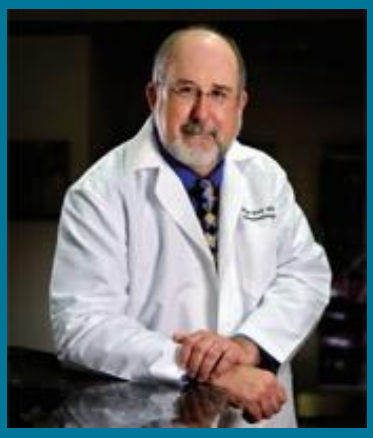
UNIVERSITY of MARYLAND
CENTER TO ADVANCE CHRONIC PAIN RESEARCH

JUNE 2021



CACPR Member Highlight:
Peter Rock, MD, MBA, FCCM

The CACPR's new structure in leadership, specifically clinical pain research program will be led by Dr. Peter Rock, the The Martin Helrich Professor and Chair of the Department of Anesthesiology, School of Medicine. This role will provide Dr. Rock with a seat on CACPR's Executive Committee. Dr. Rock is excited about the new collaboration with other CACPR members and is committed to enhancing the clinical pain research portfolio within the CACPR. He will also help to strengthen the Center's collaborative ties with UMMC and UMMS.

Dr. Rock is trained and board-certified in internal medicine, pulmonary diseases, critical-care, and anesthesiology. His initial translational research investigations included: the distribution of vascular resistance and hypoxic pulmonary vasoconstriction in an isolated-perfused pig lung model; how anesthetic agents influence oxygen consumption and delivery; and how thoracotomy increases peripheral airway tone and reactivity. He subsequently became involved in clinical outcomes research investigating: the role of anesthetic management on cardiac outcomes after peripheral and aortic revascularization surgery and how anesthetic agents impact catecholamine responses to vascular surgery. He has been a significant contributor to outcomes research involving large, multicenter clinical trials in the ARDS Network and the MIND-USA clinical trials network, and his clinical background and research experiences make him well-suited to contribute to large clinical trials.

Anesthesiologists are trained to diagnose and treat acute and chronic pain. The Department of Anesthesiology has its University of Maryland Pain Management Center at the University of Maryland Rehabilitation & Orthopaedic Institute. This group cares for a variety of patients with complex pain management issues. Maryland's Acute Pain and Regional Anesthesia Service (MAPRAS), a dedicated service within the Anesthesiology Department, also provides pain specialist support at the University of Maryland Medical Center. In addition to his clinical expertise, Dr. Rock led a research project aimed at testing transcutaneous magnetic stimulation for the treatment of low back pain, a project funded by Zygood LLC. Dr. Rock has an active, IRB-approved, research collaboration with Drs. Susan Dorsey and Cynthia Renn (HP-00085560) entitled Pain Biomarkers after Surgery (PBAS) study. He serves as PI for the study, and the goal is to identify perioperative biomarkers of chronic pain risk.

CACPR Member Laurels

Highlights of recent grant awards, publications, and presentations.

Luana Colloca, MD, PhD, MS

Colloca L, Kisaalita NR, Bizien M, Medeiros M, Sandbrink F, Mullins CD. Veteran engagement in opioid tapering research: a mission to optimize pain management. **Pain Rep**. 2021 Jun 3;6(2):e932. doi: 10.1097/PR9.0000000000000932. eCollection 2021 Jul-Aug.

This is a position paper stressing the relevance of opioids taper and patients-centered research.

Man- Kyo Chung, DMD, PhD

A virtual case-based learning module for pain in dentistry, J Dental Education, 2021 Feb 13. doi: 10.1002/jdd.12567.

In addition to the didactic course, the Department of Neural and Pain Sciences provides case-based conferences on pain for the education of dental students. This conference involves an interview of a mock patient followed by the differential diagnosis of pain symptoms. Both basic and clinical faculty members participate in the conference to facilitates discussion regarding neurobiological mechanisms and potential treatment planning. This article reports the virtual format of the conference during the Covid19 pandemic.

Susan G. Dorsey, PhD, RN, FAAN & Richard J. Traub, PhD

Cao DY, Hu B, Xue Y, Hanson S, Dessem D, **Dorsey SG, Traub RJ.** Differential activation of colonic afferents and dorsal horn neurons underlie stress-induced and comorbid visceral hypersensitivity in female rats. J Pain. 2021 Apr 19;. doi: 10.1016/j.jpain.2021.04.004. [Epub ahead of print] PubMed PMID: 33887444; NIHMSID:NIHMS1697182.

This paper examines the role of peripheral and central sensitization in contributing to stress-induced and comorbid visceral hypersensitivity.

Simon Akerman, PhD & Marcela Romero Reyes, DDS, PhD

Grant award:
W81XWH-21-1-0485-PR200852 **Akerman (PI)** and **Romero-Reyes (co-PI)** (DoD-PRMRP)
Sphingosine-1-Phosphate Receptor Subtype 1: A Novel Target in the Treatment of Chronic Migraine
07/01/2021-06/30/2025 - $1,663,827.00 over 4 years

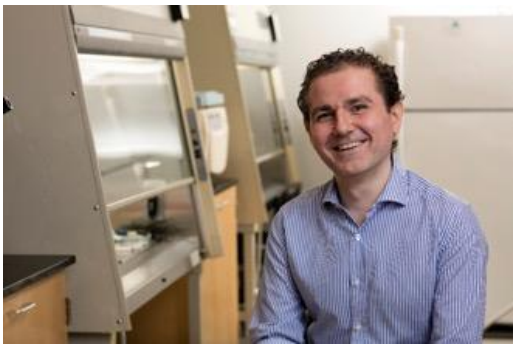
Project: The major goal of this project is to evaluate the efficacy of spingosine-1-phosphate receptor 1 antagonists in preclinical models of migraine headache, migraine aura and medication overuse headache, and to dissect their underlying molecular and neuropharmacological therapeutic mode of action.

