Stanford



# Miles Berger

Professor of Anesthesiology, Perioperative and Pain Medicine (MSD)

NIH Biosketch available Online


### CLINICAL OFFICE (PRIMARY)

- **Anesthesia Department**

  300 Pasteur Dr Rm H3580

  MC 5640

  Stanford, CA 94305

  **Tel** (650) 723-6412 **Fax** (650) 725-8544


## Bio

### BIO

I am a neuroanesthesiologist and translational human neuroscientist. Clinically, I care for patients undergoing brain and spine surgery, and have an interest in optimizing anesthesia care (and postoperative cognitive outcomes) for older surgical patients.

My research team studies mechanisms of perioperative neurocognitive disorders (such as delirium) in older adults, the relationship between anesthetic brain sensitivity (as measured by EEG) and preclinical/prodromal age-related changes in brain structure and function, and mechanisms by which the APOE4 allele leads to increased Alzheimer's Disease risk and neurocognitive decline. Together with collaborators, we use a transdisciplinary approach combining molecular/cellular assays (including ELISAs, proteomics, metabolomics, and flow cytometry) on pre- and post-operative CSF and plasma samples from older surgical surgical patients, functional and structural MRI neuroimaging, pre- and intra-operative EEG recordings, genetics (and epigenetics), and pre and postoperative delirium screening and cognitive testing. Overall, our hope is that the combination of these different methods will allow us to obtain insights into the mechanisms of perioperative neurocognitive disorders that could not be obtained by any single method alone.

Our group values mentorship, and we are happy to talk with prospective undergraduate, graduate or post-doctoral students with an interest in our work.

### CLINICAL FOCUS

- Anesthesia
- neuroanesthesiology
- geriatric anesthesia
- perioperative neurocognitive disorders
- Anesthetic Care for Patients with Dementia or Cognitive Impairment

### ACADEMIC APPOINTMENTS

- Professor-Univ Med Line, Anesthesiology, Perioperative and Pain Medicine
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

### ADMINISTRATIVE APPOINTMENTS

- Neuroanesthesiology Section Chief, Stanford Anesthesiology Department, (2024- present)

### HONORS AND AWARDS

- Inducted as a Member of the American Society of Clinical Investigation, (ASCI) (2023)
- Butler-Williams Scholar, National Institute on Aging (2015)
- GEMSSTAR Scholar, National Institute on Aging (2015-2017)
- Beeson Scholar, National Institute on Aging (2017- 2023)
- Inducted into the Foundation for Anesthesia Education & Research (FAER) Academy of Research Mentors, FAER ARMA (2023)

### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Society for Neuroscience in Anesthesiology & Critical Care (2026 - present)
- Member, American Society of Anesthesiology (2013 - present)
- Member, International Anesthesia Research Society (2013 - present)
- Member, American Society for Clinical Investigation (2024 - present)

### PROFESSIONAL EDUCATION

- Board Certification: Anesthesia, American Board of Anesthesiology (2025)
- Fellowship: Duke University Hospital (2014) NC
- Residency: Duke University Medical Center Anesthesiology Residency (2013) NC
- Medical Education: UCSF School of Medicine SF General Hospital (2009) CA

## Research & Scholarship

### RESEARCH INTERESTS

- Assessment, Testing and Measurement
- Brain and Learning Sciences
- Professional Development
- Research Methods

## Teaching

### STANFORD ADVISEES

**Postdoctoral Faculty Sponsor**

Jian Yu

## Publications

### PUBLICATIONS

- **Preoperative Moderate-Severe Excessive Daytime Sleepiness Is Associated With Postoperative Cognitive Dysfunction in Older Surgical Patients.** *Journal of the American Geriatrics Society*
  Devinney, M. J., Takla, J., VanDusen, K., Wright, M. C., Spector, A. R., Thomas, J., Avasarala, P., Hall, A., Syed, A., Adams, M., Moretti, E., Dominguez, J. E., Smith, et al
  2026
- **Relationships of Preoperative and 24-Hour Postoperative Plasma and Cerebrospinal Fluid Cytokines with Postoperative Delirium.** *medRxiv : the preprint server for health sciences*

Devinney, M. J., Simon, J., Wright, M. C., Chand, S., Yu, C. T., Herber, C. S., Terrando, N., Browndyke, J., Whitson, H. E., Cohen, H. J., Huebner, J. L., Nackley, A. G., Klein, et al

2026

- **Neuroinflammation-associated thalamocortical functional connectivity and cognition in older adults.** *Journal of neuroinflammation*

  Browndyke, J., Reekes, T., Wright, M. C., Smith, M. R., Devinney, M., Boykin, P., Upadhya, V. R., Zhu, D., Martucci, K. T., Shaw, L. M., Waligorska, T., Herber, C., Tian Yu, et al

  2026; 23 (1)

- **Association of Preoperative Posterior Cingulate Cortex Microstructural Damage With Postoperative Delirium.** *Anesthesia and analgesia*

  Reekes, T. H., Upadhya, V. R., Merenstein, J. L., Cooter Wright, M., Madden, D. J., Reese, M. A., Boykin, P. C., Timko, N. J., Mathew, J. P., Devinney, M. J., Browndyke, J. N., Berger, M.

  2026

- **Association of Preoperative Cerebrospinal Fluid Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand With 1-Year Postsurgical Pain Severity in Older Adults: A Trial Secondary Analysis.** *Anesthesia and analgesia*

  Dewberry, L. S., Wright, M. C., Klein, M. E., Devinney, M. J., Berger, M., Nackley, A. G.

  2026

- **Critical differences among stakeholders in definitions of success following inguinal hernia repair in older adults.** *Surgery*

  Thornton, M., Cher, B. A., Macdonald, C., Lunardi, N., Marten, E. L., Mai, D., Fisher, K., Machado Heredia, M. L., Skinner, C. S., Brown, C. J., Berger, M., Lee, S. C., Cullum, et al

  2026; 196: 110253

- **Apolipoprotein E Mimetic Peptide CN-105 and Postoperative Delirium in Older Patients: The Phase 2 MARBLE Randomized Clinical Trial.** *JAMA network open*

  Timko, N. J., Cooter Wright, M., Smith, M. R., Boykin, P. C., Emerson, J. M., Woldorff, M. G., Eleswarpu, S., Herbert, J. T., Moretti, E. W., Devinney, M. J., Ayoub, C. M., Rockhold, F. W., Ryu, et al

  2026; 9 (4): e262289

- **Barriers to the Implementation of Local Anesthesia for Older Adults Undergoing Inguinal Hernia Repair** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*

  Mai, D., Cher, B. A. Y., Lunardi, N., Thornton, M., Baker, J. G., Macdonald, C., Skinner, C., Brown, C. J., Marten, E. L., Makris, K., Heredia, M., Berger, M., Cullum, et al

  2026

- **Cerebrospinal fluid amyloid-β 42/40 ratio is associated with ganglion cell-inner plexiform layer thinning in individuals with and without amyloid pathology.** *Journal of Alzheimer's disease : JAD*

  Patel, H., Choi, A., Weng, P., Karl, J., Joseph, S., Johnson, K. G., Berger, M., Whitson, H. E., Grewal, D. S., Fekrat, S.

  2026: 13872877261423968

- **Effect of perioperative autonomic nervous system imbalance on surgical outcomes: role of regional sympathetic block. Comment on Br J Anaesth 2025; 135: 608-22.** *British journal of anaesthesia*

  Bombardieri, A. M., Berger, M., Schreiber, K.

  2026

- **Developing Topics.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

  Smith, M. R., Roberts, K. C., Browndyke, J. N., Wright, M. C., Reekes, T. H., Devinney, M. J., Cohen, H. J., Mathew, J. P., Whitson, H., Woldorff, M. G., Berger, M.

