

# RADIOLOGY RESEARCH UPDATE *June 2021, Issue 20*

## Department of Diagnostic Radiology and Nuclear Medicine

### RESEARCH DAY

The department's annual Research Day was held on June 9<sup>th</sup> as a hybrid virtual and in-person event with **Drs. Dheeraj Gandhi and Rao Gullapalli** moderating.

The department's high-quality, innovative research was highlighted, notably the department's ranking of #19 in Blue Ridge Institute for Medical Research 2020 – Radiology Rankings. The department received >\$10M in grant revenues in FY 2021, mostly from NIH grants.

Congratulations to the following awardees:

**Reuben S. Mezrich Research Prize: Ze Wang, PhD**



(Drs. Wang and Melhem)

**The Bruce Roberts Line Prize: Timothy Miller, MD**



(Drs. Miller and Melhem)

**RSNA Roentgen Resident Research Prize: Siva Gaddam, MD**



(Left to Right: Drs. Resnik, Gaddam, Melhem)

### GRANTS

**Linda Chang, MD, MS**, Professor, was awarded a \$5,407,500 Avant-Garde Award Program for HIV/AIDS and Substance Use Disorder Research (DP1) for "MR-Guided Focused Ultrasound to Eradicate CNS Viral Reservoirs and Promote Neurogenesis in the HIV-Infected Brain." The PAR-20-221: NIDA Avant-Garde Award Program for HIV/AIDS and Substance Use Disorder Research (DP1) is part of the Director's Pioneer Award mechanism at NIDA that supports investigators with exceptional creativity proposing high impact research projects that will open new areas of HIV/AIDS research relevant to substance use disorders and lead to novel avenues for prevention and treatment of HIV/AIDS among people who use drugs.

**Miroslaw Janowski, MD, PhD**, Associate Professor, was awarded a \$1.9M R01 for "Image-Guided, Intra-Arterial Delivery of Antibodies to the Central Nervous System."

**Rong Chen, PhD**, Associate Professor, was awarded \$423,231 for a 2-year cooperative agreement from NIDA entitled "Clear Volume Imaging with Machine Learning: A Novel Tool to Identify Brain-wide Neuronal Ensembles of Opioid Relapse in Rat Models."

**Anna Jablonska, PhD**, Research Associate, was awarded \$397,388 for a 17-month grant from NINDS entitled "Combination Therapy with Glial Restricted Progenitors and miRNAs to Repair Stroke Damage."

**Muhammad G. Saleh, PhD**, Research Associate, was awarded \$346,596 for a 2-year K99 grant from NIDA entitled "Neurometabolic Profile of Tobacco Smoking in HIV-Infected Individuals."

### FEATURED PUBLICATIONS

Li S, Rao JH, Lan XY, Li X, **Chu CY, Liang Y, Janowski M**, Zhang HT, **Walczak P**. White matter demyelination predates axonal injury after ischemic stroke in

cynomolgus monkeys. *Exp Neurol*. 2021 Feb 19:113655 Epub ahead of print.

**Kaso A, Ernst T.** Motion-insensitive diffusion imaging of the brain using optical tracking and dynamic sequence updates. *Magn Reson Med*. 2021 Mar 15. Epub ahead of print.

Isaiah A, **Ernst T, Cloak CC**, Clark DB, **Chang L.** Associations between frontal lobe structure, parent-reported obstructive sleep disordered breathing and childhood behavior in the ABCD dataset. *Nat Commun*. 2021 Apr 13;12(1):2205.

Daniels CJ, Rajpal S, Greenshields JT, Rosenthal GL, Chung EH, Terrin M, **Jeudy J...** Big Ten COVID-19 Cardiac Registry Investigators. Prevalence of clinical and subclinical myocarditis in competitive athletes with recent SARS-CoV-2 infection: results from the Big Ten COVID-19 Cardiac Registry. *JAMA Cardiol*. 2021 May 27. Epub ahead of print.

**Li J, Chelala L, Hossain R, Jeudy J, White C.** Rapid onset development of myocardial calcifications in the setting of renal failure and sepsis. *Radiol Cardiothorac Imaging*. 2021 Apr 1;3(2):e200549.

**Kastner J, Hossain R, Jeudy J, Dako F, Mehta V**, Dalal S, Dharaiya E, **White C.** Lung-RADS Version 1.0 versus Lung-RADS Version 1.1: comparison of categories using nodules from the National Lung Screening Trial. *Radiology*. 2021 May. Epub ahead of print.

Wang R, **Chu C**, Wei Z, Chen L, Xu J, Liang Y, **Janowski M**, Stevens RD, **Walczak P.** Traumatic brain injury does not disrupt costimulatory blockade-induced immunological tolerance to glial-restricted progenitor allografts. *J Neuroinflammation*. 2021 Apr 30;18(1):104.

**Liang Y**, Fan JL, Sun W, Lu R, Chen M, Ji N. A Distinct population of L6 neurons in mouse V1 mediate cross-callosal communication. *Cereb Cortex*. 2021 May. Epub ahead of print.

## RESIDENT RESEARCH

Congratulations to **Ryan Sutherland, MD**, 4<sup>th</sup> year resident, who was awarded a Certificate of Merit at the American Roentgen Ray Society 2021 Virtual Annual Meeting (April 18-22) for "Diagnosis of Acute Blunt Traumatic Aortic Injury: A Practical Review."

## WELCOME BRUCE WASSERMAN

**Bruce Wasserman, MD** and his lab members have recently joined the department. Dr. Wasserman's expertise involves using MRI to evaluate the carotid artery for stroke prevention. We look forward to highlighting Dr. Wasserman and his lab in a future Faculty Spotlight segment.

## DR. PAN IN THE NEWS

The FDA has registered the laboratory of **Dipanjan Pan, MSc, PhD** as an approved laboratory development site for RNADD's *Antisense* COVID-19 molecular diagnostic test. The move allows the laboratory to begin conducting the test, under the supervision of Dr. Pan, as it undergoes further development.

*Adapted From: GlobeNewswire*

## OPEN ACCESS FUNDING SUPPORT

The Health Sciences and Human Services Library's (HSHSL) Open Access Publishing Fund is designed to improve access to research produced at UMB and to promote publishing by early-career researchers. The fund will reimburse 50 percent of the cost of article processing charges for Open Access journals up to a maximum of \$3,000 for early-career researchers. The budget for this pilot project is limited. Reimbursements will be made on a first-come, first-served basis until funds are exhausted. Reimbursement is to UMB accounts and currently cannot be transferred to individuals or UMB Foundation accounts.

For details on who is eligible, what publications are covered, and how to apply, please visit the HSHSL's [Open Access Publishing Fund page](#).

*Source: HSHSL*

*Editor's Note: Our "Faculty Spotlight" feature is on vacation and will return in the next issue.*