

CURRICULUM VITAE

Personal

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Education

<u>Institution and Location</u>	<u>Degree</u>	<u>Dates</u>	<u>Field</u>
St. Ambrose University Davenport, IA	B.S.	1980-1984	Biology/Philosophy
University of Iowa Iowa City, IA	M.S.	1987-1989	Plant Biochemistry
University of Iowa Iowa City, IA	Ph.D.	1991-1994	Anatomy and Cell Biology

Professional Experience

8/2014 - Distinguished Professor of Cell Biology
Missouri State University

8/2008 - 7/2014 Professor of Cell Biology
Missouri State University

7/2006- Director, Center for Biomedical & Life Sciences
Missouri State University

6/2005 - 7/2008 Associate Professor of Cell Biology
Missouri State University (formerly Southwest Missouri State University)

8/2004 - 6/2006 Executive Director - Center for Applied Science and Engineering
Missouri State University

8/2001 - 5/2005 Assistant Professor of Cell Biology
Southwest Missouri State University

4/1998 - 7/2001 Assistant Research Scientist, Department of Physiology
University of Iowa (Dr. Andrew Russo)

1/1995 - 3/1998 Postdoctoral Fellow, Department of Physiology
University of Iowa (Dr. Andrew Russo)

1/1990 - 7/1991 Research Asst. II, Department of Anatomy
University of Iowa (Dr. Jeanne Snyder)

6/1985 - 12/1986 Research Asst. II, Speech Pathology and Audiology
University of Iowa (Dr. Ingo Titze)

7/1984 - 5/1985 Research Asst. I, Speech Pathology and Audiology
University of Iowa (Dr. Adrienne Perlman)

Teaching Experience (Primary Courses Only)

1/18 – 5/18	Course Director	BIO 597/697 Epigenetics and Human Health
1/18 – 5/18	Course Director	BIO 121 General Biology I (lecture)
8/17 – 12/17	Course Director	BIO 320 Molecular Cell Biology (lecture)
8/17 – 12/17	Course Director	BIO 121 General Biology I (lecture)
1/17 – 5/17	Course Director	BIO 597/697 Diabetes – A Global Epidemic
1/17 – 5/17	Course Director	BIO 121 General Biology I (lecture)
8/16 – 12/16	Course Director	BIO 320 Molecular Cell Biology (lecture)
8/16 – 12/16	Course Director	BIO 121 General Biology I (lecture)
1/16 – 5/16	Course Director	BIO 597/697 Epigenetics and Human Health
1/16 – 5/16	Course Director	BIO 121 General Biology I (lecture)
8/15 – 12/15	Course Director	BIO 320 Molecular Cell Biology (lecture)
8/15 – 12/15	Course Director	BIO 121 General Biology I (lecture)
1/15 – 5/15	Course Director	BIO 597/697 Diabetes (lecture)
1/15 – 5/15	Course Director	BIO 121 General Biology (lecture)
8/14 – 12/14	Course Director	BIO 320 Molecular Cell Biology (lecture)
8/14 – 12/14	Course Director	BIO 121 999 Honor General Biology (lecture)
8/14 – 12/14	Course Director	BIO 597/697 Cancer Biology (lecture)
1/13 -5/14	Course Director	BIO 597/697 Medicinal Plant Biochemistry
1/13 -5/14	Course Director	BIO 355/755 Developmental Biology (lecture & lab)
8/13 – 12/13	Course Director	BIO 597/697 Molecular and Cellular Techniques
8/13 – 12/13	Course Director	BIO 320 Molecular Cell Biology (lecture)
1/13 -5/13	Course Director	BIO 597/697 Epigenetics
1/13 -5/13	Course Director	BIO 355/755 Developmental Biology (lecture & lab)
8/10-12/12	Course Director- MSU	BIO 597/697 Diseases of the Nervous System
8/10-12/12	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/11-5/12	Course Director- MSU	BIO 597/730 Diabetes
1/11-5/12	Course Director-MSU	BIO 597/697 Advanced Developmental Biology
8/10-12/11	Course Director- MSU	BIO 597/697 Cancer Biology
8/10-12/11	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/11-5/11	Course Director-MSU	BIO 728 Diseases of the Nervous System
1/11-5/11	Course Director-MSU	BIO 697 Advanced Developmental Biology
8/10-12/10	Course Director- MSU	BIO 597/697 Molecular Cell Biology Techniques (lab)
8/10-12/10	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/10-5/10	Course Director-MSU	BIO 355/655 Developmental Biology (lecture and lab)
8/09-12/09	Course Director-MSU	BIO 620 Mechanisms of Pain (seminar course)
8/09-12/09	Course Director-MSU	BIO 121 General Biology I (lecture)
1/09-5/09	Course Director-MSU	BIO 355/655 Developmental Biology (lecture and lab)
8/08-12/08	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/08-5/08	Course Director-MSU	BIO 355/655 Developmental Biology (lecture and lab)
8/07-12/08	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/07-5/07	Course Director-MSU	BIO 355/655 Developmental Biology (lecture and lab)
8/06-12/06	Course Director- MSU	BIO 320 Molecular Cell Biology (lecture)
1/06-5/06	Course Director-MSU	BIO 355/655 Developmental Biology (lecture and lab)
1/05-5/05	Course Director-SMSU	BIO 355/655 Developmental Biology (lecture and lab)
8/04-12/04	Course Director-SMSU	BIO 597 Neurogenic Inflammation (seminar course)
1/04-5/04	Course Director-SMSU	BIO 630 Neurobiology of Disease (seminar course)
1/02-5/03	Course Director-SMSU	BIO 121 General Biology I (lecture)
8/01-12/05	Course Director-SMSU	BIO 320 Molecular Cell Biology (lecture and lab)

