

Frank Wolfgang Albert

Curriculum vitae

Department of Human Genetics
University of California, Los Angeles
Gonda Center 5309, 695 Charles E. Young Drive South
Los Angeles, CA 90095
USA
Phone: +1 310-825-5996
Fax: +1 310-795-5446
Email: falbert@mednet.ucla.edu
<http://frankwalbert.bol.ucla.edu>

EDUCATION

- 2010 Doctoral degree in Biology, University of Leipzig, Germany
Graduate work at the Max Planck Institute for Evolutionary Anthropology
in Leipzig with Dr. Svante Pääbo
- 2005 German “Diploma” degree in Biology with Computer Science as additional
subject, University of Würzburg, Germany
Thesis work at the Max Planck Institute for Human Cognitive & Brain
Sciences in Leipzig with Dr. Sonja Kotz
- 1997 German “Abitur” degree at Hanns Seidel Gymnasium, Hösbach, Germany

RESEARCH EXPERIENCE

- 2011 – present Post-doctoral research:
“Genomic approaches to study protein expression variation in yeast”
Princeton University & UCLA (Lab moved to UCLA in August 2013)
Advisor: Dr. Leonid Kruglyak
- 2010 Post-doctoral research: “A comparison of brain gene expression levels in
domesticated and wild animals”
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2005 – 2009 Graduate research: “The genetic basis for tameness and aggression”
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2004 – 2005 Diploma research: “Cognitive profiling of a language and speech
impediment”
Max Planck Institute for Human Cognitive & Brain Sciences, Leipzig,
Germany

SCHOLARSHIPS

2012 – 2014	Research Fellow of the German Science Foundation (DFG)
2006 – 2009	Max Planck Society Doctoral Fellowship
2002 – 2003	Fulbright Scholarship, University of Maryland, College Park

PUBLICATIONS

A self-updating list of publications and citations is available at Google Scholar:
<http://scholar.google.de/citations?hl=en&user=RvETgnYAAAAJ>

Albert FW and Kruglyak L

The role of regulatory variation in complex traits and disease
Nature Reviews Genetics (2015) 16: 197-212
(solicited review article)

Treusch S, **Albert FW***, Bloom JS*, Kotenko IE, and Kruglyak L
Genetic mapping of MAPK-mediated complex traits across *S. cerevisiae*
PLoS Genetics (2015) 11 (1), e1004913
* equal contribution

Albert FW, Muzzey D, Weissman J, and Kruglyak L
Genetic influences on translation in yeast
PLoS Genetics (2014) 10 (10), e1004692

Albert FW, Treusch S, Shockley AH, Bloom JS, and Kruglyak L
Genetics of single-cell protein abundance variation in large yeast populations
Nature (2014) 506: 494-497

Heyne HO, Lautenschläger S, Nelson R, Besnier F, Rotival M, Cagan A, Kozhemyakina R, Plyusnina IZ, Trut L, Carlborg Ö, Petretto E, Kruglyak L, Pääbo S, Schöneberg T, **Albert FW**
Genetic Influences on Brain Gene Expression in Rats Selected for Tameness and Aggression
Genetics (2014) 198 (3): 1277-1290
[Selected by the editors as an “Issue Highlight”]

Carneiro M*, Rubin CJ*, Di Palma*, **Albert FW**, ...[33 additional authors]..., Ferrand N, Lindblad-Toh K, Anderson L
Rabbit genome analysis reveals a polygenic basis for phenotypic change during domestication.
Science (2014) 345 (6200): 1074-1079

Carneiro M, **Albert FW**, Afonso S, Pereira RJ, Burbano H, Campos R, Melo-Ferreira J, Blanco-Aguiar JA, Villafuerte R, Nachman MW, Good JM, and Ferrand N
The Genomic Architecture of Speciation in the European Rabbit
PLoS Genetics (2014) 10 (8), e1003519

Good JM, Wiebe V, **Albert FW**, Burbano HA, Kircher M, Green RE, Halbwax M, André C, Atencia R, Fischer A, and Pääbo S
Comparative population genomics of the ejaculate in humans and the great apes
Molecular Biology and Evolution (2013) 30 (4): 964-976

Ka S, Markljung E, Ring H, **Albert FW**, Harun-Or-Rashid M, Wahlberg P, Garcia-Roves PM, Zierath JR, Denbow DM, Pääbo S, Siegel PB, Andersson L, and Hallböök F
Expression of carnitine palmitoyl-CoA transferase-1B is influenced by a cis-acting eQTL in two chicken lines selected for high and low body weight
Physiological Genomics (2013) 45 (9): 367-376

Albert FW, Somel M, Carneiro M, Aximu-Petri A, Halbwax M, Thalman O, Blanco-Aguilar JA, Plyusnina I, Trut L, Villafuerte R, Ferrand N, Kaiser S, Jensen P, and Pääbo S
A comparison of brain gene expression levels in domesticated and wild animals
PLoS Genetics (2012) 8 (9): e1002962

Carneiro M, **Albert FW**, Melo-Ferreira J, Galtier N, Gayral P, Blanco-Aguilar JA, Villafuerte R, Nachman MW, and Ferrand N
Evidence for widespread positive and purifying selection across the European rabbit (*Oryctolagus cuniculus*) genome
Molecular Biology and Evolution (2012) 29 (7): 1837-49

Albert FW, Hodges E, Jensen JD, Besnier F, Xuan Z, Rooks M, Bhattacharjee A, Brizuela L, Good JM, Green RE, Burbano HA, Plyusnina IZ, Trut L, Andersson L, Schöneberg T, Carlborg Ö, Hannon GJ, and Pääbo S
Targeted resequencing of a genomic region influencing tameness and aggression reveals multiple signals of positive selection
Heredity (2011) 107: 205-214

Brawand D, Soumillon M, Necsulea A, Julien P, Csardi G, Harrigan P, Weier M, Liechti A, Aximu-Petri A, Kircher M, **Albert FW**, Zeller U, Khaitovich P, Grützner F, Bergmann S, Nielsen R, Pääbo S, and Kaessmann H
The evolution of gene expression levels in mammalian organs
Nature (2011) 478 (7369): 343-8

Ka S, **Albert FW**, Denbow DM, Pääbo S, Siegel PB, Andersson L, and Hallböök F
Differentially expressed genes in hypothalamus in relation to genomic regions under selection in two chicken lines resulting from divergent selection for high or low body weight
Neurogenetics (2011) 12(3): 211-21

Liebscher I, Müller U, Teupser D, Engemaier E, Engel KMY, Ritscher L, Thor D, Sangkuhl K, Ricken A, Wurm A, Piehler D, Schmutzler S, Fuhrmann H, **Albert FW**, Reichenbach A, Thiery J, Schöneberg T, and Schulz A
Altered immune response in mice deficient for the G-protein coupled receptor GPC34
Journal of Biological Chemistry (2011) 286(3): 2101-10

Burbano HA, Hodges E, Green RE, Briggs AW, Krause J, Meyer M, Good JM, Maricic T, Johnson PLF, Xuan Z, Rooks M, Bhattacharjee A, Brizuela L, **Albert FW**, de la Rasilla M, Fortea J, Rosas A, Lachmann M, Hannon GJ, and Pääbo S
Targeted investigation of the Neandertal genome by array-based sequence capture
Science (2010) 328(5979): 723-725

Addis L, Friederici AD, Kotz SA, Sabisch B, Barry J, Richter N, Ludwig AA, Rübsem R, **Albert FW**, Pääbo S, Newbury DF, and Monaco AP
A locus for an auditory processing deficit and language impairment in an extended pedigree maps to 12p13.31-q14.3
Genes, Brain and Behavior (2010) 9(6): 545-561

Albert FW, Carlborg Ö, Plyusnina I, Besnier F, Hedwig D, Lautenschläger S, Lorenz D, McIntosh J, Neumann C, Richter H, Zeising C, Kozhemyakina R, Shchepina O, Kratzsch J, Trut L, Teupser D, Thiery J, Schöneberg T, Andersson L, and Pääbo S
Genetic architecture of tameness in a rat model of animal domestication
Genetics (2009) 182(2): 541-554
[Selected by the editors as an “Issue Highlight”]

Albert FW, Shchepina O, Winter C, Römpler H, Teupser D, Palme R, Ceglarek U, Kratzsch J, Sohr R, Trut L, Thiery J, Morgenstern R, Plyusnina I, Schöneberg T, and Pääbo S
Phenotypic differences in behavior, physiology and neurochemistry between rats selected for tameness and for defensive aggression towards humans
Hormones and Behavior (2008) 53(3), 413-421

INVITED TALKS

2013 Bay Area Yeast Meeting, UC Berkeley, November 16, 2013
Genetics of single-cell protein abundance variation in large yeast populations

Evening Evolution Group Seminar, New York University, December 04, 2012
The influence of genetic variation on protein translation and abundance

53. Symposium of the German Endocrinology Society, Leipzig, Germany, March 03 – 06, 2010
Towards a genetic understanding of tameness in a model of animal domestication

International Conference Dedicated to the 90th Anniversary of Prof. Dmitry K. Belyaev,
Novosibirsk, Russia, August 7 – 9, 2007
Uncovering the Genetic Basis for Tameness: A Model for Animal Domestication

SELECTED TALKS

Yeast Genetics Meeting, University of Washington, Seattle, WA, July 29 – August 03, 2014
Genetic influences on translation in yeast

Southern California Evolutionary Genetics & Genomics Meeting, USC, CA, March 01, 2014
Genetic influences on translation

Society for Molecular Biology and Evolution, Chicago, IL, July 7 – 11, 2013
A deep and detailed view of inter-individual proteome variation using millions of segregating yeast cells

Gordon Research Seminar on Quantitative Genetics and Genomics, Galveston, TX, February 17 – 18, 2013
Identifying genetic variants influencing protein expression using millions of segregating yeast cells.

