

Jenna T. B. Ekwealor

CURRICULUM VITAE

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EDUCATION

- 2020 **Ph.D. in Integrative Biology**
Department of Integrative Biology
University of California, Berkeley (UCB)
Advisor: Dr. Brent D. Mishler
Dissertation: *Tolerance of desiccation and UV radiation in mosses of the genus Syntrichia (Pottiaceae), from genomes to ecology*
- 2020 **Certificate of Remote Instruction**
UCB
Graduate Student Instructor Teaching & Resource Center
- 2015 **M.S. in Environmental Science, Biology Option**
California State University, Los Angeles (CSULA)
Advisor: Dr. Kirsten M. Fisher
Thesis: *Sex or survival? The genetic impacts of environment and energetic trade-offs for the Mojave Desert moss Syntrichia caninervis (Pottiaceae)*
- 2012 **B.S. in Biology, Minor in Chemistry**
Purdue University, Indiana University—Purdue University—Indianapolis (IUPUI)
- 2012 **B.A. in Religious Studies**
Indiana University, IUPUI
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PUBLICATIONS [ORCID 0000-0001-9014-8786]

7. Mishler, Brent D.; **Ekwealor, Jenna T. B.**; Nosratinia, Sonia; Dautermann, Oliver; Brinda, John; Jauregui Lazo, Javier; Ebrahimi, Sotodeh; Caswell-Levy, Caleb; Guill, Kate; Oliver, Melvin. A global phylogeny and classification of the dryland moss genus *Syntrichia*. (In prep.).
6. **Ekwealor, Jenna T. B.**; Clark, Theresa A.; Dautermann, Oliver; Russell, Alexander; Ebrahimi, Sotodeh; Stark, Lloyd R.; Niyogi, Krishna K.; Mishler, Brent D. Natural UV exposure alters photosynthetic biology and improves recovery from desiccation in a desert moss. *Authorea* (2020), DOI: 10.22541/au.159493223.30789439.
5. Silva, Anderson T.; Gao, Bei; Fisher, Kirsten M.; Mishler, Brent D.; **Ekwealor, Jenna T. B.**; Stark, Lloyd R.; Li, Xiaoshuang; Zhang, Daoyuan; Bowker, Matthew A.; Brinda, John C.; Deane-Coe, Kirsten K.; Oliver, Melvin J. To dry perchance to live: insights from the genome of the desiccation-tolerant biocrust moss *Syntrichia caninervis*. *The Plant Journal* (In Press) , DOI: 10.1111/tpj.15116.
4. **Ekwealor, Jenna T. B.**; Fisher, Kirsten M. Life under quartz: Hypolithic mosses in the Mojave Desert. *PLOS ONE* 15(7): e0235928 (2020), DOI: 10.1371/journal.pone.0235928.

*Please note name change as of 2018 from J. T. Baughman to J. T. B. Ekwealor

3. **Baughman, Jenna T.**; Payton, Adam C.; Paasch, Amber E.; Fisher, Kirsten M.; McDaniel, Stuart F. Multiple factors influence population sex ratios in the Mojave Desert moss *Syntrichia caninervis*. *American Journal of Botany* 104(5):1-10 (2017), DOI: 10.3732/ajb.1700045.
2. Meijome, Tomás E.*; **Baughman, Jenna T.***; Hooker, R. Adam; Cheng, Ying-Hua; Ciovacco, Wendy A.; Balamohan, Sanjeev A.; Srinivasan, Trishya L.; Chitteti, Brahmananda R.; Eleniste, Pierre P.; Horowitz, Mark C.; Srouf, Edward F.; Bruzzaniti, Angela; Fuchs, Robyn K.; Kacena, Melissa A. C-Mpl is expressed on osteoblasts and osteoclasts and is important in regulating skeletal homeostasis. *Journal of Cellular Biochemistry* 117:959-969 (2016), DOI: 10.1002/jcb.25380. *Contributed equally
1. Eleniste, Pierre P.; Patel, Vruti; Posritong, Sumana; Zero, Odette; Largura, Heather; Cheng, Ying-Hua; Himes, Evan R.; Hamilton, Matthew; **Baughman, Jenna**; Kacena, Melissa A.; Bruzzaniti, Angela. Pyk2 and megakaryocytes regulate osteoblast differentiation and migration via distinct and overlapping mechanisms. *Journal of Cellular Biochemistry* 9999:1-11 (2015), DOI: 10.1002/jcb.25430.

