

Jonas Zierer

Experience

	Experience
02/2019 - today	 Novartis BioMedical Research, Basel, Switzerland Senior Expert Data Science II (Principal Scientist) at Immunology Target discovery/validation using genetics and genomics data Patient stratification/endotyping/biomarker discovery based on molecular profiling Profiling of compounds, models, pathways using (sc) transcriptomics and proteomics data Mentoring junior scientists in various aspects of computational biology
08/2017 - 12/2018	 Weill Cornell Medical College of Cornell University, New York, USA Postdoctoral Associate in Statistical Genomics at Institutes of Precision Medicine and Computational Biomedicine Analysis of metabolic reprogramming in cancer using genomics data Identification of metabolic synthetic lethality through metabolic modelling
04/2014- 07/2017	 King's College London, London, UK PhD Genetics and Molecular Medicine at Department of Twin Research and Genetic Epidemiology; joint project with the Helmholtz Zentrum München, Institute for Bioinformatics and Systems Biology Epidemiological studies on ageing and age-related diseases Normalisation, analysis, and interpretation of metabolomics and genomics studies (GWAS/MWAS/) Integration of 'omics' data using multivariate statistics
05/2013 - 03/2014	 Helmholtz Zentrum München, Neuherberg, Germany Student assistant at Institute of Bioinformatics and Systems Biology (IBIS) Analysis of high-throughput metabolomics in the context of oncology and ageing Network inference from high-dimensional observational datasets
05/2010 - 04/2013	 Ludwigs-Maximilians-University, Munich, Germany Student assistent at Institute for Informatics (Bioinformatics) Normalisation and analysis of RNA-seq data Development of gene regulatory network inference algorithm (in C++ and R)
10/2008 - 04/2010	 Siemens AG, Munich, Germany Student assistant at Corporate Technology (Software Engineering) Research, documentation, prototyping of cloud computing architecture (part of EU-funded NEXOF-RA) System administration, ensuring compliance with internal security standards
	Education
10/2011- 09/2013	MSc Bioinformatics , <i>Ludwigs-Maximilians-University</i> , <i>Munich</i> , <i>Germany</i> Thesis: "Identification of Uni- and Multivariate Biomarkers in Metabolomics Data from Lymphoma Patients" Overall grade: 1.5 (with distinction)
10/2008- 09/2011	BSc Bioinformatics , <i>Ludwigs-Maximilians-University</i> , <i>Munich</i> , <i>Germany</i> Thesis: "Transcript Quantification Biases in Next Generation Sequencing Data" Overall grade: 1.5 (with distinction)
08/1998-	German Abitur, StAnna-Gymnasium, Munich, Germany

07/2007 Overall grade: 1.6 (very good)

Qualifications

- 2021 Deep Learning Specialization (Coursera/Andrew Ng) Consisting of 5 courses: Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Model
- 2021 Scalable Machine Learning on Big Data using Apache Spark (Coursera/IBM)
- 2019 Fundamentals of Immunology: Innate Immunity and B-Cell Function (Coursera/Rice)

Awards, Memberships, Grants

Member of ASHG, Metabolomics Society, NY Academy of Sciences

- 2018 Pilot Grant of the Southeast Center for Integrated Metabolomics (as part of the NIH Metabolomics Common Fund), \$50,000 [PI: Olivier Elemento]
- 2017 Travel award for the 13th Annual Conference of the Metabolomics Society
- 2016 Travel award of the National Cancer Institute (COnsortium of METabolomics Studies Scientific Meeting)
- 2015 Best presentation award of the 11th International Conference of the Metabolomics Society

Patents

2023 Remibrutinib for use in the treatment of hidradenitis suppurativa (WO2023161887A)

Publications

Selected Journal Articles

- C. Zhang, K. Shestopaloff, B. Hollis, C. H. Kwok, C. Hon, N. Hartmann, C. Tian, M. Wozniak, L. Santos, D. West, S. Gardiner, A.-M. Mallon, A. Readie, R. Martin, T. Nichols, M. T. Beste, J. Zierer, et al. "Response to anti-IL17 therapy in inflammatory disease is not strongly impacted by genetic background." *American journal of human genetics* 110 (10 Oct. 2023), pp. 1817–1824
- P. Surendran, I. D. Stewart, V. P. W. A. Yeung, M. Pietzner, J. Raffler, M. A. Wörheide, C. Li, R. F. Smith, L. B. L. Wittemans, L. Bomba, C. Menni, J. Zierer, et al. "Rare and common genetic determinants of metabolic individuality and their effects on human health". *Nature Medicine* 28 (11 Nov. 2022), pp. 2321–2332
- A. Halama, M. Kulinski, S. S. Dib, S. B. Zaghlool, K. S. Siveen, A. Iskandarani, J. Zierer, et al. "Accelerated lipid catabolism and autophagy are cancer survival mechanisms under inhibited glutaminolysis." *Cancer letters* 430 (Aug. 2018), pp. 133–147
- o J. Zierer, M. A. Jackson, G. Kastenmüller, M. Mangino, et al. "The fecal metabolome as a functional readout of the gut microbiome." *Nature genetics* 50 (6 June 2018), pp. 790–795
- M. A. Jackson, S. Verdi, M.-E. Maxan, C. M. Shin, J. Zierer, et al. "Gut microbiota associations with common diseases and prescription medications in a population-based cohort." *Nature communications* 9 (1 July 2018), p. 2655
- T. Long, M. Hicks, H.-C. Yu, W. H. Biggs, E. F. Kirkness, C. Menni, J. Zierer, et al. "Whole-genome sequencing identifies common-to-rare variants associated with human blood metabolites." *Nature genetics* 49 (4 Apr. 2017), pp. 568–578
- C. Menni, J. Zierer, A. M. Valdes, and T. D. Spector. "Mixing omics: combining genetics and metabolomics to study rheumatic diseases." *Nature reviews. Rheumatology* 13 (3 Mar. 2017), pp. 174–181
- J. Zierer, T. Pallister, P.-C. Tsai, J. Krumsiek, et al. "Exploring the molecular basis of age-related disease comorbidities using a multi-omics graphical model." *Scientific reports* 6 (1 Nov. 2016), p. 37646
- C. Barrios, J. Zierer, I. Gudelj, J. Štambuk, et al. "Glycosylation Profile of IgG in Moderate Kidney Dysfunction." *Journal of the American Society of Nephrology : JASN* 27 (3 Mar. 2016), pp. 933–41
- J. Zierer, C. Menni, G. Kastenmüller, and T. D. Spector. "Integration of 'omics' data in aging research: from biomarkers to systems biology". *Aging Cell* 14 (6 Aug. 2015), pp. 933–944

Selected Conference Presentations

- S. Finzel et al. "Dose Dependent Modulation of a B Cell Protein Signature by Ianalumab in Patients with Sjögren's Disease". ACR Convergence, Nov. 2023, 75 (suppl 9), p. 7
- J. Zierer et al. "Systematic identification and experimental validation of collateral metabolic lethality in cancer". 14th International Conference of the Metabolomics Society, June 2018
- J. Zierer et al. "The fecal metabolome as a functional readout of the gut microbiome". COnsortium of METabolomics Studies (COMETS) Scientific Meeting, Oct. 2016
- J. Zierer et al. "1H NMR-based metabolomic profiling reveals potential biomarkers of renal function in non-diabetic and diabetic populations". 12th International Conference of the Metabolomics Society, June 2016