Honors and Awards

- Reviewer for NIH Grant Study Section - 2018/05 ZRG1 IFCN-B (03) M
Member conflict: Pain Mechanisms, March 2018
- Reviewer for NIH Grant Study Section – 2018/05 ZDE1 MH (15) 1
NIDCR Clinical Research, Clinical Trials, and Clinical Trials Planning Grants, February 2018
- Recipient of Missouri State University Bronze Bear Award, December 2018
- Invited panel member for Society for Women’s Health Research Migraine Roundtable,
Washington DC, October 2017
- Reviewer for NIH Grant Study Section - Member conflict: Pain and Chemosensory Mechanisms
2017/10 ZRG1 IFCN-B (03) M, July 2017
- Reviewer for NIH Grant Study Section - RFA-DE-18-002 NIDCR Award for Sustaining
Outstanding Achievement in Research (SOAR) (R35) 2017/10 ZDE1 GZ (07) R, June 2017
- Reviewer for NIH Grant Study Section - NIH Special Emphasis Panel/Scientific Review Group
2017/08 ZRG1 IFCN-T (50) R BRAIN Initiative: Targeted BRAIN Circuits Projects, May 2017
- Missouri Board of Governor’s Excellence in Teaching Award, May 2017
- Foundation Award in Teaching, Missouri State University, May 2017
- Elected as a Member of Executive Committee for American Academy of Orofacial Pain, February
2017
- Foundation Award in Research, Missouri State University, May 2016
- Reviewer for NIH Grant Study Section, NIDCR Special Emphasis Panel NZRG1-IFCN-B-03M
(IAM), Small Business: Oral, dental and craniofacial sciences, March 2016.
- Reviewer for NIH Grant Study Section, NIDCR Special Emphasis Panel 2016/01 ZRG1 MOSS-K
(11) B Small Business: Oral, dental and craniofacial sciences, November, 2015
- Reviewer for NIH Grant Study Section, NIDCR Special Emphasis Panel 2016/01 ZDE1 GZ (07)
1, RFA-DE-16-001 Pharmacogenomics of Orofacial Pain Management (R01), September, 2015.
- Atwood Research and Teaching Award, Missouri State University May 2015
- Service Award College of Natural and Applied Sciences, Missouri State University May 2015
- Promotion to Distinguished Professor, Missouri State University, August 2014
- Invited Co-Chair Headache: Basic Science, American Academy of Neurology, San Diego, March
2014
- Reviewer for Congressionally Directed Medical Research Programs Peer Reviewed Medical
Research Program – Pre-application-Chronic Migraine and Posttraumatic Headache, July 2013
- Selected as a Council Member of the American Academy of Orofacial Pain Society, April, 2013
- Invited Co-Chair Headache: Basic Science, American Academy of Neurology, San Diego, March
2013
- Reviewer for NIH Grant Study Section, Special Emphasis Panel ZDE1 JR (15), January 2013
- Reviewer for NIH Grant Study Section, Special Emphasis Panel ZDE1 JR (15), March 2012
- Selected as Program Committee Member, AAOP 2011 Annual Meeting
- Reviewer for NIH Grant Study Section, NCCAM, RFA-AT-10-002 "Centers of Excellence for
Research on CAM (CERC) for Pain (P01), December 2010
- Invited Chair of 2010 Shanghai International Conference on Traditional Chinese Medicine and
Natural Medicine, Hangzhou, China, October 2010
- Foundation Award in Research, Missouri State University, June 2010
- Invitation to participate in NIH-sponsored workshop for development of the second phase of a
strategic planning effort for headache research, May 2010
- Chosen as Chair of Scientific Meeting: Fresh Insights into the Pathophysiology of Primary and
Secondary Headache Disorders, National Headache Foundation, Chicago, October 2009
- Chosen as Co-Chair of Teaching Course: Fresh Insights into the Pathophysiology of Primary and
Secondary Headache Disorders, 14th Congress of International Headache Society, Philadelphia,
September 2009
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group

ZRG1 CFS-E(01)S Chronic Fatigue Syndrome, Fibromyalgia Syndrome, and Temporomandibular Disorders, June 2008

- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2007/10 ZNS1 SRB-R (30) Migraine: Neural Mechanisms and Risk Factors for Progression, July 2007
- Foundation Award in Research, Missouri State University, June 2007
- Outstanding Thesis Advisor Award, Missouri State University, May 2007
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2007/05 ZDE1 YL (41) meeting, March 2007
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2007/05 ZRG1 CFS-E (01) meeting, March 2007
- Best Poster Presentation at the American Academy of Orofacial Pain Meeting, April 2006
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2006/05 ZDE1 MK (63) meeting, April 2006
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2006/05 ZAR1 MLB-G (M1) (1) meeting, March 2006
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2006/05 ZDE1 RK (41) meeting, March 2006
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Scientific Review Group 2006/05 ZRG1 IFCN-F (03) meeting, February 2006
- Excellence In Innovation Award from Allergan, 2005
- Nominated by NIH for Presidential Early Career Award for Science and Engineers, 2005
- Reviewer for NIH Grant Study Section, Special Emphasis Panel/Initial Review Group 2005/01 ZRG1 CFS (01) (S) , December 2004
- University Award for Research, Southwest Missouri State University, 2004
- Invited Presentation at NIH workshop on migraine headache, Boston, 2004
- Invited Perspective Article for *New England Journal of Medicine*, 2004
- Content Review Board member for The Professional Television Network - Neurology, 2004
- Invited Review Article for *Current Opinion in Investigational Drugs*, 2004
- Participant in Sinus Headache-A Multidisciplinary Expert Research Panel Review, Dallas, 2003
- SMSU College of Natural and Applied Sciences Excellence in Research Award, 2003
- Southwest Missouri State University Summer Faculty Fellowship, 2002
- Appointment to Graduate Faculty status at Southwest Missouri State University, 2002
- Southwest Missouri State University Faculty Research/University Grant, 2001
- Iowa Microscopy Society Research Excellence Award, 2000
- Invited Review Article for *Pharmacology and Therapeutics*, 2000
- Invited Review Article for *Expert Opinion on Therapeutic Patents*, 2000
- Endocrine Society Travel Award, 1998
- Postdoctoral Fellow Poster Award Winner, U. of Iowa, College of Medicine, 1997
- University of Iowa Cardiovascular Center Fellowship, 1996-1997
- University of Iowa Cardiovascular Center Fellowship, 1995-1996
- Outstanding Teaching Assistants Award at University of Iowa
- Tun-Yang Wing Award for Outstanding First Year Anatomy Student
- University of Iowa Teaching Research Fellowship
- Graduated Cum Laude from St. Ambrose University
- Iowa State University Scholastic Achievement Award
- D.A.R. Award
- American Legion Award

Invited Speaker

British Society for Occlusal Studies Meeting, York England, June 2018

Blue Ribbon Seminars Club Educational Series, Montana, May 2018

American Academy of Craniofacial Pain, All Presentations -Two Day Workshop Epigenetics: Relevance to Orofacial Pain and Management, Los Angeles, June 2018
American Academy of Oral Medicine 2018 Annual Conference, San Antonio, April 2018
Mahan Orofacial Pain Alumni Association Annual Meeting, New Orleans, March 2018
American Pain Society Scientific Summit, Symposium Anaheim, March 2018
Annual Greater New York Dental Meeting, New York, November 2017
Orofacial Pain Workshop for US Navy, Bethesda, October 2017
Southern Headache Society/Southern Pain Society, New Orleans, September 2017
Physical Therapy Program at the American Academy of Orofacial Pain Meeting, Phoenix, May 2017
American Academy of Orofacial Pain, Phoenix, May 2017
Vollum Institute Dental College, Oregon, April 2017
American Equilibration Society Meeting, Chicago, February 2017
Trinity College Dublin Ireland, October 2016
Orofacial Pain Workshop for US Navy, Bethesda, October 2016
American Headache Society, San Diego, June 2016
American Academy of Orofacial Pain, Orlando, April 2016
MOCAN Conference, Springfield, MO, February 2016
American Academy of Craniofacial Pain Two-day Workshop on Epigenetics, Sydney, April 2015
American Academy of Craniofacial Pain, August, Denver 2014
American Headache Society, June, Los Angeles 2014
MOCAN Conference, Springfield, MO, February 2014
Upsher-Smith Laboratories, Epilepsy Conference, Minneapolis, October, 2013
American Academy of Orofacial Pain, Orlando, April 2013
MAHAN Conference, New Orleans, March 2013
American Academy of Craniofacial Pain, Sydney, Australia, March 2013
MOCAN Conference, Springfield, MO, February 2013
Southern Headache Society, Asheville, NC October 2012
American Chemical Society, San Diego, March 2012
Satellite Meeting – From Electrical Synapses to The Clinics, Bochum, Germany, August 2011
Case Western University, Department of Neurology Grand Rounds, Cleveland, June 2011
American Academy of Orofacial Pain, Las Vegas, April 2011
Eli Lilly, Neurology/Pain Group, Indianapolis, IN, December 2010
University of Kentucky, Chandler Medical Center, May 2010
American Academy of Orofacial Pain, Orlando, FL, April 2010
The 23rd Annual Practicing Physician’s Approach to the Difficult Headache Patient, Scottsdale, Feb 2010
Headache Cooperative of the Pacific, 3rd Annual Winter Conference, Ojah Valley, Jan 2010
14th International Headache Congress, Satellite Symposium, Philadelphia, September 2009
The 22nd Annual Practicing Physician’s Approach to the Difficult Headache Patient, Scottsdale, Feb 2009
Wake Forest University, Department of Neurology, January, 2009
Merck & Co., Inc., Medical Grand Rounds, January, 2009
University of Arizona, Pain Center, January 2009
50th Annual Scientific Meeting of American Headache Society, Boston, June 2008
TMJ Association's Fifth Scientific Meeting, Bethesda MD, June 2008
American Association of Dental Research Annual Meeting, Dallas, April 2008
Harvard University, Beth Israel Medical Center, Department of Anesthesia, November 2007
University of Missouri-Columbia, Neuroscience Department, December 2007
University of Kansas Medical Center, Anatomy and Cell Biology Department, September 2007
49th Annual Scientific Meeting of American Headache Society, Chicago, June 2007
4th Annual Headache Research Summit, Rancho Mirage, CA, February 2007

