

Andrew D. Mathis

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Education

- Ph.D. in Cell and Molecular Biology** Expected 2020
University of Texas Southwestern Medical Center, Dallas
Advisor: Kimberly A. Reynolds
- M.S. in Biochemistry** 12/2015
Brigham Young University, Provo
Advisor: John C. Price
- B.S. in Biochemistry** 08/2013
Brigham Young University, Provo
- Undergraduate Research Assistant** for Dr. John T. Prince 07/2011-08/2013
Department of Chemistry and Biochemistry

Publications

1. **Mathis, A. D.***; Naylor, B. C.*; Carson, R. H.; Evans, E.; Harwell, J.; Knecht, J.; Hexem, E.; Peelor, F. F.; Miller, B. F.; Hamilton, K. L., Transtrum M. K., Bikman, B. T., Price, J.C., Mechanisms of in vivo ribosome maintenance change in response to nutrient signals. *Molecular & Cellular Proteomics* 2017, *16* (2), 243-254. *These authors contributed equally
2. Plimpton, R. L.; Cuellar, J.; Lai, C. W. J.; Aoba, T.; Makaju, A.; Franklin, S.; **Mathis, A. D.**; Prince, J. T.; Carrascosa, J. L.; Valpuesta, J. M.; Willardson, B. M., Structures of the G beta-CCT and PhLP1-G beta-CCT complexes reveal a mechanism for G-protein beta-subunit folding and G beta gamma dimer assembly. *Proceedings of the National Academy of Sciences USA* 2015, *112* (8), 2413-2418.
3. DeMille, D.; Badal, B. D.; Evans, J. B.; **Mathis, A. D.**; Anderson, J. F.; Grose, J. H., PAS kinase is activated by direct SNF1-dependent phosphorylation and mediates inhibition of TORC1 through the phosphorylation and activation of Pbp1. *Molecular biology of the cell* 2015, *26* (3), 569-582.
4. Weerasekara, V. K.; Panek, D. J.; Broadbent, D. G.; Mortenson, J. B.; **Mathis, A. D.**; Logan, G. N.; Prince, J. T.; Thomson, D. M.; Thompson, J. W.; Andersen, J. L., Metabolic-stress-induced rearrangement of the 14-3-3 ζ interactome promotes autophagy via a ULK1-and AMPK-regulated 14-3-3 ζ interaction with phosphorylated Atg9. *Molecular and cellular biology* 2014, *34* (24), 4379-4388.
5. Grose, J. H.; Belnap, D. M.; Jensen, J. D.; **Mathis, A. D.**; Prince, J. T.; Merrill, B. D.; Burnett, S. H.; Breakwell, D. P., The genomes, proteomes, and structures of three novel phages that infect the Bacillus cereus group and carry putative virulence factors. *Journal of virology* 2014, *88* (20), 11846-11860.
6. DeMille, D.; Bikman, B. T.; **Mathis, A. D.**; Prince, J. T.; Mackay, J. T.; Sowa, S. W.; Hall, T. D.; Grose, J. H., A comprehensive protein-protein interactome for yeast PAS kinase 1 reveals direct

inhibition of respiration through the phosphorylation of Cbf1. *Molecular biology of the cell* 2014, 25 (14), 2199-2215.

7. Smith, R.; **Mathis, A. D.**; Ventura, D.; Prince, J. T., Proteomics, lipidomics, metabolomics: a mass spectrometry tutorial from a computer scientist's point of view. *BMC bioinformatics* 2014, 15 (7), 1.

Presentations

1. Quantifying epistatic conservation across genetic and environmental backgrounds. **Andrew D. Mathis**, Judith Boldt, and Kimberly A. Reynolds. June 29th-July 2nd, 2018, **q-bio Conference**, Rice University.

Posters

1. A Path to Decomposing Genomes into Functionally Compartmentalized Gene Modules. **Andrew D. Mathis**, Andrew F. Schober, Junyoung O. Park, Li Chen, Joshua D. Rabinowitz, Ivan Junier, Olivier Rivoire, Kimberly A. Reynolds. May 1-3, 2017. **NSF Workshop on Multidisciplinary Complex Systems Research**, Washington D.C.
2. Assembled Hepatic Ribosomes Have Unexpected Changes in Protein Replacement Rates Between Calorie Restricted and Ad Libitum Mice. **Andrew Mathis**, Bradley Naylor, Eric Evans, Spencer Lofthouse, John Price. March 15-18, 2015, **USHUPO**, Tempe.
3. Novel Reconstruction of the Per-ARNT-Sim Kinase Network via Mass Spectrometry. **Andrew Mathis**, Tamil S. Anthonymuthu, Stewart Morley, Taylor Southwick, Ryan Taylor, Desiree DeMille, Julius Adebayo, Vasu Chetty, Julianne H. Grose, Sean Warnick, John T. Prince. September 9-13, 2012, **HUPO 11th Annual World Congress**, Boston.

Awards and Affiliations

- **Graduate Student Teaching Award** for providing outstanding teaching assistant service. \$150.00. Presented by Brigham Young University 05/2015
- **Outstanding Graduating Master's Degree Student Award** in recognition of outstanding scholarship and achievement in research as a graduate student \$300. Presented by Brigham Young University 04/2015
- **Albert D. and Jennie R. Swensen Graduate Award** in recognition of outstanding scholarship and achievement in research as a graduate student. \$1,500. Presented by Brigham Young University Department of Chemistry and Biochemistry. 2014-2015
- **Undergraduate Research Award** five-time recipient about \$7,300. Presented by Brigham Young University Department of Chemistry and Biochemistry. 2011-2013
- **Reviewer** at the Journal of Emerging Investigators 2017-present
- **US Human Proteome Organization Member:** 02/2015-Present
- **World Human Proteome Organisation Member:** 08/2012-12/2013

Teaching Experience

Division of Basic Sciences, UT Southwestern Medical Center, Dallas

Core Course Tutor

09/2017-10/2017

Core Course Graduate Teaching Assistant

09/2016-10/2016

Department of Chemistry and Biochemistry, Brigham Young University, Provo

Organic Chemistry Laboratory Instructor for Dr. Todd Bronson

01/2013-04/2014

Teaching Assistant: Biochemistry I, Biostructural Chemistry, Biochemistry Laboratory/Nucleic Acids, and Organic Chemistry Laboratory.