




Sean Mackey, M.D., Ph.D.

Redlich Professor, Professor of Anesthesiology, Perioperative, and Pain Medicine and, by courtesy, of Neurology

Anesthesiology, Perioperative and Pain Medicine

 NIH Biosketch available Online

 Curriculum Vitae available Online

CLINICAL OFFICES

- **Stanford Pain Management Center**

450 Broadway St

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Redwood City, CA 94063

Tel (650) 723-6238

Fax (650) 721-3417

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Wendy M. Schadle - Executive Assistant

Email wendy3@stanford.edu

Tel (650) 736-1847

Bio

BIO

I am Redlich Professor and Chief of the Division of Stanford Pain Medicine. I am a physician-scientist trained and experienced in neuroimaging, psychophysics, public health, health policy, patient outcomes and medical education. I am guided by our group's mission "To Predict, Prevent and Alleviate Pain" which encompasses my three goals: (1) define the factors that cause pain to become chronic after injury or surgery, (2) discover and implement novel methods to prevent the persistence or chronification of pain, and (3) discover and test novel therapies to alleviate chronic pain. This vision statement informs the multidisciplinary group I have assembled and the tools my team and I use: advanced neuroimaging, psychophysical and neurobehavioral assessment, genomics, patient- and clinician-reported outcomes, and assessment of pro-inflammatory cytokines.

I have served as principle investigator on multiple NIH awards (PO1, multiple R01's, U01, K24, T32). Additionally, I hold two endowments that provide the flexible research funds to pursue innovative projects and support our junior investigators. I am the author of over 200 journal articles and book chapters in addition to numerous national and international lectures. Broadly, some of my current research falls into two categories: (1) Characterizing CNS mechanisms of the human pain experience and its modulation and using this to develop biomarkers and (2) development and use of an open-source learning healthcare system (CHOIR; <http://choir.stanford.edu>) to transform the care of people with pain, and serve as a platform for innovative research in real-world clinic patients. Additionally, we are investigating novel therapies for pain including: transcranial magnetic stimulation, virtual reality, psychological and pharmacological therapies.

Clinical: Under my leadership, the Stanford Pain Management Center has been twice designated a Center of Excellence by the American Pain Society for the Center's innovative approach in comprehensive, interdisciplinary, and outcomes-based care. We have one of the largest academic pain centers in the country, Stanford Pain Management Center (<https://med.stanford.edu/pain.html>) with multiple physicians from different disciplines, psychologists, physical therapists, nursing, nutritionists and other professionals all working together to understand and treat the person in pain.

Mentorship: I am the Program Director for our NIH T32 postdoctoral training program "Interdisciplinary Training in Pain and/or Substance Use Disorders".

Furthermore, I have an NIH K24 which funds time to mentor and develop junior investigators. I have a long track record in mentoring of researchers and clinicians to develop their own successful careers.

Leadership: I am Past-President of the American Academy of Pain Medicine (AAPM). I co-authored the Institutes of Medicine's report on Relieving Pain in America and was Co-Chair of the Oversight Committee for the HHS/NIH National Pain Strategy (NPS), an effort to establish a national health strategy for pain care, education and research. I have received multiple awards for leadership, teaching, research and clinical care.

CLINICAL FOCUS

- Chronic Pain
- Pain Management
- Pain Medicine
- Neuropathic Pain
- Complex Regional Pain Syndrome
- Back Pain
- Acute Pain
- reflex sympathetic dystrophy
- Facial Pain
- Headache
- Anesthesia

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine
- Professor - University Medical Line (By courtesy), Neurology & Neurological Sciences
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Redlich Professor, Anesthesia & Pain Management, Neurosciences and (by courtesy) Neurology, Stanford University, (2012- present)
- Chief, Division of Pain Medicine, Stanford University, (2007- present)
- Fellowship Program Director, Pain Medicine, Stanford University, (2007- present)
- Associate Professor, Anesthesia & Pain Management, Neurosciences and (by courtesy) Neurology, Stanford University, (2007-2012)
- Co-Director, Pain Working Group, Neuroscience Institute, Stanford University, (2005- present)
- Co-Director, Stanford Pain Research and Clinical Center (SPARCC), (2004- present)
- Associate Director, Pain Management Division, Stanford University, (2004-2007)
- Director, Stanford Systems Neuroscience and Pain Lab (SNAPL), (2002- present)
- Director (and Co-Founder), Regional Anesthesia Services, (2000-2006)
- Assistant Professor, Anesthesia & Pain Management, Neurosciences, Stanford University, (1999-2007)