48th Annual Scientific Meeting of American Headache Society, Los Angeles, June 2006
 Society for Neuroscience 35th Annual Meeting, Slide Presentation, Washington, DC, Nov, 2005
 47th Annual Scientific Meeting of American Headache Society, Philadelphia, June 2005
 University of Missouri-Kansas City, Pharmacology Division, Kansas City, MO, April, 2005
 Washington University, Department of Anesthesiology, School of Medicine, St. Louis, Nov, 2004
 46th Annual Scientific Meeting of American Headache Society, Vancouver, BC, June 2004
 Saint Louis University, Microbiology and Immunology, School of Medicine, St. Louis, MO, May 2004
 Kansas State University, Division of Biology, Manhattan, KS, March 2004
 Sinus Headache-A Multidisciplinary Expert Research Panel Review, Dallas, TX, 2003
 45th Annual Scientific Meeting American Headache Society, Chicago, June 2003
 Southwest Missouri State University, Biomedical Sciences Department, Springfield, MO, April, 2003
 Drury University, Pre-Med Society and Integrated Science Program, Springfield, MO, February, 2003
 44th Annual Scientific Meeting American Headache Society, Seattle WA, June 2002
 Iowa Microscopy Society Meeting, University of Iowa, Iowa City, IA, October, 2000
 Wartburg College, Biology Department, Waverly, IA, February, 2000
 International Conference on Migraine (IBC), Philadelphia, April, 1999
 Hope College, Biology Department, Holland, MI, March 1999
 Neurology Grand Rounds, University of Iowa, Iowa City, IA, October, 1998
 International Conference on Migraine (IBC), Philadelphia, April, 1998
 Harvard Medical School, Migraine Program Project Lecture Series, Boston, February, 1998
 Society of Neuroscience Meeting, Slide Presentation, New Orleans, October, 1997
 Coe College, Biology Department, Cedar Rapids, IA, October, 1997
 Neurology Grand Rounds, University of Iowa, Iowa City, IA, October, 1996

Professional Activities

- Reviewer – *American Journal of Physiology* (1998-present)
- Reviewer – *J. of Orthopaedic and Sports Physical Therapy* (1998-present)
- Reviewer – *European Journal of Neuroscience* (1999-present)
- Reviewer – *Neuroscience Letters* (2000-present)
- Reviewer – *Brain* (2004-present)
- Reviewer – *Brain Research* (2004-present)
- Reviewer – *Medical Science Monitor* (2004-present)
- Reviewer – *Headache* (2005- present)
- Reviewer – *Annals of Neurology* (2005-present)
- Reviewer – *Pain* (2005-present)
- Reviewer – *Cephalalgia* (2005-present)
- Reviewer – *Trends in Pharmacology* (2006-present)
- Reviewer – *Journal of Neurochemistry* (2007-present)
- Reviewer – *Neuroscience* (2007- present)
- Reviewer – *Neuropeptides* (2008- present)
- Reviewer – *FASEB* (2008- present)
- Reviewer – *European Journal of Pain* (2008-present)
- Reviewer – *Journal of Pain* (2008-present)
- Reviewer – *Molecular Pain* (2008-present)
- Reviewer – *Neuron Glia Biology* (2009-present)
- Member – *Complementary and Alternative Medicine Special Interest Section of the American Headache Society*, (2005 – present)
- Editorial Board Member - *Frontiers, Neurology* (2010-present)
- Committee Member – Guidelines Textbook, Education, E-campus for American Academy of Orofacial Pain

Professional Organizations (currently a member)

- Society for Neuroscience
- American Association for the Advancement of Science
- American Headache Society
- American Academy of Orofacial Pain (Advisory Board 2013-2016; Executive Council 2017-2023)
- Southern Pain Society

Area of Research Interest

My long-term interest lies in understanding the cellular and molecular mechanisms involved in neuron-glia interactions that promote and sustain chronic peripheral and central sensitization. A primary goal of my research is to determine the signaling pathways by which inflammatory and anti-inflammatory agents control neuropeptide gene expression in disorders involving the trigeminal nerve. In addition, I am studying the effects of nutraceutical compounds on neuronal-glia interactions to identify novel biological compounds that inhibit inflammatory pathways, and am investigating the mechanism of action of cannabidiol and noninvasive transdermal vagus nerve stimulation in clinically relevant models of episodic and chronic migraine, and TMD pathology. I also am studying the connection between a healthy brain and a healthy gut using next generation sequencing to determine changes in the bacteria residing in the digestive system in response to prolonged inflammatory conditions (acute to chronic pain), early life stress, and alterations in diet and use of antibiotics.

Peer-reviewed Research Publications

1. Finkelhor, B.J., Titze, I.R. and **Durham, P.L.** (1987) The Effect of Viscosity Changes in the Vocal Folds on the Range of Oscillation. *J. Voice* 1: 320-325.
2. Alipour-Haghighi, F., Titze, I.R. and **Durham, P.L.** (1987) Twitch Response in the Canine Vocalis Muscle. *J. Speech Hearing Res.* 30: 290-294.
3. **Durham, P.L.** and Poulton, J.E. (1989) Effect of Castanospermine and Related Polyhydroxalkaloids on Purified Myrosinase from *Lepidium sativum* Seedlings. *Plant Physiol.* 90: 48-52.
4. **Durham, P.L.** and Poulton, J.E. (1990) Enzymatic Properties of Purified Myrosinase from *Lepidium sativum* Seedlings. *Z. Naturforsch.* 45c: 173-178.
5. Snyder, J.M., Rodgers, H.F., O'Brien, J.A., Mahli, N., Magliato, S.A. and **Durham, P.L.** (1992) Glucocorticoid Effects on Rabbit Fetal Lung Maturation in vivo: An Ultrastructural Morphometric Study. *Anat. Rec.* 232: 133-140.
6. **Durham, P.L.**, Davis-Nanthakumar, E.K. and Snyder, J.M. (1992) Developmental Regulation of Surfactant-associated Proteins in Rabbit Fetal Lung in vitro. *Exp. Lung Res.* 18: 775-793.
7. Wohlford-Lenane, C.L., **Durham, P.L.** and Snyder, J.M. (1992) Localization of Surfactant-associated Protein C (SP-C) in Fetal Rabbit Tissue by in situ Hybridization. *Am. J. Respir. Cell Mol. Biol.* 6: 225-234.
8. **Durham, P.L.**, Wohlford-Lenane, C.L. and Snyder, J.M. (1993) Glucocorticoid Regulation of Surfactant-Associated Proteins in Rabbit Fetal Lung in vivo. *Anat. Rec.* 237: 365-377.
9. **Durham, P.L.** and Snyder, J.M. (1995) Characterization of $\alpha 1$, $\beta 1$, and $\gamma 1$ Laminin Subunits during Rabbit Fetal Lung Development. *Dev. Dynamics* 203: 408-421.

