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, two year grants will be considered in exceptional cases.

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

Indranil Mallick, MD
Tata Medical Center
AVARO - Applied Virtual Anatomy for Radiation Oncology - Teaching Radiological Anatomy for Target Delineation and Image Guidance Using Interactive Online Tools for Large Audiences

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.

Jalal Badi Andre, MD
University of Washington
Evaluating the Prevalence, Temporal Etiology, and Cost of Patient Motion During Clinical MR Examinations

David Dreizin, MD
University of Maryland
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

Richard S. Ha, MD
Columbia University
The Effect of Ulipristal Acetate (UPA) on Breast Cell Proliferation Measured by Ki67 and Breast MRI BPE and its Potential as a Chemoprevention Agent

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

Jeremy Josef Heit, MD, PhD
Stanford University
Resting State Spontaneous Fluctuations of the BOLD Signal for Penumbra Assessment in Endovascular Stroke Candidates

Andrew B. Rosenkrantz, MD
New York University
Design of an Interactive Case-Based Online Tutorial for Prostate MRI Interpretation Using PI-RADS

Kofoworola O. Soyebi, MBChB
University of Lagos, Ili-Araba, Lagos, Nigeria
Capacity Building in Nigeria for Sickle Cell Disorder Related Stroke Prevention

Marc Harold Willis, DO
Baylor College
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)

Austin Kirschner, MD, PhD
Vanderbilt University
Mechanism of PIM1 Kinase-mediated Radiosensitization for Prostate Cancer Treatment

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 Great

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

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

Takeshi Yokoo, MD, PhD
UT Southwestern Medical Center
Validation of Optimized Dixon-based MRI Techniques for Noninvasive Evaluation of Renal Steatosis
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.

Cecilia Besa, MD
Mount Sinai
MRI-Based Surrogate Imaging Markers of Transcriptome Subclasses and Signatures in Hepatocellular Carcinoma

Anil Chauhan, MD
University of Pennsylvania
Acoustic Radiation Forced Impulse Shear Wave Velocity of Abdominal Wall Musculature for Clinical Hernia Risk Prediction

Derik L. Davis, MD
University of Maryland
Quantitative MRI of the Shoulder in Older Adults: A Pilot Study to Evaluate the Association of Intramuscular Fatty Infiltration, Functional Outcome and Re-tear Rate Following Surgical Repair of Rotator Cuff Tears

Priyanka Jha, MBBS
University of California, San Francisco
Noninvasive In Vivo Hyperpolarized [1-13C] Pyruvate Magnetic Resonance Imaging to Detect Alterations in Placental Metabolism in Gestational Hypertensive Disorders in a Small Animal Model

Avinash Ramesh Kambadakone, MD
Massachusetts General Hospital
Multi-parametric DECT Assessment of Therapeutic Response to Neo-adjuvant Chemo Radiation in Pancreatic Cancer Patients to Determine Surgical Resectability

Alexander Lerner, MD
University of Southern California
Utility of Contrast Enhanced Ultrasound and 4DCT for Preoperative Detection and Localization of Parathyroid Adenomas

Timur Mitin, MD, PhD
Oregon Health & Science University
Novel Imaging of Lymph Nodes in Patients with Rectal Cancer Using Ferumoxytol-enhanced MRI

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.

Bradley D. Allen, MD
Northwestern University
Cardiac MRI and PET for Early Diagnosis and Screening in Chemotherapy-induced Cardiotoxicity

Allen Ardestani, MD, PhD
Cedars-Sinai Medical Center
Near-infrared Spectroscopy of the Resting Brain for Predicting Neurologic Outcomes in the Comatose Patient

Divya S. Bolar, MD,PhD
Massachusetts General Hospital
Using Novel MRI Techniques to Identify Hemodynamic and Metabolic Parameters Predictive of Cognitive Outcome after Carotid Endarterectomy

Nima Nabavizadeh, MD
Oregon Health & Science University
Circulating Tumor DNA in Plasma of Patients Undergoing Trimodality Therapy for Esophageal Cancer: A Potential Tool for Neoadjuvant Treatment Response Assessment

Thanh Nguyen, MD
University of Ottawa
Preoperative Identification of Isocitrate Dehydrogenase Mutation in Gliomas Using MR Spectroscopy, Diffusion-weighted and Perfusion-weighted Imaging

Ogonna Kenechi Nwawka, MD
Hospital for Special Surgery
Use of Elastography to Quantify Change in Upper Extremity Muscle Spasticity Following Botox Injection in Children with Spastic Cerebral Palsy

Prashant Raghavan, MD
University of Maryland
Neural Network Disruption in Perinatal Hypoxic Ischemic Injury as a Predictor of Neurodevelopmental Outcome

Ty Kanyn Subhawong, MD
University of Miami
Semi-automated Qmri to Assess Desmoid Tumor Volumetric and Stromal Changes Induced by Systemic Therapy

Etay Ziv, MD, PhD
Memorial Sloan Kettering Cancer Center
Signaling Pathways Predictive of Response to Radioembolization of Colorectal Liver Metastases
Pippa Cosper, MD, PhD  
Washington University in St. Louis  
**Identifying Human and Viral Transcriptional Profiles in Cervical Tumors During Chemoradiation That Can Predict for Treatment Response**

