

Sarah N Framnes-DeBoer
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Education

2022 Ph.D. Biological Science
Marquette University, Milwaukee, WI
Dissertation: The role of neuronal leptin in the development of disordered breathing

May 2008 B.S. Clinical Laboratory Science; Minor in Biology
Marquette University, Milwaukee, WI

Professional Experience

2018- 2019 Radiation Safety Technician. Marquette University, Milwaukee, WI.
2016- 2018 Medical Service Corps Officer. United States Navy Reserves, Milwaukee, WI.
2008- 2017 Clinical Laboratory Scientist. Zablocki VA Medical Center, Milwaukee, WI.

Certification

2008- Present American Society for Clinical Pathology

Honors and Awards

2021 Dr. Catherine Grotelueschen Scholarship
2021 Merit Award for Virtual Keystone Symposia: Sleep and Circadian Rhythms
2020-2021 Arthur J. Schmitt Leadership Fellowship
2019-2020 GAANN Fellowship
2019 Graduate Student Research Travel Award
2018 Society for Neuroscience- Trainee Professional Development Award
Spring 2008 Dean's List, Marquette University
Fall 2006 Dean's List, Marquette University

Membership in Professional Societies

2021-Present Graduate Women in STEM
2019-Present American Physiological Society
2018-Present Society for Neuroscience

Committee, Organizational, and Volunteer Service

2021-2022 Secretary. Graduate Women in STEM. Milwaukee Chapter.
Fall 2020 Graduate Student Mentor for First-Generation Students. Biological Sciences Department
2019-2021 Innovation Council Member. Research and Innovation, Marquette University
2019-2020 Logistics Chair. Graduate Student Organization
2018-2020 Graduate Student Representative. Biological Sciences Department
2018, 2019 Graduate Student Mentor. Summer Research Program
2007-2008 President. Clinical Laboratory Science Student Council
2006-2007 Junior Representative. Clinical Laboratory Science Student Council

Bibliography

Peer reviewed articles

1. **Framnes-DeBoer**, S.N., Jones. A.A., Propsom, K., Kang, M.Y., Nelson, L.R., and Arble, D.M. 2021. The timing of intermittent hypoxia differentially affects macronutrient intake and energy substrate utilization. *AJP- Endo and Metab.* doi: 10.1152/ajpendo.00183.2021
2. **Framnes-DeBoer**, S.N., Bakke, E, Yalamanchili, S, Peterson, H, Sandoval, D.A., Seeley, R.J., and Arble, D.M., 2020. Bromocriptine improves glucose tolerance independent of circadian timing, prolactin, and melanocortin-4 receptor. *AJP- Endo and Metab.* doi: 10.1152/ajpendo.00325.2019
3. **Framnes**, S.N. and Arble, D.M., 2018. The bidirectional relationship between obstructive sleep apnea and metabolic disease. *Frontiers in endocrinology*, 9, 440.

Abstracts

1. Peterson, H., **Framnes-DeBoer**, S.N., Arble, D.M. 2019. The effects of acute vs chronic intermittent hypoxia on norepinephrine levels in mice. Poster presentation at the Society for Neuroscience Conference. Chicago, IL.
2. Propsom, K., **Framnes-DeBoer**, S.N., Arble, D.M. 2019. The effect of intermittent hypoxia on body weight and food intake homeostasis in leptin compromised mice. Poster presentation at the Society for Neuroscience Conference. Chicago, IL.
3. **Framnes-DeBoer**, S.N., Jones. A.A., Arble, D.M. 2019. Intermittent Hypoxia causes cardiometabolic dysfunction in obese, *ob/ob* mice. Poster presentation at the Society for Neuroscience Conference. Chicago, IL.
4. Kang, M., **Framnes-DeBoer**, S.N., Arble, D.M. 2019. The effect of intermittent hypoxia on macronutrient intake in mice. Poster presentation at SRP Symposium, Marquette University. Milwaukee, WI.
5. Propsom, K., **Framnes-DeBoer**, S. N., Arble, D. M. 2019. The effect of intermittent hypoxia on body weight regulation in diet induced and genetically obese mice. Poster presentation. Marquette University, Milwaukee, WI.
6. **Framnes-DeBoer**, S.N., Arble, D.M. 2019. Intermittent Hypoxia, Sleep Fragmentation and Glucose Tolerance. Poster presentation at the Experimental Biology Conference. Orlando, FL.
7. **Framnes**, S.N., Bakke, E, Arble, D.M. 2018. The effect of bromocriptine, a D2 receptor agonist, in lean and obese mice. Poster presentation at the Society for Neuroscience Conference. San Diego, CA.
8. Bakke, E., **Framnes**, S.N., Arble, D.M. 2018. Examining the Therapeutic Effects of Bromocriptine on Hyperglycemia in Lean and Obese Mouse Models. Poster presentation at Biodiscovery Symposium, Marquette University. Milwaukee, WI.
9. **Framnes**, S.N. 2008. Babesia: A Case Review. Poster presentation, American Society for Clinical Laboratory Science State Convention- WI. Waukesha, WI.