10. **Durham, P.L.** and Snyder, J.M. (1996) Regulation of Laminin β 2 Subunit Chain during Rabbit Fetal Lung Development. *Differentiation* 60: 229-243.
11. Russo, A.F., Clark, M.S., and **Durham, P.L.** (1996) Thyroid Parafollicular Cells: An Accessible Model for the Study of Serotonergic Neurons. *Mol. Neurobiol.* 13: 257-276.
12. **Durham, P.L.**, Sharma, R.V., and Russo, A.F. (1997) Repression of the Calcitonin Gene-Related Peptide Promoter by 5HT₁ Receptor Activation. *J. Neurosci.* 17: 9545-9553.
13. **Durham, P.L.** and Russo, A.F. (1998) Serotonergic Repression of Mitogen-Activated Protein Kinase Control of the Calcitonin Gene-Related Peptide Enhancer. *Mol. Endocrinol.* 12:1002-1009.
14. **Durham, P.L.** and Russo, A.F. (1999) Regulation of Calcitonin Gene-Related Peptide Secretion by a Serotonergic Antimigraine Drug. *J. Neurosci.* 19: 3423-3429.
15. **Durham, P.L.** and Russo, A.F. (2000) Differential Regulation of Mitogen-Activated Protein Kinase-Responsive Genes by the Duration of a Calcium Signal. *Mol. Endocrinology.* 14: 1570-1582.
16. **Durham, P.L.** and Russo, A.F. (2002) New Insights into the Molecular Actions of Serotonergic anti-migraine Drugs. *Pharmacology & Therapeutics*, 94:77-92.
17. Mora, S., **Durham, P.L.**, Smith, J.R., Russo, A.F., Jeromin, A., and Pessin, J.E. (2002) NCS-1 Inhibits Insulin-stimulated GLUT4 Translocation in 3T3L1 Adipocytes through a Phosphatidylinositol 4-kinase-dependent Pathway. *J. Biol. Chem.* 277:27494-27500.
18. **Durham, P.L.** and Russo, A.F. (2003) Stimulation of the Calcitonin Gene-Related Peptide Enhancer by Mitogen-Activated Protein Kinases and Repression by an Antimigraine Drug in Trigeminal Ganglia Neurons. *J. Neuroscience*, 23:807-815.
19. **Durham, P.L.**, Cady, R., and Cady, R. (2004) Regulation of Calcitonin Gene-Related Peptide Secretion from Trigeminal Nerve Cells by Botulinum Toxin Type A: Implications for Migraine Therapy. *Headache*, 44:35-43.
20. **Durham, P.L.**, Dong, P.X., Belasco, K.T., Kasperski, J., Gierasch, W.W., Edvinsson, L., Heistad, D., Faraci, F.M., and Russo, A.F. (2004) Neuronal expression and regulation of CGRP promoter activity following viral gene transfer into cultured trigeminal ganglia neurons. *Brain Research*, 997:103-110.
21. **Durham, P.L.** (2004) CGRP Receptor Antagonists – A Fresh Approach to Migraine Therapy? *New Engl. J. Med.*, 350:1073-1075.
22. Eddings, D., Barnes, C., Gerasimchuk, N., **Durham, P.**, Domasevich, K. (2004) First Bivalent Palladium and Platinum Cyanoximates: Synthesis, Characterization and Biological Activity. *Inorganic Chemistry*, 43:3894-3909.
23. **Durham P.L.** (2004) CGRP receptor antagonists: A new choice for acute treatment of migraine. *IDrugs?* *Curr Opin Invest Drugs.* 5:731-735.
24. Cady, R.C., Dodick, D.W., Levine, H.L., Schreiber, C.P., Eross, E.J., Setzen, M., Blumenthal, H.J., Lumry, W.R., Berman, G.D., and **Durham, P.L.** (2005) Sinus headache: a neurology and otolaryngology consensus on diagnosis and treatment. *Mayo Clinic Proceedings.* 80:908-916.

