

Leverages background in quantitative and qualitative analysis and project management skills to lead complex health research projects

## PROGRAM DESIGN & IMPLEMENTATION ♦ DATA ANALYSIS ♦ QUANTITATIVE RESEARCH

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- ♦ **Solves tough scientific problems:** Pioneered large-scale proteomic research of a novel cerebellar learning model in rodent. Critically analyzed effect of a novel kinase, PKM- $\zeta$  on learning and memory in the cerebellum while investigating involvement of voltage-gated potassium channels, and evaluated results for long term memory impact and significance.
- ♦ **Maintains accuracy in critical analytical procedures:** Successfully conducted volumetric analysis to identify impact of specific genetic markers in the development of Bipolar Disorder. Rechecked preliminary software calculations, manually traced image areas, and closely supervised a team of 20 for precise utilization of advanced neuroimaging software.
- ♦ **Designs, executes, and analyzes experiments systematically:** Leverages critical thinking, computational, and experimental methods to develop detailed research plans and engage in meaningful scientific discussions. Presented findings to a national audience of 40K+ researchers and scientists at the 45th Annual Society for Neuroscience Meeting.

Project Planning & Execution  
Experimental Design & Layout  
Strategic Scientific Communication

Scientific Analysis & Problem Solving  
Lab Management & Training  
Biomedical Research

Cross-Functional Team Leadership  
Proteomic Neurobiology  
Excel, Photoshop, & GraphPad Prism

## EXPERIENCE

### Doctoral Candidate

at *The University of Vermont*

2017

- ♦ Studied and analyzed the impact of protein kinase on learning and memory in the cerebellar region of the rat brain.
- ♦ Presented hypothesis on enhancement of cerebellar-dependent learning through PKM- $\zeta$ 's regulation of both Kv1.2 and GluR2 AMPA surface expression; deduced potential for a novel cerebellar-learning pathway; publication was well received by the scientific community and cited by related research labs.
- ♦ Maintained accuracy in testing procedures by conducting in-depth scientific research, modifying important protocols, and testing multiple protein concentrations to critically evaluate expected results.
- ♦ Utilized advanced techniques in proteomic sample preparation of cell culture and live cerebellar tissue to separate homogenized samples into nuclear, membrane, and cytosolic fractions, and performed numerous DNA transformations through designing of primers and constructs.
- ♦ Prepared, processed, and analyzed multiple samples by flow cytometry to utilize a method of whole cell fluorescence count to generate surface Kv1.2 expression.
- ♦ Experienced with Deltavision widefield, point-scanning Confocal, and Multiphoton Microscope imaging of fixed cells/slices
- ♦ Extensive work with behavioral animal model experimental design and data analysis, specifically animal models of learning and memory such as Eyeblink conditioning. Experience includes survival stereotaxic surgical methods in rodents including cannulae placement for intracranial drug infusions, histological cryo-sectioning, cresyl/nissl staining, neuroanatomical verification of cannulae placement, & vibratome sectioning
- ♦ Proficiency in protein isolation by immunoprecipitation, biotinylation, electrophoresis, & immunoblotting
- ♦ Software & Tools: SPSS for behavioral research, Graph Pad Prism for cell culture work, and Image J for data imaging.
- ♦ **Publication:** "Intra-cerebellar infusion of the protein kinase Mzeta (PKM $\zeta$ ) inhibitor ZIP disrupts eye blink classical conditioning", Chihabi K, Morielli AD, Green JT, Behavioral Neuroscience; 2016.

### Graduate Teaching Assistant

at *The Department of Neurological Sciences, UVM*

2013 - 2017

- ♦ Taught a high-level course on medical neuroanatomy to a class of 150 first-year medical students; conducted 20 unique sessions and gained understanding of medical neuroscience procedures to assist students in complex scientific questions.
- ♦ Conducted neuroanatomical science labs for ~90 undergraduate students for 3 years by regularly updating students on new research methods, ensuring on-time supply of test specimens, and prioritizing lab set-ups for 30 unique sessions.

- ♦ Assisted students in promptly understanding critical scientific concepts by adopting innovative teaching approaches, supervising group tours for groups of 5 to 10 students, and introducing self-help lab sessions.

