

# ANNA CLEMENCIA GUERRERO

1. Eugene Bell Center for Regenerative Biology and Tissue Engineering at Marine Biological Laboratory
  2. Center for Biology and Society at Arizona State University (ASU)
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## EDUCATION

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<b>Arizona State University</b> , PhD in History and Philosophy of Science	<i>expected 2023</i>
<b>Arizona State University</b> , MS in Biology	<i>2019</i>
<b>Arizona State University - Barrett, the Honors College</b> , BS in Microbiology	<i>2017</i>

## APPOINTMENTS

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<b>Research Assistant</b> Marine Biological Laboratory, Eugene Bell Center for Regenerative Biology and Tissue Engineering Advisors: Drs. Karl Matlin and Jane Maienschein Topic: History and philosophy of cell biology and synthetic cell research	<i>2020–present</i>
<b>Doctoral student</b> Arizona State University, Center for Biology and Society Advisors: Drs. Jane Maienschein and Beckett Sterner Topic: History and philosophy of image creation and utility in microbiology	<i>2017–present</i>
<b>Primary Instructor</b> Arizona State University, <i>The Embryo Project Encyclopedia</i> Topic: Scientific illustration and image development course and internship	<i>2017–2020</i>
<b>Graduate researcher</b> Arizona State University, The Biodesign Institute Advisors: Drs. César Torres and Steven Hart Topic: Imaging techniques in biofilm research	<i>2018–2020</i>

## GRANTS / FELLOWSHIPS / AWARDS

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- Graduate Excellence Scholarship from The College of Liberal Arts and Sciences, ASU *2021*
- John Templeton Foundation Ideas Challenge on the Science of Purpose Winner *2020*
- National Science Foundation: Synthetic Cells and Rules of Life Grant *2020*
- National Science Foundation Graduate Research Fellowship *2019*
- Ford Foundation Pre-Doctoral Fellowship, Honorable Mention *2019*
- European Research Council IDEM Travel Grant *2019*
- Arizona State University School of Life Science RTI Award *2019*
- Arizona State University Graduate College Fellowship, Spring, Fall *2019*
- with Embryo Project Team, Hazen Education Award from the History of Science Society *2018*
- Arizona State University Moeur Award *2017*
- National Science Foundation REU Grant Recipient – Harvard Forest *2016*
- School of Life Sciences Undergraduate Research Scholar, Arizona State University *2015*
- Mayo Clinic Physicians of Tomorrow Scholar, Rochester, MN *2015*
- New American University Scholar, Arizona State University *2013*
- National Hispanic Scholar *2013*

## SELECTED PUBLICATIONS / PRESENTATIONS

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### PUBLICATIONS

- Ronai, I., Greslehner, G.P., Boem, F. *et al.* “Microbiota, symbiosis and individuality summer school” meeting report. *Microbiome* **8**, 117 (2020). <https://doi.org/10.1186/s40168-020-00898-7>.

- Guerrero, Anna, "De Monstruorum Causis, Natura et Differentiis (On the Reasons, Nature and Differences of Monsters) (1616), by Fortunio Liceti". *Embryo Project Encyclopedia* (2018-11-29). ISSN: 1940-5030 <http://embryo.asu.edu/handle/10776/13087>.
- Guerrero, Anna, "Fortunio Liceti (1577–1657)". *Embryo Project Encyclopedia* (2018-06-25). ISSN: 1940-5030 <http://embryo.asu.edu/handle/10776/13075>.

## PRESENTATIONS

- "Images and Imagining Cyborg Cells." NSF Synthetic Cells and Rules of Life Program. March 30, 2021.
- "Groupness in the History of Microbiology." Visual Cultures in Natural History, the Life Sciences, and Medicine with the Consortium for History of Science, Technology and Medicine. February 19, 2021.
- "Finding Practical Intersections between Art and Science." Natural Science for Artists and Designers course at the Emily Carr University of Art + Design. October 5, 2020.
- "What Can Drawings of Cyborg Cells Teach Us?" Cyborg Cell Working Group, NSF Synthetic Cells and Rules of Life Program. September 3, 2020.
- "How to Draw a Cyborg Cell." Cyborg Cell Working Group, NSF Synthetic Cells and Rules of Life Program. July 29, 2020.
- with Dr. Christy Spackman. "Disrupting Lab Work: Exploring the Role of Art in the Practice and Communication of Biology." Life Science Ethics Series at Arizona State University. October 30, 2019.
- "How Images Shape the Concept of Regeneration in Microbial Communities." International Society for the History, Philosophy, and Social Studies of Biology Conference. July 11, 2019.
- "Geobacter pH gradient dynamics: Optimizing imaging on SP8 confocal microscope." Arizona State University, School of Life Sciences Microscopy Course. November 27, 2018
- "Drawing Conclusions: The Art of Forests over Time." Harvard Forest Summer Symposium; August 2016; Petersham, MA.

## RELEVANT RESEARCH ACTIVITY

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### Research Assistant

*August 2020–present*

Eugene Bell Center for Regenerative Biology and Tissue Engineering, Marine Biological Laboratory

- *Roles:* Create visual history for the invention of cell theory and turn into public exhibit; develop and execute computational experiments for verifying and discovering episodes in history of cell biology
- *Forthcoming Products:* publication; public exhibit in Lillie Library; lectures with scientists and students

### Graduate Student Trainee

*July 2020–present*

National Science Foundation: Synthetic Cells and Rules of Life Grant

- *Roles:* Lead cell biologists and engineers from multiple research institutions in conceptualizing ideas about what it means to create a "cyborg cell"; teach researchers how and when choice is involved in designing synthetic cells; develop communication strategies for other scientists and the public
- *Outcomes:* Presentation for NSF all-hands meeting; individual award from John Templeton Foundation
- *Forthcoming Products:* Fall seminar at Marine Biological Laboratory; "cyborg" cell

### Graduate Researcher

*August 2018– March 2020*

Arizona State University, The Biodesign Institute

- *Role:* Assist in creating and troubleshooting fluorescent confocal microscopy methods for measuring pH gradients in *Geobacter* biofilms in order to build more efficient fuel cells
- *Outcomes:* Presentations for microscopists and biofilm researchers; chapter in Steven Hart's biofilm engineering dissertation which asserts that all previously published confocal photomicrographs of *Geobacter* biofilms showing pH gradients are actually showing an artifact of fluorescence

### Summer Fellow – NSF Research Experience for Undergraduates

*May 2016–August 2016*

Harvard Forest, Harvard University

- *Role:* Use field work, archival work, and artistic work to communicate how forests develop through deep time and how human experience of time influences scientific research methods
- *Outcomes:* six original paintings for public exhibit in Harvard Forest Fisher Museum; one public lecture; original illustration in *Dendroecology: Tree-Ring Analyses Applied to Ecological Studies*. Springer, 2017.