Funding Radiology’s Future®

GRANTS & AWARDS

2017 RSNA R&E Foundation
The advancement of our specialty relies on identifying talented investigators and providing them with resources to explore new territory, create knowledge and translate that information into new treatment protocols. The RSNA Research & Education Foundation is proud to lead this charge and has awarded over $55 million in funding since its inception.

Great strides like these are only possible because of the support of our donors and as Inspire-Innovate-Invest: The Campaign for Funding Radiology’s Future® approaches its conclusion, we need help across our entire community to finish strong and achieve our goal of $17.5 million.

Launched at RSNA 2014 in honor of the RSNA Centennial, the Foundation’s Campaign has aimed to bridge the gap created by a decline in traditional funding sources. We’ve made great progress in achieving our goal, and in 2017, the Foundation awarded $4 million to researchers and educators at 50 institutions to reach a funding rate of 30 percent, a figure that is nearly three times greater than the rate from the NIH.

Now, as application submissions continue to climb, the support of the entire community is critical for our continued success. Funding research to help the next generation maintain intellectual leadership in medical imaging and image-guided therapy is the most important way we can support the future of our specialty.

As the end of the Campaign draws near, we are grateful for all of the individuals, private practice colleagues and corporate friends who have made an investment in our future—and as we strive to reach our goal, we invite everyone to join us.

Thank you for supporting the Foundation.

Sincerely,

N. Reed Dunnick, MD
Chair, R&E Foundation
Board of Trustees

Read full grant abstracts and see how R&E Foundation grant recipients are making a difference at RSNA.org/Grant_Search
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Where Do Your Donations Go?
Low overhead puts more of your donations toward grant funding

How Are Grant Dollars Distributed?
Percent of grant dollars awarded by grant type in 2017

**Research Scholar Grant**
Our premier career development grant transitions junior faculty to independent investigators. Funding protects research time to conduct complex projects under the guidance of a mentor and scientific advisor in preparation for NIH funding. Two-year grant of $150,000.

**Research Resident/Fellow Grant**
This grant provides investigators a chance to explore powerful ideas. Working alongside an experienced advisor, trainees gain insight into specific investigation and practice research methods and techniques; it is a catalyst to pursue research at a critical point in a radiologist’s career. One-year grant of $30,000 to $50,000.

**Education Scholar Grant**
Innovation in education can transform the way radiologists learn, understand and care for patients. This grant encourages development of new methods of teaching and evaluation and enables effective delivery for lifelong learning. One-year grant of up to $75,000.

**Research Seed Grant**
Every great discovery starts with a spark. This grant provides seed money to test hypotheses and conduct pilot studies in preparation for major grant applications to corporations, foundations and government agencies. One-year grant of up to $40,000.

**Research Medical Student Grant**
Exposure to radiology research in medical schools ignites a passion for the specialty. With support of the community and a network of mentors, a summer project can turn into a career-long pursuit of research and discovery. Grant of $3,000, matched by the sponsoring department.

**Roentgen Resident/Fellow Research Award**
The Foundation recognizes and encourages trainees who have made significant contributions to radiologic research as evidenced by presentations at regional or national meetings, publication of scientific papers, receipt of research grants and other research activities.
Through the generosity of our donors, the RSNA R&E Foundation is able to continue its investment in R&D for radiology.

The Foundation acknowledges the distinguished individuals and the Visionaries in Practice (VIP) program donors who have established endowments and awards in their names or in the names of those honored.

**Austin Radiological Association**
Derek Harwood-Nash, MD
Martin R. Prince, MD, PhD
Ralph Schlaeger Charitable Foundation
RSNA Presidents Circle
Silver Anniversary Campaign Pacesetters
Strategic Radiology

The Foundation is grateful for the major contributions from corporate donors through the Vanguard program.
R&E Embraces Machine Learning

Manisha Bahl, MD, MPH (left), with scientific advisor Constance D. Lehman, MD, PhD, will investigate the application of machine learning algorithms to risk-stratify patients with ductal carcinoma in situ (DCIS).

“Development of a highly reliable prognostic tool for predicting the risk of concurrent invasive disease and future cancer recurrence in patients with DCIS would improve clinical decision-making and decrease the morbidity and costs of overtreatment of DCIS,” said Dr. Bahl. “If successful, this machine learning model could support more targeted and precise treatment options for women diagnosed with non-invasive breast cancer.”

