SYMPOSIUM
Dissecting Biology @Single Cell Level

BERLIN, NOVEMBER 21/22, 2019

BIMSB, **BERLIN**
Hannoversche Str 28
10115 Berlin

COMPUTATIONAL
> Simon Anders, Heidelberg
> Maria Colomé-Tatché, München
> David van Dijk, Yale
> Angela Goncalves, Heidelberg

EXPERIMENTAL
> Jeff Chao, Basel
> Lars Dölken, Würzburg
> Mark Friedlaender, Stockholm
> Holger Heyn, Barcelona
> Kathrin Kattler, Saarbrücken
> Gioele La Manno, Lausanne
> Silvia Santos, London
> Christopher J Tape, London
> Jörn Walter, Saarbrücken

LOCAL SPEAKERS
> Chotima Böttcher, Charité
> David Garfield, IRI LS
> Norbert Hübner, MDC
> Jan-Philipp Junker, BIMSB
> Dagmar Kainmueller, BIH
> Markus Landthaler, IRI LS
> Markus Morkel, Charité
> Simone Reber, IRI LS
> Malte Spielmann, MPIMG
> Simone Spuler, MDC
> Florian Uhlitz, DKTK

TUTORIAL
Computational Analysis of Single Cell Sequencing Data
November 20th

IRI LIFE SCIENCES · CHARITÉ UNIVERSITÄTSMEDIZIN BERLIN · BIH Berlin Institute of Health Charité & MDC · MDC · HUMBOLDT-UNIVERSITÄT ZU BERLIN

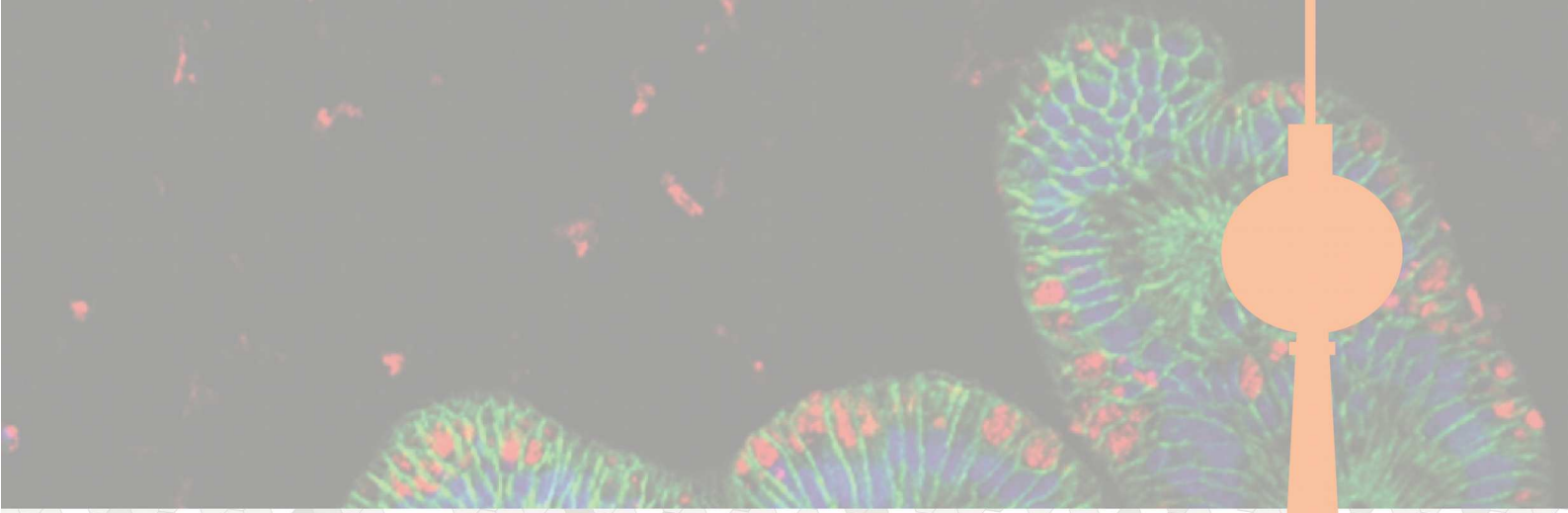
MORE INFORMATION AND REGISTRATION
www.comp-cancer.de/single_cell

