



# Foundation FOCUS

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

INSPIRE | INNOVATE | INVEST *The Campaign  
for Funding Radiology's Future®*

## Make an Investment in our Shared Goal

As the Inspire-Innovate-Invest Campaign draws to a close, the R&E Foundation has raised more than 90 percent of its \$17.5 million objective—and with support across the entire specialty, we can finish strong and achieve our shared goal. By donating to the Campaign, radiologists can help change the way the specialty is practiced in the not-too-distant future.

Case in point: 2016 Cook Medical Cesare Gianturco/RSNA Research Seed Grant recipient **Mubin I. Syed, MD**, recently published results of a study that may help pave the way for a new minimally invasive treatment of morbid obesity. His GET LEAN (Gastric artery Embolization Trial for the LEssening of Appetite Non-surgically) study collected safety and efficacy data on the new procedure, which targets a condition that has become a worldwide epidemic.

“Our results are exciting. Radiologists are the vanguard for this procedure, which I believe will be proven effective and become the standard of care for obesity,” said Dr. Syed, lead investigator of the study conducted at Dayton Interventional Radiology. “The R&E Foundation funding is critically important to the progress of this study as it allows us to continue our research and acquire additional funding to finish our work—I really think this procedure will change the world.”

As research funding becomes increasingly difficult to secure from national sources, the



Mubin I. Syed, MD

R&E Foundation is able to grant awards to approximately 30 percent of all applicants, giving early career researchers a solid start. In 2017, the R&E Foundation awarded \$4 million for the second year in a row. This unprecedented funding level is due to the generosity of donors to the Inspire-Innovate-Invest Campaign.

Led by Campaign Co-chairs William G. Bradley Jr., MD, PhD; R. Nick Bryan, MD, PhD, and David C. Levin, MD, Inspire-Innovate-Invest will conclude this year. To make a donation and help ensure a strong finish, visit [RSNA.org/Donate](http://RSNA.org/Donate).

For more information, contact Ashley Koman, manager, fund development, at 1-630-590-7773 or [akoman@rsna.org](mailto:akoman@rsna.org).



**A STRONG FINISH  
IS IN SIGHT.  
DONATE NOW.**

View full list of  
Centennial Pathfinders at  
[RSNA.org/Campaign](http://RSNA.org/Campaign)

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# INSPIRE | INNOVATE | INVEST

## *The Campaign* for Funding Radiology's Future®

### CAMPAIGN DONORS

*The R&E Foundation would like to thank the following donors for their support of the Campaign.*

#### Platinum Centennial Pathfinders (\$100,000+)

Phan T. Huynh, MD      Louise & Richard G. Lester, MD      Martin R. Prince, MD, PhD      Richard & Brigitta Steidl Trust

#### Gold Centennial Pathfinders (\$50,000)

Anonymous <i>In honor of William G. Bradley Jr., MD, PhD, FACR</i>	Nick & Jean Bryan Stamatia V. Destounis, MD, FACR & Manuel Matos, MD	Barbara & Jerry P. Petasnick, MD Richard D. White, MD Shirley S. Yang, MD, MBA & Andrew Yang, MSEE, MD <i>In memory of Henry N. Wagner Jr., MD</i>
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#### Silver Centennial Pathfinders (\$25,000)

