

# Aaron A. Jones

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## Marquette University

Arble Laboratory  
Wehr Life Sciences, Room B03  
Milwaukee, WI 53201-1881  
United States

## Contact Information

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## Education

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### 2023 Ph.D.

Biological Sciences  
Marquette University, Milwaukee, WI

### 2018 Bachelor of Arts

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

## Research Experience

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### 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

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## Bibliography

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### Peer-Reviewed Articles

- **Jones, A.A.**, Nelson, L.R., Marino, G.M., Chappelle, N.A., Joye, D.A.M., Arble, D.M. (2020). Photoperiod manipulation reveals a light-driven component to daily patterns of ventilation in C57Bl/6J mice. (*In submission*).
- **Jones, A.A.**, 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.

### Abstracts

- **Jones, A.A.**, Nelson, L.R., Marino, G.M., Chappelle, N.A., Arble, D.M. (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, A.A.**, Chappelle, N.A., Arble, D.M. (2019). Photoperiod affects leptin sensitivity and ventilatory drive in the C57Bl/6J mouse. Poster Presentation. Society for Neuroscience annual meeting. Chicago, IL.
- Framnes-DeBoer, S.N., **Jones, A.A.**, Arble, D.M. (2019). Intermittent hypoxia causes cardiometabolic dysfunction in obese, *ob/ob* mice. Poster Presentation. Society for Neuroscience annual meeting. Chicago, IL.
- **Jones, A.A.**, Arble, D.M. (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.
- Chappelle, N., **Jones, A.A.**, Arble, D.M. (2019). Diet-induced obese mice photoperiod experiment. Poster presentation. Marquette University. Milwaukee, WI.
- **Jones, A.**, 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

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### 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 4702 – Experimental Physiology Lab**, Marquette University – Milwaukee, WI

Fall 2019/2020

**BIOL 3502 – 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, 3502 and 4702)
- Led and graded 3 discussion sections a week for 35 students (BIOL 2301)
- Managed chemistry storeroom and laboratory equipment (CHEM 313)

## Organizational and Volunteer Service

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**Graduate Student Mentor – Marquette University**

2019 – 2020

**Vice President – Augustana Chemical Society**

2017 – 2018

- (*Member March 2016 – May 2018*)

**Tribeta Biological Honor Society – Augustana College**

2016 – 2018

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## Honors and Awards

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Society for Research on Biological Rhythms (SRBR) Merit Award	Spring 2020
Dean's List (Augustana)	Winter 2015 – Spring 2018
Logos Honors Program (Augustana)	2014-2015
Augustana Presidential Scholarship	Fall 2014 – Spring 2018
Augustana Biological Scholarship	Fall 2014 – Spring 2018
Augustana Summer Student Research Fellowship	Summer 2017

## Related Course Work

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### Graduate Courses

• 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

• 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