

# Jenna T. B. Ekwealor

## CURRICULUM VITAE

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### EDUCATION

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|--------------|--|
| 2015-Present | <b>Ph.D. Candidate</b><br>Department of Integrative Biology<br>University of California, Berkeley (UCB)<br>Laboratory of Dr. Brent Mishler                     |
| 2015         | <b>M.S. in Environmental Science, Biology Option</b><br>California State University, Los Angeles (CSULA)<br>Laboratory of Dr. Kirsten Fisher                   |
| 2012         | <b>B.S. in Biology, Minor in Chemistry</b><br>Purdue University, Indiana University—Purdue University—Indianapolis (IUPUI)<br>Laboratory of Dr. Melissa Kacena |
| 2012         | <b>B.A. in Religious Studies</b><br>Indiana University, IUPUI  |

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### PUBLICATIONS [ORCID 0000-0001-9014-8786]

6. **Ekwealor, Jenna T. B.**; Clark, Theresa A.; Dautermann, Oliver; Russell, Alexander; Ebrahimi, Sotodeh; Stark, Lloyd R.; Niyogi, Krishna K.; Mishler, Brent D. UV tolerance and sustained non-photochemical quenching in a desert moss. (Submitted to *Plant, Cell & Environment*).
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*. (Submitted to *The Plant Journal*).
4. **Ekwealor, Jenna T. B.**; Fisher, Kirsten M. Life under quartz: Hypolithic mosses in the Mojave Desert. (In Press, *PLOS ONE*).
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

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**FELLOWSHIPS & TRAINEESHIPS**

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

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**HONORS & AWARDS**

|      |  |
|------|--|
| 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 <sup>th</sup> Annual IUPUI Top 100 Outstanding Students, IUPUI      |
| 2011 | 12 <sup>th</sup> Annual IUPUI Top 100 Outstanding Students, IUPUI      |

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**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<br>Title: Collaborative Research: Dimensions: Desiccation and Diversity in Dryland Mosses<br>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)                                       |

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## CONFERENCE PRESENTATIONS

### Oral Presentations

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|------|--|
| 2020 | Botany 2020, Virtual<br>“The photosynthetic effects of the Mojave Desert sun on <i>Syntrichia caninervis</i> ”   |
| 2019 | Biocrust4, North Stradbroke Island, Australia<br>“UV tolerance in Mojave Desert mosses”  |
| 2019 | Botany 2019, Tucson, AZ, USA<br>“UV tolerance in Mojave Desert mosses”<br><i>Honorable Mention for A. J. Sharp Award</i><br><i>ABLS Student Travel Award (\$400)</i>   |
| 2019 | Bryology 2019, Madrid, Spain<br>“UV tolerance in Mojave Desert mosses”<br><i>UCB Dept. of Integrative Biology Graduate Student Research Allocations Committee Travel Award (\$250)</i>                         |
| 2018 | American Bryological and Lichenological Society Meeting, Nederland, CO, USA<br>“UV tolerance in Mojave Desert mosses”<br><i>ABLS Student Travel Award (\$600)</i>  |
| 2017 | California Botanical Society Graduate Symposium, Santa Barbara, CA, USA<br>“Adaptation, facilitation, and refugia in Mojave Desert mosses”<br><i>California Botanical Society Travel Award (\$200)</i>         |
| 2016 | Biocrust3, Moab, UT, USA<br>Molecular Frontiers Symposium<br>“Males of the Mojave Desert moss <i>Syntrichia caninervis</i> (Pottiaceae) are rare and shy”<br><i>Biocrust3 Complimentary Registration Award</i> |
| 2016 | Biocrust3, Moab, UT, USA<br>Early Career Scientists Symposium<br>“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”<br><i>Biocrust3 Complimentary Registration Award</i>   |
| 2016 | Botany 2016, Savannah, GA, USA<br>“Natural desert terraria: Characterization of hypolithic Mojave Desert moss community”<br><i>ABLS Student Travel Award (\$600)</i>   |
| 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*

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## 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)”

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## TEACHING

### Teaching Appointments

- 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**

|  |            |
|--|------------|
| 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**

|   |      |
|---|------|
| 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 |

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**RESEARCH EXPERIENCE**

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|--------------|---|
| 2015-Present | <b>Graduate Student Researcher</b><br>Department of Integrative Biology<br>University of California, Berkeley<br>Laboratory of Dr. Brent Mishler<br><i>Eco-physiology of UV tolerance &amp; systematics in dryland mosses</i>   |
| 2018-2019    | <b>Graduate Student Researcher</b><br>Department of Integrative Biology<br>University of California, Berkeley<br>Laboratory of Dr. Brent Mishler<br><i>The 3DMoss Project: Desiccation and Diversity in Dryland Mosses</i>  |
| 2016         | <b>Graduate Student Researcher</b><br>Department of Geography<br>University of California, Berkeley<br>Laboratory of Dr. Laurel Larsen<br><i>Analysis of landscape features from RASCAL, a model of Florida everglades landscape evolution</i>  |
| 2013-2015    | <b>Graduate Student Researcher</b><br>Department of Integrative Biology<br>University of California, Berkeley<br>Laboratory of Dr. Kirsten Fisher<br><i>Sex or survival? The genetic impacts of environment and energetic trade-offs for the Mojave Desert moss <i>Syntrichia caninervis</i> (Pottiaceae)</i> |
| 2009-2012    | <b>Life Health Sciences Internship</b>  |

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 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

|  |           |
|--|-----------|
| 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

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

## OUTREACH

### I. Media & Print

Cal BioSciences Annual Newsletter, article [here](#)

January 2019

## II. Activities & Presentations

|   |                  |
|---|------------------|
| Networking Guest, Success Suits You! Biotech Partners, Berkeley High School | January 2020     |
| 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        |

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## PROFESSIONAL SOCIETIES

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

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## CODE

[github.com/jenna-tb-ekwealor](https://github.com/jenna-tb-ekwealor)

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## 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).

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## LANGUAGES

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