CURRICULUM VITAE

Robert W. Hurley MD, PhD

Adjunct Professor of Anesthesiology and CTSI Department of Anesthesiology Division of Clinical

OFFICE ADDRESS:

Froedtert Hospital 9200 W Wisconsin Ave Milwaukee, WI 53226

EDUCATION:

1993 BA, Biopsychology, McGill University2000 PhD, Neurobiology, University of Chicago2002 MD, Medicine, University of Chicago Pritzker School of Medicine

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

2003 Intern, University of Chicago-MacNeal Hospital, Chicago, Illinois 2006 Resident, Anesthesiology, Johns Hopkins Medical Institutions, Baltimore, Maryland 2007 Fellow, Pain Medicine, Johns Hopkins Medical Institutions, Baltimore, Maryland

FACULTY APPOINTMENTS:

- 2007 2009 Assistant Professor, Department of Anesthesiology and Critical Care Medicine, Pain Medicine, Johns Hopkins University, Baltimore, MD
- 2009 2014 Joint Associate Professor, Orthopaedics and Rehabilitation, Psychiatry, Neurology, University of Florida, Gainesville, FL
- 2009 2014 Associate Professor, Department of Anesthesiology, Pain Medicine, University of Florida, Gainesville, FL
- 2014 2017 Professor, Department of Anesthesiology, Pain Medicine, Medical College of Wisconsin, 959 N. Mayfair Rd, Wauwatosa, WI 53226
- 2017 Present Adjunct Professor, Clinical & Translational Science Institute, Medical College of Wisconsin
- 2017 Present Adjunct Clinical Professor, Anesthesiology, Pain Medicine, Medical College of Wisconsin
- 2017 Present Professor, Anesthesiology, Pain Medicine, Wake Forest University School of Medicine, Winston Salem, NC 27-57
- 2017 Present Executive Director, Pain Shared Service Line, Wake Forest Baptist Health, NC 27157

ADMINISTRATIVE APPOINTMENTS:

- 2007 2009 Medical Director, Anesthesiology and Critical Care, Pain Medicine, Blaustein Pain Management Center, The Johns Hopkins Medical Institutions
- 2007 2009 Director, Anesthesiology and Critical Care, Pain Medicine, Center for Neuromodulation, Johns Hopkins Medical Institutions
- 2009 2014 Medical Director, Orthopaedics and Rehabilitation, Anesthesiology, Psychiatry, Neurology, Pain Medicine, UF Pain and Spine Center, University of Florida
- 2009 2014 Director, Cancer Pain, Oncology, University of Florida Cancer Center
- 2014 Present Medical Director, Anesthesiology, Pain Medicine, Pain Management Centers, Medical College of Wisconsin

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

2009 - 2014 Pain Fellowship Program Director, Department of Anesthesiology, University of Florida College of Medicine, Gainesville, FL

HOSPITAL AND CLINICAL ADMINISTRATIVE APPOINTMENTS:

- 2007 2009 Co-Chair, Institutional Task Force on Pain Management, The John Hopkins Medical Institutions, Baltimore, MD
- 2009 2014 UF Health Cancer Committee (Member), Shands Hospital at the University of Florida, Gainesville, FL
- 2009 2014 UF Health Pain Committee (Chair), Shands Hospital at the University of Florida, Gainesville, FL
- 2009 2014 Division Chief, Department of Anesthesiology, Pain Medicine, University of Florida College, Gainesville, FL
- 2014 Present Vice-Chair of Anesthesiology, Department of Anesthesiology, Medical College of Wisconsin, Milwaukee, WI

RESEARCH ADMINISTRATIVE APPOINTMENTS:

2009 - 2014 Anesthesiology Research Committee, Member, Department of Anesthesiology, University of Florida

SPECIALTY BOARDS AND CERTIFICATION:

Board Certified	<u>Issue Date</u>	Expiration
Anesthesiology	10/2007	None
Pain Medicine	09/2008	None

<u>Licensure</u>	<u>Number</u>	<u>Issue Date</u>	Expiration
Maryland	D64332	04/05/2006	None
Florida	ME104842	06/17/2009	None
Wisconsin	62911	09/03/2014	None

AWARDS AND HONORS:

- 1992 James McGill Award (top 1% of University Students), McGill University
- 1993 Graduate with Great Distinction (Graduating GPA >3.5), McGill University
- 1993 University Scholar (top 1% of graduates), McGill University
- 1998 3rd Prize, Poster presentation, American Society of Pharmacology and Experimental Therapeutics (ASPET) annual meeting
- 1998 1st Prize, Poster presentation, Midwest Anesthesia Residents Conference
- 2001 1st Prize, Poster presentation, Midwest Anesthesia Residents Conference
- 2001 Alpha Omega Alpha Medical Honor Society, University of Chicago Pritzker School of Medicine
- 2002 Graduated Medical Doctor (MD) with Honors, University of Chicago Pritzker School of Medicine
- 2004 FAER research scholar award, Foundation for Anesthesia Education and Research
- 2006 Outstanding Resident Award The Merel Harmel Award, Johns Hopkins Medical Institutions
- 2006 CA-3 Resident of the Year, Johns Hopkins Medical Institutions
- 2006 ASRA resident research scholar award Spring Meeting, American Society of Regional Anesthesia
- 2006 ASRA resident research scholar award Fall Meeting, American Society of Regional Anesthesia
- 2011 Technology Innovator Award, University of Florida Office of Technology Licensing
- 2012 Exemplary Teachers Award, University of Florida College of Medicine
- 2013 Technology Innovator Award, University of Florida Office of Technology Licensing

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

- 1998 Present International Association for the Study of Pain (Member)
- 1998 Present American Pain Society (Member)
- 2003 Present American Society of Anesthesiologists
- 2004 Present American Society of Regional Anesthesia (Member)
- 2005 2007 American Society of Anesthesiologists Committee on Research (Resident Member)
- 2008 2013 American Society of Regional Anesthesia and Pain Medicine (ASRA) Committee on Communications (Member)
- 2009 2013 American Society of Regional Anesthesia and Pain Medicine (ASRA) Website Editorial Committee (Member)

