

Curriculum vitae LAETITIA G. E. WILKINS

Email: laetitia.wilkins@berkeley.edu
Phone: +1 510-520-1948
Blog: laetitia.schmid.se
Website: ourenvironment.berkeley.edu/user/14535

Dept. of Environmental Sciences, Policy & Management
University of California
Berkeley, CA 94720

EDUCATION

University of Lausanne, Switzerland **PhD in Life Sciences** **Oct 2010-
Nov 2014**
Thesis: *Diversity of bacterial symbionts on salmonid eggs: genetic and environmental effects*
supervised by Prof. Claus Wedekind & Dr. Luca Fumagalli (GPA = 4.0; *Summa cum laude*)

Stockholm University, Sweden **MSc in Evolutionary Genetics** **Sep 2008-
June 2010**
Thesis: *Female mating preferences and the MHC in humpback whales*
supervised by Prof. Per Palsbøll and Dr. Martine Bérubé (GPA = 4.0; *Summa cum laude*)

University of Bern, Switzerland **BSc in Population Genetics** **Sep 2005-
June 2008**
Thesis: *Y-chromosomal phylogenies of *Microtus arvalis**
supervised by Prof. Gerald Heckel & Prof. Laurent Excoffier (GPA = 3.7; *Cum laude*)

PROFESSIONAL APPOINTMENTS

CURRENTLY: University of California, Berkeley **since Sep 2016**
Postdoctoral research scholar at UC Berkeley on host microbiome interactions in *O. mykiss*;
demography of the endangered Sierra Nevada yellow legged frog at Kings Canyon National Park;
and metagenome-assembled genomes from two hot springs in Kamchatka, Russia
awarded by Swiss NSF; hosted by Prof. Stephanie Carlson and Prof. Jonathan Eisen (UC Davis)

Canton Grisons, Switzerland, Fish & Wildlife Consultant Fishery Management **since June 2014**
External consultant for the Department of Fish and Wildlife in my home canton Graubünden, Switzerland.
Expertise: Population genetic informed management of wild fish populations; fishing regulations; hatchery
practices. Supervising a long-term monitoring program for wild brown trout using passive integrative responders
(PIT tags; 2018-2020 in Vals, GR).

Unemployed stay-at-home mom April 19th 2016 – August 31st 2016

Maternity leave from November 19th 2015 – April 18th 2016

University of Lausanne, Switzerland Postdoctoral Researcher & 1st Assistant **Dec 2014-
Nov 2015**
Project leader in Claus Wedekind's group on *Variance components of fitness-relevant traits:*
combining laboratory experiments with large-scale field studies on salmonids

Maternity leave from September 15th 2012 – 30th January 2013

Novartis Basel, Switzerland Internship/Statistician **2011/8-12**
Internship in the Department of Molecular Diagnostics (MDx) in Prof. Anthony Rossini's group. Statistical
analysis of different gene expression (RNA-seq) datasets on lung cancer; review about what is absolutely
necessary for a successful collaboration among different academic and non-academic institutions.

DISTINCTIONS

2018 Travel Award for National Postdoc Association Meeting in Cleveland #NPA2018 (\$2000)
2016-2018 Postdoc Mobility Fellowship from Swiss National Science Foundation (126,000 CHF)
2010-2014 PhD Fellowship in Life Sciences at University of Lausanne, Switzerland (140,000 CHF)
2013 Travel Award from CUSO Population Genomics Program – Evolution Conference at Snowbird, UT (\$2000)

THREE SELECTED PUBLICATIONS

ORCID ID: 0000-0003-3632-2063; <https://scholar.google.at/citations?user=OZHrP3kAAAAJ&hl=de>

Wilkins, L. G. E., Rogivue, A., Schütz Frédéric, Fumagalli, L., and Wedekind, C. 2015. Increased diversity of egg-associated bacteria on brown trout (*Salmo trutta*) at elevated temperatures. **Scientific Reports** 5: 17084. doi: 10.1038/srep17084

Wilkins, L. G. E., Fumagalli, L., and Wedekind, C. 2016. Effects of host genetics and environment on egg-associated microbiota in brown trout (*Salmo trutta*). **Molecular Ecology** 25(19): 388-394. doi: 10.1111/mec.13798

