

Annie Vogel Ciernia, Ph.D.

Assistant Professor

Department of Biochemistry and Molecular Biology

Djavad Mowafaghian Centre for Brain Health

University of British Columbia, Vancouver, Canada

<https://ciernialab.com>annie.ciernia@ubc.edu**Professional Overview**

My overall research interest is in understanding epigenetic mechanisms of transcriptional regulation involved in brain plasticity and neurodevelopmental disorders. I have a broad background in neurobiology and behavioral neuroscience as well as epigenetics and neurodevelopmental disorders. My graduate work in Dr. Marcelo Wood's laboratory at UC Irvine focused on examining the role of a neuron-specific nucleosome remodeling complex in regulating transcription subserving long-term memory formation. My postdoctoral work under Dr. Janine LaSalle at UC Davis focused on understanding how DNA methylation and chromatin accessibility impact gene expression in autism spectrum disorders (ASD). I have extensive experience in animal behavior, molecular neuroscience, bioinformatics and systems biology approaches for interpreting epigenomes. I was co-mentored in the Autism Training Program at the UC Davis MIND Institute by Dr. Jacqueline Crawley, an expert in animal models and behaviors related to neurodevelopment and ASD, and Dr. Paul Ashwood, an expert in ASD neuro-immunology. My current research at the University of British Columbia focuses on understanding how early-life perturbations to the epigenome alter cell type specific functions in the developing brain and lead to changes in behaviour. We specifically examine gene regulatory mechanisms in microglia and neurons during development using a combination of next generation sequencing, advanced bioinformatics and *in vivo* and *in vitro* mouse models. Together, our work aims to understand the fundamental regulatory mechanisms governing gene expression in the brain and how disruption of gene regulation contributes to neurodevelopmental and neuropsychiatric disorders.

Education

2019-Present	Assistant Professor <i>Understanding Gene Regulation in the Brain</i> Tier 2 Canada Research Chair Department of Biochemistry and Molecular Biology Djavad Mowafaghian Centre for Brain Health University of British Columbia, Vancouver, Canada
2014-2019	Postdoctoral Research Fellow Autism Research Training Program University of California, Davis Mentors: Dr. Janine LaSalle, Dr. Jacqueline Crawley, Dr. Paul Ashwood
2008-2014	Ph.D., Neurobiology & Behavior University of California, Irvine, 4.0/4.0 GPA Dissertation: The role of a novel epigenetic regulatory mechanism in long-term memory formation synaptic plasticity, and gene expression Mentor: Dr. Marcelo Wood
2004-2008	Bachelor of Science, Majors Biotechnology and Psychology, Minor Chemistry North Dakota State University, 4.0/4.0 GPA Honors Thesis Psychology: Orienting to Predictive Arrow, Gaze, and Symbol Cues Mentor: Dr. Chris Friesen Honors Thesis Biotechnology: The Role of Attachment Protein TRAP in <i>Cryptosporidium</i> Infection Mentor: Dr. John McEvoy

Research Experience

- 2014-2019 **Postdoctoral Researcher.** Department of Medical Microbiology and Immunology, University of California, Davis- Davis, CA. Primary Advisor: Janine LaSalle
- 2011-2014 **Graduate Student Researcher.** Department of Neurobiology and Behavior/ Center for Neurobiology of Learning and Memory, University of California, Irvine- Irvine, CA. Thesis advisor: Marcelo Wood
- 2009-2011 **Graduate Student.** Department of Neurobiology and Behavior/ Center for Neurobiology of Learning and Memory, University of California, Irvine- Irvine, CA. Thesis advisor: John Guzowski
- 2007 **Undergraduate Researcher.** Summer Undergraduate Research Fellowship. Mayo Clinic- Rochester, MN. PI: David Linden
- 2006-2008 **Undergraduate Researcher.** Pathogenic Microbiology, North Dakota State University- Fargo, ND. PI: John McEvoy
- 2004-2008 **Undergraduate Researcher.** Center for Visual Neuroscience, Psychology Department, North Dakota State University- Fargo, ND. PI: Chris Friesen

Publications (direct trainees underlined)

1. Kim, J., Pavlidis, P., and **Ciernia, A.V.** Development of a high-throughput pipeline to characterize microglia morphological states at a single-cell resolution. *In prep*
2. Sullivan, O., Choudhary, J., Kim, J., and **Ciernia, A.V.** RGFP966 Inhibition of HDAC3 During Inflammatory Stimulus Ameliorates Depressive Behaviour and Aberrant Microglial Morphology in the Brain. *Brain, Behaviour, Immunity*. 2023. *In prep*
3. Towriss, M., Kim J., & **Ciernia, A. V.** (In revision *Journal of Visualized Experiments*). Quantification of global histone post translational modifications via intranuclear flow cytometry in isolated mouse brain microglia.
4. Meleady, L., Towriss, M., Bacarac, V., Kim, J., Rowland, M., **Ciernia, A.V.** (2023). Histone deacetylase 3 regulates microglial function through histone deacetylation. *Epigenetics*. 18(1).
5. Towriss, M., MacVicar, B., and **Ciernia A.V.** (2023) Modelling Microglial Innate Immune Memory In Vitro: Understanding the role of cellular metabolic flux in innate immune memory. *International Journal of Molecular Sciences*. 24(10), 8967.
6. Sullivan, O. & **Ciernia, A.V.** (2022). Work hard, play hard: how sexually differentiated microglia work to shape social play and reproductive behaviour. *Frontiers in Behavioural Neuroscience*. 12.
7. Rowland, M.E., Jajarmi, J.M., Osborne, T.S.M., & **Ciernia, A.V.** (2022). Insights into the emerging role of Baf53b in Autism Spectrum Disorder. *Frontiers in Molecular Neuroscience*. 3(15).
8. Hughes, H.K., Rowland, M.E., Eng, S., Onore, C.E. **Ciernia, A.V.** and Ashwood, P. (2022). Dysregulated gene expression associated with inflammatory and translation pathways in activated monocytes from children with autism spectrum disorders. *Molecular Psychiatry*. 12 (3).
9. Jao, J. and **Ciernia, A.V.** (2021). MGENrichment: a web application for microglia gene list enrichment analysis. *Plos Computational Biology*. 17(11): e1009160.
10. Kim, J. & **Ciernia, A.V.** (2020). Chromatin dynamics and genetic variation combine to regulate innate immune memory. *Journal of Clinical & Cellular Immunology*. 11(4):1-5.
11. **Ciernia, A.V.**, Link, V.M., Careaga, M., Lasalle, J.M., & Ashwood, P. (2020). Genetic variants drive epigenetic regulation of endotoxin tolerance in BTBR macrophages. *Brain, Behavior and Immunity*. S0889-1591(20)30260-9
12. Kim, H.K., Gschwind, T., Nguyen, T.M., Bui, A.D., Felong, S., Ampig, K., Suh, D., **Ciernia, A.V.**, Wood, M.A., & Soltesz, I. (2020). Optogenetic intervention of seizures improves spatial memory in a mouse model of chronic temporal lobe epilepsy, *Epilepsia*. 61: 561– 571.
13. **Vogel Ciernia, A.**, Laufer, B.I., Hwang, H., Dunaway, K.W., Mordaunt, C.E., Coulson, R.L., A., Yasui, D.H., & LaSalle, J.M. (2019). Epigenomic convergence of neural-immune risk factors in neurodevelopmental