- 2009 2014 Florida Society of Anesthesiologists (Member)
- 2010 2014 Florida Medical Association (Member)
- 2010 2015 Alachua County Medical Society (Member)
- 2011 Present American Society of Regional Anesthesia and Pain Medicine (ASRA) JJ Bonica Award Selection Committee (Member)
- 2011 2013 Alachua County Medical Society (Board of Directors)
- 2012 Present American Academy of Pain Medicine (Member)
- 2012 Present American Society of Anesthesiologists (ASA) Closed Claim Project (Member)
- 2012 Present American Society of Anesthesiologists (ASA) Committee on Pain Medicine (Member)
- 2012 2013 Alachua County Medical Society (Secretary)
- 2013 2014 American Academy of Pain Medicine (AAPM) Research Committee (Member)
- 2014 Present American Academy of Pain Medicine (AAPM) Research Committee (Co-Chair)
- 2015 Present American Academy of Pain Medicine (AAPM) Nominating Committee (Member)
- 2015 Present American Society of Anesthesiologists Committee on Economics (Member)

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Editorial Board

- 2000 2002 Nature, Ad-Hoc Reviewer
- 2000 2002 Journal of Neurophysiology, Ad-Hoc Reviewer
- 2000 2002 Journal of Neuroscience, Ad-Hoc Reviewer
- 2003 Present Anesthesia and Analgesia, Ad-Hoc Reviewer
- 2003 Present Anesthesiology, Ad-Hoc Reviewer
- 2004 2006 Neuroscience, Ad-Hoc Reviewer
- 2004 2006 Neurology, Ad-Hoc Reviewer
- 2004 Present Regional Anesthesia and Pain Medicine, Ad-Hoc Reviewer
- 2006 Present Regional Anesthesia and Pain Medicine, Associate Editor
- 2007 Present Anesthesia and Analgesia, Guest Editor
- 2007 Present Pain, Ad-Hoc Reviewer
- 2009 Present Spine Journal, Ad-Hoc Reviewer
- 2009 Present Pain Medicine, Ad-Hoc Reviewer
- 2010 Present Journal of Clinical Pharmacology, Ad-Hoc Reviewer
- 2010 Present Journal of Clinical Anesthesia, Ad-Hoc Reviewer
- 2011 Present Cochrane Protocol, Ad-Hoc Reviewer
- 2012 Present PM&R, Ad-Hoc Reviewer
- 2012 Present Pain Practice, Ad-Hoc Reviewer
- 2012 Present Pain Practice, Associate Editor
- 2013 Present Korean Journal of Pain, Associate Editor
- 2014 Present Archives in PM&R, Ad-Hoc Reviewer

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

- 2015 Present Committee Member, Committee on Economics (COE), American Society of Anesthesiologists (ASA)
- 2016 Present Board of Directors, Committee on Pain Medicine, American Society of Anesthesiologists (ASA)
- 2017 Present Chair, Private Payor Coverage Policies Workgroup/COE, American Society of Anesthesiologists (ASA)

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title: "An Integrative and Sustainable

Approach to Pain Management in

Primary Care"

Source: Pfizer

Role: Principal Investigator
PI: Robert Hurley

Dates:	2013 - 10/2016
Direct Funds:	\$499,997
Title:	"The Pain Assessment and Management Improvement" (PAMI)
Source:	FMMJUA-Florida Medical Malpractice Joint Underwriting Association
Role:	Co-Investigator
PI:	Phyllis Hendry
Dates:	2014 - 2019
Direct Funds:	\$1,096,766
Title:	Designing User-Centered Decision Support Tools for Chronic Pain in Primary Care
Source:	Agency for Healthcare Research and Quality (AHRQ)
Role:	Co-Investigator
PI:	Chris Harle
Dates:	2015 - 2020
Direct Funds:	\$1,846,216
Title:	fMRI in Sickle Cell Disease Pain
Source:	Clinical Translational Research Institute
Role:	Co-I
PI:	Joshua Fields
Dates:	2016 - 2017
Direct Funds:	\$50,000
Title:	Resistance Exercise Effects on Fear Avoidance and Physical Function in Obese Older Adults With Low Back Pain
Source:	ClininalTrials.gov (NCT01250262)
Title:	Study of a Multimodality Pain Management Protocol on Postoperative
Source:	Neurosurgical Pain ClinicalTrials.gov (NCT01693588)
Source.	Chinear Hais, gov (17C 1010) 5500)
Title:	Integrating Patient Reported Outcomes (I-PRO) Study for Multidisciplinarty Pain Care
Source:	ClinicalTrials.gov (NCT201300433)
Non-Peer Review	
Title:	Advancing Pain Education for
	Interdisciplinary Health Learners in SE Wisconsin
Source:	Faye-McBeath Foundation
Role:	Principal Investigator
PI:	Robert W. Hurley
Dates:	2015 - 2016
Direct Funds:	\$50,000

Title: Education of Multidisciplinary Pain

Fellows

Source: Medtronic, Inc
Role: Primary Investigator
Dates: 2015 - 2016
Direct Funds: \$25,000

Title: Education of Multidisciplinary Pain

Fellows

Source: St Jude Medical Role: Primary Investigator

Dates: 2015 - 2016 Direct Funds: \$25,000

Prior

Peer Review

Title: National Institutes of Health Summer

Research Award (Institutional grant awarded to the University of Chicago School of Medicine, individual medical student matriculation into this program

was competitive),

Source: National Institute of Health

Dates: 1995 Direct Funds: \$1,500

Title: Training Grant in Pediatric Research,

This was a T32 awarded to the

University of Chicago Department of Pediatrics. Awarding of this grant to the individual medical students to perform research was done on a competitive basis, one was grant per year and the pool of applicants was 5-10. This grant funded one year of medical school tuition and provided a stipend for living

expenses.