  2025; 21 Suppl 7 (Suppl 7): e108129

- **Biomarkers.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

  Smith, P. J., Johnson, K. G., Roth, H. L., Potter, G. G., Patillo, S., Lin, W. J., Song, A. J., Berger, M., O'Brien, R. J., Liu, A., Lutz, M. W., Luo, S., Bozoki, et al

  2025; 21 Suppl 2 (Suppl 2): e098097

- **Biomarkers.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

  Smith, P. J., Johnson, K. G., Roth, H. L., Potter, G. G., Patillo, S., Lin, W. J., Song, A. J., Berger, M., O'Brien, R. J., Liu, A., Lutz, M. W., Luo, S., Bozoki, et al

  2025; 21 Suppl 2: e098089

- **Biomarkers.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

Smith, P. J., Johnson, K. G., Roth, H. L., Potter, G. G., Patillo, S., Lin, W. J., Song, A. J., Berger, M., O'Brien, R. J., Liu, A., Lutz, M. W., Luo, S., Bozoki, et al

2025; 21 Suppl 2: e098671

- **Learning How Preoperative Communication Relates to Postoperative Experiences for Older Veterans Having Inguinal Hernia Surgery.** *Journal of the American Geriatrics Society*

  Thornton, M. A., Marten, E. L., Lunardi, N., Mai, D., Macdonald, C., Baker, J. G., Hitzeman, A., Skinner, C. S., Brown, C. J., Berger, M., Lee, S. C., Cullum, C. M., Makris, et al

  2025

- **Identifying Barriers and Motivators to Increase Surgical Clinical Trial Participation for Older Veterans.** *Journal of the American Geriatrics Society*

  Cher, B. A., Lunardi, N., Thornton, M., Hitzeman, A., Baker, J., Macdonald, C., Skinner, C. S., Brown, C. J., Mai, D., Marten, E. L., Makris, K., Heredia, M. L., Berger, et al

  2025

- **Prediction of postoperative delirium in older adults from preoperative cognition and occipital alpha power from resting-state electroencephalogram.** *Age and ageing*

  Ning, M. H., Rodionov, A., Ross, J. M., Ozdemir, R. A., Burch, M., Lian, S. J., Alsop, D., Cavallari, M., Dickerson, B., Fong, T., Jones, R. N., Libermann, T., Marcantonio, et al

  2025; 54 (11)

- **Effects of Non-Cardiac/Non-neurologic Surgery and Anaesthesia on the CSF Proteome, and Modulation by the APOE Mimetic Peptide CN-105.** *medRxiv : the preprint server for health sciences*

  Zou, H., Lutz, M. W., Foster, M. W., Wright, M. C., Violette, M. J., Luo, S., Laskowitz, D., Devinney, M. J., Berger, M.

  2025

- **Cerebrospinal fluid proteome of patients with persistent pain and/or postpartum depression after elective cesarean delivery: An exploratory prospective cohort study: Reply.** *Journal of clinical anesthesia*

  Yurashevich, M., Habib, A. S., Berger, M.

  2025; 106: 111943

- **Cerebrospinal fluid proteome of patients with persistent pain and/or postpartum depression after elective cesarean delivery: An exploratory prospective cohort study.** *Journal of clinical anesthesia*

  Yurashevich, M., Devinney, M., Foster, M. W., Myers, R., O'Grady, N., Ji, R. R., Habib, A. S., Berger, M.

  2025; 104: 111855

- **Complement Activation in ICU Delirium and Subsequent Alzheimer's Disease (CASCADE-ICU): Study Design**

  Takla, J., Timko, N., Hassan, R., Bennett, M., Adams, M., Serbanescu, M., Terrando, N., Foster, M., Simon, J., Arepally, G., Welsh-Bohmer, K., Treggiari, M., Zetterberg, et al

  LIPPINCOTT WILLIAMS & WILKINS.2025: 178-179

- **Postoperative Changes in Plasma and Cerebrospinal Fluid Albumin Levels Suggest a Role for Increased Vascular Permeability in Delirium Following Non-Cardiac Surgery**

  Hassan, R., Wong, M., Wright, M., Marcantonio, E., Terrando, N., Browndyke, J., Whitson, H., Cohen, H., Nackley, A., Monten, K., Teshome, S., Klein, M., Ely, et al

  LIPPINCOTT WILLIAMS & WILKINS.2025: 492-495

- **Mind the messenger: role of extracellular vesicle signalling in postoperative neurocognitive dysfunction.** *British journal of anaesthesia*

  Das, S., Devinney, M. J., Berger, M., Brown, C. H.

  2025

- **Associations between anaesthetic dose-adjusted intraoperative EEG alpha power, processing speed, and postoperative delirium: analysis of data from three prospective studies.** *British journal of anaesthesia*

  Reese, M., Wright, M. C., Roberts, K. C., Browndyke, J. N., Bennett, M., Acker, L., Devinney, M. J., Reekes, T. H., Waligorska, T., Shaw, L. M., Blennow, K., Zetterberg, H., Cohen, et al

  2025

- **Clinical and Cytokine Predictors of Persistent Post-Operative Pain in Older Adults**

  Dewberry, L., Wright, M., Klein, M., Devinney, M., Berger, M., Nackley, A.

  CHURCHILL LIVINGSTONE.2025

- **Predilection for Perplexion: Preoperative microstructural damage is linked to postoperative delirium.** *medRxiv : the preprint server for health sciences*

  Reekes, T. H., Upadhya, V. R., Merenstein, J. L., Cooter-Wright, M., Madden, D. J., Reese, M. A., Boykin, P. C., Timko, N. J., Moul, J. W., Garrigues, G. E., Martucci, K. T., Cohen, H. J., Whitson, et al

  2025

- **Advancing Delirium Treatment Trials in Older Adults: Recommendations for Future Trials From the Network for Investigation of Delirium: Unifying Scientists (NIDUS).** *Critical care medicine*

  Devlin, J. W., Sieber, F., Akeju, O., Khan, B. A., MacLullich, A. M., Marcantonio, E. R., Oh, E. S., Agar, M. R., Avelino-Silva, T. J., Berger, M., Burry, L., Colantuoni, E. A., Evered, et al

  2025; 53 (1): e15-e28

- **The Role of Sleep Apnea in Postoperative Neurocognitive Disorders Among Older Noncardiac Surgery Patients: A Prospective Cohort Study.** *Anesthesia and analgesia*

  Devinney, M. J., Spector, A. R., Wright, M. C., Thomas, J., Avasarala, P., Moretti, E. W., Dominguez, J. E., Smith, P. J., Whitson, H. E., Veasey, S. C., Mathew, J. P., Berger, M.

  2025; 140 (1): 99-109

- **2025 American Society of Anesthesiologists Practice Advisory for Perioperative Care of Older Adults Scheduled for Inpatient Surgery.** *Anesthesiology*

  Sieber, F., McIsaac, D. I., Deiner, S., Azefor, T., Berger, M., Hughes, C., Leung, J. M., Maldon, J., McSwain, J. R., Neuman, M. D., Russell, M. M., Tang, V., Whitlock, et al

  2025; 142 (1): 22-51

- **Biomarkers.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

  Reese, M., Cooter, M., Roberts, K. C., Woldorff, M. G., Browndyke, J. N., Shaw, L. M., Waligorska, T., Zetterberg, H., Blennow, K., Berger, M.