25. Bellamy, J., Cady, R. and **Durham, P.L.** (2006) Salivary Levels of CGRP and VIP in Rhinosinusitis and Migraine Patients, *Headache*. 46:24-33.
26. Bowen, E., Schmidt, T., W., Firm, C.S., Russo, A.R., and **Durham, P.L.** (2006) Tumor Necrosis Factor- α Stimulation of Calcitonin Gene-Related Peptide Expression and Secretion from Rat Trigeminal Ganglion Neurons, *J Neurochem*. 96:65-77.
27. Levine, H.L., Setzen, M., Cady, R.K., Dodick, D.W., Schreiber, C.P., Eross, E.J., Blumenthal, H.J., Lumry, W.R., Berman, G.D., and **Durham, P.L.** (2006) An Otolaryngology, Neurology, Allergy, and Primary Care Consensus on Diagnosis and Treatment of Sinus Headache. *Otolaryngol Head Neck Surg*. 134:516-523.
28. Bellamy, J., Bowen, E., Russo, A.F., **Durham, P.L.** (2006) Nitric Oxide Regulation of Calcitonin Gene-Related Peptide Gene Expression in Rat Trigeminal Ganglia Neurons, *Eur J Neurosci*. 23:2057-2066.
29. **Durham, P.L.** (2006) Calcitonin Gene-Related Peptide (CGRP) and Migraine, *Headache*. 46(Suppl 1):S1-S6.
30. **Durham, P.L.** Niemann, C., Cady, R.K. (2006) Repression of Stimulated Calcitonin Gene-Related Peptide Secretion by Topiramate. *Headache*, 46:1291-1295.
31. Thalakoti, S., Patil, V.V., Damodaram, S., Vause, C.V., Langford, L.E., Freeman, S.E., **Durham, P.L.** (2007) Neuron-Glia Signaling in Trigeminal Ganglion: Implications for Migraine Pathology, *Headache*, 47:1008-1023.
32. Vause, C.V., Bowen, E.J., Spierings, E.L.H., and **Durham, P.L.** (2007) Effect of Carbon Dioxide on Calcitonin Gene-Related Peptide Secretion from Trigeminal Ganglia Neurons. *Headache*, 47:1385-1397.
33. Gerasimchuk, N., Maher, T., **Durham, P.**, Domasevitch, K.V., Wilking, J., Mokhir, A. (2007) Tin (IV) Cyanoximates: Synthesis, Characterization and Cytotoxicity. *Inorg Chem*, 46:7268-7284.
34. Abbey, M.J., Patil, V.V., Vause, C.V., **Durham, P.L.** (2008) Repression of Calcitonin Gene-Related Peptide Expression by a *Theobroma cacao* Extract, *J Ethnopharmacol*, 115:238-248.
35. Li, J., Vause, C.V., **Durham, P.L.** (2008) Stimulation of iNOS Expression in Trigeminal Ganglia Satellite Glia Cells by Calcitonin Gene-Related Peptide, *Br Res*, 1196:22-32.
36. Gerasimchuk, N., Goeden, L., **Durham, P.**, Barnes, C., Cannon, J.F., Silchenko, S., Hidalgo, I. (2008) Synthesis and Characterization of Disubstituted Arylcyanoximes and Their Several Metal Complexes. *Inorganica Chimica Acta*, 361:1983–2001.
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38. Freeman, S.E., Patil, V.V., **Durham, P.L.** (2008) Stimulation of Trigeminal Neurons by Nitric Oxide Causes Increased MAP Kinase Expression in Neurons and Satellite Glial Cells in Trigeminal Ganglia, *Neuroscience*, 157:542-555.
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64. Garrett, F. G., **Durham, P.L.** (2008) Stimulation of Trigeminal Nerves Leads to Increased Connexin Expression and Gap Junction Signaling Between Neurons and Satellite Glial Cells: Inhibition by Tonabersat. Society for Neuroscience, Washington, D.C.
65. Thalakoti, S., **Durham, P.L.** (2008) Differential Expression of MAP Kinases and MAP Kinase Phosphatases in Ipsilateral and Contralateral Trigeminal Ganglion in Response to Capsaicin Injection in the Temporomandibular Joint Capsule. Society for Neuroscience, Washington, D.C.
66. Vause, C.V., **Durham, P.L.** (2008) CGRP Stimulation of iNOS and NO Release from Trigeminal Ganglion Glial Cells Involves MAP Kinase Pathways. Society for Neuroscience, Washington, D.C.
67. **Durham, P.L.**, Strider, J., Valluri, A. (2009) Carbon Dioxide Inhibits Mast Cell Degranulation and Histamine Release. American Academy of Allergy, Asthma & Immunology Annual Meeting, Washington, D.C.
68. Garrett, F., **Durham, P.L.** (2009) Repression of Cellular Events Involved in Peripheral and Central Sensitization In an Adjuvant-Induced Model of TMJ Pathology by Tonabersat. 33rd Scientific Meeting of the American Academy of Orofacial Pain, Austin, TX.
69. Overmyer, A., **Durham, P.L.** (2009) Calcitonin Gene-Related Peptide Injection into the TMJ Capsule Differentially Regulates Expression of Signaling Molecules in Trigeminal Ganglion Neurons and Satellite Glial Cells. 33rd Scientific Meeting of the American Academy of Orofacial Pain, Austin, TX.
70. Strider, J., Valluri, A., **Durham, P.L.** (2009) Carbon Dioxide Inhibits Mast Cell Degranulation And Histamine Release. American Academy of Allergy, Asthma, and Immunology Annual Meeting, Washington, D.C.
71. Cady, R.K., Vause, C. V., Ho, T.W., Bigal, M.E., **Durham, P.L.** (2009) Elevated Saliva Calcitonin Gene-Related Peptide (CGRP) Levels During Acute Migraine Predicts Therapeutic Response to Rizatriptan, 14th International Headache Congress, Philadelphia, PA.
72. Glenn, J.R., Overmyer, A.E., **Durham, P.L.** (2009) Calcitonin Gene-Related Peptide Differentially Regulates Expression of Signaling Molecules in Trigeminal Ganglion Neurons and Satellite Glial Cells, 14th International Headache Congress, Philadelphia PA.
73. Masterson, C.G., **Durham, P.L.** (2009) DHE Repression of ATP-Mediated Sensitization of Trigeminal Ganglion Nociceptive Neurons Involves Activation of Alpha2 Adrenergic Receptors, 14th International Headache Congress, Philadelphia PA.

74. Cady, R.J., **Durham, P.L.** (2009) Repression of Acute and Chronic Inflammatory Changes in Trigeminal Ganglion Neurons and Glia in Response to Cocoa Enriched Diets, 14th International Headache Congress, Philadelphia PA.
75. Masterson, C.G., Garrett F.G., **Durham, P.L.** (2009) Rizatriptan Represses Stimulatory Effects of Capsaicin in Trigeminal Ganglion and Trigeminal Nucleus Caudalis: Inhibition of Peripheral and Central Sensitization, 14th International Headache Congress, Philadelphia PA.
76. Garrett F.G., **Durham, P.L.** (2009) Tonabersat Repression of Proteins Involved in Peripheral and Central Sensitization In Response to Acute or Chronic Inflammation, 14th International Headache Congress, Philadelphia PA.
77. Durham, Z.L., **Durham, P.L.** (2009) Interleukins IL-1 β and IL-6 Cause Sensitization of Trigeminal Ganglion Neurons Leading to Changes in the Ganglion and Trigeminal Nucleus Caudalis: Implications for Understanding Their Role in Migraine Pathology, 14th International Headache Congress, Philadelphia PA.
78. Strider, J.W., Garrett, F.G., **Durham, P.L.** (2009) Non-Inhaled Administration of 100% Carbon Dioxide Represses Capsaicin Mediated Activation of Neurons and Glia In the Trigeminal Nucleus Caudalis, 14th International Headache Congress, Philadelphia PA.
79. Strider, J.W., Garrett, F.G., **Durham, P.L.** (2009) Non-Inhaled Administration of 100% Carbon Dioxide Represses Capsaicin Mediated Activation of Neurons and Glia In the Trigeminal Nucleus Caudalis, 14th International Headache Congress, Philadelphia PA.
80. Vause, C.W., **Durham, P.L.** (2009) Calcitonin Gene-Related Peptide Acts as a Neuronal-Glial Modulator within the Trigeminal Ganglion, 14th International Headache Congress, Philadelphia PA.
81. Garrett, F.G., Hawkins, J., Scanlon, T., **Durham, P.L.** (2009) Temporal Expression of Connexin 26 Correlates with Development of Calcitonin Gene-Related Peptide-Containing Trigeminal Ganglion Neurons, Society for Neuroscience, Chicago, IL.
82. **Durham, P.L.** (2010) Predicting Treatment Response, Headache Cooperative of the Pacific, 3rd Annual Winter Conference, Ojai, CA.
83. **Durham, P.L.** (2010) Pathophysiology of Migraine, Diamond Headache Meeting, Scottsdale, Az.
84. **Durham, P.L.** (2010) Neuron-Glial Interactions in Trigeminal Mediated Disease. American Academy of Orofacial Pain, Orlando, FL.
85. **Durham, P.L.** (2010) Effects of REM Sleep Deprivation on Trigeminal Nerve Function. American Academy of Orofacial Pain, Orlando, FL.
86. Masterson, C., **Durham, P.L.** (2010) Dihydroergotamine Repression of Nociceptive Changes in the Trigeminal Ganglion and Trigeminal Nucleus Caudalis Involves Activation of Alpha2-Adrenergic Receptors, 52nd American Headache Society Meeting, Los Angeles, CA.