Source: National Institute of Health

PI: Nancy Schwartz
Dates: 1996 - 1997
Direct Funds: \$28,000

Title: "Analgesia, Supraspinal Opioids and

Inflammatory Pain", This was an individual pre-doctoral National Research Service Award (NRSA) awarded to in a competitive, peerreviewed fashion by the NIH. This grant funded 4 years of the PhD work and 2 years of Medical School as well as a

stipend for living expenses).

Source: National Institute of Health-National

Institute of Drug Abuse

Role: Primary Investigator

Dates: 1997 - 2002 Direct Funds: \$458,020

Title: Mechanism of Phantom Limb Pain

Source: Pfizer Visiting Professor Grant

Role: Primary Investigator

Dates: 2008

Title: Mechanism of Phantom Limb Pain-

Peripheral versus Central Site of Action

of Pain

Source: International Association for the Study

of Pain, ScanDesign Grant

Role: Primary Investigator

Dates: 2008 - 2009 Direct Funds: \$30,000

Title: Spinal Cord Stimulation and Peripheral

Vascular Disease

Source: The Johns Hopkins School of Medicine,

Department of Anesthesiology and Critical Care Medicine SEED grant

Role: Primary Investigator

Dates: 2009 Direct Funds: \$10,000

Title: Incidence of Chemotherapy-Induced

Painful Peripheral Neuropathy in Patients Receiving Platinum-based

Chemotherapeutics

Source: The Johns Hopkins School of Medicine,

Department of Anesthesiology and Critical Care Medicine SEED grant

Role: Primary Investigator

Dates: 2009 Direct Funds: \$10,000

Title: Resistance exercise effects on fear

avoidance beliefs and physical function in older obese individuals with chronic

low back pain

Source: National Institute of Health-NIAMS

Role: Co-Investigator
PI: Heather Vincent
Dates: 2010 - 2013
Direct Funds: \$249,000

Title: The Effect of a Pain Management

Protocol on Postoperative Neurosurgical

Pain

Source: University of Florida Risk Management

Role: Co-Investigator
PI: William Titsworth
Dates: 2012 - 2013
Direct Funds: \$25,000

Non-Peer Review

Title: Education of Multidisciplinary Pain

Fellows

Source: Boston Scientific
Role: Primary Investigator

Dates: 2008 - 2009

Title: Education of Multidisciplinary Pain

Fellows

Source: St. Jude Medical Role: Primary Investigator

Dates: 2011 - 2012

Title: Education of Multidisciplinary Pain

Fellows

Source: Boston Scientific
Role: Primary Investigator

Dates: 2011 - 2012

Title: Education of Multidisciplinary Pain

Fellows

Source: St. Jude Medical Role: Primary Investigator

Dates: 2012 - 2013

Title: Education of Multidisciplinary Pain

Fellows

Source: Boston Scientific
Role: Primary Investigator

Dates: 2012 - 2013

Title: Education of Multidisciplinary Pain

Fellows

Source: Medtronic Inc.
Role: Primary Investigator

Dates: 2013 - 2014 Direct Funds: \$25,000

Title: Education of Multidisciplinary Pain

Fellows

Source: St. Jude Medical Role: Primary Investigator

Dates: 2013 - 2014 Direct Funds: \$60,000

Title: Education of Multidisciplinary Pain

Fellows

Source: Boston Scientific Role: Primary Investigator

Dates: 2013 - 2014 Direct Funds: \$50,000

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

Robert Hurley, MD, PhD, Interssection of Pain and Addiction, Department of Internal Medicine, Annual Winter Refresher Course, Milwaukee, WI, 01/30/2015

Robert Hurley, Neuropathic pain; Update on CRPS, Presentation, Medical College of Wi Plastics Hand Clinic, 2015

Robert Hurley, Comprehensive Approach to Chronic post-operative pain, Grand Rounds, Medical College of Wisconsin Department of Orthopedics, 2015

Robert Hurley, Comprehensive Pain Management, Grand Rounds, Medical College of Wisconsin Department

- of Neurosurgery, 2015
- Robert Hurley, Comprehensive Pain Management, Grand Rounds, Medical College of Wisconsin Department of Internal Medicine, 2015
- Robert Hurley, Comprehensive Pain Care, Grand Rounds, Medical College of Wisconsin-Orthopedics, 2015
- Robert Hurley, Comprehesive Pain Management, 28th Annual Update in Primary Care, Door County, WI, 2015
- Robert Hurley, Spinal Cord Stimulator, Presentation, Medical College of WI-Spinecare, 2015
- Robert Hurley, Musculoskeletal Pain and Functional Decline in Obesity, Grand Rounds, Medical College of WI-Physical Medicine and Rehabilitation, 2015

Regional

- Robert Hurley, Grand Rounds, University of Florida College of Medicine Department of Radiation Oncology, 2010
- Robert Hurley, Modern Cancer Pain Medicine, Grand Rounds, University of Florida College of Medicine Department of Hematology/Oncology, 2010
- Robert Hurley, Opioid pain medications for the treatment of non-malignant pain: More often the wrong answer?, Grand Rounds, University of Florida College of Medicine, Department of Community Health and Family Medicine, 2011
- Robert Hurley, State of Florida Opioid Rules and Regulations, Grand Rounds, University of Florida College of Medicine Department of Neurology, 2011
- Robert Hurley, Update on Treatment of Pain in Arthritis and Fibromyalgia, VA Grand Rounds, University of Florida College of Medicine Department of Rheumatology, 2013

