles played by Reed Omary, MD, vice chair of research for radiology and associate professor of radiology and biomedical engineering; Mark Wainwright, MD, PhD, associate professor of pediatrics; John Disterhoft, PhD, Ernest J. and Hattie H. Magerstadt Memorial Research Professor of Physiology; David Johnson, PhD, associate dean for research operations; and Douglas Losordo, MD, Eileen M. Foell Professor of Heart Research and director of the Feinberg Cardiovascular Research Institute.

“We would also like to acknowledge the support of Eric Russell, MD, Drs. Frederick John Bradd and William Kennedy Professor of Radiology and chair of

the Department of Radiology; and Feinberg School Dean J. Larry Jameson, MD, PhD, for this application.”

The new scanner will be the first MRI unit on the downtown campus dedicated to small animal imaging. It will be located in the Department of Radiology’s Center for Advanced Magnetic Resonance Imaging (CAMRI) and will complement the already existing 1.5T and 3T human research MRI scanners. The new 7T scanner will be operated through a combined effort of the Department of Radiology and the Feinberg School.

Dr. Li explains that the new 7T MRI scanner is expected to be used primarily in imaging animal models of cardiovascular, neurologic, and oncologic disease. While there are a number of expected major users with existing R01 funding, any researcher within or outside the Northwestern community will be able to sign up for scanner time. This time will be allotted for researchers who require the assistance of an MRI technologist, as well as for those who have the training to perform scanning themselves. “The scanner is expected to be ‘turnkey,’ thereby permitting high throughput imaging,” Dr. Li says.

The new scanner will have a Siemens operating system. The clinical MRI scanners at Northwestern Memorial Hospital, as well as the human research MRI scanners at CAMRI, are all Siemens scanners. Additionally Siemens has provided five basic scientists within the Department of Radiology as part of a 10-year research agreement with Northwestern University. “The 7T Bruker scanner is the only

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A Few Words from Eric J. Russell, MD . . .

Remembering Northwestern Radiology's First Chairman

In this sesqui-centennial year celebrating the founding of the medical school at Northwestern, it is appropriate to look back at our own history. With this in mind, I would like to introduce to you the first chair of the Department of Radiology: James T. Case, MD.

Dr. Case was born to John Henry and Fannie Elizabeth (Roberts) Case in San Antonio, Texas, on January 5, 1882. In 1905, at age 23, he received the degree of Doctor of Medicine from the American Medical Missionary College in Chicago (which merged with the University of Illinois' School of Medicine in 1910). Following his graduation, he toured Europe with the renowned John H. Kellogg, MD, who was his mentor and fellow traveler. He then returned to become a surgical assistant at Dr. Kellogg's Battle Creek Sanitarium in Michigan.

It wasn't until 1908 that Dr. Case first engaged actively in radiology, combining this interest with his practice in surgery. In these early years, without the availability of good training in the United States, he traveled to Europe again for post-graduate work at the University of Vienna, the Radium Institute of Paris, and Universities of Freiburg, Hamburg, Munich, and Frankfurt.

In 1913, while still a surgeon at Kellogg, the 31-year-old Dr. Case was appointed professor and the first chair of radiology at Northwestern University Medical School. He held this position until 1947, when he became professor emeritus. Dr. Case also served as surgeon-in-chief at the Sanitarium from 1919-29. In 1929, he established his

home in Chicago to devote his time to radiology and his position as chair of the department and affiliated hospitals. He also engaged in private practice in Chicago's Loop. At various times, he practiced radiology at the following hospitals in the Chicago area: St. Luke's, U.S. Marine, Passavant Memorial, Evanston, and Highland Park.

Dr. Case was the second editor of the *American Journal of Roentgenology*, succeeding Preston M. Hickey, MD, in 1916. His editorial role was interrupted by his service during World War I: he became head of the radiological section of the American Expeditionary Forces in France. Dr. Case remained active in the reserves after the war, resigning as colonel in 1937.

