42 Tons of Fun in MRI!

Marla Kleingartner, RT(R), Autumn Craig, RT(R), Andrew Metzger, BS, and Vincent A. Magnotta, PhD

By now you’ve probably already heard about the installation of a powerful new 7T whole body MR scanner in the Pappajohn Biomedical Discovery Building. The scanner was delivered on June 6, 2014, and craned into the room. The scanner was cooled down and then brought up to field during late October / early November. The behemoth machine from GE Healthcare will harbor a magnetic field 2.3x stronger than scanners currently used for clinical imaging. Such a field will allow researchers to draw much more information from a single scan resulting in faster scan times, higher resolution imaging, and a better understanding of molecular and chemical phenomena throughout the human body.

Dr. Vincent Magnotta, Associate Professor of Radiology, Psychiatry, and Biomedical Engineering, submitted a grant through the National Institutes of Health (NIH), and in 2010 The University of Iowa was awarded $7.97 million for the purchase of a new GE 7 Tesla Research MRI machine. To make the trip from Baltimore to Iowa City, The University of Iowa’s new magnet, weighing 42 tons, required a trailer previously intended for hauling tanks. The scanner will be the most powerful magnetic imaging device in Iowa. As one of approximately 20 of its kind in the U.S., and 40 internationally, it puts The University of Iowa in elite company and on the cutting edge of worldwide imaging research.

Utilization of the 7T machine will allow scientists to clearly see structures that they could not see before. The scanner will produce high-resolution images of microscopic structures within the human body and brain, allowing researchers to measure subtle differences in the size and shape of specific brain structures associated with disease. It will specifically help the University to make strides in its research into degenerative brain diseases such as Alzheimer’s, Parkinson’s and Huntington’s, just to name a few. The scanner will also let researchers measure tiny fluctuations in blood flow and metabolic processes that signal differences in brain activity. It will be used to help scientists better understand the developing brain of a child and assist in oncology research.

Continued on page 3
Notes From the Chair

Well, it continues to be a transition time in the Department of Radiology. Dr. Laurie Fajardo stepped down as chair in January of 2012 and Dr. Tony Franken stepped in from retirement to once again run the department. After one and a half years, Dr. Franken stepped down as Interim Chair and eased back into retirement. On July 1, 2013, I took over as Interim Chair of the Department of Radiology. At that time, I was convinced my tenure would be the shortest on record - but I was wrong, as here I still sit.

I would like to take a moment to thank Dr. Franken for his tireless efforts on behalf of our department. I don’t know of another situation where a former chair has come back to the helm on an interim basis, not once, but twice. His steady presence and wisdom helped the department feel reassured once again. After taking a year to be a full-time retiree, Dr. Franken is back working in the department. You can find him in the fluoroscopy suite on Wednesdays.

Things at the University of Iowa Hospitals and Clinics continue to progress. Construction on the new Children’s Hospital is moving right along. An anticipated opening in 2016 is getting closer on the horizon. As part of the construction, some remodeling will occur in our department to accommodate a connection between the two hospitals. The primary change will be a relocation of Breast Imaging from the 3rd floor of the John Pappajohn Pavilion to the 4th floor of the Pomerantz Family Pavilion, situated just one floor above the Women’s Health Center, Department of Obstetrics and Gynecology. This move occurred in January of this year and will make it more convenient for patients to get their mammograms at the time of their other appointments.

Last year we had three promotions in the department: Dr. Eve Clark was promoted to the rank of Clinical Associate Professor and Drs. Laurie Ponto and Michael Schultz were promoted to the rank of Associate Professor with tenure.

I would like to echo some of the sentiments from the last notes from the chair. I would like to be so bold as to appeal to our alumni for continued financial support. It is increasingly difficult in these times of declining reimbursements to maintain top-notch residency and fellowship programs and recruit the finest medical students to be the next generation of radiologists, as well as conduct quality research by our faculty. I ask those who trained here, either in medical school, residency or fellowship, to consider a contribution to The University of Iowa Foundation for radiology research, teaching and education. Your support is critical to maintaining quality in our academic mission.

