

Habesha 'Fasika' Petros, BS, MS

*Masters Student in Biotechnology Program - Graduate Student
Biotechnology Graduate Program*

Division of Surgical Research/Dept. Surgery

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Primary Research Field

Neonatal Immunity, adult shock/sepsis, epigenetic effectors, organ injury, sepsis

Education

2022-23 M.S. pending. Biotechnology Graduate Program, Brown University, Providence, RI

2018-22 B.S. in Chemical Biology, Brown University, Providence, RI

Professional Experience

- ***Intern, Baines Avenue Clinic, Oncocare Cancer Treatment Centre, St. Anne's Hospital, Harare, Zimbabwe*** July– August 2017
 - Shadowed radiographers, radiologists, oncologists and pathologists, worked with MRI, Ultrasound, CT-Scan, X-Ray, Mammography and Fluoroscopy.
 - Delivered blood samples to the pathology laboratory, assisted radiographers in the theatre to create images of ongoing surgical procedures with an image intensifier.
- ***Desk Advocate, Connect for Health, Providence, RI*** January– May 2020
 - Assist low-income families of patients in Hasbro Children's Hospital
 - Connect clients to housing, utilities, commodities, food, and education resources in Rhode Island.
 - Communicate with clients weekly to track progress and tend to any questions and/or concerns clients may have
- ***Lab member (remote), Wang Research Group*** September – December 2020
 - Collaborated with Professor Wang, senior chemistry lecturer at Brown University (Providence, RI) to develop a lab experiment that focuses on the biological applications within chemistry so that it can be used an undergraduate chemistry course.
- ***Lab member (remote), Basu Research Group,*** January– May 2020
 - Worked together with Professor Basu, an associate chemistry professor at Brown University, Providence, RI
 - Project involved literature research on the chemistry of how plant cell wall dyes bind to their targets
 - Compiled data is currently being built upon for a publication
- ***Volunteer, The Miriam Hospital, Providence, RI*** October 2021 – Present
 - Work to improve patient experience by checking in on them in their rooms to address their questions and concerns

- **Graduate student, Ayala Research Group, September 2022 – May 2023**
 - Worked collaboratively with Professor of Surgery (Res.), Alfred Ayala, at Lifespan-RI Hospital/Brown University, Providence, RI
 - Project: Epigenetic burden(s) of neonatal sepsis: impact on acute (mature adult) and/or chronic/transgenerational lung injury/stress response.

Awards, Honors, Fellowships, Grants:

- International Baccalaureate Diploma, Valedictorian, National Honors Society (Secretary), Harare International School, Harare, Zimbabwe 2018
- Gold President's Education Award, 2nd Place in International Schools of Southern and Eastern Africa STEM Tournament, Harare, Zimbabwe 2018
- Recipient of a Brown University "SPRINT"/ Undergraduate Teaching and Research Award (UTRA), Providence, RI, USA 2022

Publications:

1. Hensler, E., **Petros, H.F.**, Gray, C.C., Chung, C-S., Ayala, A.#, Fallon, E.A.# 2022. The neonatal innate immune response to sepsis: checkpoint proteins as novel mediators of this response and as possible therapeutic/diagnostic levers. *Frontiers in Immunology* 13:940930. (#E.A.F. and A.A. contributed equally as senior authors to this work).

Abstracts (published):

1. **Petros, H.**, Hensler, E., Jiang, J., Armstead, B., Gray, C., Chung, C-S., Chen, Y., Ayala, A. 2023. Investigating the role of V-domain Ig suppressor of T-cell activation (VISTA) in the morbidity and mortality of neonatal sepsis using a mouse model. *Shock* 57:(in press).

Presentations (Oral & Poster):

1. **Petros, H.F.**, Hensler, E., Ayala, A. "Epigenetic burden(s) of neonatal sepsis: impact on acute (mature adult) and/or chronic/transgenerational lung injury/stress response" presented as an 4 minute 'elevator talk' at the Brown University- Spring 2022 SPRINT/UTRA Symposium, Brown University, Providence, RI, April 20, 2022.
2. **Petros, H.F.**, Hensler, E., Ayala, A. "Investigating the Role of V-Immunoglobulin Suppressor of T Cells (VISTA) in the Morbidity and Mortality of Neonatal Sepsis Using a Mouse Model" presented as 'MS thesis defense talk' at the RI Hospital/Brown University, Providence, RI, April 25, 2023.

Leadership Experience

- **Animator (Remote), The Science Cartoons Initiative**
February 2021 – Present
 - Create animations to publish on YouTube on STEM concepts and research, like Opioid Overdose and Lab-Grown Meat.
 - Train new animators in Adobe After Effects and Adobe Illustrator.
- **Peer Undergraduate Tutor (Remote), Sheridan Center for Teaching and Learning**
June– August 2021
 - Tutored 4 undergraduate students weekly and lesson-planned for Organic Chemistry

- **Undergraduate Teaching Assistant (Remote), Department of Chemistry**
September– December 2020
 - Worked and coordinated with the chemistry professor and the head graduate TA in producing quiz questions for Rate, Equilibrium, Structure Lab
 - Assisted professor in online Zoom lecture and helped students with logistical questions about the course.
- **Project member (Remote), Undergraduate Chemistry Course Development**
July– September 2020
 - Adapted general chemistry II lab for a remote semester in light of COVID-19 with 4 students and senior chemistry lecturer
 - Created 4 10-minute instructional videos and animation on topics, like spectrophotometry and the chemistry of color, which are used as teaching tools in the remote course

Associations:

- **Tutor, Inspiring Minds, Providence, RI**
September 2018 – March 2020
 - Tutor and encourage third grade students in Mary E. Fogarty elementary school.
 - Coordinate with the teacher in setting individualized goals based on the strengths and weaknesses of each student.
- **Secretary, National Honor Society, Harare, Zimbabwe**
September 2016 – May 2018
 - Collaborated with a local support group for adolescents living with HIV
 - Moderated discussions that address the stigmatization of adolescents living with HIV in Harare.
 - Prepared PowerPoint slides, planned interactive activities, and created supplementary take home materials
 - Delegated roles and organized the annual certification ceremonies to celebrate the participation of members

Support/Funding

Brown University—5th year Master's of sciences on Biology, Biotechnology Graduate Program

Last updated: 09/25/2023