# Emine Özgür Bayman

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## **Education**

PhD, Biostatistics	University of Iowa	Iowa City, IA	2004 - 2008
MS, Biostatistics	University of Iowa	Iowa City, IA	2003 - 2004
MS, Biostatistics	Uludag University	Bursa, Turkiye	2000 - 2002
BS, Statistics	Hacettepe University	Ankara, Turkiye	1995 - 1999

## **Employment**

Associate Professor Department of Biostatistics (Primary) Department of Anesthesia (Secondary)	University of Iowa	2019 - Present
Associate Professor Department of Anesthesia (Primary) Department of Biostatistics (Secondary)	University of Iowa	2017 - 2019
Assistant Professor Department of Anesthesia (Primary) Department of Biostatistics (Secondary)	University of Iowa	2011 - 2017
Associate Department of Anesthesia (Primary) Department of Biostatistics (Secondary)	University of Iowa	2008 - 2011
Research Assistant Clinical Trials Statistical and Data Management Center	University of Iowa	2005 - 2008
Research Assistant Biostatistics Consulting Center	University of Iowa	2004 - 2005
Research/ Teaching Assistant Department of Biostatistics	Uludag University	2000 - 2002

## **Administrative Roles**

### **Honors and Awards**

College of Public Health Faculty Service Award	2021
Delta Omega Public Health Honor Society	2020
Graduate Education Scholarship, Council of Higher Education, Turkey	2003 - 2007

### Research

### Research Interests

- Design of multi-center clinical trials
- Bayesian clinical trial designs
- Bayesian outlier detection methods
- Statistical models for pain research

#### PhD Dissertation

• Bayesian hierarchical models for multi-center clinical trials: power and subgroup analyses Dissertation advisors: Kathryn Chaloner and Kate Cowles. Defended: August 2008.

#### **Peer-Reviewed Publications**

- Leroux A, Crainiceanu C, Zeger SL, Taubb M, Ansari B, Wager TD, Bayman EO, et al. (2024): Statistical modeling of acute and chronic pain patient-reported outcomes obtained from ecological momentary assessment. *Pain*; 165 (9): 1955 - 1965. PMID: 38718196
- 2. Fleagle TR, Post AA, Dailey DL, Vance CGT, Zimmerman MB, **Bayman EO**, Crofford LJ, Sluka KA, Chimenti RL (2024): Minimal clinically important change of movement pain in musculoskeletal pain conditions. *J Pain*; 10450. PMID: 38479557
- 3. Dexter F, Hindman BJ, **Bayman EO**, Mueller RN (2024): Patient and operational factors do not substantively affect the annual departmental quality of anesthesiologists' clinical supervision and nurse anesthetists' work habits. *Cureus*; 16(3):e55346. PMID: 38559506
- 4. Zhang L, **Bayman EO**, Zamba GK (2023): A modified Huber loss function for continual reassessment methods in clinical trials. *Sequential Analysis*; 43(1):28-48.
- Gallagher J, Bayman EO, Cadmus-Bertram LA, Jenkins ND, Pearlman A, Whitaker KM, Carr JJ (2023): Physical activity among rural men: Barriers and preferences. *Preventing Chronic Disease*; 20: E88. PMID: 37797290
- 6. **Bayman EO**, Oleson JJ, Dexter F (2023): Introduction to Bayesian analyses for clinical research. *Anesthesia and Analgesia*; 138(3):530-541. PMID: 37874772
- 7. Janowski AJ, Post AA, Heredia-Rizo AM, Mosby H, Dao M, Law LF, **Bayman EO**, Wilken JM, Sluka KA, Chimenti RL (2023): Patterns of movement-evoked pain during tendon loading and stretching tasks in Achilles tendinopathy: A secondary analysis of a randomized controlled trial. *Clinical Biomechanics*; 109:106073. PMID: 37657267
- 8. Sluka KA, Wager TD, Sutherland SP, Labosky PA, Balach T, **Bayman EO**, et al. (2023): Predicting chronic postsurgical pain: Current evidence and a novel program to develop predictive biomarker signatures. *Pain*; 164(9):1912-1926. PMID: 37326643

9. Post AA, Rio EK, Sluka KA, Moseley GL, **Bayman EO**, Hall MM, de Cesar Netto C, Wilken JM, Danielson JF, Chimenti RL (2023): Efficacy of telehealth for movement-evoked pain in people with chronic Achilles tendinopathy: A non-inferiority analysis. *Phys Ther Rehabil J*; 103(3). PMID: 38419304

- 10. Chimenti RL, Post AA, Rio EK, Moseley GL, Dao M, Mosby H, Hall M, de Cesar Netto C, Wilken JM, Danielson J, Bayman EO, Sluka KA (2023): The effects of pain science education plus exercise on pain and function in chronic Achilles tendinopathy. *Pain*; 164(1): e47-365. PMID: 36095045
- 11. Post AA, Dailey DL, **Bayman EO**, Chimenti RL, Costigan M, Franck C, Huff T, Johnson E, Koepp M, Lafontant DE, McCabe ME, Neill-Hudson T, Vance CG, Van Gorp B, Zimmerman BM, Ecklund D, Crofford LJ, Sluka KA (2022): The fibromyalgia transcutaneous electrical nerve stimulation in physical therapy study (FM-TIPS) protocol. *Phys Ther*; 102(11): 116. PMID: 36036838
- 12. Hadlandsmyth KE, Mosher HJ, **Bayman EO**, Mares JG, Odom AS, Lund BC (2022): Opioid prescribing patterns for acute pain. *European Journal of Pain*; 26(7):1523-1531. PMID: 35607721
- 13. Berardi G, Frey-Law L, Sluka KA, Bayman EO, Coffey CS, Ecklund D, et al. (2022): Multi-site observational study to assess biomarkers for susceptibility or resilience to chronic pain: The acute to chronic pain signatures (A2CPS) study protocol. Front Med; 9:849214. PMID: 35547202
- 14. Lai HH, Bayman EO, Bishop MO, Landis JR, Harte SE, Clemens JQ, Rodriguez LV, Sutcliffe S, Taple BJ, Naliboff BD (2022): Longitudinal changes in the pelvic pain only and widespread pain phenotypes over one year in the MAPP-I urologic chronic pelvic pain syndrome cohort. Urology; 161:31-35. PMID: 35021046
- Lin SH, Galet C, Zanaty M, Bayman EO, Rogers WK, Hasan D, Allen LD (2021): Melatonin and risk of mortality in subjects with aneurysmal subarachnoid hemorrhage. Clin Neurol Neurosurg; 210:106990. PMID: 34739880
- 16. **Bayman EO**, Curatolo M, Rahman S, Brennan TJ (2021): AAAPT diagnostic criteria for acute thoracic surgery pain. *J Pain*; 22(8):892-904. PMID: 33848682
- 17. **Bayman EO**, Oleson JJ, Rabbitts JA (2021): AAAPT: Assessment of the acute pain trajectory. *Pain Med*; 22(3):533-547. PMID: 33735384
- 18. **Bayman EO**, Dexter F (2021): Multicollinearity in logistic regression models. *Anesth Analg*; 133(2):362-365. PMID: 34257197.
- 19. Bishop MO, **Bayman EO**, Hadlandsmyth K, Lund BC, Kang S (2020): Opioid use trajectories after thoracic surgery among veterans in the United States. *Eur J Pain*; 24(8):1569-1584. PMID: 32506529
- 20. Post AA, Rio EK, Sluka KA, Moseley GL, **Bayman EO**, Hall MM, de Cesar Netto C, Wilken JM, Danielson JF, Chimenti RL (2020): Effect of pain education and exercise on pain and function in chronic Achilles tendinopathy. *JMIR Res Protoc*; 9(11):e19111. PMID: 33141102
- 21. Polgreen LA, Carter BL, Polgreen PM, Snyder PM, Sewell DK, **Bayman EO**, Francis SL, Simmering JE, Parker C, Finkelstein R (2020): A pharmacist intervention for monitoring and