National

- Robert Hurley, Chronic post-operative pain: What do we do in the post-Reuben era, Visiting Professor, University of Virginia, Department of Anesthesiology, 2009
- Robert Hurley, Centralized Pain in the Rheumatology Patient Population, Visiting Professor, University of Virginia, Department of Anesthesiology, 2012
- Robert Hurley, Intersection of Pain and Addiction Journal Club, ASIPP, Visiting Professor, University of Virginia, Department of Anesthesiology Guidelines for the Treatment of Chronic Non-Cancer Pain A critical analysis of the Guidelines Hospital for Special Surgery (Cornell University), 2012
- Robert Hurley, Guidelines for the Treatment of Chronic Non-Cancer Pain-A Critical analysis of the Guidelines Hospital for Special Surgery, Visiting Professor, University of Virginia, 2012
- Robert Hurley, Musculoskeletal Pain, Fear Avoidance Behaviors, and Functional Decline in Obesity, Visiting Professor, University of Stanford, Department of Anesthesiology, 2013
- Anderson, R. J., Hurley, R. W., Staud, R., & Robinson, M. E., Cognitive-motivational influences on health behavior change in chronic pain, American Pain Society 34th Annual Scientific Meeting, Palm Springs, CA, 05/2015

International

- Robert Hurley, Thermography in the Diagnosis od CRPS, Visiting Professor, Aarhus University, Aarhus Denmark, 2009
- Robert Hurley, Obesity, MSK Pain and Kinesiophobia, Foro International De Medicina Del Dolor Y Paliativa, Instituto Nacional De Ciencias Medicas Y Nutricion Salvador Zubiran Mexico City, Mexico, 09/2014
- Robert Hurley, Facetogenic Pain, Foro International De Medicina Del Dolor Y Paliativa, Instituto Nacional De Ciencias Medicas Y Nutricion Salvador Zubiran Mexico City, Mexico, 09/2014

EXTRAMURAL TEACHING:

Medical Student Education

- 2013 2014 University of Florida, MDT7090 Course Co-Director, Pain-Addiction Intensive Course
- 2013 2014 University of Florida, MDT7090 Pain-Addiction Intensive, Lecturer
- 2013 2014 University of Florida, BMS6823 Small group leader and lecturer, "Evidence-based Medicine"
- 2013 2014 University of Florida, BMS6020 Clinical Neuroscience, Lecturer
- 2014 University of Florida, Family Medicine -MS3 clerkship, Lecturer

Resident and Fellow Education

- 2006 2009 Johns Hopkins University, Pain education for non-Anesthesiology Residents 5 Lecture series
- 2006 2009 Johns Hopkins University, Pain education for Anesthesiology Residents 5 Lecture series
- 2009 2014 University of Florida College of Medicine, Postoperative measures in the treatment of postoperative pain
- 2009 2014 University of Florida College of Medicine, Contemporary cancer pain management: beyond the WHO (World Health Organization) analgesic ladder
- 2009 2014 University of Florida College of Medicine, Intraoperative measures in the treatment of postoperative pain
- 2009 2014 University of Florida College of Medicine, Morbidity and Mortality Conference (Pain Medicine Division)
- 2009 2014 University of Florida College of Medicine, Postoperative measures in the treatment of postoperative pain
- 2009 2014 University of Florida College of Medicine, Pain medicine: Where have we been and where are we going?
- 2009 Present University of Florida College of Medicine, Basic Radiation Safety and Basic Spine Injections-Stimulator Sessions
- 2009 2014 University of Florida College of Medicine, How to prepare a CRPS (complex regional pain syndrome) patient for surgery
- 2009 2014 University of Florida College of Medicine, Cancer pain management
- 2009 2014 University of Florida College of Medicine, Kyphoplasty workshop: treatment of vertebral compression fractures
- 2009 2014 University of Florida College of Medicine, Preoperative measures in the treatment of postoperative pain
- 2009 Present University of Florida College of Medicine, Basic Spine Anatomy with Fluoroscopy-Simulator Sessions
- 2009 2014 University of Florida College of Medicine, Kyphoplasty in the treatment of vertebral compression fracture in cancer patients
- 2009 2014 University of Florida College of Medicine, What to do with your first interventional pain complication
- 2010 2014 University of Florida College of Medicine, Comprehensive cancer pain medicine
- 2010 2014 University of Florida College of Medicine, Cancer pain medicine: inpatient management

Continuing Medical Education

- 2012 2013 University of Florida, Master Certification for Excellence in Human Subject Research and Protections, UF-CTSI certificate program
- 2012 2013 Master Certification for Excellence in Human Subject Research and Protections, UF-CTSI certificate program, Educational Development Certificate Series
- 2013 2014 Participation in creating a CME Product for Pain Medicine to satisfy MOCA Part II, American Society of Anesthesiologists/American Society of Regional Anesthesia & Pain Medicine
- 2014 University of Florida, Mentorship Academy Program, Clinical and Translational Research Institute
- 2014 Present Pain Medicine in the Primary Care Population, 6 Lecture Series for Family Medicine Physicians

Graduate Student Education

- 1998 2000 University of Chicago, Teaching Assistant, "The Conquest of Pain"
- 1998 2003 University of Chicago, Lecturer, "Endogenous Opioids," for the undergraduate course "The Conquest of Pain"
- 2013 University of Chicago, Guest reviewer for final projects for "The Conquest of Pain"
- 2016 University of Chicago, Guest Reviewer for final projects for "The Conquest of Pain"

Postdoctoral Fellow Education

- 2007 2009 Johns Hopkins University, Chemotherapy induced peripheral neuropathy
- 2007 2009 Johns Hopkins University, Opioids and sexual dysfunction
- 2007 2009 Johns Hopkins University, Intensive Pain Interventions for Pain Fellows

- 2007 2009 Johns Hopkins University, Opioids and Gender Disparity
- 2007 2009 Johns Hopkins University, Perioperative Pain Management in the Chronic Pain Patient
- 2007 2009 Johns Hopkins University, Diagnostic criteria for CRPS in the age of litigation
- 2007 2009 Johns Hopkins University, Pain review for the Anesthesiology Boards
- 2009 2011 University of Florida, Hematology/Oncology Fellowship Orientation lecture, Cancer Pain Medicine Beyond the WHO ladder
- 2011 2014 University of Florida, Multidisciplinary Pain Medicine Fellowship Lecture series 1 (25 lectures following IASP Pain Medicine Curriculum)
- 2013 2014 University of Florida, Pain Education day Monthly day long session dedicated to pain education of fellows and residents

