

Curriculum Vitae

Education

September 17 th , 2002	Graduation Dr. rer. nat., University of Vienna, Austria
December 1995	Graduation Mag. rer. nat., University of Vienna, Austria
October 1993 - June 1994	Computer Science Studies, Technical University Vienna, Austria
September 1987 - December 1995	Biochemistry Studies, University of Vienna, Austria

Career

June 2018 – present	Senior Scientist at the Ludwig Boltzmann Institute of Osteology, Vienna, Austria “Studying bone development and osteoblast differentiation and the role of cytoskeletal elements therein in health and disease.”
August 2016 – May 2018	Post Doc in the group of Dr. Dieter Blaas, Max F. Perutz Laboratories, Dept. of Medical Biochemistry, Medical University Vienna, Austria “Structural and functional characterization of rhinoviral RNA egress.”
April 2010 - September 2015	Universitäts Assistent (till April 2015)/Visiting Scientist in the group of Dr. Roland Foisner, Max F. Perutz Laboratories, Dept. of Medical Biochemistry, Medical University Vienna, Austria “The role of LAP2 α in chromatin organization, lamin assembly, and premature aging.”
March 2004 - August 2009	Post Doc in the group of Dr. Robert Goldman, Feinberg School of Medicine, Dept. of Cell and Molecular Biology, Northwestern University, Chicago, USA “The role of nuclear lamins in chromatin organization, nuclear envelope breakdown and reassembly, and premature aging.”
June 2002 - November 2003	Post Doc/Research Associate in the group of Dr. Reginald Bittner, Neuromuscular Research Department, Institute of Anatomy, Medical Faculty, University of Vienna, Austria “Cellular and molecular characterization of dystrophin isoforms in epithelia / Molecular diagnostic (PCR, sequencing) of neuromuscular diseases.”

December 1995 - November 2001	PhD Student in the group of Dr. Roland Foisner, Dept. of Biochemistry and Molecular Cell Biology, University of Vienna, Austria; <u>Title</u> : “Cell Cycle dependent Localizations and Interactions of Lamina-associated Polypeptide 2 α .”
October 1997 – September 1998	Civil Service, Arbeiter Samariter Bund, Vienna, Austria
November 1993 - December 1994	Master Student in the group of Dr. Gerhard Wiche, Dept. of Biochemistry and Molecular Cell Biology, University of Vienna, Austria; <u>Title</u> : “Studies on the Plectin-Fodrin Interaction using Plectin Mutant Proteins.”

Teaching

2016 - present	Lecturer of Stem Cell Courses, University of Applied Sciences Vienna, Austria
September 2010 – November 2017	Lecturer of Biochemistry and Molecular Biology Courses, University of Vienna, Austria
January 2012 – October 2013	Lecturer in Biochemistry and Self Organized Learning, Medical University Vienna, Austria
April 2010 – present	Supervision of PhD, Master and Bachelor students

Trainings and Courses

November 2011	Training as Laser Safety Officer
September, December 2011	Training as Radiation Safety Officer
September - October 1997	EMBO Practical Course ‘Methods in Cell Biology’

Grants/Fellowships

June 2012 - October 2014	Grant from the Austrian “Herzfelder’sche Familienstiftung”. <i>Research Topic</i> : “The role of the lamin-chromatin interaction in the development of the premature aging disease Hutchinson-Gilford Progeria Syndrome”.
April 2012 - July 2014	“Innovator Award” from the “Progeria Research Foundation”, Boston, USA. <i>Research Topic</i> : “Stable Membrane Association of Progerin and Implications for pRb Signaling”.

September 2004 -
February 2006

Schrödinger Fellowship from the Austrian Science Fund (FWF); Feinberg School of Medicine, Northwestern University, Chicago, USA

Peer Review and Editorial Activities

2015 – present

Academic Editor of the Topical Collection “Lamins and Laminopathies” in “Cells” (MDPI- Open Access Publishing)

2004 – present

Ad hoc referee for various scientific journals (e.g. J Cell Sci, PLoS One, Aging Cell, Mol Biol Cell, FASEB J, Cells, Toxins...)

Public Relation in Science

July, 2019

Lectures entitled “Wie deine Gene Knochen machen!” in the scope of the Kinderuni Wien at the Vienna general hospital and in the scope of the Junge Uni Krems, Austria.

July, 2018

Lectures entitled “DNA, Zellen und das Altern” in the scope of the Kinderuni Wien at the Vienna general hospital and in the scope of the Junge Uni Krems, Austria.

