

Barbara Treutlein – Curriculum Vitae

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PERSONAL DATA

Date of Birth: 4 April 1982
Place of Birth: Reutlingen, Germany
Nationality: German

POSITIONS

From 09/2016 Appointment as Tenure Track Assistant Professor at the TU Munich jointly with Max Planck Research Group Leader Position
01/2016-present Max Planck Research Group Leader, MPI for Evolutionary Anthropology, Leipzig, and MPI for Molecular Cell Biology and Genetics, Dresden, Germany.
09/2014-12/2015 Group leader, MPI for Evolutionary Anthropology, Leipzig, Germany.
09/2012-08/2014 Postdoctoral Fellow with Stephen Quake, Stanford University, USA.
11/2007-08/2012 Predoctoral Fellow with Jens Michaelis, LMU München, Germany.

EDUCATION

08/2012 Ph.D. (Dr. rer. nat. “summa cum laude”), LMU München, Germany.
10/2007 Diploma in Chemistry, University of Mainz.
09/2004-08/2005 Student researcher with R.C. Cohen, UC Berkeley, USA.
10/2001-10/2007 Student of Chemistry, University Tübingen and University Mainz, Germany.
2001 Abitur, Johannes-Kepler-Gymnasium, Reutlingen.

AWARDS AND HONOURS

10/2017 Human Cell Atlas Pilot Grant, Chan Zuckerberg Initiative, USA.
09/2017 ERC Starting Grant (ORGANOMICS).
09/2017 Publication of the Year, German Stem Cell Network.
09/2016 Friedmund Neumann Prize of the Schering Foundation.
12/2012 PhD Prize of the Dr. Klaus Römer Foundation, Munich.
01/2009-12/2011 PhD-Scholarship of the Boehringer Ingelheim Fonds.
11/2007-08/2012 PhD-Scholarship of the Elite Network of Bavaria.
09/2009 Biotechnology and Applied Biochemistry Young Investigator Award.
03/2009 Student Research Achievement Award (SRAA), American Biophysical Society.
04/2008 Prize of the Böhringer Ingelheim Foundation for Diploma Thesis.
2002- 09/2007 Scholarship of the “Studienstiftung des deutschen Volkes” (German National Academic Foundation).

PUBLICATIONS

J.G. Camp*, K. Sekine*, T. Gerber, H. Löffler-Wirth, H. Binder, M. Gac, S. Kanton, J. Kageyama, G. Damm, D. Seehofer, L. Belicova, M. Bickle, R. Barsacchi, R. Okuda, E. Yoshizawa, M. Kimura, H. Ayabe, H. Taniguchi, T. Takebe*, B. Treutlein*. Multilineage communication regulates human liver bud development from pluripotency. **Nature**, 546, 533–538 (2017).

J.G. Camp, B. Treutlein. Human development: Advances in mini-brain technology, **Nature**, 545, 39–40 (2017).

J.G. Camp, B. Treutlein. Human Organomics: A fresh approach to studying human development using single-cell transcriptomics. **Development**, 144, 1584-1587 (2017).

T. Gerber*, E. Willscher*, H. Loeffler-Wirth, L. Hopp, D. Schadendorf, M. Scharl, U. Anderegg, G. Camp, B. Treutlein, H. Binder, M. Kunz. Mapping heterogeneity in patient-derived melanoma cultures by single-cell RNA-seq. **Oncotarget**, 8, 846-862 (2017).

O. L. Wapinski, Q.Y. Lee, A.C. Chen, R. Li, M.R. Corces, C.E. Ang, B. Treutlein, C. Xiang, V. Baubet, F.P. Suchy, V. Sankar, S. Sim, S.R. Quake, N. Dahmane, M. Wernig, H.Y. Chang. Rapid Chromatin Switch in the Direct Reprogramming of Fibroblasts to Neurons. **Cell Rep**, 20 (13), 3236-3247 (2017).

R. Sundaramoorthy, A.L. Hughes, V. Singh, N. Wiechens, D.P. Ryan, H. El-Mkami, M. Petoukhov, D.I. Svergun, B. Treutlein, S. Quack, M. Fischer, J. Michaelis, B. Bottcher, D.G. Norman, T. Owen-Hughes. Structural reorganization of the chromatin remodeling enzyme Chd1 upon engagement with nucleosomes. **eLife** 6 (2017).