Jamal J. Derakhshan, MD, PhD  
University of Pennsylvania  
**Feasibility Assessment and Technical Development of Noninvasive Globe Temperature Measurement and Mapping Using DWI-thermometry MRI**

Rahul S. Desikan, MD, PhD  
University of California, San Francisco  
**An Automated Atlas of the Human Brainstem and Cerebellum**

Rebecca Anne Dumont, MD  
University of California, San Francisco  
**Exploiting Bacterial Iron Metabolism for Spinal Infection Imaging with Positron Emission Tomography**

Laura Burns Eisenmenger, MD  
University of Utah  
**Development of an MRI-compatible Vessel Wall Inflammation Animal Model**

Christine Elissa Eyler, MD, PhD  
Dana Farber Cancer Institute  
**Integrated Epigenomic Analysis to Identify Determinants of Radiation Response in Mouse Lung Tumors Treated with Image-guided Conformal Radiotherapy**

Erin Gillespie, BS, MD  
University of California, San Diego  
**Develop and Test a Novel Interactive Contouring Atlas for Radiation Oncology**

George Daniel Grass, MD,PhD  
University of South Florida/H. Lee Moffitt Cancer Center & Research Institute  
**Targeting Metabolic Complexes in Small Cell Lung Cancer to Augment Radiosensitivity**

**Aaron Joseph Grossberg, MD, PhD**  
The University of Texas MD Anderson Cancer Center  
**The Role of Orexin Signaling in Brain Radiation-induced Fatigue**

Pedram Heidari, MD  
Massachusetts General Hospital  
**Redifferentiation of Neuroendocrine Carcinomas for Improved Efficacy of Moleculary Targeted Radiotherapy**

Wen Jiang, MD, PhD  
The University of Texas MD Anderson Cancer Center  
**Combining Radiation with Phosphatidylserine Blockade Promotes Immunogenic Phagocytosis and Generates Long-lasting Anti-tumor Immunity**

Sarah N. Khan, MD  
University of California, Los Angeles  
**Tumor MicroRNA Expression Profiles as Biomarkers for Predicting Hepatocellular Carcinoma Tumor Response to Y90 Radioembolization**

Benjamin Lok, MD  
Memorial Sloan Kettering Cancer Center  
**Utilizing a Novel [18F]PARPi PET Radiotracer to Predict the Efficacy of PARP Inhibitor Radiosensitization in Small Cell Lung Cancer**

Jonathon Kirk Maffie, MD, PhD  
Columbia University  
**Anatomical Covariance of Fetal Brain Regions as a Tool to Identify Early Developmental Pathology of Intrinsic Brain Networks**

Hugh C.J. McGregor, MD  
University of California, San Francisco  
**in Vivo Endothelial Cell Gene Expression Analysis of Venous Outflow Stenoses in Hemodialysis Arteriovenous Fistulas Utilizing a Novel Endovascular Sampling Technique**

Amanda Marie Murphy, MD,PhD  
University of Toronto  
**VIPER-DCI: Vascular-Perfusion Imaging for Prediction and Early Recognition of DCI and Relationship to Clinical Outcome**

Michael F. Regner, MD  
University of Colorado  
**Insular Inhibitory Neuromodulation to Reduce Cigarette Craving and Alter Brain fmRI Connectivity and Activity Patterns in Smokers**

Pavel Rodriguez, MD  
The University of Texas at San Antonio  
**Pilot Phase II Clinical Trial: Efficacy of Methylene Blue in Mild Cognitive Impairment**

Ashley Sekhon, MD  
Ohio State University  
**Feasibility of Creating a Cosmetic Image Analysis Objective Scoring Tool (CIAO) for Evaluation of Cosmetic Results From Breast Conserving Therapy**

Mark Anthony Sellmyer, MD, PhD  
University of Pennsylvania  
**Multifunctional PET Radiotracers for Quantative Reporter Gene and Bacterial Imaging**

Sina Tavakoli, MD  
The University of Texas Health Science Center at San Antonio  
**Mr Spectroscopy of Carotid Artery: An NMR Metabolomics Approach to Characterize Bioenergetic Divergence of Macrophages in Vulnerable Atherosclerotic Plaques**

Michael C. Veronesi, MD, PhD  
The University of Chicago  
**Validation of PET/CT Radiolabeled Nanoparticle Imaging for Intranasal Drug Delivery to the Brain**

Daniel Richard Wahl, MD, PhD  
University of Michigan  
**Inhibiting Isocitrate Dehydrogenase 1-mediated Reductive Biosynthesis to Augment Glioblastoma Therapy**

Eri Wehrenberg-Klee, MD  
Massachusetts General Hospital  
**HER3 PET Imaging for HER2+ Breast Cancer Adaptive Therapy Guidance**

Kaveh Zakeri, MD, MS  
University of California, San Diego  
**Restriction Spectrum Imaging as a Novel Biomarker of Treatment Response in Cervical Cancer**
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.

