Christopher J. Benway

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Summary

I am currently a post-doctoral researcher at Brigham and Women's Hospital and Harvard Medical School Channing Division of Network Medicine working on genetics and functional genomics of chronic obstructive pulmonary disease (COPD). My current research involves genome-wide association studies, statistical genetics and fine-mapping, transcriptomics, and chromatin accessibility assays. During my Ph.D. in the lab of John Iacomini at Tufts University Sackler School of Biomedical Sciences I worked on *in vivo* and cell-based models of calcineurin inhibitor nephrotoxicity, using transcriptomics and sequencing methods to detect *in vivo* miRNA:mRNA targeting. In prior work as a research technician I have largely worked on molecular and cell biology projects related to immune function, ER stress, gene therapy, and high throughput chemical biology screens.

Education

2011–2017	Ph.D. in Genetics, Tufts University, Boston, MA. PhD thesis: Defining a microRNA-mRNA targetome for calcineurin inhibitor induced nephrotoxicity.
2004–2008	A.B. in Biology, Harvard University, Cambridge, MA.

Past Scientific Positions

2017–2019	**Post-doctoral fellow** Brigham and Women's Hospital and Harvard Medical School, Channing Division of Network Medicine, Boston, MA. Advisers: Edwin K. Silverman, M.D., Ph.D. and Xiaobo Zhou, Ph.D.
2011–2017	**Graduate Research Assistant** Tufts University Sackler School of Biomedical Sciences, Department of Developmental, Molecular and Chemical Biology, Boston, MA. Adviser: John Iacomini, Ph.D.
2009–2011	**Research Assistant** Harvard Medical School, Department of Genetics, Boston, MA. Richard C. Mulligan, Ph.D. Laboratory
2008–2009	**Research Assistant** Harvard School of Public Health, Department of Immunology and Infectious Diseases, Boston, MA. Laurie H. Glimcher, MD Laboratory
2007	**Research Assistant** Harvard University, Department of Organismic and Evolutionary Biology, Cambridge, MA. Noel Michele Holbrook, Ph.D. Laboratory
2006	**Research Assistant** Harvard University, Department of Molecular and Cellular Biology, Cambridge, MA.

	Sam Kunes, Ph.D. Laboratory
2005–2006	**Research Assistant** Brigham and Women's Hospital and Harvard Medical School, Division of Genetics, Department of Medicine, Cambridge, MA. Alan M. Michelson, M.D., Ph.D. Laboratory

Bioinformatic Skills

- Data analysis of high-throughput sequencing data including DNA-seq, RNA-seq, CAGE-seq, sRNA-seq, ChIP-seq, and scRNA-seq.
- Knowledge and the ability to use various bioinformatic databases, APIs, repositories, and tools.
- Ability to implement bioinformatic pipelines using pipelining tools such as Bpipe and Snakemake.

Computer Skills

Academic References

Publications

[1] M. Ragland*, C.J. Benway*, S.H. Lutz, Bowler R.P., J. Hecker, J.E. Hokanson, J.D. Crapo, P.J. Castaldi, D.L. DeMeo, Hersh C.P., B.D. Hobbs, C. Lange, T.H. Beaty, Cho M.H., and Silverman E.K. Genetic Advances in COPD: Insights from COPDGene. *Manuscript submitted and in review.*

[2] C. J. Benway and J. Iacomini. Defining a microRNA-mRNA interaction map for calcineurin inhibitor induced nephrotoxicity. *Am. J. Transplant.*, 18(4):796–809, Apr 2018.

[3] J. Yuan, C. J. Benway, J. Bagley, and J. Iacomini. MicroRNA-494 promotes cyclosporine-induced nephrotoxicity and epithelial to mesenchymal transition by inhibiting PTEN. *Am. J. Transplant.*, 15(6):1682–1691, Jun 2015.

[4] A. Górska, J. W. Lazor, A. K. Zwieniecka, C. J. Benway, and M. A. Zwieniecki. The capacity for nitrate regulation of root hydraulic properties correlates with species' nitrate uptake rates. *Plant and Soil*, 337(1-2):447–455, Dec 2010.

This C.V. was prepared in LaTeX and is available at https://github.com/cbenway/cv.