

# Curriculum Vitae

## Timothy Lipuma

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### Education

<b>Doctoral Student, Clinical Psychology</b> Indiana University-Purdue University Indianapolis (IUPUI) Mentor: Dr. Jesse Stewart	Fall 2022 - Ongoing
<b>MSc, Anatomy and Neuroscience</b> University College Cork	Conferring Fall 2022
<b>NIH PREP Scholar</b> Virginia Tech	Summer 2020-2021
<b>Bachelor of Science, Clinical Nutrition</b> University of California, Davis	Spring 2019
<b>Associate of Arts, Psychology</b> American River College	Summer 2016

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### Peer-Reviewed Journals

1. Lis, D., Jordan, M., **Lipuma, T.**, Smith, T., Schaal, K., and Baar, K. Effects of collagen and vitamin C supplementation on lower limb rate of force development. *International Journal of Sport Nutrition and Exercise Metabolism* (2021), doi: <https://doi.org/10.1123/ijsnem.2020-0313>
2. Rainville, J.R., **Lipuma, T.**, and Hodes, G.E. Translating the transcriptome: Sex differences in the mechanisms of depression and stress revisited. *Biological Psychiatry* (2021), doi: <https://doi.org/10.1016/j.biopsych.2021.02.003>
3. Boscaini, S., Leigh, S., García-Cabrero, R., Bastiaanssen, T.F.S., **Lipuma, T.**, A. Lavelle, A., Schellekens, H., Clarke, G. and Cryan, J.F. Critical perspective on the involvement of the microbiome in body weight control. *Molecular Metabolism* (2022), doi: <https://doi.org/10.1016/j.molmet.2021.101427>

### Grants

1. **A college student's guide to the brain: Practical and evidence-based tools from neuroscience and psychology**  
Multi PI grant: Lipuma, Rainville, Diana  
Awarded, funding time course: July 2022 - July 2023  
\$1000.00  
Virginia Tech Center for Excellence in Teaching and Learning  
Role: Principal investigator  
The aims of this educational investigation are: (1) characterize undergraduate familiarity and utilization of evidence-based learning techniques, and; (2) determine the impact of a structured education intervention that covers evidence-based learning techniques.
2. **A probiotic strategy for antipsychotic-induced metabolic dysfunction**  
Multi-PI grant: Cryan, Clark, O'Connor, Pierce, Schellekens  
Awarded, prospective funding time course: October 2022 - October 2025  
€369,913.00  
Health Research Board (HRB), Ireland  
Role: Contributed to grant under supervision of Dr. Schellekens  
The aims of this patient-focused investigation are: (1) determine if concomitant administration of antipsychotic with a novel probiotic can ameliorate antipsychotic-induced metabolic dysfunction and weight gain; (2) determine if this concomitant treatment improves antipsychotic adherence; (3) explore if concomitant treatment improves measures of depression, anxiety, psychotic symptoms, self-esteem, body-image, and quality of life, and; (4) determine how shifts in the gut microbiota correlate with these outcomes.

### Poster Presentations

1. **Lipuma, T.**, Dewhirst, A.G., Booth, J.R., Hong, K., Grandinetti, K.M., Marenick, C.M., Storey, N.L., Telep, N.M., Tsyglakova, M., Rainville, J., and Hodes, G. E. *Naturalistic sleep observation during variable stress in mice*. Poster presented at: 1. Central Virginia Society for Neuroscience; 27 March 2021; Online; 2. Organization for the Study of Sex Differences; 2 May 2021; Online; 3. Mid-Atlantic PREP & IMSD Research Symposium; 18 May 2021; Online

## **Oral Presentations**

### **Invited Talks**

1. *Practical, Evidence-based Tools from Neuroscience and Psychology to Succeed in College*. (2021, October) Presenter for pilot education intervention at Virginia Tech, Online.
2. *What is Neuroscience?* (2021, June). Presenter for Virginia Tech's Summer Science Un-Camp program, Online.
3. *Navigating Academia/University: For Transfers, by Transfers*. (2020, August). Alumni Presenter for UC Davis Aggie Transfers Scholars Weekend, Online.

