

Curriculum Vitæ – Dr. rer. nat. Felix M. Key

CONTACT INFORMATION Max Planck Institute for Infection Biology
Charitéplatz 1
Campus Charité Mitte
10117 Berlin
Germany
Phone: +49 (0) 30 28460474
Email: key@mpiib-berlin.mpg.de
Web: [website](#)

EDUCATION **Ph.D., Population Genetics** (*summa cum laude*) Dec 2010 - Apr 2016
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.
Dissertation: *Human adaptation in the light of ancient and modern genomes*.
Advisor: [Aida M. Andrés](#).
Reviewer: [Svante Pääbo](#) and [Lluis Quintana-Murci](#).

Diploma, Human Biology Oct 2004 - Apr 2010
University of Greifswald, Greifswald, Germany
Major: Immunology, Minor: Microbiology, Ecotoxicology
Thesis: *Influence of polymicrobial sepsis on a subsequent immune response*
Advisor: [Barbara Broecker](#)

PROFESSIONAL EXPERIENCE **Independent Max Planck Research Group Leader (W2)** since Sep 2020
Max Planck Institute for Infection Biology, Berlin, Germany
Field: *Evolutionary Pathogenomics*

Postdoctoral fellow Aug 2018 - Aug 2020
Massachusetts Institute of Technology, Cambridge, USA
Topic: *Within-host microbial evolution, Population Genetics*
Advisor: [Tami D. Lieberman](#)

Postdoctoral associate Jul 2016 - Aug 2018
Max Planck Institute for the Science of Human History, Jena, Germany
Topic: *Ancient Microbial Genomics, Metagenomics, Archaeogenetics*
Advisor: [Johannes Krause](#)

Ph.D. Student Dec 2010 - Jun 2016
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
Topic: *Human adaptation in the light of ancient and modern genomes*
Advisor: [Aida M. Andrés](#) (now at UCL)

Diploma Student May 2009 - Apr 2010
University of Greifswald, Greifswald, Germany
Topic: *Influence of polymicrobial sepsis on a subsequent immune response*
Advisor: [Barbara Broecker](#)

Internship Sep 2007 - Mar 2008
University of British Columbia, Vancouver, Canada

Biomedical Research Centre

Topic: *p53-dependent transcription and tumor suppression are not affected in Set7/9-deficient mice*

Advisor: [Fabio Rossi](#)

SELECTED
RESEARCH
ARTICLES

[Google Scholar](#) for a complete list of publications

8. **Felix M. Key**, Veda D Khadka, Carolina Romo-González, Kimbria J Blake, Liwen Deng, Tucker C Lynn, Jean C Lee, Isaac M Chiu, Maria Teresa García-Romero, Tami D Lieberman
On-person adaptive evolution of *Staphylococcus aureus* during atopic dermatitis increases disease severity. *Cell Host & Microbe* (2023)
[weblink](#)
7. Arthur Kocher, Luka Papac, Rodrigo Barquera, **Felix M Key**, [164 co-authors], Wolfgang Haak, Johannes Krause, Denise Kühnert
Ten millennia of hepatitis B virus evolution. *Science* (2021)
[weblink](#)
6. **Felix M. Key**, Cosimo Posth, Luis R. Esquivel Gomez, [40 co-authors], Denise Kuehnert, Alexander Herbig, Johannes Krause
Emergence of human-adapted *Salmonella enterica* is linked to the Neolithization process. *Nature Ecol & Evol* (2020)
[weblink](#)
5. Ron Hübler*, **Felix M. Key***, Christina Warinner, Kirsten Bos, Johannes Krause, Alexander Herbig
HOPS: Automated detection and authentication of pathogen DNA in archaeological remains. *Genome Biology* (2019)
[weblink](#)
4. **Felix M. Key**, Muslihudeen Abdul-Aziz, Roger Mundry, Benjamin Peter, Mauro D'Amato, Megan Dennis, Joshua Schmidt, Aida Andrés.
Local adaptation of a human cold receptor along a latitudinal cline. *PLoS Genetics* e1007298 (2018)
[weblink](#)
3. Ben Krause-Kyora*, Julian Susat*, **Felix M. Key**, Denise Kühnert, Esther Bosse, Alexander Immel, Christoph Rinne, Sabin-Christin Kornell, Diego Yepes, Sören Franzenburg, Henrike O Heyne, Thomas Meier, Sandra Lösch, Harald Meller, Susanne Friederich, Nicole Nicklisch, Kurt W Alt, Stefan Schreiber, Andreas Tholey, Alexander Herbig, Almut Nebel, Johannes Krause
Neolithic and medieval virus genomes reveal complex evolution of Hepatitis B *eLife*. (2018)
[weblink](#)
2. **Felix M. Key**, Qiaomei Fu, Frédéric Romagné, Michael Lachmann, Aida M. Andrés.

