



Name: Adam Beard

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Major Professor: Milo Wiltbank; Department of Dairy Science

Degree Objective: PhD Endocrinology and Reproductive Physiology; Fall 2018-present

Background: BS Animal and Poultry Sciences, Virginia Tech, December 2017

Current Research Project:

My research focuses on the relationship between anti-Mullerian hormone (AMH) and the primordial follicles of the ovary (also known as the “ovarian reserve”). The primordial follicles remain dormant on the ovary until they are activated and later recruited to grow in a follicular wave. Studying ovarian follicle dynamics is simple in cows with the use of palpation and transrectal ultrasonography. The primordial follicles, however, are small and contain little to no fluid, thus cannot be seen via ultrasound. This makes it difficult to study the physiology of primordial follicles *in vivo*. The goal of my thesis is to develop the bovine as an *in vivo* model to study how the primordial follicles are regulated by AMH. In order to do so, we will be looking at some of the known causes of follicle loss that lead to premature ovarian failure (POF), also known as early menopause. Although the primordial follicles cannot be seen on ultrasound, the dynamics of the visible antral follicles can serve as an indicator of what is happening on the ovary in this abnormal POF state. The questions we pursue will lend some understanding to previous work in agriculture and basic physiology of the ovary, as well as being translated to POF research in women. This project currently has me characterizing the plasma AMH profile of young calves.

Honors:

Grants Received:

2018-2020 R25 Training, Education, And Mentoring in Science (TEAM-Science)

Publications:

National Presentations:

Other Presentations:

Teaching and Mentorship:

Teaching:

TA: AnSci/DySci 373: Animal Physiology; Spring 2019



TA: DySci 534: Reproductive Management of Dairy Cattle; Spring 2019

Lectured on ovarian physiology; taught students how to ultrasound ovaries; & lead class experiment with students.

Agriculture/Science Outreach:

Cows on the Concourse: June 2019

Introduced the public/consumers to UW cows and calves on the Capitol Square.

Exploring Your Future: March 2019

Introduced middle school boys to careers in science; specifically, dairy science research.

Wisconsin Science Festival: October 2018

ERP Service:

Recruitment 2019

ERP Student Committee: Fall 2019 – present

social sub-committee