

Mellisa (Roadifer) Clemons

Curriculum Vitae

Clem0382@vandals.uidaho.edu

ACADEMIC POSITIONS

Idaho INBRE (IDeA Network of Biomedical Research Excellence) Assistant Coordinator Summer 2019-present
North Idaho College & University of Idaho

Adjunct Biology Instructor Jan 2015-present
Natural Sciences Division
North Idaho College

EDUCATION

Doctor of Philosophy Student, Microbiology, Molecular Biology, and Biochemistry 2018-present
University of Idaho, Moscow, Idaho
Advisor: Dr. Peter Fuerst
Dissertation – Mitochondria as an Interface Between Neural Development and Disease

Bachelor of Science, Biology May 2018
University of Idaho, Moscow, Idaho

Associates of Science, Pre-Medical Related Studies May 2014
North Idaho College, Coeur d'Alene, Idaho

PUBLICATIONS

PEER REVIEWED PAPERS (*equal contribution)

1. Simmons, A. B.*, Camerino, M. J.*, **Clemons, M. R.***, Sukeena, J. M., Bloomsburg, S., Borghuis, B. G., and P. G. Fuerst. Increased density and age-related sharing of synapses at the cone to OFF bipolar cell synapse in the mouse retina. *Journal of Comparative Neurology*.

PUBLISHED ABSTRACTS

1. Dimico, R. H., **Clemons, M. R.**, Camerino, M. J., & Schlusser, M. K. (2019). Unravelling Genetic Determinants of Synaptic Formation in the Mammalian Visual System. https://scholarworks.boisestate.edu/icur/2019/Poster_Session/35/
2. Guillen, B. A., Kindall, A., **Clemons, M. R.**, Fuerst, P. G., (2019). Finding Down Syndrome Cell Adhesion Molecule (DSCAM) Protein Interactions in Pathways of Neuronal Development. https://scholarworks.boisestate.edu/icur/2019/Poster_Session/51/
3. Fouche, N., **Clemons, M. R.**, Kindall, A., Fuerst, P. G., (2018). Yeast 2 Hybrid Protein-Protein Interactions in DSCAM. https://scholarworks.boisestate.edu/icur/2018/Poster_Session/36/

AWARDS & HONORS

NASA Idaho Space Grant Consortium Graduate Fellowship 2019-2020
University of Idaho, Moscow, ID

Sigma Xi Research Excellence Award 2018
College of Science, University of Idaho, Moscow, ID

Outstanding Graduate Feature 2018
College of Science, University of Idaho, Moscow, ID
<https://www.uidaho.edu/sci/news/features/2018/mellisa-clemons>

TEACHING EXPERIENCE

Adjunct Biology Instructor (34 credits)

Jan 2015-Present

Department of Natural Sciences, North Idaho College (*Anatomy & Physiology Labs, Intro to Biology Labs*)

- Prepared and developed course material for lab with lead instructors

Teaching Assistant, University of Idaho (3 credits)

Spring 2019

Department of Biology (*Cell and Molecular Biology Lab*)

Teaching Assistant, University of Idaho

Fall 2018

Department of Biology, (*Cells and Evolution of Life Lecture*)

Student Tutor

Fall 2016-Fall 2017

(*Chemistry, Anatomy & Physiology*), Coeur d'Alene, ID

PRESENTATIONS

TALKS

Developmental Biology Guest Lecture, University of Idaho, Moscow, ID, November 2019

Clemons, M. R., R Dimico, M Schlusser, M Camerino, P. G. Fuerst. Balancing the Force: DSCAML1 and its role in synaptic success. Idaho INBRE research presentation, North Idaho College, Coeur d'Alene, ID, July 2019

Clemons, M. R., R Dimico, M Schlusser, M Camerino, P. G. Fuerst. Synaptic Convergence for Night Vision in the Mammalian Rod Visual Circuit. Idaho INBRE research presentation, University of Idaho, Moscow, ID, June 2019

Clemons, M. R., R Dimico, M Schlusser, M Camerino, P. G. Fuerst. Synaptic Convergence for Night Vision in the Mammalian Rod Visual Circuit. Northwest Developmental Biology Conference, Short talk selection, Friday Harbor, WA, March 2019

Clemons, M. R., R Dimico, M Schlusser, M Camerino, P. G. Fuerst. Synaptic Convergence for Night Vision in the Mammalian Rod Visual Circuit. Research presentation for campus community, North Idaho College, Coeur d'Alene, ID, March 2019

Clemons, M. R., A Kindall, N Herbenson, C Turner, P. G. Fuerst. DSCAM cell signaling using Yeast Two Hybrid System. Eukaryotic Molecular Genetics graduate presentation, University of Idaho, Moscow, ID, April 2019

POSTER PRESENTATIONS

(*equal contribution, presenter was first author unless otherwise noted)

Clemons, M. R., K Aldinger-Gibson, A Elliott, P. G. Fuerst. The Mitochondria as an Interface for Development and Disease. College of Science EXPO (2019), University of Idaho, Moscow, ID

