



Lacramioara Bintu

Assistant Professor of Bioengineering

 NIH Biosketch available Online

Bio

BIO

Lacra Bintu is an Assistant Professor in the Bioengineering Department at Stanford. Her lab performs single-cell and high-throughput measurements of chromatin and gene regulation dynamics, and uses these data to develop predictive models and improve mammalian cell engineering.

Lacra started working on the theory of gene regulation as an undergraduate with Jané Kondev from Brandeis University and Rob Phillips from Caltech. As a Physics PhD student in the lab of Carlos Bustamante at U.C. Berkeley, she used single-molecule methods to tease apart the molecular mechanisms of transcription through nucleosomes. She transitioned to studying the dynamics of epigenetic regulation in live cells during her postdoctoral fellowship with Michael Elowitz at Caltech.

ACADEMIC APPOINTMENTS

- Assistant Professor, Bioengineering
- Member, Bio-X

HONORS AND AWARDS

- Maximizing Investigators' Research Award, NIH-NIGMS (2018-2023)
- Career Award at the Scientific Interface, Burroughs Wellcome Fund (2015-2020)
- Postdoctoral Fellowship, Jane Coffin Childs Memorial Fund for Medical Research (2011-2014)
- Beckman Fellowship, California Institute of Technology (2011-2014)
- Harold M. Weintraub Graduate Student Award, Fred Hutchinson Center (2011)
- Outstanding Graduate Student Instructor Award, University of California, Berkeley (2006)
- Doris Brewer Cohen Endowment Award for best senior thesis, Brandeis University (2005)
- Wien International Scholarship, Brandeis University (2001-2005)

PROFESSIONAL EDUCATION

- Postdoctoral Fellow, California Institute of Technology , Biology and Biological Engineering (2016)
- Ph.D., University of California, Berkeley , Physics (2010)
- B.S., Brandeis University , Physics, Mathematics, Neuroscience (2005)

LINKS

- Bintu Lab Site: <https://bintulab.com/>

Teaching

COURSES

2021-22

- Molecular and Cellular Bioengineering: BIOE 300A (Win)
- Promoting Effective and Equitable Teaching in Bioengineering: BIOE 296 (Spr)

2020-21

- Molecular and Cellular Bioengineering: BIOE 300A (Win)

2019-20

- Molecular and Cellular Bioengineering: BIOE 300A (Win)

2018-19

- Molecular and Cellular Bioengineering: BIOE 300A (Win)
- Molecular and Cellular Engineering Lab: BIOE 301A (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Nora Enright, Jesse Gibson, Mingxin Gu, Renee Hastings, Stevan Jeknic, Yuxi Ke, Thomas Lozanoski, Michael Montgomery, Sedona Murphy, Naomi Pacalin, Jingyi Wei, Aaron Wilk, Xinzhi Zou

Postdoctoral Faculty Sponsor

Taihei Fujimori

Doctoral Dissertation Advisor (AC)

Cecelia Andrews, Michaela Hinks, Connor Ludwig, Adi Mukund, Joydeb Sinha

Master's Program Advisor

Masha Alekseeva

Doctoral Dissertation Co-Advisor (AC)

Nicole DelRosso, Peter Suzuki, Joshua Tycko

Doctoral (Program)

Beatriz Atsavapranee, Aris Kare, Yuxi Ke, Connor Ludwig, Kasra Naftchi-Ardebili, Taylor Nguyen, Marija Pavlovic, Lara Weed

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)
- Biophysics (Phd Program)

Publications

PUBLICATIONS

- **Nanobody-mediated control of gene expression and epigenetic memory.** *Nature communications*
Van, M. V., Fujimori, T. n., Bintu, L. n.
2021; 12 (1): 537
- **High-Throughput Discovery and Characterization of Human Transcriptional Effectors.** *Cell*

Tycko, J. n., DelRosso, N. n., Hess, G. T., Aradhana, n. n., Banerjee, A. n., Mukund, A. n., Van, M. V., Ego, B. K., Yao, D. n., Spees, K. n., Suzuki, P. n., Marinov, G. K., Kundaje, et al
2020

- **Mapping chromatin modifications at the single cell level.** *Development (Cambridge, England)*

Ludwig, C. H., Bintu, L. n.
2019; 146 (12)

- **Mitigation of off-target toxicity in CRISPR-Cas9 screens for essential non-coding elements.** *Nature communications*

Tycko, J. n., Wainberg, M. n., Marinov, G. K., Ursu, O. n., Hess, G. T., Ego, B. K., Aradhana, n. n., Li, A. n., Truong, A. n., Trevino, A. E., Spees, K. n., Yao, D. n., Kaplow, et al
2019; 10 (1): 4063

- **Advancing towards a global mammalian gene regulation model through single-cell analysis and synthetic biology** *Current Opinion in Biomedical Engineering*

Tycko, J., Van, M. V., Elowitz, M. B., Bintu, L.
2017; 4: 174-193