Human adaptation and population differentiation in the light of ancient genomes. *Nature Communications*, 7:10775. (2016). [weblink](#)

1. **Felix M. Key**, Benjamin Peter, Megan Y Dennis, Emilia Huerta-Sanchez, Wei Tang, Ludmila Prokunina-Olsson, Rasmus Nielsen, Aida M Andrés. Selection on a Variant Associated with Improved Viral Clearance Drives Local, Adaptive Pseudogenization of Interferon Lambda 4 (*IFNL4*). *PLoS Genetics*, 10:e1004681. (2014) [weblink](#)

GRANTS AND FUNDING	Grant	Jan 2025 - Dec 2028
	Volkswagen Foundation - Pioneering Research program	500,000Euro
	Grant	Oct 2021 - Aug 2023
	Klaus Tschira Boost Fund	80,000Euro
	Core Funding	Sep 2020 - Feb 2026
	Independent Max Planck Research Group	1,895,000Euro
	Grant	Mar 2020 - Jun 2023
	EASI Genomics Transnational Access Projects	50,000Euro
	Postdoctoral Stipend	Aug 2018 - Aug 2020
	German Research Foundation <i>Forschungsstipendium</i>	130,000Euro
	PhD Stipend	Dec 2010 - Dec 2014
	International Max Planck Research School 'The Leipzig School of Human Origins'	
	Travel Grant	Sep 2007
	Deutsche Akademische Austauschdienst (for Internship at BRC in Vancouver, Canada)	

AWARDS	PLoS Genetics Research Prize	2019
	Award for highly recognised research article published in 2018: Key et al. Plos Genetics	

PRESENTATIONS & PUBLIC OUTREACHG (SELECTED)	Talk	Wuerzburg (Germany), Jun 2024
	7th Joint Microbiology & Infection Conference. <i>Microbiome translocation and within-patient evolution promotes opportunistic, nosocomial infections.</i>	
	Talk	Zurich (Switzerland), Apr 2024
	Invited talk at Univeristy Zurich. <i>Pathogen emergence during prehistory.</i>	
	Talk	Paris (France), Apr 2022
	Invited talk at Pasteur Institute. <i>Microbial on-person evolution during chronic disease.</i>	

Talk Boston (USA), Nov 2019
Science of the human past meeting. *Microbial genomics in the era of ancient DNA.*

Talk New York (USA), Jul 2019
CSHL Microbiome. *Spread and adaptation of Staphylococcus aureus on the lesions on children with atopic dermatitis.*

Talk Heidelberg (Germany), Mar 2018
EMBO Conference on Reconstructing the Human Past. *6,500 year old Salmonella enterica genomes link human-host adaptation to animal domestication.*

Talk Austin (USA), Jul 2017
Annual meeting of the Society for Molecular Biology and Evolution. *High-throughput pathogen detection in ancient metagenomic data.*

Talk Vienna (Austria), July 2015
Annual meeting of the Society for Molecular Biology and Evolution. *Ancient Genomes improve our understanding of human population differentiation.*

Talk Zurich (Switzerland), April 2015.
Swiss Society for Medical Genetics. *Using Ancient and Present-Day Human Genomes to Understand Local Adaptation and Medically-Relevant Phenotypes.*

Talk Berkeley (USA), April 2013
Department of Integrative Biology (UC Berkeley). *Adaptive Pseudogenization of IFNL4 - A gene that underlies variation of Hepatitis C clearance.*

TEACHING & TRAINEES

1. **Current advisees** at *Evolutionary Pathogenomics* lab (MPI IB):
PhD students (Ian Light [*2021], Martin Fenk [*2021], Veronica Rozek [*2023], Lilly Bartsch [*2024]) and postdoctoral associate (Thomas Silvers [*2024])
 2. **Past advisees** at *Evolutionary Pathogenomics* lab (MPI IB) and before:
Postdoctoral associate (Anne K. Runge), MS thesis (Remmora Gomaïd), BS thesis (Laura Osterheldt) and internships (Lisa Skroblin, Fatumata Sow, Elina Coquery, Levin Alleweldt, Muslihudeen Abdul-Aziz, Katalina Bobowik)
 3. **Teaching** Master course Immunobiology May 2024
Taught in Lecture Series at Freie University (Berlin)
 4. **Teaching** Graduate School for Infectious Disease and Immunology May 2021
Taught in Lecture Series Infection Biology
 5. **Teaching** Graduate School: IMPRS of Human Origin Jun 2016
Taught module about ongoing research projects at MPI EVA.
 6. **Teaching** Programming for Evolutionary Biology Course Feb 2016
Population Genomics together with Stefan Laurent (Jensen Lab, U Lausanne).
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