RSNA R&E FOUNDATION

Foundation FOCUS

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A QUARTERLY PUBLICATION OF THE RADIOLOGICAL SOCIETY OF NORTH AMERICA RESEARCH & EDUCATION FOUNDATION

$15.6 Million Raised

Successful Silver Anniversary Campaign is Just the Beginning

2009 marked the end of the R&E Foundation's Silver Anniversary Campaign. The Campaign began five years ago when R. Nick Bryan, M.D., Ph.D., challenged the radiologic community to come together and raise $15 million. The goal was not only met, it was exceeded by more than $600,000.

Reaching this extraordinary goal would not have been possible without the dedication and financial support of RSNA members, volunteers, private practices, individuals and corporate donors.

Kicking off 2010, the R&E Foundation reveals a new logo and a new look to *Foundation Focus*. With the Campaign's success there is a new enthusiasm and outlook for the future. Since 1984, more than 750 grants have been funded. We are confident we will experience even greater success in the next 25 years!

Launching the Campaign in 2005

Silver Anniversary Campaign goal: $15 million

Donors exceeded the goal by $600,000+

SILVER ANNIVERSARY CAMPAIGN

BY THE NUMBERS

$7.6M

FROM INDIVIDUAL DONORS

Including annual donors, Presidents Circle members, Visionary donors, Campaign Pacesetters & Legacy donors

43%

FROM CORPORATE DONORS

Including companies in the Vanguard and Exhibitors Circle programs

25

VIP DONORS

Private practice and academic practice groups in the Visionaries in Practice (VIP) program

Advancing the Profession

A Donor Since 1984, Thompson Reflects on the Importance of Growing the Specialty

William M. Thompson, M.D., planned to follow in his father's footsteps as a radiologist in private practice in New Mexico; however a two-year stint in Alaska working in the U.S. Public Health Service changed all that.

William M. Thompson, M.D.

Fresh out of a rotating radiology internship in 1970 and serving as the head of radiology at the Alaska Native Medical Center, the young doctor realized he loved teaching.

"I always knew I wanted to be a radiologist but working in Alaska was a life-changing experience for me," said Dr. Thompson, who pursued that passion and has since held academic positions at Duke University Medical Center and the University of Minnesota.

A specialist in gastrointestinal imaging, Dr. Thompson has relished his role as an educator for more than three decades, authoring hundreds of publications and delivering lectures around the world. "I can't wait to get to work every day," he said. "Teaching residents, fellows and medical students is truly a wonderful job."

Throughout his career, Dr. Thompson has also worked to advance the profession, serving RSNA in a variety of capacities, including as chair of the annual meeting Program Committee 1994–1997 and first vice-president in 1999. He not only helped establish the R&E Foundation by becoming a Charter Donor and making an initial gift in 1984, but he is also safeguarding the future of the Foundation by leaving a planned gift as a Platinum Legacy Donor.

"RSNA is near and dear to me," said Dr. Thompson. "The annual meeting is the best in the world and the Society has done a tremendous amount for radiology and the entire field of medicine."

Since becoming a radiologist in 1975, Dr. Thompson has seen radiology revolutionize the diagnosis of disease and minimally invasive therapy and said he believes the future is just as promising.

"The field of radiology continues to develop many futuristic advances and our field will have a major impact on patient care for decades," he said.

Dr. Thompson's future is equally bright. As of January 2010, he has returned home to New Mexico in a new position as vice-chairman of radiology at the University of New Mexico and head radiologist at the Albuquerque VA Medical Center.

LEAVE A LEGACY

Interested in becoming a Legacy Donor or leaving a planned gift? Please contact Karena Rybarczyk, director of the RSNA R&E Foundation, at 1-630-590-7742 or krybarczyk@rsna.org.