Dr. Case made many contributions to the literature (>100), particularly related to gastrointestinal tract problems. His medical contributions included pioneer work in roentgen recognition of colonic,

duodenal, and small bowel diverticula; ileocecal and appendiceal studies; and colon carcinoma. Dr. Case helped to translate texts, including *Borderlands of the Normal and Beginnings of the Pathologic in Skeletal Roentgenology* by Kohler and Zimmer. In 1914, he published the four-volume text *Stereoscopic Atlas Text on X-Ray Examination of the Digestive Tract*, a copy of which is currently available for review in Northwestern Radiology's departmental offices.

Dr. Case became one of America's most distinguished radiologists, practicing for more than 55 years. An international traveler, perhaps no other American radiologist was as well known for his contributions abroad, especially in Central and South America and Europe. He made frequent trips and garnered many honors from Latin American academies of medicine and radiology. He received the gold medals of the RSNA (1937), ARRS (1939), ACR (1955), Inter-

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Dr. James Case served as chair from 1913 until 1947.



Dr. Case using a Wheatstone stereoscope to get a 3-D view of a chest X-ray.

Welcome Newcomers, Farewell Class of 2008

The 2008-09 academic year brought nine new first-year residents and 30 fellows to the department. This summer Northwestern Radiology bid adieu to its graduating residents and fellows, wishing them well as they embarked on new careers or additional subspecialty training in radiology.

Welcome New Radiology Residents

Sheetal Manvar Bhalani, Duke University; **Kush Desai**, Northwestern; **Ankur Garg**, University of Chicago; **James Gehl**, Northwestern; **Nabeel Hamoui**, Duke University; **Ryan Hickey**, Northwestern; **Nicholas Nacey**, University of Virginia; **Jonathan Samet**, University of Maryland; and **Alyssa Volk**, Northwestern.

Introducing 2008-09 Fellows

Body Imaging: **Morgan Camp**, University of Florida; **Joseph Carabetta**, University of Chicago; **Brandie Fagin**, Boston University; **Chun Feng**, Northwestern; **Ahmad Haidary**, William Beaumont Hospital; **Jeanne Horowitz**, Northwestern; and **Dejana Radulovic**, University of Manitoba, Canada.

Cardiovascular Imaging: **Cormac**

Farrelly, University College of Dublin, and **Aoife Keeling** and **John Sheehan**, both from the Royal College of Surgeons in Ireland, Dublin.

Interventional: **Brian Bianco**,

Hahnemann University Hospital; **Richard Bonsall**, Medical University of South Carolina; **Marouane Bouchareb**, Emory University; **Ramona Gupta**, Emory University Hospital; **Ajay Joshi**, University of Alabama at Birmingham; **Siddharth**



Graduating residents and fellows stand alongside Northwestern Radiology faculty members as they look forward to new beginnings.

Padia, Cleveland Clinic; **Parthiban**

Ramachandran, University of Texas; and **Timothy Scanlon**, Mater Misericordiae University Hospital, Dublin, Ireland.

Neuroradiology: **Matthew Cummings**, Case Western Reserve University; **Rami Kaakaji**, University of Arkansas; **Catherine Kim-Gavino**, University of Illinois at Chicago; **Viraj Parikh**, University of Tennessee; **Ayis Pyros**, Jefferson Medical College; and **Carina Yang**, Northwestern.

Endovascular Surgical Neuroradiology:

Michael Hurley, University College Cork, Ireland.

Women's Imaging: **Alpa Chandarana**, Loyola University; **Julie Franz**, Ochsner Clinic Foundation; **Holly Nelson-Marshall**, MetroHealth Medical Center; **Erin Neuschler**, Northwestern; and **Lillian Wang**, University of Washington.

Onward for Class of 2008

Chun Feng, body imaging fellowship, Northwestern; **Jeanne Horowitz**, body imaging fellowship, Northwestern; **Rami Kaakaji**, neuroradiology fellowship, Northwestern; **Erin Neuschler**, breast imaging fellowship, Northwestern; **Ayis Pyros**, neuroradiology fellowship, Northwestern; **Brian Schirf**, private practice in Ohio; **Daniel Wenzke**, musculoskeletal fellowship, NorthShore University HealthSystem (formerly known as Evanston Northwestern Hospital); and **Carina Yang**, neuroradiology fellowship, Northwestern.