- disorder cortex, *Cerebral Cortex*. 30(2):640-655.
14. Laufer, B.I., Hwang, H., **Vogel Ciernia, A.**, Mordaunt, C.E., & LaSalle, J.M. (2019). Whole genome bisulfite sequencing of Down syndrome brain reveals regional DNA hypermethylation and novel disorder insights, *Human Molecular Genetics*, 14(7), 672-684.
 15. **Vogel Ciernia, A.**, Yasui, D.H, Pride, M.C., Durbin-Johnson, B., Noronha, A., Chang, A., Knotts, T.A., Rutkowski, J., Ramsey, J.J., Crawley, J.N., & LaSalle, J.M. (2018). MeCP2 isoform e1 mutant mice recapitulate motor and metabolic phenotypes of Rett syndrome, *Human Molecular Genetics*, 27(3), 4077-4093.
 16. Kwapis, J.L., Alaghband Y., Kramár, E.A., **Vogel Ciernia, A.**, López, A.J., White, A.O., Shu, G., Rhee D, Michael CM, Montellier E., Liu Y, Magnan CN, Sassone-Corsi P, Baldi P, Matheos DP, Wood, M.A. (2018). Epigenetic regulation of the circadian gene *Per1* in the hippocampus mediates age-related changes in memory and synaptic plasticity. *Nature Communications*, 9(1), 3323.
 17. **Vogel Ciernia, A.**, Laufer, B.I., Mordaunt, C.E., Dunaway, K.W., Mordaunt, C.E., Coulson, R.L., Total, T.S., Stolzenberg, D.S., Frahm, J., Singh-Taylor, A., Baram, T.Z., LaSalle, J.M., & Yasui, D.H. (2018). Experience-dependent neuroplasticity of the developing hypothalamus: integrative epigenomic approaches. *Epigenetics*, 3, 1-37.
 18. Coulson, R.L., Yasui, D.H., Dunaway, K.W., Laufer, B.I., **Vogel Ciernia, A.**, Mordaunt, C.E., Total, T.S., LaSalle, J.M. (2018). Snord116-dependent diurnal rhythm of DNA methylation in mouse cortex. *Nature Communications*, 9(1):1616.
 19. **Vogel Ciernia, A.**, Careaga, M., LaSalle, J.M., & Ashwood, P. (2018). Microglia from offspring of dams with allergic asthma exhibit epigenomic alterations to genes dysregulated in autism. *Glia*, 66(3):501-521.
 20. Lopez, S.J., Dunaway, K., Islam, M.S., Mordaunt, C., **Vogel Ciernia, A.**, Meguro-Horike, M., Horike, S., Segal, D.J., & LaSalle, J.M. (2017). UBE3A-mediated regulation of imprinted genes and epigenome-wide marks in human neurons. *Epigenetics*, 2(11):982-990.
 21. **Vogel Ciernia, A.**, Pride, M., Durbin-Johnson, B., Noronha, A., Chang, A., Yasui, D.H., Crawley, J.N., & LaSalle, J.M. (2017). Early motor phenotype detection in a female mouse model of Rett syndrome is improved by cross-fostering. *Human Molecular Genetics*, 26(10):1839-1854.
 22. **Vogel Ciernia, A.** Kramár, E., Matheos, D.P., Havekes, R., Hemstedt, T.J., Magnan, C.N., Sakata, K., Tran, A., Azzawi, S., Lopez, A., Dang, R., Wang, W., Trieu, B., Tong, J., Barrett, R.M., Post, R.J., Baldi, P., Abel, T., Lynch, G. & Wood, M.A. (2017). Mutation of neuron-specific chromatin remodeling subunit BAF53b: Rescue of plasticity and memory by manipulating actin remodeling. *Learning & Memory*, 24(5):199-209.
 23. Ren, Z., Noronha, A., **Vogel Ciernia, A.**, & Lee, Y.J. (2017). Who Moved My Cheese? Automatic Annotation of Rodent Behaviors with Convolutional Neural Networks. *WACV*.
 24. K.W., Islam M.S., Coulson R.L., Lopez S.J., **Vogel Ciernia A.**, Chu R.G., Yasui D.H., Pessah I.N., Lott P., Mordaunt C., Meguro-Horike M., Horike S., Korf I., LaSalle J.M. (2016). Cumulative impact of large chromosomal duplications and polychlorinated biphenyl exposure on methylation, chromatin, and expression of autism genes. *Cell Reports*, 17(11): 3025-3048.
 25. **Vogel Ciernia, A.** & LaSalle, J. (2016). The landscape of DNA methylation amidst a perfect storm of autism etiologies. *Nature Reviews Neuroscience*, 17(7): 411-423.
 26. Lopez, A. Kramar, E., Matheos, D., White, A., Kwapis, J., **Vogel-Ciernia, A.**, Sakata, K., Espinoza, M., & Wood, M.A. (2016). Promoter specific effects of DREADD modulation on hippocampal synaptic plasticity and memory formation. *Journal of Neuroscience*, 36(12): 3588-3599.
 27. **Vogel-Ciernia, A.** & Wood, M.A. (2014). Examining Memory for Object Location and Object Recognition in Mice. *Current Protocols in Neuroscience*, 69(8.31): 8.31.1–8.31.17.
 28. Bharadwaj, R., Peter, C.J., Jiang, Y., Roussos, P., **Vogel-Ciernia, A.**, Shen, E., Mitchell, A., Mao, W., Whittle, C., Dincer, A., Jakovcevski, M., Pothula, V., Rasmussen, T.P., Giakoumaki, S.G., Bitsios, P., Gardner, P.D., Ernst, P., Ghose, S., Sklar, P., Haroutunian, V., Tamminga, C., Myers, R.H., Futai, K., Wood, M.A., & Akbarian, S. (2014). Conserved higher-order chromatin regulates NMDA receptor gene expression and cognition. *Neuron*, 84(5): 997-1008.
 29. **Vogel-Ciernia, A.** & Wood, M.A. (2014). Neuron-specific chromatin remodeling: A missing link in epigenetic mechanisms underlying synaptic plasticity, memory, and intellectual disability disorders. *Neuropharmacology*, 80:18-27.
 30. **Vogel-Ciernia, A.** Matheos, D.P., Barrett, R.M., Kramár, E., Azzawi, S., Chen, Y., Magnan, C.N., Zeller,

- M., Sylvain, A., Haettig, J., Jia, Y., Tran, A., Dang, R., Post, R.J., Chabrier, M., Babayan, A., Wu, J.I., Crabtree, G.R., Baldi, P., Baram, T.Z., Lynch, G. & Wood, M.A. (2013). The neuron-specific chromatin regulatory subunit BAF53b is necessary for synaptic plasticity and memory. *Nature Neuroscience*, 16(5): 552-561.
31. Vashishtha, M. Ng, C.W., Yildirim, F., Gipson T., Kratter, I.H., Bodai, L., Song, W., Lau, A., Labadorf, A., **Vogel-Ciernia, A.**, Troncoso, J., Ross, C.A., Bates, G.P., Krainc, D., Sadri-Vakili, G., Finkbeiner, S., Marsh, J.L., Housman, D.E., Fraenkel, E., Thompson, L.M. (2013) Targeting H3K4 Trimethylation in Huntington Disease. *PNAS*, 110(32): E3027-E3036.
32. McNulty, S., Barrett, R.M., **Vogel-Ciernia, A.**, Malvaez, M., Hernandez, N., Davatolhagh, M.F., Matheos, D.P., Schiffman, A. & Wood, M.A. (2012). Differential roles for *Nr4a1* and *Nr4a2* in object location versus object recognition long-term memory. *Learning & Memory*, 19:588-592.
33. **Vogel-Ciernia, A.** & Wood, M.A. (2012). Molecular Brake Pad Hypothesis: Pulling Off the Brakes for Emotional Memory. *Reviews in the Neurosciences*, 23(5-6): 607-626.
34. Gayzur, N.D., Langley, L.K., Friesen, C.K., Wyman, S.V., Saville, A.L., **Ciernia, A.T.**, Padmanabhan, G. (2014). Reflexive orienting in response to short- and long-duration gaze cues in young, young-old, and old-old adults. *Attention, Perception, & Psychophysics*, 76(2): 407-419.
35. Langley, L.K., Friesen, C.K., Saville, A.L., & **Ciernia, A.T.** (2011). Timing of Reflexive Visuospatial Orienting in Young, Young-Old, and Old-Old Adults. *Attention, Perception, & Psychophysics*, 73(5):1546-

Grants and Funding

Current Research Support

Canadian Institutes of Health Research 2019-2024

Tier 2 Canada Research Chair in Understanding Gene Expression in the Brain

Role: PI

Total: \$500,000 CAD salary award

University of British Columbia 2019-2024

Startup funding

This start-up funding from the University of British Columbia: Department of Biochemistry and Molecular Biology (\$275,000) and the Djavad Mowafaghian Centre for Brain Health (\$275,000).

Role: PI

\$550,000 CAD operating.

Natural Sciences and Engineering Council of Canada 2019-2026

Discovery Grant: Epigenomic Regulation In Microglia

This grant investigates epigenomic regulation of gene expression in microglia across brain development.

Role: PI

Total: \$120,000 CAD operating.

Dawn Shaw Alzheimer Disease Research Award 2021-2023

The grant examines sex-specific impacts of estrogen on Alzheimer's disease and neuroinflammation.

