

CURRICULUM VITAE

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I. EDUCATION

<u>Degree</u>	<u>Institution</u>	<u>Major Field</u>	<u>Date Completed</u>
PhD	Kent State University	Experimental Biological Psychology	2005
M.A.	Kent State University	Experimental Biological Psychology	2003
B.A.	Wesleyan College	Biology Minors in Physics and Neuroscience	2000

III. PROFESSIONAL EXPERIENCE

A. Experience in Higher Education

- 2014 – Assistant Professor, School of Nursing, University of Connecticut
- 2014 – Assistant Professor, Department of Genetics and Developmental Biology, University of Connecticut School of Medicine
- 2013-2014 Research Assistant Professor, Department of Anesthesiology, University of Pittsburgh School of Medicine (*mentor: Gerald F. Gebhart*)
- 2011- 2013 Research Assistant Professor, Department of Anesthesiology, University of Pittsburgh School of Medicine (*mentor: William R. Lariviere*)
- 6/2011-10/2011 Research Scholar, Department of Anesthesiology, University of Pittsburgh School of Medicine (*mentor: William R. Lariviere*)
- 2008-2011 Assistant Research Scientist, Behavioral and Cellular Neuroscience Program, Department of Psychology, Texas A&M University (*mentor: Mary W. Meagher*)
- 2005-2008 Postdoctoral Research Associate, Behavioral and Cellular Neuroscience Program, Department of Psychology, Texas A&M University (*mentor: Mary W. Meagher*)
- 2001-2005 Graduate Research Assistant/Teaching Fellow, Department of Psychology, Kent State University (*mentor: Robin L. Joynes*)

IV. PUBLICATIONS (# data-based) (*Peer Reviewed) (most recent first)

Baumbauer, KM, **Young, EE**, Hoy, K, France, J, & Joynes, RL. (2006). Intrathecal infusions of anisomycin impact the learning deficit but not the learning effect observed in spinal rats that have received instrumental training. *Behavioural Brain Research*, 173(2), 299-309.

Baumbauer, KM, **Young, EE**, Hoy, KC, Abood, A, & Joynes, RL. (2007). Administration of a calcium/calmodulin-dependent protein kinase II (CaMKII) inhibitor reverses the noncontingent shock learning deficit observed in spinal rats. *Behavioral Neuroscience*, 121(3), 570-578.

Baumbauer, KM, **Young, EE**, Hoy, KC, Jr, & Joynes, RL. (2007). Intrathecal administration of neurokinin 1 and neurokinin 2 receptor antagonists undermines the savings effect in spinal rats seen in an instrumental learning paradigm. *Behavioral Neuroscience*, 121(1), 186-199.

Baumbauer, KM, **Young, EE**, Hoy, KC, Jr, & Joynes, RL. (2007). Neurokinin receptors modulate the impact of uncontrollable shock on spinal plasticity. *Behavioral Neuroscience*, 121(5), 1082-1094.

Meagher, MW, Johnson, RR, Vichaya, EG, **Young, EE**, Lunt, S & Welsh, CJR. (2007). Social conflict exacerbates an animal model of multiple sclerosis. *Trauma, Violence, and Abuse*, 8(3), 314-330.

Meagher, MW, Johnson, RR, **Young, EE**, Good, E, Lunt, SC, Hardin, EA, Connor, MA, Welsh, TH, & Welsh, CJR. (2007). IL-6 as a mechanism for the effects of SDR on acute TMEV infection. *Brain, Behavior and Immunity*, 21(8), 1083-1095.

Young, EE, Baumbauer, KM, Elliot, A, & Joynes, RL. (2007). Lipopolysaccharide induces a spinal learning deficit that is blocked by IL-1 receptor antagonism. *Brain, Behavior, and Immunity*, 21(6), 748-757.

***Highlighted by the editor for "carrying new and novel insights" in the 8/07 issue of BBI and accompanied by an invited commentary by Dr. Terence Deak.*

Young, EE, Baumbauer, KM, Elliot, A, & Joynes, RL. (2007). The impact of neonatal injury on spinally mediated instrumental learning in adult rats. *Behavioral Neuroscience*, 121(5), 1095-1100.

Young, EE, Baumbauer, KM, Hillyer, JE, & Joynes, RL. (2007). Local anesthetic treatment significantly attenuates acute pain responding but does not prevent the neonatal injury-induced reduction in adult spinal behavioral plasticity. *Behavioral Neuroscience*, 121(5), 1073-1081.