- treating hypertension using bidirectional texting. *Contemp Clin Trials*; 98:106169. PMID: 33038500
- 22. Dexter F, **Bayman EO**, Wong CA, Hindman BJ (2020): Reliability of ranking anesthesiologists and nurse anesthetists using leniency-adjusted clinical supervision and work habits scores. *J Clin Anesth*; 61:109639. PMID: 31735571
- 23. Cudkowicz M, Chase MK, Coffey CS, Ecklund DJ, Thornell BJ, Lungu C, Mahoney K, Gutmann L, Shefner JM, Staley KJ, Bosch M, Foster E, Long JD, **Bayman EO**, et al. (2020): Seven-year experience from the National Institute of Neurological Disorders and Stroke-supported network for excellence in neuroscience clinical trials. *JAMA Neurol*; 77(6):755-763. PMID: 32202612
- 24. Hadlandsmyth K, Mosher HJ, **Bayman EO**, Wikle JG, Lund BC (2020): A typology of new long-term opioid prescribing in the Veterans Health Administration. *J Gen Intern Med*; 35(9):2607-2613. PMID: 32206994
- 25. **Bayman EO**, Parekh KR, Keech J, Larson N, Vander Weg M, Brennan TJ (2019): Preoperative patient expectations of postoperative pain are associated with moderate to severe acute pain after VATS. *Pain Med*; 20(3):543-554. PMID: 29878248
- 26. Seering MS, **Bayman EO**, Wong CA, Ranganath YS, Marian AA (2019): Comparison of the effect of three different adjuvants on the analgesic duration of single injection interscalene brachial plexus block. *Reg Anesth Pain Med*; 44(9):866-871. PMID: 31308262
- 27. Dexter F, **Bayman EO**, Pattillo S. J, Schwenk ES, Epstein RH (2018): Influence of parameter uncertainty on the tardiness of the start of a surgical case following a preceding surgical case performed by a different surgeon. *Perioper Care OR Manag*; 13:12-17.
- 28. **Bayman EO**, Brennan TJ (2018): Video-assisted thoracoscopic surgery versus robotic-assisted thoracoscopic surgery and postoperative opioid consumption: *J Thorac Dis*; 10: S3222-S3223. PMID: 30370119
- 29. Bayman EO, Brennan TJ (2018): In reply Anesthesiology; 128(1):225. PMID: 29232230
- 30. **Bayman EO**, Dexter F (2018): Relative importance of strategies for improving the sample size selection and reporting of small randomized clinical trials in anesthesiology. *Can J Anaesth*; 65(6):607-610. (editorial)
- 31. Block RI, Magnotta VA, **Bayman EO**, Choi JY, Thomas JJ, Kimble KK (2018): In reply *Anesthesiology;* 128(6):1261.
- 32. **Bayman EO**, Dexter F, Ledolter J (2017): Mixed effects logistic regression modeling of daily evaluations of nurse anesthetists' work habits adjusting for leniency of the rating anesthesiologists. *Perioper Care Oper Room Manag*; 6:14-19.
- 33. **Bayman EO**, Lennertz R, Brennan TJ (2017): Pain-related limitations in daily activities following thoracic surgery in a United States population. *Pain Physician*; 20(3): E367-E378. PMID: 28339436
- *34.* **Bayman EO**, Parekh KR, Keech J, Selte A, Brennan TJ (2017): A prospective study of chronic pain after thoracic surgery. *Anesthesiology*; 126(5):938-951. PMID: 28248713
- 35. **Bayman EO**, Parekh KR, Keech J, Brennan TJ (2017): Response to "VATS vs. thoracotomy regarding postoperative chronic pain". *J Thorac Dis*; 9(12): E1151-E1153.

36. **Bayman EO**, Parekh KR, Keech J, Brennan TJ (2017): Response to "Editorial on pain following thoracic surgery". *J Thorac Dis*; 9(12): E1154-E1155.