Role: Co-PI. PI Dr. Liisa Galea (UBC)

Total: \$150,000 CAD operating (\$5,000 CAD to AVC)

Cure Alzheimer's Fund 2021-2023

Sex Matters: Understanding the influence of sex and APOE genotype on hippocampal plasticity and cognition

Role: Co-PI. PI Dr. Liisa Galea (UBC)

Total: \$342,700 USD operating (\$5,000 USD to AVC)

Michael Smith Foundation for Health Research Foundation 2021-2026

Michael Smith Foundation for Health Research Scholars award

Role: PI

Total: \$75,000 CAD salary award

<p>Scottish Rite Charitable Foundation of Canada Research Award <i>Early Life Priming of Neuro-Immune Interactions</i> Role: PI Total: \$120,000 CAD</p>	2021-2023
<p>Brain Canada Future Leaders Award <i>Microbiota-Microglia Interactions in Pediatric Inflammatory Bowel Disease</i> Role: PI. Dr. Carolina Tropini co-PI Total: \$100,000 CAD</p>	2022-2024
<p>Brain Foundation Research Award <i>The Gut-Brain Axis in Autism Spectrum Disorder Presenting with Gut Inflammation</i> Role: co-PI. Dr. Carolina Tropini & Dr. J.P. Yu co-PIs Total: \$180,000 USD. \$25,000 USA to AVC</p>	2023-2025
<p>Canadian Institutes of Health Research <i>Sex differences in Neural and Molecular Mechanisms Underlying Negative Cognitive Bias</i> Role: co-PI. Dr. Liisa Galea PI Total: \$600,000 CAD. \$5,000 CAD to AVC</p>	2023-2028
<p>Faculty of Medicine Precision Health Catalyst grant <i>Human SPI1 variants alter microglial immune memory to promote neuroinflammation</i> Role: PI. Dr. Sheila Teves co-PI Total: \$50,000 CAD</p>	2023-2024
<p>DMCBH AD Research Grant <i>The role of Inflammatory bowel disease in the development of Alzheimer's disease</i> Role: PI. Dr. Carolina Tropini and Cheryl Wellington co-PIs Total: \$50,000 CAD</p>	2023-2024
<p>DMCBH Kickstart Grant <i>The role of metabolic driven changes in histone lactylation in regulating microglial inflammation</i> Role: PI. Dr. Sheila Teves and Seth Parker co-PIs Total: \$30,000 CAD</p>	2023-2024
<p>Research Corporation for Science Advancement Scialog Microbiome and Neurobiology and Disease Grant <i>Decipher the molecular language between microbiota-microglia crosstalk using a genetically tractable microbiome</i> Role: PI. Dr. Chun-Jun Guo (Cornell Medical College) and Dr. Yanjiao Zhou (University of Connecticut) co-PI Total: \$50,000 USD</p>	2023-2024
<p>Research Corporation for Science Advancement Scialog Microbiome and Neurobiology and Disease Grant <i>Identification of microglial receptors for microbiota derived metabolites</i> Role: PI. Dr. Christopher Whidbey (Seattle University) co-PI Total: \$50,000 USD</p>	2023-2024
<p>Canadian Institutes of Health Research <i>Histone Acetylation Regulates Microglial Innate Immune Memory</i> Role: PI. Total: \$998,326 CAD</p>	2023-2028
<p>Canadian Institutes of Health Research</p>	2023-2028

Metabolite Control of Microbiome-Microglia Communication in Inflammatory Bowel Disease

Role: PI. Co-PI Carolina Tropini

Total: \$849,150 CAD

Completed

Canadian Foundation for Innovation

2019-2024

John R. Evans Leaders Fund

This award provides funding for gene expression analysis infrastructure

Role: PI

Total: \$400,000 CAD infrastructure

SickKids Foundation in partnership with the Canadian Institutes of Health Research

2019-2022

New Investigator Research Grant: The Role of Baf53b in Regulating Neuronal Gene Expression, Synaptic Function and Autism Behaviours Across Development

This grant investigates chromatin remodelers in neuronal development and neurodevelopmental disorders.

Role: PI

Total: \$299,699 CAD operating.

Faculty of Medicine Precision Health Catalyst grant

2022-2023

Metabolite Control of Microbiome-Microglia Communication in Pediatric Inflammatory Bowel Disease

Role: co-PI. Dr. Carolina Tropini co-PI

Total: \$50,000 CAD (\$25,000 to AVC)

BCCHRI Healthy Starts Theme Catalyst Grant Award

2021-2022

The role of neuroinflammation in early life pain/sucrose-induced neurodevelopment impairments

Role: Co-PI. PI Dr. Manon Ranger (UBC)

Total: \$40,000 CAD operating (\$2,000 CAD to AVC)

Natural Sciences and Engineering Council of Canada

2021-2022

Research Tools and Instruments

This grant is for a specific slide scanner microscope for Expansion Microscopy.

Role: PI

Total: \$150,000 CAD infrastructure.

DMCBH Kickstart Award

2020-2021

Mechanisms of Peripheral Lipopolysaccharide Induced Brain Inflammation

Role: PI

Total: \$30,000 CAD operating

Natural Sciences and Engineering Council of Canada

2019-2020

Discovery Launch Supplement

This supplement provides one-time supplemental funding for early-career investigators that receive funding from the Natural Sciences and Engineering Council of Canada.

Role: PI

Total: \$13,500 CAD operating.

Brain and Behavior Research Foundation

2018-2020

NARSAD Young Investigator Award: The Role of MeCP2 Isoform 1 in Rett Syndrome Disease Progression

This grant investigates the role of the e1 isoform of MeCP2 in brain development and Rett Syndrome.

Role: PI

Total: \$70,000 USD operating.

National Institutes of Mental Health

2018-2019

Research Scientist Development Award: Mapping Multi-Omics Networks in Microglia Across Autism Models.

Role: PI

Total: \$315,000 USA operating.

National Institutes of Mental Health

2014-2016

Autism Research Training Fellowship Program, University of California, Davis MIND Institute T32

Role: Postdoctoral Trainee, Rogers, Sally & Amaral, David (PIs)

National Institutes of Mental Health

2013-2014

NRSA F31 The Role of BAF53b Mediated Nucleosome Remodeling in Long-Term Memory Formation

Role: PI

main focus of this work was to examine the role of a novel, neuron specific nucleosome

Awards, Honors & Fellowships

2023	Scialog Fellow Microbiome, Neurobiology and Disease
2019	Cold Spring Harbor Laboratory Leadership in Biosciences course fellowship
2018	University of California Davis Postdoctoral Excellence in Research Award
2018	Postdoctoral Research Conference Oral Presentation Second Place Award
2017	Allen Brain Institute Summer Workshop on the Dynamic Brain Faculty Choice Award
2017	Allen Brain Institute Summer Workshop on the Dynamic Brain Fellowship
2017	UC Davis Postdoctoral Scholars Association Travel Award
2017	NARSAD Young Investigator Award: The Role of MeCP2 Isoform 1 in Rett Syndrome Disease Progression: Unraveling the Causal Contributions of Microglia and Neurons
2017	UC Davis Psychology Conference Oral Presentation Winner
2017	Postdoctoral Research Conference Oral Presentation Winner
2016	Helmsley Scholarship to attend Cold Spring Harbor Laboratory Statistical Methods for Functional Genomics workshop
2014	Autism Research Training Fellowship Program, University of California, Davis MIND Institute
2013	UCI Center for Cognitive Neuroscience and Engineering Graduate Merit Fellowship
2013	James L. McGaugh Award for Excellence in Graduate Research in Neurobiology and Behavior
2013	American College of Neuropsychopharmacology (ACNP) Travel Award
2013	Renee Harwick Advanced CNLM Graduate Student Award
2013	Top Graduate Oral Presentation at the 24th Science Conference of the Graduate Women in Science
2013	ReMIND Outstanding Presentation at the Emerging Scientist Symposium
2013	NRSA: The Role of BAF53b Mediated Nucleosome Remodeling in Long-Term Memory Formation. Impact/Priority Score: 17, Percentile: 3 (F31-MH098565)
2012	Second Prize Data Blitz at the CNLM Conference on the Neurobiology of Learning and Memory
2012	Second Prize Data Blitz at the CNLM Conference on the Neurobiology of Learning and Memory
2012-2014	Achievement Rewards for College Scientists (ARCS) Fellowship (\$20,000 award)
2012	Graduate Student Chapter Travel Award, Society for Neuroscience
2012-2013	Aging Training Grant (T32-AG00096-29)
2012	Roger Russell's Scholar Award in The Neurobiology of Learning and Memory
2011	Graduate Fellow Award, HHMI-UCI Teaching Fellows Program
2011	Edward Steinhaus Teaching Award
2009-2010	Cellular and Molecular Neuroscience Training Grant (T32-NS007444)
2008-2009	Phi Kappa Phi Honor Society Graduate School Fellowship
2006	Junior Academic Achievement Award, North Dakota State University
2006	Junior Research Achievement Award, North Dakota State University
2004-2008	Recipient of the Donald Mowm Scholarship, Biotechnology Scholarship, Steinhaus-Rhinehart Scholarship, Vernon E. Wendlandt Scholarship, Ellen E. Carr Scholarship, North Dakota

Normandy Memorial Scholarship, and Lillian Goettler ND Space Grant Award, StraightForward Media Science Scholarship, E.V. Estensen Outstanding Psychology Major Award