FELLOWSHIPS & TRAINEESHIPS

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| 2020 | Graduate Remote Instruction Innovation Fellowship (UCB) (\$5,000) |
| 2015-2020 | Berkeley Fellowship (UCB) (\$86,000 awarded over five years) |
| 2017-2020 | Pinto-Fialon Fellowship (UCB) (\$25,735 awarded over three years) |
| 2018-2019 | Luso-American Education Foundation Scholarship (\$1,000) |
| 2015-2017 | Environment & Society: Data Sciences for the 21 st Century, An NSF Research Traineeship (UCB) |
| 2014-2015 | Minority Biomedical Research Support Research Initiative for Scientific Enhancement MS-to-Ph.D. Graduate Research Fellowship (CSULA) (\$17,000) |
| 2009-2012 | Ronald E. McNair Post-Baccalaureate Achievement Scholar (IUPUI) |

HONORS & AWARDS

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| 2016 | Outstanding Graduate Student Instructor, UCB |
| 2013 | Tutor of the Month, Tutor Doctor of San Gabriel Valley |
| 2012 | Rowland A. Sherrill Outstanding Religious Studies Student Award, IUPUI |
| 2012 | Christine Jakacky Mentor of the Year, IUPUI |
| 2012 | 13 th Annual IUPUI Top 100 Outstanding Students, IUPUI |
| 2011 | 12 th Annual IUPUI Top 100 Outstanding Students, IUPUI |

RESEARCH GRANTS**Current**

- 2020 Department of Integrative Biology Dissertation Award (UCB) (\$2,500)
 2020 Paul Silva Student Research Grant (California Botanical Society) (\$580)
 2020 Myrtle Wolf Grant (California Native Plant Society – East Bay Chapter) (\$1,400)

Contributions to ongoing funded research

- 2016-2019 NSF Division of Environmental Biology #163856
 Title: Collaborative Research: Dimensions: Desiccation and Diversity in Dryland Mosses
 PI: Brent Mishler, UCB

Previous

- 2019 Department of Integrative Biology Summer Grant (UCB) (\$3,500)
 2019 California Native Plant Society – Bryophyte Chapter Research Grant (\$200)
 2019 Sigma Xi Berkeley Chapter Grants-in-Aid-of-Research (UCB) (\$200)
 2018 Mathias Graduate Student Research Grant (UC Natural Reserve System) (\$2,000)
 2018 Department of Integrative Biology Summer Research Award (UCB) (\$1,750)
 2017 Anderson & Crum Field Bryology Award (American Bryological and Lichenological Society) (\$750)
 2017 Department of Integrative Biology Summer Research Award (UCB) (\$1,750)
 2016-2019 Department of Integrative Biology Graduate Student Research Allocations Committee Research Award (UCB) (\$1,200 over four years)
 2014 Evo-Devo-Eco Research Exchange Network Grant (NSF Research Coordination Network) (\$3,000)

CONFERENCE PRESENTATIONS**Oral Presentations**

- 2020 Botany 2020, Virtual
 “The effects of natural sunlight and UV radiation on photosynthesis in the Mojave Desert moss *Syntrichia caninervis*”
- 2019 Biocrust4, North Stradbroke Island, Australia
 “UV tolerance in Mojave Desert mosses”
- 2019 Botany 2019, Tucson, AZ, USA
 “UV tolerance in Mojave Desert mosses”
Honorable Mention for A. J. Sharp Award
ABLS Student Travel Award (\$400)
- 2019 Bryology 2019, Madrid, Spain
 “UV tolerance in Mojave Desert mosses”
UCB Dept. of Integrative Biology Graduate Student Research Allocations Committee Travel Award (\$250)
- 2018 American Bryological and Lichenological Society Meeting, Nederland, CO, USA
 “UV tolerance in Mojave Desert mosses”
ABLS Student Travel Award (\$600)
- 2017 California Botanical Society Graduate Symposium, Santa Barbara, CA, USA
 “Adaptation, facilitation, and refugia in Mojave Desert mosses”

California Botanical Society Travel Award (\$200)

- 2016 Biocrust3, Moab, UT, USA
Molecular Frontiers Symposium
“Males of the Mojave Desert moss *Syntrichia caninervis* (Pottiaceae) are rare and shy”
Biocrust3 Complimentary Registration Award
- 2016 Biocrust3, Moab, UT, USA
Early Career Scientists Symposium
“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”
Biocrust3 Complimentary Registration Award
- 2016 Botany 2016, Savannah, GA, USA
“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”
ABLS Student Travel Award (\$600)
- 2016 Botany 2016, Savannah, GA, USA
“Males of the Mojave Desert moss *Syntrichia caninervis* (Pottiaceae) are rare and shy”
UCB Dept. of Integrative Biology Graduate Student Research Allocations Committee Travel Award (\$250)
- 2015 California Botanical Society Graduate Symposium, Claremont, CA, USA
“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”
Best Presentation Award, Completed Research Category