Teresita L. Angtuaco, MD, FACR & Edgardo J. Angtuaco, MD, FACR Yoshimi Anzai, MD & Satoshi Minoshima, MD, PhD Shirley & Richard Baron Patricia G. Becker, MD & Gary J. Becker, MD Maysoon & Talal Beydoun, MD Martha & James Borgstede Victoria & Michael N. Brant-Zawadzki, MD Barbara Carter, MD Helen & Paul J. Chang, MD, FSIM Robert H. Choplin & Marjorie A. Bowman Glendon G. & Karen E. Cox Sarah S. Donaldson, MD Marilyn A. Roubidoux, MD & N. Reed Dunnick, MD Margaret S. Houston, MD & Richard L. Ehman, MD Richard H. Gold, MD Jeanne & Thomas M. Grist, MD	Anton N. Hasso, MD Hedvig Hricak, MD, PhD, DrHC & Alexander Margulis, MD, DSc, DrHC Michael & Beverly Huckman Joseph H. Introcaso, MD R. Gilbert Jost, MD Robert L. Kagan, MD & Bonnie Barnett Gregory C. Karnaze, MD, FACR & Pamela K. Powers Shirley & Herbert Y. Kressel, MD Anita I. Busquets & William A. Ladd, MD Peg & Paul A. Larson, MD Huong (Carisa) Le-Petros, MD David C. Levin, MD Linda & Thomas McCausland Theresa C. McLoud, MD Carolyn & Ken Meltzer Robert J. Min, MD, MBA Carol & Richard L. Morin, PhD	Martha M. Munden, MD & Reginald F. Munden, MD, DMD <i>In memory of our son, James (Jamie) Ryan Munden</i> Judy M. & William A. Murphy Jr., MD Penny Kereiakes Pomeranz & Stephen Jory Pomeranz, MD <i>In memory of James G. Kereiakes, PhD</i> Thomas Pope, MD & Jennifer Cranny, MD Vijay M. Rao, MD Sherry & Michael M. Raskin, MD, JD, MBA Anne C. Roberts, MD & John E. Arnold, MD Drs. Carol A. Diamond & Howard A. Rowley Marilyn & Ronald B. Schilling, PhD J. Keith Smith & Lisa L. Jones Dean A. Genth & Gary W. Swenson, MD Ingrid E. & Stephen R. Thomas, PhD Mary & Allen F. Turcke, MD
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#### Vanguard Campaign Intentions