Foundation News

R&E Foundation Welcomes the 2010 Board of Trustees

Jack E. Price, *Chair*
Theresa C. McLoud, M.D., *Chair-elect*
E. Russell Ritenour, Ph.D., *Secretary*
R. Gilbert Jost, M.D., *Treasurer*
James P. Borgstede, M.D.
Sarah S. Donaldson, M.D.
Burton P. Drayer, M.D.
Richard L. Ehman, M.D.
G. Scott Gazelle, M.D., Ph.D.
Hedvig Hricak, M.D., Ph.D., Dr. h.c.
Valerie P. Jackson, M.D.
Vijay M. Rao, M.D.

RSNA 2009 R&E Pavilion

Meeting attendees gave more than $40,000 toward the Silver Anniversary Campaign at RSNA 2009. Individuals who donated $250 or more throughout the year enjoyed refreshments, Internet access and a place to relax at the R&E Donor Lounge.

New Feature on Foundation Web Site

If you attended RSNA 2009, you may have tested out the new touch screen donor recognition displays in the R&E Pavilion. Attendees could search for donor names, photos and information using the new system. A similar format was also available to search grant recipients and abstracts. These same searchable databases will be added to the Foundation Web site this year. Stay tuned to *RSNA.org/Foundation* for this new feature.

R&E Foundation at RSNA 2009

Vanguard Company Profile

Canon U.S.A. Endows New Research Medical Student Grant

Canon U.S.A. has supported the RSNA R&E Foundation for over a decade. Recently Canon U.S.A. began a new commitment to donate $50,000 over five years to endow a Research Medical Student Grant.

"Canon U.S.A. is proud to once again support the research medical student grant to the R&E Foundation. Our grant supports the vision of the R&E Foundation—improving patient care by supporting research and education in radiology. Canon U.S.A. will continue to commit to our global community and invest in the future of the individuals and institutions that will advance radiologic research, education and practice," said Tsuneo Imai, Canon U.S.A.'s senior director and general manager.

Canon U.S.A. is an industry leader in business, consumer and industrial imaging equipment and information systems. The company's wide range of products and digital solutions allows consumers around the world to capture, store and distribute information with ease.

"Canon U.S.A. will continue to commit to our global community and invest in the future of the individuals and institutions that will advance radiologic research, education and practice." *Tsuneo Imai, senior director and general manager, Canon U.S.A.*

The Foundation's 14 Vanguard companies help shape radiology's future by investing in R&D. Vanguard companies had the opportunity to meet current grant recipients at the Corporate Donor Reception this past November at RSNA 2009. At the reception, corporate donors heard firsthand how their donations are supporting valuable research.

Canon U.S.A. is currently funding two Research Medical Student Grants: Chintan Shah, B.S., from the Cleveland Clinic Foundation, for his project, *Evaluation of Hippocampal Damage and Episodic Memory Loss in Multiple Sclerosis Using DTI,* and Kristina Hoot, Ph.D., from Oregon Health & Science University, for her project, *Efficacy of Targeted Molecular Therapies Combined with Irradiation on Skin Squamous Cell Carcinomas.*

Kristina Hoot, Ph.D.

Chintan Shah, B.S.

Research Medical Student Grant recipients

Peggy J. Fritzsche, M.D.

In Memoriam

A true friend of the Foundation, Peggy J. Fritzsche, M.D., passed away on September 25, 2009. Dr. Fritzsche, a professor of radiology at the Loma Linda University School of Medicine, was very involved with RSNA and the R&E Foundation. She served as RSNA president in 2003, lent her talents to numerous committees and was the 2006 chairman of the Foundation Board of Trustees. Through her exemplary leadership and professionalism and her steadfast dedication to supporting the R&E Foundation, Dr. Fritzsche leaves a meaningful legacy.

Behind the Scenes of the R&E Foundation

A Closer Look at the Fund Development Committee

Fund Development Committee develops and recommends all fundraising efforts. Duties include monitoring the budget, planning donor recognition programs and implementing new strategies. Committee members include the chairs of the subcommittees and two members-at-large.