- 37. Block RI, Magnotta VA, **Bayman EO**, Choi JY, Thomas JJ, Kimble KK (2017): Are anesthesia and surgery during infancy associated with decreased white matter integrity and volume during childhood? *Anesthesiology*; 127(5):788-799. PMID: 28837436
- 38. Dexter F, **Bayman EO**, Dexter EU (2017): Monte Carlo simulations comparing Fisher's exact test and unequal variances t-test for analysis of differences between groups in brief hospital lengths of stay. *Anesth Analg*; 125(6):2141-2145. PMID: 28961563
- 39. **Bayman EO**, Dexter F, Todd MM (2016): Prolonged operative "time to extubation" is not an appropriate metric for comparing the performance of individual anesthesia providers. *Anesthesiology*; 124(2):322-338. PMID: 26545101
- 40. Zanaty M, Chalouhi N, Starke RM, Daou B, Todd M, **Bayman EO**, Torner J, Hasan D (2016): Short-term outcome of clipping versus coiling of ruptured intracranial aneurysms treated by dual-trained cerebrovascular surgeon: Single-institution experience. *Neurosurg*; 95: 262-269.
- 41. Aziz MF, Abrons RO, Cattano D, **Bayman EO**, Swanson DE, Hagberg CA, Todd MM, Brambrink AM (2016): First-attempt intubation success of video laryngoscopy in patients with predicted difficult airway. *Anesth Analg*; 122(3):740-750. PMID: 26579847
- 42. Marian AA, **Bayman EO**, Gillett A, Hadder B, Todd MM (2016): The influence of the type and design of the anesthesia record on ASA physical status scores in surgical patients. *BMC Med Inform Decis Mak*; 16:29. PMID: 26936616
- 43. Aziz MF, **Bayman EO**, Van Tienderen MM, Todd MM, Brambrink AM (2016): Predictors of difficult video laryngoscopy with GlideScope® or C-MAC® with D-blade. *Br J Anaesth*; 117(1):118-123. PMID: 27317711
- 44. **Bayman EO**, Dexter F, Todd MM (2015): Assessing and comparing anesthesiologists' performance on mandated metrics using a Bayesian approach. *Anesthesiology*; 123(1):101-115. PMID: 25906338
- 45. Eisen SH, Hindman BJ, **Bayman EO**, Dexter F, Hasan DM (2015): Elective endovascular treatment of unruptured intracranial aneurysms. *Anesth Analg*; 121(1):188-197. PMID: 25806401
- 46. Marian AA, Ranganath YS, **Bayman EO**, Senasu J, Brennan TJ (2015): A comparison of two ultrasound-guided approaches to the saphenous nerve block: A prospective, randomized, blinded, noninferiority trial. *Reg Anesth Pain Med*; 40(5):623-630. PMID: 26110441
- 47. Ueda K, **Bayman EO**, Johnson C, Odum NJ, Lee JJ (2015): A randomized controlled trial of radial artery cannulation guided by Doppler vs. palpation vs. ultrasound. *Anaesthesia*; 70(9):1039-1044. PMID: 25857597
- 48. Oral R, Koc F, Jogerst K, Bayman L, Austin A, Sullivan S, **Bayman EO** (2014): Staff training makes a difference. *J Matern Fetal Neonatal Med*; 27(10):1049-1054. PMID: 24060204
- 49. **Bayman EO**, Brennan TJ (2014): Incidence and severity of chronic pain at 3 and 6 months after thoracotomy: Meta-analysis. *J Pain*; 15(9):887-897. PMID: 24968967
- 50. Kumar AB, Hata JS, **Bayman EO**, Krishnan S (2013): Implementing a hybrid web-based curriculum for an elective medical student clerkship in a busy surgical intensive care unit. *J Surg Educ*; 70(1):109-116. PMID: 23337679

51. **Bayman EO**, Chaloner KM, Hindman BJ, Todd MM (2013): Bayesian methods to determine performance differences and to quantify variability among centers in multi-center trials. *BMC Med Res Methodol*; 13:5. PMID: 23324207

- 52. Todd MM, **Bayman EO** (2013): Fiberoptic versus video laryngoscopic management of the difficult airway: Problems with post-randomization patient exclusion. *Anesthesiology*; 118(2):460. PMID: 23340356
- 53. Ueda K, Puangsuvan S, Hove MA, **Bayman EO** (2013): Ultrasound visual image-guided vs Doppler auditory-assisted radial artery cannulation in infants and small children by non-expert anaesthesiologists. *Br J Anaesth*; 110(2):281-286. PMID: 23151422
- 54. Dexter F, Epstein RH, **Bayman EO**, Ledolter J (2013): Estimating surgical case durations and making comparisons among facilities: Identifying facilities with lower anesthesia professional fees. *Anesth Analg*; 116(5):1103-1115. PMID: 23558844
- 55. Spofford CM, **Bayman EO**, Szeluga DJ, From RP (2012): Anesthesia machine checkout and room setup: a randomized, single-blind, comparison of two teaching modalities. *J Educ Perioper Med*; 14(1): E060. PMID: 27175391
- 56. Block RI, Thomas JJ, **Bayman EO**, Choi JY, Kimble KK, Todd MM (2013): In reply. *Anesthesiology;* 119(1):234-236.
- 57. Block RI, Thomas JJ, **Bayman EO**, Choi JY, Kimble KK, Todd MM (2012): Are anesthesia and surgery during infancy associated with altered academic performance during childhood? *Anesthesiology*; 117(3):494-503. PMID: 22801049
- 58. Laur JJ, **Bayman EO**, Foldes PJ, Rosenquist RW (2012): Triple-blind randomized clinical trial of time until sensory change using 1.5% mepivacaine with epinephrine, 0.5% bupivacaine, or an equal mixture of both for infraclavicular block. *Reg Anesth Pain Med*; 37(1):28-33. PMID: 22157740
- 59. Kumar AB, Suneja M, **Bayman EO**, Weide GD, Tarasi M (2012): Association between postoperative acute kidney injury and duration of cardiopulmonary bypass: A meta-analysis. *J Cardiothorac Vasc Anesth*; 26(1):64-69. PMID: 21924633
- 60. Mahaney KB, Todd MM, **Bayman EO**, Torner JC (2012): Acute postoperative neurological deterioration associated with surgery for ruptured intracranial aneurysm. *J Neurosurg*; 116(6):1267-1278. PMID: 22404668
- 61. Oral R, Koc F, **Bayman EO**, Assad A, Austin A, Strang T, Bayman L (2012): Perinatal illicit drug screening practices in mother-newborn dyads at a university hospital serving rural/semi-urban communities. *J Matern Fetal Neonatal Med*; 25(11):2441-2446. PMID: 22716202
- 62. Hata JS, Stotts C, Shelsky C, **Bayman EO**, Frazier A, Wang J, Nickel EJ (2011): Reduced mortality with noninvasive hemodynamic monitoring of shock. *J Crit Care*; 26(2): 224.e1-8. PMID: 20813490
- 63. Oral R, Bayman L, Assad A, Wibbenmeyer L, Buhrow J, Austin A, **Bayman EO** (2011): Illicit drug exposure in patients evaluated for alleged child abuse and neglect. *Pediatr Emerg Care*; 27(6):490-495. PMID: 21629147
- 64. **Bayman EO**, Dexter F, Laur JJ, Wachtel RE (2011): National incidence of use of monitored anesthesia care. *Anesth Analg*; 113(1):165-169. PMID: 21596866

65. Hindman BJ, **Bayman EO**, Pfisterer WK, Torner JC, Todd MM (2010): No association between intraoperative hypothermia or supplemental protective drug and neurologic outcomes in patients undergoing temporary clipping during cerebral aneurysm surgery. *Anesthesiology*; 112(1):86-101. PMID: 19952722