Young, EE, Baumbauer, KM, Hillyer, JE, Patterson, AM, Hoy, KC Jr, Mintz, EM, & Joynes, RL. (2008). The neonatal injury-induced spinal learning deficit in adult rats: Central mechanisms. *Behavioral Neuroscience*, 122(3), 589-600.

Young, EE, Prentice, TW, Satterlee, D, McCullough, H, Sieve, AN, Johnson, RR, Welsh, T, Welsh, CJR, & Meagher, MW. (2008). Glucocorticoid exposure alters the pathogenesis of Theiler's murine encephalomyelitis virus during acute infection. *Physiology and Behavior*, 95, 63-71.

- Grimes, JS, Creech SK, **Young EE**, Vichaya EG & Meagher MW. (2009). Distraction speeds the decay of fear-induced hyperalgesia: Evidence for the contribution of memorial systems in affective pain modulation. *Journal of Pain*, 10(3), 282-292.
- Baumbauer, KM, **Young, EE** & Joynes, RL. (2009). Pain and learning in a spinal system: Contradictory outcomes from common origins. *Brain Research Reviews*, 61(2), 124-143.
- Young EE**, Sieve AN, Vichaya EG, Carcoba LM, Young CR, Ambrus A, Storts R, Welsh CJR & Meagher MW. (2010). Chronic restraint stress during early Theiler's virus infection exacerbates the subsequent demyelinating disease in SJL mice: Histological evaluation of CNS disease severity. *Journal of Neuroimmunology*, 220 (1-2), 79-89.
- Vichaya EG, **Young EE**, Frazier MA, Cook JL, Welsh CJ, & Meagher MW. (2011). Social disruption induced priming of CNS inflammatory response to Theiler's virus is dependent upon stress-induced IL-6 release. *Journal of Neuroimmunology* 239(1-2), 44-52.
- Young EE**, Lariviere WR, & Belfer, I. (2012). Genetic basis of pain variability: Recent Advances. *Journal of Medical Genetics* 49(1), 1-9.
 **This article was #7 of Medscape's Most-Read Journal Articles by Anesthesiologists, featured as one of the most popular full-text, peer-reviewed journal articles from hundreds of publications and key societies in February and April 2012.
- Young EE**, Vichaya EG, Cook JL, Reusser N, Welsh CJR, & Meagher MW. (2012). Chronic social stress impairs virus specific adaptive immunity during acute Theiler's virus infection. *Journal of Neuroimmunology*, 239(1-2), 44-52.
- Young EE**, Costigan, M, Herbert TA, & Lariviere WR. (2014). Heritability of Nociception IV: genetic relationships among inflammatory and neuropathic hypersensitivity assays and other comparisons. *Pain*, 155(5), 868-880.
 **Accompanied by an invited commentary from Dr. Ze'ev Seltzer
- You DS, Creech SK, Vichaya EG, **Young EE**, Smith JS, and Meagher MW. (2014). Written emotional disclosure alters secondary hyperalgesia in women with trauma history. *Psychosomatic Medicine*, 76(5), 337-346.
- Belfer I, **Young EE**, Diatchenko L. (2014). Letting the Gene Out of the Bottle: OPRM1 Interactions. *Anesthesiology*, 121(4), 678-680.
- Srinath A, **Young EE**, Szigethy E. (*in press*). Pain management in patients with inflammatory bowel disease: Translational approaches from bench to bedside. *Inflammatory Bowel Diseases*
- Manworren RCB, Ruano G, **Young EE**, St. Marie B, McGrath JM. (*in press*). Translating

the human genome to manage pediatric post-operative pain. *Journal of Pediatric Surgical Nursing*.

Manuscripts submitted

Lariviere WR, Bryant CD, **Young EE**, Lee SE, Peng X, Cook B, Nair HK, Dreher KJ, Zhang X, Palmer AA, Chung JM, Mogil JS & Chesler EJ. (*in revision*). Genetic analysis of behavior and gene expression reveal loci and candidate genes for mechanosensation. *Genes, Brain and Behavior*.

Manworren RCB, Ruano G, **Young EE**, St. Marie B, McGrath JM. (*under review*). Translating the human genome to manage pediatric post-operative pain. *Journal of Pediatric Surgical Nursing*.

