Tamas L. Nagy

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Education

2015— Graduate student, Biomedical Informatics, University of California, San Francisco

2011—2015 B.S. in Chemistry, B.S. in Mathematics, University of Kentucky, Lexington

Research Interests

Systems Biology & Computational Biology; Machine Vision; Cell-to-Cell Heterogeneity and Cell Decision Making; Data Visualization

Awards & Grants

2017 **Graduate Division TA Award**, University of California, San Francisco

2017 **Moritz-Heyman Discovery Fellow**, University of California, San Francisco

2015 **NSF Graduate Research Fellow**, National Science Foundation

2014 **Undergraduate Research Abroad Scholar** w/Lucas Pelkmans, University of Zurich

2013 **AMGEN/CRSB Fellow** w/Jennifer Doudna, University of California, Berkeley

2012 **Chellgren Fellow**, University of Kentucky

2011 **Otis A. Singletary Scholar**, University of Kentucky (Tuition, Board, & stipend)

Publications

Saha, S., **Nagy, T. L.** & Weiner, O. D. Joining forces: crosstalk between biochemical signalling and physical forces orchestrates cellular polarity and dynamics. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 373, (2018). https://doi.org/10.1098/rstb.2017.0145

Nagy, T. & Kampmann, M. CRISPulator: a discrete simulation tool for pooled genetic screens. *BMC Bioinformatics* 18, 347 (2017). https://doi.org/10.1186/s12859-017-1759-9

Webb, S., **Nagy, T.**, Moseley, H., Fried, M. & Dutch, R. E. Hendra virus fusion protein transmembrane domain contributes to pre-fusion protein stability. *J. Biol. Chem.* (2017). https://doi.org/10.1074/jbc.M117.777235

Software

I develop or maintain the following open-source libraries:

- `Gadfly.jl`: Premier grammar of graphics library in the Julia language
- `Weave.jl`: Literate programming environment for Julia; generate reproducible scientific reports
- `Crispulator.jl`: Simulation tool for designing pooled CRISPR screens
- `OMETIFF.jl`: Read and interact with high-dimensional images
- `jekyll-lab-notebook`: Simple and flexible electronic lab notebook based on the Jekyll static site generator

Talks & Posters

2019 "Dissecting the mechanistic basis of the chemoattractant-induced volume increase in neutrophils", 2019 Gordon Research Conference on Directed Cell Migration, Galveston, TX

2018 "Dissecting the mechanistic basis of the chemoattractant-induced volume increase in neutrophils", 2018 Ion Channels & Immunity Symposium, NYU Langone Health, New York City, NY

2018 "Active control of cell volume during immune cell migration", 2018 Training Grantees Meeting, National Institute of Biomedical Imaging and Bioengineering, Bethesda, MD

2016 "Leveraging CRISPR for Precision Biology", Workshop with Jacob Corn and Martin Kampmann, American Society for Cell Biology Annual Meeting, San Francisco, CA

2014 "Investigating the Expanding Role of Transmembrane Domains in Enveloped Virus Entry," Bioinformatics Summit, UT-KBRIN, Lake Barkley, KY

2014 "Investigating Common Transmembrane Motifs in Enveloped Virus Entry," National Conference of Undergraduate Research, Lexington, KY

2013 "Engineered CRISPR/Cas-based System for RNA-guided, Tag-less, Spatiotemporal Imaging of Endogeneous RNA," AMGEN symposium, Berkeley, CA

Service

2018 Teaching Assistant, Algorithms, University of California, San Francisco

2017 Teaching Assistant, Algorithms, University of California, San Francisco

2014 Teaching Assistant, Organic Chemistry II, University of Kentucky

2013 Teaching Assistant, Organic Chemistry I, University of Kentucky

2013—2014 Public Relations, Society for the Promotion of Undergraduate Research (SPUR)

References (Alphabetical)

Steven J. Altschuler, UCSF, steven.altschuler [at] ucsf.edu

Jennifer A. Doudna, UC Berkeley, doudna [at] berkeley.edu

Rebecca E. Dutch, University of Kentucky, rdutc2 [at] uky.edu

Jerzy Jaromczyk, University of Kentucky, jurek [at] cs.uky.edu

Martin Kampmann, UCSF, martin.kampmann [at] ucsf.edu

Hunter Moseley, University of Kentucky, hunter.moseley [at] uky.edu

Lucas Pelkmans, University of Zurich, lucas.pelkmans [at] imls.uzh.ch

Orion Weiner, UCSF, orion.weiner [at] ucsf.edu

Lani Wu, UCSF, lani.wu [at] ucsf.edu

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