Poster Presentations

- 2018 International Molecular Moss Science Society Meeting, St. Petersburg, FL, USA
“UV Tolerance in Mojave Desert Soil Mosses”
Best Student Poster Award
iMOSS Trainee Fellowship Award
- 2015 California Native Plant Society Conservation Conference, San Jose, CA, USA
“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”
Best Student Poster Award

DEPARTMENTAL TALKS

- 2020 Botany Lunch, University & Jepson Herbaria, UCB
“The photosynthetic effects of the Mojave Desert sun on a biological soil crust moss”
- 2019 Guest Lecture, Ecosystems of California, UCB
“Evolution of Energetic Trade-Offs in Plant Herbivory Defense”
- 2019 Guest Lecture, Plant Systematics, UCB
“Introduction to Bryophytes”
- 2018 Grad Students on Parade Lightning Talk, Botany Lunch, University & Jepson Herbaria, UCB
“Volunteer botanizing in the Mojave National Preserve”

- 2016 Botany Lunch, University & Jepson Herbaria, UCB
 “Sex and survival: The impacts of energetic trade-offs for the Mojave Desert moss *Syntrichia caninervis* (Pottiaceae)”
- 2015 MORE & LSAMP Seminar, CSULA
 “Sex and survival: The impacts of energetic trade-offs for the Mojave Desert moss *Syntrichia caninervis* (Pottiaceae)”

TEACHING

Teaching Appointments

- Fall 2020 Part-time Faculty, Merritt College, Peralta Community College District
 2019-2020 Graduate Student Instructor, UCB
 2015-2016 Graduate Student Instructor, UCB
 2014-2015 Teaching Assistant, CSULA
 2009-2012 Undergraduate Student Instructor, IUPUI
 2008-2012 Recitation Leader, IUPUI

Undergraduate Courses

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| California Natural History, UCB | 2020 |
| Integrative Human Biology, UCB | 2020 |
| Academic Survivorship, UCB | 2020 |
| Introduction to California Plant Life (Field Course), UCB | 2020 |
| Ecosystems of California (Field Course), UCB | 2019 |
| Introductory Biology Laboratory, UCB | 2015, 2016 |
| Ecology Laboratory, CSULA | 2014, 2015 |
| Plant Biology Laboratory for Non-Majors, CSULA | 2014 |
| Peer-Led Team Learning Methods in Teaching Chemistry, IUPUI | 2009-2012 |
| General Chemistry I Peer-Led Team Learning Recitation, IUPUI | 2008-2012 |
| Concepts of Biology II Recitation, IUPUI | 2009 |

Workshops

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| Biological Sciences Discipline Workshop, Teaching Conference for First-Time GSIs, UCB | 2020 |
| Biocrusts: The Living Skin of the Earth, Expanding Your Horizons Girls' Conference, UCB | 2019 |
| Introduction to R, Git, Shell, and Reproducible Analysis in R, Software Carpentry, UCB | 2019 |
| Biological Sciences Discipline Workshop, Teaching Conference for First-Time GSIs, UCB | 2018 |
| Introduction to Shell, Git, and R, Data Carpentry, UCB | 2018 |
| Introduction to Genomics Data Wrangling, Data Carpentry UCB | 2018 |

RESEARCH EXPERIENCE

- 2015-Present **Graduate Student Researcher**
 Department of Integrative Biology
 University of California, Berkeley
 Laboratory of Dr. Brent Mishler
Eco-physiology of UV tolerance & systematics in dryland mosses
- 2018-2019 **Graduate Student Researcher**

Department of Integrative Biology
 University of California, Berkeley
 Laboratory of Dr. Brent Mishler
The 3DMoss Project: Desiccation and Diversity in Dryland Mosses

2016

Graduate Student Researcher

Department of Geography
 University of California, Berkeley
 Laboratory of Dr. Laurel Larsen
Analysis of landscape features from RASCAL, a model of Florida everglades landscape evolution

2013-2015

Graduate Student Researcher

Department of Integrative Biology
 University of California, Berkeley
 Laboratory of Dr. Kirsten Fisher
*Sex or survival? The genetic impacts of environment and energetic trade-offs for the Mojave Desert moss *Syntrichia caninervis* (Pottiaceae)*

