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\$1.5 Million Gift Pays Tribute to Derek Harwood-Nash *Endowment of New Scholar Award Preserves Legacy for Next Generation*

Most radiologists can quickly name the one or two people who truly shaped their careers. Whether it was a professor who guided them toward radiology, a scientific advisor that sparked their interest in research or a department chair that inspired their vision of the future, much is owed to these mentors for the successful careers of radiologists today.

Derek Harwood-Nash, M.B., Ch.B., D.Sc., was one of the great mentors of the profession, deeply impacting so many people around the world before his sudden death in 1996. His passion for training and educating young radiologists inspired careers and touched lives. Paul E. Berger, M.D., was one of those lucky enough to train under Dr. Harwood-Nash at the Hospital for Sick Children in Toronto, Ontario. The experience, and Dr. Harwood-Nash's friendship, stayed with him for life. Now, he is paying tribute to his mentor by ensuring that the teaching and research that shaped his career will be available for the next generation of radiologists.

With a \$1.5 million donation to the RSNA Research & Education Foundation, Dr. Berger will endow a Derek Harwood-Nash Scholar Grant to recognize the lasting contributions

Dr. Harwood-Nash made to the study and practice of radiology. The creation of this new grant award ensures that up-and-coming radiologists will have resources to pursue hypotheses, test innovative concepts and develop careers in radiology. Most importantly, this will be the first Scholar award to focus on opportunities for international educators and investigators. The new grant award is currently in development by the R&E Foundation Grant Program Committee. Complete information and application details will be announced later this year.

"Many radiologists talk about looking forward and giving back, but Dr. Berger has truly walked the walk," said Anne G. Osborn, M.D., Chair of the RSNA Research & Education Foundation. "Honoring those who have trained us, mentored us and helped us along the way - there couldn't be a better way to give something back."



From Africa to Canada and around the globe, **Derek Harwood-Nash, M.B., Ch.B., D.Sc.**, changed the practice of radiology and served as a teacher, mentor and friend to many.

Honor Your Mentor Today

You are invited to join in Dr. Berger's tribute to Dr. Harwood-Nash, or pay tribute to your own mentor, by making a memorial or honorary gift online at RSNA.org/donate.



“The R&E Foundation really gives a young faculty member the confidence to stay in an academic setting. We need our academic radiologists to train radiologists for the future and to do the research that moves our modality forward.”

Caroline Chiles, M.D.
1987 Research Scholar Grant Recipient

Thank you for your continued support!

Your Donations Fund the Building Blocks of Tomorrow's Discoveries

Your donations each year go directly to fund research and education in radiology and radiation oncology. The following grant projects are just a glimpse of the 61 different projects your donations are supporting right now.

Humberto Wong, M.D.

GE Healthcare/RSNA Fellowship Training Grant
Fellowship in Cardiovascular Imaging

Ashok Panigrahy, M.D.

GE Healthcare/RSNA Research Scholar Grant
Quantitative Proton MR Spectroscopy of Perinatal White Matter Injury: Correlation with Neurodevelopmental Outcome, Axonal Injury and Cytokine Inflammation

Scott B. Reeder, M.D., Ph.D.

AGFA/RSNA Research Scholar Grant
Quantification of Hepatic Steatosis with Magnetic Resonance Imaging

Eddy Shih-Hsin Yang, M.D., Ph.D.

RSNA Research Resident Grant
Role of Lithium and Specific GSK-3 β Inhibitors in Neural Protection During Cranial Irradiation

Takeshi Yokoo, M.D., Ph.D.

RSNA Research Resident Grant
Diagnosis and Staging of Liver Fibrosis by Quantitative Texture Analysis of Contrast-Enhanced Magnetic Resonance Images

Tasha McDonald, M.D.

Toshiba Medical Systems/RSNA Research Resident Grant
Determining the Relationship Between IL-1 β , TNF- α , and IL-6 Response to External Beam Radiation Therapy and Treatment-Related Fatigue in Patients with Prostate Cancer

Omer Aras, M.D.