87. Cady, R.J., **Durham, P.L.** (2010) Inclusion of Grape Seed Extract as a Dietary Supplement Represses Neuron and Glia Activation in Trigeminal Nucleus Caudalis in Response to Chronic Trigeminal Nerve Stimulation, 52nd American Headache Society Meeting, Los Angeles, CA.
88. Strider, J.W., Smith, K.M., **Durham, P.L.** (2010) Calcitonin Gene Related Peptide Receptor Antagonist MK8825 Represses Nociceptive Signaling in the Trigeminal Ganglion and Trigeminal Nucleus Caudalis in Response to Capsaicin, 52nd American Headache Society Meeting, Los Angeles, CA.
89. Garrett, F.G., Hawkins, J., **Durham, P.L.** (2010) Effect of REM Sleep Deprivation on Trigeminal Ganglia and Trigeminal Nucleus Neurons and Glia: Towards a Better Understanding of Sleep and Migraine, 52nd American Headache Society Meeting, Los Angeles, CA
90. Garrett, F.G., Overmyer, A.E., Vause, C.V., Hawkins, J.L., Hayden, J.B., **Durham, P.L.** (2010) Development of a novel device for measuring withdrawal latency by thermal stimulation in animal facial pain models using the Hargreaves plantar apparatus. Society for Neuroscience, San Diego.
91. Strider, J., Vause, C.V., **Durham, P.L.** (2010) Expression of signaling molecules and receptors implicated in central sensitization is increased by calcitonin gene-related peptide in cultured astrocytes and microglia. Society for Neuroscience, San Diego, CA.
92. Durham, P.L., Masterson, C. (2010) Proton stimulation of CGRP secretion from trigeminal ganglia neurons occurs via an amiloride sensitive, calcium-independent mechanism and is not blocked by rizatripan or botulinum neurotoxin type A. Society for Neuroscience, San Diego, CA.
93. Garrett, F.G., Hawkins, J.L., Hayden, J.B., Campos, J.R., **Durham, P.L.** (2011) REM Sleep Deprivation Promotes Sustained Levels of Proteins Implicated in Peripheral and Central Sensitization of Trigeminal Nerves: Role in Pain Chronification. American Pain Society's 30th Annual Scientific Meeting, Austin, TX.
94. Garrett, F.G., Hawkins, J.L., Hayden, J.B., **Durham, P.L.** (2011) Differential Behavioral Response to Thermal Stimuli Following Unilateral or Bilateral Temporomandibular Joint Inflammation. American Pain Society's 30th Annual Scientific Meeting, Austin, TX.
95. An, T., Hirst, J., Cady, R., **Paul Durham** (2011) β -Sitosterol Isolated from Cocoa Powder Functions to Increase Expression of Anti-Inflammatory Proteins in Trigeminal Neurons: Implications for Treatment of Migraine and TMJ Disorders. 10th Annual Oxford International Conference on the Science of Botanicals (ICSB), Oxford, MS.
96. Strider, J.W., Glenn, J.R., and **Durham, P.L.** (2011) Calcitonin Gene-Related Peptide Stimulates Prolonged Expression of Proteins in Spinal Trigeminal Nucleus Neurons and Glia that Promote Central Sensitization. 35th Scientific Meeting of the American Academy of Orofacial Pain, Las Vegas, NV.

97. Cady, R.J., Hawkins, J.L., **Durham, P.L.** (2011) Inclusion of Cocoa as a Dietary Supplement Represses Neuron and Glia Activation in Trigeminal Nucleus Caudalis in Response to Chronic Trigeminal Nerve Stimulation, 53rd American Headache Society Meeting, Washington, DC.
98. Overmyer, A.E., Garrett, F.G., Hawkins, J.L., Hayden, J.B., **Durham, P.L.** (2011) REM Sleep Deprivation Evokes Facial Hyperalgesia in Response to Thermal Stimulation. 53rd American Headache Society Meeting, Washington, DC.
99. Strider, J.W., Vause, C.V., **Durham, P.L.** (2011) Calcitonin Gene-Related Peptide Stimulates Expression of Proteins In Spinal Trigeminal Nuclei Astrocytes and Microglia Known to Promote Central Sensitization. 53rd American Headache Society Meeting, Washington, DC.
100. **Durham, P.L.** (2012) Regulation of inflammatory proteins in trigeminal ganglion and trigeminal nucleus caudalis in response to cocoa enriched diets: Implications for migraine and TMJ disorder. American Chemical Society, Division of Agricultural and Food Chemistry, San Diego, CA.
101. Dieckhoff, D.T., Cady, R.J., **Durham, P.L.** (2012) Calcitonin Gene-Related Peptide Promotes Healing of Cutaneous Thermal Wounds, 22nd Annual Meeting of the Wound Healing Society, Atlanta, GA. Wound Rep Reg (2012) 20 A21
102. Hawkins, J.L., Garrett, F.G., and **Durham, P.L.** (2012) Prolonged Jaw Opening Promotes Sensitization of Trigeminal Nociceptive Neurons. 36th Scientific Meeting of the American Academy of Orofacial Pain, Pasadena, CA.
103. Cady, R.J., Hawkins, J.L., and **Durham, P.L.** (2012) Sensitization of Trigeminal Nociceptive Neurons In Response to Prolonged Neck Muscle Pain: Implications for TMD Pathology, 36th Scientific Meeting of the American Academy of Orofacial Pain, Pasadena, CA.
104. Hawkins, J.L., Denson, J.E., Miley, D.R., and **Durham, P.L.** (2012) Chronic Nicotine Promotes Expression of Proteins Implicated in Development of Peripheral and Central Sensitization of Trigeminal Neurons. 54th American Headache Society Meeting, Los Angeles, CA.
105. Durham, P.L., Cady, R.J., and Hawkins, J.L. (2012) Sensitization of Trigeminal Nociceptive Neurons in Response to Prolonged Neck Muscle Pain: Implications for Migraine Pathology 54th American Headache Society Meeting, Los Angeles, CA.
106. Cady, R.J., Hawkins, J.L., and **Durham, P.L.** (2012) Elevated Levels of CGRP in the Upper Spinal Cord Promotes Cellular Changes in Trigeminal Ganglia Associated with Peripheral Sensitization of Trigeminal Nociceptors. 54th American Headache Society Meeting, Los Angeles, CA.
107. Cady, R.J., Denson, J.E., and **Durham, P.L.** (2012) Inclusion of Cocoa as a Dietary Supplement Represses Cytokine Expression in Spinal Trigeminal Nucleus in Response to Chronic Trigeminal Nerve Stimulation. 54th American Headache Society Meeting, Los Angeles, CA.