Grads Embark on Rad Careers

Interventional Radiology: **Brian Dunfee**, private practice, Diagnostic Imaging, Inc., Philadelphia, Pennsylvania; **Ronald Gaba**, attending radiologist, University of Illinois at Chicago; **Sandra Mun**, private practice, Southwest Radiology Asso-

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Small Animal Scanner

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dedicated small animal MRI that has the same operating system as existing clinical scanners,” says Dr. Omary. “Thus, innovative imaging techniques developed in animal models on the 7T scanner can be readily translated to the clinical MRI scanners. Northwestern will be one of only a handful of institutions worldwide to have this opportunity to directly translate preclinical imaging studies in this way.”

A number of ongoing research studies will benefit from this new technology. They include NIH-funded research projects led by Dr. Disterhoft that focus on the cellular and subcellular mechanisms of learning in the young and aging brain. His team is studying neurobiology of associative learning in the mammalian brain at cellular and systems levels, using both in vivo and in vitro techniques. An important focus of this research program is the examination of the cellular mecha-

nisms for altered learning in aging using a combination of behavioral, biophysical, and pharmacological approaches to address this question.

Functional MRI is being used as an important systems-level tool to visualize the neural circuits that mediate eye-blink conditioning. Most of these animal experiments are done in collaboration with colleagues at distant locations because of the unavailability of the high-field magnet on campus. While collaboration with colleagues outside of the Feinberg School is valuable in many ways, doing experiments in a distant place is not a formula for making rapid progress. “The presence of the new 7T scanner will be a huge benefit for many research programs in the medical school,” Dr. Li says.

The scanner is expected to arrive in late summer 2009. For more information, contact Dr. Li at d-li2@northwestern.edu or Dr. Omary at reed@northwestern.edu.



Drs. Debiao Li (left) and Reed Omary look forward to the new capabilities the 7T scanner will bring to the department and medical school.

This article appeared in the August 2008 FSM Research Newsletter, Northwestern University's Feinberg School of Medicine, Chicago, Illinois.

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Radiology's First Chairman

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American College of Radiology (1955), and his last: the Gold Medal of the Centre Antoine Bécélère of Paris, bestowed in absentia due to illness on February 3, 1960, at the annual meeting of the American College of Radiology in New Orleans. He served as president of several organizations, including the Chicago Roentgen Society (1915), American Radium Society (1923), American Roentgen Ray Society (1920), and American College of Radiology (1929).

In 1951 Dr. Case retired from his practice in Chicago and went to California,

where he became director of the Memorial Cancer Foundation in Santa Barbara and a member of the radiology department at the Cottage Hospital. He worked in therapy, and added a cobalt unit and expanded the use of radioisotopes. Dr. Case died on May 24, 1960, of cancer. The June 1960 issue of *Radiologia*, the official journal of the Sociedad Radiologica Panamena, dedicated to memorials for Dr. Case, included a tribute from editor Arrieta Sánchez, MD.

Credit: A memorial to the life of James T. Case, by Earl E. Barth, MD, Radiology 75:469-471, 1960. Images courtesy of the Galter Health Sciences Library's Special Collections, Northwestern University, Chicago, Illinois.

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Northwestern Radiology at RSNA 2008 Annual Meeting

The 94th scientific assembly and annual meeting of the Radiological Society of North America (RSNA) attracted medical imaging professionals from around the world to Chicago November 30 to December 5. Of the 1,803 scientific presentations, 729 scientific posters, and 1,606 education exhibits selected by the RSNA's program committees, Northwestern Radiology faculty and staff made a strong showing. Presentations from the department included:

MULTISESSION COURSES

SUNDAY, NOVEMBER 30

INTERVENTIONAL ONCOLOGY SERIES: HEPATOCELLULAR CARCINOMA

Hepatocellular Carcinoma: Yttrium 90 Therapy, Salem R.

Tumor Boards/Questions and Answers, Geschwind J, Choti M, Salem R, Lu D, Lencioni R.

