TANIA KURBESSOIAN

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A motivated Ph.D. candidate in Microbiology, seeking for a career in Microbiology, Mycology and Bioinformatics

EDUCATION

University of California, Riverside — **Riverside**
PhD. In Microbiology — 2017-
- GPA:3.89

California State University — **Northridge**
Master of Science in Microbiology — 2014 – 2016
- GPA:3.77

California State University — **Northridge**
Bachelor of Science in Microbiology — 2010 – 2013
- GPA:3.51

RELEVANT SKILLS

- **Bioinformatics:** Genome Assembly and Annotation, Variation and Haplotype Analysis, Genome Browser development, Metagenomics binning and annotation, R Amplicon Analysis using phyloseq, Utilized Python and Bash
- **Microbiology:** Aseptic technique, Fluorescent, Bright field and contrast microscopy , Staining bacteria, Culturing bacteria from the environment, Enumeration and identification, Media, buffer and chemical preparation, Utilizing food microbiology, Using selective media, Plaque assay, Enzyme assay, MALDI-TOF MS as an identification tool down to the strain level
- **Mycology:** Aseptic technique, Bright field and contrast microscopy, staining fungi, media preparation, Culturing fungi from the environment.
- **Biochemistry and Cell & Molecular Biology:** DNA extraction, Assay Preparation, Protein Extraction, Plasmid DNA preparation, Restriction enzyme digests, PCR, Agarose gel electrophoresis, using centrifugation, Amplicon Library Preparation

PUBLICATIONS

- **Kurbessoian, Tania**; Murante, Daniel; Corcker, Alex; Hogan, Deborah A.; Stajich Jason E. "In host evolution of *Exophiala dermatitidis* in Cystic Fibrosis lung micro-environment" - In Process
- **Kurbessoian, Tania**; Selbmann, Laura; Sterflinger Katja; Stajich Jason E.; Coleine Claudia. "Molecular Dating and Whole-Genome Duplication of the Micro-Colonial Fungi Genus Friedmanniomyces" - In Process
- **Kurbessoian, Tania;** Stajich Jason E. "Culturing Micro-colonial fungi from Biological Soil Crusts in the Mojave Desert and Describing Previously Unknown *Neophaeococcomyces mojavensis*, *Cladosporium tulheliwenetii* and introducing the new genera and species *Taxawa tesnikishii"* - In Process
- **Kurbessoian, Tania;** Stajich Jason E. "Exploring and Comparing 250 Chaetothyriales and Dothideomycetes Micro-Colonial Fungi" - In Process
- **Kurbessoian, Tania**; Stajich Jason E. "Culturing and Identifying a Micro-Colonial Fungi from Ancient Tar Pits in Los Angeles, California" - In Process
- Selbmann, L.; Benkő, Z.; Coleine, C.; de Hoog, S.; Donati, C.; Druzhinina, I.; Emri, T.; Ettinger, C.L.; Gladfelter, A.S.; Gorbushina, A.A.; Grigoriev, I.V.; Grube, M.; Gunde-Cimerman, N.; Karányi, Z.Á.; Kocsis, B.; **Kurbessoian, T.**; Miklós, I.; Miskei, M.; Muggia, L.; Northen, T.; Novak-Babič, M.; Pennacchio, C.; Pfliegler, W.P.; Pòcsi, I.; Prigione, V.; Riquelme, M.; Segata, N.; Schumacher, J.; Shelest, E.; Sterflinger, K.; Tesei, D.; U'Ren, J.M.; Varese, G.C.; Vázquez-Campos, X.; Vicente, V.A.; Souza, E.M.; Zalar, P.; Walker, A.K.; Stajich, J.E. Shed Light in the DaRk LineagES of the Fungal Tree of Life—STRES. Life 2020, 10, 362.
- Pombubpa, Nuttapon, **Kurbessoian, Tania**, Stajich E. Jason, Pietrasiak, Nicole, La Doux, Tasha. "Exploring the Microbial Diversity in Biological Soil Crusts at Joshua Tree National Park (U.S. National Park Service)." National Parks Service, U.S. Department of the Interior, 28 July 2020, www.nps.gov/articles/exploring-the-microbial-diversity-in-biological-soil-crusts-at-joshua-tree-national-park.htm.
- Warren, Steven D., Larry L. St Clair, Lloyd R. Stark, Louise A. Lewis, Nuttapon Pombubpa, **Tania Kurbessoian**, Jason E. Stajich, and Zachary T. Aanderud. "Reproduction and dispersal of biological soil crust organisms." Frontiers In Ecology Evolution. 7: 344. 7 (2019): 344.
- **Kurbessoian, Tania**. *Comparative analysis of 16s ribosomal RNA typing and physiological traits within Sporosarcina ureae*. Diss. California State University, Northridge, 2016.

