



Virginia L. Pszczolkowski

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Major Professor: Sebastian I. Arriola Apelo (arriolaapelo@wisc.edu)

Degree Objective: Doctorate in Endocrinology and Reproductive Physiology

Educational Background: B.S. in Chemistry with concentration in Biochemistry, 2016, Warren Wilson College, Swannanoa, NC

Current Research Project:

My thesis project is concerned with the relationship between energy signals, particularly insulin, and amino acid metabolism in the lactating mammary gland. I use both cell culture and mouse models, as well as dairy cows in this work. I am interested in determining which amino acids signal through which cellular pathways to stimulate milk synthesis, and how energy status signaling relates to these pathways.

Additionally, a secondary branch of my project that is currently in development focuses on the role that peripheral serotonin plays in mammary amino acid metabolism, with particular emphasis on how serotonin regulates insulin secretion and signaling to inform mammary amino acid utilization.

Grants Received: USDA Hatch Project 1014094, P.I.: Sebastian I. Arriola Apelo, for years 2017-2021

Publications:

- **Pszczolkowski, V. L.**, Bryant, R. W., Harlow, B. E., Aiken, G. E., Martin, L. J., & Flythe, M. D. (2016). **Effects of spent craft brewers' yeast on fermentation and methane production by rumen microorganisms.** *Advances in Microbiology*, 6(09), 716.*
- Kuehnl, J.M., Connelly, M.K., Dzidic, A., Lauber, M., Fricke, H.P., Klister, M., Olstad, E., Balbach, M., Timlin, E., **Pszczolkowski, V.**, Crump, P.M., Reinemann, D.J., Hernandez, L.L. (2019). **The effects of incomplete milking and increased milking frequency on milk production rate and milk composition.** *Journal of animal science*, 97(6), 2424.

*Undergraduate research.

National & International Presentations:

- International Symposium on Ruminant Physiology, 2019, Leipzig, Saxony, DE. **Dietary amino acid regulation of murine lactation is mediated by mTORC1.** V. L. Pszczolkowski, S. J. Halderson, E. J. Meyer, A. Lin, S. I. Arriola Apelo. Department of Dairy Science, University of Wisconsin-Madison, Madison, WI.
- American Dairy Science Association Meeting, 2018, Louisville, KY. Oral presentation. **Insulin is required for essential amino acid stimulation of mTORC1 signaling in mammary cells.** V. L. Pszczolkowski, M. M. Kurth, E. Meyer, and S. I. Arriola Apelo, Department of Dairy Science, University of Wisconsin-Madison, Madison, WI.



Teaching & Mentorship:

- Research mentor for undergraduates
 - o Mentoring & supervising for undergraduate Senior Honors Thesis, 2 students, Spring 2020
 - o BIO 152, 2 students, Spring 2018 & Spring 2019
 - o Mentoring & supervising undergraduate lab assistants, Spring 2018 – Present
- LGBTQ Peer Mentor (Gender and Sexuality Campus Center, Spring 2019 – Present)

Community & Campus Involvement

- Committee for Gay, Lesbian, Bisexual, Transgender, and Queer People in the University, Fall 2019 – Present
- Endocrinology and Reproductive Physiology Student Committee, Fall 2019 – Present
- Animal Sciences Graduate Student Association, Fall 2017 – Present
- Dean of Students Advisory Board, Fall 2019 – Present