MONDAY, DECEMBER 1

Case-based Review of Magnetic Resonance: Cardiac and Vascular (In Conjunction with the International Society for Magnetic Resonance in Medicine), Carr J.

TUESDAY, DECEMBER 2

Case-based Review of Interventional Radiology: Vascular Interventions (In Conjunction with the Society of Interventional Radiology), Nemcek A, Ray C, Trerotola S, Kaufman J.

Case-based Review of Interventional Radiology: Vascular Diagnosis (In Conjunction with the Society of Interventional Radiology), Nemcek A, Stavropoulos W, Funaki B, Darcy M.

Case-based Review of Interventional Radiology: Oncologic Interventions (In Conjunction with the Society of Interventional Radiology), Nemcek A, Salem R, Ahrar K, Facchini F, Rilling W.

Case-based Review of Interventional Radiology: Nonvascular Interventions (In Conjunction with the Society of Interventional Radiology), Nemcek A, Dixon R, D'Agostino H.

WEDNESDAY, DECEMBER 3

Boost: Gastrointestinal-integrated Science and Practice (ISP) Session, Salem R.

REFRESHER COURSES

MONDAY, DECEMBER 1

Aneurysms: Update in Treatment Strategies, Nemcek A, Matsumoto A, Lammer J.

Embolotherapy in Oncologic Patients: Arterial Embolization with Radioactive Spheres, Salem R.

TUESDAY, DECEMBER 2

Neuroradiology: Seniors versus Juniors (An Interactive Session), Bryan RN, Mathews V, Castillo M, Ginsberg L, Quencer R, Glastonbury C, Hammoud D, Walker M.

FRIDAY, DECEMBER 5

Real-time Interventional US (Hands-on Workshop), Sato K, Wilkin T, Nemcek A, Hahn D, Lewandowski R, Desai S, Himmelberg J, Stokes L, Chen R, Alonzo M, Keele K, Hamblin M, McRae S, Bozarth D.

Fast and Reliable MR Angiography: Strategies for Technique Optimization Post-processing, Work Flow, and Interpretation, Carr J.

EDUCATION EXHIBITS

ANIVATR: caBIGTM in Vivo Imaging Workspace's Annotation and Image Markup (AIM) Open Source Tool for Validation and Transcoding between AIM XML, DICOM SR and HL7 CDA, Kleper V, Mongkolwat P, Supekar K, Kogan A, Rubin D, Channin D.

CT Enterography (CTE): One Stop Shop for the Evaluation of Gastrointestinal Neoplasms, Yaghmai V, Tochetto S, Rezai P, Rezvani M.

Failed CT Enterography: Causes and Remedies, Yaghmai V, Rezai P, Tochetto S, Rezvani M.

Genitourinary Case of the Day, Casalino D, Nikolaidis P, Carabetta J, Haidary A, Horowitz J, Radulovic D.

Imaging Features of Extraovarian Cystic Lesions of the Female Pelvis on MR, Nikolaidis P, Gabriel H, Marko J, Hammond N, Yaghmai V, Berggruen S.

Patellofemoral Malalignment: Pathophysiology, Radiologic Assessment, and Surgical Treatments, Mar W, Imran O.

"Saying It in Pictures": Annotation and Image Markup in Radiology, Rubin D, Mongkolwat P, Kleper V, Supekar K, Channin D.

SCIENTIFIC POSTERS

SUNDAY, NOVEMBER 30

Session: Radiation Oncology and Radiobiology (Biology, Breast, Head, & Neck) Radiation Treatment Induction of DNA Damage and Repair: Expression of PCNA, P53, and H2AX Phosphorylation and Apoptosis in Radiosensitive Wasted Mouse, Szolc B, Paunesku T, Haley B, Nakamura K, Ono T, Woloschak G.

SCIENTIFIC PAPERS

SUNDAY, NOVEMBER 30

Vascular/Interventional (Oncologic Interventions: Transarterial Therapy of Hepatoma) CT Evaluation of Hepatic Tumor Response to Y90 Radioembolization: RECIST, Volumetry, or Tumor Density? Yaghmai V, Berggruen S, Korutz A, Wood C, Salem R.

