

ALEXANDRE R. SATHLER

(503) 545-1236 | alexrsathler@gmail.com | linkedin.com/in/alexsathler | orcid.org/0000-0002-6800-1208

Hardworking and passionate scientist with four years' experience pursuing innovative data collection and analysis for the treatment of neurological diseases on the bench, on the computer, and in the real world:

- Three years' engineering novel computational analyses for genomic data and confocal microscopy.
- Two years' wet-lab experience investigating frontiers in neuroscience.
- Two years' leadership in clinical and in biotechnology professional service organizations.
- Three years' mentoring students in STEM and in professionalism.

FIELD EXPERIENCE:

Postbaccalaureate Fellow **Bethesda, MD** **2022-Present**

National Institutes of Health (NIH) – National Institute of Neurological Disorders and Stroke (NINDS)

- Investigated aging-redox stress axis and effects on neuronal energy homeostasis using primary neuronal cell culture, confocal Airyscan microscopy, and Seahorse mitochondrial stress tests to elucidate neurodegenerative mechanisms implicated in Alzheimer's, Parkinson's, and more.
- Pioneered the use of InceptionV3 computer vision models in TensorFlow combined with FIJI analysis pipelines to classify punctate and diffuse fluorescent signal in immunohistochemistry. This de-novo methodology has broad applications in phase separation, a field of rapidly growing importance in biology.
- Communicated novel scientific findings regularly in lab meeting and during weekly journal clubs.

Teaching Assistant **Corvallis, OR** **2021-2022**

Oregon State University (OSU) – Department of Botany and Plant Pathology (BPP)

- Shaped coursework for *Computational Approaches to Biological Data (CABD)*.
- Fostered student success in a foundational course for biological data processing and analysis in any field.

Research Assistant **Corvallis, OR** **2020-2022**

Oregon State University (OSU) – Department of Biochemistry and Biophysics (BB)

- Performed cell culture, confocal microscopy, and western blotting to further our mechanistic understanding of post-translational modifications in the etiology of glioblastoma multiforme (GBM), an innovative approach to understanding the world's most aggressive brain tumor.
- Built a 3D methodology ([Link](#)) for localization of nitrated Hsp90 in any 3D culture model. This methodology has applications in cell biology, pathology, and tissue modeling.

Bioinformatics Intern **Portland, OR** **2019**

Providence Health and Services – Earle A. Chiles Research Institute (EACRI)

- Designed CAR-T cell therapy quality control for cancer patients in the nation's 11th largest health system.

EDUCATION:

Oregon State University **Corvallis, OR** **2018-2022**

Biochemistry and Molecular Biology (B.S.); Biological Data Sciences and Chemistry (Minors)

Portland Community College **Portland, OR** **2018-2019**

Bioscience Technology (A.A.S.)

SKILLS:

Personal: Leadership, team / project development, problem solving, performance under pressure, communication, public speaking, Portuguese (near-fluency), French (intermediate).

Technical: Machine learning, neuronal cell culture, confocal microscopy, ImageJ, TensorFlow, Python, Pandas, R, gel electrophoresis, western blotting, lab safety, buffer preparation, quality systems, ChatGPT prompting.

VOLUNTEER & OTHER EXPERIENCE:

OITE-BIG – Founder and President	Bethesda, MD	2022-Present
<ul style="list-style-type: none">• Founded a semi-professional biotechnology organization for NIH fellows, filling an important gap in the NIH’s existing career development ecosystem serving over 5,000 fellows.• Fostered connections between motivated NIH fellows, scientific innovators, and biotechnology organizations through seminars, workshops, and company tours.		
DMV Petri Dish – Capital Development	Bethesda, MD	2022-Present
<ul style="list-style-type: none">• Established Petri Dish’s (DMVPD) biotechnology-oriented makerspace for community research.• Accelerated DMVPD’s transformation from unknown to major player in the BioHealth Capital Region.		
ICM Cares – Committee Member and MA	Gaithersburg, MD	2023-Present
<ul style="list-style-type: none">• Coordinated efforts to certify ICM Cares Clinic (ICMCC) for Montgomery County Public Health Service funding essential for sustainable treatment of underserved patients in the clinic’s patient community.• Delivered quality medical care via leadership in the clinic development committee, creation an online media presence, and provision of medical assistantship.		
Wyzant – Independent Tutor	Portland, OR	2019-2021
Black Resilience Fund – Data Organizer	Portland, OR	2020-2021
Presidential Campaign – Regional Advisor	Portland, OR	2019-2020

AWARDS:

George T. Abed Award	Corvallis, OR	2022	\$3,000
CURE Research Grant	Corvallis, OR	2021	\$5,000
Merrill Family Foundation Scholarship	Corvallis, OR	2020	\$4,500

SELECTED CONFERENCE PROCEEDINGS:

Sathler AR, Sung AL, Nguyen KT, Estévez AG, Franco MC. “A Computational Method to Visualize Nitrated Hsp90 Distribution in 3D Culture Models” SfrBM (2021). Oral Presentation. *Young Investigator Award*.

Sathler AR, Sung AL, Nguyen KT, Estévez AG, Franco MC. “A Computational Method to Visualize Nitrated Hsp90 Distribution in 3D Culture Models” CQLS Fall Conference (2021). Oral and Poster Presentation. *Best Undergraduate Poster and Best Overall Lightning Talk*.

HONORS:

Eagle Scout	Portland, OR	2018
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