

MIRIAM VALERA- ALBERNI, PHD

Boston MA 02135 USA | +1 (857) 701-6992 | mrvaalb@gmail.com | LinkedIn Profile : [Miriam V.A.](#)

Molecular Biologist Specializing in Mitochondrial Research | Advancing Science through Cross-Functional Collaboration

HIGHLIGHTS

- Spearheaded groundbreaking research on **mitochondrial biology**, advancing our understanding of mitochondrial dynamics in human disease.
- Excelled in **scientific communication** by effectively translating complex experimental data into scientific insights that drive informed decision-making.
- Acquired extensive scientific experience across **diverse environments**, including industry, academia, and clinical research organizations.
- Orchestrated **cross-functional collaborations**, integrating expertise in mitochondrial research, preclinical studies, and human diseases to drive strategic medical and scientific initiatives.
- Passionate about **community building**, actively fostering collaboration and engagement within the research community to translate scientific discoveries into society.

Relevant RESEARCH EXPERIENCE

Harvard T.H. Chan School of Public Health

04/2021 – present

Postdoctoral Research Fellow

Boston, USA

- Investigated molecular pathways linking mitochondria to age-related cellular dysfunction, leading three projects, and contributing to two ongoing national grants.
- Uncovered a novel mechanism of mitochondrial dynamics in the research organism *C. elegans* in response to nutrients, revealing new insights into mitochondrial adaptation and metabolic regulation.
- Organized the Longwood MitoClub seminars, unifying Boston's research groups dedicated to investigating mitochondria's role in disease.

Nestlé

09/2016 – 03/2021

PhD Candidate

Lausanne, Switzerland

- Pioneered research demonstrating the therapeutic potential of modulating mitochondrial morphology for treating and preventing metabolic diseases, evidenced through six publications.
- Advanced preclinical research by collaborating with interdisciplinary teams, leveraging expertise in omics approaches, human diseases, and innovative assays.
- Excelled in communicating with diverse audiences by leading university courses, presenting research to renowned scientists, and translating complex scientific concepts for the general public through outreach events.

Selected Additional SKILLS

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|----------------------|----------------------|-------------------------|-----------------------|
| - Data Generation | - Regulatory | - Extracting Scientific | - Strategic Planning |
| - Data Dissemination | - Compliance | - Content | - Project Management |
| - Insights Gathering | - Cross-Functional | - Simplifying | - Analytical Thinking |
| - Medical Education | - Collaboration | - Complex Scientific | - Adaptability and |
| - Expertise in Human | - Cultural Awareness | - Concepts | - Resilience |
| - Diseases | - Scientific | - Publication Writing | - Team Player |
| - Public Outreach | - Communication | | |

PROFESSIONAL ORGANIZATIONS

Harvard EDIB (Equity, Diversity, Inclusion, Belonging) committee **06/2023 – present**

- Coordinated four pipelines to drive cultural transformation through advocacy for equity and inclusion.

Bioscience Network Lausanne **01/2018 – 02/2020**

- Organized two career development initiatives and five events on public outreach to promote connections between academia and industry in Life Sciences in Switzerland.

Nestlé student association **01/2019 – 09/2020**

- Led three community initiatives aimed at fostering collaboration within Nestlé students.

PARTICIPATION IN SCIENTIFIC CONFERENCES

1. Talk (virtual) | **Vincere Biosciences Mitophagy Speaker Series**. Boston, USA. 9 July 2024.
2. Talk | **Rene Salazar Speaker Series**. Broad Institute, Boston, USA. 10 October 2023.
3. Poster | **GRC Mitochondria in Health and Disease**. Lucca, Italy. 5-10 February 2023.
4. Poster | **Mechanisms of Aging**, CSHL meeting. CSH (NY), USA. 27 Sept – 1 Oct 2022.
5. Poster | **Metabolism, Aging, Pathogenesis, and Stress in *C.elegans***. Madison, USA. 14-17 July 2022.
6. Short talk (virtual) | **4th Annual UCLA Mitochondria Symposium**. 5-6 November 2020.
7. Short talk (virtual) | **WebCam seminars**. 3 June 2020.
8. Short talk (virtual) | **Aging Science Talks**. 24 April 2020.
9. Poster | **EMBL Symposia: Metabolism meets Epigenetics**, Heidelberg, Germany. 20-23 Nov 2019.
10. Short talk | **MitoChats Symposium**, Cologne, Germany. 11-12 July 2019.
11. Local organizer at the **12th LIMNA symposium**. University Hospital of Lausanne. 12 April 2019.
12. Poster | **LIMNA Symposium: Regulation of Metabolism and Feeding**, Lausanne. 8 Nov 2018.
13. Short talk | **9th World Congress on Targeting Mitochondria**, Berlin, Germany. 23-25 Oct 2018.
14. Poster | **Summer School on Chromatin and Metabolism**, Spetses, Greece. 25-31 August 2018.
15. Poster | **Frontiers in Metabolism Symposium**, Lausanne, Switzerland. 24-26 October 2017.
16. Poster | **LIMNA Symposium: Metabolism Research, Lausanne, Switzerland**. 1 June 2017.

Selected PUBLICATIONS

1. Novel Imaging Tools to Study Mitochondrial Morphology in *Caenorhabditis elegans*. *bioRxiv [Preprint]*. doi: 10.1101/2024.07.16.603730
2. Fast fragmenting mitochondria by TORC2. *Nat Cell Biol* (2023). doi: 10.1038/s41556-023-01173-1.
3. Crosstalk between Drp1 phosphorylation sites during mitochondrial remodeling and their impact on metabolic adaptation. *Cell Reports* (2021). doi: 10.1016/j.celrep.2021.109565.
4. Circadian Rhythms and Mitochondria: Connecting the Dots. *Frontiers in genetics* (2018). doi:10.3389/fgene.2018.00452
5. Mitochondrial stress management: a dynamic journey. *Cell Stress* (2018). doi: 10.15698/cst2018.10.158.
6. Mfn2 is critical for brown adipose tissue thermogenic function. *EMBO Journal* (2017). doi: 10.15252/emj.201694914.

HOBBIES

Podcast Listening · Travel · Yoga Sculpt · Community Building · Hiking / Climbing · Science Outreach

Contact details of referees available on request