Publication:
Glia and Orofacial Pain: Progress and Future Directions
Int J Mol Sci. 2021 May 19;22(10):5345. doi: 10.3390/ijms22105345.
(https://pubmed.ncbi.nlm.nih.gov/34069553/)
Yi Ye, Elizabeth Salvo, **Marcela Romero-Reyes, Simon Akerman**, Emi Shimizu, Yoshifumi Kobayashi, Benoit Michot, Jennifer Gibbs

This is a review article describing our understanding of the role of glia in different orofacial pains.

New Grant Award Spotlight

Ohannes Melemedjian, PhD



R01 NS116759 (Melemedjian, PI)

NIH/NINDS

09/30/2020 – 05/31/2025

Amount: $1,931,250 (Total direct and indirect)

“Validating ASCT2 for the Treatment of Chronic Postsurgical Pain”

Project Summary: Pain associated with surgery is experienced by millions of patients every year. Post-surgical pain usually resolves as the surgical site heals. However, up to half of the patients develop chronic pain after surgery. Crucially, little is known about the mechanisms that aid in the resolution of postoperative pain. Moreover, opioids remain the mainstay treatment for post-surgical pain which are fraught with serious side-effects and crucially - abuse liabilities. This grant proposes to validate ASCT2 as an endogenous mechanism that aids in the resolution of postoperative pain. Moreover, an innovative RNA-based strategy that enhances the translation of ASCT2 and alleviates postoperative pain will be validated. Uncovering endogenous targets that resolve postoperative pain can have a broad impact in advancing our knowledge of the transition of acute pain to chronic and lead to urgently needed public health advancements.

R01 CA249939 (Melemedjian, PI)

NIH/NCI

09/21/2020 – 08/31/2025

Amount: $1,931,250 (Total direct and indirect)

“Identification of novel targets for the treatment of chemotherapy-induced painful neuropathy:”

Project Summary: Chemotherapy-induced painful peripheral neuropathy (CIPN) is the most common toxicity associated with widely used chemotherapeutics. CIPN is the major cause of dose reduction or discontinuation of otherwise life-saving treatment. Unfortunately, CIPN can persist in cancer-survivors which adversely affects their quality of life. Moreover, available treatments are vastly inadequate which necessitates the development of novel mechanism-based therapies that can either prevent or treat CIPN. This grant will validate novel mechanism-based molecular targets that not only prevent or treat CIPN but might also potentiate the anticancer effects of chemotherapeutics.

Accolades

Dr. Marcela Romero Reyes was invited by the American Academy of Orofacial Pain (AAOP) to talk about new approaches in headache medicine. She discussed the role of the orofacial pain practitioner in the management of headache disorders, described the new therapeutic approaches in headache medicine as well as briefly discussed her current contributions in headache research.

Please click here to access the podcast.

Dr. Joyce Da Silva has been selected as the **first UMB APAA PROMISE Fellow**!

The AGEP PROMISE Academy Alliance (APAA) for the University System of Maryland was generated to increase the number of historically underrepresented minority tenure-track faculty in the biomedical sciences. At the heart of this model is a program to recruit and onboard postdoctoral scholars (APAA Fellows), support them through professional development and mentoring, and convert these scholars into tenure track positions within the University System, which includes the University of Maryland, Baltimore County (UMBC), University of Maryland, Baltimore (UMB), University of Maryland, College Park (UMCP), Salisbury University (SU) and Towson University (TU). In an effort to address STEM faculty diversity within the state's public institutions, this project has been funded by the National Science Foundation's AGEP program.

Read more here.

Announcements

Baltimore Brain Series Abstract Submission Deadline July 31!

Feel free to submit your S*f*N abstract!

The **Baltimore Brain Series** is a series of talks with the goal of promoting discussion among local Baltimore neuroscientists. The talk series is hosted by the National Institute on Drug Abuse Intramural Research Program, the University of Maryland, and Johns Hopkins University. The series features talks by outstanding graduate students and postdoctoral fellows. Selected applicants will be invited to give a talk about their ongoing research project to the students, faculty, and staff at one of these prestigious institutions. Participation not only allows for practice and honing of presentation skills, but it also opens up opportunities with neighboring institutions. For example, a postdoctoral fellow who gave a talk with BBS was invited back to the institution for a faculty interview and chalk talk.

We request that applicants send a brief abstract along with a current curriculum vitae via the submission form on our website sites.google.com/view/baltimorebrainseries/.
Applications will be reviewed by a joint committee of graduate students and postdoctoral fellows from NIDA, UMB, and JHU.
(see attached flyer)

If you have any questions at all, feel free to contact the UMB representatives for BBS:

Andreas Wulff (Thompson Lab)
David Martin (Calu Lab)
Rachel Cundiff-O'Sullivan (Colloca Lab)

The submission site for the 2021 Rita Allen Foundation Award in Pain applications is now open and will remain open until 11:59 PM EASTERN TIME on AUGUST 6, 2021. Please see the details below for more information and application instructions.

Formal Announcement: RAF 2021 Announcement.pdf
Instructions and Eligibility: View Here
Submit Your Application: Apply Here
The USASP is pleased to be the new home of the Rita Allen Foundation Award in Pain. Please forward this message to any additional organization that you believe would benefit from this knowledge. For additional questions, please contact admin@usasp.org.

The UM Center to Advance Chronic Pain Research (CACPR) is a multidisciplinary center composed of nationally and internationally renowned clinical and preclinical translational scientists whose principle research focus is on the physiological, genetic, and psychosocial underpinnings of the development and persistence of debilitating chronic pain conditions.

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