

# Jonah E. Einson

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## EDUCATION

**Columbia University:** New York, NY Fall 2017 - Current  
*PhD Student:* Biomedical Informatics  
*Advisor:* Tuuli Lappalainen

**University of Massachusetts:** Amherst, MA Fall 2013 - Spring 2017  
*Bachelor of Science:* Biochemistry and Molecular Biology *Cum Laude*  
*Bachelor of Science:* Mathematics - Statistics  
Commonwealth Honors College

## RESEARCH EXPERIENCE

**Department of Systems Biology, New York Genome Center, Lappalainen Lab**  
*Summer 2018 - Present*  
Tested an allele specific expression based approach for discovering rare genetic variants with regulatory effects. Currently developing tools to study RNA splicing as a modifier of rare variant penetrance.

**Department of Systems Biology, Rabadan Lab, Columbia University**  
*Rotation Student - Spring 2018*  
Investigated viruses in the peripheral T-Cell lymphoma microenvironment, through genomic signatures.

**Department of Systems Biology, Vitkup Lab, Columbia University**  
*Rotation Student - Fall 2017*  
Studied the ecological dynamics of the human microbiome.

**Department of Food Science, Sela Lab, UMass Amherst**  
*Fall 2014 - Spring 2017*  
Conducted independent research in microbial ecology, genomics, and food related human health.

## PUBLICATIONS

**Jonah E. Einson\***, Asha Rani\*, Xiaomeng You, Clifton L. Randell, Allison A. Rodriguez, Tammy Barnaba, Mark K. Mammel, Michael L. Kotewicz, Christopher A. Elkins, David A. Sela, "A vegetable fermentation facility hosts distinct microbiomes reflecting the production environment," *Applied Environmental Microbiology*

\*Co first author

Xiaomeng You, **Jonah Einson**, Cynthia Lopez-Peña, Mingyue Song, Hang Xiao, Julian McClements, David Sela, "Food-grade cationic antimicrobial  $\epsilon$ -polylysine transiently alters the gut microbial community and predicted metagenome function in CD-1 mice," *npj Science of Food*

## CAPSTONE THESIS

**J. Einson**, X. You, C. Randell, A. Rodriguez, M. Kotewicz, C. Elkins, M. Mammel, C. Tartera, T. Barnaba, A. Kinchla, D. Sela, "The Environmental Microbiomes of an Industrial Food Fermentation Facility," Undergraduate Research Conference, University of Massachusetts, Amherst MA, April 2017

## SELECTED POSTERS

**J. Einson**, P. Mohammadi, S. Castel, T. Lappalainen, "An allele specific expression based approach for functional rare variant discovery," Columbia University Department of Biomedical Informatics Fall Retreat, New York NY, September 2018

**J. Einson**, X. You, C. Randell, A. Rodriguez, M. Kotewicz, C. Elkins, M. Mammel, C. Tartera, T. Barnaba, A. Kinchla, D. Sela, "The Environmental Microbiomes of an Industrial Food Fermentation Facility," Strategic Research Alliance Exposition, University of Massachusetts, Amherst MA, April 2017

**J. Einson**, X. You, C. Randell, A. Rodriguez, M. Kotewicz, C. Elkins, A. Kinchla, D. Sela, "The Use of Next-Generation Sequencing to Study Microbial Ecology in Industrial Food Production," CAFE Summer Scholars Poster Session, Amherst MA, September 2016

**J. Einson**, X. You, H. Klein, A. Rodriguez, C. Randell, M. Bartlett, D. Sela, "Phyllosphere Microbial Ecology of Succulent Plants in a Greenhouse Environment," ASM Microbe Meeting, Boston MA, June 2016

## TEACHING EXPERIENCE

**Teaching Assistant**  
*Fall 2018*

BINF G4001  
New York, NY

Scheduled speakers and graded essays for *Introduction to Computer Applications in Healthcare and Biomedicine*, a course designed to introduce students to the field of biomedical informatics.

**Teaching Assistant**  
*Fall 2016*

Biochem 526  
Amherst, MA

Assisted running a senior biochemistry lab course. Responsibilities included conducting prep work, aiding in experimental design, and reviewing students' writing.

**Supplemental Instruction Leader**  
*Spring 2014 - Fall 2016*

UMass Learning Resource Center  
Amherst, MA

Attended classes and held biweekly review sessions for Multivariate Calculus.

## AWARDS AND SCHOLARSHIPS

**CAFE Summer Scholars Program** *Summer 2016* A program directed by the Center for Agriculture, Food, and the Environment at UMass that provides students an opportunity to conduct research in a mentor's lab for the summer.

**American Society for Microbiology Undergraduate Research Fellowship**

*Summer 2015* A national fellowship awarded to an undergraduate wishing to pursue a Ph.D. Included poster presentation and capstone program at the ASM Microbe Meeting, June 2016.

**Research Assistant Fellowship** *Spring 2016, Fall 2016* A grant presented by Commonwealth Honors College, to give a student the opportunity to explore independent research under the guidance of a faculty sponsor.

## PROFESSIONAL MEMBERSHIPS

American Medical Informatics Association

Phi Kappa Phi Honors Society