

Hande Acar

Curriculum Vitae

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Contact Information

Institute of Science and Technology, Austria (IST Austria)
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Research Interests

In the past I have worked on the estimation of genetic diversity within and between different sheep breeds with different levels of admixture. Also during my first year of doctorate studies I worked on finding a consistent and reliable way of analyzing bacterial growth curves (MBE 2014, 31:1).

During my doctoral studies I have acquired an extensive toolbox of experimental techniques in molecular genetics, statistical data analysis, and population genetics. In the future I am keen to collaborate more with theoreticians bringing together empirical and theoretical approaches.

My current research focuses on understanding how different factors affect the outcomes of horizontal gene transfer events. I am also working on understanding how a regulatory system responds to different levels of mutations, both as a whole and at the level of its individual components.

Outside of my focal area, I have a big interest in better understanding bacterial adaptation and innovation mechanisms, interactions between bacterial species within microbial communities, and bacterial genome evolution.

Academics

2010- : Institute of Science and Technology, Austria (IST Austria)
Ph.D. Candidate, Evolutionary Biology
Advisor: Jonathan P. Bollback
Thesis Title: Experimental Determination of the Selective Barriers to Horizontal Gene Transfer

2009-2010: Informatics Inst., Middle East Technical University (METU), Ankara, Turkey
M.Sc., Bioinformatics
Advisor: İnci Togan
Thesis title: Bioinformatical Analyses in Microsatellite-Based Genetic Diversity of Turkish Sheep Breeds

2003-2008: Dep. of Biological Sciences, METU, Ankara, Turkey
B.S., Biology
Advisor: İnci Togan

Publications

- Hall G.B., Acar H., Nandipati A. & Barlow M. Growth Rates Made Easy. *Mol Biol Evol* (2014), 31 (1): 232-238. (In the most read papers list of MBE since its publication)

Manuscripts in Preparation

- Lagator M, Acar H., Bollback J.P., Guet C.C. Intrinsic Genetic Constraints in *cis*- and *trans*-Regulatory Elements.
- Acar H., Bollback J.P. Selective Barriers to Horizontal Gene Transfer: Connectivity or Other Factors?
- Poecher* K., Acar* H., Bollback J.P. Effect of Different Environments on Horizontal Gene Transfer (* Equal contributions)

Conference and Poster Presentations

- Acar H. & Bollback J.P. 'Experimental Determination of Selective Barriers to Horizontal Gene Transfer', *SMBE Satellite Symposium on HGT, Kiel, Germany*, April 2014 (Talk)
- Acar H. & Bollback J.P. 'Experimental Characterization of Selective Barriers to Horizontal Gene Transfer', *Mathematical Evolution Symposium, Turkey*, September 2013 (Talk)
- Acar H., Döm H.A. & Togan I. 'Interpretation Of Genetic Data Obtained From Turkish Native Sheep Breeds By Use Of Bioinformatics Tools.' *The International Symposium on Health Informatics and Bioinformatics (HIBIT)*, 2010 (Poster)

Attended Courses & Workshops

- Cold Spring Harbor Laboratory - Advanced Bacterial Genetics Course, NY, USA, 2014
- Workshop participation, *Mathematical Evolution Workshop, Turkey*, September 2013
- Workshop participation, 'Bridging theoretical and experimental evolution', *Switzerland*, June 2013

Awards & Honors

- 2012, June: Best Think&Drink Presentation Award
Title: Bacteria swimming in a common gene pool.
- 2008-2010: Master and Research Fellowship awarded by
The Scientific and Technological Research Council of Turkey
(30.000 TL for 2 years of study)
- 2008, June: Graduation with Honor Degree from METU

2008 Spring: ALES Exam score: 98/100 (55. out of 174.832 applicants)
(Turkish Academic Staff and Graduate Education Entrance Examination)

2003-2008: Scholarship awarded by TR Government for 5 years of study

Teaching Experience

2008-2009: Teaching Assistant, University of Hacettepe, Ankara, Turkey
Cell Course - Laboratory Experiments - Instructor
Enzymology Course - Partial lecturer for 2 semesters

Internship

Summer 2007: REF-GEN Laboratories, Ankara, Turkey
DNA sequencing with ABI 3100 sequencer and MSA analysis

Professional Development and Memberships

2011 - current: SMBE - Society for Molecular Biology and Evolution
2012 - current: Genetics Society of America
2009 - current: EvoEko - Ecology and Evolution Network of Turkey
2012: IST Austria Young Scientist Symposium on Human Evolution - Organizing Committee

References

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John F. Baines	Christian-Albrechts-University of Kiel, Germany +49 (0) 431 597 1921 Max Planck Inst. for Evolutionary Biology, Germany +49 (0) 4522 763 367 baines@evolbio.mpg.de