Philips Medical Systems/RSNA Research Resident Grant
Imaging Cardiac Angiotensin-Converting Enzyme (ACE) Activity with ^{99m}Tc-Lisinopril in Transgenic Rats Overexpressing Cardiac ACE

Bensheng Qiu, Ph.D.

Fujifilm Medical Systems/RSNA Research Seed Grant
Instant Magnetosonoporation (MSP) Cell Labeling for MRI Tracking of Stem Cell Migration

Ryan Lo, B.A.

RSNA Research Medical Student Grant
Predicting Patient Responsiveness to Stroke Therapy Using Diffusion Tensor Imaging

Neel K. Naik, B.S.

RSNA Research Medical Student Grant
MRI Assessment of Diffusion Changes in Hepatocellular Carcinomas Post Chemoembolization

Mathieu W. Nader, B.S.

RSNA Research Medical Student Grant
Biliary Spills and Collections: Causes, Diagnosis and Management by Interventional Radiology

Susie Yi Huang, Ph.D.

RSNA Research Medical Student Grant
Designing Active Feedback-Enhanced Contrast for Improved Lesion Detection by MRI

Navneet Singh, B.H.Sc.

RSNA Research Medical Student Grant
Relationship of Cerebrovascular Outcomes and Carotid Intraplaque Hemorrhage Detected by Magnetic Resonance Direct Thrombus Imaging

Matthew R. McCurdy, Ph.D.

RSNA Research Medical Student Grant
Taxanes Increase the Radiation Pneumonitis Response in Esophagus Cancer Patients

Cyrus Raji, B.S., B.A.

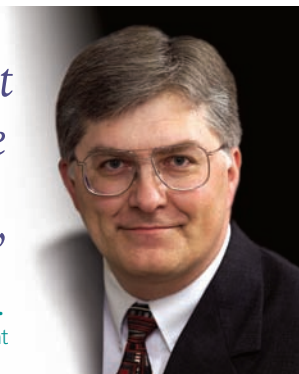
RSNA Research Medical Student Grant
Development of Reader Criteria for Early Diagnosis of Alzheimer's Disease Using Arterial Spin Labeled MRI

Do You Know the Difference You Can Make?

Your donations help to support young investigators at a crucial point in choosing their careers. Without the support of early grants for preliminary research, many top researchers and educators would not be where they are today. The R&E Foundation is proud to boast that many past grant recipients have gone on to become department chairs at top institutions across the country.

"I was very lucky to receive funding in the early part of my career from the R&E Foundation. It enabled me to do the work that I needed in order to make my research competitive for NIH funding."

Richard L. Ehman, M.D.
1989 Research Scholar Grant Recipient



Reintegrating the Practice of Radiology into Direct Patient Care

R&E Researcher Looks to Improve Health Behaviors

For Ruth Carlos, M.D., the letter sent to a patient following an imaging study is more than just a means of sharing test results. It's a teachable moment.

As part of her work in health services research, Dr. Carlos is examining how the diagnostic imaging experience can be used to help improve patient health and health behaviors.

"Each imaging encounter offers an opportunity to increase the patient's health in general, beyond the test being performed," said the University of Michigan radiologist.

For example, patients who undergo a coronary CT for chest pain could be given information on cardiac risk factors and encouraged to talk to their physician about ways to lower their cholesterol.

"Much of the focus of radiology is in reading individual studies, but we have an opportunity to help improve health in general," said Dr. Carlos. "We need to reintegrate the practice of radiology into direct patient care."

It's a big-picture approach to radiologic research—and one Dr. Carlos arrived at with the help of an R&E grant. In 2000, she studied the use of a new contrast agent for

pancreatic MR as a Toshiba America Medical Systems/RSNA Research Seed Grant recipient.

"In my case, the R&E seed grant accomplished exactly what it set out to do—it prepared me for a career in academic radiology," she said.

That initial funding helped Dr. Carlos refine her research agenda and prepared her to participate in the Robert Wood Johnson Clinical Scholars Program, which fosters the development of physicians to lead the transformation of America's healthcare.