July, 2015

Organization and realization of workshops for children termed "Woraus sind wir aufgebaut und wo befindet sich unser Bauplan?" in the scope of the Kinderuni Wien at the Vienna general hospital, Austria.

April, 2014

Organization and person in charge of a station ("DNA, Zellen und das Altern: Von 8jährigen die wie 80 aussehen") at the "Lange Nacht der Forschung" of the Medical University Vienna, Austria.

Publication Record

Peer reviewed Research Papers

Ruiss M., M. Kronschläger, A. Schlatter, T. Dechat, and O. Findl. 2021. Comparison of methods to experimentally induce opacification and elasticity change in ex vivo porcine lenses. *Sci Rep.* 11(1):23406. doi: 10.1038/s41598-021-02851-6.

Naetar N., K. Georgiou, C. Knapp, I. Bronshtein, E.P. Zier, Fichtinger, T. Dechat, Y. Garini, and R. Foisner. 2021. LAP2alpha maintains a mobile and low assembly state of A-type lamins in the nuclear interior. *Elife.* 10:e63476. doi: 10.7554/eLife.63476.

Kronschläger M., M. Ruisß, T. Dechat, and O. Findl. 2021. Single high-dose peroral caffeine intake inhibits ultraviolet radiation-induced apoptosis in human lens epithelial cells in vitro. *Acta Ophthalmol.* 99(4):e587-e593. doi: 10.1111/aos.14641.

Vidak S., K. Georgiou, P. Fichtinger, N. Naetar, T. Dechat, and R. Foisner. 2018. Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2 α in progeria cells. *J Cell Sci.* 131(3):jcs208462. doi: 10.1242/jcs.208462.

Allmaier G., D. Blaas, C. Bliem, T. Dechat, S. Fedosyuk, I. Gösler, H. Kowalski, and V.U. Weiss. 2017. Monolithic Anion-Exchange Chromatography Yields Rhinovirus of High Purity. *J Virol Methods.* 251: 15-21. doi: 10.1016/j.jviromet.2017.09.027.

Elling U., R.A. Wimmer, A. Leibbrandt, Burkard T, G. Michlits, A. Leopoldi, T. Micheler, D. Abdeen, S. Zhuk, I.M. Aspalter, C. Handl, J. Liebergesell, M. Hubmann, A.M. Husa, M. Kinzer, N. Schuller, E. Wetzl, N. van de Loo, J.A.Z. Martinez, D. Estoppey, R. Riedl, F. Yang, B. Fu, T. Dechat, Z. Ivics, C.A. Agu, O. Bell, D. Blaas, H. Gerhardt, D. Hoepfner, A. Stark, and J.M. Penninger. 2017. A reversible haploid mouse embryonic stem cell biobank resource for functional genomics. *Nature.* 550: 114-118. doi: 10.1038/nature24027.

Gesson, K., P. Rescheneder, M.P. Skoruppa, A. von Haeseler, T. Dechat, and R. Foisner. 2016. A-type lamins bind both hetero- and euchromatin, the latter being regulated by lamina-associated polypeptide 2 α . *Genome Res.* 26: 462-473. doi: 10.1101/gr.196220.115.

Vidak, S., N. Kubben, T. Dechat[§], and R. Foisner[§]. 2015. Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2 α (LAP2 α) through expression of extracellular matrix proteins. *Genes Dev.* 29: 2022-2036. doi: 10.1101/gad.263939.115. [§]Corresponding authors

Pilat, U., T. Dechat, A.T. Bertrand, N. Woisetschläger, I. Gotic, R. Spilka, K. Biadasiewicz, G. Bonne, and R. Foisner. 2013. The muscle dystrophy-causing Δ K32 lamin A/C mutation does not impair the functions of the nucleoplasmic lamin-A/C-LAP2 α complex in mice. *J Cell Sci.* 126: 1753-1762. doi: 10.1242/jcs.115246.

Dechat, T., T. Shimi, S.A. Adam, A. Rusinol, D.A. Andres, H.P. Spielmann, M.S. Sinensky, and R.D. Goldman. 2007. Alterations in mitosis and cell cycle progression caused by a mutant lamin A known to accelerate human aging. *Proc Natl Acad Sci U S A.* 104:4955-4960. doi: 10.1073/pnas.0700854104.