108. Siqiang Zhu, Joseph Mbugua, Mark Chase, Theodore R. Nicholson III, June-Ho Jung, Jeffrey Maskrod, Carrie V. Vause, Eve Fabrizio, Gusphyl Justin, **Paul L. Durham**, Ramil Marcelo L. Mercado (2012) Nanotech 2012 Electronically-Controlled Drug Release System to Assist Wound Healing.
109. T. R. Nicholson III¹, S. Zhu¹, J. Maskrod¹, M. Chase¹, J. Mbugua¹, J-H. Jung, C. V. Vause, G. Justin¹, **P. L. Durham**, and R. M. Mercado (2012) An Electroactive Polymer-based Drug Delivery System for the On-demand Loading and Release of Ibuprofen Sodium Salt and Doxycycline Hyclate. Fall BMES Meeting.
110. White, S. H. and **Durham, P.L.** (2012) Tonabersat. Eleventh Eilat Conference on New Antiepileptic Drugs (Eilat XI), Eilat, Israel, May 2012.
111. Cady, R.J., Hawkins, J.L., and **Durham, P.L.** (2012) Inflammatory Neck Muscle Pain Mediates Cellular and Behavioral Changes that Promote Prolonged Sensitization of Trigeminal Nociceptive Neurons. Society for Neuroscience Meeting, New Orleans.
112. Hawkins, J.L., Denson, J.E., and **Durham, P.L.** (2012) Prolonged Jaw Opening Promotes Sensitization of Trigeminal Nociceptive Neurons: Repression of Behavioral Response by Dietary Grape Seed Extract. Society for Neuroscience Meeting, New Orleans.
113. Hawkins, J.L., Denson, J.E., Miley, D.R., and **Durham, P.L.** (2012) Chronic Nicotine Promotes Cellular Changes in the Trigeminal System that Block the Effect of the Anti-Migraine Drug Sumatriptan. Society for Neuroscience Meeting, New Orleans.
114. Turner, I., Cady, R., **Durham, P.L.**, Dexter, J.K., Cady, R.J., and Browning, R. (2013) An Exploratory Study of Calcitonin Gene-Related Peptide in Chronic Migraineurs Receiving OnabotulinumtoxinA: Implications to Pathophysiology and Treatment Responses. 55th American Headache Society Meeting, Boston, MA.
115. **Durham, P.L.** (2013) Epigenetics: Exploring the Impact of Nutrition on the Regulation of Our Genes that Promote Human Health and Disease. Missouri Council for Activity & Nutrition (MOCAN), Springfield, MO.
116. **Durham, P.L.** (2013) What Rats Can Teach Us About Migraine. Oral Presentation at the Southern Headache Society Meeting. Ashville, N.C.
117. **Durham, P.L.**, Sullivan, L. and Cady, R. (2013) Dual Orexin Receptor Antagonist 12 Represses Expression of Proteins in Neurons and Glia Implicated in Peripheral and Central Sensitization. The 65th Annual American Academy of Neurology Meeting. San Diego, CA.
118. **Durham, P.L.** (2013) Regulation of Orofacial Pain: Emerging Importance of Epigenetics. Oral Presentation at the American Academy of Craniofacial Pain. Sydney, Australia.
119. **Durham, P.L.** (2013) Neuron-Glia Interactions in Migraine, TMD, and Other Orofacial Pain

- Disorders. Oral Presentation at the American Academy of Craniofacial Pain. Sydney, Australia.
120. **Durham, P.L.** (2013) Muscle Pathology Leads to Peripheral Sensitization: Evidence of Bidirectional Signaling in the Trigeminal System. Oral Presentation at the American Academy of Orofacial Pain. Orlando, FL.
 121. Turner, I., Cady, R., **Durham, P.**, Dexter, K., Cady, R., Browning, R. (2013) An Exploratory Study of Calcitonin Gene-Related Peptide in Chronic Migraineurs Receiving OnabotulinumtoxinA: Implications to Pathophysiology and Treatment Responsiveness. International Headache Congress, Boston, MA.
 122. Hawkins, J.L., Denson, J.E., Thurman, B.N., **Durham, P.L.** (2013) Prolonged Sensitization of Trigeminal Nociceptive Neurons Caused by Neck Muscle Inflammation and REM Sleep Deprivation: Implications for Migraine and TMD Pathology. Society for Neuroscience, San Diego, CA.
 123. Finley, P.J., Norton, R., Austin, C., Mitchell, A., Zank, S., **Durham, P.** (2013) Isolation and Characterization of Highly Silver-Resistant Clinical Bacteria. Clinical Symposium on Advanced Wound Care. Lake Buena Vista, FL.
 124. **Durham, P.L.** (2014) Epigenetics: Exploring the Impact of Nutrition on the Regulation of our Genes. Missouri Council for Activity & Nutrition (MOCAN), Springfield, MO.
 125. **Durham, P.L.**, Hawkins, J.L. (2014) Neck Muscle Inflammation Leads to Prolonged Sensitization of Trigeminal Neurons and Increased Nociceptive Behavioral Responses to a Pungent Odor. ICOT 2014 & AAOP 38th Scientific Meeting. Las Vegas.
 126. Cady, R., Cady, R., Martin, V., **Durham, P.L.** (2014) Salivary Biomarkers and their Relationship to Menstrual Migraine Before and After Treatment with Sumatriptan-Naproxen or Placebo. American Headache Society 2014 Annual Scientific Meeting. Los Angeles, CA.
 127. **Durham, P.L.**, Hawkins, J.L. (2014) Trigeminal Sensitization in Migraine: Creation of the Perfect Storm. American Headache Society 2014 Annual Scientific Meeting. Los Angeles, CA.
 128. Masterson, C., **Durham, P.L.** (2014) Human Parafollicular Cancer Cells: A Neuronal Model for Novel Drug Identification to Treat Neuropathic Pain to the American Academy of Otolaryngology—Head and Neck Surgery Foundation, Orlando, FL.
 129. **Durham, P.L.** (2014) Why A Patient’s Environment Matters: Role of Epigenetics in Disease Progression and Treatment Response. American Academy of Orofacial Pain Summer Symposium. Denver, CO.
 130. O’Reily, A. and **Durham, P.L.** (2014) Study of Proteins Associated with Epileptic Seizures in Primary Hippocampal Cultures Under Basal and Stimulated Conditions. 16th International Neuroscience Winter Conference, Solden, Austria, April 2014.

131. Durham, Z.L. and **Durham, P.L.** (2014) Elevated TNF-Alpha Levels in the TMJ Promotes Transient Peripheral Sensitization of Trigeminal Nociceptive Neurons. Society for Neuroscience, Washington D.C.
132. **Durham, P.L.**, Miley, D., Moore, N., Hawkins, J. (2015) Secondary Traumatic Stress Increases Trigeminal Nerves: Potential Role in Migraine Pathogenesis. Annual American Academy of Neurology Meeting, Washington DC.
133. Hawkins, J.L., Norton, R., **Durham, P.L.** (2015) Prolonged Trigeminal Sensitization Induces Gut Dysbiosis: Implications for Migraine Pathology. Annual American Academy of Neurology Meeting, Washington DC.
134. Moore, N., Miley, D., **Durham, P.L.** (2015) Prenatal or Postnatal Secondary Traumatic Stress Increases Expression of Proteins Implicated in Peripheral and Central Sensitization of Trigeminal Nerves, American Academy of Orofacial Pain Scientific Meeting, Denver, CO.
135. Denson, J.E., **Durham, P.L.** (2015) Investigation of the Nocifensive Behavioral and Cellular Effects of Dihydroergotamine and Sumatriptan in a Model of Sustained Trigeminal Activation. American Headache Society Meeting, Washington DC.
136. **Durham, P.L.**, Smith, K. (2015) Cannabis Extract from Cultivars Expressing Low Levels of THC Increases MAP Kinase Phosphatase Levels in Trigeminal Ganglion Neurons and Glia. American Headache Society Meeting, Washington DC. AHS
137. Miley, D., Moore, N., **Durham, P.L.** (2015) Prenatal and Postnatal Secondary Traumatic Stress: Implication for Migraine Pathogenesis by Promoting Peripheral and Central Sensitization of Trigeminal Nerves. American Headache Society Meeting, Washington DC. AHS
138. Cornelison, L., Hawkins, J., **Durham, P.L.** (2015) Elevated Intrathecal CGRP Levels Promote Trigeminal Nociception: Evidence of Bidirectional Signaling. American Headache Society Meeting, Washington DC. AHS
139. Norton, R., Hawkins, J., **Durham, P.L.** (2015) Prolonged Trigeminal Sensitization Induces Gut Dysbiosis, American Society for Microbiology, New Orleans, LA.
140. Hawkins, J., **Durham, P.L.** (2015) Chicken Broth AAC1 as a Dietary Supplement Represses Nocifensive Behaviors and PKA Expression Caused by Prolonged Jaw Opening. Society for Neuroscience, Chicago, IL.
141. Hawkins, J., Norton, R., **Durham, P.L.** (2015) Persistent Sensitization of Trigeminal Neurons Promotes Gut Dysbiosis. Society for Neuroscience, Chicago, IL.
142. Cornelison, L., Hawkins, J., **Durham, P.L.** (2015) Central Role of Calcitonin Gene-Related Peptide in Promoting Peripheral Sensitization of Trigeminal Nociceptive Neurons. Society for Neuroscience, Chicago, IL