— Manisha Bahl, MD, MPH
Timothy J. Amrhein, MD  
*Duke University*  
A Randomized Trial of CT Fluoroscopy-guided Targeted Autologous Blood and Fibrin Glue Patching for Treatment of Cerebrospinal Fluid Leaks in Spontaneous Intracranial Hypotension  
GE Healthcare/RSNA Research Scholar Grant

Jalal B. Andre, MD  
*University of Washington*  
Evaluating the Prevalence, Temporal Etiology and Cost of Patient Motion During Clinical MR Examinations  
RSNA Research Scholar Grant

Manisha Bahl, MD, MPH  
*Massachusetts General Hospital*  
Machine Learning to Predict Risk of Upgrade and Recurrence of Ductal Carcinoma In Situ  
Agfa HealthCare/RSNA Research Scholar Grant

David Dreizin, MD  
*University of Maryland School of Medicine and R Adams Cowley Shock Trauma Center*  
Development and Validation of an MDCT-based Decision Support and Outcome Prediction Tool for Bleeding Pelvic Fractures Using Semi-automated Volumetric Hematoma Analysis and Probabilistic Modeling  
RSNA Research Scholar Grant

Richard S. Ha, MD  
*Columbia University*  
The Effect of Ulipristal Acetate (UPA) on Breast Cell Proliferation Measured by Ki-67 and Breast MRI BPE and its Potential as a Chemoprevention Agent  
RSNA Research Scholar Grant
Kate Hanneman, MD  
*University of Toronto*  
Exploring the Relationship Between Left Ventricular Outflow Tract Obstruction, Exercise-induced Troponin Release and Myocardial Fibrosis in Hypertrophic Cardiomyopathy Using Molecular and Imaging Biomarkers  
GE Healthcare/RSA Research Scholar Grant

Jeremy Josef Heit, MD, PhD  
*Stanford University School of Medicine*  
Resting State Spontaneous Fluctuations of the BOLD Signal for Penumbra Assessment in Endovascular Stroke Candidates  
Bracco Diagnostics Inc./RSA Research Scholar Grant

Misun Hwang, MD  
*Children’s Hospital of Philadelphia*  
Improved Diagnosis and Prognostication of Neonatal Hypoxic Ischemic Injury With Combined Contrast Enhanced Ultrasound and Elastography  
RSA Research Scholar Grant

Laura Jimenez-Juan, MD  
*Sunnybrook Health Sciences Centre, University of Toronto*  
Towards an Early Detection of Coronary Artery Bypass Graft Failure: A Computational Fluid Dynamics Approach Based on CT and 4D-flow MRI  
Agfa HealthCare/RSA Research Scholar Grant

Anusha Kalbasi, MD  
*University of California, Los Angeles*  
Uncoupling the Tumor Promoting and Wound Healing Properties of Macrophages in the Irradiated Microenvironment  
RSA Research Scholar Grant
Austin Kirschner, MD, PhD
Vanderbilt University Medical Center
Mechanism of PIM1 Kinase-mediated Radiosensitization for Prostate Cancer Treatment
RSNA Research Scholar Grant

Robert J. McDonald, MD, PhD
Mayo Clinic, Minnesota
Assessment of the Clinical Effects of Intracranial Gadolinium Tissue Deposition Following Intravenous Administration of Gadolinium Based Contrast Agents Using a Preclinical Rat Model
Bayer HealthCare/RSNA Research Scholar Grant

Rajni Natesan, MD, MBA
The University of Texas MD Anderson Cancer Center
Impact of the Updated 2015 American Cancer Society and 2016 United States Preventive Services Task Force Breast Cancer Screening Guidelines on Screening Mammography Utilization Rates and Screen-detected Breast Cancer Across Demographic Groups in the Greater Houston Area
Carestream Health/RSNA Research Scholar Grant

Matthew J. Nyflot, PhD
University of Washington
Quantitative Sulfur Colloid SPECT/CT Radiomics to Guide Precision Radiotherapy for Patients with Hepatocellular Carcinoma
RSNA Research Scholar Grant