Teaching Experience

2023	Guest Lecture: Microglia Development in Health and Disease (FNH 451 Nutrition Metabolism and Implications for Health). University of British Columbia. Undergraduates.
2023	Lectures (2): Computational Approaches in Biochemistry (BIOC560B). University of British Columbia. Graduate students.
2021-present	Course Chair: Advanced Topics in Biochemistry and Molecular Biology (BIOC551). University of British Columbia. Graduate students.
2021	Lectures (2): Advanced Topics in Biochemistry and Molecular Biology (BIOC551). University of British Columbia. Graduate students.
2020-present	Module 3 course lead. Neuroscience 500 (NRSC500). University of British Columbia. Graduate students.
2020-present	Lectures (2): Neuronal Gene Regulation. Epigenetic Variation in Human Health and Disease. Neuroscience 500 (NRSC500). University of British Columbia. Graduate students.
2020-present	Course co-instructor. Biochemistry 410 Nucleic Acid Structure and Function (BIOC410). University of British Columbia. Undergraduates.
2019	Lecture: Epigenetic Variation in Human Health and Disease. Neuroscience 500 (NRSC500). University of British Columbia. Graduate students.
2018	Lecture: Epigenetics in Autism Spectrum Disorders. Fundamentals of Neuroscience (BIOL410). California Northstate University. Undergraduates.
2018	Lecture: Microglia in Brain Development and Human Health. Immunology (Bio 340). California Northstate University. Undergraduates.
2011	Lecture: Introduction to Biology (Bio 93) Teaching Assistant. Department of Neurobiology & Behavior, University of California, Irvine- Irvine, CA. Undergraduates.
2011	Lecture: The Basics of Animal Behavior: Non-associative and Associative Conditioning. BioSci N38: Mind, Memory, and the Brain, University of California, Irvine. Undergraduates.
2011	HHMI-UCI Teaching Fellows Program
2010, 2011	Neurobiology Lab (BioSci N113L) Teaching Assistant. Department of Neurobiology & Behavior, University of California, Irvine- Irvine, CA. Undergraduates.
2010	Lecture: Memory: Linking Molecules to Behavior. BioSci N158: Neurobiology of Learning and Memory, University of California, Irvine. Undergraduates.

Mentoring and Trainee Awards (direct supervisor 2019-Present only)

Graduate students

Jennifer Kim, PhD Neuroscience

2019-present

Awards: 2019 Canadian Epigenetics, Environment and Health Research Consortium (CEEHRC) Network Student Travel Award (2019; \$500); DMCBH Graduate Student Award (2019; \$5,000), CONP Trainee Award (2020; \$25,000); UBC Four Year Fellowship (2021; \$18,500/year x 4 years + tuition), FENS travel award (2023; \$500 EURO)

Laura Meleady, MSc Biochemistry

2019-2021

Awards: Alexander Graham Bell Canada Graduate Scholarships- Master's (CGS-M) (2020; \$17,500); Astell Award for EDI (2020; \$500); BMB Poster Presentation Award 2021; DMCBH retreat best poster presentation award (2022; \$75)

Current Position: Medical School Nova Scotia

Olivia Sullivan, MSc Neuroscience
2020-2023

Awards: Faculty of Medicine Graduate Award (2021; \$4500); Tri-Cluster poster presentation award 2021; Alexander Graham Bell Canada Graduate Scholarships- Master's (CGS-M) (2022; \$17,500); DMCBH General Award (2022; \$5,000); Knowledge First Scholarship (2022; \$5,000)

Morgan Towriss, MSc Biochemistry co-supervised Dr. Brian MacVicar
2021-present

Awards: Aboriginal Graduate Fellowship (2022-2023; \$16,175), BMB Astell Award (2022; \$500), New Relationship Trust Award (2022; \$8,000), Indigenous Graduate student fellowship (2023-2026; \$18,500).

Hitasha Bajaj, MSc Neuroscience, co-supervised Dr. Kiran Soma
2022-present

Awards: Alexander Graham Bell Canada Graduate Scholarships- Master's (CGS-M) (2022; \$17,500), UBC Affiliated Award (2023; \$16,000)

Annemarie deVries, MSc University of Groningen, Netherlands
2022-2023
Visiting graduate student

Postdoctoral Research Fellows

Dr. Megan Rowland
2020-present

Awards: DMCBH Postdoctoral Fellow Award (2020; \$10,000); Marshall Fellowship (2022 & 2023; \$75,000/year); Michael Smith Health Sciences Scholars award (2022; \$45,000/year for 3 years); Canadian Epigenetics, Environment and Health Research Consortium (CEEHRC) Network Student Travel Award (2022; \$500)

Dr. Jordan Hamden
2023-present

Awards: Michael Smith Health Sciences Scholars award (2022; \$45,000/year for 3 years)

Undergraduates

Student	Program	Start	Finish	Awards	Current Position
Joshua Yoon		2019	2020		Medical school UBC
Laura Meleady		2019	2020	Three Minute Thesis Presentation Award, NSERC URSA, UBS SUS x URO Student Research Award; medical school UBC	Medical school Nova Scotia
Brianna Bristow	Biochemistry BIOC 448	2019	2020	Faculty of Medicine SURE award	Graduated Spring 2020, currently RA Mark Cembrowski, UBC
Tess Osborne	Directed Studies	2019	2020	Faculty of Medicine SURE award (declined)	
Laura Meleady	Biochemistry BIOC 448	2019	2020		Graduated Spring 2020. BMB MSc. program fall 2020 Ciernia lab

Kayla Judson	Biochemistry BIOC 448 and Work-learn	2019	2020		Graduated Spring 2020, currently RA Greenblatt lab, UBC
John Shin	co-op	2020	2020		Completed CS degree
Baria Choudry		2020	2021		
Jessie Chai		2020	2021	Vancouver Korean-Canadian Scholarship Foundation; NSERC USRA (2021)	Medical school UBC
Olivia Sullivan	Behavioural Neuroscience PSYC 388E	2020	2021	FoM Summer Student Research Program Award 2021;	Graduated Spring 2021; Currently MSc GPN student Ciernia lab
Tess Osborne	Biochemistry BIOC 448	2020	2021		Graduated Spring 2021; currently MSc student Jan lab, UBC
Michelle Lu	Biochemistry BIOC 448	2020	2021		Graduated Spring 2021; UBC-O MSs student
Daniel Wong	Honors Biochemistry BIOC 449	2020	2021		Graduated Spring 2021; RA Dr. Thomas Cheung Hong Kong University of Science and Technology; graduate school Cornell University, NY
Justin Jao	Work-learn	2020	2022		Completing CS degree
Sana Arora	Work-learn	2021	2021		RA UBC
Mark Sago	Work-learn	2021	2021		
Brandon Wong	co-op	2021	2021		Research Technician at STEMCell
Sarah Wissmann	Work-learn	2021	2022		Co-op student
Kateryna Voznyuk	Work-learn	2021	2022		RA VGH
Vince Bacarac	Directed Studies and Biochemistry BIOC 449	2021	2022	FoM Summer Student Research Program Award 2022; Faculty of Medicine SURE award (2022); Tri-Cluster poster presentation award 2021	STEMCell research technician
Jana Jajarmi	Biochemistry BIOC 449	2021	2022		UBC graduate school medical genetics
Griff Wong	co-op	2021	2022		
Hayden Scott	Work-learn	2022	2022		
Fortune Rantwana	Work-learn	2022			

Nadine Plett	Work-learn	2022			RA UBC
Jatin Choudhary	Work-learn	2022			
Carmen Choo	Work-learn	2022		ImmunoTherapeutics Cluster 3MT Competition Award	
Ching Zang	Work-learn	2022		UBC Neuroscience Research Excellency Award	
Stephanie Spencer	Biochemistry BIOC 448	2022	2023		
Michelle Chan	Biochemistry BIOC 448	2022		Faculty of Medicine SURE award (2023)	
Vivien Dang	Biochemistry BIOC 449	2022		FoM Summer Student Research Program Award (2023)	
Cal Rosete	Behavioural Neuroscience PSYC 388E	2022		NSERC USRA (2023)	

Professional Memberships & Affiliations

2021-Present	Green College Leading Scholars Member The Leading Scholars program is a two year commitment to regular interdisciplinary meetings with other junior faculty at UBC. As part of the program, we develop a set of public lectures centered around an interdisciplinary theme. My group's theme was <i>On the move: From global migration to molecular impacts</i> . We gave a public seminar (~50 people in attendance in person and on zoom), in which I discussed the molecular impacts of stress and early life abuse on molecular impacts for brain function, cognition and transgenerational epigenetics.
2021-Present	PNIRS member
2021-Present	BC Children's Hospital Research Institute Affiliate Investigator
2021	Canadian Association for Neuroscience (CAN) Parliament Hill Week Advocacy
2020-Present	Canadian Brain Research Strategy Early Career Researchers Task Force
2020-Present	Association of Canadian Early Career Health Researchers National Steering Committee
2020-Present	Rare Diseases: Models & Mechanisms Network (model organism researcher)
2020-Present	UBC Molecular Epigenetics Group member
2020-Present	UBC Neuroscience Group member
2019-Present	Epigenetics Society member

