

2017 R&E Grants Approved for Funding

RESEARCH SCHOLAR GRANT

Timothy James 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

Manisha Bahl, MD, MPH | Massachusetts General Hospital
Machine-learning to Predict Risk of Upgrade and Recurrence of Ductal Carcinoma in Situ

Misun Hwang, MD | Johns Hopkins University
Improved Diagnosis and Prognostication of Neonatal Hypoxic Ischemic Injury With Combined Contrast Enhanced Ultrasound and Elastography

Laura Jimenez-Juan, MD | Sunnybrook Research Institute
Towards an Early Detection of Coronary Artery Bypass Graft Failure: A Computational Fluid Dynamics Approach Based on CT and 4D-flow MRI

Anusha Kalbasi, MD | University of California, Los Angeles
Uncoupling the Tumor Promoting and Wound Healing Properties of Macrophages in the Irradiated Microenvironment

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

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

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

RESEARCH SEED GRANT

Eduardo Jose Mortani Barbosa, 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

Alessandro Furlan, MD | University of Pittsburgh
Towards an MR-based Computer-aided Diagnostic Program for the Classification of Risk of Hepatocellular Carcinoma Using the Liver Imaging Reporting and Data System

Sana D. Karam, MD, PHD | University of Colorado
Combined Inhibition of EphB4 and EGFR Signaling Enhances Radiosensitization in Head and Neck Cancers

Ming-Yen Ng, MBBS | The University of Hong Kong
Cardiac Magnetic Resonance for Asymptomatic Type 2 Diabetics With Cardiovascular High Risk (CATCH) - Pilot Study

Mario Maas, MD, PhD | Academic Medical Center, Amsterdam
Is Diagnosing Osteochondral Defects in the Talar Joint With T1rho and T2 Mapping the Future?

Adam Benjamin Prater, MD | Emory University
Comparison of Multi-parametric Feature Extraction Methods for Outcome Prediction in Patients With Aneurysmal Subarachnoid Hemorrhage

Andrei S. Purysko, MD | Cleveland Clinic
Radiogenomics of Multiparametric Magnetic Resonance Imaging Visible and Invisible Prostate Cancers

Andre Uiflacker, MD | University of Virginia
Treatment of Knee Osteoarthritis With Intra-Arterial Particle Embolization in a Non-Surgically Induced Ovine Model

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

Derek Lamont West, MD | The University of Texas Health Science Center at Houston
Optimization of Electroporation-assisted Nanoparticle Uptake in a Pancreatic Nude Mouse Model

RESEARCH FELLOW GRANT

Laura Burns Eisenmenger, MD | University of California, San Francisco
Evaluation of Intracranial Aneurysm Wall Inflammation Using Ferumoxytol and Four Dimensional Flow Magnetic Resonance Imaging

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

Samuel J. Galgano, MD | University of Alabama at Birmingham
Pretreatment Staging of High-risk Prostate Cancer With F-18 Fluciclovine PET/MRI

Peiman Habibollahi, MD | University of Pennsylvania
Glypican-3 Targeting for Catheter Directed Adoptive Immunotherapy of Hepatocellular Carcinoma

Iman Khodarahmi, MD, PhD | Johns Hopkins University
Evaluation of Hip Arthroplasty Implant Heating During Metal Artifact Reduction Sequence Magnetic Resonance Imaging

Ariel E. Marciscano, MD | Johns Hopkins University
Non-invasive Molecular Oncologic Imaging to Elucidate Mechanisms of Synergy Between Stereotactic Radiotherapy and Immune Checkpoint Blockade

Ali Y. Mian, MD | Yale University
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?