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

Brandon Togioka, Johns Hopkins Medical Institutions Kevin Zhao, Harvard University Scott Goldsmith, University of Florida

Graduate Students

Ryan Anderson, University of Florida Nkaku Kisaalita, University of Florida

Clinical/Research Fellows

David Edwards, MD, PhD, University of Florida
Neil Ellis, MD, University of Florida
Aubrey Verdun, MD, Johns Hopkins University
Anita Gupta, MD, Pharm D, Johns Hopkins University
Brian Williams, MD, Johns Hopkins University
Shawn Sumida, MD, Johns Hopkins University
Eli Loch MD, University of Florida
Kacey Montgomery, MD, University of Florida
Heidi Goldstein, MD, University of Florida
Patrick Tighe, MD, University of Florida

Residents

Brad Royal, MD, University of Florida Jason Carroll, DO, University of Florida Timothy Vollmer, MD, University of Florida Andrew McNeal, MD, University of Florida Renee A. Myers MD, University of Florida Jennifer R. Bunch, MD, University of Florida Emily Davoodi, MD, University of Florida Ed Delorey, MD, University of Florida Omar Henriquez, MD, University of Florida Eli Loch, DO, University of Florida

Faculty

Julie Waldfogel, PharmD, University of Florida Chris Harle, PhD, University of Florida Egle Bavry, MD, University of Florida, NF/SG VAMC Gabriel Paulian, MD, University of Florida, NF/SG VA hospital

Refereed Journal Publications/Original Papers

- 1. Grabow TS, Hurley RW, Banfor PN, Hammond DL: Supraspinal and spinal delta2 opioid receptor-mediated antinociceptive synergy is mediated by spinal alpha2 adrenoceptors. Pain 83 (1): 47-55, 1999.
- 2. Hurley RW, Grabow TS, Tallarida RJ, Hammond DL: Interaction between medullary and spinal delta1 and delta2 opioid receptors in the production of antinociception in the rat. J Pharmacol Exp Ther 289(2): 993-999, 1999.
- 3. Hurley RW, Hammond DL: The analgesic effects of supraspinal mu and delta opioid receptor agonists are potentiated during persistent inflammation. J Neurosci 20 (3):1249-1259, 2000.
- 4. Oh SB, Tran PB, Gillard SE, Hurley RW, Hammond DL, Miller RJ: Chemokines and glycoprotein120 produce pain hypersensitivity by directly exciting polymodal nociceptors. J Neurosci 21 (14): 5027-5035, 2001.
- 5. Ackley MA, Hurley RW, Virnich DE, Hammond DL: A cellular mechanism for the antinociceptive effect of a kappa opioid receptor agonist. Pain 91 (3): 377-388, 2001.
- 6. Hurley RW and Hammond DL: Contribution of endogenous enkephalins to the enhanced analgesic effects of supraspinal mu opioid receptor agonists after inflammatory injury. J Neurosci 21 (7): 2536-2545, 2001.
- 7. Hurley RW, Chatterjea D, Feng MR, Taylor CP, Hammond DL: Gabapentin and pregabalin can interact synergistically with naproxen to produce antihyperalgesia. Anesthesiology 97(5): 1263-1273, 2002.
- 8. Parra MC, Nguyen TN, Hurley RW, Hammond DL: Persistent inflammatory nociception increases level of Dynorphin 1-17 in the spinal cord, but not in supraspinal nuclei involved in pain modulation. J Pain 3(4): 330-336, 2002.
- 9. Hurley RW, Banfor P, Hammond DL: Spinal pharmacology of antinociception produced by microinjection of mu and delta opioid receptor agonists in the ventromedial medulla of the rat. Neuroscience 118(3): 789-796, 2003.
- 10. Wu CL, Hurley RW, Anderson GF, Herbert R, Rowlingson AJ, Fleisher LA: Effect of postoperative epidural analgesia on morbidity and mortality following surgery in medicare patients. Reg Anesth Pain Med 29(6):525-33, 2004.
- 11. Block B, Hurley RW, Raja SN: Mechanism based therapies for pain. Drug News and Perspectives 17(3):172-186, 2004.
- 12. Hurley RW, Cohen SP, Williams KA, Rowlingson A, Wu CL: The analgesics effects of perioperative gabapentin on postoperative pain: A meta-analysis. Reg Anesth Pain Med 31(3):237-247, 2006.
- 13. Cohen SP, Sireci A, Wu CL, Larkin TM, Williams K, Hurley RW: Pulsed radiofrequency of the dorsal root ganglia is superior to pharmacotherapy or pulsed radiofrequency of the intercostal nerves in the treatment of chronic postsurgical thoracic pain. Pain Physician 9:179-187, 2006.
- 14. Cohen SP, Hurley RW: The ability of diagnostic spinal injections to predict surgical outcomes. Anesth Analg 105: 1756-1775, 2007.
- 15. Cohen SP, Bajwa ZH, Kraemer JJ, Dragovich A, Williams KA, Stream J, Sireci A, Shields C, Hurley RW: Factors predicting success and failure for cervical facet radiofrequency denervation: a multi-center analysis. Reg Anesth Pain Med 32:495-503, 2007.
- 16. Cohen SP, Stojanovic, Crooks M, Kim P, Blechner L, Schmidt RK, Hurley RW: Lumbar zygapophysial (facet) joint radiofrequency denervation success as a function of pain relief during diagnostic injections: a multi-center analysis. Spine J June 18th, 2007.
- 17. Cohen SP, Wenzell D, Hurley RW, Kurihara C, Griffith S, Larkin TM, Dahl E, Morlando BJ:A double blind, placebo-controlled, dose-response pilot study evaluating intradiscal etanercept in patients with chronic discogenic low back pain or lumbosacral radiculopathy. Anesthesiology 107: 99-105, 2007.
- 18. Sykes KT, White SR, Hurley RW, Mizoguchia H, Tseng LF, Hammond DL: Mechanisms responsible for the enhanced antinociceptive effects of mu opioid agonists in the rostral ventromedial medulla of rats with persistent inflammatory pain. J Pharmacol ExpTherap 322: 813-821, 2007.
- 19. Cohen SP, Hurley RW, Christo PJ, Winkley J, Mohiuddin MM, Stojanovic MP: Clinical predictors of success and failure for lumbar facet radiofrequency denervation. Clin J Pain 23:45-52, 2007.
- 20. Hurley RW, Lesley M, Adams, MCB, Brummett C, Wu CL: Pregabalin in the treatment of diabetic peripheral neuropathy. Reg Anesth Pain Med 33:389-394, 2008.
- 21. Cohen SP, Hurley RW, Buckenmaier CC 3rd, Kurihara C, Morlando B, Dragovich A: Randomized placebocontrolled study evaluating lateral branch radiofrequency denervation for sacroiliac joint pain. Anesthesiology 109(2):279-288, 2008.
- 22. Hurley RW, Adams MCB: Sex, gender and pain: an overview of a complex field. Anesth Analg 107: 309-317, 2008.
- 23. Gupta A, Daigle S, Mojica J, Hurley RW: Patient perception of pain care in hospitals in the United States. J

