NREF Announces Recipients of 2021-22 Research Fellowship Grants and Young Clinician Investigator Awards

June 22, 2021 (Rolling Meadows, Ill.) – The Neurosurgery Research & Education Foundation (NREF) is pleased to announce this year’s recipients of the Foundation’s Research Fellowship Grants and Young Clinician Investigator Awards.

“Year after year, the NREF receives applications from some of the most promising researchers in the country. The decisions were extraordinarily difficult this year. The exceptional quality of the proposals submitted by the awardees makes us optimistic for the future of neurosurgery. We are grateful for the generosity of the donors, industry partners, sections, and affiliated organizations who make these awards possible,” stated Gregory J. Zipfel, MD, FAANS, NREF Research Committee Chair.

As the premier funder of neurosurgical studies, the NREF provides funding for studies in basic, translational and patient-oriented clinical research for investigators in North America through two (2) annual neurosurgical research grant programs.

Open to residents only, the NREF Research Fellowship Grant provides training for neurosurgeons who are preparing for academic careers as clinician investigators. Applicants must be physicians who have been accepted into, or who are currently in approved residency training programs in neurological surgery in North America.

The NREF Young Clinician Investigator Award supports junior faculty who are pursuing careers as clinical investigators. Applicants must be neurosurgeons, no more than two years from the end of their clinical training, who are full-time faculty in North American teaching institutions.

The 2021-22 Research Fellowship Grant and Young Clinician Investigator Award recipients are:

**Oluwaseun O. Akinduro, MD, Mayo Clinic**

**Award:** 2021-22 NREF & AANS/CNS Section on Tumors Research Fellowship Grant  
**Sponsor:** Alfredo Quinones-Hinojosa, MD, FAANS  
**Project Title:** Targeting Chordoma Therapy Resistance Through the YAP Pathway

**Daniel Eichberg, MD, University of Miami**

**Award:** 2021-22 NREF & StacheStrong Research Fellowship Grant on behalf of the AANS/CNS Section on Tumors  
**Sponsor:** Michael Ivan, MD, FAANS and Nagi Ayad, PhD  
**Project Title:** Investigating the Role of CD97/ADGRE5 Receptor in Glioblastoma Invasion and its Mechanism of Action in the Brain
Matthew Garrett, MD, PhD, *University of Cincinnati*
Award: 2021-22 B*CURED & NREF Young Clinician Investigator Award
Sponsor: Richard Lu
Project Title: Targeting the malignant epigenome of IDH1 mutant gliomas

Katherine G. Holste, MD, *University of Michigan*
Award: 2021-22 NREF & AANS/CNS Section on Pediatric Neurological Surgery Research Fellowship Grant
Sponsor: Guohua Xi, MD, PhD
Project Title: The role of complement in pediatric intraventricular hemorrhage and development of posthemorrhagic hydrocephalus

Benjamin R. Johnston MD, PhD, *Brigham & Women's Hospital*
Award: 2021-22 NREF & Medtronic Research Fellowship Grant
Sponsor: Justin Brown, MD, FAANS
Project Title: Optogenetic Motor Neuron Transplantation to Restore Bladder Contraction

Michael B. Keough, MD, PhD, *Stanford University*
Award: 2021-22 NREF & Andrew T. Parsa Research Fellowship Grant
Sponsor: Michelle Monje, MD, PhD
Project Title: Targeting neuron-glioma circuit dynamics as a novel treatment for high-grade glioma

Alexander Ksendzovsky, MD, PhD, *University of Maryland*
Award: 2021-22 NREF & Academy of Neurological Surgeons Young Clinician Investigator Award
Sponsor: Peter Crino, MD, PhD
Project Title: LDHA enzyme may form the link between metabolism and epilepsy

Nealen Gordon Laxpati, MD, PhD, *Emory University*
Award: 2021-22 NREF & Bagan Family Foundation Research Fellowship Grant
Sponsor: Robert E. Gross, MD, PhD, FAANS
Project Title: Optogenetic Neuromodulation of the Septohippocampal Axis for the Treatment of Epilepsy

Mark Alexander MacLean, MD, MSc, *Dalhousie University*
Award: 2021-22 NREF & Academy of Neurological Surgeons Research Fellowship Grant
Sponsor: Alon Friedman, MD, PhD
Project Title: Exploring Mechanisms Underlying Mild Traumatic Brain Injury-Related Microvasculopathy

Geoffrey W. Peitz, MD, *University of Texas-San Antonio*
Award: 2021-22 NREF & Academy of Neurological Surgeons Research Fellowship Grant
Sponsor: Naomi Sayre
Project Title: Closed-loop sodium administration system for treatment of cerebral edema and intracranial hypertension: System development and proof-of-concept evaluation in a rat model
Anja I. Srienc, MD, PhD, Washington University
Award: 2021-22 NREF & L. Nelson "Nick" Hopkins Research Fellowship Grant jointly sponsored by Arvind Ahuja, MD, FAANS, and the AANS/CNS Cerebrovascular Section
Sponsor: Joseph P. Culver, PhD
Project Title: Characterizing Changes in Functional Connectivity After Aneurysmal Subarachnoid Hemorrhage Using Bedside Diffuse Optical Tomography

Justin Zihan Wang, MD, BSc, University of Toronto
Award: 2021-22 NREF & Southeastern Brain Tumor Foundation (SBTF) Research Fellowship Grant on behalf of the AANS/CNS Section on Tumors
Sponsor: Gelareh Zadeh, MD, PhD, FAANS, FRCSC
Project Title: Establishing the utility of plasma-based liquid biopsies in meningiomas using cell-free methylated DNA immunoprecipitation with deep sequencing

Jacob Stewart Young, MD, University of California, San Francisco
Award: 2021-22 NREF & StacheStrong Research Fellowship Grant on behalf of the AANS/CNS Section on Tumors
Sponsor: Manish K. Aghi, MD, PhD, FAANS
Project Title: In Vivo Gene Screening and Transcriptome Editing with Retroviral-Delivered CRISPR-Cas for the Treatment of Glioblastoma

For more information about the NREF Research Fellowship Grants and Young Clinician Investigator Awards or other grant and fellowship programs, please contact NREF at (847) 378-0500 or info@nref.org.

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About the NREF
The Neurosurgery Research & Education Foundation (NREF) is a not-for-profit 501(c)(3) organization created in 1980 by the American Association of Neurological Surgeons (AANS) to support research and education efforts that enhance and confirm the critical role neurosurgeons play in improving lives.

The NREF is dedicated to providing education to neurosurgeons at all stages of their careers, as well as funding research into new and existing neurosurgical treatments, in order to identify links between best practices and improved outcomes in patient care. Through voluntary public donations, corporate support, and donations from allied groups, the NREF supports endeavors that impact the lives of those suffering from epilepsy, stroke, brain tumors, spinal disorders, sports-related head injuries, lower back pain and Parkinson’s disease.

For more information about NREF, please visit www.nref.org.