

**Bernadette D. Johnson, Ph.D.**

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## **Education**

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### **Postdoctoral Research Fellow**

**Department of Zoology**

2023-Present

University of British Columbia | Vancouver, BC, Canada

Advisor: Judith Mank, Ph.D.

**Ph.D. Biological Sciences**

2023

University of Idaho | Moscow, ID, USA

Thesis: Genomics of Sexual Selection and Sexual Conflict in Syngnathidae

Advisor: Adam Jones, Ph.D.

**B.S. Biological Sciences with a minor in Chemistry**

2017

**Summa Cum Laude with Highest Honors**

Texas A&M University-Commerce | Commerce, TX, USA

Thesis: Zebrafish as a Model for Post-Traumatic Stress Disorder (PTSD)

Advisor: Venu Cheriya, Ph.D.

## **Research Experience**

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**Postdoctoral Research Fellow at University of British Columbia**

2023-Present

Transcriptomics, Genomics, Sexual Conflict, Sexual Selection,

Bioinformatics, *Poecilia* fishes, *Nothobranchius* killifishes

**Research Technician in Jones Lab at University of Idaho**

2023

Transcriptomics, Genomics, Sexual Selection, CRISPR, Behavior,

Bioinformatics, *Nothobranchius* killifishes, Syngnathids fishes

**Graduate Research Assistant at University of Idaho** 2017-2023

Transcriptomics, Genomics, Sexual Selection, CRISPR, Behavior,  
Bioinformatics, *Nothobranchius* killifishes, Syngnathids fishes

**Undergraduate Research Assistant at Texas A&M University-Commerce** 2015-2017

Epigenetics, Histology, PTSD, Behavior, Zebrafish  
Media Coverage: [youtube.com/watch?v=CfSc6FlfM88](https://www.youtube.com/watch?v=CfSc6FlfM88)

### **Publications**

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- [1] Rose E., **Johnson B.D.**, Armitage V., and Jones, A. (2023). The response of the brood pouch transcriptome to synthetic estrogen exposure in the Gulf pipefish (*Syngnathus scovelli*). *Frontiers in Marine Science*.
- [2] **Johnson, B.D.**, and Jones, A.G. (2023). Studying mating behaviors in *Nothobranchius furzeri*. In W. Wang, N. Rohner, and Y. Wang (Ed.). *Emerging Model Organisms*. Springer US.
- [3] Ramesh, B., Small, C.M, Healey, H., **Johnson, B.D.**, Barker, E.M., Currey, M., Bassham, S., Myers, M., Cresko, W.A., and Jones, A.G. (2023). Improvements to the Gulf pipefish (*Syngnathus scovelli*) genome. *Gigabyte*.
- [4] **Johnson B.D.**, Anderson A., Small C., Rose E., Flanagan S., Hendrickson-Rose C., and Jones, A. (2022). The evolution of testis transcriptomes in pregnant male pipefish and seahorses, *Evolution*, 76 (9), 2162-2180.
- [5] Fritzsche K., Henshaw J.M., **Johnson, B.D.**, Jones, A.G. (2021). The 150<sup>th</sup> anniversary of *The Descent of Man*: Darwin and the impact of sex-role reversal on sexual selection research, *Biological Journal of the Linnean Society*, 134 (3), 525-540.
- [6] **Johnson, B.D.**, Fox, A., Wright, L. R., Carney, G. E., Robison, B. D., & Jones, A. G. (2020). *Nothobranchius furzeri* as an emerging model for mate choice: female choice revealed by animations, *Behaviour*, 158 (1), 35-49.
- [7] **Johnson B.D.**, Rose E., and Jones, A. Sensitivity of transcriptomics: Different populations and methodology can affect conclusions. 2023. *In review*.