In past issues of *Focus*, we shared with you two groups critical to the Foundation's work: the Grant Program Committee and the Public Relations Committee. With their help, we are able to select grants and promote the Foundation to the public. In this issue we will look at the Fund Development Committee and its subcommittees who oversee our fundraising efforts.

Individual Giving Subcommittee is responsible for all aspects of planned and individual giving. This includes oversight of solicitations to potential donors and assisting with the cultivation, solicitation and promotion of the planned and annual giving programs.

Corporate Giving Subcommittee helps identify, solicit and cultivate corporations interested in the corporate giving programs. Subcommittee members provide insight and expertise on the companies so that giving programs align with current industry trends.

Visionaries in Practice (VIP) Subcommittee assists in all aspects of private and academic practice groups solicitations. The subcommittee identifies groups, increases awareness of the program and shares the importance of supporting industry R&D.

LEARN MORE

The R&E Foundation depends on the expertise and support of dozens of volunteers who serve in various capacities from grant review to fundraising to program evaluation.

GET INVOLVED

Interested in volunteering on a committee? Contact Susan Thomas, assistant director of governance and administration, at 1-630-571-7810 or sthomas@rsna.org.

Making a Difference

Frank J. Rybicki III, M.D., Ph.D., turned his annual casino night event into a benefit for the R&E Foundation. The 12th annual event was held on November 30, 2009, at the Sheraton Hotel Chicago. Director of the Applied Imaging Science Laboratory at Brigham and Women's Hospital, Dr. Rybicki gathered approximately 100 guests, including former trainees, colleagues, RSNA members and corporate friends, for an evening of entertainment. Guests made individual donations totaling $1,000. A very special thank you to Dr. Rybicki and the Brigham and Women's Hospital Applied Imaging Science Lab for using this fantastic event to make a difference.

Frank J. Rybicki III, M.D., Ph.D. (left), and Hiroshi Asahina at the casino night event which raised $1,000 in donations for the Foundation.

TELL US *YOUR* FUNDRAISING IDEAS!

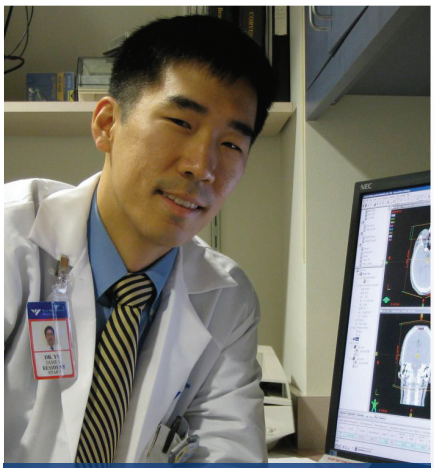
RSNA donors have a history of giving back to research and education in creative ways.

Would you like to organize a fundraising event? We welcome your thoughts about how to support crucial R&E endeavors.

Contact Karena Rybarczyk, director of the R&E Foundation, at *krybarczyk@rsna.org* or 1-630-590-7742.

R&E Foundation Grant Report Highlights

A glimpse at just one of the many promising projects made possible by your support. Every dollar you donate helps secure grant funding, research and the future of radiology. A complete listing of grant projects can be found at RSNA.org/Foundation.



Grant Recipient James B. Yu, M.D.

"The grant from the RSNA Research & Education Foundation will likely have a great influence on my career. By allowing the purchase of the SEER-Medicare database and analytic computational equipment and software, the grant will allow for many research studies and investigations. I will be able to use these resources for many years, and the techniques learned and software written for the current project will be expanded to investigate IMRT for other disease sites. In addition to furthering my career as a radiation oncologist, the resources purchased with the RSNA R&E grant also allow for collaboration with other health outcomes researchers and has nurtured relationships across disciplines."

"...A GREAT INFLUENCE ON MY CAREER..."

