

Samuel A. McLean, MD, MPH

EDUCATION

| <u>Hospital/Institution and Location</u> | <u>Degree/Program</u> | <u>Year</u> | <u>Degree/Focus</u> |
|--|-----------------------|-------------|--|
| Boston Medical Center Boston University, Boston, MA | Residency | 2001 | Emergency Medicine |
| Massachusetts General Hospital Harvard University, Boston, MA | Residency | 1998 | Internal Medicine |
| University of Michigan Ann Arbor, MI | MD | 1995 | Medicine |
| University of Michigan Ann Arbor, MI | MPH | 1995 | Epidemiology |
| Dartmouth College Hanover, NH | BA | 1990 | Comparative Religion/Philosophy (summa cum laude) |
| Sexton High School Lansing, MI | Diploma | 1986 | Valedictorian |

Board Certification:

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|--------------------------------------|----------------------------------|
| American Board of Emergency Medicine | 2012-2022 |
| American Board of Internal Medicine | 1998-2008 (no renewal attempted) |

State Licensure:

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| North Carolina | 2007-01889 (current) |
| Michigan | 4301077320 (expired) |
| Massachusetts | 154989 (expired) |

PROFESSIONAL EXPERIENCE -- EMPLOYMENT HISTORY

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| 2013 | Associate Professor, with permanent tenure, Department of Anesthesiology, University of North Carolina at Chapel Hill, Chapel Hill, NC. |
| 2013 | Associate Professor, Department of Emergency Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC |
| 2009 - | Vice Chair, Research, Department of Anesthesiology, University of North Carolina at Chapel Hill, Chapel Hill, NC. |
| 2008 - | Director, TRYUMPH Research Program (Trauma recovery: Understanding Mechanisms & Promoting Healing), Chapel Hill, NC |
| 2009 - 2013 | Assistant Professor, Department of Anesthesiology, University of North Carolina at Chapel Hill, Chapel Hill, NC |
| 2008 - 2013 | Clinical Assistant Professor, Department of Emergency Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC. |
| 2008-2009 | Assistant Professor, School of Dentistry, Department of Endodontics, University of North Carolina at Chapel Hill, Chapel Hill, NC |
| 2006-2007 | Director, TRYUMPH Research Program, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI |
| 2006-2007 | Assistant Professor, Department of Psychiatry, University of Michigan, Ann Arbor, MI |
| 2006-2007 | Assistant Professor, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI |
| 2001-2006 | Lecturer, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI |

- 1998-2001 Teaching Fellow, Department of Emergency Medicine, Boston University School of Medicine, Boston, MA
- 1995-1998 Clinical Fellow, Department of Medicine, Harvard Medical School, Cambridge, MA

Society Memberships:

- 2010 – Present American Society of Anesthesiologists
- 2010 – Present American Burn Association
- 2007 – Present Society of Biological Psychiatry
- 2003 – Present American Pain Society
- 2003 – Present International Association for the Study of Pain
- 1998 – Present Society of Academic Emergency Medicine
- 1998 – Present American College of Emergency Physicians

HONORS AND AWARDS

- 2012 First author publication selected as journal club focus article for August addition of *Journal of Pain*, 2nd highest ranked journal in pain field (impact factor 4.9)
- 2012 Senior author of abstract selected as "Best of Abstracts: Clinical Science" at 2012 *American Society of Anesthesiologists* annual meeting
- 2012 Senior author of two abstracts selected as top abstracts at 2012 *Society for Biological Psychiatry* annual meeting (top 1% of all abstracts submitted)
- 2006 Golden Apple Teaching award nominee, UM/SJMH Residency Program
- 2005 Golden Apple Teaching award nominee, UM/SJMH Residency Program
- 2003 American Pain Society Emergency Medicine Pain Scholar
- 2002 University of Michigan Department of Emergency Medicine Top 5 Teaching Faculty to Medical Students Award
- 2001 Frommer Award for resident academic achievement, Boston Medical Center, Boston, MA.
- 2000 Research Award, Resident Division, New England Regional SAEM Conference, Worcester, MA.

BIBLIOGRAPHY

Textbook Chapters:

1. **McLean SA.** The potential role of stress systems in WAD pathogenesis. *In.* Sterling M, Kenardy J (eds): Whiplash: evidence base for clinical practice. Sydney. Elsevier 2011, 93-96.
2. Simmons S, **McLean SA.** Chronic pain and addiction. *In.* Newton CR, Khare RK (eds): Emergency Medicine Quick Glance, McGraw-Hill Publishers 2006, 701-703.
3. **McLean SA,** Clauw DJ, Williams DA. The role of trauma (whiplash, repetitive strain injury) in chronic neuromuscular pain. *In.* Wallace DJ, Clauw DJ (eds): Textbook of Fibromyalgia and Other Non-Neuropathic Pain Syndromes. Philadelphia. Lippincott 2005, 267-280.
4. Rothenhaus TC, **McLean SA.** Acute Renal Failure: Oliguria and Azotemia. *In.* Harwood-Nuss AL, Linden CH, Luten RC, et al. (eds): The Clinical Practice of Emergency Medicine, Third Edition. J.B. Lippincott 2001, 863-867.
5. Bortsov AV, Millikan RC, Belfer I, Boortz-Marx RL, Arora H, **McLean SA** Genetic polymorphisms in mu-opioid receptor gene and breast cancer survival. *In.* Marie-Odile Parat (ed): Morphine and Metastases. New York: Springer 2013, 95-112.

Journal Articles (Refereed):

1. Bortsov AV; Smith JE; Diatchenko L; Soward AC; Ulirsch JC; Rossi C; Swor RA; Hauda WE; Peak DA; Jones JS; Holbrook D; Rathlev NK; Foley KA; Lee DC; Collette R; Domeier RM; Hendry PL; **McLean SA.**