I would like to thank you for your time and I would like to think this will be my first and last “Notes from the Chair”, but we shall see.

Dr. Brian Mullan Steps Down as Vice Chair of Education

It is with mixed emotions I write this to thank Dr. Brian Mullan for his long-time service to our department as the Vice Chair of Education. For over a decade Brian has championed Radiology Education, not just within our Department but throughout the University of Iowa Hospitals and Clinics and the Carver College of Medicine.

I cannot praise Brian enough for his leadership. I strongly believe we have an elite teaching department and this in no small part is due to Dr. Mullan’s leadership and commitment, which have been greatly appreciated. He has taken our education mission to new levels.

While he served as Vice Chair of Education, Brian won innumerable teaching awards; he mentored hundreds, including medical students, residents and junior faculty. He is chair of the CCOM Clinical Experiences Committee, which is responsible for putting in place the next curriculum for our medical students. Dr. Mullan’s latest challenge is that he has been appointed Chair of the RSNA Education Committee.

Again, I cannot thank Brian enough for his service and commitment to the educational mission of our department. We look forward to his continued participation and our continued success in the future.
For our many NIH-funded investigators now using 1.5T and 3T systems, the proposed 7T system offers new capabilities that will strengthen and expand their research programs.

The main advantage is a better than two-fold increase in the signal-to-noise ratio (SNR). The higher SNR at 7T can be used to increase spatial resolution thereby improving anatomical detail. The higher SNR can also be used to increase and enhance functional imaging, allowing event-related functional brain designs to use fewer trials. Decreased scan time is another benefit of the increased SNR, which will be helpful in imaging of articular cartilage at very high resolution in a reasonable time. The greater SNR at 7T also increases sensitivity for detection of metabolites by multinuclear spectroscopy (especially for nuclei with low gyromagnetic ratios). In addition, 7T offers powerful synergies with parallel imaging to allow even greater increases in spatial and temporal resolution as well as other benefits. Finally, the increased field strength also provides increased spectral resolution.

One application that will significantly benefit from the increased field strength is functional imaging using the Blood Oxygenation Level Dependent (BOLD) effect. This effect is stronger and more localized at 7T with a smaller intravascular component. Thus, neural activation produces a stronger signal in BOLD imaging resulting in functional brain maps that are more sensitive and reliable. BOLD imaging at 7T can be performed with an isotropic resolution of 1mm and coupled with newer multi-band imaging techniques will provide both high temporal and spatial resolution. Other functional imaging techniques, such as arterial spin labeling (ASL), will also benefit from the 7T scanner by taking advantage of the increased T1 relaxation times. Thus, ASL imaging is more robust at 7T because the tagging persists for a longer time. ASL-based sequences are also known for their robustness in high susceptibility environments - a common problem at ultra-high field. Specific projects will benefit from ASL-based fMRI as an alternative to BOLD fMRI including the ability to perform functional brain mapping in regions of high susceptibility distortion, such as near air-filled para nasal sinuses. Similarly, ASL-based perfusion imaging is a robust alternative to exogenous contrast-based techniques for obtaining perfusion maps. The prolonged T1 at 7T also suppresses background tissues and increases the conspicuity of exogenous contrast agents. This effect is responsible for the increased conspicuity of small blood vessels on bright blood MR angiography, more robust perfusion imaging, and improved detection of weakly enhancing tumors and

Continued on next page
MR spectroscopy will substantially improve at the higher field strength resulting from the improved SNR and increased spectral resolution. The increased spectral resolution of metabolite signals allows for separating signals from glutamate and glutamine for example. This can be coupled with ultra-short echo-time (TE) sequences, allowing a large number of metabolite concentrations to be reliably measured. The increased SNR allows smaller voxel sizes to be acquired for $^{31}$P and $^{23}$Na spectroscopy. It is also possible to acquire images from $^{23}$Na at 7T with 4mm isotropic resolution.

The 7T scanner from GE will provide a number of state-of-the-art capabilities and coils for imaging. The scanner will have 8 transmit channels and 64 receive channels. There are coils for imaging of the head (32-channel), extremities (28-channel), and abdomen (32-channel) along with multinuclear coils for $^{31}$P and $^{23}$Na imaging. The scanner will also include a separate small field-of-view gradient coil suitable for translational imaging in animals.