James B. Yu, M.D.
Department of Therapeutic Radiology
Yale School of Medicine, New Haven, Conn.
2008 RSNA Research Resident Grant

Project Title:
The Promise of Intensity Modulated Radiation Therapy for Head and Neck Cancer: Patterns of Care, Access to Treatment, and Functional Outcomes

SUMMARY:

Intensity modulated radiation therapy (IMRT) is a new and technologically intensive method of treating cancer. Head and neck cancer treatment with IMRT is more complex than conventional treatment. There is a risk of missing the tumor and possibly causing increased complication rates because of the relative precision by which radiation dose can be prescribed, if treatment is not planned or administered carefully. However, because of the lower possible dose to adjacent normal tissue and improved distribution of dose to areas at risk for cancer spread, and because of the economic advantage to the radiation oncology practice, IMRT is rapidly becoming adopted as the technique of choice for head and neck cancer radiotherapy.

- **Aim 1:** To characterize the increase in use of IMRT for patients with head and neck cancer diagnosed between 1998 and 2002.
- **Aim 2:** To identify patient-level factors associated with IMRT use for cancers of the head and neck.
- **Aim 3:** To identify provider-level factors associated with IMRT adoption for cancers of the head and neck.
- **Aim 4:** To determine the relationship between IMRT and conventional therapy for functional outcomes for cancers of the head and neck.

CLINICAL SIGNIFICANCE AND FUTURE IMPACT:

This study is the first to show a difference in days of hospitalization between patients who underwent IMRT versus those who did not. No other study has shown difference in outcomes other than patient-reported quality of life or measured salivary function. Days of hospitalization is directly applicable to health economic analysis, and the study's results lend further credence to the idea that technology improvements in IMRT have a measurable benefit to society beyond patient-reported quality of life factors. In addition to correlating a lower rate of hospitalization with IMRT use, our study is the first to show a disparity in the distribution of IMRT across urban and rural areas. In the current climate of health reform, accurate characterization of the distribution of emergent radiation therapy technologies will help shape debate, perhaps highlighting areas where national investment is needed to bring state-of-the-art technologies to underserved areas.

ADDITIONAL FUNDING:

Using the results of this study, preliminary data have already been used in a grant application submitted to the NIH. The study, *Investigating the Diffusion of Novel Cancer Therapies*, has included investigating IMRT in all disease sites. The submitted application builds upon the work in the last year which has been funded by the RSNA R&E Foundation grant.

Exhibitors Circle Profile

New Technology Needed for a Better Tomorrow

"While many foundations seem to spend much of their time and effort looking back, the RSNA R&E Foundation is focused on the future of radiology—where it's going, what barriers stand in the way of achieving that future and how to support groundbreaking research to surpass that future," said Janine Broda, chief marketing officer of Compressus. "That focus of identifying barriers and creating solutions is central to Compressus' mission of developing interoperability solutions designed for a virtualized radiology workflow."

Built on innovation in imaging acquisition and analysis, radiology has always been on the forefront of technology in medicine. As medicine moves fully into the electronic data era, radiology continues to lead the way. While government stimulus efforts have focused on the electronic medical record, the radiology community—the first discipline to be faced with the challenges of multiple, disparate IT systems—has been working to overcome these challenges for several years.

One of the central issues that create breakdowns in healthcare enterprises is the different reporting formats generated from disparate imaging and IT systems. As a result, data cannot be exchanged, may be lost or has to be recreated or reformatted manually, adding time-consuming steps and the potential for errors into the reporting process.

To address this challenge, Compressus has developed the MEDxConnect interoperability solution. Drawing its roots in PACS, Compressus quickly recognized that the easy part was to integrate new technology as PACS were installed. Compressus understood that without seamless connectivity, interoperability and attention to workflow, the full advantages of electronic patient records could never be realized. With interoperability implementations around the nation, Compressus has proven the benefits of achieving the goal: faster, more accurate reporting, higher productivity and, ultimately, better patient care.