Conferences

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| 2019 | Poster Presentation, Society for Neuroscience. Chicago, IL. |
| 2019 | Poster Presentation, Experimental Biology. Orlando, FL. |
| 2018 | Poster Presentation, Society for Neuroscience. San Diego, CA. |
| 2017 | Guest Judge for Student Bowl, American Society for Clinical Laboratory Science State Convention- WI. La Crosse, WI. |
| 2008 | Poster Presentation, American Society for Clinical Laboratory Science State Convention- WI. Waukesha, WI. |

Research Experience

- Spring 2018-
Present Graduate Student. Dr. Deanna Arble, Milwaukee, WI
Multiple drug studies in mice. Worked on protocols and experiments for intermittent hypoxia. Mentors undergrads. Currently performing stereotaxic brain surgery in mice.
- Spring 2018 Graduate Rotation Student. Dr. Deanna Arble, Milwaukee, WI
Drug Study in Mice. 4-week drug study on 36 mice requiring daily IP injections of bromocriptine. Multiple days of Glucose Tolerance Testing performed, for 18 mice at a time. Presented final project in Dr. Evan's lab meeting.
- Fall 2017 Graduate Rotation Student. Dr. Michael Schläppi, Milwaukee, WI
Cold Tolerant Rice. 4-week Low Temp Seedling Survivability Experiment. Grew rice, isolated RNA at specific timepoints, multiple times, performed PCR and qPCR. Presented final project in lab meeting.
- Fall 2017 Graduate Rotation Student. Dr. Michelle Mynlieff, Milwaukee, WI
Calcium Imaging. Cultured neurons from rat pups. Calcium imaged multiple pups, sexes, and timepoints. Presented final project in lab meeting.

Teaching

- 2021 Teaching assistant. Experimental Physiology Laboratory. Marquette University.
Assisted in all labs and prep work. Graded lab reports for 14 students.
- 2018 Teaching assistant. General Biology 2. Marquette University.
Led and graded 4 discussions a week for 150 students. Contributed exam questions. Designed and led lecture on "The Brain".
- 2017 Teaching assistant. General Biology 1. Marquette University.
Led and graded 4 discussions a week for 150 students. Designed and led lecture on the "Theory of Evolution".
- 2014-2015 Guest Lecturer. Marquette University's Clinical Laboratory Science. "Clinical Enzymes" and "Cardiac Markers" lecture.

Related Course Work- Graduate

- Fall 2021 Cell Signaling (G-Protein Coupled Receptors)
- Fall 2020 Genetics
- Spring 2020 Sleep and Circadian Rhythms (Systems Neuroscience)
- Fall 2019 Foundations in Neuroscience 1 (Cell and Molecular Neuroscience)
- Spring 2019 Foundations in Neuroscience 2
- Fall 2018 Statistics
- Fall 2018 Scientific Writing
- Spring 2018 Advanced Cell Biology and Biochemistry
- Spring 2018 Neurochemical Basis/ Behavior
- Fall 2017 Advanced Genetics and Cell Biology
- Fall 2017 Protein Structure and Function