MONDAY, DECEMBER 1

Physics (MR Imaging: Image Quality), Why Does Ductal Carcinoma in Situ Enhance on Dynamic Contrast-enhanced MR Imaging of the Breast? Jansen S, Paunesku T, Woloschak G, Vogt S, Conzen S, Markiewicz E.

TUESDAY, DECEMBER 2

Breast Series: Identification and Management of the Patient at High Risk for Breast Cancer, Reasons for Refusing a Screening Breast MRI in Women at Elevated Risk of Breast Cancer: ACRIN 6666 (American College of Radiology Imaging Network), Berg W, Blume J, Adams A, Jong R, Barr R, Lehrer D, Mendelson E.

WEDNESDAY, DECEMBER 3

Cardiac (CT/MR Imaging of Plaque), Compensatory Enlargement of Coronary Arteries Detected by MRI in Populations with Subclinical Atherosclerosis: Multi-ethnic Study of Atherosclerosis (MESA), Miao C, Macedo R, Wasserman B, Li D, Lima J, Bluemke D.

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Northwestern Radiology at RSNA

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ISP: Breast Imaging (Ultrasound), Breast Keynote Speaker: Screening Breast US—Potential Use and Current Limitations, Mendelson E, Weinstein S.

Neuroradiology (Brain Tumors—Treatment Related), Predicting Response to Anti-angiogenic Chemotherapy in Patients with High-grade Glioblastomas Using MR Perfusion Imaging, Sawlani R, Raizer J, Horowitz S, Shin W, Grimm S, Chandler J.

Neuroradiology (Brain: Orbits, Pituitary Gland, and Cranial Nerves), Moderators: Curtin H, Nemeth A.

THURSDAY, DECEMBER 4

Physics (MR Imaging: New Acquisition Techniques), Improving Radial Sliding Window Contrast-enhanced Intracranial MRA with HYPR, Jeong H, Eddleman C, Getch C, Walker M, Cashen T, Carroll T.

Vascular/Interventional (Image-guided Biopsy), Moderators: Nemcek A, Sidhu M.

FRIDAY, DECEMBER 5

Neuroradiology (Brain: Vascular Noninvasive Imaging—New Techniques), 4D MRI to As-

sess High Flow Cerebral Arteriovenous Malformations at 6 Frames Per Second, Hurley M, Jeong H, Eddleman C, Shaibani A, Bendok B, Carroll T.

Neuroradiology (Brain: Vascular Noninvasive Imaging—New Techniques), Moderators: Russell E, Camacho D, Law M.

Vascular/Interventional (Oncologic Interventions—Transarterial Therapy of Hepatoma), CT Evaluation of Hepatic Tumor Response to Y90 Radioembolization: RECIST, Volumetry, or Tumor Density? Yaghmai V, Berggruen S, Korutz A, Wood C, Salem R.

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Newcomers, Graduates

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ciation, Houston; **Gregory Neri**, private practice, Aurora Radiology Consultants, Aurora, Illinois; **Paul Speece**, private practice, California Medical Imaging, Fresno, California; **Ernest Wiggins**, private practice, Monmouth Medical Imaging, Long Beach, New Jersey; and **Ronald Workman**, private practice, Radiology of Huntsville, Huntsville, Alabama.

Body Imaging: **Kirsten Cestaro**, private practice, Northeast Advanced Imaging, Albany, New York; **Winnie Mar**, attending radiologist, University of Illinois at Chicago; **Bernard Sajous**, private practice, Radiology Associates of Main Street, Flushing, New York; **Shidrokh Shakeri**, attending radiologist, Edward Hines Hospital, Chicago; **Stephanie Shors**, attending radiologist, Rush University Medical Center, Chicago; **Aheed Siddiqi**, private practice, Radiologists of DuPage, Good Samaritan Hospital, Downers Grove, Illinois; and **Stephen**

Thomas, private practice, GCM Radiology, Washington, DC.