  2024; 20 Suppl 2: e089088

- **Developing Topics.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*

  Berger, M., Timko, N. J., Boykin, P. C., Emerson, J. M., Woldorff, M. G., Wright, M. C., Herbert, J. T., Moretti, E. W., Devinney, M. J., Ryu, D., VanDusen, K. W., Bunning, T., Hsia, et al

  2024; 20 Suppl 8: e095338

- **Advancing Delirium Treatment Trials in Older Adults: Recommendations for Future Trials From the Network for Investigation of Delirium: Unifying Scientists (NIDUS).** *Critical care medicine*

  Devlin, J. W., Sieber, F., Akeju, O., Khan, B. A., MacLullich, A. M., Marcantonio, E. R., Oh, E. S., Agar, M. R., Avelino-Silva, T. J., Berger, M., Burry, L., Colantuoni, E. A., Evered, et al

  2024

- **Corrigendum to "A real-time neurophysiologic stress test for the aging brain: Novel perioperative and ICU applications of EEG in older surgical patients" Neurotherapeutics 20 (4) (2023) 975-1000.** *Neurotherapeutics : the journal of the American Society for Experimental NeuroTherapeutics*

  Berger, M., Ryu, D., Reese, M., McGuigan, S., Evered, L. A., Price, C. C., Scott, D. A., Westover, M. B., Eckenhoff, R., Bonanni, L., Sweeney, A., Babiloni, C.

  2024: e00473

- **Potential risks of nonoperative management of appendicitis in high-risk patients.** *Surgery*

  Lunardi, N., Thornton, M., Zarzaur, B. L., Agarwal, S., Berger, M., Sharath, S., Kougias, P., Bhat, S., Frank, K., Pham, T. H., Balentine, C. J.

  2024

- **Multi-level social determinants of health, inflammation, and postoperative delirium in older adults** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*

  Vasunilashorn, S. M., Wolfson, E., Berger, M., Leung, J., Ware, E. B., Baccarelli, A., Jones, R. N., Ngo, L. H., Marcantonio, E. R., Inouye, S. K., Kind, A. J. H.

  2024

- **Prediction of Post-Operative Delirium in Older Adults from Preoperative Cognition and Alpha Power from Resting-State EEG.** *medRxiv : the preprint server for health sciences*

  Ning, M., Rodionov, A., Ross, J. M., Ozdemir, R. A., Burch, M., Lian, S. J., Alsop, D., Cavallari, M., Dickerson, B. C., Fong, T. G., Jones, R. N., Libermann, T. A., Marcantonio, et al

  2024

- **Anesthesia Dose and Delirium-A Picture Coming Into Focus** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
  Berger, M., Neuman, M. D.
  2024; 332 (2): 107-108

- **Cognitive and Cerebrospinal Fluid Alzheimer's Disease-related Biomarker Trajectories in Older Surgical Patients and Matched Nonsurgical Controls** *ANESTHESIOLOGY*
  Reese, M., Wong, M. K., Cheong, V., Ha, C. I., Wright, M., Browndyke, J., Moretti, E., Devinney, M. J., Habib, A. S., Moul, J. W., Shaw, L. M., Waligorska, T., Whitson, et al
  2024; 140 (5): 963-978

- **Reply to "A Letter Concerning a Role for Blood-Brain Barrier Dysfunction in Delirium following Noncardiac Surgery in Older Adults"** *ANNALS OF NEUROLOGY*
  Devinney, M. J., Berger, M.
  2024; 95 (2): 411-413

- **Preoperative electroencephalographic alpha-power changes with eyes opening are associated with postoperative attention impairment and inattention-related delirium severity** *BRITISH JOURNAL OF ANAESTHESIA*
  Acker, L., Wong, M. K., Wright, M. C., Reese, M., Giattino, C. M., Roberts, K. C., Au, S., Colon-Emeric, C., Lipsitz, L. A., Devinney, M. J., Browndyke, J., Eleswarpu, S., Moretti, et al
  2024; 132 (1): 154-163

- **Association between surgery and rate of incident dementia in older adults: A population-based retrospective cohort study** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Reich, K. M., Gill, S. S., Eckenhoff, R., Berger, M., Austin, P. C., Rochon, P. A., Nguyen, P., Goodarzi, Z., Seitz, D. P.
  2024; 72 (5): 1348-1359

- **Inflammatory changes in the plasma and cerebrospinal fluid of patients with persistent pain and postpartum depression after elective Cesarean delivery: an exploratory prospective cohort study** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
  Yurashevich, M., Cooter Wright, M., Sims, S. C., Tan, H., Berger, M., Ji, R., Habib, A. S.
  2023; 70 (12): 1917-1927

- **Role of Blood-Brain Barrier Dysfunction in Delirium following Non-cardiac Surgery in Older Adults** *ANNALS OF NEUROLOGY*
  Devinney, M. J., Wong, M. K., Wright, M., Marcantonio, E. R., Terrando, N., Browndyke, J. N., Whitson, H. E., Cohen, H. J., Nackley, A. G., Klein, M. E., Ely, E., Mathew, J. P., Berger, et al
  2023; 94 (6): 1024-1035

- **PD-L1/PD-1 checkpoint pathway regulates hippocampal neuronal excitability and learning and memory behavior** *NEURON*
  Zhao, J., Bang, S., Furutani, K., Mcginnis, A., Jiang, C., Roberts, A., Donnelly, C. R., He, Q., James, M. L., Berger, M., Ko, M., Wang, H., Palmiter, et al
  2023; 111 (17): 2709-+

- **EEG pre-burst suppression: characterization and inverse association with preoperative cognitive function in older adults** *FRONTIERS IN AGING NEUROSCIENCE*
  Reese, M., Christensen, S., Anolick, H., Roberts, K. C., Wong, M. K., Wright, M., Acker, L., Browndyke, J. N., Woldorff, M. G., Berger, M., MADCO-PC & INTUIT Investigators
  2023; 15: 1229081

- **Awake Spinal Fusion Is Associated with Reduced Length of Stay, Opioid Use, and Time to Ambulation Compared to General Anesthesia: A Matched Cohort Study** *WORLD NEUROSURGERY*
  Sykes, D. A. W., Tabarestani, T. Q., Chaudhry, N. S., Salven, D. S., Shaffrey, C. I., Bullock, W., Guinn, N. R., Gadsden, J., Berger, M., Abd-El-Barr, M. M.
  2023; 176: E91-E100

- **Amyloid beta and postoperative delirium: partners in crime or strangers in the dark?** *BRITISH JOURNAL OF ANAESTHESIA*
  Reekes, T. H., Devinney, M. J., Berger, M.
  2023; 131 (2): 205-208

- **Perioperative changes in neurocognitive and Alzheimer's disease-related cerebrospinal fluid biomarkers in older patients randomised to isoflurane or propofol for anaesthetic maintenance** *BRITISH JOURNAL OF ANAESTHESIA*
  Villalobos, D., Reese, M., Wright, M., Wong, M., Syed, A., Park, J., Hall, A., Browndyke, J. N., Martucci, K. T., Devinney, M. J., Acker, L., Moretti, E. W., Talbot, et al

2023; 131 (2): 328-337

- **A Real-Time Neurophysiologic Stress Test for the Aging Brain: Novel Perioperative and ICU Applications of EEG in Older Surgical Patients** *NEUROTHERAPEUTICS*
  Berger, M., Ryu, D., Reese, M., McGuigan, S., Evered, L. A., Price, C. C., Scott, D. A., Westover, M., Eckenhoff, R., Bonanni, L., Sweeney, A., Babiloni, C.
  2023; 20 (4): 975-1000

- **A Role for Blood-brain Barrier Dysfunction in Delirium following Non-Cardiac Surgery in Older adults.** *medRxiv : the preprint server for health sciences*
  Devinney, M. J., Wong, M. K., Wright, M. C., Marcantonio, E. R., Terrando, N., Browndyke, J. N., Whitson, H. E., Cohen, H. J., Nackley, A. G., Klein, M. E., Ely, E. W., Mathew, J. P., Berger, et al
  2023