- 66. Dexter F, **Bayman EO**, Epstein RH (2010): Statistical modeling of average and variability of time to extubation for meta-analysis comparing desflurane to sevoflurane. *Anesth Analg*; 110(2):570-580. PMID: 19820242
- 67. **Bayman EO**, Chaloner K, Cowles MK (2010): Detecting qualitative interaction: A Bayesian approach. *Stat Med*; 29(4):455-463. PMID: 19950107
- 68. Agoliati A, Dexter F, Lok J, Masursky D, Sarwar MF, Stuart SB, **Bayman EO**, Epstein RH (2010): Meta-analysis of average and variability of time to extubation comparing isoflurane with desflurane or isoflurane with sevoflurane. *Anesth Analg*; 110(5):1433-1439. PMID: 20418303
- 69. Nguyen HP, Zaroff JG, **Bayman EO**, Gelb AW, Todd MM, Hindman BJ (2010): Perioperative hypothermia (33 degrees C) does not increase the occurrence of cardiovascular events in patients undergoing cerebral aneurysm surgery. *Anesthesiology*; 113(2):327-342. PMID: 20571361
- 70. Coghlan LA, Hindman BJ, **Bayman EO**, Banki NM, Gelb AW, Todd MM, Zaroff JG (2009): Independent associations between electrocardiographic abnormalities and outcomes in patients with aneurysmal subarachnoid hemorrhage. *Stroke*; 40(2):412-418. PMID: 19095990
- 71. Todd MM, Hindman BJ, Clarke WR, Torner JC, Weeks JB, **Bayman EO**, Shi Q, Spofford CM (2009): Perioperative fever and outcome in surgical patients with aneurysmal subarachnoid hemorrhage. *Neurosurgery*; 64(5):897-908. PMID: 19404150
- 72. McGregor DG, Lanier WL, Pasternak JJ, Rusy DA, Hogan K, Samra S, Hindman B, Todd MM, Schroeder DR, **Bayman EO**, Clarke W, Torner J, Weeks J (2008): Effect of nitrous oxide on neurologic and neuropsychological function after intracranial aneurysm surgery.

  Anesthesiology; 108(4):568-579. PMID: 18362587
- 73. Cakar E, Dincer U, Kiralp MZ, Taskaynatan MA, Yasar E, **Bayman EO**, Ozgul A, Dursun H (2007): Sexual problems in male ankylosing spondylitis patients. *Clin Rheumatol*; 26(10):1607-1613. PMID: 17285222
- 74. Ercan I, Özkaya G, Alper Z, Ediz B, **Bayman EO**, Kan İ, Bilgel N (2006): Algorithm for increasing patient satisfaction related to a non-technical dimension of services in Turkey. *Eur J Gen Med*; 3(2):73-77.
- 75. Demircan C, Cikriklar HI, Engindeniz Z, Cebicci H, Atar N, Guler V, **Unlu (Bayman) EO**, Ozdemir B (2005): Comparison of the effectiveness of intravenous diltiazem and metoprolol in the management of rapid ventricular rate in atrial fibrillation. *Emerg Med J*; 22(6):411-414. PMID: 15911947
- 76. Ozkan T, Kıyıcı M, Memesa A, Dolar E, Ozakın C, **Unlu (Bayman) EO**, Ozeke T (2002): Value of stool antigen test in diagnosis of helicobacter pylori infection. *Hepato-Gastroenterology*; 49:321.
- 77. Kurt E, Evrensel T, Gonullu G, Kanat O, Demiray M, Arslan M, **Unlu (Bayman) EO**, Dilek K, Manavoglu O (2002): Cisplatin'e bagli bobrek toksisitesi ve sentetik oral prostaglandin E1 analogunun etkinliginin degerlendirilmesi. *Uludag Univ Tip Fakultesi Dergisi*; 28(2):17-20.

### **Book Chapters**

• Bayman EO (2021): Middle Development Trials. S. Piantadosi & C. L. Meinert (Eds.), *Principles and Practice of Clinical Trials*, New York, NY: Springer, ISBN: 978-3-319-52677-5.

#### **Invited Presentations**

- 1. Learning to speak the language of the collaborators: collaborating with other researchers, *First Annual PURPOSE Pain Meeting*, NIH HEAL Initiative, Washington DC, 2023.
- 2. Use of Bayesian methods to correctly identify true outliers in clinical metrics of individuals and provider performance, *Scholarship in Family Medicine Conference*, University of Iowa, Iowa City, IA, 2017.
- 3. Bayesian outlier detection methods, *International Society for Bayesian Analysis Meeting*, Sardine, Italy, 2016.
- 4. Detecting performance outliers with Bayesian methods, *University of Iowa, College of Public Health, Department of Biostatistics*, 2016.
- 5. Assessing and comparing anesthesiologists' performance on mandated metrics using a Bayesian hierarchical model, *Design and Analysis of Experiment Conference*, Cary, NC, 2015
- 6. What does all this 'Greek' mean? Navigating and making sense of scientific literature, *Iowa Association of Nurse Anesthetists Meeting*, Des Moines, IA, 2014
- 7. Who is not performing as fellow colleagues? A Bayesian hierarchical model for mandated faculty monitoring, *American Statistical Association Oregon Chapter*, Portland, OR, 2014
- 8. Approaches to assessing qualitative interactions, *Joint Applied Statistics Symposium, International Chinese Statistical Association & Korean International Statistical Society*, Portland, OR, 2014
- 9. Detecting qualitative interaction among subgroups of a clinical trial with a Bayesian approach, Applied Statistics Symposium, *International Chinese Statistical Association*, Boston, MA, 2012
- 10. Power and sample size calculations for multi-center clinical trials, *Design and Analysis of Experiment Conference*, Memphis, TN, 2007

#### **Contributed Presentations**

- 1. Mascha E, **Bayman EO** (2024): Cluster-Randomized Crossover Trials (CRXO): Design and Analysis Features. *Society for Clinical Trials*, Boston, MA (roundtable discussion).
- 2. **Bayman EO**, Zimmerman B, Heagerty P, Turner L, Lafontant D, McCabe M, Ecklund D, Crofford L, Sluka K (2023): Reassessing the sample size in a cluster randomized trial. *Society for Clinical Trials*, Baltimore, MD.
- 3. Thabane L, **Bayman EO** (2023): Career Paths in Clinical Trials. *Society for Clinical Trials*, Baltimore, MD (roundtable discussion).
- 4. Post AA, Lafontant D, McCabe ME, **Bayman EO**, Dailey DL, Chimenti RL, Costigan M, Franck C, Huff T, Johnson E, Koepp M, Neill-Hudson T, Vance CG, Van Gorp B, Zimmerman BM, Ecklund D, Crofford LJ, Sluka KA (2023): Movement-evoked and resting pain are each associated with disease impact in individuals with fibromyalgia. J Pain 24(4, Supp):81-82, *United States Association for the Study of Pain Meeting*, Durham, NC.

