

# Stanford

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## Onn Brandman

Assistant Professor of Biochemistry

 Curriculum Vitae available Online

### Bio

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#### ACADEMIC APPOINTMENTS

- Assistant Professor, Biochemistry
- Member, Bio-X
- Member, Stanford Cancer Institute

#### LINKS

- <http://web.stanford.edu/~onn/>: <http://web.stanford.edu/~onn/>

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

The Brandman Lab studies how cells sense and respond to stress. We employ an integrated set of techniques including single cell analysis, mathematical modeling, genomics, structural studies, and in vitro assays.

### Teaching

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#### COURSES

##### 2019-20

- Advanced Cell Biology: BIO 214, BIOC 224, MCP 221 (Win)
- Biochemistry Bootcamp: BIOC 202 (Aut)

##### 2018-19

- Advanced Cell Biology: BIO 214, BIOC 224, MCP 221 (Win)
- Biochemistry Bootcamp: BIOC 202 (Aut)

##### 2017-18

- Advanced Cell Biology: BIO 214, BIOC 224, MCP 221 (Win)
- Biochemistry Bootcamp: BIOC 202 (Aut)
- Developing an Original Research Proposal: BIOC 360 (Win)

##### 2016-17

- Biochemistry Bootcamp: BIOC 202 (Aut)
- Developing an Original Research Proposal: BIOC 360 (Win, Spr)

## STANFORD ADVISEES

### Doctoral Dissertation Reader (AC)

Yilin Fan, Maia Kinnebrew, Chandni Patel, Shizuka Yamada

### Orals Chair

Jonathan Mares

### Postdoctoral Faculty Sponsor

Danish Khan

### Doctoral Dissertation Advisor (AC)

Brian Alford, Laura Persson, Jeremy Work

### Postdoctoral Research Mentor

Danish Khan

### Doctoral (Program)

Laura Persson

## GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biochemistry (Phd Program)
- Biophysics (Phd Program)

## Publications

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### PUBLICATIONS

- **Viscoadaptation Controls Diffusion and Intracellular Reaction Rates in Response to Heat and Energy Availability**  
Persson, L., Ambati, V., Brandman, O.  
CELL PRESS.2020: 134A
- **Aggregation of CAT tails blocks their degradation and causes proteotoxicity in *S. cerevisiae*.** *PloS one*  
Sitron, C. S., Park, J. H., Giafaglione, J. M., Brandman, O.  
2020; 15 (1): e0227841
- **MISTERMINATE Mechanistically Links Mitochondrial Dysfunction with Proteostasis Failure.** *Molecular cell*  
Wu, Z., Tantray, I., Lim, J., Chen, S., Li, Y., Davis, Z., Sitron, C., Dong, J., Gispert, S., Auburger, G., Brandman, O., Bi, X., Snyder, et al  
2019
- **CAT tails drive degradation of stalled polypeptides on and off the ribosome.** *Nature structural & molecular biology*  
Sitron, C. S., Brandman, O.  
2019
- **Finding the Right Finish Line in Eukaryotic Transcription.** *Biochemistry*  
Persson, L., Brandman, O.  
2019
- **Quantification of Hsp90 availability reveals differential coupling to the heat shock response.** *The Journal of cell biology*  
Alford, B. D., Brandman, O.  
2018
- **Asc1, Hel2, and Slh1 couple translation arrest to nascent chain degradation.** *RNA (New York, N.Y.)*  
Sitron, C. S., Park, J. H., Brandman, O.  
2017

- **Ribosome-associated protein quality control.** *Nature structural & molecular biology*  
Brandman, O., Hegde, R. S.  
2016; 23 (1): 7–15
- **Protein synthesis. Rqc2p and 60S ribosomal subunits mediate mRNA-independent elongation of nascent chains.** *Science*  
Shen, P. S., Park, J., Qin, Y., Li, X., Parsawar, K., Larson, M. H., Cox, J., Cheng, Y., Lambowitz, A. M., Weissman, J. S., Brandman, O., Frost, A.  
2015; 347 (6217): 75-78
- **A Ribosome-Bound Quality Control Complex Triggers Degradation of Nascent Peptides and Signals Translation Stress** *CELL*  
Brandman, O., Stewart-Ornstein, J., Wong, D., Larson, A., Williams, C. C., Li, G., Zhou, S., King, D., Shen, P. S., Weibezahn, J., Dunn, J. G., Rouskin, S., Inada, et al  
2012; 151 (5): 1042-1054
- **Feedback loops shape cellular signals in space and time** *SCIENCE*  
Brandman, O., Meyer, T.  
2008; 322 (5900): 390-395
- **STIM2 is a feedback regulator that stabilizes basal cytosolic and endoplasmic reticulum Ca<sup>2+</sup> levels** *CELL*  
Brandman, O., Liou, J., Park, W. S., Meyer, T.  
2007; 131 (7): 1327-1339
- **Interlinked fast and slow positive feedback loops drive reliable cell decisions** *SCIENCE*  
Brandman, O., Ferrett, J. E., Li, R., Meyer, T.  
2005; 310 (5747): 496-498
- **Protein evolution in the context of Drosophila development** *JOURNAL OF MOLECULAR EVOLUTION*  
Davis, J. C., Brandman, O., Petrov, D. A.  
2005; 60 (6): 774-U42