Manuscripts in preparation

Cook JL, **Young EE**, Vichaya EG, Young CR, Reusser NM, Welsh CJ, & Meagher MW (*in preparation*). Pain behaviors and cognitive deficits in chronic phase TMEV infection.

Young EE, Vichaya EG, Herrman J, Cook, JL, & Meagher MW. (*in preparation*). Prior exposure to chronic social stress sensitizes zymosan-induced mechanical hypersensitivity.

Parsh GD, Dreher KJ, **Young EE**, Henker RA, Conley YP, O'Donnell CP & Lariviere WR. (*in preparation*). Morphine-induced sedation, respiratory depression and lethality are highly dose- and genotype-dependent in the mouse.

Nair HK, Parsh GD, **Young EE**, Spence JS, Chesler EJ & Lariviere WR. (*in preparation*) Genetic loci and candidate genes underlying inflammatory hypersensitivity.

Young EE, Benhayon D, Kirshner M, Coates MD, Davis BM, Szigethy E & Lariviere WR. (*in preparation*). Genome-wide expression profiling of peripheral and central nervous tissues in a mouse model of inflammatory bowel disease.

Published Abstracts

Young, EE and Joynes, RL. (2002). Lipopolysaccharide Administration Disrupts Acquisition of an Increased Flexion Response in Adult Spinal Rats. Annual meeting of the Society for Neuroscience, Orlando, FL.

Baumbauer, KM, Hoy, KC, France, J, **Young, EE**, & Joynes, RL. (2003). The impact of intrathecal protein synthesis inhibition on an acquired flexion response in spinal rats. Annual meeting of the Society for Neuroscience, New Orleans, LA.

Baumbauer, KM, **Young, EE**, Hoy, K, France, J, & Joynes, RL. (2003). The role of protein synthesis inhibition in the acquired flexion response in spinal rats. Annual meeting of the Pavlovian Society, Bloomington, IN.

- Young, EE**, Baumbauer, KM, Elliott, A, & Joynes, RL. (2003). NOS inhibitor does not prevent lipopolysaccharide (LPS) induced disruption of instrumental learning in spinal rats. Annual meeting of the Society for Neuroscience, New Orleans, LA.
- Young, EE**, Baumbauer, KM, Elliott, A, & Joynes, RL. (2003). The impact of neonatal injury on spinally mediated instrumental learning in adult rats. Annual meeting of the Pavlovian Society, Bloomington, IN.
- Baumbauer, KM, **Young, EE**, Hoy, KC, and Joynes, RL. (2004). The role of calcium/calmodulin kinase II (CAMKII) in the maintenance of the learning deficit observed in spinal rats. Annual meeting of the Society for Neuroscience, San Diego, CA.
- Brown, JE, **Young, EE**, Baumbauer, KM, Elliott, AE, and Joynes, RL. (2004). The impact of supraspinal systems on the developmental of spinal plasticity in rats after neonatal hindpaw injury. Annual meeting of the Society for Neuroscience, San Diego, CA.
- Young, EE**, Baumbauer, KM, and Joynes, RL. (2004). The role of nitric oxide in the learning deficit observed after noncontingent shock in adult spinal rats. Annual meeting of the Society for Neuroscience, San Diego, CA.
- Baumbauer, KM, Hoy, KC, **Young, EE**, and Joynes, RL. (2005). Intrathecal administration of NK1 receptor antagonist L-703,606 undermines the savings effect and reverses the learning deficit observed in spinally mediated instrumental learning. Annual meeting for the Society for Neuroscience, Washington, DC.
- Hillyer, JE, **Young, EE**, Wallace, S, and Joynes, RL. (2005). Are supraspinal systems necessary for the development of injury-induced sensitization in the neonatal rat? Annual meeting of the Society for Neuroscience, Washington, DC.
- Hoy, KC, Baumbauer, KM, **Young, EE**, Riccio, DC, and Joynes, RL. (2005). Direct stimulation of NK-1 and NK-2 receptors disrupts acquisition of a flexion response in spinal rats. Annual meeting for the Society of Neuroscience, Washington, DC.
- Young, EE**, Baumbauer, KM, Hillyer, JE, and Joynes, RL. (2005). Lidocaine administration does not prevent the neonatal injury-induced deficit in adult spinal learning. Annual meeting for the Society for Neuroscience, Washington, DC.
- Young, EE** and Joynes, RL. (2005). Characterization of the pathway involved in the neonatal injury induced learning deficit in adult spinal rats. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL
- Young, EE**, Good, E, Copeland, S, Johnson, RR, Welsh, CJ, and Meagher, MW. (2006). The role of glia in the exacerbating effects of social stress on acute Theiler's virus (TMEV) infection. Annual meeting of the Society for Neuroscience, Atlanta, GA.