- Polymorphisms in the glucocorticoid receptor co-chaperone FKBP5 predict persistent musculoskeletal pain after traumatic stress exposure. *Pain*, 2013.
2. Isaacs CG, Kistler C, Hunold KM, Pereira GF, Buchbinder M, Weaver MA, **McLean SA**, Platts-Mills TF. Shared Decision-Making in the Selection of Outpatient Analgesics for Older Individuals in the Emergency Department. *J Am Geriatr Society*. [Epub Ahead of Print]
 3. Hunold KM, Esserman DA, Isaacs CG, Dickey RM, Pereira GF, Fillingim RB, Sloane PD, **McLean SA**, Platts-Mills TF. Side Effects from Oral Opioids in Older Adults During the First Week of Treatment for Acute Musculoskeletal Pain. *Academic Emergency Medicine*. Accepted *Academic Emergency Medicine* 2013.
 4. Lee DC, Peak DA, Jones JS, Domeier RM, Hendry PL, Rathlev NK, Swor RA, **McLean SA**. Variations in institutional review board reviews of a multi-center, Emergency Department (ED)-based genetic research protocol. *Am J Emerg Med*. 2013 epub ahead of print.
 5. Halpern CT, Tucker CM, Bengtson A, Kupper LL, **McLean SA**, Martin SL. Somatic Symptoms Among US Adolescent Females: Associations with Sexual and Physical Violence Exposure. *Maternal and Child Health Journal* January 2013, e-pub ahead of print.
 6. Bortsov AV, Platts-Mills TF, Peak DA, Jones JS, Swor RA, Domeier RM, Lee DC, Rathlev NK, Hendry PL, Fillingim RB, **McLean SA**. Pain Distribution and Predictors of Widespread Pain in the Immediate Aftermath of Motor Vehicle Collision. *European Journal of Pain* January 2013, e-pub ahead of print.
 7. Ballina LE, Ulirsch JC, Soward AC, Rossi C, Rotolo S, Linnstaedt SD, Heafner T, Foley KA, Batts J, Collette R, Holbrook D, Zelman S, **McLean SA**. μ -Opioid Receptor Gene A118G Polymorphism Predicts Pain Recovery after Sexual Assault. Published online *Journal of Pain* Dec 2012.
 8. Lee YM, Platts-Mills TF, MacWilliams JB, Sochor MR, Jones JS, Domeier RM, Schneider LW, **McLean SA**. Descriptions of Motor Vehicle Collisions by Participants in Emergency Department–Based Studies: Are They Accurate?. *Western Journal of Emergency Medicine* 13(4): 329-334, 2012.
 9. **McLean SA**, Soward AC, Ballina LE, Rossi C, Rotolo S, Wheeler R, Foley KA, Batts J, Casto T, Collette R, Holbrook D, Goodman E, Rauch SA, Liberzon I. Acute Severe Pain is a Common Consequence of Sexual Assault. *Journal of Pain* 13(8):436-41, 2012.
 10. Platts-Mills T, Hunold K, Esserman D, Sloane P, **McLean SA**. Motor Vehicle Collision-Related Emergency Department Visits by Older Adults in the United States. *Acad Emerg Med* 19(7):821-7, 2012.
 11. Platts-Mills TF, Hunold K, Ballina L, Bortsov AV, Peak DA, Jones JS, Swor RA, Lee DC, Domeier RM, Hendry PL, Rathlev NK, **McLean SA**. More Educated Emergency Department Patients are Less Likely to Receive Opioids for Acute Pain. *Pain* 153(5):941-2, 2012.
 12. Bortsov AV, Millikan RC, Belfer I, Boortz-Marx RL, Arora H, **McLean SA**. Mu-opioid receptor gene A118G polymorphism predicts survival in patients with breast cancer. *Anesthesiology* 116(4):896-902, 2012.
 13. Platts-Mills TF, Lee YM, Swor RA, Zaleski EZ, Clauw DJ, **McLean SA**. Pain and interference of pain with function and mood in older adults involved in a motor vehicle collision: a pilot study. *Exp Aging Res* 38(3):330-43, 2012.
 14. Platts-Mills TF, Esserman DA, Brown DL, Bortsov AV, Sloane PD, **McLean SA**. Older US Emergency Department Patients are Less Likely to Receive Pain Medication than Younger Patients: Results from a National Survey. *Ann Emerg Med*. 60(2):199-206, 2012.
 15. Tomecka MJ, Bortsov AV, Miller NR, Solano N, Narron J, McNaull PP, Ricketts KJ, Lupa MC, **McLean SA**. Substantial Postoperative Pain is Common Among Children Undergoing Laparoscopic Appendectomy. *Pediatric Anesthesia* 22(2):130-5. 2012.
 16. Orrey DC, Bortsov AV, Hoskins JM, Shupp JW, Jones SW, Cicuto BJ, Hwang J, Jordan MH, Holmes JH, Haith LR, Roane BM, Diatchenko L, Cairns BA, **McLean SA**. Catechol-O-methyltransferase genotype predicts pain severity in hospitalized burn patients. *J Burn Care Res* 33(4):518-23, 2012.
 17. Sterling M, **McLean SA**, Sullivan MJ, Elliott J, Butenhuis J, Kamper SJ. Potential processes involved in the initiation and maintenance of Whiplash Associated Disorders (WAD). *Spine* 36:S322-9, 2011.

18. **McLean SA.** The Potential Contribution of Stress System Responses to the Transition to Chronic Whiplash-Associated Disorders. *Spine* 36:S226-32, 2011.
19. Platts-Mills TF, Ballina L, Bortsov AV, Soward A, Swor RA, Jones JS, Lee DC, Peak DA, Domeier RM, Rathlev NK, Hendry PL, **McLean SA.** Using Emergency Department-Based Inception Cohorts to Determine Genetic Characteristics Associated with Long Term Patient Outcomes: Methodology of the CRASH Study. *BMC Emergency Medicine* 11:14, 2011.
20. Curatolo M, Bogduk N, Ivancic PC, **McLean SA,** Siegmund GP, Winkelstein E. The role of tissue damage in whiplash associated disorders. *Spine* 36: S309-15, 2011.
21. **McLean SA,** Diatchenko L, Lee YM, Swor RA, Domeier RM, Jones JS, Jones CW, Reed C, Harris RE, Maixner W, Clauw DJ, Liberzon I. Catechol O-methyltransferase haplotype predicts immediate musculoskeletal neck pain and psychological symptoms after minor motor vehicle collision. *Journal of Pain* 12(1):101-7, 2011.
22. Platts-Mills TF, Leacock B, Cabanas J, Shofer FS, **McLean SA.** Emergency medical services use in the elderly: analysis of a statewide database. *Prehosp Emerg Care* 14(3):329-33, 2010.
23. Tchivileva IE, Lim PF, Smith SB, Hinderliter AL, Diatchenko L, **McLean SA** and Maixner W. Effect of catechol-O-methyltransferase polymorphisms on response to propranolol therapy in chronic musculoskeletal pain: A randomized, double-blind, placebo-controlled, crossover pilot study. *Pharmacogenetics and Genomics* 20(4):239-48, 2010.
24. **McLean SA,** Kirsch N, Tan-Schriner C, Sen A, Frederiksen S, Harris R, Maixner W, Maio RF. Health status, not head injury, predicts concussion symptoms after minor injury. *Am J Emerg Med* 27(2): 182-190, 2009.
25. Harris RE, Sundgren PC, Pang Y, Hsu M, Petrou M, Kim S, **McLean SA,** Gracely RH, Clauw DJ. Dynamic levels of glutamate within the insula are associated with improvements in multiple pain domains in fibromyalgia. *Arthritis Rheum* 58(3):903-907, 2008.
26. Harris RE, Clauw DJ, Scott DJ, **McLean SA,** Gracely RH, Zubieta JK. Decreased central mu-opioid receptor availability in fibromyalgia. *J Neurosci* 12: 10000-6, 2007.
27. Petrou M, Harris RE, Foerster BR, **McLean SA,** Sen A, Clauw DJ, Sundgren PC. Proton MR spectroscopy in the evaluation of cerebral metabolism in patients with fibromyalgia: comparison with healthy controls and correlation with symptom severity. *Am J Neuroradiol* 29(5):913-8, 2008.
28. Bay E, **McLean SA.** Mild traumatic brain injury: an update for advanced practice nurses. *J Neurosci Nurs* 39:43-51, 2007.
29. **McLean SA,** Williams DA, Stein PK, Harris RE, Lyden AK, Whalen G, Park KM, Liberzon I, Sen A, Gracely RH, Baraniuk JN, Clauw DJ. Cerebrospinal fluid corticotropin-releasing factor concentration is associated with pain but not fatigue symptoms in patients with fibromyalgia. *Neuropsychopharmacology* 31(12):2776-82, 2006.
30. Harris RE, DA, Gracely RH, **McLean SA,** Williams DA, Giesecke T, Petzke, F, Clauw DJ. Comparison of clinical and evoked pain measures in fibromyalgia. *J Pain* 7(7):521-7, 2006.
31. Harris RE, Williams DA, **McLean SA,** Sen A, Hufford M, Gendreau M, Gracely RH, Clauw DJ. Characterization and consequences of pain variability in individuals with fibromyalgia. *Arthritis Rheum* 52(11):3670-4, 2005.
32. **McLean SA,** Williams DA, Harris RE, Groner KH, Ambrose K, Lyden A, Gracely RH, Crofford LJ, Geisser ME, Sen A, Biswas P, Clauw DJ. Momentary relationship between cortisol secretion and symptoms in patients with fibromyalgia. *Arthritis Rheum* 52(11):3660-9, 2005.
33. Gendreau RM, Thorn MD, Gendreau JF, Kranzler JD, Riberio S, Gracely RH, Williams DA, Mease PJ, **McLean SA,** Clauw DJ. The efficacy of milnacipran in patients with fibromyalgia. *J Rheumatol* 32(10):1975-85, 2005.
34. **McLean SA,** Clauw DJ. "Biomedical" models of fibromyalgia. *Disability and Rehabilitation* 27(12):659-665, 2005.
35. **McLean SA,** Williams DA, Clauw DJ. Fibromyalgia after motor vehicle collision: evidence and implications. *Traffic Inj Prev.* 6(2):97-104, 2005.