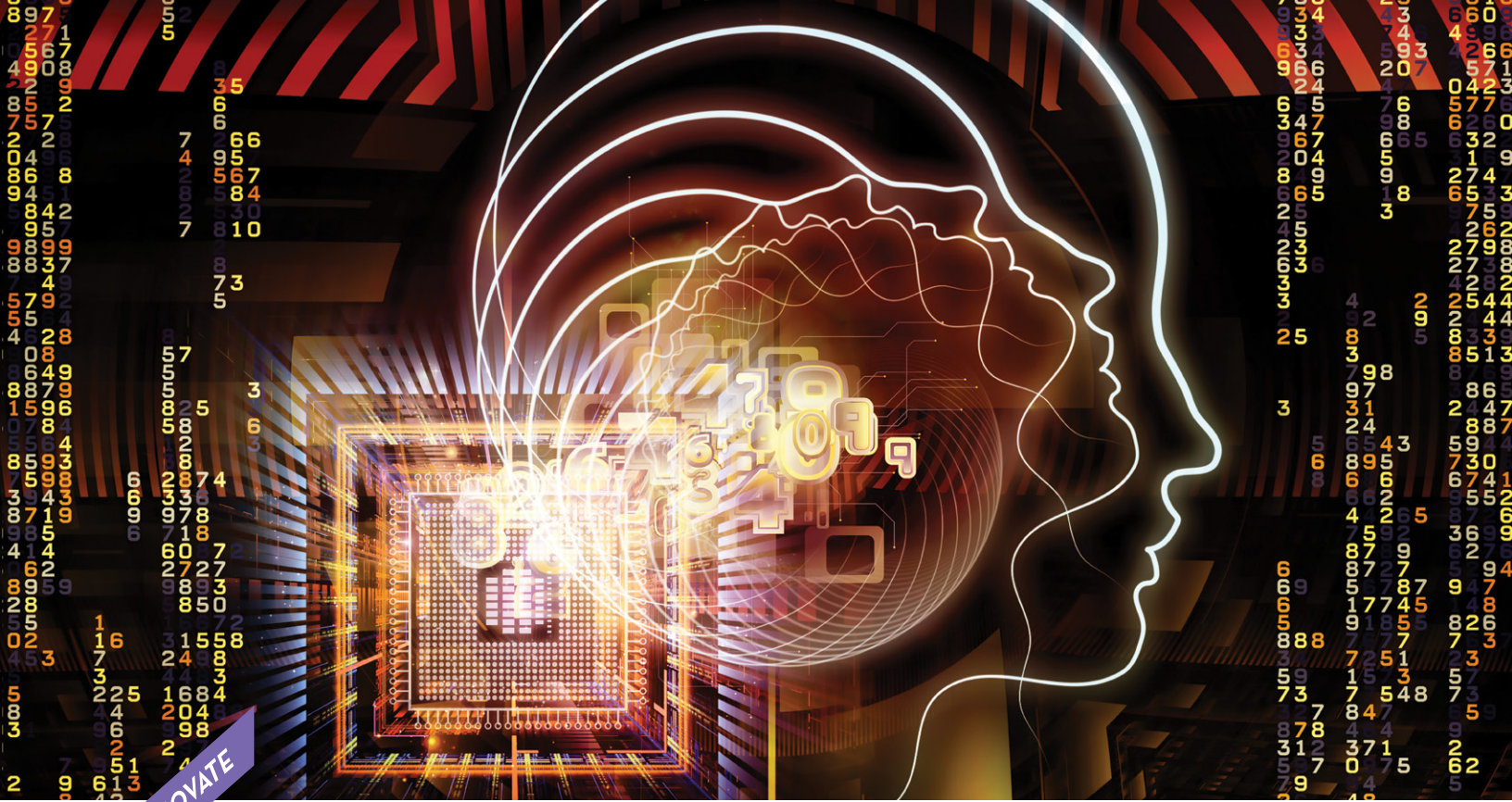


GE Healthcare



#### Visionaries in Practice Campaign Intentions

Asheville Radiology Associates, P.A., <i>Asheville, NC</i> Austin Radiological Association, <i>Austin, TX</i> Inland Imaging, Professional Services, <i>Spokane, WA</i>	Mecklenburg Radiology Associates, <i>Charlotte, NC</i> Radiology Associates of South Florida, <i>Miami, FL</i> Radiology Consultants of Little Rock, P.A., <i>Little Rock, AR</i> Raleigh Radiology, <i>Raleigh, NC</i>	St. Paul Radiology Foundation, <i>St. Paul, MN</i> Strategic Radiology University Radiology Group, <i>East Brunswick, NJ</i>
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# Machine Learning Grant Applications Rise as Interest in AI Grows

Experts in the field of artificial intelligence (AI) are anticipating rapid growth in applications of machine learning (ML) to diagnostic imaging over the next several years, especially those applications associated with specific forms of “deep learning” such as convolutional, deep belief and recurrent neural networks. These new applications hold the promise of further increasing the diagnostic and quantitative efficacy of our imaging tests, as well as the promise of greatly facilitating the work of the radiologist. This technological innovation will undoubtedly transform radiology over time.

Radiologists should assume a leadership role in the development and application of machine learning algorithms to diagnostic radiology. By providing grants for scientific research and education, the RSNA R&E Foundation provides a venue for those investigators and scholars who wish to pursue exciting and innovative projects, typically by exploring new applications of current technology, developing new technologies or exploring new disciplines.

Over the last four years, the number of grant applications involving artificial intelligence has increased significantly and it is highly likely that this trend will continue. The R&E Foundation is funding projects that will help guide the way for humans and machines to work in mutually beneficial ways, thereby leading to a future in which this technology continues to serve the needs of expert radiologists, referring clinicians, and most importantly, patients.