"Seed grants are so valuable because they provide resources at a time in one's career when resources are hard to come by. It primes the pump, so to speak," she added.

Today, Dr. Carlos is funded by the NIH to evaluate the use of screening mammography to improve colon cancer screening.

"Women are very aware of the need for breast cancer screening, but not for colon cancer screening," she explained. "We're looking at how we can leverage women's participation in breast cancer screenings to improve colon cancer screenings."

That might be as simple as adding age-appropriate information about colon cancer screenings to the letter sent to women noti-



For **Ruth Carlos, M.D.**, an RSNA Seed Grant helped launch a successful career in academic radiology.

fying them of normal screening mammogram results or putting an educational video in patient waiting areas.

"We can be an intermediary, a matchmaker for information," said Dr. Carlos. "If we're able to affect the behavior of just one percent of the patients we see, it would be a huge improvement."

In addition to serving on RSNA's grant-writing faculty, serving on the R&E Foundation's Research Study Section to review grant applications and mentoring young researchers, Dr. Carlos and her radiologist husband both contribute annually to the R&E Foundation.

"I'm paying forward the investment RSNA made in me, and it's great to see that evolution," she said.

"All of us practicing in the radiologic sciences today have benefited from the recent incredible advances in our field. Now is our time for payback to ensure that our successors will have an equally rewarding and satisfying experience."

Nancy J. and Robert E. Campbell, M.D.
Campaign Pacesetters



Standing on the shoulders of *Giants*

Department Chair Pays It Forward to Support Future Research

SINCE ATTENDING HIS FIRST MEETING IN 1980, William G. Bradley Jr., M.D., Ph.D., has been deeply connected to the RSNA. The organization played a vital role in his career development, through its publications, presentations and refresher courses, to bridge the gap between formal education and current practice.

"Very few people my age are practicing today what they learned in residency," said Dr. Bradley, Chairman of the Department of Radiology at University of California, San Diego. "I wasn't taught MRI in residency - superconducting systems didn't exist then. Instead, I learned as much as I could through *Radiology* and through talks at the RSNA annual meeting".

It must have been successful; in 2003, Dr. Bradley won the RSNA Gold Medal for his pioneering contributions to the field of MRI.

"We are standing on the shoulders of giants," he said, gratefully acknowledging those who came before him. To repay them, Dr. Bradley has committed himself to maximizing the R&E Foundation's impact to preserve the future of imaging research.

As a Campaign Pacesetter, Dr. Bradley is helping lead the Silver Anniversary Campaign as the Foundation's next great step to advance the science. With NIH grants being increasingly more difficult to obtain, researchers need alter-

native funding sources with higher pay lines. The hope is that by raising \$15 million for the Campaign, the Foundation will be able to maintain funding above the 25th percentile - far greater than the NIH funding rate.

Because he sees the RSNA Research Scholar Grant as one of the best predictors of an investigator's future success in obtaining NIH funding, Dr. Bradley encourages researchers in his department to apply for RSNA grants. "On average, for every dollar invested in RSNA Scholars, they go on to get \$9 in extramural funding - which is great leverage," Dr. Bradley said, "It is very important to young investigators who are considering academics to make these grants available."

Just as when he was beginning research in MRI almost three decades ago, Dr. Bradley finds excitement in the unknown and the constant change occurring in the field. Just as the strong, fast gradients required for echo planar imaging enabled applications such as diffusion imaging and contrast enhanced MRA, Dr. Bradley looks with anticipation toward the applications that will evolve with the use of 3T MRI.

He knows these applications will not evolve without the continued support of research and

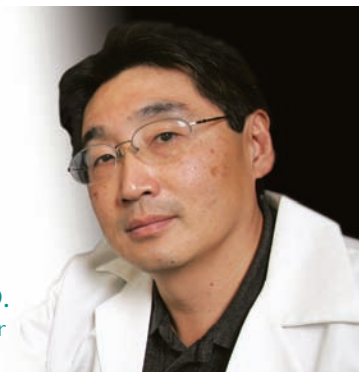


Rosalind B. Dietrich, M.D., and William G. Bradley Jr., M.D., Ph.D., have seen radiology come a long way from when they started - and they know there is much more to come.

education. While Dr. Bradley tries to lead by example, he hopes that others are taking note. "Radiologists need to take responsibility for the continued success of radiology," he clearly stated, "if no one supports these researchers, we won't be able to perform the research and we will lose the field."