- **Awake spinal anesthesia facilitates spine surgery in poor surgical candidates: A case series** *NEUROCHIRURGIE*
  Sykes, D. A. W., Tabarestani, T. Q., Salven, D. S., Chaudhry, N. S., Wang, T. Y., Gottfried, O. N., Shaffrey, C. I., Guinn, N. R., Gadsden, J., Ayoub, C. M., Bullock, W., Berger, M., Abd-El-Barr, et al
  2023; 69 (3): 101444

- **Perioperative neurocognitive and functional neuroimaging trajectories in older APOE4 carriers compared with non-carriers: secondary analysis of a prospective cohort study (vol 127, pg 917, 2021)** *BRITISH JOURNAL OF ANAESTHESIA*
  Browndyke, J. N., Wright, M. C., Yang, R., Syed, A., Park, J., Hall, A., Martucci, K., Devinney, M. J., Shaw, L., Waligorska, T., Moretti, E. W., Whitson, H. E., Cohen, et al
  2023; 130 (5): 646

- **Outcomes of Nonoperative vs Operative Management of Acute Appendicitis in Older Adults in the US** *JAMA SURGERY*
  Meier, J., Stevens, A., Bhat, A., Berger, M., Balentine, C.
  2023; 158 (6): 625-632

- **Blood-brain barrier permeability and cognitive dysfunction after surgery - A pilot study** *JOURNAL OF CLINICAL ANESTHESIA*
  Lascola, C. D., Cotter, S. F., Klinger, R. Y., Bisanar, T., Wright, M., Berger, M., Martin, G., Podgoreanu, M. V., Newman, M. F., Terrando, N., Mathew, J. P.
  2023; 86: 111059

- **Comparison of Postoperative Outcomes of Laparoscopic vs Open Inguinal Hernia Repair** *JAMA SURGERY*
  Meier, J., Stevens, A., Berger, M., Makris, K., Bramos, A., Reisch, J., Cullum, C., Lee, S. C., Skinner, C., Zeh, H., Brown, C. J., Balentine, C. J.
  2023; 158 (2): 172-180

- **Hevin/Sparcl1 drives pathological pain through spinal cord astrocyte and NMDA receptor signaling** *JCI INSIGHT*
  Chen, G., Xu, J., Luo, H., Luo, X., Singh, S. K., Ramirez, J. J., James, M. L., Mathew, J. P., Berger, M., Eroglu, C., Ji, R.
  2022; 7 (23)

- **Conserved YKL-40 changes in mice and humans after postoperative delirium** *BRAIN, BEHAVIOR, & IMMUNITY - HEALTH*
  David-Bercholz, J., Acker, L., Caceres, A. I., Wu, P., Goenka, S., Franklin, N. O., Rodriguiz, R. M., Wetsel, W. C., Devinney, M., Wright, M., Zetterberg, H., Yang, T., Berger, et al
  2022; 26: 100555

- **Neuroimaging and immunological features of neurocognitive function related to substance use in people with HIV** *JOURNAL OF NEUROVIROLOGY*
  Murdoch, D. M., Barfield, R., Chan, C., Towe, S. L., Bell, R. P., Volkheimer, A., Choe, J., Hall, S. A., Berger, M., Xie, J., Meade, C. S.
  2023; 29 (1): 78-93

- **Intraoperative Anesthetic Probes of Brain Health: Ketamine as a Canary in the Coal Mine?** *Anesthesia and analgesia*
  Reese, M., Heifets, B. D., Berger, M.
  2022; 135 (4): 679-682

- **The potential link between obstructive sleep apnea and postoperative neurocognitive disorders: current knowledge and possible mechanisms** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
  Devinney, M. J., VanDusen, K. W., Kfouri, J. M., Avasarala, P., Spector, A. R., Mathew, J. P., Berger, M.
  2022; 69 (10): 1272-1287

- **Regional vs General Anesthesia and Incidence of Postoperative Delirium in Older Patients Undergoing Hip Fracture Surgery** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
  Nobuhara, C., Devinney, M., Berger, M.
  2022; 327 (17): 1707-+

- **Pre- and Postoperative CSF Proteomic Signatures of Postoperative Delirium**
  Thomas, J., Corcoran, D., Fuller, M., Moseley, A., Cooter, M., Lutz, M., Mathew, J. P., Berger, M., Devinney, M.
  LIPPINCOTT WILLIAMS & WILKINS.2022: 467-470

- **Cognitive and cerebrospinal fluid Alzheimer's Disease biomarker changes over time in older surgical patients and matched nonsurgical controls**
  Wong, M., Reese, M., Cooter, M., Browndyke, J. N., Mathew, J. P., Cohen, H. J., Whitson, H. E., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2022: 954-956

- **Perioperative neurocognitive and CSF Alzheimer's biomarker trajectories in older patients randomized to Isoflurane or Propofol for Anaesthetic Maintenance**
  Villalobos, D., Berger, M., Cooter, M., Browndyke, J. N., Syed, A., Moretti, E., Divinney, M.
  LIPPINCOTT WILLIAMS & WILKINS.2022: 488-490

- **The SANDMAN Study: Sleep Apnea, Neuroinflammation, and Cognitive Dysfunction Manifesting After Non-cardiac surgery**
  Avasarala, P., Thomas, J., Spector, A. R., Browndyke, J. N., Smith, P. J., Dominguez, J., Cooter, M., Bunning, T., Eleswarpu, S., VanDusen, K. W., Cai, V., Whitson, H. E., Mathew, et al
  LIPPINCOTT WILLIAMS & WILKINS.2022: 1100-1102

- **Preoperative EEG Inattention Signatures and Postoperative Delirium**
  Acker, L., Au, S., Roberts, K., Giattino, C., Moretti, E., Devinney, M., Reese, M., Cohen, H. J., Mathew, J. P., Woldorff, M. G., Whitson, H. E., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2022: 496

- **Machine learning XGBoost classification of postoperative delirium by intraoperative EEG metrics**
  Reese, M., Roberts, K., Woldorff, M. G., Cooter, M., Acker, L., Wu, S., Whitson, H. E., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2022: 609-611

- **Postoperative changes in cognition and cerebrospinal fluid neurodegenerative disease biomarkers** *ANNALS OF CLINICAL AND TRANSLATIONAL NEUROLOGY*
  Berger, M., Browndyke, J. N., Wright, M., Nobuhara, C., Reese, M., Acker, L., Bullock, W., Colin, B. J., Devinney, M. J., Moretti, E. W., Moul, J. W., Ohlendorf, B., Laskowitz, et al
  2022; 9 (2): 155-170

- **Developing a Real-Time Electroencephalogram-Guided Anesthesia-Management Curriculum for Educating Residents: A Single-Center Randomized Controlled Trial** *ANESTHESIA AND ANALGESIA*
  Berger, M., Eleswarpu, S. S., Wright, M., Ray, A. M., Wingfield, S. A., Heflin, M. T., Bengali, S., Udani, A. D.
  2022; 134 (1): 159-170

- **A Processed Electroencephalogram-Based Brain Anesthetic Resistance Index Is Associated With Postoperative Delirium in Older Adults: A Dual Center Study** *ANESTHESIA AND ANALGESIA*
  Wright, M., Bunning, T., Eleswarpu, S. S., Heflin, M. T., McDonald, S. R., Lagoo-Deenadalayan, S., Whitson, H. E., Martinez-Camblor, P., Deiner, S. G., Berger, M.
  2022; 134 (1): 149-158

- **Geriatric Preoperative Optimization: A Review** *AMERICAN JOURNAL OF MEDICINE*
  Zietlow, K. E., Wong, S., Heflin, M. T., McDonald, S. R., Sickeler, R., Devinney, M., Blitz, D., Lagoo-Deenadayalan, S., Berger, M.
  2022; 135 (1): 39-48