The 2017 ML/AI grants cover a wide variety of topics, including:

- *Evaluation of Quantitative Cardiac Function and Volumes With Single Breath-hold Volumetric Cardiac MRI and Deep Learning Segmentation*
- *Development of an Automated Liver Imaging Reporting and Data System Using Deep Machine Learning*
- *Automated Neuroradiologic Diagnosis Using Customized Advanced Image Processing Algorithms and Bayesian Networks*
- *Machine-learning to Predict Risk of Upgrade and Recurrence of Ductal Carcinoma in Situ*

Although most practicing radiologists are not currently involved with machine learning algorithms in their daily work, major academic institutions and radiology societies have already taken notice of this major trend, and have set up partnerships to explore the potential of artificial intelligence in diagnostic radiology. Radiology societies have begun to offer educational presentations on the topic of machine learning. In addition to refresher courses and educational symposiums, the 2017 RSNA Scientific Assembly and Annual Meeting will feature a Machine Learning Showcase on the Technical Exhibits floor and a Machine Learning Community in the Learning Center.



# The 2017 RSNA Scientific Assembly and Annual Meeting is where you can see your Foundation at its best!

R&E will take center stage when past grant recipient and current RSNA President **Richard L. Ehman, MD**, officially calls the meeting to order on Sunday, November 26. Also on Sunday, past grant recipient **Mitchell D. Schnall, MD, PhD**, will be honored with the RSNA Outstanding Researcher Award and R&E Foundation Chair **N. Reed Dunnick, MD**, will deliver the annual address of the Foundation immediately prior to the Image Interpretation Session. Later in the week, past grant recipients **Jonathan B. Kruskal, MD, PhD**, will deliver the Annual Oration in Diagnostic Radiology, and **Daphne A. Haas-Kogan, MD**, will deliver the Annual Oration in Radiation Oncology. In total, 256 current and past R&E grant recipients will share their knowledge as session authors, moderators and scientific paper and poster presenters throughout RSNA 2017!

Please be sure to stop by the R&E Booth in Lakeside Center, Level 3, to learn about our 2017 grant recipients and their innovative and inspiring projects. Take an up-close and personal look at the photos and names of the many donors who make it all possible. While visiting the booth, snap a photo at our interactive photo wall and share it with other meeting attendees to show why you give to the Foundation. A \$300 donation to the Foundation, made before or during the meeting, allows access to the Donor Suite for the entire meeting week. Featuring morning coffee, light refreshments, a hassle-free self-serve coat room, comfortable seating and a place to connect with colleagues, the R&E Donor Suite provides a perfect respite away from the hubbub of the meeting.

A more active mid-week break in support of the Foundation is the annual R&E 5k Fun Run, sponsored by Konica Minolta Healthcare. The 2017 run kicks off on Tuesday, November 28, at 6:30 AM from Arvey Field in Grant Park. The \$40 registration fee is fully tax-deductible and directly benefits the R&E Foundation. Participants will also receive a commemorative t-shirt while supplies last. Simply add the Fun Run to your online registration ([RSNA.org/Register](http://RSNA.org/Register)) or sign up onsite at McCormick Place during the meeting.

New this year, when RSNA meeting attendees use Go Airport Express for ground transportation from Chicago's airports, a portion of the fare paid will be directed to the Foundation. Also, be sure to visit the RSNA Shop in the Connections Center and show your support by purchasing your limited edition R&E Foundation coffee mug.

R&E staff can't wait to see you and say thank you!





# Karen & Glendon G. Cox Show their Support as Silver Centennial Pathfinders

**Glendon G. Cox, MD**, has led an extensive career in radiology, both in academics and private practice. Dr. Cox and his wife, **Karen E. Cox**, are longtime supporters of the RSNA R&E Foundation and recently made a commitment to the Inspire-Innovate-Invest Campaign as Silver Centennial Pathfinders.

## *Why did you choose to enter the field of radiology?*

During my first month in medical school, I was drawn to the capacity of imaging to demonstrate in life the anatomy that we were trying to learn from books and dissection. This had a tremendous impact on me as a visual learner.

## *Having worked in both academic and private practice, can you share your perspective on radiology research and how it affects both sectors?*

Participation in research instills patterns of thinking and behavior that improve the clinical performance of practicing radiologists and trainees. Research in medical imaging has provided us with a steady flow of innovative clinical technologies that have kept us, as a profession, at the leading edge of patient care.