The 7T scanner is sited in the basement of the new Pappajohn Biomedical Discovery Building (LS50). We have begun to acquire images in phantoms and other materials as our system is tested and calibrated. Starting March 1st, we will begin human scanning, which will allow us to evaluate imaging of ambulatory subjects who have previous studies conducted at 1.5 and 3T. This is an exciting time for the MRI research facility, ushering in a new era of research and clinical developments. We hope that this will facilitate translation research activities within the Department of Radiology, as well as other departments.
Breast Imaging Division Receives Grant Funding for Tomosynthesis Evaluation

Laurie L. Fajardo, MD, MBA, FACR, FSBI
Professor of Radiology; Director of Breast Imaging Division

The Department of Radiology, Division of Breast Imaging & Intervention has received significant funding from FUJI Medical for a clinical trial evaluating breast tomosynthesis. The study seeks to enroll at least 300 women who will undergo both conventional 2D mammography and tomosynthesis (AKA 3D mammography). Data from this trial will add to the growing body of research and information on digital breast tomosynthesis. A large scale population-based screening trial of tomosynthesis in Norway recently reported interim data demonstrating superior performance for the combination of 2D + 3D mammography relative to 2D mammography alone. In this trial 2D + 3D detected 8.0 cancers per 1000 screenings, while 2D detected 6.1/1000. The increased cancers detected were attributable to invasive cancers, rather than in situ cancers. Moreover, radiologist’s false positive rates were also significantly reduced with the combination of 2D + 3D mammography.

In another multi-institutional study published this summer in JAMA, significant improvements in performance were reported for 2D/3D “combo” tomosynthesis imaging. In this study, 13 clinical sites reported their mammography audit metrics for the time period of 1 year before and 1 year after instituting tomosynthesis in their practices. Significant findings included: a 41% increase in invasive cancer detection, a 15% reduction in women recalled for additional imaging, a 49% increase in positive predictive value (PPV) for a recall and a 21% increase in PPV for biopsy, especially for detecting invasive lobular cancer. The results of this review correlated with data we presented at last year’s RSNA on the University of Iowa experience with tomosynthesis. At last year’s RSNA, we reported a 29% relative reduction in recall rate across our practice (with individual rates varying from 19 to 64%) after instituting tomosynthesis. We also reported our experience with cancers detected only by tomosynthesis (not seen on 2D mammogram). For this subpopulation, we found an over representation of invasive lobular cancers (pathologic grade 2), which represented 36% of the total lesions diagnosed by 3D mammography only. The expected proportion, based on traditional data for 2D mammography is 15%. Thus, tomosynthesis may prove a better diagnostic tool for this type of breast cancer, which is notoriously difficult to detect on

Both columns continued on page 9
In the fall of 2011, Drs. Sarah Averill and Lillian Lai began their radiology residency at the University of Iowa Hospitals and Clinics. They shared an interest in two things: radiology and global health. Just a few years before, Daniel Mallura, who is cut from the same cloth, had worked to establish RAD-AID, a non-profit organization recognizing the shortage of radiology services in large parts of the developing world. The year Sarah and Lillian began radiology residency, RAD-AID started a chapter’s program. Sarah and Lillian submitted the application with Maheen Rajput, MD, as the official faculty sponsor, and became the second chapter in the country. Now, there are over 26 chapters at academic medical centers from coast to coast.

Over the last four years, the Iowa RAD-AID chapter has been involved in a number of projects. Chapter members have delivered seminars to medical students about global service opportunities in the field of radiology and developed educational modules for the central organization’s on-line learning center. In 2014, three members of the Chapter attended the annual RAD-AID conference where they met Liz Arnold of Global Partners. In the months that followed, they made plans to join with Global Partners in an early breast cancer detection program. The Global Partners project includes efforts to expand diagnostic breast ultrasound services to women with palpable breast masses in the Matagalpa region. So far, four residents and fellows have traveled to Matagalpa, Nicaragua and worked at the FARA clinic with Mark Nigogosyan, a radiologist employed at Gundersen Lutheran Hospital in La Crosse, Wisconsin, who has been training staff at the FARA Clinic in diagnostic evaluation of palpable breast masses.