- **Perioperative neurocognitive and functional neuroimaging trajectories in older APOE4 carriers compared with non-carriers: secondary analysis of a prospective cohort study** *BRITISH JOURNAL OF ANAESTHESIA*
  Browndyke, J. N., Wright, M. C., Yang, R., Syed, A., Park, J., Hall, A., Martucci, K., Devinney, M. J., Shaw, L., Waligorska, T., Moretti, E. W., Whitson, H. E., Cohen, et al
  2021; 127 (6): 917-928

- **Electroencephalogram-Based Complexity Measures as Predictors of Post-operative Neurocognitive Dysfunction** *FRONTIERS IN SYSTEMS NEUROSCIENCE*

Acker, L., Ha, C., Zhou, J., Manor, B., Giattino, C. M., Roberts, K., Berger, M., Wright, M., Colon-Emeric, C., Devinney, M., Au, S., Woldorff, M. G., Lipsitz, et al
2021; 15: 718769

- **Locoregional Anesthesia for Major Surgery in Frail Adults May Reduce Postoperative Morbidity and Mortality**
Meier, J., Stevens, A. R., Berger, M., Cullum, M., Brown, C. J., Balentine, C.
ELSEVIER SCIENCE INC.2021: E62

- **A template for physical resilience research in older adults: Methods of the PRIME-KNEE study** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
Whitson, H. E., Crabtree, D., Pieper, C. F., Ha, C., Au, S., Berger, M., Cohen, H. J., Feld, J., Smith, P., Hall, K., Parker, D., Kraus, V., Kraus, et al
2021; 69 (11): 3232-3241

- **Using local rather than general anesthesia for inguinal hernia repair may significantly reduce complications for frail Veterans** *AMERICAN JOURNAL OF SURGERY*
Meier, J., Berger, M., Hogan, T., Reisch, J., Zeh, H., Cullum, C., Lee, S. C., Skinner, C., Brown, C. J., Balentine, C. J.
2021; 222 (3): 619-624

- **Racial and Ethnic Disparities in Access to Local Anesthesia for Inguinal Hernia Repair** *JOURNAL OF SURGICAL RESEARCH*
Meier, J., Stevens, A., Berger, M., Hogan, T. P., Reisch, J., Cullum, C., Lee, S. C., Skinner, C., Zeh, H., Brown, C. J., Balentine, C. J.
2021; 266: 366-372

- **Local Anesthesia is Associated with Fewer Complications in Umbilical Hernia Repair in Frail Veterans** *JOURNAL OF SURGICAL RESEARCH*
Meier, J., Berger, M., Hogan, T. P., Reisch, J., Cullum, C., Lee, S. C., Skinner, C., Zeh, H., Brown, C. J., Balentine, C. J.
2021; 266: 88-95

- **Goldilocks and propofol dosage in older adults: Too much, too little, or just right?** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
Devinney, M. J., Berger, M.
2021; 69 (8): 2106-2109

- **Using local rather than general anesthesia for inguinal hernia repair is associated with shorter operative time and enhanced postoperative recovery** *AMERICAN JOURNAL OF SURGERY*
Balentine, C. J., Meier, J., Berger, M., Hogan, T. P., Reisch, J., Cullum, M., Zeh, H., Lee, S. C., Skinner, C., Brown, C. J.
2021; 221 (5): 902-907

- **Perioperative neurocognitive and neuroimaging trajectories in older APOE4 carriers vs non-carriers: A prospective cohort study**
Yang, R. O., Browndyke, J. N., Cooter, M., Berger, M.
LIPPINCOTT WILLIAMS & WILKINS.2021: 545-546

- **Risk of Spinal Hematoma After Lumbar Puncture** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
Nobuhara, C., Berger, M.
2021; 325 (8): 787-+

- **Immunomodulatory lipid mediator profiling of cerebrospinal fluid following surgery in older adults** *SCIENTIFIC REPORTS*
Terrando, N., Park, J. J., Devinney, M., Chan, C., Cooter, M., Avasarala, P., Mathew, J. P., Quinones, Q. J., Maddipati, K., Berger, M., MADCO-PC Study Team
2021; 11 (1): 3047

- **Using Local Anesthesia for Inguinal Hernia Repair Reduces Complications in Older Patients** *JOURNAL OF SURGICAL RESEARCH*
Balentine, C. J., Meier, J., Berger, M., Reisch, J., Cullum, M., Lee, S. C., Skinner, C., Brown, C. J.
2021; 258: 64-72

- **Cerebrospinal Fluid Proteome Changes in Older Non-Cardiac Surgical Patients with Postoperative Cognitive Dysfunction** *JOURNAL OF ALZHEIMERS DISEASE*
VanDusen, K. W., Li, Y., Cai, V., Hall, A., Hiles, S., Thompson, J., Moseley, M., Cooter, M., Acker, L., Levy, J. H., Ghadimi, K., Quinones, Q. J., Devinney, et al
2021; 80 (3): 1281-1297

- **APOE4 Copy Number-Dependent Proteomic Changes in the Cerebrospinal Fluid** *JOURNAL OF ALZHEIMERS DISEASE*

Berger, M., Cooter, M., Roesler, A. S., Chung, S., Park, J., Modliszewski, J. L., VanDusen, K. W., Thompson, J., Moseley, A., Devinney, M. J., Smani, S., Hall, A., Cai, et al
2021; 79 (2): 511-530

- **Relationship Between Depression/Anxiety and Cognitive Function Before and 6 Weeks After Major Non-Cardiac Surgery in Older Adults** *JOURNAL OF GERIATRIC PSYCHIATRY AND NEUROLOGY*
  Oyeyemi, D. M., Cooter, M., Chung, S., Whitson, H. E., Browndyke, J. N., Devinney, M. J., Smith, P. J., Garrigues, G. E., Moretti, E., Moul, J. W., Cohen, H., Mathew, J. P., Berger, et al
  2022; 35 (1): 145-154
- **Necessary Heroes and Ethos, from Fighting Nazis to COVID-19** *ANESTHESIOLOGY*
  Berger, M., Ghadimi, K.
  2020; 133 (6): 1307-1310
- **Association Between Exposure to General Versus Regional Anesthesia and Risk of Dementia in Older Adults** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Velkers, C., Berger, M., Gill, S. S., Eckenhoff, R., Stuart, H., Whitehead, M., Austin, P. C., Rochon, P. A., Seitz, D.
  2021; 69 (1): 58-67
- **Local Anesthesia Can Reduce Complications in Adults Undergoing Umbilical Hernia Repair**
  Meier, J., Berger, M., Cullum, M., Lee, S. C., Zeh, H. J., Brown, C., Balentine, C.
  ELSEVIER SCIENCE INC.2020: S100-S101
- **A New Severity Scoring Scale for the 3-Minute Confusion Assessment Method (3D-CAM)** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Vasunilashorn, S. M., Devinney, M. J., Acker, L., Jung, Y., Ngo, L., Cooter, M., Huang, R., Marcantonio, E. R., Berger, M.
  2020; 68 (8): 1874-1876
- **Developing a Real-time EEG-guided Anesthesia Management curriculum for Educating Residents (DREAMER): A randomized controlled trial**
  Eleswarpu, S., Berger, M., Cooter, M., Udani, A. D., Heflin, M. T., Bengali, S., Ray, A., Wingfield, S.
  LIPPINCOTT WILLIAMS & WILKINS.2020: 413
- **Neurovascular and immune mechanisms that regulate postoperative delirium superimposed on dementia** *ALZHEIMERS & DEMENTIA*
  Wang, P., Velagapudi, R., Kong, C., Rodriguiz, R. M., Wetsel, W. C., Yang, T., Berger, M., Gelbard, H. A., Colton, C. A., Terrando, N.
  2020; 16 (5): 734-749
- **A Plague on Both Your Monitors! Are Bispectral Index and Cerebral Oximetry Useful for Reducing Postoperative Cognitive Impairment?** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
  Klinger, R. Y., Bottiger, B., Berger, M.
  2020; 34 (5): 1182-1183
- **Of Parachutes, Speedometers, and EEG: What Evidence Do We Need to Use Devices and Monitors?** *ANESTHESIA AND ANALGESIA*
  Berger, M., Mark, J. B., Kreuzer, M.
  2020; 130 (5): 1274-1277
- **The SANDMAN Study: Sleep Apnea, Neuroinflammation, and Cognitive Dysfunction Manifesting After Non-cardiac surgery**
  Devinney, M., Spector, A. R., Browndyke, J. N., Smith, P. J., Dominguez, J., Dominguez, A. M., Cooter, M., Eleswarpu, S., Bunning, T., VanDusen, K. W., Avasarala, P., Cai, V., Mathew, et al
  LIPPINCOTT WILLIAMS & WILKINS.2020: 514-515
- **Cognitive and Cerebrospinal fluid Alzheimer's Disease biomarker changes over time in older surgical patients and matched nonsurgical controls**
  Ha, C., Cheong, V., Cooter, M., Browndyke, J. N., Moretti, E., Bullock, W. M., Colin, B. J., Devinney, M., Whittle, J., Ferrandino, M., Gadsden, J., Habib, A. S., Lemm, et al
  LIPPINCOTT WILLIAMS & WILKINS.2020: 502
- **The MARBLE Study: Modulating ApoE signaling to Reduce Brain inflammation, deLirium, and postopErative Cognitive Dysfunction**
  VanDusen, K. W., Eleswarpu, S., Moretti, E., Devinney, M., Roberts, K., Cooter, M., Laskowitz, D. T., Rockhold, F. W., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2020: 432-433