5. Fleagle TR, Post AA, Dailey DL, Vance CG, **Bayman EO**, Crofford LJ, Sluka KA, Chimenti RL (2023): Establishing a minimal clinically important difference of movement-evoked pain in musculoskeletal pain. J Pain 24(4, Supp):83-84, *United States Association for the Study of Pain Meeting*, Durham, NC.

- 6. **Bayman EO**, Nadel L, Coffey C, Sluka KA, Dailey DL, McCarthy RJ, Brummett C (2023): Acute to chronic pain signatures (A2CPS) thoracic enrollment. J Pain 24(4, Supplement):7, *United States Association for the Study of Pain Meeting*, Durham, NC.
- 7. Berardi G, Frey-Law L, Vance CG, **Bayman EO**, Coffey CS, Dailey DL, Ecklund D, Sluka KA, Balach T, Burns J, Buvanendran A, Jacobs J, McCarthy RJ, Wixson R, Zhou XJ, Brummett CM, Chang A, Clauw D, Colquhoun D, Harris RE, Harte S, Waljee J, Williams DA, Dakup P, Fiehn O, Fisch KM, Howard TD, Jacobs JM, Jepsen K, Langefeld CD, Laurent LC, Lokshin A, Olivier M, Qian W, Swensen AC, Caffo B, Crainiceanu C, Ford J, Kahn A, Lindquist M, Sutherland SP, Taub M, Wager T, Johnston N, Wandner LD (2022): Acute to Chronic Pain Signatures Program (A2CPS): Implementation of remote training for a multisite observation study during COVID-19. *J Pain* 23(5 Supp):5-6, *United States Association for the Study of Pain Meeting*, Cincinnati, OH.
- 8. Dailey DL, Vance CG, Chimenti RL, Franck C, Post A, Johnson E, Costigan M, Koepp M, Huff T, Van Gorp B, Ecklund D, **Bayman EO**, Archer KR, Zimmerman B, Crofford LJ, Sluka KA (2022): Physical therapist training challenges for an embedded pragmatic trial. J Pain 23(5 Suppl):33-34, *United States Association for the Study of Pain Meeting*, Cincinnati, OH.
- 9. Van Gorp B, Vance CG, Dailey DL, Chimenti RL, Post A, **Bayman EO**, Costigan M, Neill-Hudson T, Ecklund D, Johnson EM, Archer-Swygert KR, Crofford LJ, Sluka KA (2022): Facilitators and barriers to implementation of a transcutaneous electrical nerve stimulation intervention in a pragmatic clinical trial. *J Pain* 23(5 Supp):33, *United States Association for the Study of Pain Meeting*, Cincinnati, OH.
- 10. Bayman EO, Dailey DL, Ecklund D, Johnson E, Vance CG, Van Gorp B, Lafontant D, McCabe M, Zimmerman B, Koepp M, Costigan M, Chimenti RL, Spencer M, Post A, Huff T, Archer KR, Neill-Hudson T, Peters R, Nye G, Franck C, Crofford LJ, Sluka KA (2022): Impact of COVID-19 on the patient enrollment for a pragmatic, cluster randomized clinical trial for fibromyalgia. J Pain 23(5 Suppl):32, United States Association for the Study of Pain Meeting, Cincinnati, OH.
- 11. Berardi G, Vance CG, Dailey DL, Ecklund D, Coffey CS, **Bayman EO**, Sluka KA (2022): The Acute to Chronic Pain Signatures program (A2CPS): Conceptual design and protocol implementation of a multi-site observational study assessing risk and resilience biomarkers. Cambridge: J Clin Transl Sci 6(s1):51. *Translational Science Meeting of the Association for Clinical & Translational Science*, Chicago, IL.
- 12. **Bayman EO**, Langefeld CD, Lindquist M, Coffey C, Leroux A, Crainiceanu C, McCarthy R, Tsodikov A, Zeger SL, Berardi G, Brummett C, Burns J, Clauw D, Johnston N, Sluka K, Wager TD (2022): Acute to Chronic Pain Signature Program powered for discovery and prediction modeling. *International Association for the Study of Pain*, Toronto, Canada.
- 13. **Bayman EO**, Ecklund D, Sluka K, Berardi G, Dailey D (2022): Increasing the generalizability of pain study results. *Society for Clinical Trials Annual Meeting*, San Diego, CA.
- 14. Lai HH, **Bayman EO**, Landis JR, Harte S, Clemens JQ, Rodriguez L, Sutcliffe S, Taple B, Naliboff B (2020): Longitudinal changes in the "pelvic pain only" and "widespread pain" phenotypes in the MAPP urologic chronic pelvic pain syndrome cohort. Baltimore, MD: *J Urol* 203(4S): Supp.

15. Chimenti R, Post A, Rio E, **Bayman EO**, Hall M, Netto CD, Wilken J, Danielson J, Moseley L, Sluka KA (2020): Integrating pragmatism and rigor - impact of the pandemic on a randomized controlled trial of a complex intervention. *Inaugural Meeting of the US Association for the Study of Pain*, Virtual.