Cardiovascular Imaging: **John Sheehan**, MRI fellowship, Northwestern.

Neuroradiology: **Benjamin Liu**, attending radiologist, Northwestern Radiology; **Wayde Nagamine**, attending radiologist, MacNeal Hospital, Berwyn, Illinois; **Jessica Stern**, attending radiologist, Children's Memorial Hospital, Chicago; and **Eric Yeh**, private practice, Riverside Radiology Associates, Columbus, Ohio.

Endovascular Surgical Neuroradiology (ESN): **Michael Hurley**, second year of ESN fellowship and neuroradiology, Northwestern.

Breast Imaging: **Luzmarie Buonomo**, private practice, OSF Saint Anthony Medical Center, Rockford, Illinois; **Jennifer Massengale**, private practice, Texas Radiology Associates, Plano,

Texas; **Stephanie Weber**, private practice, Carle Clinic Association Urbana, Illinois; and **Jennifer Yilk**, private practice, DuPage Medical Imaging Glen Ellyn, Illinois.

Children's Memorial Hospital: **Kerry Conneely**, private practice, St. Alexis Medical Center, Hoffmann Estates, Illinois, and **Andrew Johanek**, attending radiologist, Provena St. Joseph Medical Center, Joliet, Illinois.

Evanston Northwestern Healthcare: **Tami DenOtter**, private practice, musculoskeletal radiology, Omaha, Nebraska; **Andrew Griffin**, attending radiologist, Little Company of Mary Hospital, Evergreen Park, Illinois; **Nancy Rifenberg**, private practice, Aurora Radiology Consultants, Aurora, Illinois; and **Alex Sleeker**, private practice, Commonwealth Radiology, Richmond, Virginia.

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Northwestern Radiology Faculty and Staff Notes

Honors, Awards, Accolades

Tom Meade, PhD, Northwestern professor of chemistry with a secondary appointment in radiology, received the 2008 Excellence in Teaching Award from the Northwestern University Alumni Association. The honor recognizes Dr. Meade's excellence in teaching biological sciences and biochemistry, and his support of undergraduate co-curricular research activities.

Frank Miller, MD, has been appointed consulting editor to Radiologic Clinics of North America.

Jennifer Nicholas, MD, was selected as the recipient of the 2008 Dr. Susan Perlman Award, given to the Northwestern resident who best exemplifies academic excellence, special leadership skills, and compassion for patients.

Reed Omary, MD, has been elected as a new alumni member of Northwestern University's Chapter (Gamma) of Alpha Omega Alpha, Honor Medical Society.

Grant Awards

The National Institutes of Health (NIH) awarded **Debiao Li, PhD**, a \$2 million one-year grant (effective July 1, 2008) to support his research "7T MRI Scanner for Small Animal Imaging." **Tim Carroll, PhD**, received a \$1.5 million NIH-NHLBI grant for his research "Time Resolved MRA of the Intracranial Vasculature." **Rohan Dharmakumar, PhD**, received from the NIH-NHLBI a \$1.5 million grant for his work "4D CCFP MRI for Detecting Functionally Important Coronary Artery Stenosis at Rest."

Reed Omary, MD, was awarded a \$1.3 million NIH-NCI grant for his work "Functional MRI Monitoring of Hepatic

Chemoembolization." The NIH-NCI awarded \$907,911 to **Andrew Larson, PhD**, for his research "Transcatheter Intra-arterial Perfusion (TRIP)-MRI for Monitoring Liver Tumor Embolization."

The Society of Interventional Radiology (SIR) Foundation awarded **Robert Lewandowski, MD**, \$25,000 to support his research "MRI-Targeted Transcatheter Drug Delivery in a Rabbit Animal Model of Pancreatic Cancer." **Kent Sato, MD**, also received from the SIR Foundation \$25,000 for his work "TRIP-MRI Monitoring of Radiofrequency Ablation of Liver Tumors in Rabbits."

Northstar Neuroscience, Inc., awarded **Todd Parrish, PhD**, a \$109,620 grant to support his research "Investigation of Chronic Stroke at Baseline and after Therapy." He also received from the Wm. Wrigley Jr. Company a grant for \$279,139 for his work "Investigation of the Effect of Chewing Gum on Cognition and Stress Using Functional MRI and EEG."