36. **McLean SA**, Clauw DJ, Abelson JL, Liberzon I. The development of persistent pain and psychological morbidity after motor vehicle collision: integrating the potential role of stress response systems into the biopsychosocial model. *Psychosom Med* 67(5):783-90, 2005.
37. **McLean SA**, Clauw DJ. Predicting chronic symptoms after an acute “stressor” – lessons learned from 3 medical conditions. *Med Hypotheses* 63:653-658, 2004.
38. **McLean SA**, Domeier RM, DeVore HK, Hill EM, Maio RF, Fredericksen SM. The feasibility of pain assessment in the prehospital setting. *Prehospital Emerg Care* 8:155-61, 2004.
39. **McLean SA**, Blow FC, Walton MA, Gregor MA, Barry KL, Maio RF, Knutzen SR. Rates of at-risk drinking among patients presenting to the emergency department with occupational and non-occupational injury. *Acad Emerg Med* 10:1354-61, 2003.
40. **McLean SA**, Maio RF, Domeier R: The epidemiology of pain in the prehospital setting. *Prehosp Emerg Care* 6(4):402-405, 2002.
41. **McLean SA**, Maio RF, Spaitte DW, Garrison HG. Outcomes research in emergency medical services systems. *Prehosp Emerg Care* 6(2):S52-56, 2002.
42. Dart RG, **McLean SA**, Dart L. Isolated fluid in the cul de sac: how well does it predict ectopic pregnancy? *Am J Emerg Med* 20:1-4, 2002.
43. **McLean SA**, Feldman JA. The impact of changes in HCFA documentation requirements on academic emergency medicine practice: results of a physician survey. *Acad Emerg Med*; 8:880-885, 2001.
44. **McLean SA**, Paul ID, Spector PS. Lidocaine-induced conduction disturbance in patients with systemic hyperkalemia. *Ann Emerg Med* 36:615-618, 2000.

Letters to the Editor:

1. **McLean SA**, Platts-Mills TF, Hunold KM. Response to: Who receives opioids for acute pain in emergency departments? Considering evidence, patient and provider preferences. *Pain*. 2012 Sep 1. [Epub ahead of print]
2. **McLean SA**, Gracely RH. Letter to the Editor regarding: Blumstein HA, Moore D. Visual analog pain scores do not define desire for analgesia in patients with acute pain. *Acad Emerg Med*. 2003; 10:211–4.

Published Abstracts:

1. Bortsov AV, Linnstaedt SD, Swor RA, Peak DA, Rathlev NK, Lee DC, Domeier RM, Hendry PL, Jones JS, McLean SA. Genetic variants affecting CRH-binding protein predict pain persistence after trauma exposure. Accepted for the 2013 American Society of Anesthesiologists meeting, October 12-16, 2013, San Francisco, CA. *Selected as a conference "top abstract"*
2. Bortsov A, Diatchenko L, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean S**. COMT haplotypes predict pain intensity and interference 6 weeks after motor vehicle collision. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
3. Ballina L, Ulirsch J, Nielsen C, Adasme RA, Thom N, Pauley C, Jones S, Hwang J, Cairns B, **McLean S**. Pain catastrophizing influences pain and itch symptoms within 24 hours of skin autograph. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
4. Adasme RA, Platts-Mills TF, Fillingim R, Swor R, Jones J, Lee D, Peak D, Domeier R, Rathlev N, Hendry P, **McLean S**. Fear of movement in the early aftermath of a motor vehicle collision is an independent predictor of pain interference at six weeks. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
5. Murray CT, Ulirsch J, Soward A, Rossi C, Rotolo S, Wheeler R, Foley K, Batts J, Collette R, Holbrook D, Goodman E, Csontos E, **McLean S**. Most sexual assault survivors with new moderate or severe pain do not receive medical care in the initial six weeks after sexual assault. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
6. Ulirsch J, Bortsov A, Soward A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean S**. No man is an island: living in a more disadvantaged neighborhood increases the likelihood of developing persistent moderate or severe neck pain 6 weeks after motor vehicle collision. Presented at the

- Annual Meeting of the American Pain Society, New Orleans, LA, May 2013. Also presented as oral presentation at Society of Academic Emergency Medicine annual meeting, Atlanta, GA, May 2013. **Selected as top abstract ("Gallery of Excellence") - top 12% of abstracts.*
7. Soward A, Ulirsch J, Bair E, Slade G, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean S**. Risk factors for persistent pain after motor vehicle collision differ between litigants and non-litigants. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
 8. Verma N, Platts-Mills TF, Hunold K, Swor R, Peak D, Lee D, Jones J, Rathlev N, Domeier R, Hendry P, **McLean S**. Initial neuropathic pain symptoms predict musculoskeletal pain severity six weeks after MVC. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
 9. Linnstaedt S, Bortsov A, Swor R, Jones J, Lee D, Peak D, Domeier R, Rathlev N, Hendry P, **McLean S**. Among women with substantial peritraumatic distress after minor motor vehicle collision (MVC), the presence of one or more G alleles at OPRM1 A118G is protective against developing persistent moderate or severe pain. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
 10. Orrey DC, Ulirsch J, Linnstaedt S, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean S**. Interactions between gender and other risk factors are associated with persistent neck pain after motor vehicle collision. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
 11. Platts-Mills TF, Matthews S, Pereira G, Fillingim R, Swor R, Jones J, Lee D, Peak D, Domeier R, Rathlev N, Hendry P, **McLean S**. Age-related differences in recovery from pain due to motor vehicle collision: a prospective longitudinal study. Presented at the Annual Meeting of the American Pain Society, New Orleans, LA, May 2013.
 12. Qadri YJ, Bortsov AV, Swor RA, Peak DA, Jones JS, Rathlev NK, Lee DC, Domeier RM, Hendry PL, **McLean SA**. Genetic polymorphisms in the Dopamine Receptor D2 are associated with acute pain severity after motor vehicle collision. Accepted to the 2012 Annual Meeting of the American Society of Anesthesiologists. ***Selected for oral presentation in the "Best of Abstracts: Clinical Science" session.*
 13. Cotton AS, Tamburrino MB, Wang X, Morgan RSD, Sripada R, Biehn TL, Chen JZ, Brickman KR, **McLean SA**, Dzurik AD, Ding Y, Dennis MJ, Liberzon I. Default mode network functional connectivity from the initial days to weeks after a motor vehicle collision. Accepted for presentation at the Annual Meeting for the Society for Neuroscience, New Orleans, LA, October 2012.
 14. Xie H, Liberzon I, Wang X, Wall JT, **McLean SA**, Brickman KR, Elhai JD, Dennis MJ, Bauer WR, Kane J, Tamburrino MB. Rapid cortical structural changes over initial weeks after trauma. Accepted for presentation to the Annual Meeting for the Society for Neuroscience, New Orleans, LA, October 2012.
 15. Smith JE, Ulirsch J, Bortsov A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, Diatchenko, **McLean S**. FKBP5 Variants Predict Neck Pain Persistence Six Weeks After Motor Vehicle Collision. Accepted for poster presentation at the International Association of the Study of Pain's Bi-Annual World Congress on Pain, Milan, Italy, August 2012. *Selected for oral presentation at the 2012 Annual Meeting of the American Society of Anesthesiologists.*
 16. Goetzinger A, Orrey D, Lee Y, Platts-Mills T, Bortsov, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, Liberzon I, **McLean S**. Persistent Neck Pain is Associated with Increased Risk of significant PTSD and Depressive Symptoms and Greater Health Service Utilization 6 Weeks after Motor Vehicle Collision. Accepted for poster presentation at the International Association of the Study of Pain's Bi-Annual World Congress on Pain, Milan, Italy, August 2012.
 17. Halawa O, Al-Diri I, Dunlap R, Bernard S, Boortz-Marx R, **McLean SA**, Darnall BD. When I'm in pain, I feel God is testing me. Religiosity and Pain Experiences in Kuwaiti vs. American Patients with Lung Cancer. Accepted for presentation at the International Association of the Study of Pain's Bi-Annual World Congress on Pain, Milan, Italy, August 2012.
 18. Lewis GC, Platts-Mills TF, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean SA**. Incidence and predictors of psychological distress after motor vehicle collision. Presented at the Society for Academic Emergency Medicine Annual Conference, Chicago, IL 2012. ***Selected for oral presentation in special "Future Stars of Emergency Medicine" session.*

