

SBHD 2025			
Monday, June 16, 2025			
08:30	Registration and Welcome Coffee		
10:00	Roland Eils	Opening and Welcome Remarks	
10:15	Peer Bork	Keynote: Systemic microbiome analysis for human health and wellbeing	
11:15	Matthias König	Reproducible Digital Twins for Studying the Effect of Disease on Pharmacokinetics	Short Talks
11:35	Zahra Moslehi	Multi-output Gaussian Processes for Integration of Multi Omics Data	
11:55	Adán Espinosa	A top-down-bottom-up pipeline for the automatic construction of a mechanistic mathematical model of breast cancer resistance	
12:15	Lunch		
13:30	Ayan Paul	Charting the regulation of Alternative Splicing with Machine Learning in two human diseases, COPD and SCLC	
14:10	Ralf Herwig	Effects of SF3B1 mutations in CLL and MDS patients uncovered by long-read transcriptome sequencing	Short Talks
14:30	Vincent Wieland	A Stochastic Modelling Framework for Cancer Patient Trajectories: Combining Tumour Growth, Metastasis, and Survival	
14:50	Inna Lavrik	Dissecting apoptosis regulation in cancer cells via computational modeling and pharmacological targeting	
15:10	Lina Alasfar	Trajectory inference of T-cell differentiation and exhaustion in unmanipulated stem cell grafts and their link to clinical outcomes in children	
15:30	Coffee Break		
16:00	Fei Lan 蓝斐	Targeting Cancer through Ribosome-based Epigenetics Mechanisms	
16:40	Tancredi Pentimalli	3D multimodal analysis of cellular and ECM interactions in the lung cancer microenvironment	Short Talks
17:00	Viola Hollek	Pooled single-cell screening in colorectal cancer identifies transcriptional modules of clinical relevance unlocked by oncogenes	
17:20	Annika Schoene	Responsible AI for Mental Health	
19:00	Welcome Reception and Conference Dinner		

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Tuesday, June 17, 2025			
09:00	James Dodd	Exacerbation prediction modelling in Chronic Obstructive Lung Disease	
09:40	Aaron Meyer	Generating predictive models of patient-level phenotypes from scRNA-seq with Unaligned Low-rank Tensor Regression with Attention (ULTRA)	Short Talk
10:00	Coffee Break		
10:30	Janna Nawroth	The biomechanics of airway mucociliary clearance in health and disease	
11:10	Katy Börner	Human Reference Atlas Construction and Usage	
11:50	Julius Upmeier zu Belzen	Inference and application of a data-driven gene ontology with cell-type resolution across the human body	Short Talk
12:10	Lunch		
13:10-15:00	Poster Session in Foyer of BIH Rahel Hirsch Center for Translational Medicine		
Special LLM Session			
15:00	Matthias Gröschel	GPT-4o and document retrieval to increase guideline adherence in chronic obstructive pulmonary disease: a pragmatic, AI randomized controlled trial	Short Talks
15:20	Felix Bießmann	End-to-end Pseudonymization of German Texts with Deep Learning – An Empirical Comparison of Classical and Modern Approaches	
15:40	Zhiyun Duan 段智允	Systematic Evaluation of Large Language Models for Lung Cancer Screening Management: A Multimodal, Multicenter study	
16:00	Fabian Prasser and Lena Baum	Using generative AI to support the analysis of biomedical data in self-service platforms	
16:20	Christoph Lippert	Large language models improve transferability of electronic health record-based predictions across countries and coding systems	
16:40	Coffee Break		
17:10	Qihao Duan 段启昊	JanusDNA: A Powerful Bi-directional Hybrid DNA Foundation Model	Short Talks
17:30	Benjamin Wild	Rethinking Healthcare Data Interoperability in the Age of LLMs	
17:50	Lei Liu 刘雷	Prediction of drug response and prognosis in cancer via deep learning models	
18:10	Sukanya Punthambaker	AI Meets Multiomics: A New Era in Systems Biology powering the future of Precision Medicine	

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Wednesday, June 18, 2025			
09:00	Evelyne Bischof	AI-Empowered Personalized Healthy Longevity Medicine	
09:40	Leeat Keren	Anne Heidenthal Award Lecture: Spatial proteomics for next generation pathology	
10:30	Coffee Break		
11:00	Lucas Arnoldt	Integration of Multimodal Single-Cell Data via Explainable Sparse Deep Generative Modelling	Short Talks
11:20	Andrea Lomagno	CoPPIs Algorithm: A Tool to Unravel Protein Cooperative Strategies in Pathophysiological Conditions	
11:40	Elin Nyman	Machine learning for forensic predictions of time and cause of death	
12:00	Henrik Podéus	Enhancing Disease Screening Through Alcohol Consumption Markers and Digital Monitoring Tools	
12:20	Lunch		
13:20	Elfriede Friedmann	Finite Element Modeling of Aflibercept and Ranibizumab Pharmacodynamics in Age-Related Macular Degeneration	Short Talks
13:40	Lei Gu 顾磊	Histone Modification-Based Epigenetic Clocks Uncover Evolutionarily Conserved Biomarkers of Aging and Senescence Regulation	
14:00	Dongsheng Yuan 袁东昇	crossNN: an explainable framework for cross-platform DNA methylation-based classification of cancer	
14:20	Dennis Vitkup	Autism Mutations Preferentially Target Distributed Brain Circuits and Cell Types Associated with Sensory Integration and Decision Making	
14:40	Short Break		
15:00	Dan Gallahan	Cancer Systems Biology at the National Cancer Institute	
15:40	Thomas Südhof	Keynote: From Molecules to Behavior, from Gene Expression to Synaptic Circuits	
16:45	Roland Eils	Closing remarks	
17:00	End of meeting		