### **Submitted Talks**

4. *Mixed Asian Heritage: A Multiplicity of Identities or "I'm Confused. Are You Amerasian, Cablanasian, Eurasian, Hapa, or Multi-Asian?"* (2016, June). Workshop panelist at the National Conference on Race and Ethnicity (NCORE), San Francisco, CA.

## **Science Communication**

1. Khan, K., Crebbin-Coates, M., **Lipuma, T.**, Robinson, B., Jones, A.M., and Scherr, R.E. Nutrition & health info sheets for consumers - energy drinks. *Department of Nutrition, University of California, Davis* (2019). <https://nutrition.ucdavis.edu/outreach/nutr-health-info-sheets/consumer-energy-drinks>
2. Crebbin-Coates, M., Khan, K., and **Lipuma, T.** Fat around the middle may be influenced by the types of food we eat. *Nutrition Perspectives* (2019). [https://nutrition.ucdavis.edu/sites/g/files/dgvnsk426/files/inline-files/2\\_mar\\_apr\\_2019.pdf](https://nutrition.ucdavis.edu/sites/g/files/dgvnsk426/files/inline-files/2_mar_apr_2019.pdf)
3. **Lipuma, T.** Take this class: CHEM 420: Organic chemistry. *American River Current* (2016). <https://www.arcurrent.com/scene/2016/04/25/photo-gallery-organic-chemistry-lab/>

## **Research Experience**

### **Anatomy and Neuroscience Msc Student | Summer 2021 - Fall 2022**

#### **Advisors: Dr. Harriet Schellekens, Dr. Jane English**

- Completed translational study investigating therapeutic potential of probiotic *Bifidobacterium longum* in ameliorating antipsychotic-induced weight gain and metabolic dysfunction, used findings for empirical MSc by Research thesis.
- Assisted in design of human-based, double-blind, placebo-controlled, randomized intervention investigating the effects of the probiotic *B. longum* on antipsychotic-induced weight gain and cardiometabolic dysfunction.
- Developed grant writing through several independent and multi-PI collaborative grants, learned to create Gantt charts, CONSORT diagrams, perform power calculations, write background literature reviews, contingency plans, and ethics documents.
- Mentored 4th year undergraduate in final year research project and thesis.

### **Virginia Tech NIH PREP Scholar | June 2020 - June 2021**

#### **Advisor: Dr. Georgia Hodes**

- Completed rotation projects in three laboratories, including troubleshooting Qualtrics surveys for parental assessment of child development (Dr. Martha Ann Bell), coding and digitization of psychological surveys related to COVID-19 and mental health (Dr. Pearl Chiu), and a systematic analysis of genes common in mice and humans for psychiatric and neurological conditions (Dr. Georgia Hodes).
- Managed research projects in translational models of depression, investigating the effects of stress on sleep, immune signaling, weight, in addition to an investigation on the relationship between the brain-gut-microbiome axis and the blood-brain-barrier.
- Underwent professional and graduate student development through coursework in research methods, grant writing, research ethics, graduate journal clubs, leading undergraduate journal clubs, junior research mentorship, training in PRISMA meta-analysis methodologies, storytelling for scientists.

### **UC Davis Nutrition Intern | February 2018 - June 2020**

**Advisors: Dr. Keith Baar and Dr. Dana Lis**

- Served as team lead for a clinical trial investigating the effect of cocoa epicatechins on the rate of force development, managing all aspects of the trial for the cohort.
- Built skills necessary for clinical investigations through involvement in six clinical trials, scientific writing through manuscript editing, and scientific presentation through poster preparation
- Coordinated recruitment and screening of interns for both research and nutrition projects, mentored more than 10 interns for clinical trials over two years.

### **Research Internship, University College Dublin | Fall 2018**

**Advisor: Dr. Aifric O'Sullivan**

- Became the first UC Davis clinical nutrition undergraduate to do a research internship at University College Dublin through the University of California Education Abroad Program (UCEAP).
- Completed a literature review on the gut-brain-microbiome axis and presented conclusions to the lab group, covering mechanisms and future directions for the field.
- Shadowed a longitudinal neurodevelopmental twin study investigating the role of the microbiome on cognition, as well as a study investigating novel food-delivery systems for Vitamin D.