19. Goetzinger A, Orrey D, Lee Y, Platts-Mills T, Bortsov A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. Peritraumatic Psychological Distress and Mild Traumatic Brain Injury Symptoms (MTBI) are Associated in the Early Aftermath of Trauma. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012. *** Scored in the top 1% of all abstracts submitted to conference and received a Top Poster Finalist award.*
20. Smith J, Bortsov A, Ulirsch J, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. FKBP5 Polymorphism Predicts Peritraumatic Dissociation after Motor Vehicle Collision. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012. ***Scored in the top 1% of all abstracts submitted to conference and received a Top Poster Finalist award.*
21. Bortsov A, Soward A, Diatchenko L, Ulirsch J, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. Tryptophan Hydroxylase 2 Synonymous Polymorphism rs7305115 is Associated with Acute Psychological Response after Motor Vehicle Collision. Presented the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
22. Ulirsch J, Bortsov A, Smith J, Diatchenko L, Bortsov A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. ADRA2A Variants Predict Peritraumatic Dissociation After Motor Vehicle Collision. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
23. Ballina L, Diatchenko L, Ulirsch J, Bortsov A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. Sexually Dimorphic Influence of COMT on Distress in the Immediate Aftermath of Trauma. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
24. Platts-Mills T, Ballina L, Diatchenko L, Bortsov A, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domieir R, Hendry P, Liberzon I, **McLean SA**. Influence of COMT HPS Haplotype on Peritraumatic Distress Severity among Women Experiencing Motor Vehicle Collision: Report of an Age x Gene Interaction. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
25. Orrey D, Bortsov A, Shupp J, Jones S, Hwang J, Jordan M, Holmes J, Haith L, Cairns B, Liberzon I, **McLean SA**. Individuals with Elevated PTSD Symptoms Experience Increased Itch Symptom Morbidity after Major Burn Injury. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
26. Orrey D, Bortsov A, Liberzon I, Shupp JW, Jones S, Hwang J, Jordan MH, Holmes J, Haith L, Cairns B, **McLean SA**. Failure of propranolol to decrease anxiety and PTSD symptoms in a genotype-based RCT of patients with major thermal burn injury. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012.
27. Soward A, Ulirsch J, Liberzon I, Rossi C, Rotolo S, Wheeler R, Batts J, Casto T, Collette R, Holbrook D Goodman E, Csontos E, Rausch SAM, Diatchenko L, **McLean SA**. Catechol O-Methyltransferase Haplotype Predicts Posttraumatic Stress Disorder Symptom Severity Six Weeks after Sexual Assault. Presented at the Annual Meeting of the Society of Biological Psychiatry, Philadelphia, PA, May 2012 and at the Annual Meeting of the Society of Academic Emergency Medicine, Chicago, IL, May 2012.
28. Orrey DC, Zhao S, Bair E, Bortsov AV, Shupp JW, Jones SW, Hwang J, Jordan MH, Holmes JH, Haith LR, Cairns BA, **McLean, SA**. Smokers Experience Increased Pain and Itch After Major Burn Injury. Presented at the annual meeting of the American Burn Association, Seattle, WA, 2012.
29. Xie H, Tamburrino M, Dennis M, Elhai J, Brickman K, Liberzon I, **McLean S**, Wall J, Bauer W, Wang X. Relationships Between Brain Structural Properties and Acute Pain and Stress After a Motor Vehicle Accident. Presented at the Annual Meeting of the Society for Neuroscience, Washington, DC, 2011.
30. Bortsov AV, Millikan R, Diatchenko L, Belfer I, Boortz-Marx, Arora H, **McLean SA**. μ -Opioid Receptor Gene Polymorphism A118G is Associated with Breast Cancer Survival. Presented at the Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, 2011. ***Selected for oral presentation at special 2011 Journal Symposium, with invitation to submit to Anesthesiology journal.*

31. Tomecka M, Orrey D, Bortsov A, Shupp J, Jordan M, Jones S, Holmes J, Haith L, Cairns B, **McLean SA**. Itch Symptoms are Strongly Associated with Pain Symptoms in Patients with Major Thermal Burn Injury. Presented at the Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, 2011.
32. Orrey DC, Shupp J, Jones SW, Cicuto B, Jordan M, Holmes J, Haith L, Cairns B, **McLean SA**. Results of a Pilot Multi-centered RCT of Propranolol to Decrease Pain in Admitted Burn Patients. Presented at the Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, 2011.
33. Orrey DC, Bortsov A, Shupp J, Cicuto B, Jordan M, Holmes J, Haith L, Cairns B, **McLean SA**. Catechol-*O*-methyltransferase genotype predicts pain severity in hospitalized burn patients. Presented at the Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, 2011.
34. Platts-Mills T, Brown D, Bortsov A, **McLean SA**. Oligoanalgesia in Elderly Adults Presenting to US Emergency Departments. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011 as well as at the Annual Meeting of the Society of Academic Emergency Medicine, Boston, MA, 2011.
35. Whittington K, Bortsov A, Soward AC, Jones J, Peak D, Swor R, Lee D, Rathlev N, Domeier R, Hendry P, Maixner W, Slade G, **McLean SA**. A pain in the neck? Which regions of body pain are most associated with pain interference and other health outcomes 6 weeks after motor vehicle collision. Presented at the Annual Meeting of the APS, Austin, TX, 2011, and the Annual Meeting of the Society of Academic Emergency Medicine, Boston, MA, 2011.
36. Soward AC, Whittington K, Rossi C, Rotolo S, Wheeler R, Foley K, Batts J, Casto T, Collette R, Holbrook D, Goodman E, Harney K, Csontos E, Rauch SAM, Liberzon I, **McLean SA**. Moderate or severe pain is common six weeks after sexual assault. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011 and the Annual Meeting of the SAEM, Boston, MA, 2011.
37. Bortsov A, Whittington K, Lee Y, Soward AC, Jones J, Peak D, Swor R, Lee D, Rathlev N, Domeier R, **McLean SA**. Individual vulnerability factors, but not collision-related factors, are associated with extent of moderate or severe pain symptoms in the immediate aftermath of motor vehicle collision. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
38. Westphal W, Soward AC, Rossi C, Rotolo S, Heafner T, Foley K, Batts J, Casto T, Collette R, Holbrook D, Goodman E, Harney K, Csontos E, Rauch SAM, Liberzon I, **McLean SA**. Severe pain is common but rarely treated in the immediate aftermath of sexual assault. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
39. Lee Y, Orrey D, Bortsov A, Whittington K, Jones J, Peak D, Swor R, Lee D, Rathlev N, Domeier R, Maixner W, Slade G, Fillingim R, **McLean SA**. Shared Vulnerability to pain and post-concussive syndrome in the early aftermath of motor vehicle collision. Presented for Presentation at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
40. Edwards L, Mitchell P, Jones J, Hendry P, Peak D, Swor R, Lee D, Rathlev N, Domeier R, Bortsov A, Platts-Mills T, Fillingim R, **McLean SA**. Increased catastrophizing and reduced recovery expectations in the early aftermath of motor vehicle collision among African Americans vs. European Americans. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
41. Orrey D, Shupp J, Hoskins J, Platts-Mills T, Bortsov A, Bangdiwala S, Haith L, Diatchenko L, Holmes J, Jordan M, Cairns B, **McLean SA**. Pilot multicenter, genotype-based, randomized, double-blind, placebo-controlled trial of propranolol to reduce initial pain symptoms in patients with major burn injury. Presented for Presentation at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
42. Ballina L, Platts-Mills T, Jones J, Peak D, Swor R, Soward AC, Whittington K, Lee D, Rathlev N, Domeier R, Orrey D, Liberzon I, **McLean SA**. Receipt of mental health care services in the initial weeks after motor vehicle collision is rare among patients with persistent neck pain and substantial co-morbid PTSD symptoms. Presented at the Annual Meeting of the American Pain Society, Austin, TX, 2011.
43. **McLean SA**, Soward AC, Rotolo S, Rossi C, Whittington K, Rauch SAM, Jackson C, Zelman S, Foley K, Batts J, Liberzon I. New moderate or severe pain is common after sexual assault. Presented at the Annual Meeting of the Society of Biological Psychiatry, San Francisco, CA, 2011.
44. Orrey DC, Shupp J, Hoskins JM, Platts-Mills TF, Bortsov AV, Bangdiwala SI, Jones SW, Cicuto BJ, Haith LR, Diatchenko L, Holmes JH, Jordan MH, Cairns BA, **McLean SA**. Feasibility and Acceptability of a