Clemons, M. R., M Schlusser, N Reynolds, M Camerino, A Elliott, A Bartle, J Doyle, P. G. Fuerst. Synaptic Convergence for Night Vision in the Mammalian Rod Visual Circuit. College of Science EXPO (2018), University of Idaho, Moscow, ID

Clemons, M. R.*, M Schlusser*, M Camerino, J Doyle, P. G. Fuerst. Synaptic Convergence for Night Vision in the Mammalian Rod Visual Circuit. Idaho INBRE Conference (2017), Moscow, ID

Aldinger-Gibson, K, A Elliott, **M. R. Clemons**, P. G. Fuerst. Comparing mitochondria in rod bipolar cells of Dscaml1 mammalian retinas. Idaho INBRE Conference (2019), Moscow, ID

Elliott, A, K Aldinger-Gibson, **M. R. Clemons**, P. G. Fuerst. Mitochondrial morphological malfunction in Dscaml1 mutant mice. Idaho INBRE Conference (2019), Moscow, ID

Dimico, R, M Camerino, M Schlusser, **M. R. Clemons**, P. G. Fuerst. Unravelling Genetic Determinants of Synaptic Formation in the Mammalian Visual System. Idaho Conference of Undergraduate Research (2019), Boise, ID

Dimico, R, M Camerino, M Schlusser, **M. R. Clemons**, P. G. Fuerst. Unravelling Genetic Determinants of Synaptic Formation in the Mammalian Visual System. National Conference of Undergraduate Research: Posters on the Hill (2019), Washington DC

Kindall, A, **M. R. Clemons**, N Herbenson, C Turne¹, P. G. Fuerst. Discovering Down Syndrome's Cell Adhesion Molecule's Signaling Pathway. College of Science EXPO University of Idaho (2019), Moscow, ID

Fife, P, M Camerino, N Reynolds, J Doyle, I Engerbretson, **M. R. Clemons**, P. G. Fuerst. Distribution of OFF-Bipolar Cells in the Mouse Retina. Idaho INBRE Conference (2019), Moscow, ID

Bartle, A, A Flores, M Lee, M Schlusser, **M. R. Clemons**, P. G. Fuerst. The effects of *Dscaml1* on cell population density in the hippocampus of the mammalian brain. Idaho INBRE Conference (2019), Moscow, ID

Kindall, A, **M. R. Clemons**, N Herbenson, C Turner, P. G. Fuerst. Cellular Signaling with Down Syndrome Cell Adhesion Molecule leading to Neuronal Self-avoidance. Idaho INBRE Conference (2019), Moscow, ID

Guillen, B, A Kindall, **M. R. Clemons**, P. G. Fuerst. Finding Down Syndrome Cell Adhesion Molecule (DSCAM) Protein Interactions in Pathways of Neuronal Development. Idaho Conference of Undergraduate Research (2019), Boise, ID

Turner, C, **M. R. Clemons**, A Kindall, N Herbenson, P. G. Fuerst. Protein-Protein Interactions of Down Syndrome Cell Adhesion Molecule. Undergraduate Research EXPO University of Idaho (2019), Moscow, ID

Camerino, M, N Reynolds, J Doyle, I Engerbretson, **M. R. Clemons**, P. G. Fuerst. Density and spatial mapping of OFF-Bipolar Cells in the Mouse Retina. Idaho INBRE Conference (2018), Moscow, ID

EDUCATIONAL OUTREACH

Research Mentor Summer 2019

University of Idaho and North Idaho College
(INBRE, REU)

Research Mentor Summer 2018

University of Idaho
(INBRE, REU)

What is ATP? February 2017

<https://www.youtube.com/watch?v=ZP5SrwGPm-s>

STEM Night, Fernan Elementary Spring 2015

Heart Demonstrations to elementary students and families

MANUSCRIPT REVIEWS

Company of Biologist: Biology Open

CURRENT MEMBERSHIPS

Golden Key Honor Society

AAAS – American Association for the Advancement of Science Membership

Society for Developmental Biology

Sigma Xi – Scientific Research Honor Society Membership

CURRENT CERTIFICATIONS

Preparing Future Faculty Certification, University of Idaho, Moscow, ID

- Year-long course on lecture instruction, diversity, inclusion, and ethics in teaching

Laboratory Safety, Fire Safety, Hazardous Waste Management, Biosafety Training, Hazardous Communication, Responsible Conduct of Research, Biosecurity Training Institutional Animal Care and Use Committee and Lab Animal Research Certification

MENTORSHIP

Undergraduates: Austin Kindall, Natasha Herbenson, Chance Turner, Reece Beard, Parker Fife, Kirah Aldinger-Gibson, Arthur Elliott, Amaris Bartle, Alex Flores, Lance Fredericks, Ren Dimico, Megan Schlusser, Michael Camerino, Mark Lee, John Sanchez, Heidi Sellmann, Romana Hyde, Nina Clark, Davian Martinez, Ethan Overfelt, Nicholas Pancheri, Addie White, Miriam Robertson, Annie Carper, Corinne Roppel, Michael Baielli, Mikel Berria, Abigail Childress, Ian Engerbretson, Nya Fouche, Cailyn Black