Selcan Aydın
Curriculum Vitae

The Jackson Laboratory
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EDUCATION

PhD Biology, Duke University, USA, 2017
Advisor: Dr. Nicolas E. Buchler
MSc Systems Biology, University of Heidelberg, Germany, 2011
BSc Biological Sciences and Bioengineering, Sabanci University, Turkey, 2009

PROFESSIONAL APPOINTMENTS

Postdoctoral Fellow Munger Lab, The Jackson Laboratory, USA, 2018- Present
Advisor: Dr. Steven C. Munger

PUBLICATIONS

1. Skelly, D. A., Czechanski, A., Byers, C., **Aydin, S**., Spruce, C., Olivier, C., Choi, K., Gatti, D. M., Raghupathy, N. M., Stanton, A., Vincent, M., Dion, S., Greenstein, I., Pankratz, M., Porter, D. K., Martin, W., Qin, W., Harrill, A. H., Choi, T., Churchill, G. A., Munger, S. C., Baker, C. L., Reinholdt, L. G. Genetic variation influences pluripotent ground state stability in mouse embryonic stem cells through a hierarchy of molecular phenotypes. (2019) *bioRxiv*, 552059.
2. Ortmann D., Brown S., Czechanski A., **Aydin S.**, Tomaz R.A., Osnato A., Skelly D.A., Choi T., Churchill G.A., Baker C.L., Munger S.C., Reinholdt L.G., Vallier L. (2019). Genetic background impacts on variability of ground state pluripotent stem cell lines. *(in submission)*
3. Aydin, S. Understanding the Effects of Genetic Variation on Osmo-adaptation Dynamics Across S. cerevisiae using Bulk Segregant Analysis and Whole Genome Sequencing (2017). Duke University.
4. Rienzo A., Poveda-Huertes D., **Aydin S.**, Buchler N.E., Pascual-Ahuir A., Proft M. (2015). Different mechanisms confer gradual control and memory at nutrient- and stress-regulated genes in yeast. *Mol Cell Biol,* 35:3669–3683.
5. Pinna, F., Sahle, S., Beuke, K., Bissinger, M., *__Tuncay, S.,__ D'Alessandro, L. A., Gaugaes, R., Raue, A., Timmer, J., Klingmüller, U., Schirmacher, P., Kummer, U., Breuhahn, K. (2012). A Systems Biology Study on NFκB Signaling in Primary Mouse Hepatocytes. *Frontiers in Physiology*, *3*, 466.

AWARDS & HONORS

2018, Pyewacket Award, The Jackson Laboratory
2016, Biology Grant in Aid, Biology Department, Duke University
2016, Conference Travel Award, The Graduate School, Duke University
2016, Graduate Student Training Enhancement Grant, Duke University
2016, Summer Research Fellowship, The Graduate School, Duke University
2015, 28th Fungal Genetics Conference travel award, Genetics Society of America

*Maiden name

2010, Fulbright Student Program PhD Grant, The Turkish Fulbright Commission

CONFERENCES & WORKSHOPS

Selected Talks and Poster Presentations

2019, Genetic modifiers of protein abundance in embryonic stem cells (poster), New York Stem Cell Foundation Conference, October 22
2019, Genetic dissection of the embryonic stem cell proteome (talk), Complex Traits Consortium / Rat Genomics 17th Annual Meeting, June 11
2019, Genetic dissection of the embryonic stem cell proteome (talk), JAX Scientific Symposium, May 7

International Conferences and Workshops

2018, Population, Evolutionary and Quantitative Genetics Conference (participant), May 13-16
2016, Quantifying the effects of genetic variation on osmoadaptation dynamics (poster), 10th Annual q-bio Conference, July 27-30
2016, Tenth Q-bio Summer School San Diego Campus (participant), July 10-22
2015, Characterizing the effects of genetic variation on signaling dynamics (poster), 28th Fungal Genetics Conference, March 17-22
2012, The Cell Cycle Meeting (participant) at Cold Spring Harbor Laboratory, May 15 -19
2011, Generation of an ODE-based model for TNFα/NF-κB signaling in murine hepatocytes (poster), International Congress of Systems Biology, Aug 28 – Sept 1

RESEARCH EXPERIENCE

2018-, Postdoctoral Fellow
Studying the influence of genetic variation on cell fate decisions, focusing on pluripotency maintenance in mouse embryonic stem cells under the supervision of Dr. Steve Munger.

2010-2017, Dissertation Project
Investigated the effects of genetic variation on signaling dynamics using osmo-adaptation in budding yeast as a model phenotype under the supervision of Dr. Nicolas E. Buchler and Dr. Paul M. Magwene in the Department of Biology, Duke University.

2010-2011, Master's Thesis Project
Modeled the Tumor necrosis factor (TNF) α induced Nuclear Factor Kappa-light-chain-enhancer of activated B cells (NFκB) signaling using quantitative experimental data from primary murine hepatocytes. Mathematical modeling and parameter estimation under the supervision of Prof. Dr. Ursula Kummer in in Bioquant Research Institute at University of Heidelberg.

TEACHING EXPERIENCE

The Jackson Laboratory

2019, Teaching Assistant, Genetics 1
2019, Instructor, R for Data Science, March 25 & April 1
2019, Instructor, R for Reproducible Scientific Analysis, February 4 & 11
2018, Teaching Assistant, Human and Mammalian Genetics and Genomics: The 59th McKusick Short Course, July 16-27

Duke University, Teaching Assistant

2017 Spring, BIO212L: General Microbiology
2016 Fall, BIO212L: General Microbiology
2016 Spring, BIO212L: General Microbiology
2015 Fall, BIO212L: General Microbiology
2015 Spring, BIO201L: Gateway to Biology: Molecular Biology

OUTREACH & LEADERSHIP

2019, Co-supervised JAX Summer Student with Dr. Steven Munger, The Jackson Laboratory, Bar Harbor, ME
2018 - 2019, Treasurer, JAX Postdoc Association, The Jackson Laboratory, Bar Harbor, ME
2018, Co-supervised JAX Summer Student with Dr. Steven Munger, The Jackson Laboratory, Bar Harbor, ME
2018, DNA Day Volunteer at Conners-Emerson School, Bar Harbor, ME
2015 - 2017, Treasurer, Women In Science and Engineering, Duke University, NC
2015, NC DNA Day Volunteer at Ridgecroft School, Ahoskie, NC
2014 - 2015, Mentored two undergraduate students at Duke University, NC
2011 - 2012, BOOST Science coach for 7th grade students at Duke University, NC

LANGUAGES

English (fluent)
Turkish (native)

REFERENCES

Available upon request.