"Achieving true radiology workflow is more than simply moving images—that problem was largely solved with DICOM and other industry standards," said Broda. "Interoperability is based on the ability to read, process and deliver the entire medical message to the right destination at the right time. These are the productivity enhancements designed into MEDxConnect and focused on delivering on the promise of enterprise-wide medical message analysis and routing."

Compressus is a Gold Level supporter in the RSNA Exhibitors Circle. Thirty-one companies supported the Exhibitors Circle in 2009, providing over $92,000 for research and education. "The RSNA R&E Foundation affords support for the continued development of new technology and solutions, and Compressus is proud to support these efforts for a better tomorrow," added Broda.

COMPRESSUS

Thank You Silver Anniversary Campaign Subcommittee

This extraordinary group of volunteers has provided oversight to the Campaign since its launch in 2005. Their dedication made the $15 million goal a reality.

William G. Bradley Jr., M.D., Ph.D., *Co-chair*
Luther W. Brady Jr., M.D., *Co-chair*
Anne G. Osborn, M.D., *Co-chair*
Lilian F. Leong, M.D.
William T. Thorwarth Jr., M.D.

The success of the Silver Anniversary Campaign was celebrated at the Distinguished Donor Reception held this past November in Chicago at the Union League Club. Visionary, Presidents Circle, VIP and Vanguard corporate donors attended the reception.

Who Helped You? Who Are You Helping?

Would your career be different without your first seed grant or the support of the radiology community to keep you going?

Just as NIH funding is critical for clinical studies, R&E funding is critical to nurture the brightest minds in academic radiology and jump start their careers. Below are several current grant projects made possible by your support. See the entire list at RSNA.org/Foundation.

Gerald Aben, M.D.
RSNA Education Seed Grant
Radiology, Michigan State University
Creating a Blended Introductory Radiology Course for Geographic Dispersed Campuses

Helen Cheung, B.Sc.
RSNA Research Medical Student Grant
Radiology, University of Toronto
Detecting Complicated Plaque in the Coronary Arteries Using Magnetic Resonance Intraplaque Hemorrhage (MRIPH) Technique in a Porcine Model of Diabetes-induced Accelerated Atherosclerosis

Michael Connolly, B.M.Sc.
RSNA Research Medical Student Grant
Radiation Oncology, Schulich School of Medicine & Dentistry, The University of Western Ontario
Correlation Between Tumor Perfusion Measurements and Tumor Growth Delay with Radiation Therapy in an Autochthonous Prostate Cancer Murine Model

Eric Diaz, B.S.
RSNA Research Medical Student Grant
Radiology, UCSD School of Medicine
Comparison of Quantification Techniques for Long T2 Components in Patellar Articular Cartilage at 3T: Multi-Echo Spin Echo (ME-SE), 2D Spiral Chopped Magnetization Prep (2D-SCMP) and T2 Preparation with Ultrashort Echo Time (UTE) Acquisition

Salomao Faintuch, M.D.
GE Healthcare/RSNA Research Scholar Grant
Radiology, Beth Israel Deaconess Medical Center - Harvard Medical School
Prostatic Artery Embolization as a Primary Treatment for Benign Prostatic Hyperplasia

Marilyn Goske, M.D.
Derek Harwood-Nash Education Scholar Grant
Radiology, Cincinnati Children's Hospital Medical Center
Developing a "Best Practice" National Registry for CT Scans in Children

Alexander Guimaraes, M.D., Ph.D.
Bayer HealthCare Pharmaceuticals/RSNA Research Scholar Grant
Radiology, Massachusetts General Hospital
Evaluation of Magnetic Nanoparticle Enhanced Magnetic Resonance Imaging in Clinical Autoimmune Diabetes

Ariel Hirsch, M.D.
Varian Medical Systems/RSNA Education Seed Grant
Radiation Oncology, Boston University Medical Center
Integration of Radiation Oncology into the Undergraduate Medical Curriculum