HONORS AND AWARDS

- Robert G. Addison, MD Award, American Academy of Pain Medicine (2020)
- Pain Medicine Fellowship Excellence Award, American Academy of Pain Medicine (2019)
- Presidential Commendation, American Academy of Pain Medicine (2019)

- Distinguished Service Award, American Academy of Pain Medicine (2017)
- Pain Medicine Fellowship Award, American Academy of Pain Medicine (2017)
- Wilbert E. Fordyce Clinical Investigator Award, American Pain Society (2016)
- NIH Directors Award, National Institutes of Health (2015)
- Clinical Center of Excellence, American Pain Society (2012)
- Presidential Commendation, American Academy of Pain Medicine (2012)
- U.S. News and World Report Top 1% of Pain Management Specialists, U.S. News and World Report (2012)
- Stanford CAM Center for Chronic Back Pain, NIH P01 AT006651 (2011-2016)
- Stanford CAM Center for Chronic Back Pain Supplement, NIH P01 AT006651S1 (2011-2012)
- Neuroimaging and Mentoring in Translational Pain Research, NIH K24 DA029262 (2010-2015)
- Ellis Cohen Achievement Award, Department of Anesthesia, Stanford University (2010)
- Chris Redlich Endowment in Pain Research, Chris Redlich Endowment Fund (2009-forever)
- Learned Control of Frontal and Limbic Systems via Real-Time fMRI, NIH R21 DA026092 (2009-2011)
- Development and Applications of Real Time fMRI Technology, Stanford Bio-X (2009-2010)
- Central Mechanisms of Urologic Pelvic Pain: Functional and Structural Analysis by MRI, NIH U01 DK082316 (2008-2013)
- Prescription Opioid Use, Misuse, and Pain in Post-Surgical Patients, NIH K23 DA25152 (2008-2013)
- Low-Dose Naltrexone in the Treatment of Fibromyalgia, American Fibromyalgia Syndrome Association (2008-2009)
- Mechanisms of Opioid-Induced Hyperalgesia in Pain Patients: Examination via fMRI, NIH K99/R00 DA023609 (2007-2011)
- Mechanisms of Analgesic Response During IV Lidocaine Infusion in Neuropathic Pain Patients, Foundation for Anesthesia Education and Research (2007-2008)
- fMRI of Pain in the Human Spinal Cord, NIH R01 NS053961 (2006-2010)
- Duloxetine: Functional MRI Neural Correlates of Efficacy in Patients with Chronic Low Back Pain, Eli Lilly (2006-2009)
- Fellowship Grant, Arthritis Foundation (2006-2007)
- Applications of Real Time fMRI-Phase II, NIH R44 NS050642 (2004-2007)
- Imaging Neural Systems in Complex Regional Pain Syndrome, Foundation for Anesthesia Education & Research (2004-2006)
- Teacher of the Month, Stanford Department of Anesthesia (2003)
- Applications of Real Time fMRI, NIH R43MH067290 (2002-2004)
- Top Doctors in America, Published in "Guide to Top Doctors" (2002, 2004-2006, 2008, 2010, 2012-2015)
- Processing of Pain in the Human Central Nervous System: Analysis through fMRI, Stanford Office of Technology Licensing Grant (2001-2004)
- Use of NMDA-Antagonists and Opiates in the Treatment of Fibromyalgia, Oxnard Foundation (2001-2004)
- Dodie and John Rosekrans Pain Research Endowment Fund, Dodie and John Rosekrans Pain Research Endowment Fund (2001 - forever)
- Cognitive Neurosciences Grant, Clark Center for Bioengineering, Biomedicine & Bioscience (2000)
- Development of a Human Neuropathic Pain Model, Stanford University (1999-2007)
- Interventional Magnetic Resonance Imaging Applied to Regional Anesthesia and Pain Medicine, Stanford University (1999-2003)
- Electrical and Thermal Characterization of Radiofrequency Catheter Ablation, American College of Cardiology Research Grant (1994)
- TV Catheter Delivery of Elec Energy to Ablate Arrhythmogenic Tissue..., Alpha Omega Alpha Honor Society Research Fellowship (1991-1992)
- Characterization & Optimization of RF Catheter Ablation for the Treatment of Cardiac Arrhythmias, American Heart Association Fellowship (1990-1991)
- Optimal Control of Transvenous Catheter Ablation in the Treatment of Tachyarrhythmias, NIH Short Term Research Fellowship (1989-1994)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Nominating Committee, American Academy of Pain Medicine (2020 - present)

