GABRIELA LOMELI

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EDUCATION

8/18 – present **University of California, Berkeley/ San Francisco**
- *PhD, Bioengineering*, anticipated May 2023 (GPA: 4.0/4.0)
- National Science Foundation Graduate Research Fellow
- GEM Associate Fellow
- Advisor: Dr. Amy E. Herr
- Activities: Bioengineering Association of Students, Latino/a Association of Graduate Students in Engineering and Science, Graduate Women Engineers

9/14 – 6/18 **Stanford University**
- *BS, Chemical Engineering,* 2018 (GPA: 3.9/4.0)
- *Minor, German Studies*, 2018
- Activities: Tau Beta Pi Engineering Honor Society, Society of Latino Engineers, Society of Women Engineers, American Institute of Chemical Engineers, Ritmo (Latin Dance Group), Taekwondo Club

RESEARCH AND ENGINEERING EXPERIENCE

5/19 – present **Graduate Student Researcher**, University of California, Berkeley
Faculty Mentor: Dr. Amy E. Herr
- Graduate Researcher: Research towards increasing multiplexed protein detection in single cells by Multiplexed Ion Beam Imaging (MIBI) of single-cell protein separations; Study of oncoprotein isoform heterogeneity in HER2-positive breast cancer cells via single-cell isoelectric focusing towards better understanding of therapeutic response in cells expressing truncated HER2 isoforms
- Safety Officer: Coordinate with EH&S campus staff to ensure lab processes follow chemical and biological safety guidelines
- Rotation Project: Developed a method for making gradient pore size polyacrylamide gels

3/19 - 5/19 **Graduate Rotation Student**, University of California, Berkeley
Faculty Mentor: Dr. Aaron Streets
- Rotation Project: Investigated the use of hydrogel beads for single-cell encapsulation and sequencing

9/18 - 11/18 **Graduate Rotation Student**, University of California, Berkeley
Faculty Mentor: Dr. Phillip Messersmith
- Rotation Project: Explored the role of albumin as an endogenous drug carrier

6/17 – 9/17 **Analytical Operations Intern**, Genentech, Inc., South San Francisco, CA
- Optimized the protocol for imaged capillary isoelectric focusing (iCIEF)
- Collected and analyzed chromatography data for use in bioprocess development
- Performed maintenance for high-performance liquid chromatography instruments
- Awarded position in the Genentech Leader Intern Exchange Program (gLINX)

12/14 – 12/16 **Process Monitoring Intern**, Stanford Nanofabrication Facility
- Performed photolithography and etching on silicon wafers in a class 100 cleanroom
- Acquired regular etch rate and selectivity data on dry etching tools to track tool performance
- Wrote qualification instructions for dry etching tools and trained new interns

6/15 - 8/16 **Undergraduate Research Assistant**, Alexander Dunn Research Group
- Improved the lab's three-color immunofluorescence microscopy technique with image processing improvements
- Selected two promising protein hits (PINCH1 and ARF4) from a proteomics screen and studied how they bind differentially to paxillin in MCF10a cells before and after epithelial-to-mesenchymal transition (EMT)

1/14 - 5/14 **Subsystems Engineering Intern**, *Northrop Grumman Corporation, Palmdale, CA*

- Modeled subsystem hardware and the electrical cables and tubes that attach to it using the computer-aided design software CATIA

TEACHING

9/15 – 6/18 **Course Assistant**, Computers and Photography, *Stanford University*

- Organized class lectures to deliver valuable content in creative ways
- Led photography labs on wide angle and macro photography

LEADERSHIP AND INVOLVEMENT

6/20 – present **LAGSES Corporate Liaison**, *UC Berkeley*

- Planned networking opportunities for the Latino/a Association of Graduate Students in Engineering and Science

12/19 – present **BEAST Industry/Alumni Liaison**, *UC Berkeley and UCSF*

- Planned networking opportunities for the Bioengineering Association of Students

6/19 – present **Bay Area Graduate Pathways in STEM (GPS)**, *UC Berkeley and Stanford University*

- GPS is a one-day conference that aims to inspire diverse talent to be the next generation of leaders through advanced degrees in STEM fields
- Speaker Recruitment Chair (2019 & 2020): Recruited ~25 speakers from industry and academia to be Keynote speakers, workshop leaders, and panelists
- Mentor (2018): Mentored several students through the graduate school application process

FELLOWSHIPS

- NSF Graduate Research Fellowship (2018)
- GEM University Fellowship (2018)

AWARDS AND HONORS

- Brodie Scholar in Bioengineering Award. UC Berkeley Department of Bioengineering (2020)
- NorCal Section AIChE Senior Award (2018)
- Michel Boudart Academic Excellence Award. Stanford University (2018)
- Genentech US Biologics Technical Development Outstanding Junior Award (2016)
- Vice Provost for Undergraduate Education Summer Research Award. Stanford University (2015 and 2016)

SELECTED POSTERS

- **G. Lomeli**, M. Bosse, S.C. Bendall, M. Angelo, A.E. Herr "Detection of Proteoforms from Single Cells by Multiplexed Ion Beam Imaging." Presented at the 24th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2020) and at the UC Berkeley/UCSF Annual BioE Retreat (2020).
- **G. Lomeli**, H.M. Robison, M. Bosse, M. Angelo, A.E. Herr "Combining mass spectrometry and electrophoresis for the multiplexed detection of proteoforms." Presented at the UC Berkeley/UCSF Annual BioE Retreat (2019).
- **G. Lomeli**, S. Tan, A.H. Mekhdjian, A.C. Chang and A.R. Dunn. "Exploring novel paxillin interactors before and after EMT through immunofluorescence microscopy." Presented at the Stanford Summer Engineering Academy Closing Dinner and Ceremony (2016), Stanford Chemical Engineering REU Poster Session (2016), and Stanford School of Engineering Opportunity Job Fair Reception (2016).
- **G. Lomeli**, A.H. Mekhdjian, A.C. Chang and A.R. Dunn. "Enhancing three-color fluorescence spectroscopy with imaging and process improvements." Presented at the Stanford Summer Engineering Academy Closing Dinner and Ceremony (2015) and Stanford Chemical Engineering REU Poster Session (2015).

SKILLS / PROFICIENCIES

- **Languages:** Bilingual in English and Spanish
- **Programming Languages:** Python • Java • C++
- **Software Tools:** Microsoft Word, PowerPoint, Excel, and Publisher • SolidWorks • CATIA • MATLAB • ImageJ • COMSOL • LaTeX • R
- **Lab Techniques:** Microfabrication, fluorescence and confocal spectroscopy, mammalian and bacterial cell culture, polyacrylamide gel synthesis, DNA purification, circular dichroism spectroscopy, high-performance liquid chromatography, imaged capillary isoelectric focusing, gas chromatography – mass spectrometry, multiplexed ion beam imaging

PROFESSIONAL MEMBERSHIPS AND HONOR SOCIETIES

- American Institute of Chemical Engineers (AIChE)
- Tau Beta Pi Engineering Honor Society
- Delta Phi Alpha National German Honorary Society