In October of 2014, Sarah Averill presented the Iowa Chapter’s project at the 6th Annual RAD-AID conference in Baltimore, Maryland and contributed to the JACR white paper on global health in radiology. She will return for a final trip during her residency in March of 2015.

If you would like to contribute to the UI Radiology Chapter’s ongoing collaboration, checks can be made to The University of Iowa RAD-AID Chapter and can be sent to the RAD-AID Chapter Program Adviser at:

Maheen Rajput, MD
Department of Radiology
200 Hawkins Drive
Iowa City, IA 52242

If you have questions, you can e-mail Dr. Rajput at maheen-rajput@uiowa.edu.
Department of Radiology alumnus Saher S. Sabri, MD, grew up in Amman, Jordan, where he completed his medical school training in 2000. He came to The University of Iowa in 2002 to do his internship and residency, graduating in 2007. During his residency he married his wife Huda, and he served as chief resident from 2006-2007. Dr. Sabri went on to complete a fellowship in Vascular and Interventional Radiology at the University of Virginia in 2008, where he stayed on as interventional radiology faculty. He quickly rose to the rank of Associate Professor in Radiology and Surgery and has served as Director of the Diagnostic Radiology Program and Vice Chair of Education since 2012. His continuing interest in resident/fellow education led him to become involved in helping to develop the requirements for the new direct pathways IR residency by serving on committees for the Association of University Radiologists (AUR) and the Society of Interventional Radiology (SIR).

Dr. Sabri’s research interests include peripheral vascular disease, aortic interventions and portal hypertension management. He has participated in more than 30 invited lectures, workshops and grand rounds; 20+ multicenter trials; and, has authored or co-authored more than 40 peer-reviewed articles and book chapters, as well as 50+ abstracts. He holds the American Board of Radiology’s Certificate of Added Qualification (CAQ) in vascular and interventional radiology and is a board examiner for the American Board of Radiology. Dr. Sabri has received several awards, including the Dean’s Award for Clinical Excellence and the Charles J. Tegtmeyer Award for Clinical Excellence from the School of Medicine at the University of Virginia.

Saher and his wife Huda say they miss Iowa City. They still plan their Saturdays around Hawkeye football games. They have two boys, Zaid (5) and Ali (2). Saher plays soccer and basketball every week and participates in a soccer league. As a family they travel once or twice a year back home to Jordan.

A Letter from the UI Foundation : Help Build a Stronger Future

Whether it’s excellence in education, patient care, or research, The University of Iowa Department of Radiology changes the lives of those around us. Each day, the department provides world-class care to patients and gives undergraduate, graduate, and postgraduate students the necessary expertise in this ever-changing medical profession.

It wouldn’t be possible without alumni and friends such as you. Your generous contributions—which help the department invest in educational resources covering everything from endowed faculty positions to seed money for research—have never been more important. As state funding continues to decrease and the National Institutes of Health (NIH) funding proves to be even more difficult to secure, your continued support allows us to expand opportunities to conduct critical research and educate future generations of radiologists.

These are the challenges I strive to tackle in my role as the new associate director of development for major gifts for the Roy J. and Lucille A. Carver College of Medicine. Together, we can assist the UI Department of Radiology as it continues to innovate and educate at a local, national, and global level. It’s an honor to build upon the success of an exceptional program that is transforming the future of health care for generations to come.