WORK EXPERIENCE

International Congress of Armenian Mycologists (ICAM)-*Nonprofit* — **USA**
Co-Founder, Vice-President
- After the ending of the Artsakh 2020 war other diaspora Armenian Mycologists decided to create the ICAM non-profit organization.
- As an organization we strive to conduct critical scientific research on the understudied fungal kingdom in the both ancient yet contemporary civilization of Armenia.
- We seek to build science capacity in Armenia by: collaborating with the nation's already successful scientists through shared grants, co-authorship, and resource allocation; by providing financed scientific mentorship to Armenian youth; and by gathering biological data that can be used in the protection of land and life.

University of California, Riverside **Riverside, CA**

Graduate Researcher July 2017-

- Working with P.I. Dr. Jason E. Stajich on observing evolutionary trends in Fungi, while also focusing on melanized fungi isolated from a variety of environments including Biological Soil Crusts, rock patinas, the soil from tar pits, etc.
- Applied learned microbiology techniques to successfully isolate mycological organisms from arid regions and biological crusts.
- Developed Bioinformatics skills to assemble and annotate genomes from a variety of different Phyla of Fungi.
- Collaborating with multiple teams on numerous different projects involving melanized fungi.

Teaching Associate

- Winter 2019, 2021 MCBL 127 - Microbial Evolution 25% TA-ship
- Spring 2020 BIOL 119 - Introduction to Genomics and Bioinformatics 50% TA-ship
    - Facilitated teachings through preparing asynchronous lectures, graded homework, quizzes and exams and provided the final grade to the professors.

California State University, Northridge **Northridge, CA**

Graduate Research Assistant Jan. 2014 – Dec.2016

- Working with P.I. Dr. Larry Baresi using numerous molecular biology techniques to extract, isolate and digest DNA from and PCR techniques to extract 16S sequences from 57 strains of *Sporosarcina ureae*.
- Processed alignments and created phylogenetic trees which depict the non-clonal relationship between 57 strains.
- Appropriated the BIOLOG tool in order to observe physiological results expressing the relationship between the 57 strains.
- Utilized MALDI-TOF MS to create protein profiles for all 57 strains of *Sporosarcina* and created dendograms based on MSP's and 97% similarities of protein profiles to group them into OTUs, generated PCA plots.

Teaching Associate Jan 2015 – Dec 2015

- Principles of Microbiology two semesters
    - Facilitated teachings through preparing lectures, graded exams, and provided final grades to the students.
    - Promoted a dynamic learning environment, while simultaneously enhancing communication skills through student interaction.

Graduate Teaching Assistant Jan 2014 – Dec 2016

- Assisted undergraduate students in laboratory classes including Principles of Microbiology, Medical Microbiology, Microbial Physiology, Biology of the Fungi and Food Microbiology.
- Fostered CSU's success through preparing media and cultures that were utilized in the microbiology teaching classrooms.
- Taught students how to maneuver and accomplish proper aseptic technique.

California State University **Northridge, CA**

Undergraduate Research Student Jan – Dec 2013

- Prepared different types of media specific to certain types of *Escherichia coli* as well as to an archaea *Methanobrevibacter smithii strain G*.
- Isolated and transferred *Methanobrevibacter smithii strain G* through anaerobic techniques.

INTERNSHIP EXPERIENCE

Jet Propulsion Laboratory, JPL - NASA **Pasadena, CA**

Summer Intern Program (SIP) Intern July – Sept. 2016

- Collaborated with P.I. Wayne Schubert and Planetary Protection Officers to apply biological aspects to astrobiological situations.
- Created, followed up and finished Embedded Bioburden experiments on extreme heat and desiccation resistant strains of Bacillus sp. (ATCC 29669), utilized a cryogen grinder and mastered serial dilutions and plating techniques.
- Calculated varying D-values for ATCC 29669 in varying temperature and time lengths.
- Created and maintained MALDI-TOF MS protein profiles of the Bacillus sp. (ATCC 29669).
- Prepared embedded spore masses using a variety of epoxies.

PROFESSIONAL ORGANIZATIONS

International Congress of Armenian Mycologists (ICAM) *Non-profit* **USA**

Co-Founder, Vice-President *November 2020-*

Association for Women in Science- Riverside Chapter(AWIS) **Riverside, CA**

President, Publicity Chair June 2018-2022

Mycological Society of America, Student and PostDoc Section (MSASPS) **USA**

Chair, Vice-Chair, Outreach Chair August 2019-

Graduate Student Association- Microbiology Chapter (Micro-GSA) **Riverside, CA**

President, Vice President, Outreach June 2017-2020

Microbiology Students Association at California State University (MSA) **Northridge, CA**

Secretary, Treasurer and President Jan 2013-Aug 2016

Women in Science at California State University (WiS) **Northridge, CA**

Member Jan 2015-Dec 2016

Graduate Leadership Association at California State University (GLA) **Northridge, CA**

Social Media Coordinator Jan 2015-Dec 2016

Los Angeles Mycological Society (LAMS) — **Los Angeles, CA**
Member — Nov 2014 - Present

American Society for Microbiology (ASM) — **USA**
Member — Aug 2013 – Present

Mycological Society of America (MSA) — **USA**
Student Member — Jan 2016 -- Present

