

BIOGRAPHICAL SKETCH

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NAME Franke, Andre		POSITION TITLE Professor	
eRA COMMONS USER NAME (credential, e.g., agency login) AFRANKE			
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Christian-Albrechts-University Kiel (CAU), Department of Zoology CAU, Institute of Clinical Molecular Biology	Diploma	2003	Developmental Biology
	Dr. rer. nat.	2006	Genetics

A. Positions and Honors.**Positions and Employment**

2008-2011	Junior Professorship (W1) for Epithelial Barrier Diseases within the DFG excellence cluster "Inflammation at Interfaces"
2008-2013	Academic guest position at the Medical Faculty, University of Oslo, Norway (Rikshospitalet)
2011-2016	W2 endowment professorship "Peter Hans-Hofschneider" of the Foundation of Experimental Biomedicine
2011	Guest scientists at the Broad Institute of MIT and Harvard (Boston, USA) in the group of Mark J. Daly and mentored by Richard S. Blumberg
Since 2011	Director of the Institute of Clinical Molecular Biology and the high-throughput core facilities
Since 2016	Full W3 professorship of Molecular Medicine

Other Experience and Professional Memberships

Since 2009	Spokesperson of the young investigators in the DFG Excellence Cluster 306 "Inflammation at Interfaces"
Since 2012	Spokesperson of the DFG Research Training Group GRK 1743/1 "Genes, Environment and Inflammation"
Since 2012	Member of the Steering Committee of "Inflammation at Interfaces"

Honors

2008	Hensel-prize (100,000 €) for excellent research from CAU Kiel
2011	Janssen Prize Dermatology
2011	W2 Peter Hans-Hofschneider professorship of Foundation of Experimental Biomedicine (Zürich, Switzerland)
2012	Ludwig-Deuling Research Prize of German Crohn's and Colitis Foundation (DCCV; 20,000 €)
2017	Thannhauser Prize of the DGVS (German Society for Digestive and Metabolic Diseases; 10,000 €)
2017	Schleswig-Holstein Excellence Chair (8 professors in State selected)

B. Selected peer-reviewed publications (in chronological order).

10 best publications in last five years selected from overall **451** peer-reviewed publications, cumulative impact factor **4914.1**.

