

ANDREA (SCARPA) WILDERMAN

400 Farmington Avenue, R1261
Farmington, CT 06030
awilderman@uchc.edu

14 Pollack Road
Mansfield Center, CT 06250
(515) 441-1356

RESEARCH INTERESTS

Developmental biology, chromatin architecture, transcriptional regulation

DEGREES

Expected May 2022

Ph.D., Biomedical Sciences

University of Connecticut Health Sciences, Farmington, CT
Thesis title: "Identification of an enhancer cluster regulating *HOXA* in early human craniofacial development"

2007

M.S., Agronomy, Major: Plant Physiology

Iowa State University, Ames, IA

2000

B.S., Biology (May 2000)

Cornell University, Ithaca, NY

EMPLOYMENT

2008-2014

Staff Research Associate/Lab Manager

University of California–San Diego
Lab of Paul A. Insel, Department of Pharmacology

2000-2003

Research Associate I/II

Unilever Research, Edgewater, NJ

PUBLICATIONS

Refereed Journal Articles

VanOudenhove J, Yankee T, **Wilderman A**, Cotney J. Epigenomic and transcriptomic dynamics during human heart organogenesis. *Circulation Research*. 2020; 127:e184-e209.

Hsiao JS, Germain ND, **Wilderman A**, Stoddard C, Wojenski LA, Villafano GJ, Core L, Cotney J, Chamberlain SJ. A bipartite boundary element restricts *UBE3A* imprinting to mature neurons. *Proc Natl Acad Sci U S A*. 2019; 116(6):2181-6.

Wilderman A, VanOudenhove J, Kron J, Noonan JP, Cotney J. High Resolution Epigenomic Atlas of Human Embryonic Craniofacial Development. *Cell Reports*. 2018; 23:1581-97.

Klepak K, Kilic A, Gnad T, Brown LM, Herrmann B, **Wilderman A**, Balkow A, Glöde A, Simon K, Lidell ME, Betz MJ, Enerbäck S, Wess J, Freichel M, Blüher M, König G, Kostenis E, Insel PA, Pfeifer A. The Gq signaling pathway inhibits brown and beige adipose tissue. *Nat Commun*. 2016; doi: 10.1038/ncomms10895.

Keshwani MM, Kanter JR, Ma Y, **Wilderman A**, Darshi M, Insel PA, Taylor SS. Mechanisms of cyclic AMP/protein kinase A- and glucocorticoid-mediated apoptosis using S49 lymphoma cells as a model system. *Proc Natl Acad Sci USA*. 2015; 112(41):12681-6.

Wilderman A*, Guo Y*, Divakaruni A, Perkins G, Zhang L, Murphy A, Taylor SS, Insel, PA. Proteomic and metabolic analyses of wild-type and PKA-null S49 lymphoma cells reveal novel regulation of mitochondria by cyclic AMP and PKA. *J Biol Chem*. 2015; 290(36):22274-86.
*Contributed equally

Walker CS, Eftekhari S, Bower RL, **Wilderman A**, Insel, PA, Edvinsson L, Waldvogel HJ, Jamaluddin MA, Russo AF, Hay DL. A second trigeminal CGRP receptor: function and expression of the AMY₁ receptor. *Annals of Clinical and Translational Neurology*. 2015; 2(6):595-608.

Guo Y, **Wilderman A**, Zhang L, Taylor SS, Insel PA. Quantitative Proteomics Analysis of the cAMP/Protein Kinase A Signaling Pathway. *Biochemistry*. 2012; 51(46):9323-9332.

Zambon AC, **Wilderman A**, Ho A, Insel PA. Increased expression of the pro-apoptotic protein BIM, a mechanism for cAMP/protein kinase A (PKA)-induced apoptosis of immature T cells. *J Biol Chem*. 2011; 286(38):33260-33267.

Review Articles

Insel PA, **Wilderman A**, Zambon A, Snead A, Murray F, Aroonsakool N, McDonald D, Zhou S, McCann T, Zhang L, Sriram K, Chinn A, Michkov A, Lynch R, Overland A, Corriden R. GPCR expression in native cells: “Novel” endoGPCRs as physiologic regulators and therapeutic targets. *Mol Pharmacol*. 2015; 88(1):181-7.

Insel PA, **Wilderman A**, Zhang L, Keshwani MM, Zambon AC. Cyclic AMP/PKA-promoted apoptosis: Insights from studies of S49 lymphoma cells. *Hormone and Metabolic Research*. 2014; 46(12):854-862.