- **A protocol to reduce self-reported pain scores and adverse events following lumbar punctures in older adults** *JOURNAL OF NEUROLOGY*
  Nobuhara, C. K., Bullock, W., Bunning, T., Colin, B., Cooter, M., Devinney, M. J., Ferrandino, M. N., Gadsden, J., Garrigues, G., Habib, A. S., Moretti, E., Moul, J., Ohlendorf, et al
  2020; 267 (7): 2002-2006

- **Response to 'Correlation between bispectral index and age-adjusted minimal alveolar concentration' (Br J Anaesth 2020; 124:e8)** *BRITISH JOURNAL OF ANAESTHESIA*
  Berger, M., Cooter, M., Ni, K., Thomas, J., Gupta, D. K., Kertai, M. D.
  2020; 124 (3): E38-E39

- **Postoperative Neurocognitive Disorders in the Geriatric Patient** *ESSENTIALS OF NEUROSURGICAL ANESTHESIA & CRITICAL CARE: STRATEGIES FOR PREVENTION, EARLY DETECTION, AND SUCCESSFUL MANAGEMENT OF PERIOPERATIVE COMPLICATIONS, 2ND EDITION*
  Schenning, K. J., Berger, M.
  edited by Brambrink, A. M., Kirsch
  2020: 105-107

- **The MARBLE Study Protocol: Modulating ApoE Signaling to Reduce Brain Inflammation, DeLirium, and PostopErative Cognitive Dysfunction** *JOURNAL OF ALZHEIMERS DISEASE*
  VanDusen, K. W., Eleswarpu, S., Moretti, E. W., Devinney, M. J., Crabtree, D. M., Laskowitz, D. T., Woldorff, M. G., Roberts, K. C., Whittle, J., Browndyke, J. N., Cooter, M., Rockhold, F. W., Anakwenze, et al
  2020; 75 (4): 1319-1328

- **Age-dependent decrease in minimum alveolar concentration of inhaled anaesthetics: a systematic search of published studies and meta-regression analysis** *BRITISH JOURNAL OF ANAESTHESIA*
  Cooter, M., Ni, K., Thomas, J., Gupta, D. K., Hopkins, T. J., Miller, T. E., James, M. L., Kertai, M. D., Berger, M.
  2020; 124 (1): E4-E7

- **State of the clinical science of perioperative brain health: report from the American Society of Anesthesiologists Brain Health Initiative Summit 2018 (vol 123, pg 464, 2019)** *BRITISH JOURNAL OF ANAESTHESIA*
  Mahanna-Gabrielli, E., Schenning, K. J., Eriksson, L. I., Browndyke, J. N., Wright, C. B., Culley, D. J., Evered, L., Scott, D. A., Wang, N., Brown, C. H., Oh, E., Purdon, P., Inouye, et al
  2019; 123 (6): 917

- **Flow Cytometry Characterization of Cerebrospinal Fluid Monocytes in Patients With Postoperative Cognitive Dysfunction: A Pilot Study** *ANESTHESIA AND ANALGESIA*
  Berger, M., Murdoch, D. M., Staats, J. S., Chan, C., Thomas, J. P., Garrigues, G. E., Browndyke, J. N., Cooter, M., Quinones, Q. J., Mathew, J. P., Weinhold, K. J., Young, C., Amundsen, et al
  2019; 129 (5): E150-E154

- **State of the clinical science of perioperative brain health: report from the American Society of Anesthesiologists Brain Health Initiative Summit 2018** *BRITISH JOURNAL OF ANAESTHESIA*
  Mahanna-Gabrielli, E., Schenning, K. J., Eriksson, L., Browndyke, J. N., Wright, C. B., Evered, L., Scott, D. A., Wang, N., Brown, C. H., Oh, E., Purdon, P., Inouye, S., Berger, et al
  2019; 123 (4): 464-478

- **In Response.** *Anesthesia and analgesia*
  Berger, M., Angst, M. S., Culley, D. J., Price, C. E., Scott, D. A., Whittington, R. A., Eckenhoff, R. G.
  2019; 129 (3): e112-e113

- **Paradox of age: older patients receive higher age-adjusted minimum alveolar concentration fractions of volatile anaesthetics yet display higher bispectral index values** *BRITISH JOURNAL OF ANAESTHESIA*
  Ni, K., Cooter, M., Gupta, D. K., Thomas, J., Hopkins, T. J., Miller, T. E., James, M. L., Kertai, M. D., Berger, M.
  2019; 123 (3): 288-297

- **Impact of Cognitive Impairment Across Specialties: Summary of a Report From the U13 Conference Series** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Carpenter, C. R., McFarland, F., Avidan, M., Berger, M., Inouye, S. K., Karlawish, J., Lin, F. R., Marcantonio, E., Morris, J. C., Reuben, D. B., Shah, R. C., Whitson, H. E., Asthana, et al
  2019; 67 (10): 2011-2017

- **In Response.** *Anesthesia and analgesia*
  Berger, M., Angst, M. S., Culley, D. J., Price, C. E., Scott, D. A., Whittington, R. A., Eckenhoff, R. G., Perioperative Neurotoxicity Working Group
  2019

- **Intravenous Lidocaine Does Not Improve Neurologic Outcomes after Cardiac Surgery A Randomized Controlled Trial** *ANESTHESIOLOGY*
  Klinger, R. Y., Cooter, M., Bisanar, T., Terrando, N., Berger, M., Podgoreanu, M., Stafford-Smith, M., Newman, M. F., Mathew, J. P., Mathew, O. P., Blumenthal, J. A., Karhausen, J. A., Kertai, et al
  2019; 130 (6): 958-970

- **THE SANDMAN STUDY: SLEEP APNEA, NEUROINFLAMMATION, AND COGNITIVE DYSFUNCTION MANIFESTING AFTER NON-CARDIAC SURGERY**
  Devinney, M., Spector, A. R., Browndyke, J. N., Smith, P. J., Dominguez, J., Bunning, T., Cooter, M., Mathew, J. P., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2019: 918