- 16. **Bayman EO**, Dailey DL, Ecklund D, Johnson E, Vance CG, Zimmerman B, Costigan M, Chimenti R, Spencer M, Post A, Huff T, Koepp M, Archer KR, Peters R, Nye G, Franck C, Neill-Hudson T, Crofford L, Sluka KA (2020): Impact of COVID-19 on a pragmatic, cluster randomized clinical trial for fibromyalgia. *Inaugural Meeting of the US Association for the Study of Pain*, Virtual.
- 17. Dailey DL, Vance CG, Chimenti R, Franck C, Post A, Johnson E, Costigan M, Koepp M, Huff T, Ecklund D, **Bayman EO**, Zimmerman B, Archer K, Crofford LJ, Sluka KA (2020): Fibromyalgia transcutaneous electrical nerve stimulation in physical therapy study: an embedded pragmatic clinical trial in physical therapy clinics. *Inaugural Meeting of the US Association for the Study of Pain*, Virtual.
- 18. Sluka KA, Law LF, Coffey CS, **Bayman EO**, Ecklund D, Vance CG, Dailey DL, Wager T, Lindquist M, Kahn A, Burns J, McCarthy R, Jacobs J, Buvanendran A, Zhou X, Brummett C, Clauw D, Williams D (2020): Conceptual design and protocol for the acute to chronic pain signatures program. *Inaugural Meeting of the US Association for the Study of Pain*, Virtual.
- 19. **Bayman EO**, Bishop M, Hadlandsmyth K, Lund B, Kang S, Vander-Weg MW, Mosher H (2019): Chronic opioid use after thoracic surgery among VA veterans. *American Pain Society Scientific Meeting*, Milwaukee, WI.
- 20. **Bayman EO**, Parekh KR, Keech JC, Brennan TJ (2018): Predictors of moderate-to-severe acute pain after video-assisted thoracoscopic surgery. *Association of University Anesthesiologists Annual Meeting*, Chicago, IL.
- 21. Ranganath YS, Yap A, Ravindranath S, **Bayman EO**, Marian A (2018): Adductor canal block: an anatomical study in volunteers to identify the relationship between the two commonly described block approaches. *American Society of Regional Anesthesia and Pain Medicine Annual Meeting*, New York, NY.
- 22. **Bayman EO**, Brennan, T (2017): Acute pain after thoracic surgery. *The ACTTION-APS-AAPM Acute Pain Taxonomy (AAAPT) Meeting*, The ACTTION-APS-AAPM Acute Pain Taxonomy (AAAPT), Washington DC.
- 23. **Bayman EO**, Parekh KR, Keech JC, Brennan TJ (2017): Association of preoperative expected pain with acute pain after video-assisted thoracoscopic surgery. *American Society of Anesthesiologists Annual Meeting*, Boston, MA.
- 24. **Bayman EO**, Parekh KR, Keech JC, Brennan TJ (2017): A prospective study of predictors of chronic pain after thoracic surgery. *American Pain Society Annual Meeting*, Pittsburgh, PA.
- 25. **Bayman EO**, Brennan TJ (2016): The Danish questionnaire for pain after thoracic surgery in a United States population. *American Pain Society Annual Meeting*, Austin, TX.
- 26. **Bayman EO**, Brennan TJ (2015): Chronic pain after thoracic surgery. *Health Sciences Research Week*, University of Iowa, Iowa City, IA.
- 27. Aziz M, Abrons RO, Cattano D, **Bayman EO**, Swanson D, Hagberg C, Todd MM, Brambrink A (2015): Comparison of the Storz C-MAC D-Blade against the Glidescope, efficacy in the predicted difficult airway. *International Anesthesia Research Society*, Honolulu, HI.

28. **Bayman EO**, Brennan TJ (2014): No change in the incidence of chronic pain after thoracotomy for three decades. *American Pain Society Annual Meeting*, Tampa, FL.

- 29. Hussey P, Ueda K, **Bayman EO** (2014): Radial arterial line cumulative summation test for learning curve among residents. *Midwest Anesthesia Residents Conference*, Chicago, IL.
- 30. Eisen SH, Hasan DM, **Bayman EO**, Hindman BJ (2013): Factors associated with ICU admission after elective endovascular treatment of unruptured intracranial aneurysms. *American Society of Anesthesiologists Annual Meeting*, San Francisco, CA.
- 31. **Bayman EO**, Dexter F, Todd MM (2013): An improved statistical method for assessing and comparing anesthesiologists' performance on mandated metrics. *American Society of Anesthesiologists Annual Meeting*, San Francisco, CA.
- 32. Ueda K, Johnson C, Odum NJ, **Bayman EO** (2012): Ultrasound visual guided versus doppler auditory assisted versus palpation technique for radial arterial cannulation in adult patients. *American Society of Anesthesiologists Annual Meeting*, Washington DC.
- 33. **Bayman EO**, Chaloner K (2012): Detecting outliers in multi-center clinical trials. *World Congress in Probability and Statistics*, Istanbul, Turkey.
- 34. **Bayman EO**, Chaloner K, Hindman BJ, Todd MM, IHAST Investigators (2011): No large differences among centers in a multi-center neurosurgical clinical trial. *Society for Clinical Trials Annual Meeting*, Vancouver, Canada.
- 35. Kumar AB, Hata JS, **Bayman EO** (2010): Designing and implementing a web-based curriculum for the medical student clerkship in a busy surgical ICU. *The Society for Education in Anesthesia Meeting*, Pittsburgh, PA.
- 36. Thomas JJ, Choi JY, **Bayman EO**, Kimble KK, Todd MM, Block RI (2010): Does anesthesia exposure in infancy affect academic performance in childhood? *International Anesthesia Research Society (IARS)*, Honolulu, HI.
- 37. Kumar AB, Tarasi M, **Bayman EO** (2010): Is time on cardiopulmonary bypass during cardiac surgery related to post-operative acute kidney injury and outcomes? *Midwest Anesthesia Residents Conference*, Cincinnati, OH.
- 38. Dexter F, **Bayman EO**, Epstein RH (2009): Modeling average and variability of time to extubation for meta-analysis comparing desflurane to sevoflurane. *American Society of Anesthesiologists Annual Meeting*, New Orleans, LA.
- 39. From RP, Spofford CM, **Bayman EO**, Szeluga DA, Choi JY, Brenchley P (2009): Anesthesia machine setup and checkout: Web-based video instruction versus lecture group instruction. *American Society of Anesthesiologists Annual Meeting*, New Orleans, LA.
- 40. **Bayman EO**, Chaloner K (2008): Power of test of qualitative interaction in multi-center clinical trials. *Society for Clinical Trials Annual Meeting*, St. Louis, MO.
- 41. Leira EC, Torner JC, Davis PH, **Bayman EO**, Weeks JB, Hindman BJ, Todd M (2008): A simple algorithm to predict site of ruptured aneurysm in patients with good grade subarachnoid hemorrhage. *Congress of the European Federation of Neurological Societies Meeting*, Madrid, Spain.
- 42. **Bayman EO**, Chaloner K (2008): Detecting qualitative interaction: a Bayesian approach. *Bayesian Biostatistics Conference*, Houston, TX.

43. **Bayman EO**, Chaloner K (2008): Detecting qualitative interaction: a Bayesian approach. *International Biometric Society Eastern North American Region Meeting*, Arlington, VA.