"We must maintain our leadership position in both research and education. The R&E Foundation provides the ability for innovation to flourish and to translate that innovation into actionable service through education."

Paul J. Chang, M.D.
Bronze Visionary Donor



Top Philips Exec Credits RSNA, R&E with Imaging Progress

Says Foundation Knows How to Maximize ROI on Grant Funding

JACK PRICE HAS A GREAT DEAL OF ADMIRATION FOR radiologists and their ability to bring together two vastly different and enormous disciplines.

"I stand in awe of radiologists who have a keen understanding of today's extremely complex and diversified imaging technologies, as well as an acute knowledge of the clinical side of medicine," he said.

That's high praise from a man who led Philips Medical Systems North America's Sales and Service Organization during the company's rapid growth in the late 1990s.

"I grew up in an environment that believed supporting the research and education efforts of RSNA was an extremely productive and worthy investment," he said. "The individuals we

were involved with from RSNA had a great deal of credibility with Philips management."

During his tenure at Philips, Mr. Price's own respect for the radiologists, researchers and individuals at RSNA grew. As a result, he and his wife Marilyn are longtime donors to the R&E Foundation.

"Both my wife and I have a personal commitment to the people and mission of RSNA and R&E," he said. That commitment led them to become Pace-setters in the Foundation's Silver Anniversary Campaign.

"Throughout my career in medical imaging, I saw amazing progress," said Mr. Price, who joined Philips when the x-ray was the only available imaging modality. "I believe that's a testament to the success of RSNA."



Jack and Marilyn Price are proud to be part of the RSNA family.

Unlike other medical organizations, Mr. Price said he found RSNA to be uniquely empathetic to industry concerns, open and inclusive—which has yielded outstanding results.

"I have a great deal of respect for the individuals who have directed RSNA's research efforts and awarded R&E grants," he

said. "They have done a beautiful job of knowing exactly where to apply funding to achieve maximum value."

When he retired in 2000, Mr. Price was asked to join the R&E Foundation Board of Trustees, an invitation he considered to be a significant honor.

"RSNA is a forward-thinking and –looking organization," he said. "More organizations need to adopt their approach."

Do You Know an Outstanding Educator or Researcher?

Nominations are Now Open for Prestigious Foundation Award

The nominating process has begun for this year's RSNA Outstanding Educator and Outstanding Researcher awards. These annual awards recognize and honor senior individuals in each category who have made original and significant contributions to the field of radiology or radiologic sciences throughout a career of education or research. In recent years, the Outstanding Educator award was given to Robert A. Novelline, M.D., and Donald L. Resnick, M.D., while the Outstanding Researcher award was given to Bruce J. Hillman, M.D., and Richard L. Ehman, M.D.

Eligibility for either award requires that the nominee demonstrate a long-term commitment (15 or more years) to radiologic education or research evidenced by publication of original articles in peer-reviewed journals or textbooks, outstanding service as a mentor for a new generation of physicians and scientists, or principal investigator on nationally funded research studies, among other pertinent criteria. Recipients will be honored at the opening session of the RSNA Scientific Assembly and Annual Meeting and will receive complimentary airfare and hotel accommodations.

To nominate someone who deserves to be recognized, send a one-page letter of intent with the nominee's CV to the RSNA R&E Foundation by mail or email. **Nomination materials must be received by June 15.** After the initial round, nominators of top candidates will be asked to provide a more detailed letter of nomination and supporting materials. For further information about the awards or nomination process, please contact Scott Walter at swalter@rsna.org.