- **THE INTUIT STUDY: INVESTIGATING NEUROINFLAMMATION UNDERLYING POSTOPERATIVE NEUROCOGNITIVE DYSFUNCTION AND DELIRIUM IN OLDER ADULTS**
  Bunning, T., Whitson, H. E., Weinhold, K., Woldorff, M. G., Moretti, E., Oyeyemi, D., Cooter, M., Chan, C., Cabeza, R., Browndyke, J. N., Murdoch, D., Devinney, M., Shaw, et al
  LIPPINCOTT WILLIAMS & WILKINS.2019: 432

- **INTRA-OPERATIVE ELECTROENCEPHALOGRAM CORRELATES OF POST-OPERATIVE NEUROCOGNITIVE RESILIENCE IN OLDER ADULTS**
  Acker, L., Berger, M., Zhou, J., Lipsitz, L., Woldorff, M. G., Whitson, H. E.
  LIPPINCOTT WILLIAMS & WILKINS.2019: 489

- **METABOLIPIDOMIC ANALYSIS OF CEREBROSPINAL FLUID REVEALS INCREASED ARACHIDONIC ACID-DERIVED LIPIDS AND SPECIALIZED PRO-RESOLVING MEDIATORS 24 HRS AND 6-WEEKS FOLLOWING SURGERY AND ANESTHESIA**
  Devinney, M., Maddipati, K., Chan, C., Mathew, J. P., Cooter, M., Terrando, N., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2019: 485-486

- **The INTUIT Study: Investigating Neuroinflammation Underlying Postoperative Cognitive Dysfunction** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Berger, M., Oyeyemi, D., Olurinde, M. O., Whitson, H. E., Weinhold, K. J., Woldorff, M. G., Lipsitz, L. A., Moretti, E., Giattino, C. M., Roberts, K. C., Zhou, J., Bunning, T., Ferrandino, et al
  2019; 67 (4): 794-798

- **Workshop on Synergies Between Alzheimers Research and Clinical Gerontology and Geriatrics: Current Status and Future Directions (vol 10, pg 1229, 2018)** *JOURNALS OF GERONTOLOGY SERIES A-BIOLOGICAL SCIENCES AND MEDICAL SCIENCES*
  Brinkley, T. E., Berger, M., Callahan, K. E., Fieo, R. A., Jennings, L. A., Morris, J. K., Wilkins, H. M., Kritchevsky, S. B.
  2019; 74 (3): 432

- **Longitudinal Changes in Regional Cerebral Perfusion and Cognition After Cardiac Operation** *ANNALS OF THORACIC SURGERY*
  Smith, P. J., Browndyke, J. N., Monge, Z. A., Harshbarger, T. B., James, M. L., Gaca, J. G., Alexander, J. H., Berger, M. M., Newman, M. F., Milano, C. A., Mathew, J. P., Neurologic Outcomes Res Grp NORG
  2019; 107 (1): 112-118

- **Recommendations for the nomenclature of cognitive change associated with anaesthesia and surgery-2018** *BRITISH JOURNAL OF ANAESTHESIA*
  Evered, L., Silbert, B., Knopman, D. S., Scott, D. A., DeKosky, S. T., Rasmussen, L. S., Oh, E. S., Crosby, G., Berger, M., Eckenhoff, R. G., Nomenclature Consensus Working Grp
  2018; 121 (5): 1005-1012

- **Recommendations for the nomenclature of cognitive change associated with anaesthesia and surgery-2018** *ACTA ANAESTHESIOLOGICA SCANDINAVICA*
  Evered, L., Silbert, B., Knopman, D. S., Scott, D. A., DeKosky, S. T., Rasmussen, L. S., Oh, E. S., Crosby, G., Berger, M., Eckenhoff, R. G., Nomenclature Consensus Working Grp
  2018; 62 (10): 1473-1480

- **Neurocognitive Function after Cardiac Surgery From Phenotypes to Mechanisms** *ANESTHESIOLOGY*
  Berger, M., Terrando, N., Smith, S., Browndyke, J. N., Newman, M. F., Mathew, J. P.
  2018; 129 (4): 829-851

- **Workshop on Synergies Between Alzheimer's Research and Clinical Gerontology and Geriatrics: Current Status and Future Directions** *JOURNALS OF GERONTOLOGY SERIES A-BIOLOGICAL SCIENCES AND MEDICAL SCIENCES*
  Brinkley, T. E., Berger, M., Callahan, K. E., Fieo, R. A., Jennings, L. A., Morris, J. K., Wilkins, H. M., Kritchevsky, S. B.
  2018; 73 (9): 1229-1237

- **Postoperative Delirium and Postoperative Cognitive Dysfunction Two Sides of the Same Coin?** *ANESTHESIOLOGY*
  Devinney, M. J., Mathew, J. P., Berger, M.
  2018; 129 (3): 389-391

- **F-18-florbetapir Positron Emission Tomography-determined Cerebral -Amyloid Deposition and Neurocognitive Performance after Cardiac Surgery** *ANESTHESIOLOGY*
  Klinger, R. Y., James, O. G., Borges-Neto, S., Bisanar, T., Li, Y., Qi, W., Berger, M., Terrando, N., Newman, M. F., Doraiswamy, P., Mathew, J. P., Alzheimers Dis Neuroimaging, NORG
  2018; 128 (4): 728–44

- **Transnasal Transsphenoidal Elevation of Optic Chiasm in Secondary Empty Sella Syndrome Following Prolactinoma Treatment** *WORLD NEUROSURGERY*
  Cobb, M., Crowson, M., Mintz-Cole, R., Husain, A. M., Berger, M., Jang, D., Codd, P.
  2018; 112: 250-253

- **IS OBSTRUCTIVE SLEEP APNEA ASSOCIATED WITH POSTOPERATIVE DELIRIUM AND COGNITIVE DECLINE?**
  Devinney, M., Cheong, Y., Wickenheisser, V., Cooter, M., Dominguez, J., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2018: 704-705

- **PERIOPERATIVE TRAJECTORY OF ALZHEIMER'S DISEASE BIOMARKERS IN SURGICAL PATIENTS AND MATCHED NON-SURGICAL CONTROLS**
  Cheong, Y., Cooter, M., Huang, R. L., Whitson, H. E., Cohen, H. J., Mathew, J. P., Berger, M.
  LIPPINCOTT WILLIAMS & WILKINS.2018: 353-356

- **Task-related changes in degree centrality and local coherence of the posterior cingulate cortex after major cardiac surgery in older adults** *HUMAN BRAIN MAPPING*
  Browndyke, J. N., Berger, M., Smith, P. J., Harshbarger, T. B., Monge, Z. A., Panchal, V., Bisanar, T. L., Glower, D. D., Alexander, J. H., Cabeza, R., Welsh-Bohmer, K., Newman, M. F., Mathew, et al
  2018; 39 (2): 985-1003

- **Best Practices for Postoperative Brain Health: Recommendations From the Fifth International Perioperative Neurotoxicity Working Group.** *Anesthesia and analgesia*
  Berger, M. n., Schenning, K. J., Brown, C. H., Deiner, S. G., Whittington, R. A., Eckenhoff, R. G., Angst, M. S., Avramescu, S. n., Bekker, A. n., Brzezinski, M. n., Crosby, G. n., Culley, D. J., Eckenhoff, et al
  2018