1. Thingholm LB, Rühlemann MC, Koch M, Fuqua B, Laucke G, Boehm R, Bang C, Franzosa EA, Hübenthal M, Rahnavard A, Frost F, Lloyd-Price J, Schirmer M, Lusi AJ, Vulpe CD, Lerch MM, Homuth G, Kacprowski T, Schmidt CO, Nöthlings U, Karlsen TH, Lieb W, Laudes M, **Franke A***, Huttenhower C (2019). *Obese Individuals with and without Type 2 Diabetes Show Different Gut Microbial Functional Capacity and Composition*. **Cell Host Microbe** Aug 14;26(2):252-264.e10. *shared senior authorship and corresponding author
2. Degenhardt F, Wendorff M, Wittig M, Ellinghaus E, Datta LW, Schembri J, Ng SC, Rosati E, Hübenthal M, Ellinghaus D, Jung ES, Lieb W, Abedian S, Malekzadeh R, Cheon JH, Ellul P, Sood A, Midha V, Bk T, Wong SH, Schreiber S, Yamazaki K, Kubo M, Boucher G, Rioux J, Lenz TL, Brant SR, **Franke A** (2018). *Construction and benchmarking of a multi-ethnic reference panel for the imputation of HLA class I and II alleles*. **Hum Mol Genet**. doi: 10.1093/hmg/ddy443.
3. Huang H, Fang M, Jostins L, Umićević Mirkov M, Boucher G, Anderson CA, Andersen V, Cleynen I, Cortes A, Crins F, D'Amato M, Deffontaine V, Dmitrieva J, Docampo E, Elansary M, Farh KK, **Franke A**, Gori AS, Goyette P, Halfvarson J, Haritunians T, Knight J, Lawrance IC, Lees CW, Louis E, Mariman R, Meuwissen T, Mni M, Momozawa Y, Parkes M, Spain SL, Théâtre E, Trynka G, Satsangi J, van Sommeren S, Vermeire S, Xavier RJ; International Inflammatory Bowel Disease Genetics Consortium, Weersma RK, Duerr RH, Mathew CG, Rioux JD, McGovern DPB, Cho JH, Georges M, Daly MJ, Barrett JC (2017). *Fine-mapping inflammatory bowel disease loci to single-variant resolution*. **Nature**. 547(7662):173-178.
4. Ji SG, Juran BD, Mucha S, Folseraas T, Jostins L, Melum E, Kumasaka N, Atkinson EJ, Schlicht EM, Liu JZ, Shah T, Gutierrez-Achury J, Boberg KM, Bergquist A, Vermeire S, Eksteen B, Durie PR, Farkkila M, Müller T, Schramm C, Sterneck M, Weismüller TJ, Gotthardt DN, Ellinghaus D, Braun F, Teufel A, Laudes M, Lieb W, Jacobs G, Beuers U, Weersma RK, Wijmenga C, Marschall HU, Milkiewicz P, Pares A, Kontula K, Chazouillères O, Invernizzi P, Goode E, Spiess K, Moore C, Sambrook J, Ouwehand WH, Roberts DJ, Danesh J, Floreani A, Gulamhusein AF, Eaton JE, Schreiber S, Coltescu C, Bowlus CL, Luketic VA, Odin JA, Chopra KB, Kowdley KV, Chalasani N, Manns MP, Srivastava B, Mells G, Sandford RN, Alexander G, Gaffney DJ, Chapman RW, Hirschfield GM, de Andrade M; UK-PSC Consortium; International IBD Genetics Consortium; International PSC Study Group, Rushbrook SM, **Franke A**, Karlsen TH, Lazaridis KN, Anderson CA (2017). *Genome-wide association study of primary sclerosing cholangitis identifies new risk loci and quantifies the genetic relationship with inflammatory bowel disease*. **Nat Genet**. 2017 Feb;49(2):269-273.
5. Ellinghaus D, Jostins L, Spain SL, Cortes A, Bethune J, Han B, Park YR, Raychaudhuri S, Pouget JG, Hübenthal M, Folseraas T, Wang Y, Esko T, Metspalu A, Westra HJ, Franke L, Pers TH, Weersma RK, Collij V, D'Amato M, Halfvarson J, Jensen AB, Lieb W, Degenhardt F, Forstner AJ, Hofmann A; International IBD Genetics Consortium (IIBDGC), International Genetics of Ankylosing Spondylitis Consortium (IGAS), International PSC Study Group (IPSCSG), Genetic Analysis of Psoriasis Consortium (GAPC), Psoriasis Association Genetics Extension (PAGE), Schreiber S, Mrowietz U, Juran BD, Lazaridis KN, Brunak S, Dale AM, Trembath RC, Weidinger S, Weichenthal M, Ellinghaus E, Elder JT, Barker JN, Andreassen OA, McGovern DP, Karlsen TH, Barrett JC, Parkes M, Brown MA, **Franke A** (2016). *Analysis of five chronic inflammatory diseases identifies 27 new associations and highlights disease-specific patterns at shared loci*. **Nature Genetics**. 48(5):510-8.
6. Wang J, Thingholm LB, Skiecevičienė J, Rausch P, Kummel M, Hov JR, Degenhardt F, Heinsen FA, Rühlemann MC, Szymczak S, Holm K, Esko T, Sun J, Pricop-Jeckstadt M, Al-Dury S, Bohov P, Bethune J, Sommer F, Ellinghaus D, Berge RK, Hübenthal M, Koch M, Schwarz K, Rimbach G, Hübbe P, Pan

WH, Sheibani-Tezerji R, Häsler R, Rosenstiel P, D'Amato M, Cloppenburg-Schmidt K, Künzel S, Laudes M, Marschall HU, Lieb W, Nöthlings U, Karlsen TH, Baines JF, **Franke A** (2016). *Genome-wide association analysis identifies variation in vitamin D receptor and other host factors influencing the gut microbiota*. **Nature Genetics**. 48(11):1396-1406.