Hologic: Pushing Women's Healthcare to the Cutting Edge

Company Invests in Research to Fight Cancer, Osteoporosis

Executives at Hologic are working to make the company's name synonymous with women's healthcare—and succeeding.

From a small imaging company just over two decades ago, Hologic has evolved into a global leader in women's healthcare, offering some of the most innovative and trusted brands for the screening, detection and treatment of cancers and conditions affecting women.

Last year, a merger with the Cytac Corporation and other strategic initiatives doubled the company's size and nearly tripled annual sales to \$1.5 billion. Today, Hologic is the market leader in nine technology areas serving women's health including breast

cancer diagnosis and treatment, cervical cancer screening, prenatal testing and osteoporosis detection.

"Women throughout the world are basically an underserved population," said Jack Cumming,

CEO. "We have a chance as a company to make a difference in women's lives."

Working on the key battlegrounds of breast cancer and osteoporosis,

Hologic is driving better detection through solutions such as Selenia digital mammography and dual x-ray (DXA) bone densitometry technology, now considered the gold standard for bone health assessment.

"We have worked hard to help the industry move to digital mammography as a standard of care for breast

cancer screening," he said. "Our efforts have helped Hologic capture 60 percent of the digital mammography market in the U.S."

Among the company's innovative treatment solutions are a new breast biopsy device capable of reaching more lesions with fewer needle

insertions and the MammoSite targeted radiation therapy, which allows clinicians to deliver a site-specific radiation dose inside the breast over a five-day period.

Each of the company's advancements relies on tens of millions of dollars in annual R&D—including participation in the RSNA R&E Foundation Exhibitors Circle, which Hologic supports at the highest level.

"Our support of the Foundation is an excellent example of

our commitment to research and education," Mr. Cumming said. "Through the work of the Foundation we are helping drive innovative science that will allow women to live a fuller and more satisfying life."

Hologic is focused on extending women's lives through early detection, improved diagnosis and outcomes and less invasive treatments.

HOLOGIC



Your Donations Help Campaign Reach \$11 Million

Thanks to your support, the Foundation has reached \$11 million toward its \$15 million goal. Funds raised in the Silver Anniversary Campaign will be used to support research and education grants in the radiologic sciences. With your support, the Foundation will be able to award dozens

more grants each year. You can help us reach the \$15 million goal by making a donation at [RSNA.org/donate](https://rsna.org/donate). For a donation of \$500 or more we will send you a special RSNA R&E Foundation Silver Anniversary travel mug to show off your support!

Bracco Diagnostics Collaborations Span the Globe

Leadership Requires Steadfast Commitment to R&D

With an emphasis on research and education, the missions of Bracco Diagnostics and RSNA's R&E Foundation dovetail perfectly.

Bracco Diagnostics Inc., the U.S.-based subsidiary of Bracco Imaging SpA, is a world leader in solutions for the diagnostic imaging field. Here in North America, Bracco is one of the fastest growing developers and marketers of diagnostic pharmaceuticals, with a range of products for various imaging applications.

Central to Bracco's operations is a high-level international research network with centers in Milan, Geneva and Princeton, New Jersey where scientists develop products for latest-generation diagnostic techniques, from X-ray and computed tomography (CT) to magnetic resonance imaging (MRI) and echo contrast.

At the 35,000 square-foot, state-of-the-art Princeton laboratory, more than 50 scientists and support staff—half of whom possess a Ph.D. or

M.D. degree—are at work creating new biochemically targeted imaging agents and related therapeutic drugs.

"We have a strong and steadfast commitment to R&D," said Carlo Medici, president and chief executive officer.

Indeed, Bracco invests some 15 percent of its annual profits into research and development and has a portfolio of 1,500 patents worldwide. Of the company's 2,200 employees, nearly 400 work in R&D.

Bracco's extramural research network—including its advanced contrast media research program—is also extensive and includes scientific collaborations with prestigious universities and institutes throughout the world.

For the second time since 1990, Bracco is also supporting another outside researcher—through an endowment with the R&E Foundation. The company recently committed to donate \$600,000 to endow a research resident grant,

which provides support for a promising fellow or resident conducting innovative radiologic research. Providing radiologic professionals with comprehensive product information and education is also a top priority at Bracco.