- Young, EE**, Vichaya, E, and Meagher, MW. (2007). Prior exposure to chronic social stress sensitizes zymosan-induced mechanical allodynia. Annual meeting of the Society for Neuroscience, San Diego, CA.
- Young, EE**, Sieve AN, Vichaya EG, Carcoba LM, Steelman AJ, Young CR, Ambrus A, Storts R, Welsh TH, Welsh CJR, and Meagher MW. (2008). Impact of chronic restraint stress during early Theiler's virus infection on CNS disease severity in SJL mice. Annual meeting of the Psychoneuroimmunology Research Society, Madison, WI.
- Young EE**, Sieve AN, Vichaya EG, Carcoba LM, Steelman AJ, Young CR, Ambrus A, Storts R, Welsh CJR, and Meagher MW. (2008). Chronic restraint stress during early Theiler's virus infection exacerbates the subsequent demyelinating disease in SJL mice: II. Histological evaluation of CNS disease severity. Annual meeting of the Society for Neuroscience, Washington, DC.
- Herrman JW, **Young EE**, and Meagher MW. (2009). Chronic social stress sensitizes inflammatory arthritis in the mouse. Texas A&M Society for Neuroscience Symposium.
- Vichaya EG, **Young EE**, and Meagher MW. (2009). Chronic social disruption stress facilitates zymosan-induced mechanical allodynia. Texas A&M Society for Neuroscience Symposium.
- Vichaya EG, **Young EE**, and Meagher MW. (2009). Chronic social disruption stress facilitates zymosan-induced mechanical allodynia. Annual meeting of the Psychoneuroimmunology Research Society, Breckenridge, CO.
- Frazier MA, Vichaya EG, **Young EE**, Welsh CJR, and Meagher MW. (2009). Prior exposure to social stress sensitizes virus-induced cytokine expression during acute Theiler's virus infection. Texas A&M Society for Neuroscience Symposium.
- Frazier MA, Vichaya EG, **Young EE**, Welsh CJR, and Meagher MW. (2009). Prior exposure to social stress sensitizes virus-induced cytokine expression during acute Theiler's virus infection. Annual meeting of the Psychoneuroimmunology Research Society, Breckenridge, CO.
- Young EE**, Herrman JW, Vichaya EG, and Meagher MW. (2009). Chronic social stress exacerbates inflammatory arthritis-induced pain. Annual meeting of the Society for Neuroscience, Chicago, IL, 76.17.
- Vichaya EG, Cook JL, Frazier MA, **Young EE** and Meagher MW. (2010). Modeling symptoms of chemotherapy: Bortezomib and 5-Fluorouracil induce sickness in mice. *Psychoneuroimmunology Research Society*, Dublin, Ireland, June 2010.
- Vichaya EG, Cook JL, Frazier MA, **Young EE** & Meagher MW. (2010). Modeling symptoms of chemotherapy: Bortezomib induce sickness in mice. Annual meeting of the Society for Neuroscience, San Diego, CA, 361.10.

Young EE, Vichaya EG, Cook JL, Reusser NM, Welsh CJR & Meagher MW. (2010). Social stress disrupts virus-specific adaptive immunity during acute Theiler's virus infection. Annual meeting of the Society for Neuroscience, San Diego, CA, 359.7.

Bouchard SM, **Young EE**, Vichaya EG, Cook JL & Meagher MW. (2011). Characterization of Sickness Behavior Induced by the Colorectal Chemotherapy Agents Oxaliplatin and 5-FU. Annual meeting of the Psychoneuroimmunology Research Society, Chicago, IL.

Bouchard SM, **Young EE**, Vichaya EG, Cook JL & Meagher MW. (2011). Cancer chemotherapy-induced sickness behavior is associated with increased peripheral and central cytokine expression. Annual meeting of the Society for Neuroscience, Washington, DC, 87.