F. Mora-Bermúdez*, F. Badsha*, S. Kanton*, J.G. Camp*, B. Vernot, K. Köhler, B. Voigt, K. Okita, T. Maricic, Z. He, R. Lachmann, S. Pääbo*, B. Treutlein* and W.B. Huttner*. Differences and similarities between human and chimpanzee neural progenitors during cerebral cortex development. **eLife** 5 (2016).

B. Treutlein*, Q.Y. Lee*, J.G. Camp, M. Mall, W. Koh, S.A.M. Shariati, S. Sim, N.F. Neff, J.M. Skotheim, M. Wernig*, S. Quake*. Dissecting direct reprogramming from fibroblast to neuron using single-cell RNA-seq. **Nature**, 534, 391-395 (2016).

O. Gokce*, G.M. Stanley*, B. Treutlein*, N.F. Neff, J.G. Camp, R.C. Malenka, P.E. Rothwell, M.V. Fuccillo, T.C. Südhof*, S.R. Quake*. Cellular Taxonomy of the Mouse Striatum as Revealed by Single-Cell RNA-Seq. **Cell Reports**, 16 (4), 1126-37 (2016).

J.G. Camp*, F. Badsha*, M. Florio, S. Kanton, T. Gerber, M. Wilsch-Bräuninger, E. Lewitus, A. Sykes, W. Hevers, M. Lancaster, J.A. Knoblich, R. Lachmann, S. Pääbo*, W.B. Huttner*, B. Treutlein*. Human cerebral organoids recapitulate gene expression programs of fetal neocortex development. **PNAS**, 112 (51) 15672-15677 (2015).

A.E. Vaughan, A.N. Brumwell, Y. Xi, J.E. Gotts, D.G. Brownfield, B. Treutlein, K. Tan, V. Tan, F.C. Liu, M.R. Looney, M.A. Matthay, J.R. Rock, H.A. Chapman. Lineage-negative progenitors mobilize to regenerate lung epithelium after major injury. **Nature**, 517, 621-625 (2015).

B. Treutlein*, O. Gokce*, S. R. Quake and T. C. Südhof. Cartography of Neurexins mapped by single-molecule long-read mRNA sequencing. **PNAS**, 111 (13), 1291-99 (2014).

B. Treutlein*, D. G. Brownfield*, A. R. Wu, N. F. Neff, G. L. Mantalas, F. H. Espinoza, T. J. Desai, M. A. Krasnow* and S. R. Quake*. Reconstructing lineage hierarchies of the distal lung epithelium using single cell RNA-seq. **Nature**, 509, 371-375 (2014).

A. R. Wu, N. F. Neff, T. Kalisky, P. Dalerba, B. Treutlein, M. E. Rothenberg, F. M. Mburu, G. L. Mantalas, S. Sim, M. F. Clarke and S. R. Quake. Quantitative assessment of single-cell RNA-sequencing methods. **Nature Methods**, 11, 41-46 (2013).

B. Treutlein and J. Michaelis. Single molecule studies of RNA polymerases.

Chem. Rev., 113, 8377-99 (2013).

B. Treutlein, A. Muschielok, J. Andrecka, A. Jawhari, C. Buchen, D. Kostrewa, F. Hög, P. Cramer and J. Michaelis, Dynamic architecture of a minimal RNA Polymerase II open promoter complex.

Molecular Cell, 46, 136-146 (2012).

B. Treutlein and J. Michaelis, Direct Observation of Single RNA Polymerase Processing through a Single Endogenous Gene in a Living Yeast Cell. **Angew Chem Int Ed**, 50, 9788-9790 (2011).

J. Andrecka, B. Treutlein, M. I. Arcusa, A. Muschielok, R. Lewis, A. C. M. Cheung, P. Cramer and J. Michaelis, Nano-positioning system reveals the course of upstream and nontemplate DNA within the RNA polymerase II elongation complex. **Nucleic Acids Research**, 37, 5803-5809 (2009).

J.A. Huffman*, B. Treutlein* and U. Pöschl, Fluorescent biological aerosol particle concentrations and size distributions measured with an ultraviolet aerodynamic particle sizer (UV-APS) in. **Atmospheric Chemistry and Physics**, 10 (7), 3215 (2010).

S. Schuy, B. Treutlein, A. Pietuch and A. Janshoff, In situ synthesis of lipopeptides as versatile receptors for the specific binding of nanoparticles and liposomes to solid-supported membranes.

Small, 4 (7), 970 (2008).