Registration for the Tutorial: compcancer@charite.de

Scientific Organising Committee: Nils Blüthgen, Markus Landthaler

CompCancer Research Training Group RTG2424

Gefördert durch DFG Deutsche Forschungsgemeinschaft



Thursday, November 21st

Time	Speaker	Title
08:30	Registration and morning coffee	
	Session I (Chair: Nils Blüthgen)	
09:00	Lars Dölken (Würzburg, Germany)	scSLAM-seq and GRAND-SLAM reveal core features of the intrinsic immune response in single virus-infected cells
09:25	Gioele La Manno (Lausanne, Switzerland)	RNA velocity of single cells: differentiation predicts differentiation
09:50	Markus Landthaler (Berlin, Germany)	Single-cell RNA-sequencing of Herpes simplex virus 1-infected cells
10:10	David van Dijk (Yale, USA)	Manifold learning uncovers hidden structure in complex cellular state space
10:35	Ambra Sartori (Geneva, Switzerland)	Single-cell analysis of immune cell diversity in atherosclerotic plaques (*Selected Short Talk*)
10:45	Pratyaksha Wirapati (Lausanne, Switzerland)	Incorporating scRNA data into analyses of bulk tumor expression profiles (*Selected Short Talk*)
10:55	Coffee break	
	Session II (Chair: Markus Landthaler)	
11:30	Norbert Hübner (Berlin, Germany)	Towards a cell atlas of the human heart in health and disease
11:55	Jan-Philipp Junker (Berlin, Germany)	Cellular drivers of injury response and regeneration in the zebrafish heart
12:20	Katrin Kattler (Saarbrücken, Germany)	Spatial transcriptomic and epigenomic maps of human liver: blueprints for projection of single cell data into hepatic pseudospace
12:45	Malte Spielmann (Berlin, Germany)	Pleiotropic effects of mutations during embryonic development at single cell resolution
13:05	Thomas Conrad (Berlin, Germany)	An epigenetic atlas of the aging heart revealed by multimodal single-cell genomics (*Selected Short Talk*)
13:15	Lunch	
	Session III (Chair: Simone Reber)	
14:30	Maria Colomé-Tatché (München, Germany)	Computational single cell epigenomics
14:55	Simon Anders (Heidelberg, Germany)	Statistical inference in single-cell RNA-Seq: how to analyse case-control studies or other comparative experiments with multiple samples
15:20	Dagmar Kainmueller (Berlin, Germany)	Learning cell segmentation and tracking
15:40	Angela Goncalves (Heidelberg, Germany)	Detecting differential distributions in scRNA sequencing
16:00	Maren Büttner (München, Germany)	Deep learning for cell-type annotation tasks does not outperform classical machine learning (*Selected Short Talk*)
16:10	Jonathan Chubb (London, UK)	Transition state dynamics during a stochastic fate choice (*Selected Short Talk*)
16:20	Coffee break	

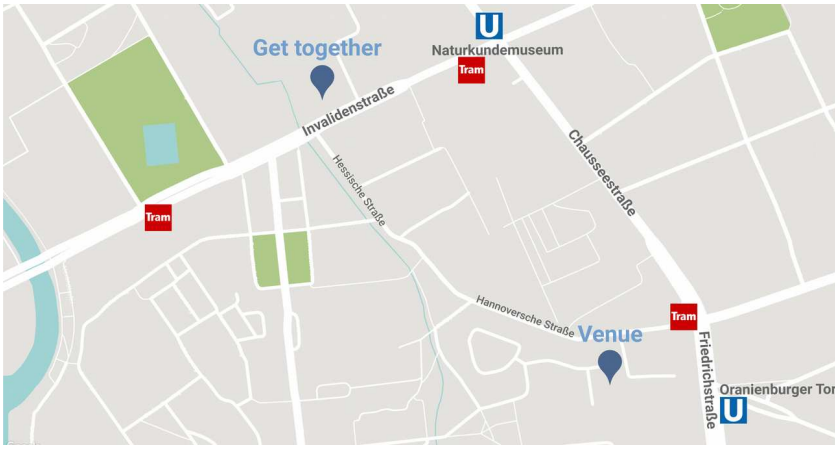
Time	Speaker	Title
	Session IV (Chair: Jan-Philipp Junker)	
16:50	David Garfield (Berlin, Germany)	Cell fate specification and zygotic genome activation in the sea urchin
17:10	Holger Heyn (Barcelona, Spain)	Towards generating a high-quality human cell atlas: from benchmarks to application
17:35	Chotima Böttcher (Berlin, Germany)	Unraveling high dimensionality of the brain using single cell technologies
17:55	Simone Spuler (Berlin, Germany)	Molecular profiling of human muscle stem cells reveals several highly regenerative subpopulations
18:15	Sara Jimenez (Strasbourg, France)	Transcriptional dynamics during enteroendocrine cell-fate decision at single-cell resolution (*Selected Short Talk*)
19:00 – 22:00	**Get together and reception in the Natural History Museum**	