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

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

Ravi Patel, MD, PhD | University of Wisconsin
Utilization of Molecular Targeted Radiotherapy to Enhance the Efficacy of Systemic Dual Checkpoint Inhibition in Preclinical Metastatic Cancer Models

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

Sharath Bhagavatula, MD | Brigham & Women's Hospital
Development and Characterization of a System for Real-time Photoacoustic Image Guided Percutaneous Needle Interventions

Aadel Chaudhuri, MD, PhD | Stanford University
Circulating Tumor DNA Quantitation as a Prognostic Biomarker for Locally Advanced Esophageal Cancer Treated With Chemoradiation

Lauren Colbert, MD, MSc | 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

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

Matthew Nicholas DeSalvo, MD | Massachusetts General Hospital
Using High Temporal Resolution Functional MRI to Correlate Directional Resting-state Functional Connectivity and Surgical Outcome in Unilateral Temporal Lobe Epilepsy

Syedmehdi Payabvash, MD | University of California, San Francisco
Evaluation of White Matter Connectome Changes in Children With Sensory Processing Disorders Using Edge Density Imaging

Daniel Walter Pinkham, PhD | Stanford University
Gas-exchange Imaging With Xenon-CT for Adaptive Functional Lung Avoidance in Radiotherapy

Hersh Sagreiya, MD | Stanford University
Quantitative Analysis of Ovarian Cancer With Novel Molecular Ultrasound Agent BR55

Elizabeth Tong, MD | University of California, San Francisco
Effects of Brain Training on Brain Network Connectivity in Pre-clinical Huntington's Disease

Jeffrey Ware, MD | University of Pennsylvania
Implementation and Validation of a Clinical Resting State Functional MRI Protocol for Prognostic Evaluation of Acute Brain Injury

Alex El-Ali, MD | University of Pittsburgh
Placental MRI BOLD and Impaired Neurodevelopment in Congenital Heart Disease

Azadeh Elmi, MD | University of Pennsylvania
PET Cell Proliferation Imaging Biomarker for Combined Estrogen Receptor and Cell-cycle Targeted Breast Cancer Therapy

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

John Martin Floberg, MD, PhD | Washington University
Imaging Oxidative Stress in Cervical Cancer: A Potential Biomarker for Traditional and Novel Therapies

Thomas F. Flood, MD, PhD | University of Colorado
The Neurological Signature of Chronic Low Back Pain: fMRI-based Biomarker Characterization in a Clinical Population

Thomas J. Hayman, MD, PhD | Yale University
Targets for Radiosensitization of HPV-Negative Head and Neck Squamous Cell Carcinoma

Cheng William Hong, MD, MS | University of California, San Diego
Reader Agreement of LI-RADS V2017

Amin Haghghat 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

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

Brian S Letzen, MD | Yale University
Development of an Automated Liver Imaging Reporting and Data System Using Deep Machine Learning

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

Vishal Patel, MD, PhD | Regents of the University of California, Los Angeles
Quantifying White Matter Changes in Aging and Dementia Through Sparse Encoding of Diffusion-weighted MRI of the Brain

Benjamin Pulli, MD | Massachusetts General Hospital
Multimodal Molecular Imaging Profiling of Thrombus in Acute Ischemic Stroke

Priya Rajagopalan, MBBS | Indiana University
Cerebral Perfusion Alterations in Cortisol Gene Carriers: A Potential Alzheimer's Disease Pathway

RESEARCH MEDICAL STUDENT GRANT

Anup Kumar Bhattacharya | Temple University
Identification of a Resting State Imaging Biomarker to Predict Response to Deep Brain Stimulation in Parkinson's Disease

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

Alex K. Bryant | University of California, San Diego
Outcomes of Anal Cancer Among HIV Positive Patients in the Veterans Affairs System

Evan Chen | Yale University
Identifying Enhancement-based Staging Markers on Baseline MR Imaging in Patients With Colorectal Cancer Liver Metastases Undergoing Loco-regional Tumor Therapy

Ting-wei Fan, BS | Keck School of Medicine of the University of Southern California
Radiomics Evaluation of Bladder Cancer: Differentiating Transitional Cell Carcinoma From Micropapillary Carcinoma

Arash Fereydooni, MS | Yale University
Irinotecan-Eluting LC Bead-M1 (DEBIRI-M1) for Patients With Liver Metastases From Colorectal Cancer: A Phase II Single-center Study

Rosalind Gerson, MSc | Dalhousie University
Quantification of Hepatic, Splenic, and Pancreatic Fat Fraction and R2 by 3T MR - a Cross-Sectional Study*