To learn more about how your private support can change lives and support the continued excellence of the UI Department of Radiology, please contact John Dwyer at john-dwyer@uiowa.edu or at (319) 467-3861.
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<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
<th>Residency/Fellowship</th>
<th>Institution</th>
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<tr>
<td>Manish Bajaj, MBBS</td>
<td>Musculoskeletal Radiology</td>
<td>RNT Medical College, India</td>
<td>Fellowship: University of Iowa</td>
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<tr>
<td>Greg Durst, MD</td>
<td>Musculoskeletal Radiology</td>
<td>University of Florida</td>
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<td>Jerry Kovoor, MBBS, DMRD, DNB</td>
<td>Neuroradiology</td>
<td>St. Johns Medical College and Nat'l Inst of Mental Health &amp; Neurosci, India</td>
<td>Fellowship: University of Iowa</td>
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<td>Christopher Luty, MD</td>
<td>Neuroradiology</td>
<td>University of Iowa</td>
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<tr>
<td>Nadine Mallak, MD</td>
<td>Body Imaging</td>
<td>Hotel-Dieu De France Hospital, Lebanon</td>
<td>Fellowship: University of Iowa</td>
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<tr>
<td>Casey Swenson, MD</td>
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<td>University of Iowa</td>
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<td>Body Imaging</td>
<td>University of Colombia, Colombia</td>
<td>Fellowships: University of Iowa</td>
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<tr>
<td>Fabiana Policeni, MD</td>
<td>Breast Imaging</td>
<td>University of Iowa</td>
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<td>Faik Shaikh, MD</td>
<td>PET/CT</td>
<td>University of North Carolina</td>
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<td>Jimmie Taylor, MD</td>
<td>Musculoskeletal Radiology</td>
<td>Integris Baptist Medical Center</td>
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<td>Casey Swenson MD</td>
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<td>Amit Rattan, MD</td>
<td>Musculoskeletal Radiology</td>
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<td>Shawn Sato, MD</td>
<td>Pediatric Radiology</td>
<td>University of Iowa</td>
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**Pictured left to right:**
Muhammad Abdul-Wahab, MD
University of South Dakota
Antony Hayes, MD
Medical College of Wisconsin
Adam Bryant, MD
University of Illinois
Shafik Wassef, MB, ChB
Ain Shams University
Girish Bathla, MD
Maulana Azad Medical College
Joel Dennhardt, MD
University of Tennessee
Ehab Saad Aldin, MD
American University of Beirut
Shihong Li, MD, PhD
Dalian Medical University
Michael Kwofe, MD
State University of New York

**2014 - 2015 Fellows**
milestone assessment has not been static. In the summer of 2014, we held a retreat with a select group of residents to evaluate the progress of the milestones. Each group of residents reviewed our current processes and made suggestions on how to streamline those processes. Our work will be presented at the Association of University Radiologists’ national meeting panel next spring.

This last summer we also graduated our first class in the new curriculum. The new curriculum is divided into 3 years of core rotations where every resident rotates in the same areas. At the end of the 3 years he or she then sits for the America Board of Radiology (ABR) Core Exam. The fourth and final year has changed to a very exciting year where each resident has the opportunity to select areas to concentrate their training. We have divided this year into 4 large blocks of three months. One of the blocks is reserved to guarantee that each resident fulfills the ABR requirements for nuclear medicine and breast imaging training. The other 3 blocks are designed by each resident with their preferences to concentrate their training. During this concentrated 3-month training, the resident is expected to increase their level of responsibility on the service, functioning in a transition from residency to fellowship or practice.

Last but not least, the Department of Radiology in partnership with The University of Iowa Foundation has launched a campaign to raise funds to support resident related projects. Thanks to dedicated faculty and alumni, we have raised $17,300 towards our goal of $50,000. Our ability to continue providing outstanding medical teaching and research—and exceptional patient care—depends upon the generosity of a dedicated circle of supporters. If you would like to make a gift or need more information about how to support this endowed fund, please contact Bridget Hoffman, the UI Foundation executive director of development for the Roy J. and Lucille A. Carver College of Medicine and UIHC. You may reach her by phone at 319-467-3470 or 800-648-6973 and by e-mail at bridget-hoffman@uiowa.edu.