- Advisory Board Member HSRD Naloxone Distribution IIR, Veterans Affairs (VA) (2020 - 2020)
- Invited Member, FDA & Center for Devices & Radiological Health (CDRH) (2020 - 2020)
- Steering Group, Pain Registries SIG, International Association for the Study of Pain (IASP) (2020 - 2020)
- Technical Expert Panel Member PCOR TEP Pain/OD, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) (2020 - 2020)
- Council Member, Council on Science & Public Health, (CMA) (2019 - present)
- Vice-Chair - Committee on Temporomandibular Disorders (TMD), National Academies of Sciences, National Institutes of Health, (NAS)/(NIH) (2019 - 2020)
- Delegate, California Medical Association, (CMA) (2018 - present)
- Advisory Committee Member, Drug Safety & Risk Mngt, Anesthetic & Analgesic Drug Products Advisory Comm (DSaRM/AADPAC)/(FDA) (2018 - 2019)
- Committee Member, Committee on Electronic Media & Informatics Technology (EMIT), ASA (2018 - 2018)
- Committee Member Innovations in Medical Devices to Prevent Opioid Use Disorder (OUD), Analgesic, Anesthetic, & Addiction Clinical Trial Translations, Innovations, Opportunities, & Networks (ACTTION) (2018 - 2018)
- Reviewer, American Society of Anesthesiologists Committee on Research (ASA) (2017 - present)
- Committee Member - Marshaling Physician Leadership to Counter Opioid Epidemic, National Academy of Medicine (2017 - 2017)
- Oversight Committee, Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (2017 - 2017)
- Panelist, National Academies of Sciences, Engineering, and Medicine (2017 - 2017)
- Working Group Member to add Pain and Opioid questions to National Health Interview Survey, Centers for Disease Control and Prevention (CDC) (2016 - 2017)
- Board Member, The Association of Pain Program Directors (2015 - present)
- Immediate Past-President, American Academy of Pain Medicine (2015 - 2016)
- Panelist - Healthy People 2020 Chronic Pain Workgroup, National Institute of Health (NIH) (2014 - 2016)
- President, American Academy of Pain Medicine (2014 - 2015)
- Committee Member, National Comprehensive Cancer Network, Adult Cancer Pain Committee (2013 - present)
- Co-Chair - Prevention and Care Working Group, National Pain Strategy Task Force (NPSTF) (2013 - 2016)
- Member - Pain Consortium Chronic Low Back Pain Research Task Force, National Institute of Health (NIH) (2013 - 2014)
- Chair, Department of Anesthesia; Stanford School of Medicine, Faculty & Development and Mentoring Committee (2013 - 2013)
- Committee Member, Department of Anesthesia; Stanford School of Medicine, Finance Committee (2012 - present)
- Co-Chair, National Pain Strategy Task Force (NPSTF) (2012 - 2016)
- Member - Inter agency Pain Research Coordinating Committee, National Institute of Health (NIH) (2012 - 2013)
- Co-Chair Annual Meeting, American Academy of Pain Medicine (2012 - 2012)
- Vice President Scientific Affairs, American Academy of Pain Medicine (2011 - 2013)
- Committee Member & Author, Institute of Medicine (IOM) (2010 - 2011)
- Member, American Academy of Pain Research Committee (2009 - present)
- Member - CME Oversight Committee, American Academy of Pain Medicine (2009 - present)
- Member, American Academy of Pain Medicine Executive Committee (2009 - 2015)
- Member, American Pain Society Nominating Committee (2009 - 2011)
- Member - Appointments & Promotions Committee, Department of Anesthesia; Stanford School of Medicine (2008 - present)
- Director at Large, American Academy of Pain Medicine (2008 - 2015)
- Committee Member, California Department of Workers Compensation (2007 - present)
- Member - Research Committee, Department of Anesthesia; Stanford School of Medicine (2005 - present)
- Member - Neuroscience Committee, Stanford University, Neuroscience (2004 - present)
- Member - Governance Committee, Department of Anesthesia; Stanford School of Medicine (2003 - present)