2009-2012

Life Health Sciences Internship

Orthopaedic Laboratories
 Indiana University School of Medicine
 Laboratory of Dr. Melissa Kacena
Characterization of C-Mpl and Pyk2 in skeletal growth and development and in bone-blood interactions

2011

Multidisciplinary Undergraduate Research Institute

Departments of Earth Sciences & Department of Anthropology
 Indiana University—Purdue University—Indianapolis
 Laboratories of Dr. Gabriel Filippelli & Dr. Jeremy J. Wilson
Analysis of the ratio of carbon to nitrogen from soil cores in a Mississippian era Native American civilization site as a marker for landscape use change

SERVICE
I. Community

- Peer reviewer: *Plant and Soil*, *American Journal of Botany*, *Annals of Botany*, *Plant Biology*, and *The Bryologist*.
- Social Media Chair: California Native Plant Society, Bryophyte Chapter, 2018-2020
- Student Representative: International Molecular Moss Science Society, 2018-present

II. University

- Curriculum Faculty Committee, Department of Integrative Biology, UCB, 2018-2020
- Diversity, Equity, & Inclusion Faculty Committee, Department of Integrative Biology, UCB, 2018-2020
- Graduate Student Orientation Committee, Department of Integrative Biology, UCB, 2018-2019
- Women in Science at Cal, Student Organization Planning Committee, UCB, 2016-2019

MENTORSHIP
Undergraduate Students

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| Dean Berkowitz, Mishler Lab, UCB | 2018-2020 |
| Jordan Jomsky, Mishler Lab, UCB | 2018-2020 |
| Shloka Reddy, Mishler Lab, UCB | 2018 |
| Heloise Carion, Mishler Lab, UCB | 2017-2018 |
| Easha Sagar, Mishler Lab, UCB | 2017-2018 |
| Brittanie Rodriguez, Fisher Lab, CSULA | 2015 |
| Katelyn Millette, Fisher Lab, CSULA | 2014 |

High School Students

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| José Adame Medina, Mishler Lab, Berkeley High School | 2019 |
| Angela Sacramento, Mishler Lab, Oakland Technical High School | 2018 |

OUTREACH

I. Media & Print

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| <i>Smithsonian Magazine</i> , article here | August 2020 |
| <i>The Guardian</i> , article here | August 2020 |
| <i>The New York Times: Trilibotes</i> , article here | July 2020 |
| <i>Berkeley News: Research Science & Environment</i> , article here | July 2020 |
| <i>Cal BioSciences Annual Newsletter</i> , article here | January 2019 |

II. Activities & Presentations

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| "10 Coolest Bryophyte Facts" presentation, Bronx Arena High School | October 2020 |
| Networking Guest, Success Suits You! Biotech Partners, Berkeley High School | January 2020 |
| Bay Area Science Festival: Celebrating Nature, University & Jepson Herbaria | November 2019 |
| Supervisory Scientist, Mission Mojave, Blueprint Earth | January 2019 |
| Cal Day, Bryophyte Station, University & Jepson Herbaria, UCB | January 2019 |
| Interview Day, Panel Member, "Life as an IB Graduate Student," UCB | 2016, 2017, 2018 |
| Cal Day, Bryophyte Station, University & Jepson Herbaria, UCB | January 2018 |
| Cal Day, Bryophytes & Ferns Station, University & Jepson Herbaria, UCB | 2016 |
| "Be a Scientist" Mentor, Community Resources for Science | 2016 |
| Logistics Volunteer, Expanding Your Horizons Conference | 2016 |
| Field Researcher, Mission Mojave, Blueprint Earth | 2014, 2015 |
| Naturalist, Marine Mammals, Indianapolis Zoo | January 2012 |
| Youth Mentor "Big Sister," Big Brothers Big Sisters of Central Indiana | 2010-2011 |

PROFESSIONAL SOCIETIES

California Native Plant Society, International Molecular Moss Society (iMOSS), American Bryological and Lichenological Society, Botanical Society of America, California Botanical Society

CODE

www.github.com/jenna-tb-ekwealor

SKILLS

Proficiency in R, Bash, Matlab, Git, & HTML. Additional experience programming in Python, Perl, & Java. Proficiency in bryophyte microscopy (dissection, sectioning, and creating permanent slides).

LANGUAGES

English (native), Spanish (limited working proficiency), Portuguese (limited working proficiency)