Wilkins, L. G. E., Marques da Cunha, L., Menin, L., Ortiz, D., Voccat-Mottier, V., Hobil, M., Nusbaumer, D., and Wedekind, C. 2017. Maternal allocation of carotenoids increases stress tolerance in brown trout (*Salmo trutta*), **Oecologia** 185(3): 351-363. doi:10.1007/s00442-017-3952-y

TEACHING AND SUPERVISION

Introduction to Evolutionary Biology at elementary school. *Biology and Freshwater Ecology* at high school level (Gymnasium Kloster Disentis, CH; Campolindo Highschool, Moraga, CA, USA). *Zoology and Applied Microbiology* for first year BSc students, *Computational Population Genetics* for second year BSc students, *Conservation biology* for third year BSc students, and *Molecular Population Genetics* and *Freshwater Ecology* for graduate students. Guest lecturer in Freshwater Ecology for Senior BSc students at UC Berkeley (2018).

Supervised and mentored the following MSc students at UNIL: *Aude Rogivue* (2012/13), *Zoé Daepfen* (2013/14), *Chloë Schmidt* and *Hanna Smith* (2014), *Véronique Voccat-Mottier* (2015), *Oliver Selmoni* (2015/16), and *David Zeugin* (2016); and the following undergraduate students at UNIL: *Emma Pereira* (2015/16), at UC Santa Cruz: *Roger Faust* (Doris Duke Conservation Scholar 2017), and at UC Davis: *Amy Wen* and *Jolie Lobrutto* (2018).

Completed the online summer course in teaching for Bachelor students (undergraduates) *Scientists Teaching Science* at the New York Academy of Sciences, 2018. Emphasis on active learning; bias, discrimination and diversity; and teaching online courses (the future of education is online).

PRESENTATIONS

Inbreeding at the MHC in humpback whales (poster) Biennial Conference on the Biology of Marine Mammals, Québec City, CA (2010); *Immune gene expression in whitefish embryos* (poster and talk) Evolution, Snowbird UT, USA (2013); *Microbial communities on salmonid eggs* (talk) Metagenomics Symposium, University of Neuchâtel, CH (2011); Population Genomics Symposium, University of Lausanne, CH (2014); *Ergebnisse Äschenuntersuchungen im Engadin* (talk) Weiterbildungskurs Fischereiaufseher Pontresina, CH (2014); *Embryo genetics affects composition of host-associated bacteria in brown trout* (poster) ESEB, Lausanne, CH (2015); *Maternal allocation of carotenoids increases tolerance to bacterial infection in brown trout* (talk) AFS Cal-Neva, Eureka CA, USA (2017); *Non-genetic paternal effects on early salmonid development* (talk) AFS National Meeting, Tampa FL, USA (2017); *Bacteria everywhere: on fish, inside fish, and in hot springs of Kamchatka* (talk) WSL Birmensdorf, CH (2017). *Berkeley Spouses, Partners and Parents Association BSPPA* (poster) Postdoc appreciation week UC Berkeley (2017). *Who lives in the guts of O. mykiss juveniles harboring different migratory genotypes* (talk) Coastal Marine Science Symposium UC Davis (2018). *Non-genetic paternal effects on early salmonid development* (talk) UC Davis Postdoc Symposium (2018).

Invited talks: *MHC and female mating preferences in humpback whales* AWI Wattenmeerstation Sylt, DE (2010); IFM Geomar Kiel, DE (2010); ETH Zürich, CH (2010); *16 Questions in Evolutionary Biology* WSL Birmensdorf, CH (2016); *Salmonid embryos: a powerful system to study evolutionarily relevant questions in ecology* NOAA Southwest Fisheries Santa Cruz CA, USA (2017); *Diversity of bacterial symbionts on salmonid eggs - genetic and environmental effects* Microbiology Seminar UC Davis, USA (2017); *Non-genetic paternal effects on early salmonid development* U.S. Fish and Wildlife Service, Red Bluff Fish and Wildlife Office, CA, USA (2017). *Berkeley Spouses, Partners and Parents Association BSPPA* (keynote talk) National Postdoc Association Annual Meeting, Cleveland, OH (2018).