Ronnie Alex Sebro, MD, PhD
University of Pennsylvania
Integrated Biomarker PET/CT Imaging Trial for Assessing Hypoxia in Soft Tissue Sarcomas Using a Novel PET/CT Tracer
RSNA Research Scholar Grant
Rahul Anil Sheth, MD
The University of Texas MD Anderson Cancer Center
Antitumor Immune Activation by Molecularly Targeted Photothermal Ablation for the Treatment of Hepatocellular Carcinoma
RSNA Research Scholar Grant

Elizabeth J. Sutton, MD
Memorial Sloan Kettering Cancer Center
Percutaneous Breast MRI Biopsy as an Alternative to Surgery in Diagnosing a Complete Pathologic Response Post Neoadjuvant Chemotherapy
Guerbet/RSNA Research Scholar Grant

Takeshi Yokoo, MD, PhD
UT Southwestern Medical Center
Validation of Optimized Dixon-based MRI Techniques for Noninvasive Evaluation of Renal Steatosis
Siemens Healthineers/RSNA Research Scholar Grant

Your Investment, Radiology’s Success

“The salary support provided by the Scholar Grant was invaluable in protecting my time and allowed me to use my department startup funding towards supplies and materials for my work. As a result, nearly all of my upcoming grant proposals will be based off of work that is attributable to either my Resident or Scholar Grant from RNSA.

“Participating in the RSNA Advanced Course in Grant Writing program has been incredibly valuable as well. Taken in concert with my Research Scholar Grant, it has truly transformed the way I have approached and written grants and has already translated into an NIH-funded Boston Biomedical Innovation Center (B-BIC) Drive Grant.”

– Leo L. Tsai, MD, PhD, Msc
Grant Recipients Tag-Team to Tackle Colorectal Liver Metastasis

Steven Yevich, MD, MPH (center), under the scientific guidance and mentorship of past R&E grant recipients Alda Tam, MD, MBA (right), and Rony Avritscher, MD (left), will investigate the pharmacokinetics, toxicity and tumoricidal effects of an irinotecan-lipiodol nano-emulsion delivered via a transportal route in a rat colorectal liver metastasis model in comparison to the intra-arterial delivery.

“We hypothesize that a portal delivery will lead to greater conversion of irinotecan into the active chemotherapeutic metabolite, SN-38, which will result in improved locoregional tumoricidal effect on colorectal liver metastases,” said Dr. Yevich. “Ultimately, we hope this will lead to the development of a new IR treatment option with greater therapeutic outcomes for colorectal liver metastases.”
Alessandro Furlan, MD
University of Pittsburgh Medical Center
Towards an MR-based Computer-aided Diagnostic Program for the Classification of Risk of Hepatocellular Carcinoma Using the Liver Imaging Reporting and Data System
Hitachi Medical Systems/RSNA Research Seed Grant

Sana D. Karam, MD, PhD
University of Colorado
Combined Inhibition of EphB4 and EGFR Signaling Enhances Radiosensitization in Head and Neck Cancers
Toshiba America Medical Systems and Canon Group/RSNA Research Seed Grant

Mario Maas, MD, PhD
Academic Medical Center, University of Amsterdam
Is Diagnosing Osteochondral Defects in the Talar Joint with T1rho and T2 Mapping the Future?
Toshiba America Medical Systems and Canon Group/RSNA Research Seed Grant

Eduardo Jose Mortani Barbosa, Jr., MD
University of Pennsylvania
Quantitative Measurement of CT Texture Patterns in Fibrosing Interstitial Lung Diseases: Evaluation of New Imaging Biomarkers for Improved Disease Classification, Stratification of Severity and Prediction of Prognosis
Fujifilm Medical Systems/RSNA Research Seed Grant

Ming-Yen Ng, MBBS
The University of Hong Kong
Cardiac Magnetic Resonance for Asymptomatic Type 2 Diabetics with Cardiovascular High Risk (CATCH): A Pilot Study
RSNA Research Seed Grant
Adam Benjamin Prater, MD, PhD
Emory University
Comparison of Multi-parametric Feature Extraction Methods for Outcome Prediction in Patients with Aneurysmal Subarachnoid Hemorrhage
RSNA Research Seed Grant

Andrei S. Purysko, MD
Cleveland Clinic
Radiogenomics of Multiparametric Magnetic Resonance Imaging Visible and Invisible Prostate Cancers
Philips/RSNA Research Seed Grant

Andre Uflacker, MD
University of Virginia
Treatment of Knee Osteoarthritis with Intra-arterial Particle Embolization in a Non-surgically Induced Ovine Model
RSNA Research Seed Grant

Derek Lamont West, MD
Emory University
Optimization of Electroporation-assisted Nanoparticle Uptake in a Pancreatic Nude Mouse Model
RSNA Research Seed Grant

Steven Yevich, MD, MPH
The University of Texas MD Anderson Cancer Center
Transportal Irinotecan Chemoembolization Using a Lipiodol Nano-emulsion (TICL) for the Treatment of Colorectal Liver Metastases in Rat
RSNA Research Seed Grant
Improving the Value of Medical Imaging

Bridging the disciplines of neuroscience, computer science, medical imaging and informatics, 2017 RSNA Research Resident Grant recipient Andreas Rauschecker, MD, PhD, is pursuing an approach that combines advances in the fields of image processing and artificial intelligence to perform automated neuroradiologic diagnosis.

“Proof-of-concept development will focus on image-based feature quantification algorithms for lesion detection and characterization in two traditionally difficult sets of neuroimaging disease types: those involving the basal ganglia and those involving the white matter,” said Dr. Rauschecker. “These general methods, when established, may apply to other pathologies and to other organ systems in the future, providing a framework for artificial intelligence algorithms that can transform images to differential diagnosis for both common and rare diseases. Our hope is that these types of algorithms can greatly aid both the accuracy and efficiency of the interpreting radiologist.”
Bradley D. Allen, MD  
Northwestern University Feinberg School of Medicine  
Cardiac MRI and PET for Early Diagnosis and Screening in Chemotherapy-induced Cardiotoxicity  
RSNA Research Resident Grant

Patricia Balthazar, MD  
Emory University  
Disparities in the Utilization of Emergency Department Computed Tomography for Common Illnesses: An All-payer Population-based Study  
RSNA Research Resident Grant

Sharath Bhagavatula, MD  
Brigham and Women’s Hospital  
Harvard Medical School  
Development and Characterization of a System for Real-time Photoacoustic Image Guided Percutaneous Needle Interventions  
Philips/RSNA Research Resident Grant

Aadel Chaudhuri, MD, PhD  
Stanford University School of Medicine  
Circulating Tumor DNA Quantitation as a Prognostic Biomarker for Locally Advanced Esophageal Cancer Treated with Chemoradiation  
RSNA Research Resident Grant

Lauren Colbert, MD, MSCR  
The University of Texas MD Anderson Cancer Center  
A Prospective Study Characterizing Genomic and Immunologic Differences Driving Variable Radiation Response within HPV-related Cervical Carcinomas  
RSNA Research Resident Grant
Azadeh Elmi, MD
University of Pennsylvania
PET Cell Proliferation Imaging Biomarker for Combined Estrogen Receptor and Cell-cycle Targeted Breast Cancer Therapy
RSNA Research Resident Grant

Penny Fang, MD
The University of Texas MD Anderson Cancer Center
Microbiome Profile as a Predictive Biomarker for Non-small Cell Lung Cancer Response to Chemoradiation and Immunotherapy Treatment
RSNA Research Resident Grant

Soudabeh Fazeli Dehkordy, MD, MPH
University of California, San Diego
Patient Reported Outcomes for Conventional Ultrasound and Investigational Abbreviated MRI in an HCC Screening Population
Philips/RSNA Research Resident Grant

Tim Finkenstaedt, MD
University of California, San Diego
Non-invasive Assessment of Knee Cartilage and Meniscus Integrity by Magnetic Resonance Imaging with Ultra-short Echo Time (UTE) Pulse Sequences
RSNA Research Fellow Grant
**John Martin Floberg, MD, PhD**  
*Washington University School of Medicine in St Louis Barnes-Jewish Hospital*

*Imaging Oxidative Stress in Cervical Cancer: A Potential Biomarker for Traditional and Novel Therapies*

*Varex Imaging/RSNA Research Resident Grant*

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**Thomas F. Flood, MD, PhD**  
*University of Colorado*

*The Neurological Signature of Chronic Low Back Pain: fMRI-based Biomarker Characterization in a Clinical Population*

*RSNA Presidents Circle Research Resident Grant*

*Thomas F. Flood, MD, PhD (right), shown with scientific advisor Tor Wager, PhD*

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**Samuel J. Galgano, MD**  
*University of Alabama at Birmingham*

*Pretreatment Staging of High-risk Prostate Cancer with F-18 Fluciclovine PET/MRI*

*RSNA Research Fellow Grant*

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**Peiman Habibollahi, MD**  
*University of Pennsylvania*

*Glypican-3 Targeting for Catheter Directed Adoptive Immunotherapy of Hepatocellular Carcinoma*

*RSNA Research Fellow Grant*

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**Thomas J. Hayman, MD, PhD**  
*Yale University School of Medicine*

*Targets for Radiosensitization of HPV-negative Head and Neck Squamous Cell Carcinoma*

*RSNA Research Resident Grant*
Cheng William Hong, MD, MS  
*University of California, San Diego*  
Reader Agreement of LI-RADS V2017  
RSNA Research Resident Grant

Amin Haghighat Jahromi, MD, PhD  
*University of California, San Diego*  
Developing a Novel Paramagnetic Fluorinated Nanoemulsion for Sensitive Imaging of Inflammation by Fluorine-19 Magnetic Resonance Imaging  
Cook Medical Cesare Gianturco/RSNA Research Resident Grant

Iman Khodarahmi, MD, PhD  
*Johns Hopkins University School of Medicine*  
Evaluation of Hip Arthroplasty Implant Heating During Metal Artifact Reduction Sequence Magnetic Resonance Imaging  
Ralph Schlaeger Charitable Foundation Research Fellow Grant

Anderson H. Kuo, MD  
*The University of Texas Health Science Center at San Antonio*  
Cardiac Magnetic Resonance Spectroscopy for Detection of Obesity with Normal Weight: Cardiac Lipotoxicity in Intrauterine Growth Restricted Adults  
RSNA Research Resident Grant

Brian S. Letzen, MD  
*Yale University School of Medicine*  
Development of an Automated Liver Imaging Reporting and Data System Using Deep Machine Learning  
Philips/RSNA Research Resident Grant
Ariel E. Marciscano, MD  
*Johns Hopkins University School of Medicine*  
**Non-invasive Molecular Oncologic Imaging to Elucidate Mechanisms of Synergy Between Stereotactic Radiotherapy and Immune Checkpoint Blockade**  
RSNA Research Fellow Grant

Aaron W.P. Maxwell, MD  
*The Warren Alpert Medical School of Brown University*  
**Comparison of Percutaneous and Endobronchial Administration of a Novel Thermal Accelerant Agent for Augmentation of Tissue Heating During Microwave Ablation in Lung**  
RSNA Research Resident Grant

Ali Yusuf Mian, MD  
*Yale University School of Medicine*  
**Do In Vivo Synaptic Density Changes in the Glutamine Synthetase Inhibition Model of Epilepsy in Rats Mirror Those Seen in Living Human Epilepsy Patients Using the Novel SV2A PET Tracer C11-UCB-J?**  
RSNA Research Fellow Grant

Sweet Ping Ng, MBBS  
*The University of Texas MD Anderson Cancer Center*  
**Using Multi-parametric Tumor Imaging Kinetics and Circulating Tumor Cells to Predict Response in Patients with High-risk Head and Neck Cancer: Matching “Liquid Biopsy” and Quantitative Tumor Modeling**  
RSNA Research Fellow Grant

Sweet Ping Ng, MBBS (right), with scientific advisor Clifton D. Fuller, MD, PhD

Sana Parsian, MD  
*University of Washington*  
**Breast MRI Background Parenchymal Enhancement: Biological Basis and Utility for Predicting Effectiveness of Chemoprevention with Selective Estrogen Receptor Modulators**  
RSNA Research Fellow Grant
Ravi Patel, MD, PhD  
*University of Wisconsin*  
Utilization of Radiotherapy to Enhance the Efficacy of Systemic Dual Checkpoint Inhibition in Preclinical Metastatic Cancer Models  
RSNA Research Fellow Grant

Vishal Patel, MD, PhD  
*University of California, Los Angeles*  
Quantifying White Matter Changes in Aging and Dementia Through Sparse Encoding of Diffusion-weighted MRI of the Brain  
RSNA Research Resident Grant

Seyedmehdi Payabvash, MD  
*University of California, San Francisco*  
Evaluation of White Matter Connectome Changes in Children with Sensory Processing Disorders Using Edge Density Imaging  
Silver Anniversary Campaign Pacesetters Research Fellow Grant

Benjamin Pulli, MD  
*Massachusetts General Hospital*  
Multimodal Molecular Imaging Profiling of Thrombus in Acute Ischemic Stroke  
Prince Research Resident Grant

Priya Rajagopalan, MBBS, MPH  
*Indiana University School of Medicine*  
Cerebral Perfusion Alterations in Cortisol Related Gene Carriers: A Potential Alzheimer’s Disease Pathway  
RSNA Research Resident Grant

Priya Rajagopalan, MBBS, MPH (left), with scientific advisor Andrew Saykin, PsyD
Andreas M. Rauschecker, MD, PhD
University of Pennsylvania
Automated Neuroradiologic Diagnosis Using Customized Advanced Image Processing Algorithms and Bayesian Networks
RSNA Research Resident Grant

Hersh Sagreiya, MD
Stanford University School of Medicine
Quantitative Analysis of Ovarian Cancer with Novel Molecular Ultrasound Agent BR55
RSNA Research Fellow Grant

Elizabeth Tong, MD
University of California, San Francisco
Effects of Brain Training on Brain Network Connectivity in Pre-clinical Huntington’s Disease
RSNA Research Fellow Grant

Joshua Matthew Walker, MD, PhD
Oregon Health & Science University
Correlates of T Cell Activation in Mouse Radiotherapy Models
RSNA Research Resident Grant

Jeffrey Ware, MD
University of Pennsylvania
Implementation and Validation of a Clinical Resting State Functional MRI Protocol for Prognostic Evaluation of Acute Brain Injury
Siemens Healthineers/RSNA Research Fellow Grant
Catherine J. Wei, MD, PhD
Beth Israel Deaconess Medical Center
Comparing Restriction Spectrum Imaging (RSI) to Conventional and Abbreviated Breast MRI for Breast Cancer Screening
RSNA Research Resident Grant

Ye Yuan, MD, PhD
University of California, Los Angeles
The Role of MicroRNA-34 in the DNA Damage Response and Cancer Cell Immune Evasion Via Regulation of PD-L1 After Ionizing Radiation
RSNA Research Resident Grant

Kevin Amir Zand, MD
University of Mississippi Medical Center
Comparative Effectiveness of Noninvasive Imaging Tests for Staging Chronic Liver Disease
RSNA Research Resident Grant

Thank You Donors...

“I would like to take this opportunity to express my gratitude and appreciation for your support of our research project. The Silver Anniversary Campaign Pacesetter Fellow grant will allow us to develop new imaging biomarkers for diagnosis of sensory processing abnormalities in children with Sensory Processing Disorder, and open new horizons in evaluation of other neurodevelopmental and cognitive deficits in children.”

— Sam (Seyedmehdi) Payabvash, MD
Launching Careers:
From Medical Student to Mentor

Fujifilm Medical Systems/RSNA Research Medical Student Grant recipient Travis R. Hallett, BA (left), aims to identify and track imaging biomarkers to study the long-term effects of HIV on the heart, and to identify possible interventions. Travis will conduct this exciting research under the scientific guidance and mentorship of past Research Medical Student Grant recipient Michael T. Lu, MD, MPH.

“As a 2005 recipient of the RSNA Medical Student Research Grant, I have a very good understanding of how important this award will be for Travis,” said Dr. Lu. “Like Travis, I was a medical student with a budding interest in academic radiology — receiving the R&E grant as a medical student solidified my commitment and was critical for launching my career.”
Anup K. Bhattacharya, BA
Enrolled at Lewis Katz School of Medicine at Temple University
Research conducted at Thomas Jefferson University Hospital
Identification of a Resting State Imaging Biomarker to Predict Response to Deep Brain Stimulation in Parkinson's Disease
RSNA Research Medical Student Grant

Luke William Bonham, BS
Enrolled at Johns Hopkins University
Research conducted at University of California, San Francisco
Development of a Multi-modal Imaging Risk Gradient Score for Alzheimer's Disease Prediction
Canon U.S.A./RSNA Research Medical Student Grant

Alex K. Bryant, BS
University of California, San Diego
Outcomes of Anal Cancer Among HIV Positive Patients in the Veterans Affairs System
RSNA Research Medical Student Grant

Evan Chen, BS
Yale University School of Medicine
Identifying Enhancement-based Staging Markers on Baseline MR Imaging in Patients with Colorectal Cancer Liver Metastases Undergoing Loco-regional Tumor Therapy
RSNA Research Medical Student Grant

Ting-Wei Fan, BS
Keck School of Medicine of the USC
Radiomics Evaluation of Bladder Cancer: Differentiating Transitional Cell Carcinoma From Micropapillary Carcinoma
RSNA Research Medical Student Grant
Arash Fereydooni, MS  
*Yale University School of Medicine*  
Irinotecan-eluting LC Bead-M1 (DEBIRI-M1) for Patients with Liver Metastases From Colorectal Cancer: A Phase II Single-center Study  
RSNA Research Medical Student Grant

Rosalind Gerson, MSc  
*Dalhousie University*  
Quantification of Hepatic, Splenic, and Pancreatic Fat Fraction and R2* by 3T MR, a Cross-sectional Study  
RSNA Research Medical Student Grant

Elias Taylor Gunnell, MS, BS  
*University of North Carolina at Chapel Hill*  
Coronary Artery Calcium Scoring by Cardiac Gated-stationary Digital Tomosynthesis  
RSNA Research Medical Student Grant

Syed F. Haider, BS  
*Icahn School of Medicine at Mount Sinai*  
Predicting Outcomes Using Multimodal MRI Biomarkers in Cervical Spondylotic Myelopathy  
RSNA Research Medical Student Grant

Travis R. Hallett, BA  
*Enrolled at Boston University School of Medicine*  
Research conducted at Massachusetts General Hospital  
Epicardial Adipose Tissue and High-risk Plaque Features in HIV-accelerated Coronary Artery Disease  
Fujifilm Medical Systems/RSNA Research Medical Student Grant
Jingran Ji, BA  
Northwestern University Feinberg School of Medicine  
Transcatheter Bacteriolytic Therapy with Iron Oxide Labeled Clostridium novyi-NT Spores  
RSNA Research Medical Student Grant

Daniel Kwon, MSc  
University of British Columbia, BC Cancer Research Centre  
Matriptase as an Emerging and Promising Target for PET Imaging of Invasive Epithelial Cancers  
Philips/RSNA Research Medical Student Grant

Gwendolyn Joyce McGinnis, BS  
Oregon Health & Science University  
[18F]DPA-714 PET Imaging of Minocycline Treatment for Radioimmunotherapy-related Neuroinflammation and Neurocognitive Impairment  
RSNA Research Medical Student Grant

Anna Sophia McKenney, PhD, MPH  
Enrolled at Weill Cornell Medical College  
Research conducted at Memorial Sloan Kettering Cancer Center  
Texture Feature and 4D Texture Kinetic Analyses of Dynamic Contrast Enhanced T1 MRI Perfusion of Pseudoprogression in Glioblastoma  
RSNA Research Medical Student Grant

Ricky R. Savjani, BS  
Houston Methodist Hospital and Texas A&M University  
Developing an Automated Pipeline for Functional Characterization of the Boundary of Intracranial Lesions Using Resting-state fMRI  
RSNA Research Medical Student Grant
**Ashley Joy Schlafstein, BA**
*Emory University*

Understanding and Exploiting SAMHD1 in DNA Repair for Cancer Therapy  
RSNA Research Medical Student Grant

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**Ryan Joseph Slovak, BS**
*Enrolled at the University of Connecticut*

Research conducted at Yale University School of Medicine  
Enhancing Immunotherapy with Combined Image Guided Cryotherapy and PD-1 Axis Inhibition in a Murine Colorectal Model  
RSNA Research Medical Student Grant

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**Marina Stukova, BS**
*Enrolled at San Juan Bautista School of Medicine*

Research conducted at Johns Hopkins University  
Evaluating Choline Metabolism in Vivo: Targeting GDPD5 and GDPD6 in Orthotopic Human Breast Cancer Xenograft Models  
RSNA Research Medical Student Grant

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**Justin Sun, BS**
*Enrolled at Lewis Katz School of Medicine at Temple University*