- Member - Residency Selection Committee, Department of Anesthesia; Stanford School of Medicine (1999 - present)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Pain Management Fellowship (1999) CA
- Residency: Stanford University Anesthesiology Residency (1998) CA
- Medical Education: University of Arizona College of Medicine Office of the Registrar (1994) AZ
- Internship: Tucson Medical Center Medical Education Program (1995) AZ
- Board Certification: Pain Management, American Board of Anesthesiology (2000)
- Board Certification: Anesthesia, American Board of Anesthesiology (1999)
- M.D., University of Arizona , Medicine (1994)
- Ph.D., University of Arizona , Electrical Engineering (1994)
- M.S.E, University of Pennsylvania , Bioengineering (1986)
- B.S.E., University of Pennsylvania , Bioengineering (1986)

PATENTS

- Sean Mackey, Ian Carroll, David Clark. "United States Patent 2005072433 Toxin Induced Sympathectomy", Jan 26, 2004
- Sean Mackey. "United States Patent 5837001 Radio Frequency Energy Delivery System for Multipolar Electrode Catheters", Nov 17, 1998

LINKS

- Twitter: <https://twitter.com/DrSeanMackey>
- Lab Website: <http://med.stanford.edu/pain/snapl.html>
- Personal Site: <http://drseanmackey.com>
- ResearchGate: https://www.researchgate.net/profile/Sean_Mackey

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I have several NIH funded projects ongoing and a large number of additional studies funded by philanthropy. Some, but not all of these include the following:

Characterization of central pain mechanisms using simultaneous spinal cord-brain functional imaging. NIH R01 (Mackey- PI) funded effort to use simultaneous fMRI of the spinal cord, brainstem and brain to understand the CNS mechanisms of pain and develop objective biomarkers.

Comparative Effectiveness of Pain Cognitive Behavioral Therapy and Chronic Pain Self-Management within the Context of Opioid Reduction - PCORI (PI-Darnall; Co-I Mackey) The EMPOWER study is a multisite pragmatic clinical trial conducted in 4 Western states in primary care and pain clinics. The goal is to help physicians and patients with chronic pain safely and effectively reduce opioid use. We will compare two evidence based group behavioral treatment classes (cognitive behavioral therapy and chronic pain self management) to facilitate opioid and pain reduction within the context of a patient-centered opioid tapering program. Total N = 1300 patients.

Single Session Pain Catastrophizing Treatment: Comparative Efficacy & Mechanisms

NIH R01 (Multi-PI: Darnall & Mackey): This project seeks to understand mechanisms of pain catastrophizing and optimize rapid delivery of targeted treatment. This comparative effectiveness trial studies a single-session 2-hour class developed to treat pain catastrophizing

Development and Implementation of an Open-Source Learning Healthcare System. I have developed and implemented CHOIR (<http://choir.stanford.edu>) to optimize pain care and serve as a platform for innovative research in real-world patients. We have published over 25 manuscripts using CHOIR with novel discoveries we have translated into improved patient care. Furthermore, we have disseminated CHOIR to multiple US and international sites with a collaborative network.

Stanford Center for Low Back Pain (PI: Mackey). This is an NIH P01 center grant funded effort to characterize the central mechanisms and predictors of treatment for several treatments for chronic back pain including cognitive behavioral therapy, mindfulness based stress reduction and acupuncture. We have deeply characterized several hundred patients pre-post treatment with data currently under analysis.

We have multiple additional projects including those involving transcranial magnetic stimulation, virtual reality, novel pharmacologic and psychological therapies, health policy research, patient- and clinician-reported outcomes and many others.

Please disregard the Clinical Trials section below. It is incorrectly pulling outdated information from sources unknown. In fact, several of the trials below incorrectly list my involvement or are closed. We have approximately 20 clinical trials ongoing in the Stanford Systems Neuroscience and Pain Lab. Please reach out to us for further details.