AWARDS & PRESENTATIONS

- Poster Presentation at American Society of Microbiology General Meeting. May 30 - June 2, 2015, New Orleans, Louisiana "Comparative Analysis of 16s Ribosomal RNA Typing and Physiological Traits within *Sporosarcina ureae*". ***Kurbessoian, Tania**, Baresi, Larry.
- Poster Presentation at CSUN Research Symposium at California State University, Northridge April 2014, 2015, 2016 "Comparative Analysis of 16s Ribosomal RNA Typing and Physiological Traits within *Sporosarcina ureae*" ***Kurbessoian, Tania**, Baresi, Larry.
- Oral presentation at Southern California Chapter for the American Society of Microbiology General Meeting October 28-29 2016, San Diego California "Heat Inactivation of Embedded Bacterial Spores", ***Kurbessoian, Tania**, Alexander, Aaron, Schubert, Wayne.
- Oral presentation at JPL-NASA during Summer Internship September 9, 2016, La Canada Flintridge, California. "Heat Inactivation of Embedded Bacterial Spores", ***Kurbessoian, Tania**, Schubert, Wayne.
- Oral Presentation at Black Yeast Workshop part of International Society for Human and Animal Mycology in Amsterdam, Netherlands 2018, ***Kurbessoian, Tania**, Pombubpa, Nuttapon, Stajich, Jason.
- Oral Presentation at 4th International Workshop on Biological Soil Crusts. 25-30 August 2019 North Stradbroke Island, Queensland, Australia. "Exploring the Role of Melanized Fungi in Cooperative Biological Soil Crust Systems". ***Kurbessoian, Tania**, Pombubpa, Nuttapon, Pietrasiak, Nicole, Stajich, Jason.
- Poster Presentation at Mycological Society of America Annual Meeting August 10 - 14, 2019, Minneapolis Minnesota. "Just Deserts: Exploring the Diversity of Melanized Fungi in Rocks and Biological Soil Crusts", ***Kurbessoian, Tania**, Pompbubpa, Nuttapon, Pietrasiak, Nicole, Coleine, Claudia, Selbmann, Laura, Stajich, Jason.
- CANCELLED-Oral Presentation at Cellular and Molecular Fungal Biology Gordon Research Conference, June 21 - 26, 2020, Holderness School in Holderness, NH. "Black Yeasts as Desert Sunscreen: Assessing the Genetic Composition of Black Yeasts Found within Biological Soil Crusts", ***Kurbessoian, Tania**, Pompbubpa, Nuttapon, Pietrasiak, Nicole, Coleine, Claudia, Selbmann, Laura, Stajich, Jason.
- Teaching Presentation at Mycological Society of America Annual Meeting, "Mycology in the Clouds", July 22, 2020. "Teaching Mycology and Bioinformatics Virtually", ***Kurbessoian, Tania**.
- Poster Presentation at 2020 Virtual Tri-Science Societies (ASA - American Society of Agronomy, CSSA - Crop Science Society of America, SSSA - Soil Science Society of America) Meeting, Virtual World, November 9 - 13, 2020, "Black Yeasts as Desert Sunscreen: Assessing the Genetic Composition of Black Yeasts Found within Biological Soil Crusts", ***Kurbessoian, Tania**, Pompbubpa, Nuttapon, Pietrasiak, Nicole, Coleine, Claudia, Selbmann, Laura, Stajich, Jason.
- Oral Presentation at 2021 MSA/Botany Virtual Meeting, July 19-23, 2021 "Black Yeast as Desert Sunscreen: Assessing the Genetic Composition of Black Yeasts found in Desert Biological Soil Crusts", ***Kurbessoian, Tania**, Pompbubpa, Nuttapon, Pietrasiak, Nicole, Coleine, Claudia, Selbmann, Laura, Stajich, Jason.
- Oral Presentation at 31st Fungal Genetics Conference in Asilomar, Pacific Grove March 14-20, 2022. ""In host evolution of Exophiala dermatitidis in Cystic Fibrosis lung micro-environment", ***Kurbessoian, Tania**; Murante, Daniel; Corcker, Alex; Hogan, Deborah A.; Stajich Jason E.
- Poster Presentation at 31st Fungal Genetics Conference in Asilomar, Pacific Grove March 14-20, 2022. ""In host evolution of Exophiala dermatitidis in Cystic Fibrosis lung micro-environment", ***Kurbessoian, Tania**; Murante, Daniel; Corcker, Alex; Hogan, Deborah A.; Stajich Jason E.
- Eugene Robles Fellowship for UC Riverside PhD Program September 2017-March 2018 - $24,000
- Emory Simmons Fellowship from Mycological Society of America winner April 2019 -$9,000
- UCR Edge Devirian Fellowship 2019 - $900
- UCR Graduate Student Mentorship Program (GSMP) Best Mentor Award 2019-2020
- UCR Distinguished Teaching Award 2020-2021 - $500
- UCR DEI Scholarship 2021 - $600

❖ **Language skills:** Proficient in reading, writing and communicating in English, Armenian, Russian