- Pain Res 2:157-164, 2009.
- 24. Brummett CM, Williams BS, Hurley RW, Erdek MA: A prospective, observational study of the relationship between body mass index and depth of the epidural space during lumbar transforaminal epidural steroid injection. Reg Anesth Pain Med 34(20):100-105, 2009.
- 25. Bailey JA, Hurley RW, Gold MS: Crossroads of pain and addiction. Pain Med 11:1803-1818, 2010.
- 26. Liu SS, Togioka BM, Hurley RW, Vu CM, Hanna MN, Murphy JD, Wu CL: Methodological quality of randomized controlled trials of postoperative epidural analgesia. Validation of the epidural analgesia trial checklist as a specific instrument to evaluate methodology. Reg Anesth Pain Med 35:549-555, 2010.
- 27. Vincent HK, Vincent KR, Seay AN, Hurley RW: Functional impairment in obesity: a focus on knee and back pain. Pain Management 1(5):427-439, 2011.
- 28. Vincent HK, Heywood K, Connelley J, Hurley RW. Obesity and weight loss in the treatment and prevention of osteoarthritis. PM R 4:S59-S67, 2012.
- 29. McGreevy K, Hurley RW, Erdek MA, Aner MM, Li S, Cohen SP: The effectiveness of repeat celiac plexus neurolysis for pancreatic cancer: a pilot study. Pain Pract Feb;13(2):89-95, 2013.
- 30. Vincent H, Seay A, Conrad B, Hurley RW, Vincent KR: Functional Pain Severity and Mobility in Overweight Older Men and Women With Chronic Low Back Pain: Part I. PMR, May; 92(5):430-8, 2013.
- 31. Vincent H, Seay A, Conrad B, Hurley RW, Vincent KR: Kinesiophobia and Fear Avoidance Beliefs in Overweight Older Adults With Chronic Low Back Pain, Relationship to Walking Endurance: Part II. PM R, May; 92(5):439-45, 2013.
- 32. Hurley RW, Adams MCB, Benzon HT: Neuropathic Pain: Treatment Guidelines and Updates. Curr Opin Anesthesiol, Aug, 2013.
- 33. Vincent HK, Adams MCB, Vincent KR, Hurley RW: Musculoskeletal Pain, Fear Avoidance Behaviors, and Functional Decline in Obesity: Potential Interventions to Manage Pain and Maintain Function. Reg Anesth Pain Med, Nov-Dec;38(6):481-91, 2013.
- 34. Vincent HK, Vincent KR, Seay AN, Conrad BP, Hurley RW, George SZ: Back Strength Predicts Walking Improvement in Obese, Older Adults With Chronic Low Back Pain. PMR. No; pii: S1934-1482(13)01148-9, 2013.
- 35. Hurley RW, Zhao K, Tighe PJ, Ko PS, Pronovost PJ, Wu CL: Examination of Publications from Academic Anesthesiology Faculty in the United States. Anest Analg, Jan; 118(1):192-9, 2014.
- 36. Lee F, Jamison DE, Hurley RW, Cohen SP: Epidural Lysis of Adhesions. Korean J Pain, Jan; 27(1):3-15. 2014.
- 37. Verdun AV, Williams B, Cohen SP, Hurley RW: Pneumocephalus after Lumbar Epidural Steroid Injection: A case report and review of the literature. Anesth Analg-Case Reports;2014;3:9-13.
- 38. Cohen SP, Hameed H, Kurihara C, Pasquina PF, Patel AM, Babade M, Griffith SR, Erdek ME, Jamison DE, Hurley RW: The Effect of Sedation on the Accuracy and Treatment Outcomes for Diagnostic Injections: A Randomized, Controlled Crossover Study. Pain Med. 2014 Apr;15(4):588-602
- 39. Tighe PJ, Fillingim RB, Hurley RW: Geospatial Analysis of HCAHPS Pain Management Satisfaction Scores in US Hospitals. PAIN. 2014 May;155(5):1016-26
- 40. Vincent HK, George SZ, Seay AN, Vincent KR, Hurley RW: Resistance Exercise, Disability, and Pain Catastrophizing in Obese Adults with Back Pain. Medicine & Science in Sports & Exercise., 2014 Sep;46(9):1693-701
- 41. Kisaalita N, Staud R, Hurley R, Robinson, ME: Placebo use in pain management: the role of medical context, treatment efficacy, and deception in determining placebo acceptability. PAIN. 2014