CLINICAL TRIALS

- Diagnostic and Prognostic Biomarkers for High-impact Chronic Pain: Development and Validation, Recruiting
- Low-Dose Naltrexone for the Treatment of Complex Regional Pain Syndrome, Recruiting
- Stanford Center for Back Pain, Recruiting
- TMS for Complex Regional Pain Syndrome, Recruiting
- Acupuncture and Pain Processing, Not Recruiting
- Applications of Realtime Functional Magnetic Resonance Imaging (fMRI), Not Recruiting
- Imaging Study of Chronic Low Back Pain in Patients Taking Pain Medication, Not Recruiting
- Single Session Pain Psychology Treatment: Comparative Efficacy & Mechanisms, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Troy Dildine, Merve Kaptan, Theresa Lii, Dario Pfyffer

Postdoctoral Research Mentor

Theresa Lii

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Bioengineering (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Prevalence and predictors for postpartum sleep disorders: a nationwide analysis.** *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*

- Sultan, P., Guo, N., Kawai, M., Barwick, F. H., Carvalho, B., Mackey, S., Kallen, M. A., Gould, C. E., Butwick, A. J.
2023; 36 (1): 2170749
- **Pain Management: Optimizing Patient Care Through Comprehensive, Interdisciplinary Models and Continuous Innovations.** *Anesthesiology clinics*
Mackey, S. C., Pearl, R. G.
2023; 41 (2): xv-xvii
 - **Blinded Pain Cocktails: A Reliable and Safe Opioid Weaning Method.** *Anesthesiology clinics*
Kwon, A. H., Colloca, L., Mackey, S. C.
2023; 41 (2): 371-381
 - **Pragmatic Comparative Effectiveness Trials and Learning Health Systems in Pain Medicine: Opportunities and Challenges.** *Anesthesiology clinics*
Salmasi, V., Terkawi, A. S., Mackey, S. C.
2023; 41 (2): 503-517
 - **A Longitudinal Investigation of the Impact of COVID-19 on Patients with Chronic Pain.** *The journal of pain*
Ziadni, M. S., Jaros, S., Anderson, S. R., You, D. S., Darnall, B. D., Mackey, S. C.
2023
 - **The Problem of Pain in the United States: A Population-Based Characterization of Biopsychosocial Correlates of High Impact Chronic Pain using the National Health Interview Survey.** *The journal of pain*
Falasinnu, T., Hossain, M. B., Weber, K. A., Helmick, C. G., Karim, M. E., Mackey, S.
2023
 - **Research objectives and general considerations for pragmatic clinical trials of pain treatments: IMMPACT statement.** *Pain*
Hohenschurz-Schmidt, D. J., Cherkin, D., Rice, A. S., Dworkin, R. H., Turk, D. C., McDermott, M. P., Bair, M. J., DeBar, L. L., Edwards, R. R., Farrar, J. T., Kerns, R. D., Markman, J. D., Rowbotham, et al
2023
 - **Real-world data and evidence in pain research: a qualitative systematic review of methods in current practice.** *Pain reports*
Vollert, J., Kleykamp, B. A., Farrar, J. T., Gilron, I., Hohenschurz-Schmidt, D., Kerns, R. D., Mackey, S., Markman, J. D., McDermott, M. P., Rice, A. S., Turk, D. C., Wasan, A. D., Dworkin, et al
2023; 8 (2): e1057
 - **Pain acceptance and psychological inflexibility predict pain interference outcomes for persons with chronic pain receiving pain psychology.** *Scandinavian journal of pain*
Karayannis, N. V., Sturgeon, J. A., Kemani, M. K., Mackey, S. C., Greco, C. M., Wicksell, R. K., McCracken, L. M.
2023
 - **Self-reported physical function is strongly related to pain behavior and pain interference and weakly related to physical capacity in people with chronic low back pain.** *Musculoskeletal science & practice*
Karayannis, N. V., Smuck, M., Law, C., Mackey, S. C., Gross, J. J., Darnall, B. D., Hush, J.
2023: 102721
 - **Confounds in neuroimaging: A clear case of sex as a confound in brain-based prediction.** *Frontiers in neurology*
Weber, K. A., Teplin, Z. M., Wager, T. D., Law, C. S., Prabhakar, N. K., Ashar, Y. K., Gilam, G., Banerjee, S., Delp, S. L., Glover, G. H., Hastie, T. J., Mackey, S.
2022; 13: 960760
 - **Association of cannabis and/or opioid with quality of life and healthcare utilization in patients with chronic pain.** *Frontiers in pain research (Lausanne, Switzerland)*
Salmasi, V., Nelson, L. M., Hong, J., Mackey, S. C.
2022; 3: 1015605
 - **A literature review of the impact of exclusion criteria on generalizability of clinical trial findings to patients with chronic pain** *PAIN REPORTS*
Salmasi, V., Lii, T. R., Humphreys, K., Reddy, V., Mackey, S. C.
2022; 7 (6): e1050
 - **Patient Responses to the Term Pain Catastrophizing: Thematic Analysis of Cross-sectional International Data.** *The journal of pain*
Webster, F., Connoy, L., Longo, R., Ahuja, D., Amtmann, D., Anderson, A., Ashton-James, C. E., Boyd, H., Chambers, C. T., Cook, K. F., Cowan, P., Crombez, G., Feinstein, et al
2022

