

Brian M. Castellano, Ph.D. (any pronouns)

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Education, Research and Selected Awards

Ph.D. in Molecular and Cell Biology, University of California - Berkeley, Dec. 2017.

Dissertation Project: *Sterol-dependent regulation of mTORC1 activation at the lysosomal surface*

- Graduating Honors: Inaugural Cris Alvaro Memorial Prize for Scientific and DEI Excellence
- 2013-2017 Howard Hughes Medical Institute (HHMI) Gilliam Fellowship for Advanced Study
- 2014-2015 Outstanding Graduate Student Instructor Award

B.S. in Chemistry - Concentration in Biochemistry, San Jose State University, May 2013.

Research Project: *Experimental support for a desolvation energy term in governing equations for binding equilibria*

- Graduating Honors: Magna Cum Laude
- 2012-2013 National Institutes of Health (NIH) Maximizing Access to Research Careers Fellowship
- 2010-2012 HHMI SCRIBE Fellowship

Massachusetts Institute of Technology Dept. of Chemistry June – Aug. 2012 & 2013

Research Project: *Crystallographic studies of cyclization domains in natural product biosynthesis*

- 2012 HHMI ExROP and 2013 HHMI Capstone Scholarships

Work Experience

Genentech US Biologics Technical Development (PTDU)

Cell Culture and Bioprocessing Operations

Postdoctoral Researcher
Dec. 2018 – Present

Research Project: *Investigating signaling pathways important to biopharmaceutical processes*

- Utilizing cell-based assays to improve and develop our bioprocessing platforms to increase efficiency and productivity.
- Current results indicate that growth signaling and protein folding interact and are modulated through our bioprocess via unknown mechanisms currently being investigated.
- Manuscripts and potential patent in process.
- Invited speaker to 2 universities for combined 60+ attendees
- Member of the Postdoctoral Committee whose goal is to improve and develop the Postdoctoral Program at Genentech through events, workshops and community building.

Publications

- Louie S*, Lakkyreddy J*, Castellano BM *et al.* *Insulin degrading enzyme (IDE) expressed by Chinese Hamster Ovary (CHO) cells is responsible for degradation of insulin in culture media.* **J. Biotechnol** (2020) 320, 44-9. DOI: 10.1016/j.jbiotec.2020.04.016
- Castellano BM*, Thelen AM* *et al.* *Lysosomal cholesterol activates mTORC1 via an SLC38A9-Niemann-Pick C1 signaling complex.* **Science** (2017) 355(6331), 1306-11. DOI: 10.1126/science.aag1417
- De Leon JA*, Qiu J*... Castellano BM *et al.* *Positive and negative regulation of the master metabolic regulator mTORC1 by two families of Legionella pneumophila effectors.* **Cell Reports** (2017) 21(8), 2031-8. DOI: 10.1016/j.celrep.2017.10.088
- Okosun J*, Wolfson RL*... Castellano BM *et al.* *Recurrent mTORC1-activating RRAGC mutations in follicular lymphoma.* **Nat. Genet** (2016) 48(2), 183-8. DOI: 1038/ng.3473
- Castellano BM & Eggers DK. *Experimental support for desolvation energy term in governing equations for binding equilibria.* **J. Phys. Chem. B** (2013) 117, 8180-8. DOI: 10.1021/jp402632a

Selected Oral Presentations (3 of 8, Full List Here)

- *Signaling pathways for cellular growth and personal development.* Castellano BM.
 - +University of Santa Cruz oSTEM & SACNAS Joint Seminar. Santa Cruz, CA. Jan. 16, 2020.
 - +San Francisco State University Colloquium in Molecular, Cell and Microbiology. San Francisco, CA. Sept. 19, 2019.
- *Cholesterol activates mTORC1 via a lysosomal signaling complex.* Castellano BM*, Thelen AM* *et al.* 2017 UC Berkeley's MCB – Biochemistry, Biophysics and Structural Biology Annual Retreat. Monterey, CA. Jan. 8-10, 2017.

* = Equal contribution + = Invited speaker ■ = Poster Prize Award

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Selected Diversity, Equity and Inclusion (DEI) and Organizational Experience

Startup Biotech Company	
Diversity, Equity and Inclusion Consultant June 2020 - Present	<ul style="list-style-type: none">• Advise the executive team on DEI areas for a CB Insights 2020 150 Most Innovative Digital Health Startup company (~40 people)• Draft public statements, mission values and enhance recruiting and hiring guidelines through a DEI lens• Identify and launch DEI initiatives for the company in three different areas: (1) organizational, (2) internal and (3) external. Initiatives include, but are not limited to: cultural dialogue circles, external community outreach efforts, company DEI interview survey and tracking company DEI statistics
Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)	
Local Chapter Board member and Co-Lead Jan. 2011 - Present	Genentech Professional Chapter Dec. 2018 – Present <ul style="list-style-type: none">• Organized and facilitated 4 workshops with combined 150+ attendees both internal and external to Genentech. Outcome: one workshop identified and reported to leadership challenges for BIPOC employees to advance in four different types of roles: (1) functional expert, (2) scientific expert, (3) people manager and (4) senior leader UC Berkeley Graduate Student Chapter Aug. 2013 – Dec. 2017 <ul style="list-style-type: none">• Organized 15+ events including: science writing workshops, community college visitations, SACNAS chapters visitations, Pow Wow tablings San Jose State University Student Chapter Jan. 2011 – May 2013 <ul style="list-style-type: none">• Organized 6+ events including: park cleanups, Pow Wow tablings
Transforming Academic Ecosystems (TAE) Consortium	
Founding Member Feb. 2020 - Present	<ul style="list-style-type: none">• HHMI Gilliam Fellows-led advocacy group for mental health awareness in the following areas: (1) resource accessibility, (2) mental health stigma in URM groups and (3) sustained and proactive dialogue
UC Berkeley Center for Educational Partnerships (CEP)	
UCB-NIH Bridges to Baccalaureate Program	
Program Consultant Jan. 2016 – Aug. 2018	<ul style="list-style-type: none">• Reimagined and implemented new mentor selection process by soliciting applications from junior mentors directly instead of recruiting at the senior mentor level. Outcome: improved trainee outcomes as mentors are more engaged and interested in developing mentorship capabilities• Facilitated 2 mentor training sessions for 16 junior mentors
Program Coordinator June 2016 – Aug. 2016	<ul style="list-style-type: none">• Guided a cohort of 16 community college students through a summer research program at UC Berkeley• Utilized conflict resolution skills between students and mentors
NIH Office of Intramural Training and Education (OITE)	
High School Scientific Training and Enrichment Program (HiSTEP)	
Amgen-NIH Educational Teaching Fellow June 2017 – Aug. 2017	<ul style="list-style-type: none">• Education and career-oriented mentorship for rising high school seniors from low-income schools in the Washington DC area• Taught students introductory biology and personal development skills through lecture and lab-based modules at the NIH campus
UC Berkeley Department of Molecular and Cell Biology (UCB MCB)	
Graduate Student Recruitment Representative Aug. 2013 – Dec. 2017	<ul style="list-style-type: none">• Reviewed and assessed graduate student applications on the admissions committee• Organized and advised annual graduate student recruitment visits• Recruited undergraduates for internships and graduate programs at 5 national conferences
Amgen Summer Program at UC Berkeley	
Graduate Student Mentor June 2014 – Aug. 2014	<ul style="list-style-type: none">• Education and career-oriented mentorship for six students through a summer undergraduate research program• Moderated scientific and professional development discussions as well as one-on-one meetings with each student on a biweekly basis• Utilized conflict resolution skills between trainees and mentors