Professional Service

Peer reviewer for funding agencies:

India Alliance DBT Wellcome Trust (2021)
 CIHR Fellowships Post-PhD (2022)
 CIHR Behavioural Sciences 2 Project Grant external (2020)
 MSFHR Research Trainee BIOM2 Review Panel (2021)
 Dunhill Medical Trust Research Awards (United Kingdom) (2023)
 Scottish Rite Research Foundation Reviewer (2023)
 CFI reviewer (2023)
 Mitacs Accelerate research proposal reviewer (2023)

Peer reviewer for scientific journals (last 5 years):

2018	Gerontology
2018	Systems Biology and Medicine
2019	Molecular Autism (2)

2019	Neuroscience & Biobehavioral Reviews
2019	Molecular Therapy
2020	Journal of Clinical Medicine
2020	Cellular Immunology
2020	Journal of Neurodevelopmental Disorders
2020	International Journal of Molecular Sciences
2020	Nature Communications
2020	Frontiers in Neuroendocrinology
2020	Nature
2021	Nature Communications
2021	Cell Reports
2021	Communications Biology
2021	Brain Research
2022	Frontiers in Psychiatry
2022	Frontiers in Cellular Neuroscience
2022	Nature Communications
2022	Translational Psychiatry
2023	Journal of Zhejiang University
2023	Journal of Neuroimmunology

Reviewer for internal UBC awards:

Graduate student Neuroscience Paper of the Year Award (2019)

Vanier applications in Neuroscience (2019)

CIHR, NSERC and affiliated fellowships for Neuroscience (2019)

DMCBH Innovation Fund graduate and postdoc awards (2019)

DMCBH KickStart grant panel (2022; 2023)

David Hoar and Noreen Rudd Scholarship Selection Committee (2021, 2022)

BMB Astell Award in EDI (2020-present)

National Committees

Canadian Brain Research Strategy Early Career Researchers Task Force Member (2019-present)

The mission of this group is to build on Canada's strengths and current investments in neuroscience to transform neurological and mental health for Canadians.

Association of Canadian Early Career Health Researchers National Steering Committee Member (2020-present)

This group is composed of early career investigators from across Canada and the steering committee meetings bi-monthly to discuss topics related to our goals of increased, stable federal support for health research, policies to specifically promote early career researchers and communicate concerns of early career investigators back to government funding agencies. We are currently conducting a nationwide survey project to assess the impacts of the global COVID19 pandemic on early career investigators. This project recently received a CIHR Planning and Dissemination Grant to support implementation of the survey and dissemination of the results to early career investigators across Canada.

Canadian Epigenetics, Environment and Health Research Consortium annual meeting planning committee member (2022-2023)

This group meets biweekly to plan the annual CEEHRC meeting that will be held in Banff, Canada in fall 2023.

UBC Committees (2019-Present only)

Biochemistry and Molecular Biology Astell Award Committee	2020-Present	This committee oversees the advertisement, selection and award ceremony for the BMB EDI Astell Award. The committee meets approximately 5 times including the final interview session of the candidates for award selection. I gave the awards as part of the BMB seminar series in the fall of 2020, 2021, 2022.
Biochemistry and Molecular Biology Graduate Program Advisory Committee Member	2020-Present	This committee advises the BMB graduate program to address needs of the current and incoming BMB students. We meet quarterly.
Graduate Program in Neuroscience Executive Committee Member	2020-Present	This committee advises the graduate program in neuroscience, providing feedback on advisors, course and curriculum development and overall program goals. We meet quarterly.
Biochemistry and Molecular Biology EDI Committee Chair	2020-Present	The committee includes members from each rank within the department (undergraduate, graduate, postdoc, staff and faculty). As Chair of this group, over the last two years I helped launch a series of assessments of our department to evaluate issues related to EDI at every level. Together we developed and are implementing our department's five-year EDI Action Plan (https://biochem.ubc.ca/equity-diversity-inclusion/). Under my leadership we have made significant improvements in incorporating EDI practices in our hiring policies, undergraduate and graduate teaching, lab cultures and faculty research practices. We specifically have developed a work-learn program targeted to undergraduates from under-represented groups in STEM. The program places trainees in research labs and supports their mentorship and development as young scientists. Importantly, the positions are paid, allowing undergraduates from all backgrounds to participate and gain valuable research experience. We have also launched a mentorship program designed to help all members of our department gain valuable information and advice about how to navigate the "hidden curriculum" of the academic world. We match mentees with mentors, provide mentor training and hold regular in person networking events to facilitate access for all members of our department to thrive in academic research and beyond.
DMCBH Neuroinformatics working group member	2020-Present	This committee consists of 6 faculty from the DMCBH that oversees data science related resources, training and development at the DMCBH. This committee works to address computational needs across research groups within the DMCBH and facilitate training of graduate students in computational methods. We meet quarterly.
Biochemistry and Molecular Biology Seminar Committee Member	2020-2021	This committee coordinates the schedule for the weekly BMB seminar. We met quarterly.
Biochemistry and Molecular Biology Mentorship Committee Member	2020	This committee created the departmental mentoring policy for new faculty.

Dynamic Brain Circuits Steering Committee Member	2020	This committee advised on the renewal of the UBC Dynamic Brain Circuits Cluster of Excellence which was successfully renewed in 2021.
Centre for Brain Health Seminar Committee	2019-Present	This committee consists of 12 members of the DMCBH faculty that each nominate 2-3 speakers they would like to host for the weekly DMCBH seminar series.

Outreach (2019-Present only)

Career Panel Co-Organizer		Helped organize a career panel and lunch as part of the Canadian Association for Neuroscience (CAN) annual meeting in Montreal, Canada.
Science Rendezvous	2023	Organized a Biochemistry and Molecular Biology set of activities to teach kids about DNA, chromatography and protein aggregation. More than 300 families participated.
Green College Panel	2023	Molecular Biology Over Time: Doing Biochemistry Without a Licence. Panel of 3 faculty and one PhD student discussing career paths in molecular biology. Open to the general public in person and over zoom.
High School lab tour	2023	20 Van Tech Secondary students (grades 10-12) visited DMCBH and toured the Ciernia Lab.
High School Career Talk	2023	Ciernia, A. (Feb 18, 2023). How your genes and environment shape who you are. Invited talk hosted by STEM Fellowship, a nationally recognized charity that aims to equip students of all ages with the opportunities and skills necessary to pursue STEM fields in the future. They have members from 35 of High School Chapters and 18 students attended the talk on zoom.
High School lab tour	2022	Lord Byng Secondary school students (30) visited DMCBH and toured the Ciernia Lab.
High School lab tour	2022	As part of the UBC Summer Science Program we gave a lab tour for 25 Indigenous high school students from the surrounding area in BC.
Life Sciences Research Night EDI panelist	2022	Panelist discussing EDI in STEM as part of the undergraduate Research Night at UBC
UBC REDI presentation and panelist	2022	UBC FoM REDI presentation and panel discussion on progress made by the BMB EDI committee from 2019-2022. 20 attendees over zoom.
High School lab tour	2022	8 high school students (grades 10-11) toured the lab and spent time discussing careers in STEM, undergraduate majors and graduate school.
UBC EDI Action Network presentation and panelist	2022	UBC EDI Action Network presentation and panel discussion on progress made by the BMB EDI committee from 2019-2022. 54 attendees over zoom.
Keynote talk BC Children's Hospital Mini Med School.	2022	<i>Neuroscience, Epigenetics and the Developing Brain</i> keynote talk to 70 grade 10-12 high school students from the Fraser Valley
Women in Stem Laboratory Tour	2022	Hosted virtual lab tours for UBC undergraduate Women in STEM club

UBC Dimensions Advisory board member	2021	Attended two meetings to provide EDI feedback for UBC Dimensions project.
Faculty Panelist	2021	Biochemistry Knowledge Undergraduate Student Workshop
Faculty Panelist	2020	How to Survive Biochemistry Undergraduate Student Workshop
NeuroPsyched Faculty Advisor	2019-Present	I am the faculty advisor for this graduate student run Neuroscience outreach program. https://www.neuropsyched.ca/

Presentations (2019-Present as PI)