In the future, it will be research—particularly clinical outcomes, cost-effectiveness and performance efficacy research—that will allow us to remain at the table in the emerging era of population health care delivery and value-based reimbursement.



Karen E. Cox and Glendon G. Cox, MD

## *As a longtime supporter of the R&E Foundation, why did you decide to commit to the Inspire-Innovate-Invest Campaign as a Centennial Pathfinder?*

I have been very fortunate to have done well in a career that I have thoroughly enjoyed for over 30 years. Karen's and my contributions to the R&E Foundation are our way of giving back in some small way on a national level.

## *What are your hopes for the future of radiology?*

I hope that radiology remains among the most innovative of the medical specialties, delivering the highest quality, most cost-effective diagnoses and treatments to our patients. I also hope that future radiologists can experience the same level of professional satisfaction in meeting the challenges of their specialty as I have.

## *What professional and personal milestones make you most proud?*

Professionally, I am proud to have received the Radiology Leadership Institute/American College of Radiology's Leadership Luminary Award in 2016. Personally, I am lucky to have had a willing and understanding partner in Karen for 30 years. We are growing into our roles as grandparents to our four grandchildren, Amelia, Sam, Margot and George.

## End of Year Giving – Options for Support and Savings

Donate to the RSNA Research & Education Foundation by December 31 and take advantage of a 2017 tax deduction!

**Annual Gift** – Making your annual gift to the Foundation is simpler than ever. Visit our mobile-optimized online giving page, [RSNA.org/Donate](http://RSNA.org/Donate), to easily make a gift from any device. Consider our new convenient monthly gift option. A monthly donation of \$125 adds up to a \$1,500 Presidents Circle gift!

**Stock** – Donate appreciated securities that you've owned for more than one year, take a federal income tax deduction on the current fair market value and avoid the capital gains tax on increase in value.

**Donor-Advised Funds** – Allows you to make a charitable contribution and claim an immediate tax deduction.

**IRA Charitable Rollover** – Donors age 70 or older can transfer up to \$100,000 from an IRA directly to a qualified charity such as the R&E Foundation without having to pay income taxes on the amount. A charitable rollover gift can satisfy part or all of your required minimum distribution for the year.

For questions about your giving options, please contact Ashley Koman at [akoman@rsna.org](mailto:akoman@rsna.org) or 1-630-590-7773.



# Truly VIP: Private Practice Groups Boost Foundation's Campaign

Over a dozen years ago, the R&E Foundation debuted its Visionaries in Practice (VIP) Program as a mechanism for private practice groups to support the Foundation. What began with 10 practice groups donating a total of \$190,000 in 2005 has grown into a vital source of research and education grant funding with upwards of 35 practice groups donating a total of \$500,000 annually.

Private practitioners see the value in donating to the R&E Foundation. It is an investment in future clinical innovation and practice—the reason so many practice groups are loyal to the Foundation and show their support year after year.

The increase of private practice group giving has come at a pivotal time by providing a critical boost to the Inspire-Innovate-Invest Campaign. Since the

start of the Campaign in 2013, private practice group donors in the VIP Program have stepped up in a major way with donations and commitments totaling \$3.15 million.

“As a large private practice, we recognize the downstream value and necessity of radiology research and radiology education. We, and private practices across the country, are beneficiaries of research and education in the form of future development of cutting-edge radiology techniques, interventions and technology and the development of critically thinking and high-quality radiologists that we hope to recruit to improve our future practice, the care of our patients, and the health of radiology as a critically valuable medical specialty. Financial support of the RSNA R&E Foundation and our pledge of \$100,000 towards the Inspire-Innovate-Invest Campaign is the most direct way

*“Financial support of the RSNA R&E Foundation and our pledge of \$100,000 towards the Inspire-Innovate-Invest Campaign is the most direct way we can show our support for this process.”*