We look forward to another exciting year to continue to improve radiology training for our residents.
Honors & Awards

Umar S. Chaudhry, MBBS
• Recognized by the ACR for his work on the ACR’s Resident and Fellow Section Subcommittee

Brian F. Mullan, MD, MME, MS
• Appointed Chair of the RSNA Education Committee, 2014-2017

Michael K. Schultz, PhD
• In 2014, Dr. Schultz was nominated to the United States Environmental Protection Agency Science Advisory Board - Radiation Advisory Committee. As a member of this committee, Dr. Schultz provides guidance to the United States Environmental Protection Agency on policy related to radioactivity in the environment.
• UI Radiology spin-off company Viewpoint Molecular Targeting, LLC, founded by Dr. Schultz, has been awarded its first NIH (NCI) Small Business Innovation Research Grant. The company will use the $150,000 grant to advance a new image-guided radionuclide therapy for metastatic melanoma.
• As Fulbright Scholar, Dr. Schultz traveled to Krasnoyarsk, Russia (Siberia) to work with Faculty at Siberian Federal University (SFU) on the development of curriculum in Radiopharmaceutical Sciences and Nuclear Medicine. Dr Schultz will travel again to Siberia in the summer of 2015. The program intends to develop a Masters Program in Radiopharmaceutical Sciences at SFU.

Jessica C. Sieren, PhD
• Dr. Sieren’s recent publication in the Journal of Clinical Investigation on the “Development and translational imaging of a TP53 porcine tumorigenesis model” was selected to be featured as a Scientific Show Stopper on the journal website at http://www.jci.org/posts/197

Alan H. Stolpen, PhD, MD, FACR
• Inducted as a Fellow of the American College of Radiology

Faculty Awards
Krabbenhoft Award for Excellence in Teaching
Kousei Ishigami, MD

Outstanding Departmental Service Award
Monzer Abu-Yousef, MD  ~  Bruno Policeni, MD

Resident Teaching Awards
Resident Research Award
John Kim, MD: “Detection of brain, spinal epidural, and paraspinal abscesses on diffusion-weighted MR imaging and their apparent diffusion coefficient values”

Roentgen Resident Research Award
John Kim, MD

Resident Teacher of the Year
John Kim, MD

Resident Award for Outstanding Clinical Service
Casey Swenson, MD

Resident Award for Professionalism
Brendan O’Shea, MD

Faculty Teacher of the Year
Bruno Policeni, MD

Medical Student Teaching
Gillies Award for Outstanding Senior Medical Student
Jeffrey C. Ames

Resident Teacher of the Year
Eric Carolan, MD

Resident Educators of the Year
Mark VanTassell, MD  ~  Hussein Kekhia, MD

Fellow Teacher of the Year
Christine Walsh, MD

Senior Faculty Teachers of the Year
Yusuf Menda, MD  ~  Brian Mullan, MD

Junior Faculty Teacher of the Year
Andres Capizzano, MD

Resident Award for Outstanding Clinical Service
Casey Swenson, MD

Resident Award for Professionalism
Brendan O’Shea, MD

Faculty Teacher of the Year
Bruno Policeni, MD

Honors & Awards

Departmental Teaching Awards 2013-2014

Facility Awards

Krabbenhoft Award for Excellence in Teaching
Kousei Ishigami, MD

Outstanding Departmental Service Award
Monzer Abu-Yousef, MD  ~  Bruno Policeni, MD

Resident Teaching Awards

Resident Research Award
John Kim, MD: “Detection of brain, spinal epidural, and paraspinal abscesses on diffusion-weighted MR imaging and their apparent diffusion coefficient values”

Roentgen Resident Research Award
John Kim, MD

Resident Teacher of the Year
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Casey Swenson, MD

Resident Award for Professionalism
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Bruno Policeni, MD

Medical Student Teaching

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Jeffrey C. Ames

Resident Teacher of the Year
Eric Carolan, MD

Resident Educators of the Year
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Fellow Teacher of the Year
Christine Walsh, MD

Senior Faculty Teachers of the Year
Yusuf Menda, MD  ~  Brian Mullan, MD

Junior Faculty Teacher of the Year
Andres Capizzano, MD

Resident Award for Outstanding Clinical Service
Casey Swenson, MD

Resident Award for Professionalism
Brendan O’Shea, MD

Faculty Teacher of the Year
Bruno Policeni, MD
New Grants

PI: Laurie Fajardo, MD
Co-Investigator: N/A
Title: ECOG-ACRIN Media and Publications Subcommittee Chair Agreement
Sponsor: ECOG-ACRIN
Amount: $19,521
Duration: 04/29/2014-02/28/2015

