

# 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., **Aydın, 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. (*accepted at Cell Stem Cell*)
2. Ortmann D., Brown S., Czechanski A., **Aydın 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. (*accepted at Cell Stem Cell*)
3. Aydın, 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., **Aydın 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., Gauges, 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

2019, International Mammalian Genome Society Scholarship (IMGS) for Trainees, IMGS

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, 28<sup>th</sup> Fungal Genetics Conference travel award, Genetics Society of America  
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), 28<sup>th</sup> 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 TNF $\alpha$ /NF- $\kappa$ B 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)  $\alpha$  induced Nuclear Factor Kappa-light-chain-enhancer of activated B cells (NF $\kappa$ B) 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 Connors-Emerson School, Bar Harbor, ME  
2015 - 2017, Treasurer, Women In Science and Engineering, Duke University, NC  
2015, NC DNA Day Volunteer at Ridgcroft School, Ahoskie, NC  
2014 - 2015, Mentored two undergraduate students at Duke University, NC  
2011 - 2012, BOOST Science coach for 7<sup>th</sup> grade students at Duke University, NC

### **LANGUAGES**

English (fluent)  
Turkish (native)

### **REFERENCES**

Available upon request.