"With a focus on safety, efficacy and customer satisfaction, our goal is to improve peoples' lives by advancing the frontiers of medical knowledge and creating a unique customer experience," said Michael Ramalho, manager of corporate communications.

Ongoing initiatives at the company include webcasts, continuing education programs and the online Bracco eLearning Center site, where diagnostic professionals can choose from a selection of courses and case histories developed by leading experts in various disciplines.

"Bracco Diagnostics Inc. has long been committed to furthering professional education, in both the clinical and business arenas, throughout the world," said Pamela Intile, director of customer education.



Carilion Clinic: A Physician-Led System of Care and Research

Following the lead of world-renowned organizations such as the Mayo Clinic, Cleveland Clinic and Lahey Clinic, the Carilion Health System recently reorganized to form a new healthcare delivery system: the Carilion Clinic.

The new physician-led institution based in Roanoke, Virginia has a three-tiered focus on patient care, research and medical education. From a foundation of eight hospitals and 67 physician practices, Carilion is building an integrated system that also includes medical

subspecialty clinics, nursing and allied health-care degree programs and unique partnerships with major universities.

In addition to the Carilion Research Institute, Carilion has collaborated with Virginia Tech and the University of Virginia to create a business incubator called the Carilion Biomedical Institute to foster the development of advanced medical devices and their introduction to the marketplace.

The Carilion Clinic is also a research collaborator with the R&E Foundation Exhibitors Circle, contributing \$5,000 at the Gold Circle level to help fund promising investigators performing innovative radiologic research.

Keep Our Funding Rate Competitive

Thanks to the generous support of RSNA members and friends, the Foundation has been able to reach a funding rate of 35%! Your continued support will help us to fund even more grant programs next year to keep radiology in the forefront of medicine. Go to RSNA.org/donate today and make your donation to support radiologic research and education for tomorrow.

RSNA Education Grant Leads to Overhaul of Physics Teaching File

New Physics Teaching File an Online Resource for Residents and Instructors

RSNA EDUCATION GRANTS ARE DESIGNED to promote the healthy future of the specialty by supporting the development of educational materials and methods, clinical training and education career development.

Walter Huda, Ph.D., Anthony J. Seibert, Ph.D., and Kent M. Ogden, Ph.D., recipients of a 2005 World Wide Web-Based Educational Program Grant, have put these standards into action by developing a comprehensive Physics Teaching File. It was a task that the educators were glad to develop and their final product has filled an important need.

The focus of the teaching file is to identify clinical images that illustrate important imaging physics principles that would be helpful for those involved in the teaching of physics to radiology residents. The teaching file covers material that

addresses imaging modalities that use x-rays (i.e., projection radiography, mammography, fluoroscopy, angiography/DSEA and CT). In the future, the file may be expanded to incorporate Nuclear Medicine, Ultrasound and MR.

Dr. Huda, now Professor of Radiology at the Medical University of South Carolina, has been actively involved with the physics education of radiology residents and has received numerous awards for teaching radiology residents.

"The material on the Physics Teaching File will help residents and their instructors achieve a basic understanding of all x-ray based medical



Walter Huda, Ph.D., continues his active involvement with the physics education of radiology residents through his work on an RSNA Education Grant.

imaging systems, including radiography/mammography, fluoroscopy and Computed Tomography," said Dr. Huda. He encourages residents and anyone involved with teaching to use the web site, www.upstate.edu/radiology/rsna.

Also an annual supporter of the Foundation, Dr. Huda sees the full circle of impact his donations can have and hopes that others will support worthwhile grants as well.

It is thanks to your support that education grants like this

one are making an impact on the radiological sciences. These gains could not be made without the funding from generous donors like you. Learn more about education grants at RSNA.org/foundation.



Foundation Focus

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New Endowment honors Dr. Derek Harwood-Nash

See inside how you can join one radiologist's tribute to his mentor