 Dec;155(12):2638-45
- 42. Cohen SP, Hameed H, Pasquina PF, Hurley RW: Sedation for Diagnostic Injections: Prioritizing Patient Interests. Pain Med. 2014 Nov;15(11):1980-1
- 43. Bunch JR, Goldstein HV, Hurley RW: Complete coverage of phantom limb and stump pain with constant current SCS system: A case report and review of the literature. Pain Practice. 2015 Jan;15(1):E20-6
- 44. Zaremski JL, Herman DC, Clugston JR, Hurley RW, Ahn AH: Occipital Neuralgia as a Sequela of Sports Concussion: A Case Series and Review of the Literature. Current Sports Medicine Reports. 2015 Jan;14(1):16-9.
- 45. Hulata DF, Le-Wendling L, Boezaart AP, Hurley RW: Stellate Ganglion Local Anesthetic Blockade and Neurolysis for the Treatment of Refractory Ventricular Fibrillation: A Case Report. Anesthesia and Analgesia. Mar;15(4)49-51
- 46. Chang KL, Fillingim R, Hurley RW, Schmidt S: Chronic pain management: evaluation of chronic pain. FP

- Essent. 2015 May;432:11-20
- 47. Chang KL, Fillingim R, Hurley RW, Schmidt S: Chronic pain management: nonpharmacological therapies for chronic pain. FP Essent. 2015 May;432:21-26.
- 48. Chang KL, Fillingim R, Hurley RW, Schmidt S: Chronic pain management: pharmacotherapy for chronic pain. FP Essent. 2015 May;432:27-38
- 49. Harle CA, Listhaus A, Covarrubias C, Schmidt SOF, Mackey S, Carek PJ. Fillingim RB, Hurley RW.
 Overcoming Barriers to Implementing Patient-Reported Outcomes in an Electronic Health Record: A
 Case Report. Journal of the American Medical Informatics Association. 2015, (Accepted for publication)
- 50. Chang KL, Fillingim, R, Hurley, RW, Schmidt S: Chronic pain management: legal and licensure issues. FP Essent. 2015 May; 432:39-42
- 51. Anderson, R. J., Hurley, R. W., Staud, R., & Robinson, M. E. (2016). Cognitive-motivational influences on health behavior change in adults with chronic pain. Pain Medicine. doi: 10.1111/pme.12929
- 52. Harle, CA, Lipori G, Hurley RW. Collecting, Integrating, and Disseminating Patient-Reported Outcomes for Research in a Learning Healthcare System. eGEMs (Generating Evidence & Methods to improve patient outcomes). 2016 (In Press).
- 53. Kisaalita N,Hurley RW,Staud R, Robinson ME. Placebo use in pain management:a mechanism-based educational intervention enhances placebo treatment acceptability. J Pain. 2015 Nov 18.
- 54. Tighe PJ, Harle CA, Hurley RW, Aytug H, Boezaart AP, Fillingim RB.Teaching a Machine to Feel Postoperative Pain: Combining High-Dimensional Clinical Data with Machine Learning Algorithms to Forecast Acute Postoperative Pain. Pain Med. 2015 Jul;16(7):1386-401.
- 55. Harle CA, Bauer SE, Hoang HQ, Cook RL, Hurley RW, Fillingim RB. Decision support for chronic pain care: how do primary care physicians decide when to prescribe opioids? a qualitative study. BMC Fam Pract 2015;16:48
- 56. Bicket MC, Hurley RW, Moon JY, Brummett CM, Hanling S, Huntoon MA, van Zundert J, Cohen SP. The Development and Validation of a Quality Assessment and Rating of Technique for Injections of the Spine (AQUARIUS), Regional Anesthesia and Pain Medicine 12/2015
- 57. Titsworth WL, Abram J, Guin P, Herman MA, West J, Davis NW, Bushwitz J, Hurley RW, Seubert CN. A prospective time-series quality improvement trial of a standardized analgesia protocol to reduce postoperative pain among neurosurgery patients. J Neurosurg. 2016 Mar 11:1-10

Books, Chapters, and Reviews

- 1. Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013.
- 2. Buvanendran K, Cohen SP, Hayek S, Hooten M, Hurley RW, Jackson T, Kapural L, McKenzie-Brown A, Peng P, Provenzano D, Vorenkamp K, Watson J, Wellington J (eds): Self-Assessment Modules for Pain Medicine (SAM-PM). Chicago, America Society of Anesthesiology, 2012.
- 3. Benzon HT, Raja SN, Molloy RE, Hurley RW, Liu S (eds): Essentials of Pain Medicine and Regional Anesthesia, ed 3. Philadelphia, Elsevier Churchill, 2011
- 4. Dhesi SS, Hurley RW: The neurobiology of pain, in Tollison CD, Satterthwaite JR, Tollison JW (eds): Practical Pain Management, Ed 3. Philadelphia, Lippincott Williams & Wilkins, pp 10-25, 2002.
- 5. Wu CL and Hurley RW Postoperative pain management and outcome. In Postoperative Pain Management, 1st Edition: Chapter 8, 2005.
- 6. Wu CL, Hurley RW, Stauffer JW: Analgesics, in Lee C-J, Lee JH, Wu CL, Lee BR, Chen M-L (eds): Clinical Trials of Drugs and Biopharmaceuticals. Boca Raton, CRC Press, pp 417-438, 2006.
- 7. Hurley RW, Cohen SP: Neuraxial agents, in Benzon H, Rathmell JP, Wu CL, Turk DC, Argoff CE eds): Raj's Practical Management of Pain, 4th Edition, Philadelphia, Mosby, pp 699-714, 2008.
- 8. Williams, KA, Hurley RW, Wu CL: Neuropathic pain syndromes (CRPS, PHN, PDN), in Benzon H, Rathmell JP, Wu CL, Turk DC, Argoff CE eds): Raj's Practical Management of Pain, 4th Edition, Mosby, pp 427-445, 2008.
- 9. Benzon N, Hurley RW, Deer T: Chronic pain, in Barash PG, Cullen BF, Stoelting RK (eds): Barash's Clinical Anesthesia, ed 6. Philadelphia, Lippincott Williams and Wilkins. 1505-1531, 2009.
- 10. Hurley RW, Wu CL: Acute postoperative pain, in Miller RD, Eriksson LI, Fleisher LA, Wiener-Kronish J, Young WL (eds): Miller's Anesthesia, ed 7. Elsevier, pp 2757-2782, 2009.
- 11. Hurley RW, Lenz FA: Neurosurgical treatment of cancer pain. In: Bruera ED, Portenoy RK (eds): Cancer Pain: Assessment and management, ed 2.Cambridge University Press, pp 329-339, 2010
- 12. Hurley RW, Cohen SP, Wu CL: Acute pain in adults, in Fishman SM, Ballantyne JC, Rathmell JP (eds):