- **The Effect of Propofol vs. isoflurane anesthesia on Postoperative Changes in Cerebrospinal Fluid Cytokine levels: results from a randomized Trial** *FRONTIERS IN IMMUNOLOGY*
  Berger, M., Ponnusamy, V., Greene, N., Cooter, M., Nadler, J. W., Friedman, A., McDonagh, D. L., Laskowitz, D. T., Newman, M. F., Shaw, L. M., Warner, D. S., Mathew, J. P., James, et al
  2017; 8: 1528

- **Orbitocerebral Impalement: Case Discussion and Management Algorithm** *CRANIOMAXILLOFACIAL TRAUMA & RECONSTRUCTION*
  Crowson, M., Berger, M., McCarthy, G. C., Powers, D. B.
  2017; 10 (3): 225-229

- **Intraoperative Frontal Alpha-Band Power Correlates with Preoperative Neurocognitive Function in Older Adults** *FRONTIERS IN SYSTEMS NEUROSCIENCE*
  Giattino, C. M., Gardner, J. E., Sbahi, F. M., Roberts, K. C., Cooter, M., Moretti, E., Browndyke, J. N., Mathew, J. P., Woldorff, M. G., Berger, M., MADCO-PC Investigators
  2017; 11: 24

- **Resting-State Functional Connectivity and Cognition After Major Cardiac Surgery in Older Adults without Preoperative Cognitive Impairment: Preliminary Findings** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
  Browndyke, J. N., Berger, M., Harshbarger, T. B., Smith, P. J., White, W., Bisanar, T. L., Alexander, J. H., Gaca, J. G., Welsh-Bohmer, K., Newman, M. F., Mathew, J. P.

2017; 65 (1): E6-E12

- **Effect of intravenous lidocaine on the transcerebral inflammatory response during cardiac surgery: a randomized-controlled trial** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
  Klinger, R. Y., Cooter, M., Berger, M., Podgoreanu, M. V., Stafford-Smith, M., Ortel, T. L., Welsby, I. J., Levy, J. H., Rinder, H. M., Newman, M. F., Mathew, J. P., Neurologic Outcomes Res Grp NORG, Duke Heart Ctr
  2016; 63 (11): 1223-1232
- **Anesthetic Suppression of Thalamic High-Frequency Oscillations: Evidence that the Thalamus Is More Than Just a Gateway to Consciousness?** *ANESTHESIA AND ANALGESIA*
  Berger, M., Garcia, P. S.
  2016; 122 (6): 1737-1739
- **The Effect of Propofol Versus Isoflurane Anesthesia on Human Cerebrospinal Fluid Markers of Alzheimer's Disease: Results of a Randomized Trial** *JOURNAL OF ALZHEIMERS DISEASE*
  Berger, M., Nadler, J. W., Friedman, A., McDonagh, D. L., Bennett, E. R., Cooter, M., Qi, W., Laskowitz, D. T., Ponnusamy, V., Newman, M. F., Shaw, L. M., Warner, D. S., Mathew, et al
  2016; 52 (4): 1299-1310
- **Postoperative Cognitive Dysfunction: Minding the Gaps in Our Knowledge of a Common Postoperative Complication in the Elderly.** *Anesthesiology clinics*
  Berger, M., Nadler, J. W., Browndyke, J., Terrando, N., Ponnusamy, V., Cohen, H. J., Whitson, H. E., Mathew, J. P.
  2015; 33 (3): 517-50
- **Intraoperative Glycemic Control to Prevent Delirium after Cardiac Surgery Steering a Course between Scylla and Charybdis** *ANESTHESIOLOGY*
  Berger, M., Browndyke, J., Mathew, J. P.
  2015; 122 (6): 1186-1188
- **G alpha(i/o)-coupled receptor signaling restricts pancreatic beta-cell expansion** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Berger, M., Scheel, D. W., Macias, H., Miyatsuka, T., Kim, H., Hoang, P., Ku, G. M., Honig, G., Liou, A., Tang, Y., Regard, J. B., Sharifnia, P., Yu, et al
  2015; 112 (9): 2888–93
- **Alzheimer's Disease, Anesthesia, and Surgery: A Clinically Focused Review** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
  Berger, M., Burke, J., Eckenhoff, R., Mathew, J.
  2014; 28 (6): 1609-1623
- **Neurological complications of cardiac surgery** *LANCET NEUROLOGY*
  McDonagh, D. L., Berger, M., Mathew, J. P., Graffagnino, C., Milano, C. A., Newman, M. F.
  2014; 13 (5): 490-502
- **Preventing Delirium After Cardiothoracic Surgery: Provocative but Preliminary Evidence for Bispectral Index Monitoring** *ANESTHESIA AND ANALGESIA*
  Berger, M., Nadler, J., Mathew, J. P.
  2014; 118 (4): 706-707
- **A novel application for bolus remifentanil: blunting the hemodynamic response to Mayfield skull clamp placement** *CURRENT MEDICAL RESEARCH AND OPINION*
  Berger, M., Philips-Bute, B., Guercio, J., Hopkins, T. J., James, M. L., Borel, C. O., Warner, D. S., McDonagh, D. L.
  2014; 30 (2): 243-250
- **Volatile Anesthetic Sedation During Therapeutic Hypothermia After Cardiac Arrest in the ICU: A Journey of a Thousand Miles Begins With a Single Step** *CRITICAL CARE MEDICINE*
  Berger, M., Warner, D. S., McDonagh, D. L.
  2014; 42 (2): 494-495
- **General anesthetic and the risk of dementia in elderly patients: current insights** *CLINICAL INTERVENTIONS IN AGING*
  Hussain, M., Berger, M., Eckenhoff, R. G., Seitz, D. P.
  2014; 9: 1619-1628

- **Rapid ventricular pacing assisted hypotension in the management of sudden intraoperative hemorrhage during cerebral aneurysm clipping.** *Asian journal of neurosurgery*
  Khan, S. A., Berger, M., Agrawal, A., Huang, M., Karikari, I., Nimjee, S. M., Zomorodi, A. R., McDonagh, D. L.
  2014; 9 (1): 33-5
- **Anesthetic Neuroprotection: Antecedents and An Appraisal of Preclinical and Clinical Data Quality** *CURRENT PHARMACEUTICAL DESIGN*
  Ishida, K., Berger, M., Nadler, J., Warner, D. S.
  2014; 20 (36): 5751-5765
- **Intraoperative Magnesium Administration Does Not Improve Neurocognitive Function After Cardiac Surgery** *STROKE*
  Mathew, J. P., White, W. D., Schinderle, D. B., Podgoreanu, M. V., Berger, M., Milano, C. A., Laskowitz, D. T., Stafford-Smith, M., Blumenthal, J. A., Newman, M. F., Duke Heart Ctr
  2013; 44 (12): 3407-3413
- **Precise pattern of recombination in serotonergic and hypothalamic neurons in a Pdx1-cre transgenic mouse line** *JOURNAL OF BIOMEDICAL SCIENCE*
  Honig, G., Liou, A., Berger, M., German, M. S., Tecott, L. H.
  2010; 17: 82
- **The Expanded Biology of Serotonin** *ANNUAL REVIEW OF MEDICINE*
  Berger, M., Gray, J. A., Roth, B. L.
  2009; 60: 355-366
- **Molecular determinants in the second intracellular loop of the 5-hydroxytryptamine-1A receptor for G-protein coupling** *MOLECULAR PHARMACOLOGY*
  Kushwaha, N., Harwood, S. C., Wilson, A. M., Berger, M., Tecott, L. H., Roth, B. L., Albert, P. R.
  2006; 69 (5): 1518-1526
- **Different G<sub>i</sub>-coupled chemoattractant receptors signal qualitatively different functions in human neutrophils** *JOURNAL OF LEUKOCYTE BIOLOGY*
  Berger, M., Budhu, S., Lu, E., Li, Y. M., Loike, D., Silverstein, S. C., Loike, J. D.
  2002; 71 (5): 798-806