Name	**Martin David Burkhalter**
Title	Dr. sc. nat.
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Education and Career Stations

Since Oct 2015	Postdoctoral fellow at the Institute of Biochemistry and Molecular Biology, Ulm University, Ulm, Germany Group of PD Dr. Melanie Philipp
Aug. 2013-Sep 2015	Postdoctoral fellow at the Leibniz Institute on Aging, Fritz-Lipmann Institute, Jena, Germany, Group of Prof. K. Lenhard Rudolph
Jan. 2010-Aug. 2013	Institute of Molecular Medicine & Max-Planck-Research Group on Stem Cell Aging, Ulm University, Ulm, Germany Group of Prof. K. Lenhard Rudolph
Mai 2005-Dec. 2009	Postdoctoral fellow at the Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC, USA, Group of Prof. Dale A. Ramsden
Jan. 2005-Apr. 2005	Visiting Postdoc at the Samuel Research Institute at Mount Sinai Hospital, Toronto, Canada, Group of Prof. Daniel Durocher
Jan. 2004-Jan. 2005	Postdoctoral fellow at the Institute of Cell Biology, ETH Zürich, Group of Dr. José M. Sogo
2000-2004	PhD thesis at the Institute of Cell Biology, ETH Zürich, Group of Dr. José M. Sogo Titel: Initiation and Termination of Replication at the rDNA Locus and the HOT1 Recombination Hot Spot are Functionally Dependent on the Enhancer Element
1993-1999	Studies of Natural Science, ETH Zürich Final exams in Toxicology, Genetics, Pharmacology, Microbiology, Immunology (Diploma Dipl. Natw.)

Publications (cumulative impact factor 181.399)

Original Publications

Davor Lessel, Tariq Muhammad, Teresa Casar Tena, Barbara Moepps, **Martin D. Burkhalter**, Marc-Phillip Hitz, Okan Toka, Axel Rentzsch, Stephan Schubert, Adelheid Schalinski, Ulrike M. M. Bauer, Christian Kubisch, Stephanie M. Ware, Melanie Philipp.
'The analysis of heterotaxy patients reveals new loss-of-function variants of GRK5.'
Scientific Reports, 6:33231, 2016 IF: 5.228

Alush I. Avila, Yohei Morita, Anett Illing, Melanie Philipp, and **Martin D. Burkhalter.**
'Xpg limits expansion of haematopoietic stem and progenitor cells after ionising radiation.'
Nucleic Acids Research, 44(13):6252-6261, 2016 IF: 9.112

Martina Burczyk, **Martin D. Burkhalter**, Tamara Blätte, Sabrina Matysik, Marc G. Caron, Lawrence S. Barak, and Melanie Philipp.
'Phenotypic regulation of the sphingosine 1-phosphate receptor Miles Apart by GRK2.'
Biochemistry, 54(3):765-75, 2015 IF: 3.015

Davor Lessel, Bruno Vaz, Swagata Halder, Paul J. Lockhart, Ivana Marinovic-Terzic, Jaime Lopez-Mosqueda, Melanie Philipp, Joe C. H. Sim, Katherine R. Smith, Judith Oehler, Elisa Cabrera, Raimundo Freire, Kate Pope, Amsha Nahid, Fiona Norris, Richard J. Leventer, Martin B. Delatycki, Gotthold Barbi, Simon von Ameln, Josef Högel, Marina Degoricija, Regina Fertig, **Martin D. Burkhalter**, Kay Hofmann, Holger Thiele, Janine Altmüller, Gudrun Nürnberg, Peter Nürnberg, Melanie Bahlo, George M. Martin, Cora M. Aalfs, Junko Oshima, Janos Terzic, David J. Amor, Ivan Dikic, Kristijan Ramadan, and Christian Kubisch.
'Mutations in SPRTN cause early-onset hepatocellular carcinoma, genomic instability and progeroid features.'
Nature Genetics, 46(11):1239-1244, 2014 IF: 29.352

Pavlos Missios, Yuan Zhou, Luis Miguel Guachalla, Guido von Figura, Andre Wegner, Sundaram Reddy Chakkarappan, Tina Binz, Anne Gompf, Götz Hartleben, **Martin D. Burkhalter**, Veronika Lellek, Cagatay Günes, Rui Wang Sattler, Zhangfa Song, Thomas Illig, Susanne Klaus, Bernhard O. Böhm, Tina Wenz, Karsten Hiller, and K. Lenhard Rudolph.
'Glucose substitution prolongs maintenance of energy homeostasis and lifespan of telomere dysfunctional mice.'
Nature Communications, 5:4924, 2014 IF: 11.47