PI: Laurie Fajardo, MD
Co-Investigator: N/A
Title: Acquisition of Digital Mammography and Breast Tomosynthesis Images for Clinical Evaluation of Fujifilm Digital Breast Tomosynthesis
Sponsor: FUJIFILM Medical Systems USA
Amount: $210,250
Duration: 07/28/2014-04/30/2016

PI: Eric Hoffman, PhD
Co-Investigator: N/A
Title: Parametric Response Mapping in COPD
Sponsor: Regents of the University of Michigan
Prime Sponsor: US Department of Health & Human Services, National Institutes of Health
Amount: $138,264
Duration: 05/05/2014-04/30/2018

PI: Eric Hoffman, PhD
Co-Investigator: N/A
Title: Pulmonary Microvascular Blood Flow and Cor Pulmonale Parvus in Emphysema/COPD
Sponsor: The Trustees of Columbia University in the City of New York
Prime Sponsor: US Department of Health & Human Services, National Institutes of Health
Amount: $284,794
Duration: 02/01/2014-01/31/2018

PI: Eric Hoffman, PhD
Co-Investigator: N/A
Title: Novel Quantitative Emphysema Subtypes in MESA and SPIROMICS
Sponsor: The Trustees of Columbia University in the City of New York
Prime Sponsor: US Department of Health & Human Services, National Institutes of Health
Amount: $195,554
Duration: 07/01/2014-06/30/2016

PI: Sandeep Laroia, PhD
Co-Investigator: N/A
Title: Prototyping and Testing of a Bidirectional Intravascular Access Device for Interventional Procedures on Fistulas and Grafts
Sponsor: University of Iowa Office of the Vice President for Research GAP Funding Initiative
Amount: $16,725
Duration: 11/01/2014-02/28/2015

PI: Vincent Magnotta, PhD
Co-Investigator: N/A
Title: State-Dependent Functional T1 Imaging in Bipolar Disorder
Sponsor: Brain & Behavior Research Foundation (formerly NARSAD)
Amount: $100,000
Duration: 09/15/2014-09/14/2016

Co-PIs: Laura Ponto, PhD & Susan Schultz, MD
Co-Investigator: N/A
Title: Utility of Early Phase PIB as a Surrogate for Cerebral Blood Flow Measures
Sponsor: US Department of Health & Human Services, National Institutes of Health
Amount: $151,000
Duration: 09/01/2014-05/31/2016

PI: Michael Schultz, PhD
Co-Investigator: N/A
Title: Multimodal Somatostatin Analogs for Non-Invasive and Intraoperative Imaging
Sponsor: University of Texas Health Science Center at Houston
Prime Sponsor: US Department of Health & Human Services, National Institutes of Health
Amount: $51,711
Duration: 04/01/2014-03/31/2018

PI: Michael Schultz, PhD
Co-Investigator: N/A
Title: Studies on Free Radical Quenching by Mesoporous Materials Using Spin Trapping Electron Paramagnetic Resonance
Sponsor: Battelle Energy Alliance, LLC
Prime Sponsor: US Department of Energy
Amount: $39,760
Duration: 10/01/2014-09/30/2015

PI: Jessica Sieren, PhD
Co-Investigator: N/A
Title: Data Mining Chest CT: Image Feature Extraction for Translating Early Lung Nodule Detection into Early Diagnosis
Sponsor: American Cancer Society Institutional Research Grant
Amount: $30,000
Duration: 12/01/2014-11/30/2015

PI: Dan Thedens, PhD
Co-Investigator: N/A
Title: Imaging the Porcine Lung with Fluorine-19 Magnetic Resonance
Sponsor: University of Iowa Office of the Vice President for Research Internal Funding Initiative
Amount: $222,714
Duration: 03/01/2014-05/30/2015

PI: Dan Thedens, PhD
Co-Investigator: N/A
Title: Imaging the Porcine Lung with Fluorine-19 Magnetic Resonance
Sponsor: University of Iowa Office of the Vice President for Research Internal Funding Initiative
Amount: $50,000
Duration: 06/01/2014-05/31/2015