- 44. Torner J, Todd MM, Hindman BJ, Clarke W, Weeks JB, Shi Q, **Bayman EO** (2007): Early postoperative neurological deficits and outcome after subarachnoid hemorrhage in good grade patients. *International Stroke Conference*, San Francisco, CA.
- 45. **Bayman EO**, Chaloner K, Cowles MK (2007): Bayesian sample size calculations for multi-center clinical trials with binary responses. *Health Sciences Research Week*, University of Iowa, Iowa City, IA.
- 46. **Bayman EO**, Chaloner K, Cowles MK (2007): Power and sample size calculations for Bayesian analysis and assessment of balance for multi-center clinical trials with binary responses. *Midwest Biopharmaceutical Statistics Workshop*, Ball State University, Muncie, IN.
- 47. Chaloner K, **Bayman EO**, Han C (2007): Bayesian experimental design in practice: generalized linear mixed model example, nonlinear mixed effects model example. *International Symposium on Business and Industrial Statistics*, Ponta Delgada Azores, Portugal.
- 48. **Bayman EO**, Chaloner K, Cowles K (2007): Bayesian power and sample size calculations for multi-center clinical trials with binary responses. *Joint Statistical Meeting*, Salt Lake City, UT.
- 49. Chaloner K, **Bayman EO**, Cowles MK, Shi Q, Zhang L (2007): Multi-center clinical trials with binary outcomes and random effects for centers: sample size and power determination. *Joint Statistical Meeting*, Salt Lake City, UT.
- 50. Cakar E, Dincer U, Kiralp MZ, **Bayman EO**, Dursun H (2006): Ankilozan spondilitte hastalik 'aktivitesnin belirlemede akut faz reaktaniari ve basdai'nin karsilastirilmasi. *Ulusal Romatizmal Hastaliklar Kongresi*, Antalya, Turkey.
- 51. **Bayman EO**, Taneli Y, Ediz B, Guvendeger N, Kan I, Taneli S (2004): The reliability and validity analysis on Yale-Brown obsessive-compulsive disorder scale for adults and children. *World Congress of the International Association for Child and Adolescent Psychiatry and Allied Professions*, Berlin, Germany.

### **Grant Activity**

Grant	Role	<b>Funding Period</b>
NIH/ NINDS; A Phase 3 Clinical Trial of an E-Health Behavioral Intervention to Improve Executive Functioning in Adolescents with Epilepsy	Avani Modi, Pl Emine Bayman, Co-l	2024 - 2029
PCORI; A Comparative Effectiveness Study of Oral Medications Used for Migraine Prevention	Todd Schwedt, Chris Coffey, Co-Pl Emine Bayman, Co-l	2024 - 2029
NIH/ NINDS; Data Coordinating Center for Network of Excellence in Neuroscience Clinical Trials (NeuroNEXT)	Chris Coffey, PI Emine Bayman, Co-I	2011 - 2028
NIH/ NCATS; University of Iowa Institute for Clinical and Translational Science (ICTS)	Patricia Winokur, PI Emine Bayman, Co-I	2023 - 2028

Grant	Role	Funding Period
NIH/ NINDS; Interdisciplinary Training Program in Pain Research	Kathleen Sluka, Yuriy Usachev, Co-Pl Emine Bayman, Co-I	2022 - 2027
Acute to Chronic Pain Signatures (A2CPS) Program	Kathleen Sluka, Laura Frey-Law, Chris Coffey, Co-Pl Emine Bayman, Co-I	2019 - 2025
NIH/ NHLBI; Iowa Summer Institute for Research Education in Biostatistics and Data Science	Gideon Zamba, PI Emine Bayman, Co-I	2022 - 2025
NIH/ NHLBI; A Pharmacist Intervention for Monitoring and Treating Hypertension Using Bidirectional Texting	Linnea Polgreen, PI Emine Bayman, Co-I	2020 - 2025
NIH/ NIAMS; Fibromyalgia TENS in Physical Therapy Study (TIPS): An Embedded Pragmatic Clinical Trial	Kathleen Sluka, Leslie Crofford, Co-Pl Emine Bayman, Co-I	2020 - 2024
NIH/ NICHD; General Anesthesia During Early Childhood and Brain Development	Robert Block, PI Emine Bayman, Co-I	2018 - 2024
V Foundation for Cancer Research; Alleviation of Paclitaxel-Induced Peripheral Neuropathies in Cancer Survivors	Donna Hammond, PI Emine Bayman, Co-I	2019 - 2023
PCORI; Posterior Fossa Decompression with or without Duraplasty for Chiari Type I Malformation with Syringomyelia	David Limbrick, Pl Emine Bayman, Co-I	2015 - 2023
NIH/NIAMS; Mechanism-Based Treatment Approach to Chronic Tendinopathy Pain	Ruth Chimenti, PI Emine Bayman, Co-I	2019 - 2022
Iowa Neuroscience Institute Accelerator Grant; Personalized Neuromodulation for Treating Post- Surgical Pain	Emine Bayman, Jatin Vaidya, Co-Pl	2019 - 2021
NIH/NCI; Phase II Trial of Nicotinamide Riboside for Relief of Taxane-Induced Sensory Neuropathy	Donna Hammond, PI Emine Bayman, Co-I	2016 - 2020
University of Iowa; Nontraumatic Subarachnoid Hemorrhage (SAH) Registry	Mike Todd, PI Emine Bayman, Co-I	2016 - 2020
NIH/ NIDDK; Bayesian Analysis of MAPP-I Psychosocial and Neuroimaging Data	Emine Bayman, Co-PI	2016 - 2018
NIH/NIDDK; Clinical Islet Transplantation Trial	Eric Foster, PI Emine Bayman, Co-I	2015 - 2017
University of Iowa; Brain fMRI to Predict Chronic Pain after Thoracotomy	Emine Bayman, PI	2015 - 2016

Grant	Role	<b>Funding Period</b>
NINDS; Predicting Chronic Pain after Thoracic Surgery: A Bayesian Approach	Emine Bayman, PI	2013 - 2015
Karl Storz Endoscope; Storz Against Glidescope	Michael Aziz, PI	2012 - 2014
Efficacy (StAGE Trial)	Emine Bayman, Co-I	
SmartTots; General Anesthesia During Human Infancy and Brain Development	Robert Block, PI Emine Bayman, Co-I	2012 - 2014
Baxter Pharmaceuticals; Statistical Modeling of Rate and Reliability of Time to Extubation for Meta- Analysis Comparing Desflurane to Sevoflurane	Franklin Dexter, PI Emine Bayman, Co-I	2008 - 2009

# **Teaching**

## Primary Instructor – University of Iowa

Course Nun	nber Course Name	Credits	Year
BIOS:7600	Advanced Clinical Trials (co-instructor)	3	2024
BIOS:5710	Biostatistical Methods I	4	2019, 2020, 2022, 2023
BIOS: 5130	Applied Categorical Data Analysis	3	2021
171: 161	Introduction to Biostatistics	3	2009
156: 204	Biostatistics for Biomedical Research	1	2009 - 2014
Contributed Lectures - University of Jowa			

## Contributed Lectures – University of Iowa

BIOS:6610	Statistical Methods in Clinical Trials	2008 (TA), 2009 - 2023
BIOS:7600	Advanced Clinical Trials	2016, 2018, 2020, 2022

## Uludag University (Teaching Assistant)

Introduction to Biostatistics I	2000, 2001, 2002
Introduction to Biostatistics II	2000, 2001, 2002
Data Analysis with Statistical Software	2000, 2001