Kevin Kozak, M.D., Ph.D.
Philips Healthcare/RSNA Research Seed Grant
Human Oncology, University of Wisconsin School of Medicine and Public Health
Exploiting Angiogenic Rebound with Ionizing Radiation

Valentin Lance, B.S.
RSNA Research Medical Student Grant
Radiology, University of California, Los Angeles
Radiologic and Microarray (Radiogenomic) Analysis of Gastric Adenocarcinoma: A Novel Classification of Tumor Subtypes and Prognosis

Charles Li, B.S.
RSNA Research Medical Student Grant
Radiology, University of California, San Diego
Improved Isotropic 3D FSE Methods for Imaging the Knee

M. Reza Taheri, M.D., Ph.D.
GE Healthcare/RSNA Research Fellow Grant
Radiology, University of Washington
In Vivo MRI Assessment of Erythropoietin Treatment on the Migration of Iron Oxide-labeled Neuronal Stem Cells in a Rat Stroke Model

Alvin Thompson, Ph.D.
RSNA Research Medical Student Grant
Radiation Oncology, Wayne State University School of Medicine
Enhanced Radiosensitization of Prostate Cancer Cells Using Combined Treatments of Genistein and Vitamin D

Christian Welch, B.S.
RSNA Research Medical Student Grant
Radiation Oncology, University of California at San Diego School of Medicine
Transcranial Sound Field Characterization using High-Focused Ultrasound (for the Purpose of Mechanical Sonothrombolysis in Stroke)

Terence Williams, M.D., Ph.D.
Toshiba America Medical Systems/RSNA Research Resident Grant
Radiation Oncology, University of Michigan
Identification of Anti-Neoplastic FADD Kinase Inhibitors Utilizing a Molecular Imaging-based High Throughput Screen

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THE COUNT IS IN!
Final Campaign Numbers Inside

2010

New Year, New Ideas,
New Reasons to Give Back.

RSNA R&E Foundation Launches Career of Neuroradiologist Studying AD

When Jeffrey R. Petrella, M.D., laid eyes on cross-sectional images of the brain during medical school, he knew instantly what kind of medicine he wanted to practice.

"I saw the detailed anatomy of the eyes and optic nerves—and I was sold on radiology," said Dr. Petrella, an undergraduate physics major.

Figuring out how to incorporate his love of physics with the field of radiology was a much longer process.

"In the late '80s, physics and computer science had not yet become fully integrated into mainstream medicine," said Dr. Petrella, who eventually found a match in academia in the subspecialty of neuroradiology.

Working first at the University of Pennsylvania, then at the National Institutes of Health and finally at Duke University Medical Center—where he is currently an associate professor of radiology in the Division of Neuroradiology—Dr. Petrella pursued his dream of being a hybrid radiologist-scientist.

Winning back-to-back grants from the RSNA R&E Foundation—starting with a seed grant to study the effects of aging on memory with fMRI—put his career in high gear. As the recipient of the 2000 Mallinckrodt Medical, Inc./RSNA Research Scholar Grant, Dr. Petrella was able to extend his fMRI research two more years to include subjects with mild cognitive impairment.

"The RSNA R&E grant funding allowed me to devote time to research and obtain solid preliminary data for an NIH proposal," he said.

That NIH proposal resulted in a $1.8 million R01 grant to evaluate patients with Alzheimer disease (AD), mild cognitive impairment and normal elderly controls longitudinally, in the hope of finding a functional imaging signature predictive of future cognitive decline.

"The RSNA R&E Foundation funding allowed me to do prospective imaging research, which gave me acknowledgement within my own institution as well as external recognition," said Dr. Petrella, who is currently awaiting word on a new NIH grant proposal to continue to expand his previous work in Alzheimer disease research. "I am very grateful."

"The RSNA R&E Foundation is playing an important role in the careers of both new and practicing radiologists. Its efforts are sustaining radiology as a field."

Jeffrey R. Petrella, M.D.