Thomas Battey, BS  
University of Maryland  
*Prediction of Post-traumatic Abdominal Compartment Syndrome Using Computed Tomography and Semi-automated Segmentation of Intra-abdominal Fluid Volumes*

Mark Alexander Forsberg, BS  
Thomas Jefferson University  
*Evaluation of Fluoroscopic Image Quality Using Quantitative Metrics Derived From Clinical Images*

Mansur Ghani, BS  
Yale University  
*Early Survival Prediction After Radioembolization for HCC: A 3D Quantitative MRI Assessment of Tumor Response*

Christopher Thomas Hensley, PhD  
UT Southwestern Medical Center  
*Understanding the Cellular Origins of Tumor Tracer Data in Non-small Cell Lung Cancer Tumors*

Xiaojing Huang, PhD  
Washington University in St. Louis  
*Effect of Glucose Metabolism on Sensitivity to Chemoradiation in Cervical Cancer Cells*

Manoj Jagani, BS  
Mayo Clinic, MN  
*RNA Sequencing Analysis and Quantification of Intracranial Gadolinium Deposition in a Rat Model*

Brian Gabriel Jiang, BS  
Duke University  
*Optimization of a Frequency-based Fusion Technique for Improving the Image Quality on Low Energy Virtual Monochromatic Images From Dual Energy CT*

Aasheesh Kanwar, BS  
The University of Texas MD Anderson Cancer Center  
*Radiomic Assessment of Oropharyngeal Cancers Treated with Radiation Therapy: Prognostic Quantitative Imaging Biomarkers From CT Texture Analysis*

Mike Kwon, BS  
University of Southern California  
*Fractal Viewpoint of Renal Masses: A Quantitative Technique*

Howard Jinsoo Lee, BA  
Duke University  
*Correlation of Functional Imaging Heterogeneity in Lung Cancer Radiation Treatment to Clinical Outcomes of Toxicity and Efficacy with SPECT/CT Ventilation/Perfusion Scans and FDG PET/CT Scans*

Shruti Mishra, BS  
Washington University in St. Louis  
*Quantitative Assessment of In Vivo Tau Pathology in Preclinical Alzheimer's Disease and Early Dementia*

Angel Moran, BS  
University of California, Davis  
*Combined PET/CT-based Radiomics Modeling for Locally Advanced Non-small Cell Lung Cancer: Toward Personalized Radiotherapy*

Michael Nguyentat, BA  
University of California, Irvine  
*Risk Assessment of Prostate Lesions by Utilizing Multiparametric MRI PIRADSv2 and MRI/Transrectal Ultrasound (TRUS) Fusion Biopsy*

Jean-Pierre Obeid, BS  
University of Miami  
*Multiparametric Evaluation of Preoperative MRI in Early Stage Breast Cancer: Prognostic Impact of Peri-tumoral Fat*

Jeremy Paluch, BS  
University of Southern California  
*Utility of Shear Wave Elastography to Assess Liver Fibrosis in Liver Transplant Patients with Chronic Liver Disease*

Neil Panjwani, BSE  
University of California, San Diego  
*Develop and Test a Novel Interactive Contouring Atlas for Radiation Oncology*

Sherveen Nick Parivash, MS  
Duke University  
*Characterizing the Radiologic Abnormalities Observed in Chronic Fatigue Syndrome and Assessing the Potential Use of Advanced MRI in Clinical Diagnosis*

Benjamin Vincent Park, PhD  
The University of Illinois at Chicago  
*Histological Evaluation of Radiologic Diagnosis in HCC Patients After Y90 Radioembolization*

Charles Puza, BA  
Duke University  
*Investigation of Mechanisms of Thermal Ablation Zone Enlargement When Combined with Transarterial Embolization for Treatment of Liver Tumors*

Omid Shearkhani, BSc  
University of Toronto  
*Developing and Evaluating the Accuracy of a Jacobian Operator-based Vector Displacement Field Technique to Detect Volume Changes of Metastatic Brain Tumors in Serial MR Imaging of the Brain*

Jacob Scott Thurston, BS  
Medical College of Wisconsin  
*Cost-effective Analysis of Percutaneous Femoral Artery Access in Endovascular Aortic Repair*

Chidubem Godwin Ugwueze, MS  
University of Southern California  
*Three Dimensional Texture Analysis of Perirenal Fat as an Image Based Predictor of Intra-operative Adherent Perinephric Fat*

Janis Yee, BA  
University of Southern California  
*Time Intensity Curve Analysis of Contrast Enhanced Ultrasound in Renal Masses*
Jason Yoon, BA
Washington University in St. Louis
Next-generation Radioimmunotherapy: Characterizing Fully Human Monoclonal Anti-CD20 Antibodies Labeled with Zirconium-89

Andrew Zureick, BA
Enrolled at University of Michigan Medical School. Research conducted at Massachusetts General Hospital
Quantitative MRI Analysis of Radiotherapy-induced Structural, Functional, and Developmental Changes in the Brain: Potential Predictors of Adverse Neurocognitive Effects in Pediatric Brain Tumor Survivors