### PhD Thesis Advisor/ Co-Advisor

Ling Zhang Primary Advisor, with Dr. Gideon Zamba Nov 2023
A family of modified Huber loss functions for continual reassessment methods in clinical trials

Megan McCabe Impact of differences	Primary Advisor, with Dr. Chris Coffey in placebo response for platform trials	June 2024
Fangfang Jiang Bayesian approaches	Primary Advisor, with Dr. Gideon Zamba for early phase clinical trials	TBD

### Dissertation Committee Member

Name	Department	Defense Date
Yoon Joo Cho	Biostatistics	TBD
Lauren Mudd	Biostatistics	TBD
Uche Nwoke	Biostatistics	TBD
Adam Janowski	Physical Therapy and Rehabilitation Science	August 2024
Daren Kuwaye	Biostatistics	December 2023
Daniel Kang	Biostatistics	December 2022
Hassan Ahamed	MD/ PhD in Neuroscience	August 2022
Jacob Gallagher	Health and Human Physiology	March 2021
Alexandra Curtis	Biostatistics	November 2020
Anne Welhaven	Biostatistics	December 2019
Janel Barnes	Biostatistics	June 2017

# Other Mentoring \_\_\_\_\_

Trainee Name	Trainee Role	Faculty Role	Date
Atakan Selte	Medical student	Research mentor	Summer 2016
Nyle Larson	Medical student	Research mentor	Summer 2017
Akshar Patel	MD	Research mentor	Fall 2017
Giovanni Berardi	post-doctoral research scholar	Faculty mentor	2021- Present
Emily Roberts	Junior faculty	Faculty mentor	2022 – Present
Ezgi Genc	post-doctoral research scholar	Faculty mentor	2024 - 2025

# **Professional Service**

Department of Biostatistics, University of Iowa				
Ladies in UI Biostatistics Committee, Organizer and Mentor	2019-Present			
Admission Committee	2019 - 2021			
M.S. Core Exam Committee	2020 - 2024			
Woolson Lecture Committee	2023, 2024			
Diversity, Equity, and Inclusion Committee	2020 - 2024			
Student Awards Committee	2019			
Faculty Search Committee      Promotion and Tonyra Internal Boar Figure Valuation Committee	2021			
<ul> <li>Promotion and Tenure Internal Peer Evaluation Committee</li> <li>Chaloner Lecture Committee</li> </ul>	2020, 2021			
Chatoner Lecture Committee	2022, 2023			
Department of Anesthesia, University of Iowa				
Research Review Committee	2010 - 2019			
Faculty Promotion and Tenure Committee	2017 - 2019			
Department of Anesthesia Strategic Planning Task Force	2017 - 2018			
College of Public Health, University of Iowa				
CPH Research Council (Chair in 2021 - 2022)	2020 to 2023			
CPH Alumni Task Force	2021			
<ul> <li>Associate Dean for Research Search Committee</li> </ul>	2021			
<ul> <li>College of Public Health Research Week Poster Judge</li> </ul>	2019 - 2024			
Compan College of Mediaine Hairensity of laws				
Carver College of Medicine, University of Iowa				
Admissions Committee	2011 - 2019			
<ul> <li>Carver College of Medicine Research Week Poster Judge</li> </ul>	2012 - 2019			
Faculty Senate Representing the College of Medicine	2018 - 2020			
University of Iowa				
College of Public Health Representative, University of Iowa's Women's	2022 - Present			
Faculty Development Symposium Planning Committee				

• Executive Leadership Academy – Higher Education Program, faculty mentor 2024-2025

## **Editorial Board Membership**

Journal	Impact Factor	My Role	Date Range
Journal of Pain	5.0	Editorial Board Member	2021 - Present
European J of Pain	3.6	Editorial Board Member	2021 - Present
Anesthesia and Analg	esia 4.6	Assistant Statistical Editor	2018 - Present
Neurosurgery	5.3	Editorial Board Member	2011 - Present

### Other Journal Reviews:

### Journal Name (Impact Factor / Number of Reviews)

Statistics / Clinical Trials	Medicine
Statistics in Medicine (1.8 / 2)	British Medical Journal (93.6 / 6)
Sequential Analysis (0.8 / 1)	British Medical Journal Open (2.9 / 4)
Trials (2.1 / 11)	Nature Medicine (58.7 / 1)
Anesthesiology	Injury (2.5 / 1)
Anesthesiology (9.1 / 2)	Annals of Palliative Medicine (1.93 / 1)
Acta Anaesthesiologic Scandinavica (2.3 / 2)	Frontiers in Medicine (3.1 / 1)
BMC Anesthesiology (2.2 / 2)	International J. of Obstetric Anesth. (2.6 / 2)
Pain Research	Journal of Clinical Epidemiology (7.5 / 1)
Journal of Pain Research (2.6 / 4)	Scientific Reports (4.3 / 1)
Pain Medicine (3.7 / 8)	PLoS ONE (3.8 / 4)
Clinical Journal of Pain (3.8 / 7)	
J. of Pain and Symptom Management (3.8 / 2)	
Pain Research and Management (2.5 / 1)	

## NIH Study Section / Grant Review

- National Institute of Neurological Disorders and Stroke (NINDS)
- March 2022, Dec 2022, March 2023, May 2023, Aug 2023, Jan 2024, April 2024, July 2024, July 2024, Nov 2024 (standing member as of Jan 2024)
- National Center for Complementary and Integrative Health (NCCIH) Sept 2022, Feb 2023, July 2023, Oct 2023.
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

April 2020, March 2024

DSMB Membership	
Pathophysiology of Active and Latent Myofascial Trigger Points	2022 - 2024
NIH/ NIDDK, Liver Cirrhosis Network (LCN)	2022 - Present
Young Adults as Community Health Workers in Humanitarian Settings	2022 - Present
Chronic Subdural Hematoma Treatment with Embolization vs. Surgery	2023 - Present
Clinical Trial of Amobarbital to Reduce PTOA Risk in Tibial Pilon Fractures	2022 - Present
NIH/ NIDA, Center for the Clinical Trials Network (CTN)	2024 - Present
Other Service	
Society for Clinical Trials, Membership Committee	2022 - Present
Elected co-chair	2024 - 2025
HEAL Data Ecosystem Collective Board, National Institutes of Health (NIH)	2021 - 2023
US Association for the Study of Pain, Co-Chair of the Clinical Trials in Pain	2020 - 2023
American Society of Anesthesiologists (ASA) Committee on Research	2019 - 2021
Other Membership	
American Statistical Association	2005 - Present
Society for Clinical Trials	2007 - Present
American Pain Society / US Association for the Study of Pain	2014 - Present

2020 - Present

Association of University Anesthesiologists, Elected Member