- **Intensity of Chronic Low Back Pain and Activity Interference: A Daily Diary Study of the Moderating Role of Cognitive Pain Coping Strategies.** *Pain medicine (Malden, Mass.)*
Vertsberger, D., Talmon, A., Ziadni, M., Kong, J., Darnall, B. D., Manber, R., Mackey, S., Gross, J. J.
2022
- **CHOIRBM: An R package for exploratory data analysis and interactive visualization of pain patient body map data.** *PLoS computational biology*
Cramer, E., Ziadni, M., Scherrer, K. H., Mackey, S., Kao, M.
2022; 18 (10): e1010496
- **Association of pain catastrophizing longitudinally with pain severity and interference in patients with chronic pain and cancer: A CHOIR study**
Azizoddin, D., Wilson, J., Mackey, S., Flowers, K., Darnall, B., Edwards, R., Schreiber, K. L.
LIPPINCOTT WILLIAMS & WILKINS.2022: 213
- **Mindfulness-Based Stress Reduction, Cognitive Behavioral Therapy, and Acupuncture in Chronic Low Back Pain: Protocol for Two Linked Randomized Controlled Trials.** *JMIR research protocols*
Mackey, S., Gilam, G., Darnall, B., Goldin, P., Kong, J., Law, C., Heirich, M., Karayannis, N., Kao, M., Tian, L., Manber, R., Gross, J.
2022; 11 (9): e37823
- **Increased pain catastrophizing longitudinally predicts worsened pain severity and interference in patients with chronic pain and cancer: A CHOIR study.** *Psycho-oncology*
Wilson, J. M., Schreiber, K. L., Mackey, S., Flowers, K. M., Darnall, B. D., Edwards, R. R., Azizoddin, D. R.
2022
- **Altered resting-state functional connectivity within corticostriatal and subcortical-striatal circuits in chronic pain.** *Scientific reports*
Park, S. H., Baker, A. K., Krishna, V., Mackey, S. C., Martucci, K. T.
2022; 12 (1): 12683
- **The Problem of Pain in Rheumatology: Clinical Profiles Associated With Concomitant Diagnoses With Chronic Overlapping Pain Conditions.** *ACR open rheumatology*
Falasinnu, T., Nguyen, T., Jiang, T. E., Chaichian, Y., Rector, A., Darnall, B. D., Mackey, S., Simard, J. F.
2022
- **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial (vol 153, pg 303, 2018) JAMA SURGERY**
Hah, J., Mackey, S. C., Schmidt, P.
2022; 157 (6): 553
- **Surgeon Variation in Perioperative Opioid Prescribing and Medium or Long Term Opioid Utilization After Total Knee Arthroplasty: A Cross-Sectional Analysis.** *Anesthesiology*
Cen, X., Jena, A. B., Mackey, S., Sun, E. C.
2022
- **Whole Body Pain Distribution and Risk Factors for Widespread Pain Among Patients Presenting with Abdominal Pain: A Retrospective Cohort Study.** *Pain and therapy*
Hah, J. M., Aivaliotis, V. I., Hettie, G., Pirrotta, L. X., Mackey, S. C., Nguyen, L. A.
2022
- **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial (vol 153, pg 303, 2018) JAMA SURGERY**
Hah, J., Mackey, S. C., Schmidt, P.
2022
- **Clarification of Conflict of Interest Disclosures.** *JAMA surgery*
Mackey, S. C.
2022
- **The impact of COVID-19 on patients with chronic pain seeking care at a tertiary pain clinic.** *Scientific reports*
Ziadni, M. S., You, D. S., Cramer, E. M., Anderson, S. R., Hettie, G., Darnall, B. D., Mackey, S. C.
2022; 12 (1): 6435
- **Strategies to Promote Racial Healthcare Equity in Pain Medicine: A Call to Action.** *Pain medicine (Malden, Mass.)*