Insel PA, Snead A, Murray F, Zhang L, Yokouchi H, Katakia T, Kwon O, Dimucci D, **Wilderman A**. GPCR expression in tissues and cells: are the optimal receptors being used as drug targets? *Br J Pharmacol*. 2012; 165(6):1613-1616.

HONORS AND AWARDS

2021 ASHG/Charles J. Epstein Trainee Award for Excellence in Human Genetics Research Finalist

- 2020** Path to Postdoc @ UCSF Participant
- 2018** Lepow Award for Outstanding Fourth-Year Student in UConn Health Biomedical Sciences Ph.D. Program
- 2016** Cold Spring Harbor Laboratory Financial Aid to attend Advanced Sequencing Technologies and Applications Course
- 2016** UConn Health Auxiliary Short Course Award- November, 2016

CONFERENCE ACTIVITY

- 2021** **Wilderman A.** Identification of an enhancer cluster regulating *HOXA* in early human craniofacial development. Plenary Talk to be presented October 22, 2021 at American Society of Human Genetics Annual Meeting
- 2021** **Wilderman A.** Identification of an enhancer cluster regulating *HOXA* in early human craniofacial development. Platform Talk to be presented October 18, 2021 at Society for Craniofacial Genetics and Developmental Biology Annual Meeting
- 2018** **Wilderman A.,** VanOudenhove J., Hardy A., Yankee T., Cotney J. Investigation of a HOXA Locus Control Region in Early Human Craniofacial Development. Poster presented at the Musculoskeletal Biology and Bioengineering Gordon Research Seminar, Andover, NH, August 4-5, 2018.
- 2015** **Andrea Wilderman,** Yurong Guo, Ajit Divakaruni, Guy Perkins, Lingzhi Zhang, Anne Murphy, Susan Taylor, and Paul Insel. Cyclic AMP/PKA-Mediated Regulation of Mitochondria and Branched-Chain Amino Acid Metabolism in S49 Lymphoma Cells Poster presented at Experimental Biology; FASEB J April 2015 29:896.5
- 2014** **Andrea Wilderman,** Yurong Guo, Susan Taylor, Paul Insel. cAMP/PKA-mediated regulation of amino acid metabolism in murine T-lymphoma cells. Poster presented at Experimental Biology; FASEB J. April 2014 28:1095.16.
- 2013** **Andrea S. Wilderman,** Aaron Snead, Fiona Murray, Nakon Aroonsakool, and Paul A. Insel. G Protein-Coupled Receptor Profiling: An Omics Approach to Study GPCRs. Poster presented at the 4th G Protein-Coupled Receptors Colloquium, Boston, MA, April 24-25, 2013.
- 2013** **Andrea Scarpa Wilderman,** Aaron Snead, Fiona Murray, Nakon Aroonsakool, and Paul A. Insel. G-protein coupled receptor profiling: an omics approach to study receptors and cell signaling. Poster presented at Experimental Biology; FASEB J. April 9, 2013 27:1096.5.

2010 **Andrea Wilderman**, Paul A Insel, and Alex C Zambon. Cyclic AMP/PKA-triggered secondary transcription networks associated with growth arrest and apoptosis in S49 lymphoma cells. Poster presented at Experimental Biology; FASEB J. April 6, 2010 24:678.23.

TEACHING EXPERIENCE

2010-2014 **University of California, San Diego**
Summer Undergraduate Research Foundation Mentor

2005-2007 **Iowa State University**
Teaching Assistant, Plant Transformation Workshop

RESEARCH EXPERIENCE

2015-present **Graduate Student Research Assistant**
University of Connecticut, Health Sciences
Department of Genetics and Genome Sciences

2003-2007 **Graduate Research Fellow**
Iowa State University
Department of Agronomy

OUTREACH

2019, 2020 **Connecticut Junior Science and Humanities Symposium at UCONN Health**,
Hands-on demonstration to introduce students to concepts in DNA sequencing
and teach students to use the UCSC Genome Browser

PROFESSIONAL MEMBERSHIPS

2020-present American Association for Anatomy (AAA)

2020-present Society for Craniofacial Genetics and Developmental Biology (SCGDB)

2019-present American Society of Human Genetics (ASHG)

2017-present American Heart Association (AHA)

2010-2015 American Society for Investigative Pathology (ASIP)