

Aaron A. Jones

Marquette University

Arble Laboratory
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United States

Contact Information

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Education

2023 Ph.D.

Biological Sciences
Marquette University, Milwaukee, WI

2018 Bachelor of Arts

Major: Biochemistry
Minor: Chemistry
Augustana College, Rock Island, IL

Research Experience

Dissertation Research in laboratory of Dr. Deanna Arble

Spring 2018 – Present

Marquette University – Milwaukee, WI

- Currently studying the role of light in modifying ventilatory and metabolic rhythms in mice
 - Respiratory, metabolic, and endocrine studies.

Graduate Rotation in laboratory of Dr. Deanna Arble

Spring 2018

Marquette University – Milwaukee, WI

- CITI training for mouse and rat handling
- Investigated the effects of photoperiod manipulation on ventilatory drive in mice
 - Used whole-body plethysmograph to assess breathing

Graduate Rotation in laboratory of Dr. Sofia Origanti

Fall 2018

Marquette University – Milwaukee, WI

- Aseptic handling and sub-culturing of mammalian breast epithelial cells
- Engineered plasmids using bacterial transformations and restriction enzymes
- Transfected mammalian cells with engineered plasmids using lipofection technique
- Investigated protein expression of eukaryotic initiation factors in mammalian epithelial cells using Western Blot analysis
- Assessed protein interactions using pull-down assays

Graduate Rotation in laboratory of Dr. Anita Manogaran

Fall 2018

Marquette University – Milwaukee, WI

- Created mutant strains of *Saccharomyces Cerevisiae* using a gene disruption/transformational approach
 - Knocked out genes encoding for autophagy-associated proteins
- Analyzed protein aggregate formation in mutant strains using fluorescent microscopy

Undergraduate Research in laboratory of Dr. Scott Gehler

Summer 2017

Augustana College – Rock Island, IL

- Tested naturally occurring flavonoids against breast cancer cell motility and adhesion
- Aseptic handling and sub-culturing of human breast cancer cells
- Assays: Proliferation, Scratch, Transwell, Adhesion, Cell Spreading and Focal Adhesion Formation
- ImageJ analysis software
- Fluorescent microscopy
- Recipient of an Augustana Summer Student Research Fellowship

Aaron Jones

Bibliography

Peer-Reviewed Articles

- **Jones AA**, Nelson LR, Marino GM, Chappelle NA, Joye DAM, Arble DM. (2021). Photoperiod manipulation reveals a light-driven component to daily patterns of ventilation in male C57Bl/6J mice. *J Biol Rhythms*. 36(4):346-358. PMID: 33685258
- Framnes-DeBoer SN, **Jones AA**, Kang M, Propsom K, Nelson LR, Arble DM. (2021). The timing of intermittent hypoxia differentially affects macronutrient intake and substrate utilization in mice. *Am J Physiol Endocrinol Metab*. 321(4):E543-E550. PMID: 34459217
- **Jones AA**, and Gehler S. (2020). Acacetin and Pinostrobin Inhibit Malignant Breast Epithelial Cell Adhesion and Focal Adhesion Formation to Attenuate Cell Migration. *Integr Cancer Ther*. 19:1534735420918945. PMID: 32493139

Abstracts

- **Jones AA**, Propsom K, Nelson LR, Arble DM. (2021) The timing of food intake differentially alters daily rhythms in metabolic rate and ventilation in mice. Poster Presentation. Society for Neuroscience annual meeting. Virtual Conference.
- **Jones AA**, Propsom K, Nelson LR, Arble DM. (2021) Circadian misalignment of food intake differentially alters daily rhythms in metabolic rate and ventilation in mice. Accepted, (*Conference Canceled*). Chronobiology Gordon Research Conference. Mount Snow, VT.
- **Jones AA**, Nelson LR, Marino GM, Chappelle NA, Arble DM. (2020). Photoperiod manipulation reveals a light-driven component to the daily oscillation in ventilatory drive. Poster Presentation. Society for Research on Biological Rhythms biennial meeting. Virtual Conference.
- **Jones AA**, Chappelle NA, Arble DM. (2019). Photoperiod affects leptin sensitivity and ventilatory drive in the C57Bl/6J mouse. Poster Presentation. Society for Neuroscience annual meeting. Chicago, IL.
- Framnes-DeBoer SN, **Jones AA**, Arble DM. (2019). Intermittent hypoxia causes cardiometabolic dysfunction in obese, *ob/ob* mice. Poster Presentation. Society for Neuroscience annual meeting. Chicago, IL.
- **Jones AA**, and Arble DM. (2019). Photoperiod modulates ventilatory drive through a leptin-melanocortin pathway in the C57Bl/6J mouse. Accepted, (*Did not attend*). Chronobiology Gordon Research Seminar. Castelldefels, Spain.
- **Jones A**, and Gehler S. (2017). The Flavonoids Acacetin and Pinostrobin Inhibit Cell Migration and Adhesion in MDA-MB-231 Breast Epithelial Cells. Poster Presentation. ASCB-EMBO annual meeting. Philadelphia, PA.