- Naetar, N., S. Hutter, D. Dorner, T. Dechat, B. Korbei, J. Gotzmann, H. Beug, and R. Foisner. 2007. LAP2 α -binding protein LINT-25 is a novel chromatin-associated protein involved in cell cycle exit. *J Cell Sci.* 120: 737-747. doi: 10.1242/jcs.03390.
- Snyers, L., S. Vlcek, T. Dechat, D. Skegro, B. Korbei, A. Gajewski, O. Mayans, C. Schöfer, and R. Foisner. 2007. Lamina-associated polypeptide 2-alpha forms homo-trimers via its C-terminus and oligomerization is unaffected by a disease-causing mutation. *J Biol Chem.* 282:6308-6315. doi: 10.1074/jbc.M605782200.
- Shumaker, D.K.[#], T. Dechat[#], A. Kohlmaier[#], S.A. Adam, M.R. Bozovsky, M.R. Erdos, M. Eriksson, A.E. Goldman, S. Khuon, F.S. Collins, T. Jenuwein, and R.D. Goldman. 2006. Mutant nuclear lamin A leads to progressive alterations of epigenetic control in premature aging. *Proc Natl Acad Sci U S A.* 103:8703-8708. doi: 10.1073/pnas.0602569103. [#]Equal contribution
- Dechat, T., A. Gajewski, B. Korbei, D. Gerlich, N. Daigle, T. Haraguchi, K. Furukawa, J. Ellenberg, and R. Foisner. 2004. LAP2 α and BAF transiently localize to telomeres and to specific regions on chromatin during nuclear assembly. *J Cell Sci.* 117: 6117-6128. doi: 10.1242/jcs.01529.
- Mostafaie, N., W. Rossmannith, H. Hombauer, T. Dechat, T. Raffelsberger, K. Bauer, B. Worofka, E. Kittl, J. Hofmann, M. Hejtman, W. Kirchmeyr, W. Schreiber, S. Weissgram, S. Jungwirth, P. Fischer, R. Bittner, and K. Huber. 2004. Mitochondrial genotype and risk for Alzheimer's disease: cross-sectional data from the Vienna-Transdanube-Aging "VITA" study. *J Neural Transm.* 111:1155-1165. doi: 10.1007/s00702-004-0161-8.
- Markiewicz, E., T. Dechat, R. Foisner, R. A. Quinlan, and C. J. Hutchison. 2002. The lamin A/C binding protein LAP2 α is required for the nuclear anchorage of the retinoblastoma protein. *Mol Biol Cell.* 13:4401-4413. doi: 10.1091/mbc.e02-07-0450.
- Nussbaumer, P., and T. Dechat. 2001. Ready access to 6-alkyl, 6-phenyl, 5,6-dialkyl, and 5-alkyl-6-phenyl substituted 1,2,3,4-tetrahydroisoquinolines. *Chemical Monthly.* 132:1047-1055.
- Dechat, T., B. Korbei, O. A. Vaughan, S. Vlcek, C. J. Hutchison, and R. Foisner. 2000. Lamina-associated polypeptide 2 α binds intranuclear A-type lamins. *J Cell Sci.* 113:3473-3483.
- Meissner, M., T. Dechat, C. Gerner, R. Grimm, R. Foisner, and G. Saueremann. 2000. Differential nuclear localization and nuclear matrix association of the splicing factors PSF and PTB. *J Cell Biochem.* 76:559-566. *JIF (2000) = 2.775; TC = 40*
- Vlcek, S., H. Just, T. Dechat, and R. Foisner. 1999. Functional diversity of LAP2 α and LAP2 β in postmitotic chromosome association is caused by an α -specific nuclear targeting domain. *EMBO J.* 18:6370-6384. doi: 10.1093/emboj/18.22.6370.
- Dechat, T., J. Gotzmann, A. Stockinger, C. A. Harris, M. A. Talle, J. J. Siekierka, and R. Foisner. 1998. Detergent-salt-resistance of LAP2 α in interphase nuclei and phosphorylation-dependent association with chromosomes early in nuclear assembly implies functions in nuclear structure dynamics. *EMBO J.* 17:4887-4902. doi: 10.1093/emboj/17.16.4887.
- Nussbaumer, P., K. Baumann, T. Dechat, and M. Harasek. 1991. Highly selective TFAA-cleavage of tertiary 2,4-dimethoxybenzylamines and its use in the synthesis of tertiary amines. *Tetrahedron.* 47: 4591-4602.

Peer reviewed Review Articles

Osmanagic-Myers, S., T. Dechat, and R. Foisner. 2015. Lamins at the crossroads of mechanosignaling. *Genes Dev.* 29: 225-237. doi: 10.1101/gad.255968.114.

Dechat, T., K. