RSNA Research & Education Foundation
New Grants Approved for Funding

RESEARCH SCHOLAR GRANT
The Foundation’s 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.

Amit Gupta, MBBS, MD | University Hospitals Cleveland Medical Center
Lung T1 Mapping and Non-Contrast MR Angiography: A Noninvasive Method for Assessment of Pulmonary Vasculature and Perfusion Abnormalities in Patients with Chronic Thromboembolic Pulmonary Hypertension

Lewis Dirk Hahn, MD | University of California San Diego
Deep Learning-Based Prediction of Chronic Thromboembolic Pulmonary Hypertension

Leslie Lamb, MD | Massachusetts General Hospital
Strategy to Reduce Disparities in Breast Cancer Risk Assessment Using Artificial Intelligence

Yoo Jin Lee, MD | University of California, San Francisco
Imaging of Active Myocardial Fibrosis Using 68 Ga-FAP-2286

Kirti Magudia, MD, PhD | Duke University
Optimizing Preoperative Assessment and Postoperative Management of Bariatric Surgery Patients with Fully Automated, High Throughput and Normalized Ct-Based Body Composition Analysis

Devarati Mitra, MD, PhD | MD Anderson
Prediction of Radiation Therapy-Associated Toxicity To Correct a Race-Based Disparity

Marwan Moussa, MD | Beth Israel Deaconess Medical Center
Combinational Thermal Ablation and Nanodrug Immunomodulation to Promote Anti-Tumor Immunity

Amanda Rose Smolock, MD | The Medical College of Wisconsin, Inc
Understanding the Effect of Histotripsy on Tumor Hypoxia in a Pancreatic Cancer Model

Scott Michael Thompson, MD, PhD | Mayo Clinic Rochester
Intraindividual Comparison of Hepatic Intraarterial Versus Systemic Intravenous 68 Ga-PSMA PET/CT in Patients with HCC

Angela Tong, MD | New York University Grossman School of Medicine
Added Value of Quantitative MR Imaging to Radiologists and Deep Learning Based Computer Aided Detection of Prostate Cancer on Prostate MRI

Christian Balthasar van der Pol, MD | Christian Balthasar van der Pol, MD
Liver Imaging Reporting and Data System (LI-RADS) Diagnostic Test Accuracy Individual Patient Data (IPD) Meta-Analysis

Michael C. Veronesi, MD, PhD | Indiana University
Development of Neuroimaging Biomarkers Using Simultaneous FET PET and MR CEST for Combination Therapy Against Glioblastoma

Vivek Yedavalli, MD | Johns Hopkins School of Medicine
Deep Learning Models Using Baseline Comprehensive CT Stroke Collateral Imaging in Cerebral Angiographic Collateral, Post Procedural Hemorrhagic Transformation, and Clinical Outcomes Predictions for Increasing Endovascular Thrombectomy Eligibility in the Late Time Window
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.

Erin F. Alaia, MD | New York University Grossman School of Medicine  Clinical Utility of Knee and Hip MRI for Atraumatic Pain in Patients Aged 50 and Older: A Comparative-Effectiveness Based Analysis

Scott M. Bugenhagen, MD, PhD | Mallinckrodt Institute of Radiology  Absolute Perfusion Reserve: Theory and Measurement of a New Metric for Coronary Lesion Grading

Adam Fang, MD | University of Maryland School of Medicine  Development and Integration of an Inferior Vena Cava Filter Alert System Using a Novel Natural Language Processing Tool To Identify Eligible Patients for Filter Retrieval

Peter Goff, MD, PhD | University of Washington  Inhibiting the Replication Checkpoint To Augment the Immunogenicity of Radiotherapy

Pankaj Gupta, MD | Postgraduate Institute of Medical Education and Research, Chandigarh  Deep Learning Radiogenomics for Individualized Therapy in Unresectable Gallbladder Cancer

Jorge D. Oldan, MD | University of North Carolina – Chapel Hill  18-Fluorofuranylnorprogesterone (FFNP) PET/CT as a Potential Biomarker of Response to Progesterone Therapy in Complex Atypical Hyperplasia (CAH) and Grade 1 Endometrial Cancer (EC)

Jessica Huang Porembka, MD | University of Texas Southwestern Medical Center  Understanding the Impact of Temporary Testing-Related Health Utilities and Social Determinants of Health on Lung Cancer Screening Participants

Harjit Singh, MD | Johns Hopkins University  Assessment of Indeterminate Biliary Strictures Using Ultrahigh-Resolution Optical Coherence Tomography

RESEARCH RESIDENT/FELLOW GRANT
This grant provides investigators a chance to explore powerful ideas. Working alongside an experienced advisor, trainees gain insight in 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/$50,000.

Arman Avesta, MD | Yale School of Medicine  Developing Capsule Networks for Brain Image Segmentation

Mark Barahman, MD, PhD | University of California, San Diego  Proton Density Fat Fraction Estimation with Point of Care Nuclear Magnetic Resonance Technology

Krister Barkovich, MD, PhD | University of California, San Diego  Developing a Novel Tumor-Targeting Dual NIRF/MRI Imaging Nanoparticle for Longitudinal Molecular Cancer Imaging

Soha Bazyar, MD | University of Maryland Baltimore  Ultra-High Dose Rate Sparing of Lung Tissue During Radiation Therapy

Joshua Brown, PhD | Emory University  Chemical Exchange Saturation Transfer MRI in Non-Lesional Temporal Lobe Epilepsy Imaging

Marwan Moussa, MD | NYU Grossman School of Medicine  Pilot Study of an Organ-Based Cancer Screening Electronic Application Tool To Improve Cancer Screenings for Sexual and Gender Minority Persons

Jeremy N Ford, MD, MBA | Massachusetts General Hospital  Blood-Brain Barrier Water Exchange in Alzheimer Disease
Colbey W. Freeman, MD | University of Pennsylvania
Going with the Flow: A Comparison of Brain Perfusion Detected by Ultrasound Microvascular Imaging, Contrast-Enhanced Ultrasound, and Microspheres in a Porcine Model

Matthew Gallitto, MD | Columbia University
Focused Ultrasound-Enhanced STAT3 Inhibition and Radiosensitization for Diffuse Midline Glioma

Ruoqi Gao, MD | The University of Texas Southwestern Medical Center
Targeted Acoustic Activation of Systemic Immunomodulating Nanodroplets as a Novel Immunotherapeutic Platform

Elmira Hassanzadeh, MD | Massachusetts General Hospital
Protocol Optimization for Resting State fMRI Under Anesthesia

Samuel Jang, MD | Mayo Clinic – Rochester
Contrast-Enhanced Ultrasound and Shear Wave Elastography in Patients Receiving Lymphaticovenous Anastomosis Surgery in the Upper Extremities

Cody Keller, MD | University of California, San Diego
Optimization of Quantitative Ultrasound Fat Fraction Estimation in Advanced Nonalcoholic Fatty Liver Disease and Nonalcoholic Steatohepatitis

Behnaz Khazai, MD | Yale University School of Medicine
PET Biomarker for Synaptic Density Changes After Radiation Therapy

Sean Koerner, MD | University of Pittsburgh
Graduated Spatially Fractionated Radiotherapy: A Novel Technique to Potentiate Immunotherapy Response

Min Lang, MD | Massachusetts General Hospital

Matthew D. Lee, MD | NYU Langone Health
Correlation of MRI With Intraoperative 5-Aminolevulinic Acid Fluorescence and Stimulated Raman Histology in Glioblastomas

Ningcheng Li, MD | Oregon Health & Science University
Chronic Post-Thrombotic Venous Biomechanical Changes and Impact on Response to Venous Intervention

William Lo, MD, PhD | Washington University in St Louis
Integrin-Targeted PET Imaging and Therapeutics To Predict and Mitigate Radiation-Induced Pulmonary Fibrosis

Jennifer Ma, MD | Memorial Sloan Kettering Cancer Center
Radiotherapeutic and Tumor Microenvironmental Determinations of Response to Immune Checkpoint Blockade in DNA Repair-Deficient Breast Cancer

Gohar Shahwar Manzar, MD, PhD | The University of Texas MD Anderson Cancer Center
Evaluating and Optimizing Radiotherapy Immunoconditioning to Enhance CAR-NK Cell Therapy for Head and Neck Cancer

Marcela Marsiglia, MD, PhD | Massachusetts General Hospital
Assessment of the Diameter and Flow of the Ophthalmic and Ciliary Arteries in Patients with Advanced Dry Age-Related Macular Degeneration Using 7 Tesla MRI

Aram S. Modrek, MD, PhD | New York University Grossman School of Medicine
DNA Damage Drives Genome Reorganization in Glioblastoma

Sujoy Mukherjee, MD | The University of Texas Southwestern Medical Center
Liver Health Outcome of Longstanding Hepatic Steatosis: A Longitudinal Cohort Study of the Dallas Heart Study Population

Veit Sandfort, MD | Stanford
Minimizing Human Labeling Effort in Cardiovascular Deep Learning Segmentation to Enable Comprehensive Risk Assessment in Type B Aortic Dissection

Michael Vincent Sherer, MD | University of California, San Diego
Improving Contouring Training for Radiation Oncology Residents via Implementation of Novel Curricular Elements Using an Interactive Online Contouring Platform
Nadia Solomon, MD | Yale New Haven Hospital
*Postmortem Imaging for Investigation of Disease Pathophysiology, Mechanisms of Injury, and Cause of Death*

David J. Tischfield, MD, PhD | University of Pennsylvania
*Functional Metabolic Imaging for HCC Subtyping and Response Prediction*

Ophir Vermesh, MD | Stanford University School of Medicine
*Engineering Genetically Encoded Synthetic Reporters for Dual Breath- and Imaging-Based Early Cancer Detection*

**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.

Emily Avery, BA | Yale School of Medicine
*Deep Learning Assessment of Admission CTAs for Prognostication of Acute Large Vessel Occlusion Stroke*

Ernest Barral, BS | Duke University Hospital
*Evaluation of Short- and Long-Term Clinical Outcomes in Patients Following Intervention for Pulmonary Embolism*

Joseph A. Behnke, PhD | Emory University
*Assessment of White Matter Microstructural Integrity in Postconcussion Vestibular Dysfunction (PCVD) Using Diffusion Tensor Imaging (DTI) and Neurite Orientation Dispersion and Density Imaging (NODDI)*

Drew Bergman, BA | Dartmouth-Hitchcock Medical Center
*Epigenetic Mechanisms of the FLASH Radiotherapy Effect*

Rahul Chandrupatla, BS | University of California, San Diego
*Deep Learning Visualization and Quantification of Mechanical Dyssynchrony in Cardiac MRI*

Gunvant Chaudhari, BS | University of California, San Francisco
*Modeling Risk of Progression to Lung-RADS 4 From a Benign Lung Cancer Screening CT Using Imaging and Clinical Data*

Michelle Clark, BA | Memorial Sloan Kettering Cancer Center
*Predicting Lung Adenocarcinoma Histology Subtypes Using Deep Learning Methods*

Jamie Clarke | University of Miami
*Amplified Imaging of the Pediatric Brain*

Erin Gaudette, BSc, MSc | Dalhousie University Faculty of Medicine
*Development of a Multi-Parametric Model To Distinguish Between Pseudoprogression and Progression of Glioblastoma Multiforme*

Amanda Gong, BA | The University of California, Los Angeles
*Deep Learning in RECIST Oncology Response Assessment: Automated New Lesion Detection*

Prateek C. Gowda, BS | Johns Hopkins University
*Understanding the Hemodynamics Behind the “Beats-of-Stasis” Embolization Endpoint Using a Multiparametric “In Vitro” Model of Transarterial Embolization*

Lindsey Greenlund, BS | University of Minnesota
*Comparison of Myeloid Derived Suppressor Cells in Tumor Tissue and Peripheral Blood in Head and Neck Cancer Patients*
Daniel Grits | Cleveland Clinic
A Comparative and Correlative Evaluation of Early to Late-Stage Osteoarthritis in Human Knee Cartilage Utilizing Clinical and Preclinical MRI Imaging (3T & 7T) With Histopathology and Immunohistochemistry As the Standard

Amir Hasani | National Institutes of Health
Similarities and Differences of Lung Cysts in LAM and BHD Using Radiomics and Machine Learning on High-Resolution CT scan

Janson Kappen | University of Western Ontario
Visualization Tools to Aid Vascular Assessment in Pancreatic Adenocarcinoma Staging CT

Mihir Khunte, BS | Rhode Island Hospital
Development and Clinical Validation of Fully Automated Artificial Intelligence Pipeline for Longitudinal Tracking of Kidney Health on Magnetic Resonance Imaging

Michael Kozuch, MPH | The Medical College of Wisconsin, Inc
Impact of a Standardized Vertebral Compression Fracture Management Pathway on Healthcare Resource Utilization and Opioid Use

Soryan Kumar | Rhode Island Hospital
Deep Reinforcement Active Learning for Post-Treatment Brain Tumor Segmentation with Quality Estimation

Andrew Lancaster | Johns Hopkins University
A Deep Learning-Based Multi-Task Artificial Intelligence System for Quantitative Medical Image Analysis of Thoracic Abnormalities on Chest CT

Jonathan Lee, BS | Keck School of Medicine of USC
Predicting Bone Density from Spine CT and Demographic Data With a Multimodal Regression Network

Zachary Miller | University of Wisconsin-Madison
Improving MRI Detection of Pulmonary Nodules Using High Resolution, End-Inspiratory Breath Held 3D UTE Lung Imaging

Arif Musa, MS | University of California Irvine Medical Center
(EMPOWER) Evaluating Medical Student Participation, Observation, and Workstation Education in Radiology: Implementing a Hybrid Learning Model in Diagnostic Radiology Electives

Daniella Portal, BS | Rutgers Cancer Institute of New Jersey
Evaluating the Role of Adaptive Radiation Planning on Reducing Pneumonitis in Patients with Non-Small Cell Lung Cancer

Divya Ramakrishnan, BS | Yale School of Medicine
PACS-Based Volumetric Analysis to Improve Outcome Prediction in Pediatric Neuro-Oncology Clinical Trials

Alex G. Raman, MS | University of Southern California
A Federated Learning System for Radiologic Image Segmentation

Ashwin Reddy | Rhode Island Hospital
Artificial Intelligence for Pancreatic Cancer Evaluation and Outcome Prediction from Imaging and Clinical Data

Sylvia Rhodes, BA | University of Pennsylvania
Improving Submission Quality of Clinical Trials That Use Molecular Imaging or Therapy: Findings of the University of Pennsylvania Radiation Research Safety Committee

Arrix Ryce, MSc | Emory University School of Medicine
Interpretable Machine Learning for Management of Abdominal and Pelvic Injuries Caused by Blunt Trauma: A Feasibility Study With the Trauma Quality Improvement Program Registry

Jeremy Stephan | Rush University Medical Center
Derivation and Validation of an Algorithm for Predicting Major Adverse Health Events Following Low-Dose CT Lung Cancer Screening

Walter Zhao | Case Western Reserve University
Enhancing Robustness of Magnetic Resonance Radiomics Using Quantitative MR Fingerprinting
EDUCATION PROJECT AWARD
This project award is intended to recognize and highlight the impact of educators by providing supplemental funding of up to $20,000 for new or ongoing education projects.

Masis Isikbay, MD | University of California, San Francisco
Standardized Web Based Call Preparation Curriculum for Diagnostic Radiology

Leanne Yuanci Lin, MD | University of Michigan Hospital
Applications for 3D Models and Augmented Reality for Patient Education and Outreach

Jordan David Perchik, MD | University of Alabama at Birmingham
Artificial Intelligence Literacy: Developing a Multi-Institutional Infrastructure for AI Education

Sidak Pannu, MD | Dartmouth Hitchcock Medical Center
DartRad – A Radiology Education Portal by Medical Students for Medical Students

Kareem Rayn, MD | New York Presbyterian Hospital - Columbia University Irving Medical Center
Transition to Independent Practice Curriculum Year (TIPCY)

DEREK HARWOOD-NASH INTERNATIONAL EDUCATION SCHOLAR GRANT
Innovation in education can transform the way radiologists learn, understand, and care for patients. This grant funds investigators looking to affect radiology education around the world. One-year grant of up to $75,000; two year grants will be considered in exceptional cases.

Toma Omofoye, MD | MD Anderson Cancer Center
Development of a Customized Interactive Web-Based Global Breast Imaging Curriculum With Self-Assessment for Radiologists in Low- and Middle-Income Countries

Katrina A. McGinty, MD | University of North Carolina, Chapel Hill
International Peer Learning: The Future of Global Imaging Education

RSNA/AUR/APDR/SCARD RADIOLOGY EDUCATION RESEARCH DEVELOPMENT GRANT
This grant helps to build a critical mass of radiology education researchers and promotes the careers of those with a passion to advance the science of radiology education. One-year grant of up to $10,000.

Jonathan Martin, MD | Duke University School of Medicine
Development of a Series of Didactic Portable Radiology Escape Rooms for Undergraduate Medical Education