**Brian D. Petersen, MD**

we can show our support for this process,” said **Brian D. Petersen, MD**, of Inland Imaging, Professional Services, whose group recently made a 10-year commitment to give at the \$10,000 Bronze level in honor of the Campaign. Inland Imaging is not the only private practice group to make a lead gift of this nature. A remarkable 10 private practice group donors have come forward with multi-year commitments in honor of the Campaign. What’s more, Austin Radio-

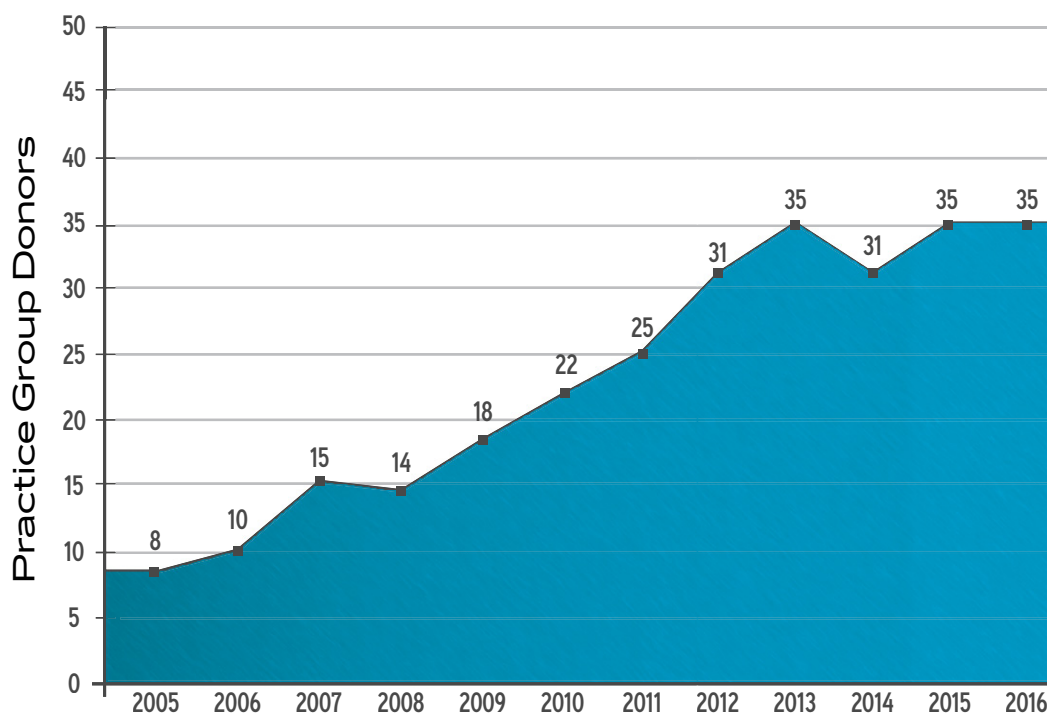
logical Association and the practice group members of Strategic Radiology took the additional steps of agreeing to fund named grant awards in honor of the Campaign.

With VIP donors demonstrating an incredible level of donor loyalty and new private practice groups coming forward each year to support the specialty, VIP giving is now an essential source of fundraising for the Foundation. Thank you to the private practice group donors leading the way in support of radiology’s future!

To learn more, visit [RSNA.org/VIP](http://RSNA.org/VIP) or contact Robert Leigh at 1-630-590-7760 or [rleigh@rsna.org](mailto:rleigh@rsna.org).



## Private Practice Growth







# Latest Award Brings Subsequent Funding to \$50 Million

When donors gave to the R&E Foundation in the 1990s, would they have ever contemplated that a Research Seed Grant would result in \$50 million in subsequent funding twenty years later? This is the kind of return on investment being realized by those early supporters who funded the research efforts of **Zahi A. Fayad, PhD**.