JOURNAL REVIEWING

for *BMC Research Notes*, *Conservation Genetics*, *Evolution*, *Genes*, *Hydrobiologia*, *International Journal of Molecular Sciences*, *Journal of Fish Diseases*, *Microbial Ecology*, and *Scientific Reports*.

CONFERENCE ORGANIZATION

CUSO Population Genomics Conference: head of organizing committee, Churwalden, CH (2012); *ESEB*: organizing committee - audiovisual systems, Lausanne, CH (2015); *Marine Microbial Symbiosis Workshop*: organizing together with Dr. Matthieu Leray and Dr. Jarrod Scott at Bocas del Toro, Smithsonian Tropical Research Institute, Panama (2018 – in progress).

SERVICE AND OUTREACH

Co-founder and Co-Chair of the Berkeley Spouses, Partners and Parents Association BSPPA. This is a volunteer organization for postdoctoral and visiting researchers, scholars and their families. We organize workshops on work-life balance, how to navigate your life in the US (health system, adult education for spouses, career counseling, housing, childcare, family-friendly STEM events) and we meet regularly for social events (picnics, potluck parties, excursions) and networking. We also created and maintain a website (bsppa.berkeley.edu).

Member of the **Vice Chancellor for Research Advisory Committee** at UC Berkeley (February – September 2018). Advocating for better postdoc housing in the Bay Area.

Provincetown Center for Coastal Studies, Cape Cod, MA, USA Internship 2010/7-9
Internship at the Provincetown Center for Coastal Studies, Cape Cod, MA, USA under supervision of Dr. Jooke Robbins and David Mattila. Collection of behavioral and demographic data on humpback whales *Megaptera novaeangliae* in the Gulf of Maine; crossbow biopsy sampling and genetic analyses.

SEFALO, Stockholm University, Sweden Fieldwork Assistant 2008/6-8
“Saving the Endangered Fennoscandinavian Alopex Lagopus” – internship under supervision of Prof. Anders Angerbjörn, Stockholm University, Sweden. Collection of behavioral and demographic data about Arctic foxes *Alopex lagopus* in the Swedish tundra, close to Abisko; scat and blood sampling; genetic analyses; paternity tests.

Alpine Environment, Switzerland Shepherd & Cheesemaker 2004/6-9
Swiss alp summer job (Naustgel, Val Sumvitg, Grisons, Switzerland): producing 14 tons of cheese, caring for 120 dairy cows and retaining the alpine environment.

SKILLS AND INTERESTS

Applied programming, data analysis in R (and bioconductor), Perl, bash-scripting, LaTeX. Sequencing, cloning, qPCR, library preparation for NGS (454 and illumina), *in vitro* fertilization, rearing and pathogen infection of salmonids. FACS, LM, GLM, GLMM, QIIME 2, DADA2, Phyloseq and anvi'o data analysis. Project management, supervision of students at various levels.

My interests include host-microbe interactions, their co-evolution, phylogenomics, life-history trade-offs, and fish biology. I am a consultant for my home state in Switzerland - Graubünden in fish population genetic questions and population management. I am highly engaged in scientific writing and outreach (contributor to *The Molecular Ecologist* at www.molecularecologist.com, personal blog: laetitia.schmid.se, and twitter: @M_helvetiae). I believe in diversity, creativity and an inclusive environment in academia. I strongly support reproducible research (sharing of protocols, raw data, bioinformatic pipelines via GitHub (<https://github.com/megaptera-helvetiae>), Jupyter Notebooks, protocols.io (personal url) and figshare). I am also following the principles of the *Riffomonas Reproducible Research Tutorial* by Patrick Schloss (http://www.riffomonas.org/reproducible_research/).

REFERENCES

Prof. Stephanie Carlson, UC Berkeley, USA, smcarlson@berkeley.edu, +1 510-643-9688
Prof. Jonathan Eisen, UC Davis, USA, jonathan.eisen@gmail.com, +1 530-752-3498
Prof. Claus Wedekind, University of Lausanne, Switzerland, claus.wedekind@unil.ch, +41 21 692 42 50
Dr. Luca Fumagalli, University of Lausanne, Switzerland, luca.fumagalli@unil.ch, +41 21 692 41 72