Friday, November 22nd

Time	Speaker	Title
08:30	Morning coffee	
	Session I (Chair: Markus Morkel)	
09:00	Marc Friedländer (Stockholm, Sweden)	Nuclear gene proximity and protein interactions shape transcript covariances in mammalian single cells
09:25	Jeff Chao (Basel, Swizerland)	Imaging the life and death of mRNAs in single cells
09:50	Simone Reber (Berlin, Germany)	Training microscopes to follow individual cells and derive morphometry-time correlations
10:10	Silvia Santos (London, UK)	Our first choices: decoding cellular signals during early developmental transitions
10:35	Arnaud Krebs (Heidelberg, Germany)	Single-molecule characterization of transcription factor cooperative binding at mouse cis-regulatory elements (*Selected Short Talk*)
10:45	Coffee break	
	Session II (Chair: Christine Sers)	
11:20	Chris Tape (London, UK)	Single-cell signalling analysis of tumour microenvironment organoids
11:45	Markus Morkel (Berlin, Germany)	Differentiation trajectories in clinical specimens and organoids of colorectal cancer patients
12:05	Florian Uhlitz (Berlin, Germany)	Perturbation profiling of patient-derived colorectal cancer organoids
12:25	Sabine Tejpar (Leuven, Belgium)	Single cell profiling of colorectal cancer
12:50	Benedikt Obermayer (Berlin, Germany)	Tracing tumorigenesis in a solid tumor model at single-cell resolution (*Selected Short Talk*)
13:00	Closing remarks & Lunch & Departure	

Venue

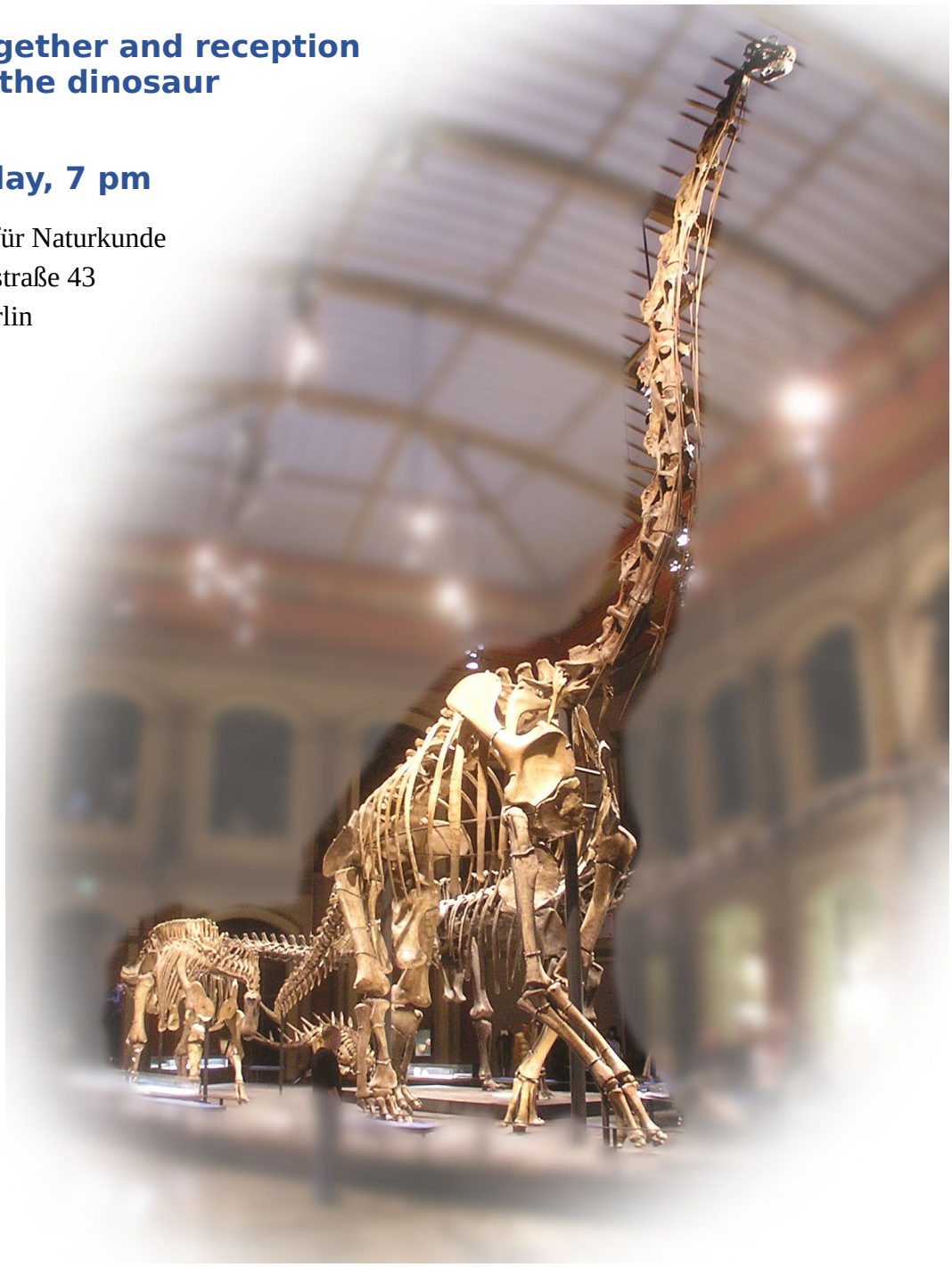
BIMSB Lecture Hall
Hannoversche Straße 28
10115 Berlin



Get together and reception below the dinosaur

Thursday, 7 pm

Museum für Naturkunde
Invalidenstraße 43
10115 Berlin



adapted from Axel Mauruszat, wikipedia.de