Genotype-Specific Randomized Controlled Trial (RCT) of Pain Treatment in a Research Network Burn Center Population. *Accepted for presentation at the annual meeting of the American Burn Association in Chicago, IL, 2011.*

45. Solano NE, Halawa O, Heilbron N, Ricketts KJ, Nonoy NP, McGee JP, Miller NR, Salo-Coombs VH, **McLean SA**. Substantial postoperative pain variation among children undergoing laparoscopic appendectomy. Presented at the Annual Meeting of the American Society of Anesthesiologists, San Diego, CA, 2010.
46. Miller NR, Halawa O, Heilbron N, Ricketts KJ, Nonoy NP, McGee JP, Solano NE, Salo-Coombs VH, **McLean SA**. Common clinical characteristics do not predict substantial pain after appendectomy in children. Presented at the Annual Meeting of the American Society of Anesthesiologists, San Diego, CA, 2010.
47. Halawa O, Roane BM, Orrey D, Whittington K, Soward AC, Jones S, Cairns B, **McLean SA**. Feasibility and acceptability of a genotype-specific RCT of pain treatment in a burn population. Presented at the Annual Meeting of the American Society of Anesthesiologists, San Diego, CA, 2010.
48. Maixner W, Smith SB, Bhangale T, Weir B, Hyde C, Slade G, John, SL, **McLean SA**, Gracely RH, Ambrose K, Tan K, Jordan J, Diatchenko L. Initial identification of genetic variants associated with painful osteoarthritis – results from a community based genome-wide association study. Presented at International Association for the Study of Pain, Montreal, Canada, August 2010.
49. Smith SB, Fillingim RB, Maixner W, Hyde C, Slade G, John, SL, **McLean SA**, Gracely RH, Zaykin D, Mazo I, Yuryev A, Tchivileva I, Tan K, Diatchenko L. Multivariate factor analysis and genetic association provide evidence for clinical heterogeneity in fibromyalgia. Presented at International Association for the Study of Pain, Montreal, Canada, August 2010.
50. Gracely RH, Smith SB, Slade G, Diatchenko L, Fillingim RB, Fijal B, Frakes E, **McLean SA**, Piezer K, Heinloth AN, Maixner W, Houston J. Association of genetic polymorphisms with placebo treatment in patients with osteoarthritis knee pain. Presented at International Association for the Study of Pain, Montreal, Canada, August 2010.
51. Lee DC, **McLean S**, Barton E, Hahn SJ. Variations in local institutional Review Boards (IRB) responses to a standard, multi-center, emergency department-based genetic research project. *Academic Emergency Medicine*. 2010;17(5):S(1)S140-141.
52. Halawa OI, **McLean SA**, Lee YM, Platts-mills TF, Zaleski E, Withrow A, Clauw DJ, Liberzon I. Elevated Cortisol Levels after Motor Vehicle Collision Predict Post Traumatic Stress Disorder and Depressive Symptoms at 1 Month. Presented at the annual meeting of the Society for Biological Psychiatry, New Orleans, LA, 2010.
53. Roane BM, Orrey D, Soward AC, Swor RA, Liberzon I, Clauw DJ, **McLean SA**. Pain and psychological symptom differences in African Americans and European Americans experiencing motor vehicle collision. Presented at the annual meeting of the American Pain Society, Baltimore, MD, 2010.
54. Orrey D, Soward A, Rotolo S, Rossi C, Roane BM, Csontos E, Casto T, Rauch SAM, Liberzon I, **McLean SA**. Psychological characteristics associated with pain severity in the early aftermath of sexual assault. Presented at the annual meeting of the American Pain Society, Baltimore, MD, 2010.
55. Soward AC, Orrey DC, Rotolo S, Rossi C, Roane BM, Csontos E, Casto T, Wheeler B, Rauch S, Slade G, **McLean SA**. Incidence and distribution of pain symptoms after sexual assault. Presented at the annual meeting of the American Pain Society, Baltimore, MD, 2010.
56. Swor RA, Lee YM, **McLean SA**. Spinal board immobilization may be associated with persistent pain after Motor Vehicle Crash. National Association of EMS Physicians, Phoenix, AZ 2010.
57. Tchivileva IE, Lim PF, Kasravi P, Gibson D, Smith S, Maixner W, **McLean SA**. Propranolol in TMJD Treatment. Presented at the American Pain Society Meeting, San Diego, CA, 2009.
58. **McLean SA**, Diatchenko L, Reed C, Jones CW, Zaleski E, Mistry Y, Swor R, Sochor MR, Liberzon I, Clauw D, Maixner W. Catechol O-Methyltransferase (COMT) met/met genotype influences cortisol response and pain symptoms after minor motor vehicle collision (MVC). Presented at the American Pain Society Meeting, Tampa Bay, 2008.

59. Tchivileva IE, Lim PF, Kasravi P, Maixner W, **McLean SA**. Effect of propranolol on TMD patients: preliminary finding. Presented at the American Pain Society Meeting, Tampa Bay, 2008.
60. Clauw DJ, Belfer I, Max M, Williams DA, Gracely RH, **McLean SA**, Harris RE, Neely A, Bair E, Diatchenko L, Maixner, W. Increased Frequency of the Minor Allele for beta-3 Adrenergic Receptors in Individuals with Fibromyalgia and Related Syndromes. Presented at the American College of Rheumatology Annual Meeting, Boston, MA, 2007.
61. Robinson D, **McLean SA**, Swor R, Zaleski EM, Mistry Y, Schon S, Sochor MR, Newton, CRH, Liberzon I, Clauw DJ. Characteristics associated with neck pain persistence versus recovery after minor motor vehicle collision. Presented at the American College of Rheumatology Annual Meeting, Boston, MA, 2007.
62. Schon S, **McLean SA**, Mistry Y, Zaleski EM, Swor R, Robinson D, Sochor MR, Newton CRH, Liberzon I, Clauw DJ. Predictors of persistent moderate or severe neck and/or back pain 1 and 6 months after minor motor vehicle collision. Presented at the American College of Rheumatology Annual Meeting, Boston, MA, 2007.
63. **McLean SA**, Diatchenko L, Reed C, Swor R, Sochor MR, Robinson D, Zaleski E, Mistry Y, Clauw D, Liberzon I, Maixner W. Genetic variations related to catecholamine systems predict persistent symptom development after minor motor vehicle collision. Presented at the National Injury & Violence Prevention Research Conference, Columbus, OH, 2007.
64. Clauw DJ, Belfer I, Max MB, Williams DA, Gracely RH, **McLean SA**, Harris RE, Neely A, Bair E, Diatchenko L, Maixner W. Increased Frequency of the Minor Allele for beta-3 Adrenergic Receptors in Individuals with Fibromyalgia and Related Syndromes. Presented at the *American College of Rheumatology* Annual Meeting, Boston, MA, 2007.
65. Bernardo de Leon M, Kirsch N, Maio R, Tan-Schriner CU, Frederiksen S, Tanner C, Breer L, **McLean SA**. Fatigue after Mild Head Trauma. Presented at American Congress of Rehabilitation Medicine, Fall 2007.
66. **McLean SA**, Sochor M, Newton C, Clauw D, Liberzon I. Cortisol Response to Minor Motor Vehicle Collision Predicts Pain and Psychological Sequelae. Oral presentation at the American Psychosomatic Society, Budapest, Hungary, 2007.
67. Withrow AD, **McLean SA**, Williams DA, Sochor MR, Newton CHR, Fowler J, Clauw DJ. 3 -7 Day Cognitive Behavioral Factors are Associated with Persistent Pain and Psychological Symptoms after MVC. Presented at the *American College of Rheumatology* Annual Meeting, Washington, DC, 2006.
68. Jones CW, **McLean SA**, Sochor MR, Newton CHR, Withrow AD, Fowler J, Stanislawski BA, Williams DA, Liberzon I, Clauw DJ. Persistent Musculoskeletal Pain and Posttraumatic Stress Disorder Symptoms after Motor Vehicle Collision Share ED Symptom Risk Factors and Outcomes. Presented at the *American College of Rheumatology* Annual Meeting, Washington, DC, 2006.
69. Switzer M, **McLean SA**, Jones CW, Sochor MR, Newton CHR, Withrow AD, Fowler J, Williams DA, Liberzon I, Clauw DJ. Pre-MVC Symptom and Psychological Characteristics are Associated with Persistent Pain and Psychological Symptoms after MVC. Presented at the *American College of Rheumatology* Annual Meeting, Washington, DC, 2006.
70. **McLean SA**, Switzer M, Jones CW, Sochor MR, Newton CHR, Withrow AD, Fowler J, Williams DA, Stein PK, Liberzon I, Clauw DJ. Emergency Department Physiologic Predictors of Pain and Psychological Sequelae after Motor Vehicle Collision. Presented at the *American College of Rheumatology* Annual Meeting, Washington, DC, 2006.
71. Fons CE, Koch EI, Abelson J, **McLean S**, Porcari C, Pole N, Porter K, Liberzon I. Physiological Arousal and Acute Stress Disorder Among Trauma Survivors in a Hospital Emergency Department. Presented at the *International Society for Traumatic Stress Studies*, Hollywood, California, 2006.
72. King AP, Britton JC, **McLean SA**, Abelson J, Taylor SF, Liberzon I. Endogenous Cortisol and Harm Avoidance Predict Emotional Responses and rCBF Activation in Insular Cortex Following Trauma Recall. Presented at Society for Neuroscience 2005.
73. Harris RE, Williams DA, **McLean SA**, Sen A, Hufford M, Gendreau RM, Gracely RH, Clauw DJ. Characterization and Consequences of Pain Variability in Individuals with Fibromyalgia. Presented at the American College of Rheumatology Annual Meeting, *Arthritis and Rheumatism*; 2005.