Young EE, D'Ardenne CA, & Lariviere WR. (2012). Identification of novel candidate genes for inflammation-induced hypersensitivity and hyposensitivity. *International Association for the Study of Pain, Milan, IT.*

Lariviere WR, **Young EE**, Benhayon D, Kirshner M, Coates MD, Davis BM & Szigethy E. (2013). Genome-wide expression profiling of brain areas involved in pain processing and depression in a mouse model of inflammatory bowel disease. *Winter Conference on Brain Research, Breckenridge, CO.*

Young EE, Benhayon D, Huo Z, Tseng GC, Lariviere WR, & Szigethy E. (2013). Genome-wide expression profiling of brain areas in a mouse model of IBD: potential mechanisms of transition from acute inflammation to persistent hypersensitivity. *Midwest Regional Pain Interest Group Annual Meeting, Cincinnati, OH.*

V. **RESEARCH AND EVALUATION GRANTS RECEIVED**

Research Funding

Active:

University of Connecticut (UCONN) Center for the Advancement of Managing Pain (CAMP) NIH Center of Excellence in Pain Education (CoEPE), NIDA, 2014-2019

PI: Dr. Renee Manworren

Role: **Co-Investigator**

Goal: Bring together experts in research, education, clinical care and advocacy related to pain to develop, implement and support coordinated educational programs in pain at all levels of healthcare professionals' education.

Genetic Variation and Premature Infant Stress in the NICU, Sigma Theta Tau International, Mu Chapter

PI: Amy D'Agata (trainee), 2014-2015

Role: **Co-Investigator**

Goal: Evaluate the impact of FKBP5 haplotype on neurodevelopmental outcomes for premature infants undergoing care in the NICU prior to discharge

A Mixed Methods Feasibility Study to Identify Pluripotent Stem Cells in Mothers' Breastmilk for Premature Infants, National Association of Neonatal Nurses, 2014-2015

PI: Dr. Carrie-Ellen Briere (trainee)

Role: **Collaborator**

Goal: Identify the stem cell content in breastmilk samples from mothers with preterm infants

A Mixed Methods Feasibility Study to Identify Pluripotent Stem Cells in Mothers' Breastmilk for Premature Infants, Foundation for Neonatal Research and Education (FNRE), 2014-2015

PI: Dr. Carrie-Ellen Briere (trainee)

Role: **Co-Investigator**

Goal: Establish methods and feasibility for identify the stem cell content in breastmilk samples from mothers with preterm infants

Completed:

UL1 RR024153 (CTSI)

NIH/NCRR Clinical and Translational Science Institute (CTSI), University of Pittsburgh Mechanisms of Persistent Visceral Hyperalgesia in Inflammatory Bowel Disease, 1/2012-6/2013

PIs: Dr. William R. Lariviere & Dr. Eva Szigethy

Role: **Co-PI**

Goal: Identify tissue-specific gene expression differences that predict persistent bowel pain during quiescent inflammatory bowel disease using clinical and preclinical (animal) models

VII. HONORS RECEIVED/ SPECIAL CERTIFICATIONS (most recent first)

A. Honors Received

2012 International Association for the Study of Pain Foreign Travel Award

2011 Student Recognition Award for Teaching Excellence

2011 American Psychological Association Committee on Animal Research and Ethics (CARE) Imprinting-Interdivisional Mentoring Fellowship Award

2005 American Psychological Association Dissertation Research Award

2005 Kent State University, Access Unlimited Teaching Excellence Award

ONTAP Teaching Fellow, Kent State University

Kent State University, Graduate Student Senate Research Grant Award,
Master's Thesis

B. Memberships

AAAS

International Association for the Study of Pain

American Pain Society

Society for Neuroscience (SFN)

Genetics Society of America

IX. PRESENTATIONS (# Data-based) (* Refereed) (most recent first)

Invited Lectures

Persistent Pain in Inflammatory Bowel Disease: utilizing a bedside-to-bench-to-bedside approach to understand the mechanisms underlying chronic visceral pain. October 2013. Connecticut Children's Medical Center, Hartford, CT.

Genetics of Pain: Pathway to personalized medicine. April 2014. 2nd Joint Symposium of IHS/IASP, Siena Italy

X. PROFESSIONAL SERVICE

Department of Psychology, Kent State University

Experimental Training Committee Member (2002-2003)

President, KSU Graduate Association of Students in Psychology (2004-2005)

Kent State University

KSU Graduate Student Senate (2003-2004)

Professional

Ad hoc reviewer

NeuroMolecular Medicine

Journal of Neuroscience

Neuroimmunomodulation

Grant reviewer

National Science Foundation Grant Merit Review

Medical Research Council

02/15