7. Huang YH, Zhu C, Kondo Y, Anderson AC, Gandhi A, Russell A, Dougan SK, Petersen BS, Melum E, Pertel T, Clayton KL, Raab M, Chen Q, Beauchemin N, Yazaki PJ, Pyzik M, Ostrowski MA, Glickman JN, Rudd CE, Ploegh HL, **Franke A**, Petsko GA, Kuchroo VK, Blumberg RS. *CEACAM1 regulates TIM-3-mediated tolerance and exhaustion*. **Nature**. 2015 Jan 15;517(7534):386-90.
8. Fischer U, Forster M, Rinaldi A, Risch T, ..., Lehrach H, Borkhardt A*, Bourquin JP*, **Franke A***, Korbel JO*, Stanulla M*, Yaspo ML* (2015). *Genomics and drug profiling of fatal TCF3-HLF-positive acute lymphoblastic leukemia identifies recurrent mutation patterns and therapeutic options*. **Nat Genet**. 47(9):1020-9. *shared senior authorship, alphabetical order; grant coordinated by Franke A/Stanulla M.
9. Goyette P, Boucher G, Mallon D, Ellinghaus E, Jostins L, Huang H, Ripke S, Gusareva ES, Annesse V, Hauser SL, Oksenberg JR, Thomsen I, Leslie S; International Inflammatory Bowel Disease Genetics Consortium.; Australia and New Zealand IBDGC.; Belgium IBD Genetics Consortium.; Italian Group for IBD Genetic Consortium.; NIDDK Inflammatory Bowel Disease Genetics Consortium.; United Kingdom IBDGC.; Wellcome Trust Case Control Consortium.; Quebec IBD Genetics Consortium., Daly MJ, Van Steen K, Duerr RH, Barrett JC, McGovern DP, Schumm LP, Traherne JA, Carrington MN, Kosmoliaptsis V, Karlsen TH, **Franke A***, Rioux JD* (2015). *High-density mapping of the MHC identifies a shared role for HLA-DRB1*01:03 in inflammatory bowel diseases and heterozygous advantage in ulcerative colitis*. **Nature Genetics**. 47(2):172-9. *shared senior authorship
10. Wittig M, Anmarkrud JA, Kässens JC, Koch S, Forster M, Ellinghaus E, Hov JR, Sauer S, Schimmler M, Ziemann M, Görg S, Jacob F, Karlsen TH, **Franke A** (2015). *Development of a high-resolution NGS-based HLA-typing and analysis pipeline*. **Nucleic Acids Res**. 43(11):e70.

For a complete list of publications please see:

<https://www.ikmb.uni-kiel.de/people/scientists/andre-franke#publications>

Research Support

Ongoing Research Support

2019-2027	DFG Cluster of Excellence "Precision Medicine in Inflammation" (PMI); PI of RTF I "Genomic Diversity", RTF VI "Sequence-based profiling", RTF X "General Patient Access and CCIM", TI-2 "Integrative Immunogenetics and Cellular Approaches towards Developing an Antigen-Specific Therapy" and Area Z "Data Management"; >2,812,910 €
2019-2026	EU IMI ImmUniverse-3TR; 226,000 € for data manager
2019-2023	EU "European Advanced Infrastructure for Innovative Genomics (EASI-Genomics; Project ID: 824110); 806,866 €
2019-2023	BMBF iTREAT "A systems medicine approach to individualized treatment trajectories in psoriasis and IBD"; 332,597 €
2019-2022	BMBF GUIDE-IBD "Molecular Medicine therapy guidance in inflammatory disease"; 320,162 €
2019-2022	ZIM project "good2blood"; 190,000 €
2019-2022	DFG CRU 306 – "Primary Sclerosing Cholangitis" (ID: ID: FR 2821/10-2), phase II; subprojects 1 & INF; 566,300 €
2019-2021	DFG "Discovery of risk factors for hemorrhoids" (ID: FR 2821/19-1); 410,003 €
2019-2021	EU Interreg "Changing Cancer Care (CCC)"; 100,000 €
2019-2021	DFG-RFBR Cooperation: "Systems medicine approach towards the immune repertoire in inflammatory bowel diseases (IBD)" (ID: FR 2821/18-1); 286,100 €
2019-2021	DFG Clinician Scientist Program in Evolutionary Medicine (CSEM); tandem project with Prof. Matthias Laudes; € N/A
2019-2021	Else Kröner-Fresenius-Stiftung (EKFS) "Darm-Gehirn-Achse"; associated mentor
2018-2019	Pfizer "Establishment of a mobile patient app for bridging communication and knowledge gaps between ulcerative colitis patients and physicians"; 55,000 €
2017-2022	EU "SYSCID - A systems medicine approach to chronic inflammatory disease"; 420,000 €
2017-2021	DFG Research Training Group 1743 "Genes, Environment and Inflammation" (spokesperson); 3,172,000€
2017-2019	BMBF e:Med grant "SysINFLAME"; subprojects CP3 and CP10
2016-2019	DFG CRC 1182– "Origin and function of metaorganisms"; subprojects A02 und INF; 1,015,000€
2016-2019	DFG CRU 306 – "Primary Sclerosing Cholangitis" (ID: ID: FR 2821/10-1), phase I; subprojects 1 & INF; 404,200 €