74. **McLean SA**, Myria P, Bradley F, Ambrose K, Fan X, Mayo-Bond LA, Leone V, Sundgren PC, Clauw DJ. Two D-CSI MR spectroscopy in the evaluation of fibromyalgia patients. A prospective study comparing fibromyalgia patients with normal healthy controls. Presented at the American College of Rheumatology Annual Meeting, *Arthritis and Rheumatism*; 2005.
75. **McLean SA**, Myria P, Bradley F, Ambrose K, Fan X, Mayo-Bond LA, Leone V, Williams DA, Gracely RH, Sundgren PC, Clauw DJ. Relationship Between Two D-CSI MR Spectroscopy Findings and Clinical Characteristics in Fibromyalgia. Presented at the American College of Rheumatology Annual Meeting, *Arthritis and Rheumatism*; 2005
76. **McLean SA**, Patel R, Williams DA, Clauw DJ, Gracely RH. Pain processing differences in women with fibromyalgia with and without a self-reported history of physical or sexual abuse. Presented at the International Association for the Study of Pain meeting, Sydney, Australia, 2005. *Pain* 2005.
77. **McLean SA**, Williams DA, Groner KH, Gracely RH, Crofford LJ, Geisser ME, Clauw DJ. Ambulatory Cortisol Measures do Not Distinguish Patients with Fibromyalgia (FM) or Other Chronic Multi-System illness from Healthy Controls. Presented at the American College of Rheumatology Annual Meeting, 2004. *Arthritis and Rheumatism* 2004.
78. **McLean SA**, Blow FC, Walton MA, Barry KL, Maio RF, Knutzen SR. At risk drinking among injured older adults presenting to the emergency department. Presented at the Society of Academic Emergency Medicine Annual Meeting, Boston, MA, 2003. *Acad Emerg Med*, 10: 536, 2003.
79. **McLean SA**, Domeier RM, DeVore HK, Maio RF, Frederiksen SM. The feasibility of pain measurement in the prehospital setting. Presented at the Society of Academic Emergency Medicine Annual Meeting, Boston, MA, 2003. *Acad Emerg Med*, 10: 474-475, 2003.
80. Chang J, Doyle CJ, Domeier RM, Sobanski C, **McLean SA**, Maio RF, Frederiksen SM. The Practice of pain medication administration following EMS protocol change. Presented at the Society of Academic Emergency Medicine Annual Meeting, Boston, MA, 2003. *Acad Emerg Med*, 10: 444, 2003.
81. Dart RG, **McLean SA**, Dart L. Isolated fluid in the cul de sac: how well does it predict ectopic pregnancy? *JAMA* 2003; 289:1905 *Abstract from our previously published article was featured in JAMA in section highlighting publications of note from other journals*
82. **McLean SA**, Gregor MA, Walton MA, Barry KL, Blow FC, Maio RF, Knutzen SR. The prevalence of at risk drinking among patients presenting to the emergency department. *Acad Emerg Med*, 9(5): 470, 2002. Presented at the Society of Academic Emergency Medicine Annual Meeting, St. Louis, MO, 2002.
83. Kelley SA, **McLean SA**, Maio RF, Cunningham R, Hill EM: The ED-TISS: A Therapeutic Intervention Scoring System for Patients with Minor Injury. *Acad Emerg Med* 9(5): 418, 2002. Presented at the Society of Academic Emergency Medicine Annual Meeting, St. Louis, MO, 2002.
84. **McLean SA**, Feldman JA. The impact of changes in HCFA documentation requirements on academic emergency medicine practice: results of a physician survey. *Ann Emerg Med* 36: S29-S30, 2000. Presented at the American College of Emergency Physicians Annual Scientific Assembly, Philadelphia, PA, 2000.
85. Dart RG, **McLean SA**, Dart L: Isolated fluid in the cul de sac: how well does it predict ectopic pregnancy? *Acad Emerg Med* 7(5): 448, 2000. Presented at the Society of Academic Emergency Medicine Annual Meeting, San Francisco, CA, 2000.
86. Dart RG, **McLean SA**, Dart L. Predicting ectopic pregnancy in patients without chorionic villi after a dilatation and curettage procedure. *Acad Emerg Med* 2000; 7(5):447. Presented at the Society of Academic Emergency Medicine Annual Meeting, San Francisco, CA, 2000.

Journal Articles in Submission (Incomplete list):

1. Bortsov A, Diatchenko L, **McLean S**. COMT haplotype interactions predict pain intensity and interference 6 weeks after motor vehicle collision.
2. Lewis GC, Platts-Mills TF, Swor R, Peak D, Jones J, Rathlev N, Lee D, Domeier R, Hendry P, **McLean SA**. Incidence and predictors of psychological distress after motor vehicle collision.

3. Wang X, Xie H, Tamburrino M, Cotton A, Smirnoff J, Dennis M, Biehn T, Contractor A, Brickman C, **McLean S**, Elhai J, Liberzon I. Decrease in activation of negative emotion during the initial weeks after a motor vehicle collision.
4. Platts-Mills TF, Weaver MA, Dickey RM, Hunold KM, Fernandez AR, Fillingim RB, Cairns CB, **McLean SA**. Treatment of Pain During Prehospital Care in North Carolina in 2011: A Descriptive Analysis
- 5.

Abstracts in Submission:

1. Xie H, Cotton AS, Dennis MJ, Migliori J, Brickman KR, Tamburrino MB, Liberzon I, Sripada R, **McLean SA**, Bauer WR, Wang X. Correlation between traumatic stress and brain alterations during the initial weeks after trauma. Accepted for presentation at the 19th Annual Meeting of the Organization for Human Brain Mapping, Seattle, WA, June 2013.

Media

- 2013 Physician's Briefing online article published May 23, 2013, "More than half of female sexual assault survivors have severe pain at initial exam and one week later; few receive pain meds."
- 2013 Medscape Emergency Medicine online article published May 13, 2013, "Persistent Pain After Sexual Assault Often Untreated".
- 2013 American Pain Society weekly electronic news brief ("Smartbrief") sent to all American Pain Society members. Featured news story for week of May 8, 2013.
- 2013 American News Report online article published May 7, 2013, "Chronic Pain Linked to Stress".
- 2013 Futurity Online article published May 3, 2013, "Chronic Pain After Trauma Could Be Genetic".
- 2012 HealthDay Online article published Oct. 16, 2012, "Pain Level After Car Crash Could Depend on Your Genes, Studies Say"
- 2012 ABC News Online article published March 21, 2012, "Opioids May Play Role in Cancer Growth".
- 2011 New York Times article published November 21, 2011, "Disparities: In the E.R., the Elderly Get Less Pain Relief".
- 2011 Anesthesiology News Front Page article published in December 2011 issue, "Opioid Gene Variants Linked To Cancer Survival in Women".
- 2006 UPI interview in article published May 8, 2006, "Emergency rooms flunk pain tests".

TEACHING RECORD

Course Directorships

2010 - Director, Anesthesiology 403 Research Elective. Fourth year medical students selecting this rotation learn the basics of patient screening, informed consent, and the conduct of patient baseline and follow-up interviews for randomized controlled trials. These skills are learned by working with a team of full time research assistants, study coordinators, and nurses in the UNC Department of Anesthesiology Research Division. Students also take part in our weekly research group meetings, and give a presentation at the end of their month reviewing a research topic of their choice. I see the students on a day to day basis during their month, and meet with them several times during the month to help the student select and prepare their presentation and discuss their topic of interest. (Eight students to date during current academic year 7/12 - 10/12.)

Weekly Research Program Lecture Directorship

2010 - Director, TRYUMPH Research Program Weekly Lecture Series. Faculty, fellows, residents, staff, medical students doing 403 elective or volunteering in the research program, undergraduate work study students, and undergraduate students volunteering in the research program participate in this weekly lecture series. Presentations include topical reviews, descriptions/discussions of emerging concepts or recently published articles, discussions and critiques of articles and analyses in development, and

lectures by scientists from around campus or from the southeast region. I organize this conference, send out a weekly informational email to the Anesthesiology Department and other interested individuals on campus describing the agenda and summarizing the utility of the topic, frequently present, and moderate the discussion. Invited speakers include faculty from around campus and around the country.

Mentees (since 2009)

A large portion of my time is spent on individual mentoring. A list of previous mentees since 2009 (excluding Anesthesiology 403 students) is provided below, along with a brief description of the nature of the mentorship activities.

Faculty Mentees (see bibliography for publications with mentees)

| | |
|-------------------------|--|
| Tim Platts-Mills, M.D. | Primary mentor on Dr. Platts-Mills' K23, " <i>Persistent pain and associated physical function decline among elderly individuals experiencing motor vehicle collision</i> ", which received a perfect score (10) at NIH study section and was funded 5/13. |
| Tim Platts-Mills, M.D. | Primary mentor on Dr Platts-Mills' 2010-2012 KL2, " <i>Predictors of persistent pain among individuals greater than 65 experiencing minor motor vehicle collision</i> ". |
| Mara Buckbinder, Ph.D. | Mentor on Dr. Buckbinder's 2012-2014 KL2, " <i>Patient-Provider Communication about Pain and Analgesics in the ED</i> " |
| Andrey Bortsov, MD, PhD | Primary mentor 2010 - present for Dr. Bortsov's academic activities, currently two R03 submissions per year to develop track record of NIH funding |
| Sarah Linnstaedt, PhD | Primary mentor 2012 - present for Dr. Linnstaedt's academic activities, currently preparing for KL2 and K23 submissions |
| LeKisha Edwards, PhD | 2010-2012 Principle Investigator on Dr. Edwards's two year diversity supplement, which provided her with 75% protected time and was funded through R01AR060852. |
| Amy Goetzinger, PhD | Primary mentor 2011- present for Dr. Goetzinger's research activities (1-2 national presentations and papers per year) |
| Jennifer Naylor, PhD | 2012-2016 Advisor on Dr. Naylor's funded VA merit award, <i>Neurosteroids as Novel Therapeutic Agents for Chronic Pain in OEF/OIF Veterans</i> . |
| Anesthesiology Faculty | Since 2009 have provided frequent mentorship for UNC Department of Anesthesiology faculty regarding design and conduct of their faculty projects. |

Resident Mentees

| | |
|----------------|---|
| Muhammad Qadri | 2011-2012 mentor, independent research project, selected for oral presentation as "Best of Abstracts: Clinical Science" at 2012 <i>American Society of Anesthesiologists</i> annual meeting |
| Gemma Lewis | 2011-2012 mentor, independent research project, selected for oral presentation in "Future Stars of Emergency Medicine" session at 2012 Society for Academic Emergency Medicine conference. Project also received UNC Emergency Medicine Residency award for "Most outstanding senior resident research project" |
| Maggie Tomecka | 2010-2011 Primary mentor on independent research project leading to abstract and manuscript publications. |
| John Narron | 2009-2010 Primary mentor on independent research project leading to abstract and manuscript publications. Subsequently accepted to Penn State Anesthesiology Residency. |

Medical Students

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|-------------------|--|
| Lauriane Auvergne | 2012-2013 Primary Mentor on project, <i>Development of Postconcussive Symptoms after Motor Vehicle Collision</i> . This project won the 2013 Scott Neil Schwirck |
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|----------------|---|
| | Fellowship, awarded to one UNC medical student annually who submits an outstanding research proposal. |
| Jacob Wang | 2012-2013 Primary Mentor, MPH Master's Thesis project, <i>Variation in acute pain outcomes after video-assisted thoracoscopic surgery</i> . |
| Nisha Verma | 2012 Primary Mentor, Carolina Medical Student Research Program Grant, <i>The Association between Initial Neuropathic Pain Symptoms and Development of Chronic Pain and Chronic Itch in Hospitalized Burn Patients</i> . Abstract and manuscript in preparation. |
| Collyn Murray | Primary Mentor 2012 Carolina Medical Student Research Program Grant, <i>Sexual Assault Survivor Experiences with Sexual Assault Nurse Examiner (SANE) Care and Health Services Utilization in the Weeks after Sexual Assault</i> . Abstract and manuscript in preparation. |
| Jennifer Smith | Primary Mentor, Doris Duke Fellowship Year 2011-2012. Ms. Smith managed study coordination for the BURN Experiences Trial, and presented abstract <i>FKBP5 Polymorphism Predicts Peritraumatic Dissociation after Motor Vehicle Collision. Presented at the Annual Meeting of the Society of Biological Psychiatry, May 2012. **Scored in the top 1% of all abstracts submitted to conference and received a Top Poster Finalist award.</i> |
| Omar Halawa | Primary Mentor, Doris Duke Fellowship Year 2009-2010. Mr. Halawa coordinated the BURN HELP Trial. Publications shown in bibliography section. |

Undergraduate and Post Baccalaureate Programs

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|----------------------|--|
| Ryan Adamse | Primary academic mentor while working as a staff member in my research program 2012-present. Funded through NIH diversity supplement (Native American). |
| Jacob Ulirsch | Primary academic mentor while working as a staff member in my research program 2011-present. Multiple abstract and manuscript publications. |
| Lauren Ballina | Primary academic mentor while working as a staff member in my research program 2010-present. Multiple abstract and manuscript publications. |
| Young Danielle Orrey | Primary academic mentor while working as staff member in my research program 2009-2012. Multiple abstracts and manuscripts, now attending UNC School of Medicine. |
| Brandon Roane | Primary academic mentor while working as a staff member in my research program 2009-2010. Multiple abstracts, now attending UNC School of Medicine. |
| Min Lee | Primary academic mentor while undergraduate working as staff member in the research program 2009-2012. Multiple abstracts and papers, now attending UNC School of Medicine. |
| Caitlin Wright | 2009 Summer Undergraduate Research Fellowship (SURF), <i>Association between Neuropeptide Y Polymorphism and Minor Motor Vehicle Sequelae</i> . Subsequently attended master's degree program in genetic counseling. |

Lectures

Recurring course lectures

| | |
|------------|---|
| 2010- | One or two lectures annually to UNC Department of Anesthesiology Pain Fellows and Faculty on a topic of interest related to pain pathophysiology or research. |
| 2010 - | One or two lectures annually to UNC Department of Anesthesiology Pain Fellows and Faculty on a topic of interest related to pain pathophysiology or research. |
| 2010, 2012 | Lecture to UNC Department of Emergency Medicine Residents regarding pain pathophysiology and the optimal management of pain conditions in the emergency department. |

Local invited lectures (last 2 years only)

- 2012 Department of Surgery Grand Rounds, "Pain after Injury and Trauma: Understanding Mechanisms, Testing Interventions". University of North Carolina at Chapel Hill, Chapel Hill, NC, March 28, 2012.
- 2011 "Liar, Wimp, Drug-Seeker: Understanding Basic Concepts in Pain", Pain Management: Current Options and Updates for Primary Care and Pain Medicine. Friday Center

Regional invited lectures (last 2 years only)

- 2012 "What is Cooking in Pain Research", Invited Speaker, The 25th Annual Carolina Refresher Course 2012: Perioperative & Anesthetic Care of the Surgical Patient, Kiawah Island, SC.
- 2012 "Read with caution—common errors interpreting the literature", The 25th Annual Carolina Refresher Course 2012: Perioperative & Anesthetic Care of the Surgical Patient, Kiawah Island, SC.