1. Ciernia, A. (May 29th, 2023). *Microbiota-Microglia Interactions in Pediatric Inflammatory Bowel Disease*. Future Leaders Meeting at Canadian Association for Neuroscience meeting, Montreal, Canada
2. Ciernia, A. (May 13th, 2023). *How your genes and environment shape your brain*. Public outreach talk. Science Rendezvous, UBC, Vancouver, Canada
3. Ciernia, A. (April 26, 2023). *Microglia Regulation of Microglial Immune Memory*. Invited talk. LEARNMEM2023 conference, Huntington Beach, California, USA.
4. Ciernia, A. (March 29, 2023). *Epigenetic Regulation of Microglial Immune Memory*. Invited talk. Fragile Nucleosome Seminar Series, Virtual.
5. Ciernia, A. (March 22, 2023). *The Role of Chromatin Remodelers in Autism Spectrum Disorder*. Invited talk. Neuroscience Grand Rounds, University of British Columbia, Vancouver, BC. Virtual.
6. Ciernia, A. (March 20, 2023). *Epigenetic Regulation of Microglial Innate Immune Memory*. Invited talk. Manitoba Neuroscience Networks Seminar Series, University of Manitoba, Winnipeg, Canada.
7. Ciernia, A. (March 3, 2023). *Mechanisms of Peripheral Lipopolysaccharide Brain Inflammation*. Invited talk. DMCBH Seminar Series, UBC, Vancouver, BC.
8. Ciernia, A. (Feb 23, 2023). *Epigenetic Regulation of Microglia in Health and Disease*. Invited talk. Biochemistry and Molecular Biology Departmental Retreat, Loon Lake, BC.
9. Tropini, C. & Ciernia, A. (Feb 2, 2023). Metabolite control of microbiome-microglia communication in pediatric inflammatory bowel disease. Invited talk. Faculty of Medicine Precision Medicine Symposium, University of British Columbia, Vancouver, BC.
10. Ciernia, A. (Jan 27, 2023). How your genes and environment shape who you are. Biotechnology Networking Night. Keynote Invited talk. BCIT, University of British Columbia, Vancouver, BC.
11. Ciernia, A. (Nov 11, 2022). Hdac3 regulation of microglial inflammation. Annual meeting of the Molecular, Cellular & Cognition Society. Invited talk. San Diego, California, USA.
12. Ciernia, A. (June 21, 2022). *Epigenetic Regulation of Immune Function in the Brain*. University of British Columbia Department of Psychiatry Educational Rounds. virtual
13. Ciernia, A. (May 3, 2022). *Epigenetic Regulation of Microglia in Health and Disease*. DMCBH retreat, Kelowna, BC.
14. Ciernia, A. (April 5, 2022). *Histone Acetylation Regulation of Microglial Innate Immune Memory*. Keynote seminar, Biochemistry and Molecular Biology Annual Symposium. University of British Columbia, Vancouver, BC.
15. Ciernia, A. *Neuroscience, Epigenetics and the Developing Brain*. Keynote talk BC Children's Hospital Mini Med School. Fraser Valley.
16. Ciernia, A. (March 8, 2022). *Histone Acetylation Regulation of Microglial Innate Immune Memory*. Neuroepigenomics seminar invited talk, United Kingdom Dementia Research Institute, Imperial College London. virtual.
17. Ciernia, A. (March 2, 2022). *Histone Acetylation Regulation of Microglial Innate Immune Memory*. talk, UBC Neuroscience Days, Vancouver Coastal Health, Vancouver, BC.
18. Ciernia, A. (December 14th, 2021). *Epigenomics and Genomics Reanalyzed*. Workshop presentation, Central Asia Bioinformatics and Genomics Workshop. University of Uzbekistan, Tashkent, Uzbekistan. Virtual.
19. Ciernia, A. (December 9th, 2021). *Epigenetic Regulation of Microglial Innate Immune Memory*. talk, Asilomar Chromatin, Chromosomes and Epigenetics Conference. Monterey, California, USA. Virtual.

20. Ciernia, A. (December 8th, 2021). *Histone Acetylation Regulates Microglial Innate Immune Responses*. Keynote presentation, Central Asia Genomics Symposium. University of Uzbekistan, Tashkent, Uzbekistan. Virtual.
21. Ciernia, A. (October 28th, 2021). *Epigenetic Regulation of Microglial Innate Immune Memory*. Selected short talk, EMBO Microglia conference. Virtual.
22. Ciernia, A. (September 29, 2021). *Epigenetic Regulation of Microglial Innate Immune Memory*. Invited seminar, Multi-Omics Group, BC Children's Hospital, Vancouver, British Columbia. Virtual.
23. Ciernia, A. (June 4th, 2021). *Epigenetic Regulation of Microglial Innate Immune Memory*. Invited seminar, UBC Psychiatry Research Days, University of British Columbia. Virtual.
24. Ciernia, A. (May 14th, 2021). *Microglia Memory: Fine-Tuning Gene Expression in the Brain*. Invited seminar, Medical Microbiology & Immunology Seminar Series, UC Davis, California, USA. Virtual.
25. Ciernia, A. (May 6th, 2021). *Microglia Memory: Fine-Tuning Gene Expression in the Brain*. Invited seminar, Kasturba Medical College of Manipal, Kamataka, India. Virtual.
26. Ciernia, A. (May 5th, 2021). *Microglia Memory: Fine-Tuning Gene Expression in the Brain*. Invited seminar, Healthy Starts Seminar, British Columbia Children's Hospital. Vancouver, Canada. Virtual.
27. Ciernia, A. (March 23rd, 2021). *Microglia Memory: Fine-Tuning Gene Expression in the Brain*. Invited seminar, Penn State University, USA. Virtual.
28. Ciernia, A. (March 19th, 2021). *Epigenetic Conductions of Microglial Immune Memory in the Brain*. Invited talk, Canadian Epigenetics, Environment and Health Research Consortium. Virtual.
29. Ciernia, A. (September 14th, 2020). *Microglial Memory: Fine Tuning Gene Expression in the Brain*. Zoology Seminar Series, University of British Columbia. Virtual.
30. Ciernia, A. (April 23rd, 2020). *Microglial Gene Regulation in Autism and Neuroinflammation*. Invited talk, PITCH Childhood Disease Seminar, University of British Columbia. Virtual.
31. Ciernia, A. (April 17th, 2020). *Microglial Gene Regulation in Autism and Neuroinflammation*. Invited talk, Centre for Brain Health, University of British Columbia. Virtual.
32. Ciernia, A. (January 22nd, 2020). *Epigenomic Signatures of Altered Neuroimmune Function in Autism*. Invited talk, Neuropsychiatry Grand Rounds, University of British Columbia.
33. Ciernia, A. (December 4th, 2019). *Epigenomic Signatures of Microglia in Autism*. Invited talk, SWIFT Biosciences Seminar, University of British Columbia.
34. Ciernia, A. (November 7th, 2019). *Epigenomic Signatures of Microglia in Autism*. Invited talk, Cellular and Physiological Sciences Colloquium Series, University of British Columbia.
35. Ciernia, A. (October 3rd, 2018). *Epigenomic Signatures of Microglia in Autism*. Invited talk, Canadian Epigenetics, Environment and Health Research Consortium Network 5th Canadian Conference on Epigenetics, Esterel, Quebec, Canada.
36. Vogel Ciernia, A. (March 8th, 2018). *Epigenomic Signatures of Microglia in Autism*. Invited talk, Department of Biochemistry and Molecular Biology, University of British Columbia, Vancouver, Canada.
37. Vogel Ciernia, A. (February 15th, 2018). *Epigenomic Signatures of Microglia in Autism*. Invited talk, Allen Institute for Brain Science, Seattle, Washington.
38. Vogel Ciernia, A. (February 15th, 2018). Life-long consequences of early life experiences on epigenetic programming. Invited talk, Department of Biology, University of Nevada, Reno.
39. Vogel Ciernia, A. (February 9th, 2018). Life-long consequences of early life experiences on epigenetic programming. Medical Microbiology and Immunology MMI 291 Seminar Series Emerging Challenges in Microbiology and Immunology, University of California, Davis.
40. Vogel Ciernia, A. (May 5th, 2017). Early motor phenotype detection in a female mouse model of Rett syndrome. University of California Davis Psychology Conference, University of California, Davis.
41. Vogel Ciernia, A. (April 12th, 2017). Maternal allergic asthma alters gene expression and regulation in offspring microglia. Postdoctoral Research Conference, University of California, Davis.
42. Vogel Ciernia, A. (July 7th, 2016). The role of MeCP2 isoform 1 in Rett syndrome disease progression. Invited talk. Rutgers University, New Jersey, USA.
43. Vogel Ciernia, A. (February 4th, 2016). Mapping epigenomic pathways of resilience acquired in early life. Selected talk: Epigenomics 2016, Puerto Rico, USA.
44. Vogel-Ciernia, A. (June 18th, 2014). How understanding memory formation can span the gap from genes to intellectual disorders. Invited talk: Institute for Advanced Study (Wissenschaftskolleg), College of Life Sciences, Berlin, Germany.