Dr. Fayad received a 1998 RSNA Research Seed Grant for his project, *Non-Invasive MR Characterization of Atherosclerotic Plaques in Human Coronary Arteries*. Today, he is principal investigator on a study that has been awarded \$13 million from the National Heart, Lung and Blood Institute of the National Institutes of Health (NIH). In this current project, *Stress and Atherosclerotic Plaque Macrophages – a Systems Biology Approach*, Dr. Fayad aims to uncover the

mechanisms by which stress contributes to cardiovascular risk through a five-year research program. This NIH award brings Dr. Fayad's subsequent grant funding as principal investigator to \$50 million.

Dr. Fayad is the Mount Sinai endowed chair in medical imaging and bioengineering; professor of radiology and medicine (cardiology), and director of the Translational and Molecular Imaging Institute at the Icahn School of Medicine in New York, NY.



Zahi A. Fayad, PhD

## 2018 Grant Application Deadline – Apply Now



The R&E Foundation has grants available for medical students, trainees, junior faculty and seasoned investigators. An R&E grant is an outstanding way to further your research career or pursue cutting-edge education projects.

**Education Grants – Deadline January 10**

**Research Grants – Deadline January 16**

**Medical Student Grants – Deadline February 1**

For more information, go to [RSNA.org/Foundation](http://RSNA.org/Foundation) or contact Scott A. Walter, MS, assistant director, grant administration, at 1-630-571-7816 or [swalter@rsna.org](mailto:swalter@rsna.org).

## Include the Foundation in Your Estate Plan

Did you know that the R&E Foundation has a giving program that recognizes donors who have indicated that they will make a planned gift to the Foundation? If you have taken the steps to include the Foundation in your will, trust, or as a beneficiary of your estate, please notify R&E staff. In addition to welcoming you as a Legacy Donor, we would like to sincerely thank you for your generosity. Your status as a Legacy Donor will also entitle you to special recognition in RSNA publications and you will also receive enhanced benefits during the RSNA annual meeting.

Would you like to include the



R&E Foundation in your will or estate plan, but are unsure how to get started? The R&E Foundation has a website dedicated specifically to answering all of your planned giving questions. Visit [RSNA.planmylegacy.org](http://RSNA.planmylegacy.org) to learn more about the many ways you can make a planned gift to the Foundation and join your colleagues as a Legacy Donor.

Please contact Robert Leigh at 1-630-590-7760 or [rleigh@rsna.org](mailto:rleigh@rsna.org) to include the Foundation in your estate plans or to learn more about the best options available to you.



## Vanguard Companies Commit \$5 Million during Inspire-Innovate-Invest Campaign

Throughout the history of the R&E Foundation, Vanguard donor companies have been vital partners in the Foundation's efforts to advance the future of medical imaging and innovation. Vanguard donors are the Foundation's corporate supporters, and since the Foundation's inception, their steadfast commitment has translated to more than \$24 million in support to hundreds of educators and investigators. The Vanguard program alone has contributed over \$5 million to date to the Inspire-Innovate-Invest Campaign.

Through the Vanguard program, companies provide seed money for investigators working toward major discoveries. Vanguard companies support Foundation grants at all levels. From medical students to seasoned investigators, Vanguard support is critical to the advancement of radiologic research and education.

"I want to extend a heartfelt thank you to all of our Vanguard donor companies for their support of the RSNA Research & Education Foundation," said **Reginald F. Munden, MD, DMD**, chair of the Foundation's Corporate Giving Subcommittee. "As a department chair, I am grateful for the collaborative partnerships and support of the corporate community in furthering the academic missions of research

and education in radiology departments. And, as a radiologist, I am thankful for the many advances our profession has realized because of this joint commitment."

The Foundation would like to acknowledge the continued support of our Vanguard Donors.

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Systems USA*	Varex Imaging
GE Healthcare*	



*\*Vanguard donor companies that made new multi-year commitments to the Foundation during the Inspire-Innovate-Invest Campaign.*

The R&E Foundation is grateful for their dedicated support and looks forward to many years of continued success and innovation.

### Three Easy Ways to Give



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