- Bonica's Pain Management, ed 4. Baltimore, Lippincott Williams and Wilkins, pp 699-723, 2010.
- 13. Hurley RW, Ellis N, Adams MCB: Central and peripheral neurolysis, in Benzon H, Raja SN, Molloy RE, Hurley RW, Liu S (eds): Essentials of Pain Medicine and Regional Anesthesia, ed 3. Philadelphia, Elsevier Churchill, pp 531-538, 2011.
- 14. Hurley RW, Jerman JD, Benzon HT. Postmeningeal Puncture Headache and Spontaneous Intracranial Hypotension, in Benzon H, Raja SN, Molloy RE, Hurley RW, Liu S (eds): Essentials of Pain Medicine and Regional Anesthesia, ed 3. Philadelphia, Elsevier Churchill, pp 272-277, 2011.
- 15. Hurley RW, Enneking FK. Preemptive and Preventative Analgesia, in Benzon H, Raja SN, Molloy RE, Hurley RW, Liu S (eds): Essentials of Pain Medicine and Regional Anesthesia, ed 3. Philadelphia, Elsevier Churchill, pp 200-206, 2011.
- 16. Hurley RW, Benzon H, Davoodi E. Membrane Stabilizers, in Benzon H, Raja SN, Molloy RE, Hurley RW, Liu S (eds): Essentials of Pain Medicine and Regional Anesthesia, ed 3. Philadelphia, Elsevier Churchill, pp 123-129, 2011.
- 17. Hurley RW, Yakovleva N: Diabetic peripheral neuropathy, in American Society of Regional Anesthesia and Pain Medicine Resource Center. http://www.asra.com/pain-resource-center-chronic-pain-diabetic-peripheral-neuropathy.php
- 18. Hurley RW, Bavry, E: HIV painful neuropathy, in American Society of Regional Anesthesia and Pain Medicine Resource Center. http://www.asra.com/
- 19. Adams MCB, Hurley RW. Review of Perioperative Pain Management, in Miller's Anesthesia Review, ed 2. Philadelphia, Elsevier Churchill, 2012.
- 20. Hurley RW, Adams MCB. Perioperative Pain Management, in Miller RD, Pardo M (eds): Basics of Anesthesia, ed 6. Philadelphia, Elsevier Churchill, 2012.
- 21. Montgomery KA, Amin N, Hurley RW. Kyphoplasty, in Gupta A (ed): Interventional Pain Medicine. New York, Oxford University Press, pp 149-156, 2012.
- 22. Montgomery KA, Hurley RW. Nerve Destruction for the Alleviation of Visceral Pain, in Deer, Huntoon, Benzon Narouze, Spinal Injections & Peripheral Nerve Blocks, ed 1., Vol 4 from the Interventional and Neuromodulatory Techniques for Pain Management Series. New York, Elsevier Churchill, 2012.
- 23. Adams MCB, Tighe PJ, Hurley RW. Management of pain in the hospitalized patient, in McKean S, Ross J, Dressler D, Brotman D, Ginsberg J (eds): Principles and Practice of Hospital Medicine. Burr Ridge, Illinois, McGraw Hill, 2012.
- 24. Benzon N, Hurley RW, Deer T, Buvenandran K: Chronic pain, in Barash PG, Cullen BF, Stoelting RK (eds): Barash's Clinical Anesthesia, ed 7. Philadelphia, Lippincott Williams and Wilkins. 2013.
- 25. Kucera T, Hurley RW. Neck and Upper Extremity Pain, in Brummett C, Cohen SP (eds): Pain Medicine: A Case Based Approach, ed. 1. Oxford University Press, New York, 2013.
- 26. Hurley RW, Henriquez O, Wu CL: Neuropathic Pain Syndromes, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013.
- 27. Hurley RW, McGeeney B, Argoff CE: Membrane Stabilizers for the Treatment of Pain, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013.
- 28. Adams MCB, Benzon HT, Hurley RW: Chemical Neurolytic Blocks, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier.
- Hurley RW, Anderson D, Cohen SP: Neuraxial Agents, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013. Mosby, 2013.
- 30. Hurley RW, Burton A: Spinal Cord and Peripheral Nerve Stimulation, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013.
- 31. Hurley RW, Benzon HT, Turk DC: Future Directions and Trends in Pain Medicine, in Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff C, Hurley RW (eds): Practical Management of Pain, ed 5. New York, Elsevier-Mosby, 2013.
- 32. Hurley RW, Murphy J, Wu CL: Acute postoperative pain, in Miller RD, Eriksson LI, Fleisher LA, Wiener-Kronish J, Young WL (eds): Miller's Anesthesia, ed 8. Elsevier, 2015

Editorials, Letters to Editor, Other

1. Hurley RW: Fellowships in Regional Anesthesia Should Be Renamed 'Fellowship in Acute Pain Medicine'? - Guest Editorial - Regional Anesthesia vs. Acute Pain Medicine: When Both Miss the Mark. ASRA

- Newsletter, pp 3-5, November 2010.
- 2. Adams MCB, Hurley RW: Spinal cord stimulation complications: An example of the personal anecdote in the lay media. ASRA Newsletter, pp 16-17, November 2011.
- 3. Hurley RW: The Future of Pain Medicine Fellowship Training: 1 year versus 2 years Is it an issue of time or priorities. ASRA Newsletter, pp 18-21, May 2012.

Abstracts

1. Anderson, R. J., Hurley, R. W., Staud, R., & Robinson, M. E. (2015). Cognitive-motivational influences on health behavior change in chronic pain. Journal of Pain, 16(4), S18. doi:10.1016/j.jpain.2015.01.085