45. Vogel-Ciernia, A. (April 18, 2014). The role of a novel epigenetic mechanism in long-term memory formation. Conference presentation: Association for Graduate Students, University of California, Irvine.
46. Vogel-Ciernia, A. (November 12, 2013). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Conference presentation: Society for Neuroscience, San Diego, California.
47. Vogel-Ciernia, A. (November 18, 2013). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Conference presentation: Molecular and Cellular Cognition Society, San Diego, California.
48. Vogel-Ciernia, A. (April 13, 2013). The role of a novel epigenetic mechanism in long-term memory formation. Conference presentation: 24th Science Conference of the Graduate Women in Science, Chapman University, Orange, California.
49. Vogel-Ciernia, A. (February 20, 2013). The role of a novel epigenetic mechanism in long-term memory formation. Conference presentation: ReMIND Emerging Scientists Symposium on Neurological Disorders, University of California, Irvine

Poster Presentations (2019-Present as PI)

1. Hrelja, K., Kim, J., Bacarac, V., Plett, N., Winstanley, C., & **Ciernia, A.** (June 28th, 2023). Diving into the two-hit hypothesis: A comparisons between multiple forms of “second hit” in rats. International Behavioural Neuroscience Society meeting, Niagra Falls, Canada
2. Rowland, M., de Vries, A., Rantuana, F., Zobaidi, K., & **Ciernia, A.** (April 26, 2023). Investigating the Role of Baf53b in Neuronal Gene Expression and Autism Behaviours. Poster & Lightening Talk at EMBO | EMBL Symposium. Brain genome: regulation, evolution, and function. Heidelberg, Germany. Chosen for lightening talk.
3. Kim, J., Pavlidis, P., & **Ciernia, A.** (May 2023). Development of a high-throughput pipeline to characterize microglia morphological states at a single-cell resolution. Posters at VII Symposium of the Portuguese Glial Network and FENS Regional Meeting 2023. Albufeira, Algarve, Portugal. Travel Award
4. Meleady, L., Towrris, M., Kim, J., Dang, V., & **Ciernia, A.** (March 6th, 2023). Microglial Hdac3 Governs Resolution of Neuroinflammation Through Enhanced Histone Acetylation. Poster at Gordon Research Conference Glial Biology: Functional Interactions Among Glia and Neurons. Ventura, California, USA.
5. Towriss, M., MacVicar, B., & **Ciernia, A.** (March 8th, 2023). Examining the role of histone lactylation in microglial inflammatory response. Poster at Gordon Research Conference Glial Biology: Functional Interactions Among Glia and Neurons. Ventura, California, USA.
6. Hoq, F., Kang, R., **Ciernia, A.**, Soma, K., & Ranger, M. (Feb 1, 2023). Alterations in pro/anti-inflammatory markers in hippocampus and blood after repeated sucrose and pain exposure in mouse pups. Poster at the BC Children’s Hospital Research Days. Vancouver, Canada. Travel Award for best poster presentation in the Healthy Starts: Origins of Childhood Health and Disease.
7. Kim, J., Hrelja, K., Bacarac, V., Plett, N., Winstanley, C., & **Ciernia, A.** (October 6th, 2022). Microglia as a mediator of the ‘two-hit’ hypothesis. Poster at the 8th Canadian Conference on Epigenetics meeting. Esterel, Quebec, Canada.
8. Rowland, M.E., Rantuana, F., Zobaidi, K., & **Ciernia, A.** (October 6th, 2022). Investigating the Role of Baf53b in Neuronal Gene Expression and Autism Behaviours. Poster at the 8th Canadian Conference on Epigenetics meeting. Esterel, Quebec, Canada.
9. Towriss, M., MacVicar, B., & **Ciernia, A.** (October 6th, 2022). Examining the role of histone lactylation in microglial inflammatory response. Poster at the 8th Canadian Conference on Epigenetics meeting. Esterel, Quebec, Canada.
10. Sullivan, O., Cotton, S., Lee, K., Ng, K., Kim, J., Tropini, C., & **Ciernia, A.** (August 30th, 2022). How early life gut inflammation impacts brain microglia and neurodevelopment. Poster at the Developmental Origins of Health and Disease conference. Vancouver, Canada.
11. **Ciernia A.** (July 22nd, 2022). Epigenetic Regulation of Microglial Innate Immune Memory. Poster at Glia in Health and Disease CSHL Meeting, CSHL, NY, USA.
12. Sullivan, O., Cotton, S., Lee, K., Ng, K., Kim, J., Tropini, C., & **Ciernia, A.** (May 7th, 2022). How early life gut inflammation impacts brain microglia and neurodevelopment. Poster at the International Society for Developmental Neuroscience conference. Vancouver, Canada.

13. Kim, J., Tamayo, J., Madany, A.M., Ashwood, P., **Ciernia, A.** (June 2nd, 2022). Characterizing microglia morphology changes in a mouse model of innate immune memory. Djavad Mowafaghian Centre for Brain Health Research Retreat, UBC Okanagan, Canada.
14. Sullivan, O., Cotton, S., Lee, K., Ng, K., Kim, J., Tropini, C., & **Ciernia, A.** (June 2nd, 2022). How early life gut inflammation impacts brain microglia and neurodevelopment. Djavad Mowafaghian Centre for Brain Health Research Retreat, UBC Okanagan, Canada.
15. Meleady L., **Ciernia, A.** (June 7th, 2022). Investigating the role of epigenetic-modifier histone deacetylase 3 (Hdac3) in microglia gene expression and immune response. Djavad Mowafaghian Centre for Brain Health Research Retreat, UBC Okanagan, Canada. Chosen for lightning talk.
16. Sullivan, O., Lee, K., Ng, K., Kim, J., Tropini, C., & **Ciernia, A.** (November 26th 2021). How early life gut inflammation impacts brain microglia and neurodevelopment. Poster at the 3rd Annual Tri-Cluster Research Day. (Virtual). Presentation Award (2nd place).
17. Bacarac V., Kim J., Hrelja K., Winstanley C, **Ciernia, A.** (November 26th 2021). Assessing the "two-hit" hypothesis: How does a two-hit immune activation affect microglial gene expression in the rat brain? Poster at the 3rd Annual Tri-Cluster Research Day. (Virtual). People's Choice Award (Best Poster)
18. **Ciernia, A.** (June 7th, 2021). Epigenetic Regulation of Microglial Innate Immune Memory. Poster and SciTalk at NeurolImmune Interactions in Health and Disease Keystone Meeting (virtual).
19. Meleady L., **Ciernia, A.** (May 26th 2021). Investigating the role of epigenetic-modifier histone deacetylase 3 (Hdac3) in microglia gene expression and immune response. Poster at 23rd Biennial Meeting of the International Society of Developmental Neuroscience. (Virtual).
20. Meleady L., **Ciernia, A.** (March 26th 2021). Investigating the role of Hdac3-mediated gene in primary microglia immune response to lipopolysaccharides (LPS). Poster at University of British Columbia Biochemistry and Molecular Biology Symposium on Genetics, Transcription, and Translation, Vancouver, Canada. (Virtual). Top poster awarded by Graduate Student Association judging panel
21. Rowland, M.E. & **Ciernia, A.** (March 26th 2021). Investigating the Role of Baf53b in Regulating Gene Expression and Morphology in Neurons. Poster at University of British Columbia Biochemistry and Molecular Biology Symposium on Genetics, Transcription, and Translation, Vancouver, Canada. (Virtual).
22. Meleady, L., **Ciernia, A.** (March 25th 2021). Investigating the role of Hdac3-mediated gene in primary microglia immune response to LPS. Poster at Conte Center Symposium on Neuro-Immune Interactions online from the Conte Centre for Neuroimmune Studies Boston, Massachusetts. (Virtual).
23. Rowland, M.E. & **Ciernia, A.** (December 10, 2020). Investigating the Role of Baf53b in Regulating Gene Expression and Neuronal Morphology in Excitatory and Inhibitory Neurons. Poster at Asilomar Chromatin, Chromosomes, and Epigenetics Conference. (Virtual).
24. Meleady, L., **Ciernia, A.** (November 4th, 2020). Using Hdac3 inhibitor (RGFP966) to investigate histone acetylation and gene expression changes in primary rat microglia. Poster at Future of Health Research Day at the Djavad Mowafaghian Centre for Brain Health, Vancouver, Canada. (Virtual).
25. Rowland, M.E. & **Ciernia, A.** (October 28, 2020). Investigating neuronal morphology and function in mouse primary neurons with Baf53b mutations associated with Autism Spectrum Disorder. Poster at Embo Workshop, Neuroepigenetics: From Cells to Behaviour and Disease. (Virtual).
26. Hughes, H., Dada, S., **Ciernia, A.**, & Ashwood, P.A. (June 3rd, 2020). Dysregulated immune gene expression in monocytes from Autism Spectrum Disorders. Poster at International Society for Autism Research. (Virtual).
27. Kim, J., Tamayo, J., Madany, A.M., Ashwood, P.A., & **Ciernia, A.** (November 18th, 2019). Investigating brain region-specific regulation of LPS-induced innate immune memory. Poster at Canadian Epigenetics, Environment and Health Research Consortium Network 6th Canadian Conference on Epigenetics, Banff, Canada. Travel award winner.
28. Dada, S., Hughes, H., Onore, C., Ashwood, P.A., & **Ciernia, A.** (November 18th, 2019). Dysregulated immune gene expression in monocytes from Autism Spectrum Disorders. Poster at Canadian Epigenetics, Environment and Health Research Consortium Network 6th Canadian Conference on Epigenetics, Banff, Canada.
29. Kim, J., Tamayo, J., Madany, A.M., Ashwood, P.A., & **Ciernia, A.** (November 8th, 2019). Investigating brain region-specific regulation of LPS-induced innate immune memory. Poster and Lighting Talk (Top 10

abstracts) at Future of Health Research Day at the Djavad Mowafaghian Centre for Brain Health, Vancouver, Canada.