## **Selected Symposium Presentations**

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- [1] **Johnson, B.D.**, Anderson, A.P., Small, C.M., Rose, E., Flanagan, S.P., Hendrickson-Rose C., and Jones, A.G. (2023). The evolution of the gonad transcriptome in pregnant male pipefishes and seahorses [Poster presentation]. EVO-WIBO, Fort Worden, WA, USA.
- [2] **Johnson, B.D.**, Anderson, A.P., Small, C.M., Rose, E., Flanagan, S.P., Hendrickson-Rose C., and Jones, A.G. (2022). The evolution of the testis transcriptome in pregnant male pipefishes and seahorses [Oral presentation]. International Society for Behavioral Ecology Congress, Stockholm, Sweden.
- [3] **Johnson, B.D.**, Fox, A., Wright, L.R., Carney, G.E., Robison, B.D., and Jones, A.G. (2021). *Nothobranchius furzeri* as an emerging model for mate choice: What do we know about other strains? [Oral presentation]. 1st annual International African Turquoise Killifish Conference, MDI Biological Laboratory, ME, USA and Online.
- [4] **Johnson, B.D.**, Fox, A., Wright, L.R., Carney, G.E., Robison, B.D., and Jones, A.G. (2021). *Nothobranchius furzeri* as an emerging model for mate choice: female choice revealed by animations. [Oral presentation]. 4th *Nothobranchius* Symposium, Brno, Czech Republic and Online.
- [5] **Johnson, B.D.**, Rose, E., Small, C.M., Anderson, A.P., Rose-Hendrickson, C., and Jones, A.G. (2019). The evolutionary impacts of male pregnancy on the testis transcriptome in syngnathid fishes. [Oral presentation]. Evolution, Providence, RI, USA.
- [6] **Johnson, B.D.**, Morris, M., and Cheriyaath, V. (2017). Role of ROS in Post-Traumatic Stress Disorder (PTSD) in Zebrafish. [Poster presentation]. Undergraduate Research Day at the Capital, Austin, TX, USA.
- [7] **Johnson, B.D.** and Cheriyaath, V. (2017). Zebrafish as a Viable Model for Post-Traumatic Stress Disorder (PTSD). [Poster presentation]. Undergraduate Research at Richland College, Dallas, TX, USA.
- [8] **Johnson, B.D.** and Cheriyaath, V. (2016). Zebrafish as a Viable Model for Post-Traumatic Stress Disorder (PTSD). [Poster presentation]. Pathways Research Symposium at Prairie View A&M University, Prairie View, TX, USA.
- [9] **Johnson, B.D.** and Cheriyaath, V. (2016). Epigenetics and behavior: Zebrafish as a Viable Model for Post-Traumatic Stress Disorder (PTSD). [Oral presentation]. Bio Pride Program at Texas A&M University-Commerce, Commerce, TX, USA.

## **Mentorship and Teaching**

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### **University of Idaho | Moscow, ID, USA**

Students mentored:

Noah Jones, Hannah Kemp, Jonathan Wiese, Victoria Armitage, Avrie Fox,  
Jennell Johnson, Corey Hendrickson-Rose, Alexa Small

Teaching Assistant and Course Development:

Computer Skills for Biologists (BIOL 456/549) for Spring 2022

Conservation Genomics (BIOL501) for Spring 2020

Tutorials for beginners in bioinformatics, genomics, and husbandry:

<https://bernadettebiology.weebly.com/protocols--tutorials.html>

**Texas A&M University-Commerce | Commerce, TX, USA**

Students mentored:

Maddy Morris, Noor Faisal, Priscille Murphy, Bianca Rayo

**Volunteer Service and Outreach**

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**Palouse Wildlife Rehabilitation | Moscow, ID, USA** 2021-2023

Animal Care and Public Education

**University of Idaho | Moscow, ID, USA** 2017-2023

Invent Idaho

Women in Science at Coeur d'Alene

iCEV- Meet the Scientist and Exploring the Scientific Method

SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science)

**Texas A&M University-Commerce | Commerce, TX, USA** 2013-2017

Biannual Science Day

Physics Day

Commerce ISD's Educational Foundation Writing Camp

Dallas Zoo's Science Day

**United States Army Corps of Engineers | Belton, TX, USA** 2014

Public Education and Conservation Program

**Honors and Awards**

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College of Science Dean's Graduate Award 2023

UI College of Science Equity & Diversity certificate 2022

Outstanding Graduate Student Research and Creative Activity Award *Nominee* 2022

The 4th <i>Nothobranchius</i> Symposium, Best Student Talk Award, 2 <sup>nd</sup> place	2021
Gilliam Fellowship for Advanced Study <i>Nominee</i>	2019
Graduate Student Travel Grant	2019
Undergraduate Research Award to Present at the Capital in Austin, TX	2017
Undergraduate Grant Writing Competition (3 awards)	2016-2017
Undergraduate Travel Grant	2016
Honors College Scholarship	2013-2017
Academic Excellence Scholarship Award (8 awards)	2013-2017
President's Scholar for Academic Achievement (5 awards)	2013-2015
Certificate of Appreciation from the United States Army Corps of Engineers	2014

## References

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### University of British Columbia

**Judith Mank, Ph.D.**

*Postdoctoral Research Advisor*

Professor of Zoology

Canada 150 Chair

Email: [mank@zoology.ubc.ca](mailto:mank@zoology.ubc.ca)

Phone: (604) 822-1185

### University of Idaho

**Adam Jones, Ph.D.**

*Doctoral Research and Thesis Advisor*

Professor of Evolutionary Biology & Genomics

Email: [adamjones@uidaho.edu](mailto:adamjones@uidaho.edu)

Phone: (208) 885-0948

**Paul Hohenlohe, Ph.D.**

*Dissertation Committee Member*

Associate Professor of Evolutionary Biology & Conservation Genomics

Director of Bioinformatics and Computational Biology Graduate Program

Email: [hohenlohe@uidaho.edu](mailto:hohenlohe@uidaho.edu)

Phone: (208) 885-4031

**James Nagler, Ph.D.**

*Dissertation Committee Member*

Professor of Cellular, Molecular Biology, & Reproductive Biology

Director of Center for Research on Invasive Species

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**Barrie Robison, Ph.D.**

*Research Collaborator and Coauthor*

Professor of Ecology & Evolutionary Biology

Director of IIDS, Director of Polymorphic Games

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