Andreas M. Rauschecker, MD, PhD | University of Pennsylvania
Automated Neuroradiologic Diagnosis Using Customized Advanced Image Processing Algorithms and Bayesian Networks

Catherine Sheridan Spina, MD, PhD | Columbia University/ New York Presbyterian
Metronomic Delivery of Radimmunotherapy to Induce a Durable (Mraid) Anti-Tumor Response in Solid Tumors

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

Catherine Jane Wei, MD, PhD | Beth Israel Deaconess Medical Center
Comparing Restriction Spectrum Imaging (RSI) to Conventional and Abbreviated Breast MRI for Breast Cancer Screening

Ye Yuan, MD | 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

Kevin Amir Zand, MD | University of Mississippi
Comparative Effectiveness of Noninvasive Imaging Tests for Staging Chronic Liver Disease

Elias Taylor Gunnell, MS, BS | University of North Carolina, Chapel Hill
Coronary Artery Calcium Scoring by Cardiac Gated-Stationary Digital Tomosynthesis

Syed F Haider, BS | Icahn School of Medicine at Mount Sinai
Predicting Outcomes Using Multimodal MRI Biomarkers in Cervical Spondylotic Myelopathy

Travis Robert Hallett, BA | Enrolled at Boston University, research conducted at Massachusetts General Hospital
Epicardial Adipose Tissue and High-Risk Plaque Features in HIV-Accelerated Coronary Artery Disease

Jingran Ji, BA | Northwestern University
Transcatheter Bacteriolytic Therapy With Iron Oxide Labeled Clostridium novyi-NT Spores

Daniel Kwon, MSc | University of British Columbia
Matriptase as an Emerging and Promising Target for PET Imaging of Invasive Epithelial Cancers

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

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

Ricky R. Savjani, BS | Texas A&M University
Developing an Automated Pipeline for Functional Characterization of the Boundary of Intracranial Lesions Using Resting-state fMRI

Ashley Joy Schlafstein, BA | Emory University
Understanding and Exploiting SAMHD1 in DNA Repair for Cancer Therapy

Ryan Joseph Slovak | Enrolled at the University of Connecticut, research conducted at Yale New Haven Hospital
Enhancing Immunotherapy With Combined Image Guided Cryotherapy and PD-1 Axis Inhibition in a Murine Colorectal Model

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

Justin Sun | Enrolled 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

Jose Jose Viramontes, BS | McGovern Medical School, The University of Texas Health Science Center at Houston
Optimization of Electroporation-assisted Nanoparticle Uptake in a Pancreatic Nude Mouse Model

Noah Wasserman | Washington University
Radiomics of Immune Checkpoint Therapy

Jacob Wynne, BS | Emory University
The Role of SIRT2 and Its Inhibitors in the DNA Damage Response and the Treatment of BRCA1-Associated Malignancies

Annie Xiao | University of Chicago
Quantitative T1/T2 Mapping of Salivary Gland Tumors: MRI Correlation With Histopathological Features of Cellularity and Malignancy

Minerva Zhou, BS | Washington University School of Medicine
Automated Calculation of ASPECTS

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

EDUCATION SCHOLAR GRANT

Richard Duszak, MD | Emory University
Radiology Economics and Policy Learning Electronic Toolkit (REPLeT)

Monica Majmundar Sheth, MD | Hofstra Northwell School of Medicine at Hofstra University
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

Erin Gillespie, BS, MD | University of California, San Diego
Econtour 2.0: Simulation-based Education to Eliminate the Quality Gap in Radiation Oncology

Jennifer L. Nicholas, MD | Washington University
Facilitating a Radiology Curriculum for Radiology Residents in Haiti Using Tablet Computers

Kathryn Darras, MD | University of British Columbia
Technology-Enhanced Undergraduate Anatomy Education: Development of a Blended Curriculum for Digital Dissection

Kofoworola O. Soyebi, MBChB | University of Lagos, Idi-Araba, Lagos, Nigeria
Capacity Building in Prevention of Sickle Cell Disorder Related Stroke in Nigerian Children

Evguenia Jane Karimova, MD | Beth Israel Deaconess Medical Center
Simulation-based Teaching of Screening Mammography Using Deliberate Practice on Cancer Enriched Case Sets