



# THE SOCIETY OF NEUROLOGICAL SURGEONS

## RESEARCH UPDATE IN NEUROSCIENCE FOR NEUROSURGEONS (RUNN) COURSE DIRECTORS AND FACULTY October 30 – November 6, 2021

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#### **Introduction: Welcome, Introduction, and Course Objectives**

#### **E. Antonio Chiocca, M.D., Ph.D., Chairman, Department of Neurosurgery**

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**Lecture Title: “Translating Ideas into Projects, Projects into Grant/Papers and Ultimately into Patients”**

### CO-DIRECTORS:

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#### **Issam A. Awad, MD, MSc, FACS, MA (hon)**

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Director, Safadi Program of Excellence in Clinical and Translational Neuroscience  
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**Lecture Title: "Philosophy of Science in Relevance to Neurosurgery" and "Deconstructing a Neurosurgical Disease: A Path to Therapy for Cerebral Cavernous Malformation"**

**Henry Brem, M.D.**

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**Lecture Title: "Brain Tumor Therapy"**

**Robert Dempsey, M.D.**

Manucher J. Javid Professor & Chairman  
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**Lecture Title: "Inspiration and Neurosurgical Research - How to Start a Project, Grant or Paper"**

**FACULTY**

**Wael Asaad, M.D., Ph.D.**

Associate Professor Neurosurgery  
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**Lecture Title: "Cyborgs IRL: Emerging Strategies and Applications for Neuromodulation"**

**Larry Benowitz, Ph.D.**

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**Lecture Title: "Rewiring the Injured CNS"**

**Edward Benzel, M.D.**

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**Lecture Title: "On Becoming an Academician"**

**Kerry Bernstein, Program Manager**

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**Lecture Title: "The Patient is Healthcare, and the Disease is Electronic"**

**Edward Boyden, Ph.D.**

Y. Eva Tan Professor in Neurotechnology at MIT  
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**Lecture Title: "Tools for Understanding and Repairing the Brain"**

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**Lecture Title: "Gene Therapy for Neurological Disorders"**

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**Lecture Title: "The Art and Science of Lesioning the Brain: From Lobotomies to Focused Ultrasound"**

**Rose Du, MD, PhD**

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**Lecture Title: "Genetics of Cerebrovascular Diseases"**

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**Lecture Title: “Neuromodulatory and Activity Dependent Mechanisms that Enhance Sensorimotor and Autonomic Functions Following Several Neuromotor Disorders”**

**Emad Eskandar, MD, MBA**

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**Lecture Title: “Epilepsy”**

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**Lecture Title: “PD-1 Cancer Immunotherapy”**

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**Lecture Title: “The Search for Truth in Spine Surgery: RCTs, Registries, and now AI?”**

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**Lecture Title: “BrainGate: Clinical Trials in Intracortical Brain-Computer Interfaces for the Restoration of Communication and Mobility”**

**William G. Kaelin, Jr., MD**

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**Lecture Title: “von Hippel-Lindau Disease: From Bedside to Bench to Bedside”**

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**Lecture Title: “Clinical Trials of Gene Therapy for Neurologic Diseases”**

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**Lecture Title: “Invisible Physics for Neurosurgeons: Hydrocephalus and Epilepsy”**

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**Lecture Title: “Peripheral Nerve Regeneration and Repair: Possibilities and Challenges”**

**James T. Rutka, MD, PhD, FRCSC, FACS, FAAP, FAANS**

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**Lecture Title: “High Grade Glioma Invasion: Clues from the Leading Edge”**

**Marc Simard, M.D., Ph.D.**

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**Lecture Title: "The SUR1-TRPM4 Channel - a Critical Player in CNS Ischemia and Trauma"**

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**Lecture Title: “Registries in Neuroscience: How to Use Them to Change Care” and “The Neurosurgeon Data Scientist”**

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**Lecture Title: “Interneuron Transplantation: Basic Science and Prospective Clinical Applications”**

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**Lecture Title: “Functional Neurosurgical Approaches for Restoring Motor and Cognitive Function”**