### **Relevant Employment**

**Science Success Center Instructional Assistant (IA) | American River College | Fall 2019 - Spring 2020 (IA) , Fall 2015 - Spring 2016 (Student Tutor)**

- Taught metacognitive and behavioral study strategies to promote college success.
- Developed student curricula for academic success based on evidence-based strategies from neuroscience and psychology.

**Dusty Baker Center Instructional Assistant | American River College | Spring 2020**

- Tutored student-athletes in statistics, psychology, and nutrition.
- Focused on retention of students at risk for academic dismissal.

**Undergraduate Admissions Student Outreach Ambassador | UC Davis | Fall 2017 - Summer 2019**

- Provided outreach and peer mentorship to prospective university transfers.
- Gave talks on undergraduate research, study skills, imposter syndrome, and financial aid.
- Built Qualtrics surveys for program assessment and university impact reports.

**Beacon Tutor | American River College | Spring 2015 - Spring 2016**

- Tutored introductory, general, and organic chemistry.
- Facilitated group study sessions of 2-16 students, encouraging peer teaching, self assessment, and development of study skills.

### **Leadership and Organizations**

#### **Virginia Tech**

**Neuroscience Postdoctoral Graduate Student Association Member | October 2020 - Ongoing**

- Assisted in drafting of a science outreach grant funded by the National Science Policy Network.
- Leading funded project on building COVID-19 vaccine confidence by producing outreach media.
- Contributed to development of staff and faculty focused educational materials related to institutional diversity, equity, and mental health support.
- Leading development of pilot seminars aimed at boosting undergraduate academic performance and confidence through training of evidence-based study skills.

#### **UC Davis**

**Recognizing Illness Very Early and Responding (RIVER) Intern | May 2017 - January 2019**

- Underwent peer and professional-led training in practices related to preventative health, including motivational interviewing, boosting health literacy, health equity, and developing healthcare provider best practices/approaches.
- Collaborated on building nutrition education materials for low-income elementary schools.

### **Performance Nutrition Intern | February 2018 - January 2020**

- Gave nutrition talks to division I UC Davis athletes centered around evidence-based strategies and dispelling nutrition myths.
- Led cooking sessions with student athletes, communicating the role of dietary omega-3s in brain health.

### **American River College**

#### **American River Current | January 2016 - May 2016**

- Served as Staff Writer and Opinion Editor.
- Supervised editorials, guided opinion pieces in unbiased manner, ensured properly sourced and accurate reporting.
- Authored and published local science pieces in an accessible journalistic form.

#### **American River College Life is Worth the Walk Club | January 2013 - May 2016**

- Founding President of organization.
- Coordinated with local organizations on mental health initiatives and events.
- Met with California legislators to promote expansion of mental health services.

#### **American River College Model United Nations | December 2012 - May 2015**

- As 1st Committee Chair, authored an issue book on nuclear disarmament for 2014 Model United Nations of the Far West conference.
- Established two high school Model United Nations conferences, provided training to students.

### **Research Certifications**

2021 University College Dublin Training on Experimental Animal Use, Regulations, and Procedures  
2021 NIH/NSF Responsible Conduct of Research  
2020 Virginia Tech-Specific American Association for Laboratory and Animal Science Training  
2020 CITI Good Clinical Practice Course for NIH funded Clinical Trials  
2020 CITI Social & Behavioral Research  
2018 NIH Protecting Human Research Participants

### **Honors and Awards**

2021 Organization for the Study of Sex Differences NIH-Sponsored Travel Award  
2018 University of California Education Abroad Promise Award Scholarship  
2018 Winter Quarter Dean's List for The College of Agricultural and Environmental Sciences  
2016 Alyce Mae Fiedler Beacon Tutor Scholarship  
2016 Bayer Employee & Recreations Council Scholarship