- Telusca, N., Gaisey, J. N., Woods, C., Khan, J. S., Mackey, S.
2022
- **A review of potential national chronic pain surveillance systems in the United States.** *The journal of pain*
Duca, L. M., Helmick, C. G., Barbour, K. E., Nahin, R. L., Von Korff, M., Murphy, L. B., Theis, K., Guglielmo, D., Dahlhamer, J., Porter, L., Falasinnu, T., Mackey, S.
2022
 - **Responding to the opioid crisis in North America and beyond: recommendations of the Stanford-Lancet Commission.** *Lancet (London, England)*
Humphreys, K., Shover, C. L., Andrews, C. M., Bohnert, A. S., Brandeau, M. L., Caulkins, J. P., Chen, J. H., Cuellar, M., Hurd, Y. L., Juurlink, D. N., Koh, H. K., Krebs, E. E., Lembke, et al
2022; 399 (10324): 555-604
 - **Clarification of Conflict of Interest Disclosure.** *JAMA*
Mackey, S. C.
2022; 327 (16): 1617
 - **Comparing Perceived Pain Impact Between Younger and Older Adults With High Impact Chronic Pain: A Cross-Sectional Qualitative and Quantitative Survey.** *Frontiers in pain research (Lausanne, Switzerland)*
You, D. S., Ziadni, M. S., Hettie, G., Darnall, B. D., Cook, K. F., Von Korff, M. R., Mackey, S. C.
2022; 3: 850713
 - **Brain circuits for pain and its treatment.** *Science translational medicine*
Mercer Lindsay, N., Chen, C., Gilam, G., Mackey, S., Scherrer, G.
2021; 13 (619): eabj7360
 - **Prediction of Cognitive Function with Multimodal Brain MRI**
Weber, K., Wager, T. D., Rosen, A., Ashar, Y. K., Law, C. S., Gilam, G., Upadhyayula, P. A., Zhu, S., Banerjee, S., Glover, G. H., Hastie, T. J., Mackey, S.
WILEY.2021: S42
 - **Author Correction: Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers.** *Scientific data*
Cohen-Adad, J., Alonso-Ortiz, E., Abramovic, M., Arneitz, C., Atcheson, N., Barlow, L., Barry, R. L., Barth, M., Battiston, M., Buchel, C., Budde, M., Callot, V., Combes, et al
2021; 8 (1): 242
 - **Engagement in Prescription Opioid Tapering Research: the EMPOWER Study and a Coproduction Model of Success.** *Journal of general internal medicine*
Mardian, A., Perez, L., Pun, T., Cheung, M., Porter, J., De Bruyne, K., Kao, M., Flood, P., Moore, N., Colloca, L., Cramer, E., Ashton-James, C. E., Lorig, et al
2021
 - **Lack of Premeditation Predicts Aberrant Behaviors Related to Prescription Opioids in Patients with Chronic Pain: A Cross-Sectional Study.** *Substance use & misuse*
Hettie, G., Nwaneshiudu, C., Ziadni, M. S., Darnall, B. D., Mackey, S. C., You, D. S.
2021: 1-6
 - **Characterization of chronic overlapping pain conditions in patients with chronic migraine: A CHOIR study.** *Headache*
Barad, M. J., Sturgeon, J. A., Hong, J., Aggarwal, A. K., Mackey, S. C.
2021
 - **Chronic pain severity, impact, and opioid use among patients with cancer: An analysis of biopsychosocial factors using the CHOIR learning health care system.** *Cancer*
Azizoddin, D. R., Schreiber, K., Beck, M. R., Enzinger, A. C., Hruschak, V., Darnall, B. D., Edwards, R. R., Allsop, M. J., Tulskey, J. A., Boyer, E., Mackey, S.
2021
 - **Assessing the Feasibility of an Open-Source Virtual Reality Mirror Visual Feedback Module for Complex Regional Pain Syndrome: Pilot Usability Study.** *Journal of medical Internet research*
Won, A. S., Barreau, A. C., Gaertner, M., Stone, T., Zhu, J., Wang, C. Y., Mackey, S.
2021; 23 (5): e16536
 - **Customizing CAT administration of the PROMIS Misuse of Prescription Pain Medication Item Bank for patients with chronic pain.** *Pain medicine (Malden, Mass.)*
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