Vahid Yaghmai, MD, received from Siemens Medical Solutions a \$556,375 grant to support research and training in advanced computed tomography applications.

Welcome New Faculty

Guilherme Dabus, MD, assistant professor, interventional neuroradiology, received his MD degree from Brazil's Santos School of Medical Sciences in 2000. In Brazil he was an intern at the Hospital Guilherme Alvaro and completed his radiology residency at Hospital das Clinicas at the State University of Campinas in 2004. After completing a fellowship in diagnostic neuroradiology at Northwestern in 2005, he went on to three

years of intensive training in interventional/endovascular neurosurgery at the Mallinckrodt Institute of Radiology of Washington University (2005–06) and the Massachusetts General Hospital/Harvard University (2006–08).

Benjamin Liu, MD, assistant professor, neuroradiology, holds an MD degree from Northwestern. After graduating in 2002 from the medical school, he served a transitional internship year at Evanston Northwestern Healthcare and completed a residency in diagnostic radiology at the Boston Medical Center of Boston University in 2007. He completed a neuroradiology fellow in our department in June.

Erin McComb, MD, assistant professor, neuroradiology, is a 2002 medical school graduate of Northwestern. She served a transitional internship year at Evanston Northwestern Healthcare and completed a residency in diagnostic radiology at Northwestern in 2007. She completed a neuroradiology fellowship at the University of California at Los Angeles in June.

Faculty Promotions this Fall

Congratulations to the following faculty members who were promoted effective September 1: **Ronald Hendrix, MD**, to professor of radiology; **Ali Shaibani, MD**, to associate professor of radiology; and **Imran Omar, MD**, to assistant professor of radiology.



New CT Scanner Enhances Emergency Department Imaging

In early November Northwestern Radiology successfully completed its first day of scanning patients in the emergency department (ED) at Northwestern Memorial with its new Siemens 128-slice AS+ CT scanner.

The first adaptive scanner of its kind in Chicago and one of only a few in the country, this CT scanner ranks among the fastest in the world and features a rotation time of 0.3 seconds.

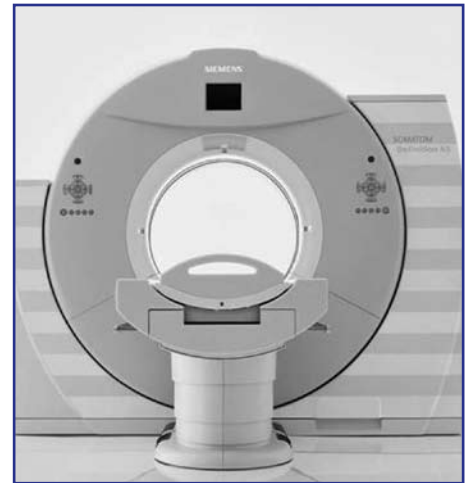
“It is extremely fast and ideal for the emergency room where throughput is essential,” says Vahid Yaghmai, MD, medical director of CT. “It rotates more than three times a second. The fastest 16-slice scanner, for example, has a rotation time of 0.37 seconds and most other scanners are in the 0.4-second range.”

The new scanner has a weight capacity of 650 pounds and a large gantry of

78 centimeters, allowing the ED to accommodate more patients of all sizes. It features a 100-kilowatt generator, among the most powerful in the industry, which lends itself well to the production of quality images. Technologically engineered to reduce radiation delivery to patients, the scanner offers many features that make it ideally suited for the ED environment.

“It enhances our ability to perform perfusion scans of the brain, which are very useful for stroke patients,” explains Dr. Yaghmai. “It provides 10-centimeter coverage for these types of studies as well as allows us to perform dynamic studies with a large coverage of 27 centimeters.”

Additionally the scanner can perform scans for 4D angiographic studies and has potential research applications for oncology-related perfusion scans.



The department's 128-slice AS+ CT scanner ranks among the fastest in the world.



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