

ALI R. VAHDATI

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QUALIFICATIONS PROFILE

Highly skilled **Evolutionary Biologist** with experience in computational biology and data science.

- Skilled in using computational approaches to analyze evolutionary processes.
- Background in processing large datasets, such as human genome variation data (1000 genomes project).
- Experienced in statistical modeling, machine learning and biological modeling for population genetics inquiries.
- Clear, confident communicator who builds rapport with stakeholders at all organizational levels.

WORK EXPERIENCE

Postdoc, Christoph Zollikofer group, Department of Anthropology –UNIVERSITY OF ZURICH, Zurich, Switzerland, 2017- present

EDUCATIONAL BACKGROUND

Ph.D., Evolutionary Biology –UNIVERSITY OF ZURICH, Zurich, Switzerland, 2012 – 2017
Thesis: Genotype networks: convergent evolution, population size and adaptation.

Master of Science, Evolutionary Genetics and Genomics–UNIVERSITY OF MANCHESTER, Manchester, UK, 2011

Thesis 1: Identifying QTL and Genomic imprinting effects on mice tissue phenotypes.

Thesis 2: Analysis of replication timing on genetic variation in the human genome.

Bachelor of Science, Cellular and Molecular Biology, Genetics, AZAD UNIVERSITY, Tonekabon, Iran, 2006-2010

TECHNICAL PROFICIENCIES

Julia, Python, R, Linux, HTML, MySQL, ViennaRNA, ClustalW, NJPlot, BioEdit, PHYLIP, MEGA, Galaxy.

TEACHING EXPERIENCE

EAWAG – Kastanienbaum, Switzerland

1st reproducible research workshop, 2018

I gave a lecture and hands-on tutorial on using Git version control software and collaborating using Github. ([Teaching materials here](#))

Continued...

UNIVERSITY OF ZURICH – Zurich, Switzerland

Teaching Assistant, Introduction to Bioinformatics, 2013

As part of a team, tutored about 30 students in the Evolutionary Biology and Environmental Studies programs to help them solve their programming questions in Python.

Key Achievements:

- Maintained a high retention rate in assigned classes.
- Tutored students improved performance over a single grading period.

UNIVERSITY OF ZURICH – Zurich, Switzerland

Teaching Assistant, Principles of Evolution, 2013

Prepared teaching material for R programming. Prepared and delivered two lectures on Modeling Population Genetic Simulation of Natural Selection and Drift Processes. Fielded questions from students on lecture topics.

Key Achievements:

- Gave an R programming lecture and helped students solve non-programming conceptual problems.

AWARDS AND PROFESSIONAL AFFILIATIONS

Member, Swiss Institute of Bioinformatics (SIB), 2012-2017

Member, UK Genetics Society (SHRM), 2011-2012

Top Researcher, Young Researchers Club, 2009

Grant Recipient, Young Researchers Club, 20080-2009, 2009-2010

PUBLICATION HIGHLIGHTS

Vahdati A. R., GraphNotes software: organize your scientific notes, doi.org/10.5281/zenodo.1174170

Vahdati A. R., Wagner A., Population size affects adaptation in complex ways: simulations on empirical adaptive landscapes. *Evolutionary Biology*. 2017.

Vahdati A. R., Sprouffske K., Wagner A., Effect of Population Size and Mutation Rate on the Evolution of RNA Sequences on an Adaptive Landscape Determined by RNA Folding . *International Journal Biological Sciences*. 2017;13(9):1138–51.

Vahdati A. R., Wagner A., 2016 Parallel or convergent evolution in human population genomic data revealed by genotype networks. *BMC Evolutionary Biology*, 16(1), 154.

Dall’Olio G. M., **Vahdati A. R.**, Bertranpetit J., Wagner A., Laayouni H., 2014 VCF2Networks: applying Genotype Networks to Single Nucleotide Variants data. *Bioinformatics*: 4–5.

Kaerst S.*, **Vahdati A.R.***, Brockmann G., Hager R., 2012 Genomic imprinting and genetic effects on muscle traits in mice, *BMC Genomics*, 13:408 - * Equal contribution

B. Sadeghi, **R.A.R Vahdati**, 2012 Comparison and SEM-characterization of novel solvents of DNA/carbon nanotube, Applied Surface Science, 258, 3086-3088

B. Sadeghi, M.A.S Sadjadi and **A.R Vahdati**, 2009 Nanoplates controlled synthesis and catalytic activities of silver nanocrystals, Superlattices and Microstructures, 46, 858-863.