**Supervising Research Assistant** at *The UCLA Ahmanson-Lovelace Brain Mapping Center* 2010 – 2012

- ♦ Analyzed gene behavior in development of Bipolar Disorder by using genetic markers from an isolated population.
- ♦ Trained and supervised 20 undergraduate students in using neuro-imaging software including BrainSuite and FreeSurfer and in conducting volumetric analysis on multiple MRI cases.
- ♦ Ensured accuracy in critical analytical procedures by manually tracing image areas on individual MRI files, cross-checking important software calculations, and evaluating results on more than 50 cases on a daily basis.

## EDUCATION

<b>PhD Neuroscience</b>	<i>The University of Vermont</i>	2017
<b>BS Neuroscience</b>	<i>UCLA</i>	2012
<b>International Baccalaureate (IB) in Science</b>	<i>John W. North High School</i>	2008

**Software & Tools:** Image J, Graph Pad Prism 6, Zen 2012, Xcalibur & Proteome, SPSS, Excel, Adobe Photoshop CC/CS6

**Memberships:** UVM Neuroscience Graduate Program Admissions Committee, *Voting Member*  
 Vermont Chapter for the Society of Neuroscience, *Graduate Representative*  
 The American Association for the Advancement of Science, *Nominated Member*  
 Society for Neuroscience, *Graduate Student Member*

## PUBLICATIONS & PRESENTATIONS

- ♦ **Publication:** “Intra-cerebellar infusion of the protein kinase Mzeta (PKM $\zeta$ ) inhibitor ZIP disrupts eye blink classical conditioning”, Chihabi K, Morielli AD, Green JT, Behavioral Neuroscience; 2016.
- ♦ Chihabi K, Green JT & Morielli AD. “PKM- $\zeta$  is involved in cerebellar-dependent learning and memory”. Poster was presented at the 6th Annual Neuroscience, Behavior and Health Research Forum to an audience of 150.
- ♦ Chihabi K, Green JT & Morielli AD. “PKM- $\zeta$  is involved in cerebellar-dependent learning and memory”. Poster was presented at the Annual Pharmacology Research Retreat to an audience of 50.
- ♦ Chihabi K, Green JT & Morielli AD. “PKM- $\zeta$  is involved in cerebellar-dependent learning and memory”. Poster was presented at the 45th Annual Society for Neuroscience Meeting to a national audience of more than 40,000.
- ♦ Chihabi K, Green JT & Morielli AD. “PKM- $\zeta$  and its Implication for Cerebellar Learning and Memory”. Paper was presented at the 5th Annual Neuroscience, Behavior and Health Research Forum to an audience of 150.
- ♦ Chihabi K, Green JT & Morielli AD. “Regulation of Cerebellar Kv1.2 by PKM- $\zeta$  and its Implication for Learning and Memory”. Poster was presented at the 5th Annual Neuroscience, Behavior and Health Research Forum to an audience of 150.
- ♦ Chihabi K, Green JT & Morielli AD. “PKM- $\zeta$ 's regulation of GluR2 and Kv1.2 has Implications for Learning and Memory”. Paper was presented at the Annual Pharmacology Research Retreat to an audience of 80.
- ♦ Chihabi K, Green JT & Morielli AD. “Regulation of Cerebellar Kv1.2 by PKM- $\zeta$  and its Implication for Learning and Memory”. Poster was presented at the Annual Pharmacology Research Retreat to an audience of 80.
- ♦ Chihabi K, Green JT & Morielli AD. “From Molecules to Mind: Potential Role of Kv $\beta$ 2 in Regulating Voltage-Gated Potassium Channels in Brain”. Paper was presented at the Annual Pharmacology Research Retreat to an audience of 100.

## AWARDS & HONORS

- Nominated by UVM Faculty for AAAS Excellence in Science - 2016
- UVM Pharmacology Research Retreat Best Poster Award - 2015
- UVM Graduate Student Senate Travel Grant - 2015
- UVM Neuroscience Graduate Program Student Travel Grant - 2015
- ASUCLA Exceptional Employee Performance Award - 2012
- UCLA Olive Tree Initiative Scholarship - 2010
- UCLA 18th Annual MLK Oratorical Contest Finalist - 2010