Research conducted at University of California, San Diego  
Evaluation of Quantitative Cardiac Function and Volumes with Single Breath-hold Volumetric Cardiac MRI and Deep Learning Segmentation  
RSNA Research Medical Student Grant

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**Jose Viramontes, BS**
*The University of Texas Health Science Center at Houston, McGovern Medical School*

Optimization of Electroporation-assisted Nanoparticle Uptake in a Pancreatic Nude Mouse Model  
RSNA Research Medical Student Grant
Noah Wasserman, BA  
Washington University in St Louis  
Mallinckrodt Institute of Radiology  
Radiomics of Immune Checkpoint Therapy  
RSNA Research Medical Student Grant

Jacob F. Wynne, BS  
Emory University  
The Role of SIRT2 and its Inhibitors in the DNA Damage Response and the Treatment of BRCA1-associated Malignancies  
RSNA Research Medical Student Grant

Annie Xiao, BS  
University of Chicago  
Quantitative T1/T2 Mapping of Salivary Gland Tumors: MRI Correlation with Histopathological Features of Cellularity and Malignancy  
RSNA Research Medical Student Grant

Minerva Zhou, BS  
Washington University in St Louis  
Mallinckrodt Institute of Radiology  
Simulating Methods of Care Delivery to Assess Patient-centered Outcomes in Acute Ischemic Stroke  
RSNA Research Medical Student Grant

Andrew Zureick, BA  
Enrolled at University of Michigan  
Research conducted at Massachusetts General Hospital  
Partial Brain vs. Craniospinal Irradiation for Posterior Fossa Tumors: Using Quantitative MRI Analysis to Predict Adverse Neurocognitive Effects and Late Radiation-induced Changes  
Canon U.S.A./RSNA Research Medical Student Grant
Improving Breast Cancer Detection by Improving Resident Preparedness

RSNA Education Scholar Grant recipient Evguenia Jane Karimova, MD, will develop and test a new educational method to improve teaching of screening mammography to radiology residents. Utilizing a deliberate practice (DP) model of simulation-based learning, immediate feedback and gradual increasing case complexity to steadily improve perception and interpretation, Dr. Karimova sets her sights on improving breast cancer detection by bridging the gap between the performance of residents and national benchmarks in interpreting screening mammograms.

“To implement the main idea of this project, we will develop and integrate DP training exercises into the curriculum during breast imaging rotations,” said Dr. Karimova. “The results of this project will be broadly disseminated with the goal of wide adoption of this newly developed curriculum across radiology training programs.”
Andres R. Ayoob, MD
University of Kentucky
Development of a Web-based Curriculum to Prepare Diagnostic Radiology Residents During their Post-graduate Year 1 by Promoting Learning via Retrieval Practice and Spaced Repetition
Philips/RSNA Education Scholar Grant

Kathryn E. Darras, MD
University of British Columbia
Technology-Enhanced Undergraduate Anatomy Education: Development of a Blended Curriculum for Digital Dissection
RSNA Education Scholar Grant

Richard Duszak, MD
Emory University
Radiology Economics and Policy Learning Electronic Toolkit (REPLeT)
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Simulation-based Teaching of Screening Mammography Using Deliberate Practice on Cancer Enriched Case Sets
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**Facilitating a Radiology Curriculum for Radiology Residents in Haiti Using Tablet Computers**  
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Monica Majmundar Sheth, MD  
*Hofstra Northwell School of Medicine*  

**Bridging the Gap Between Residency Training and Clinical Practice: The Development of Entrustable Professional Activities for Breast Imaging (EPA-BR), EPA-BR Based Curriculum and Self-assessment Modules**  
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**Capacity Building in Prevention of Sickle Cell Disorder Related Stroke in Nigerian Children**  
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**Technology Enhanced Learning: Medical Student Education Simulation Utilizing Clinical Decision Support (Teaching Medical Students to Select the ‘Right Test’ at the ‘Right Time’ for the ‘Right Reason’)**  
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Trainees often feel hindered by their own unfamiliarity with research, but as someone who spent most of medical school not doing research, I strongly encourage others to dive in during their radiology training and see the great places it can take them. My research path led me through so many interesting clinical questions, taught me a great deal of useful life skills and established long-lasting relationships with career mentors.”

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