Completed Research Support

2004-2007	BMBF NGFN2: Environmental Disorders, Project ID: NUW-S23T06 (>1 Mio. EUR incl. personnel)
2008	NoPSC (patient organization): 200k EUR for German PSC GWAS
2008	EXC Call01 Miniproposal "Next generation (ultrafast) sequencing – an infrastructure relevant for the excellence cluster": 50k €
2008	EXC Call01 Miniproposal "A comprehensive GW analysis of structural variation in concordant/discordant monozygotic twins for IBD": 50k €
2008-2012	BMBF NGFNplus "IG Systematic Genomics of Chronic Inflammatory Barrier Diseases"; subprojects GP1, GP6, GP7, T3; 2,288,000€
2008-2012	DFG Cluster of Excellence (ID: EXC 306) "Inflammation at Interfaces"; Research Area I, Z, I-d, and IRN Z; 957,000 €
2009	Industry: Giuliani S.p.A. (Milan, Italy); 100,000k EUR
2009	DFG „Großgerät nach Art. 91b GG“: „Hochdurchsatzroboter für Genotypisierungs-, Expressions- und epigenetische Studien" (Illumina iScan) (ID: Inst 257/348-1); 520,000 EUR
2010-2012	DFG "A genome-wide phenotype-overlapping approach for the identification of shared disease loci." (ID: FR 2821/2-1); 717,000€

Program Director/Principal Investigator (Last, First, Middle):

2011-2012 DFG "Fine mapping of susceptibility loci for atopic dermatitis on chromosome 1q21.3 and chromosome 11q13.5." (ID: WE 2678/6-2); 85,000 €

2011 Industry: Siemens "Next Generation Genetic Diagnostics"; 347,000€

2011-2015 ESGI European Sequencing and Genotyping Infrastructure (ID: 262055); 694,000€

2011-2015 EPIHEALTH "Linking perturbed maternal environment during periconceptional development, due to diabetes, obesity or assisted reproductive technologies, and altered health during ageing" (ID: 278418); 461,000€

2012-2015 BfS Pilotstudie "Sequenzierung und bioinformatische Auswertung von kindlichen Leukämie-Fällen (Akute lymphoblastische Leukämie/ALL) (ID: 3611S70014); 740,610€

2013 Industry: Siemens "Zusammenarbeit auf dem Gebiet der molekularen Mikrobiologie"; 682,000 €

2013-2014 International Psoriasis Council: Towards Completing the Genetic Risk Map for Psoriasis: Rare Protein-altering Variants in 10,000 Psoriasis Cases and 10,000 Controls; 133,000€

2013-2014 PSC Partners Seeking a Cure: Whole Exome Sequencing of PSC patients with severe Disease; 47,000€

2014 Industry: Siemens "Zusammenarbeit auf dem Gebiet der Einzelzellanalyse"; 26,000k €

2012-2017 DFG Cluster of Excellence (ID: EXC 306) "Inflammation at Interfaces"; Cluster Laboratory IX "Theoretical Biology" and Research Area Z "Data Management"; 2,462,061 €

2012-2017 DFG Research Training Group (ID: GRK1743/1) "Genes, Environment and Inflammation"; 2400 k€ for the whole group

2013-2016 BMBF e:Med grant "SysINFLAME" (ID: 01ZX1306A); subprojects CP3 and CP10; 902,479 €

2014-2016 DFG "Whole-exome sequencing of Crohn's disease pedigrees" (ID: FR 2821/6-1); 273,000€

2014-2016 DFG "Untersuchung des monogenen essentiellen Tremors durch Exomsequenzierung" (ID: FR 2821/9-1); 80,000€

2014-2016 DFG "Die Bedeutung von seltenen Varianten in lysosomalen Genen in der Pathogene der Parkinson Krankheit" (ID: FR 2821/7-1); 28,000€

2015-2017 BMBF VarWatch – A Database of in limbo Genetic Variants from Next Generation Sequencing (ID: 01EK1506); 457,000€

2016-2018 DFG CRU – "Primary Sclerosing Cholangitis" (ID: ID: FR 2821/10-1); subproject 1; 404,200€

2017-2018 DFG Cluster of Excellence "Inflammation at Interfaces"; PI of Research Area I "Genetic and phenotypic architecture of inflammatory barrier diseases", Cluster Laboratory IX "Theoretical Biology" and Research Area Z "Data Management"

Kiel, the 3rd of January 2020