30. **Vogel Ciernia, A.**, Laufer, B.I., Dunaway, K.W, Mordaunt, C.E., Coulson, R.L., Yasui, D.H., and LaSalle, J.M. (November 18th, 2018). Epigenomic convergence of genetic and immune risk factors in autism brain. Poster at IDDRRC Director's Meeting, Boston Children's Hospital and Developmental Disabilities Research Center, Boston, MA, USA.
31. **Vogel Ciernia, A.**, Laufer, B.I., Dunaway, K.W, Mordaunt, C.E., Coulson, R.L., Yasui, D.H., and LaSalle, J.M. (October 19th, 2018). Epigenomic convergence of genetic and immune risk factors in autism brain. Poster at American Society for Human Genetics, San Diego, CA, USA.
32. **Vogel Ciernia, A.**, Careaga, M., LaSalle, J., & Ashwood, P. (November 14th, 2017). Microglia isolated from offspring of dams with allergic asthma exhibit methylation and transcriptional alterations to autism risk genes. Poster at Society for Neuroscience, Washington DC, USA.
33. **Vogel Ciernia, A.**, Careaga, M., LaSalle, J., & Ashwood, P. (January 18th and 19th, 2017). Maternal allergic asthma alters microglial transcriptome and methylome of offspring. Poster at Gordon Research Conference Neuroimmune Communication in Health & Disease, Ventura, CA, USA.
34. **Vogel Ciernia, A.**, Pride, M., Durbin-Johnson, B., Noronha, A., Chang, A., Yasui, D.H., Crawley, J.N., & LaSalle, J.M. (November 14th, 2016). The impact of maternal care on a female mouse model of Rett syndrome. Poster presented at Society for Neuroscience, San Diego, California, USA.
35. **Vogel Ciernia, A.**, Yasui, D.H., Singh-Taylor, A., Cope, J., Baram, T.Z., Dunaway, K.W., & LaSalle, J.M. (February 2nd and 3rd, 2016). Mapping epigenomic pathways of resilience acquired in early life. Poster presented at Epigenomics 2016, Puerto Rico, USA.
36. **Vogel-Ciernia, A.**, Matheos, D.P., Kramár, E.A., Cox, C., Trieu, B., Magnan, C.N., Zeller, M. Lopez, A., Sakata, K., Tong, J., Tran, A., Azzawi, S., Dang, R., Barrett, R.M., Post, R.J., Havekes, R., Abel, T., Baldi, P., Lynch, G., & Wood, M.A. (November 15, 2014). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Poster presented at Society for Neuroscience, Washington D.C.
37. Lopez, A.J., Kramar, E., Kwapis, J., White, A.O., **Vogel-Ciernia, A.**, & Wood, M.A. (November 15, 2014). Bi-directional chemogenetic manipulation of the CA1 using DREADDs leads to modulation in object location memory, but not object recognition memory. Poster presented at Society for Neuroscience, Washington D.C.
38. **Vogel-Ciernia, A.** Matheos, R. Dang, A. Tran, Kramár, E.A., Trieu, B., Cox, C., Lynch, G. & Wood, M.A. (February 21, 2014). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Poster presented at Innovation and Promise in Epilepsy Research 3rd International UCI EpiCenter Symposium, Irvine, California.
39. **Vogel-Ciernia, A.** Matheos, R. Dang, A. Tran, Kramár, E.A., Trieu, B., Cox, C., Lynch, G. & Wood, M.A. (February 21, 2014). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Poster presented at Innovation and Promise in Epilepsy Research 3rd International UCI EpiCenter Symposium, Irvine, California.
40. **Vogel-Ciernia, A.** Matheos, D.P., Barrett, R.M., Kramár, E.A., Zeller, M., Magnan, C., Alex H. Babayan, Crabtree, G.R., Baldi, P., Lynch, G. & Wood, M.A. (December 10, 2013). The neuron-specific chromatin regulatory subunit BAF53b is necessary for epigenetic regulation of synaptic plasticity and memory. Poster presented at American College of Neuropsychopharmacology (ACNP), Hollywood, Florida.
41. **Vogel-Ciernia, A.** Matheos, D.P., Barrett, R.M., Kramár, E., Chen, E.Y., Zeller, M., Magnan, C., Azzawi, S. Haettig, J., Jia, Y., Tran, A., Post, R.J., Sylvain, A., Crabtree, G.R., Baram, T.Z., Baldi, P., Lynch, G. & Wood, M.A. (2012) The role of BAF53b in regulating long-term memory formation. Poster presented at Society for Neuroscience, New Orleans, Louisiana.
42. Jacobs, N.S., Allen, T.A, Turk, A.A., **Vogel-Ciernia, A.**, Fortin, N.J. (2011) Mapping the Extent of Functional Inactivation Following Local Infusion of Fluorescent Muscimol. Poster presented at Society for Neuroscience, Washington DC.
43. Smith, E.D, Carlos, A.J., Aguilar, B.L., **Vogel-Ciernia, A.**, Nielsen, S.E., Cornwell, L., Hanna, M., Passos, G., Prieto, G.A., Winchester, J., Pop, V., & Noldan, P. (2011). New Ways to Explore the Brain: Brain Awareness Week at Stacy-Clegg. Poster presented at Society for Neuroscience, Washington DC.

Other Contributions: Public Communications (last 5 years)

1. Dr. Ciernia was interviewed by Spectrum News for her opinion on serotonin regulation of microglia neurodevelopment and Autism. <https://doi.org/10.53053/ISLD4008>
2. Feature article in the UBCObysses. Dr. Ciernia was interviewed about her lab's work on Autism Spectrum Disorder. The newspaper goes out to all UBC undergraduates. <https://www.ubyssey.ca/science/dr-annie-ciernias-lab-is-investigating-the-role-of-epigenetics-in-autism-spectrum-disorder/>
3. Feature article in the Clay County Union on Dr. Ciernia's Future Leader's in Canadian Brain Research Award. This newspaper is local to Dr. Ciernia's hometown in rural Minnesota, USA and circulates to ~500 readers in the community.
4. Dr. Ciernia recognized for a Future Leader's in Canadian Brain Research Award <https://www.med.ubc.ca/news/annie-ciernia-named-a-2021-brain-canada-future-leader-in-canadian-brain-research>
5. Green College public seminar 2022 (~50 people in attendance in person and on zoom). On the move: From global migration to molecular impacts. This was a three person led presentation which I led a 15 minute talk on molecular impacts of stress and early life abuse on molecular impacts for brain function, cognition and transgenerational epigenetics.
6. The Scientist. Sept 2021. Commentary included in article on microglia function in a novel ASD mouse model. <https://www.the-scientist.com/news-opinion/serious-infections-linked-to-autism-study-69193>
7. Spectrum News. Autism-related conditions converge on same loss of DNA tags. Feature article on Dr. Ciernia's postdoctoral work on DNA methylation changes in human postmortem brain from Autism patients. January 20th, 2021. <https://www.spectrumnews.org/news/autism-related-conditions-converge-on-same-loss-of-dna-tags/>
8. NeuroPsyched New P.I. Spotlight featuring Dr. Ciernia. July 10, 2020. <https://neuropsychedsquarespace.com/summer-2020/new-pi-spotlight-dr-annie-ciernia>
9. Science in Vancouver. Feature article on Genetic Variants Drive Altered Epigenetic Regulation of Endotoxin Response in BTBR Macrophages. June 4th, 2020. <https://scienceinvancouver.com/2020/06/04/genetic-variants-drive-altered-epigenetic-regulation-of-endotoxin-response-in-btbr-macrophages/>
10. Spectrum News. Feature article on the Ciernia Lab's work on Autism Spectrum Disorders. September 10th, 2019. <https://www.spectrumnews.org/opinion/q-and-a/beyond-the-bench-a-conversation-with-annie-ciernia/>
11. Spectrum News. Maternal Asthma Alters Immune Cells in Fetal Brain. Feature article on Dr. Ciernia's postdoctoral work on DNA methylation changes in microglia in a mouse model of Autism. November 14th, 2017. <https://www.spectrumnews.org/news/maternal-asthma-alters-immune-cells-fetal-brain/>