Rat Genomics & Models, Cold Spring Harbor Laboratory, NY, December 02 – 05, 2009
Towards a genetic understanding of tameness in a model of animal domestication

POSTER PRESENTATIONS

Gordon Research Conference on Quantitative Genetics & Genomics, February 22-27, 2015
Lucca, Italy
Genetic influences on protein translation and abundance

EMBL Conference “From Functional Genomics to Systems Biology”, Heidelberg, Germany, November 8 – 11, 2014
Genetic influences on protein translation

Biology of Genomes, Cold Spring Harbor Laboratory, NY, May 6 – 10, 2014
Genetic influences on translation in yeast

Systems Biology: Global Regulation of Gene Expression, Cold Spring Harbor Laboratory, NY, March 18 – 22, 2014
Genetic influences on protein translation

Biology of Genomes, Cold Spring Harbor Laboratory, NY, May 7 – 11, 2013
A deep and detailed view of inter-individual proteome variation using millions of segregating yeast cells

Gordon Research Conference on Quantitative Genetics and Genomics, February 18 – 22, 2013
Identifying genetic variants influencing protein expression using millions of segregating yeast cells

Yeast Genetics and Molecular Biology Meeting, Princeton, NJ, July 31 – August 5, 2012
Identifying genetic variation influencing protein expression

Society for Molecular Biology and Evolution, Dublin, Ireland, June 23 – 26, 2012
A comparison of brain gene expression levels in domesticated and wild animals

International Congress of Quantitative Genetics, Edinburgh, Scotland, June 17 – 22, 2012
The influence of genetic variation on protein translation

Biology of Genomes, Cold Spring Harbor Laboratory, NY, May 10 – 14, 2011
Cortical gene expression in domestic animals

Gordon Research Conference on Quantitative Genetics and Genomics, February 20 – 25, 2011
The genetic basis for tameness in a rat model of animal domestication

74th Symposium: Evolution, Cold Spring Harbor Laboratory, NY, May 27 – June 1, 2009
Towards a genetic understanding of tameness in a model of animal domestication

International Congress of Genetics, Berlin, Germany, July 12 – 17, 2008
Uncovering the Genetic Basis for Tameness: A Model for Animal Domestication

3rd International Conference of Quantitative Genetics, Hangzhou, China, August 19 – 24, 2007
Uncovering the Genetic Basis for Tameness: A Model for Animal Domestication

TEACHING & MENTORING EXPERIENCE

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| 2014 | Mentor to a rotation student in the UCLA Molecular Biology PhD program |
| 2013 | Teaching Assistant in “MOL205 – Genes, Health and Society” taught by Prof. Leon Rosenberg, Princeton University |
| 2010 – present | Advisor to a graduate student at the Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany |
| 2009 | Organized and led three-week practical lab course and literature seminar for master students in Biology and Biochemistry |

PROFESSIONAL SERVICE

Meeting organization Co-Chair for the Gordon Research Seminar in Quantitative Genetics & Genomics, February 21-22, 2015 in Lucca, Italy

Invited reviewer for the Pacific Symposium on Biocomputing (PSB) 2015 session on Personalized Medicine

Co-organizer of the Southern California Evolutionary Genetics & Genomics Meeting at UCLA, Nov 15 2014

Peer Reviewer PLoS Genetics; Genetics; Genome Biology and Evolution; BMC Genomics; PLoS One; Bioinformatics; Molecular Ecology; Hormones and Behavior; Behavioural Processes; Brain, Behavior and Immunity

COLLABORATIVE RESEARCH VISITS

2010	Henrik Kaessmann Laboratory, University of Lausanne, Switzerland
2008	Gregory Hannon Laboratory, Cold Spring Harbor Laboratory, NY, USA
2007 – 2008	Örjan Carlborg Laboratory, Swedish Agricultural University, Uppsala, Sweden (several multi-week visits)
2007	Uppsala Genome Center, Uppsala, Sweden (several multi-week visits)

NON-ACADEMIC EXPERIENCE

2006	Internship, The Boston Consulting Group, Frankfurt, Germany
2005	Internship at United Nations Headquarters, New York, NY, USA
2004	National Model United Nations 2004, New York, NY, USA
2001	JAVA Developer at 'i-te Systems', Würzburg, Germany
1997 –1998	German Civilian Service

MEDIA COVERAGE

2011	“How Man Tamed the Wild” National Geographic Magazine Vol. 219 (3), March 2011
2010	“How Man Tamed the Wild” National Geographic Television Documentary
2009	“My little zebra: The secrets of domestication”. New Scientist 2728, 05 Oct
2006	“Nice Rats, Nasty Rats: Maybe It’s All in the Genes”. The New York Times, 25 July [Title Story in the Science Section]