National invited lectures

- 2012 "Unraveling the Development of Persistent Pain and Suffering After Trauma", United States Army Institute for Surgical Research, Fort Sam Houston, TX.
- 2012 "Pain pathogenesis after exposure to stress and trauma", Boston Medical Center, Boston University School of Medicine, Boston, MA.
- 2011 "Pain and PTSD Development After Trauma: Mechanisms and Opportunities for Secondary Prevention", Northwestern University Feinberg School of Medicine, Chicago, IL.

International invited lectures

- 2012 Symposium Speaker, 14th World Congress on Pain, International Association for the Study of Pain, Milan, Italy, August 27-31, 2012: "The Potential Contribution of Stress System Responses to the Transition to Chronic Pain Following Injury."
- 2011 International Symposia on Whiplash, Brisbane, Australia: "Influence of Stress Systems on the Development of Chronic Pain" (International Symposia of 20 thought leaders sponsored by Australian Center of National Research on Disability and Rehabilitation)
- 2010 Symposium Speaker, British Pain Society Annual Meeting, London, England: "Pathways and potions: stress systems biology in the aetiology and treatment of idiopathic pain disorders."

Clinical Emergency Medicine Teaching

- 2008- 3-4 emergency department shifts per month in UNC emergency department, providing patient care and supervising residents and medical students. Aggregate review ratings from most recent evaluation period are provided in below table (above mean in all areas except one, where at the mean). Complete listing of qualitative comments provided by residents is also provided below.

GRANTS

Current

1. TITLE: Applying the Biopsychosocial Model to Post-MVC Pain Development in African Americans
Grant Type (or Number): R01AR060852
Grant Amount: \$3,515,869
Funding Agency: NIAMS
Grant Period: 2011-2016
Grant Status: AWARDED
Principal Investigator: Samuel McLean (20% Effort)
2. TITLE: Diversity Supplement to above grant, Applying the Biopsychosocial Model to Post-MVC Pain Development in African Americans

- Grant Type (or Number): R01AR060852 - 01A1W1
 Grant Amount: \$54,410
 Funding Agency: NIAMS
 Grant Period: 2012-2013
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean (0% Effort)
3. TITLE: Genetic predictors of acute and chronic musculoskeletal pain after minor MVC
 Grant Type (or Number): R01AR056328
 Grant Amount: \$2,551,312
 Funding Agency: NIAMS
 Grant Period: 2008-2013
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean (20% Effort)
4. TITLE: Diversity Supplement to the above grant, Genetic predictors of acute and chronic musculoskeletal pain after minor MVC
 Grant Type (or Number): R01AR056328
 Grant Amount: \$212,657
 Funding Agency: NIAMS
 Grant Period: 2010-2012
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean (0% Effort)
5. TITLE: Phase IIB Randomized Controlled Trial to Prevent Chronic Pain after MVC
 Grant Type (or Number): Foundation
 Grant Amount: \$241,753
 Funding Agency: Mayday Fund
 Grant Period: 2010-2013
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean (0% Effort)
6. TITLE: The Influence of MicroRNA in Chronic Pain Development
 Grant Type (or Number): Foundation
 Grant Amount: \$40,000
 Funding Agency: Mayday Fund
 Grant Period: 2012-2014
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean/Anesthesiology Department (0% Effort)

Completed

1. TITLE: Women's Health Study
 Grant Type (or Number): UNC Intramural
 Grant Amount: \$50,000
 Funding Agency: NC TraCs
 Grant Period: 2009-2010
 Grant Status: AWARDED
 Principal Investigator: Samuel McLean (0%)
2. TITLE: CTRC: The BURN HELP Trial
 Grant Type (or Number): 09-0681

Grant Amount: \$10,000 annual support
Funding Agency: UNC CTRC
Grant Period: 2009-2010
Grant Status: AWARDED
Principal Investigator: Samuel McLean (0% Effort)

3. TITLE: Identifying Predictors of Persistent Pain in Older Patients Following Minor Motor Vehicle Crash

Grant Type (or Number): 10KR40927
Grant Amount: \$10,000 support
Funding Agency: UNC CTRC
Grant Period: 2009-2011
Grant Status: AWARDED
Principal Investigator: Tim Platts-Mills (McLean mentor)

4. TITLE: Development of Chronic Pain After Motor Vehicle Trauma

Grant Type (or Number): K23 KAR050410A
Grant Amount: \$593,750
Funding Agency: NIH
Grant Period: 2006-2009
Grant Status: AWARDED
Principal Investigator: Samuel McLean (75% Effort)

5. TITLE: Development of Chronic Pain After Motor Vehicle Trauma

Grant Type (or Number): University of Michigan GCRC Intramural
Grant Amount: \$19,996
Funding Agency: University of Michigan GCRC
Grant Period: 2005-2007
Grant Status: AWARDED
Principal Investigator: Samuel McLean (75% Effort)

6. TITLE: Development of Chronic Pain After Motor Vehicle Trauma

Grant Type (or Number): K12 RR017607-01
Grant Amount: 100,000
Funding Agency: University of Michigan K12 Program
Grant Period: 2005-2006
Grant Status: AWARDED
Principal Investigator: David Schteingart
Role: K12 recipient (75% Effort)

7. TITLE: Occupational Injuries: Workplace Events & Outcomes

Grant Type (or Number): T42/CCT510428-08
Grant Amount: \$18,730 direct costs
Funding Agency: NIOSH
Grant Period: 2002
Grant Status: AWARDED
Principal Investigator: Samuel McLean

PROFESSIONAL SERVICE

Committees

NIH Study Sections (National Committees)

- 2013 Ad Hoc Reviewer, National Institute of Health CSR Study Section: Neurological, Aging and Musculoskeletal Epidemiology (NAME), (Phone in reviewer for February 2013 meeting).
- 2013 Temporary Committee Member, National Institute of Complementary and Alternative Medicine, ZAT1 SM28, "Centers of Excellence for Research on CAM", January 16-18, 2013.
- 2011 Temporary Committee Member, National Institute of Health CSR Study Section: Neurological, Aging and Musculoskeletal Epidemiology (NAME), Santa Monica, CA, June 2-3, 2011.
- 2007 Ad Hoc Reviewer, National Institute of Health CSR Study Section: Psychosocial Risk and Disease Prevention (Phone in reviewer).
- 2006 Ad Hoc Reviewer, National Institute of Health CSR Study Section: Psychosocial Risk and Disease Prevention (Phone in reviewer).

Local Committees

- 2012-present IT committee, UNC Department of Anesthesiology. This committee assists with IT-related planning and strategy in the department.
- 2011-present Faculty Recruitment Committee, UNC Department of Anesthesiology
- 2009-present Chair, UNC Department of Anesthesiology Research Financial Allocations Committee. This committee reviews grant proposals, provides suggestions, and approves departmental research funds for research projects performed by department faculty.
- 2009-present Academic Performance Review Committee, UNC Department of Anesthesiology. This committee provides an annual evaluation of academic performance of department faculty.
- 2009-present Executive Leadership Committee, UNC Department of Anesthesiology
- 2011-12 Chair, IT Manager Search Committee, UNC Department of Anesthesiology
- 2010 Chair, Department Epidemiologist Search Committee, UNC Department of Anesthesiology
- 2010 Chair, Department Psychologist Search Committee, UNC Department of Anesthesiology

Journal Reviewer (last 2 years only)

The Journal of Pain, Arthritis and Rheumatism, The Clinical Journal of Pain, The Lancet, Psychoneuroendocrinology, Arthritis Care and Research

Industry and Consultant Positions

- 2008-2009 Chief Medical Officer, Algynomics, Inc. (concurrent with academic appointment)
- 2007-2009 Consultant, Algynomics, Inc. (concurrent with academic appointment)