143. Hawkins, J.L., **Durham, P.L.** (2016) Biochemical Comparison of AAC1 Enriched Chicken Broth to Homemade Chicken Broth: Potential Benefits to Joint Health. American Society for Nutrition, San Diego, CA.
144. Norton, R., Hawkins, J.L., **Durham, P.L.** (2016) Inclusion of Chicken Broth AAC1 as a Dietary Supplement Modulates the Gut Microbiome: Results of Next-Generation DNA Sequencing. American Society for Nutrition, San Diego, CA.
145. Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Chicken Broth AAC1 as a Dietary Supplement Inhibits Pain Transmission and Decreases Serum C-Reactive Protein Levels In a Model of TMJ Disorder. American Society for Nutrition, San Diego, CA.
146. Hawkins, J.L., **Durham, P.L.** (2016) Nocifensive Response and PKA Expression Caused by Prolonged Jaw Opening Are Suppressed by Inclusion of Chicken Broth AAC1 as a Dietary Supplement. American Academy of Orofacial Pain, Orlando, FL.
147. Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Vagal Nerve Stimulation Inhibits Activation of Trigeminal Nociceptive Neurons in a Model of Trigeminal Sensitization. American Academy of Orofacial Pain, Orlando, FL.
148. Hawkins, J.L., **Durham, P.L.** (2016) Dietary Inclusion of Chicken Broth AAC1 Inhibits Mechanical Hyperalgesia and Increased PKA Expression: Evidence Blocking Peripheral and Central Sensitization in the Trigeminal System. American Headache Society, San Diego, CA.
149. Hawkins, J.L., Hyde, C., **Durham, P.L.** (2016) Administration of a Cannabinoid Enriched Extract Expressing Low Levels of THC Stimulates Increased Expression of MAP Kinase Phosphatases in Trigeminal Ganglion Neurons and Glia: Implications for Migraine Therapy. American Headache Society, San Diego, CA.
150. Koop, L., Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Temporomandibular Joint Inflammation Induces Changes in Protein Expression in V1 and V2 Trigeminal Neurons Implicated in Peripheral Sensitization and Migraine Pathology: Central Role of CGRP. American Headache Society, San Diego, CA.
151. Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Vagal Nerve Stimulation Suppresses Activation of Trigeminal Nociceptive Neurons in an Animal Model of Migraine Involving Trigeminal Sensitization. American Headache Society, San Diego, CA.
152. Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Vagal Nerve Stimulation Inhibits Activation of Trigeminal Nociceptive Neurons in a Model of Trigeminal Sensitization. European Headache and Migraine Trust International Congress, Glasgow, UK.
153. Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2016) Vagal Nerve Stimulation Inhibits Expression of Proteins Implicated in Sensitization and Excitation of Trigeminal Nociceptive

Neurons: Relevance to Migraine Therapy. European Headache and Migraine Trust International Congress, Glasgow, UK.

154. Chelliboina, N., Hawkins, J.L., and **Durham, P.L.** (2017) Neck Muscle Inflammation Promotes Sensitization of Trigeminal Neurons: Risk Factor for Chronic Nociception In Response to Prolonged Jaw Opening. American Academy of Orofacial Pain, Phoenix, AZ.
155. Hawkins, J.L., Blankenship, B.A., Cornelison, L.E., **Durham, P.L.** (2017) Vagal Nerve Stimulation Suppresses Trigeminal Sensitization Induced by Neck Muscle Inflammation: Treating a Risk Factor of Migraine. American Academy of Orofacial Pain, Phoenix, AZ.
156. Hawkins, J.L., Blankenship, B.A, Cornelison, L.E., and **Durham, P.L.** (2017) The Use of an Odorant Trigger to Induce Nociception in Animals with Trigeminal Sensitization Elicited by Neck Muscle Inflammation: A Novel Model of Migraine Pathology. American Headache Society, Boston.
157. Hawkins, J.L., Blankenship, B.A., Cornelison, L.E., **Durham, P.L.** (2017) Non-invasive Vagal Nerve Stimulation Suppresses Trigeminal Sensitization Induced by Neck Muscle Inflammation: Treating a Risk Factor of Migraine. American Headache Society, Boston.
158. Cornelison, L.E., Hawkins, J.L., Mohite, S., Allen, J., Chelliboina, N., **Durham, P.L.** (2017) Inhibition of Trigeminal Nociception by Cannabidiol In a Model of Migraine Pathology American Headache Society, Boston.
159. Peterson, O., Hawkins, J.L., Cornelison, L.E., **Durham, P.L.** (2017) Early-Life Stress Causes a Heightened State of Trigeminal Nociception and Gut Dysbiosis: Evidence of Risk Factor for Development of Chronic Orofacial Pain Conditions. Society for Neuroscience, Washington, D.C.
160. Hawkins, J.L., Blankenship, B.A., **Durham, P.L.** (2017) Neck Muscle Inflammation Induces Trigeminal Central Sensitization: A Risk Factor for Episodic Migraine. Society for Neuroscience, Washington, D.C.

Summary of Other Activities

Patents and Inventions:

Author on 16 patents (7 since 2011); designed a novel device for behavior testing sold by Ugo Basile (http://www.ugobasile.com/catalogue/product/37100_durham_animal_holders.html).

Student Mentoring (since 2002):

Provided research opportunities for 95 undergraduate students. Primary thesis advisor for 38 graduate

students (completed). In addition, I have served on the thesis committee for 24 additional graduate students from the Departments of Biology, Chemistry, and Biomedical Sciences.

Service:

Faculty advisor for Tri-Beta Honor Society, Ice Hockey team, and Roller Hockey team (2010- current); Member of Public Affairs Committee (multiple yrs); Vision Committee (2014-2015); Steering Committee (2015-2016); Hearing Committee (2015-2016); Chair of CNAS Scholarship Committee (past 5 yrs); Sustainability Academic Subcommittee (currently), Sustainability Advisory Committee (currently), Church choir (weekly with my wife); Co-director (with my wife) for youth program for our church. Teaching weekly Tai Chi course at our church.

Scholarship of Teaching:

My average mean evaluation for all courses taught at MSU is ~1.3 (1 = outstanding, 5 pt. scale). I have consistently taught two full courses each semester (average of 6 contact hours per week). Typically, one course (BIO 121 General Biology, Gen Ed) is primarily for freshman biology majors while the other course I teach is taken by upper level undergraduate students and graduate students majoring in biology.