Teaching Experience

Tutoring

2017 – 2018

Augustana College – Rock Island, IL

- Tutored students in cell biology, genetics and human physiology
- Coordinated with Student Success Services to ensure students are getting appropriate academic help
- Gained valuable one-on-one teaching and communicational experience

Teaching Assistantships

BIOL 4501 – Cellular Neurobiology Lecture, Marquette University – Milwaukee, WI

Spring 2021

BIOL 4702 – Experimental Physiology Lab, Marquette University – Milwaukee, WI

Fall 2019/2020

BIOL 4502 – Experimental Neurobiology Lab, Marquette University – Milwaukee, WI

Spring 2019/2020

BIOL 2301 – Cell Biology Lecture, Marquette University – Milwaukee, WI

Fall 2018

CHEM 313 – Organic Chemistry 3 Lab, Augustana College – Rock Island, IL

Spring 2018

- Led and graded lab activities without instructor supervision (BIOL 4702)
- Regularly held office hours to help students (BIOL 2301, 4501, 4502 and 4702)
- Led and graded 3 discussion sections a week for 35-80 students (BIOL 2301 and 4501)
- Managed chemistry storeroom and laboratory equipment (CHEM 313)

Aaron Jones

Organizational and Volunteer Service

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| Graduate Student Mentor – Marquette University | 2019 – 2020 |
| Vice President – Augustana Chemical Society • (Member March 2016 – May 2018) | 2017 – 2018 |
| Tribeta Biological Honor Society – Augustana College | 2016 – 2018 |

Honors and Awards

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| Marquette University Fellowship | 2021-2022 |
| Biology Graduate Summer Scholarship | Summer 2021 |
| Richard W. Jobling Distinguished Research Assistantship, Biology Dept. Nominee | Spring 2021 |
| Society for Research on Biological Rhythms (SRBR) Merit Award | Spring 2020 |
| Augustana Summer Student Research Fellowship | Summer 2017 |
| Dean's List (Augustana) | Winter 2015 – Spring 2018 |
| Augustana Presidential Scholarship | Fall 2014 – Spring 2018 |
| Augustana Biology Scholarship | Fall 2014 – Spring 2018 |
| Logos Honors Program (Augustana) | 2014-2015 |

Related Course Work

Graduate Courses

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| • Neuroscience Foundations 2 (Systems Level Neuroscience) | Spring 2020 |
| • Sleep and Circadian Rhythms | Spring 2020 |
| • Neuroscience Foundations 1 (Cell and Molecular Neuroscience) | Fall 2019 |
| • Scientific Writing | Fall 2019 |
| • Eukaryotic Protein Trafficking | Spring 2019 |
| • Advanced Experimental Design and Quantitative Methods | Spring 2019 |
| • Statistical Methods | Fall 2018 |
| • Imaging and Cytoskeleton | Fall 2018 |

Undergraduate Courses

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| • Histology | Spring 2018 |
| • Molecular Genetics | Winter 2017/2018 |
| • Physical Chemistry | Fall 2017 |
| • Human Anatomy | Fall 2017 |
| • Biochemistry 2 | Spring 2017 |
| • Cancer Biology | Spring 2017 |
| • Genetics | Winter 2016/2017 |
| • Human Physiology | Fall 2016 |
| • Biochemistry 1 | Fall 2016 |
| • Cell Biology | Spring 2016 |
| • Zoology | Winter 2014/2015 |
| • Organic Chemistry 1, 2 and 3 | Fall 2015 – Spring 2016 |
| • General Chemistry 1, 2 and 3 | Fall 2014 – Spring 2015 |