Crystal A. Waters, Natasha T. Strande, John M. Pryor, Christina N. Strom, Piotr Mieczkowski, **Martin D. Burkhalter**, Sehyun Oh, Bahjat F. Qaquish, Dominic T. Moore, Eric A. Hendrickson, and Dale A. Ramsden.
'The fidelity of the ligation step determines how ends are resolved during nonhomologous end joining.'
Nature Communications, 5:4286, 2014 IF: 11.47

Martin D. Burkhalter, Gregory B. Fralish, Richard T. Premont, Marc G. Caron, and Melanie Philipp.
'Grk5l controls heart development by limiting mTOR signaling during symmetry breaking.'
Cell Reports, 4(4):625-32, 2013 IF: 7.207

Tobias Sperka, Zhangfa Song, Yohei Morita, Kodandaramireddy Nalapareddy, Luis Miguel Guachalla, André Lechel, Yonnne Begus-Nahrmann, **Martin D. Burkhalter**, Monika Mach, Falk Schlaudraff, Birgit Liss, Zhenyu Ju, Michael R. Speicher, and K. Lenhard Rudolph.
'Puma and p21 represent cooperating checkpoints limiting self-renewal and chromosomal instability of somatic stem cells in response to telomere dysfunction.'
Nature Cell Biology, 14(1):73-79, 2011 IF: 19.488

Tama Evron, Melanie Philipp, Jiuyi Lu, Alison R. Meloni, **Martin Burkhalter**, Wei Chen, and Marc G. Caron.
'Growth Arrest Specific 8 (Gus8) and GPCR Kinase 2 (GRK2) synergize to promote Smoothened signalling and ciliary localization.'
J. Biol. Chem., 286(31): 27676-27686, 2011 IF: 4.773

Steven A. Roberts, Natasha Strande, **Martin D. Burkhalter**, Christina Strom, Jody M. Havener, Paul Hasty, and Dale A. Ramsden.
'Ku, an AP lyase, has a direct role in processing damaged ends during nonhomologous end joining.'
Nature, 464(7292): 1214-7, 2010 IF: 36.101

Olivier Fritsch*, **Martin D. Burkhalter***, Sanja Kais, José M. Sogo, and Primo Schär.
'DNA ligase 4 stabilizes the ribosomal DNA array upon fork collapse at the replication fork barrier.'
DNA Repair, 9: 879–888, 2010 IF: 4.293
* equal contribution

Martin D. Burkhalter, Steven A. Roberts, Jody M. Havener, and Dale A. Ramsden.
'Activity of ribonucleotide reductase helps determine how cells repair double strand breaks.'
DNA Repair, 8: 1258–1263, 2009 IF: 4.199

Martin D. Burkhalter and José M. Sogo.
'rDNA Enhancer Affects Replication Initiation and Mitotic Recombination: Fob1 Mediates Nucleolytic Processing Independently of Replication.'
Mol Cell, 15: 409-421, 2004 IF: 16.811

Reviews
Teresa Casar Tena, **Martin D. Burkhalter***, and Melanie Philipp*.
'Left-right asymmetry in the light of TOR.'
Biology of the Cell, 107:1-13, 2015 IF: 3.506
*co-corresponding authors

Martin D. Burkhalter*, K. Lenhard Rudolph, and Tobias Sperka*.
'Genome instability of ageing stem cells – induction and defence mechanisms.'
Ageing Research Reviews, 23(Pt A):29-36, 2015 IF: 4.94
* co-corresponding authors

Martin D. Burkhalter, Yohei Morita, and K. Lenhard Rudolph.
'Lin28a – boost your energy for youthful regeneration.'
EMBO Journal, 33(1):5-6, 2014 IF: 10.434

Book Chapters

Karin N. Kleinhans and **Martin D. Burkhalter**.
'DNA damage, checkpoint response, and cell cycle control in aging stem cells.'
Advances in Stem Cell Aging. Else Kröner-Fresenius Symp. Basel, Karger, vol 3, 35-46, 2012

Grants and Fellowships

2005	-Postdoctoral Fellowship awarded by the Swiss National Foundation (SNF), Bern
2004	-Postdoctoral Fellowship awarded by the Novartis Foundation, Basel -Travel Grant awarded by the Swiss Society for Cell Biology, Molecular Biology, and Genetics (ZMG), Basel -Stipendiatspreis awarded by the Huggenberger-Bischoff Foundation, Zürich
2003	-Travel Grant awarded by the Swiss Society for Cell Biology, Molecular Biology, and Genetics (ZMG), Basel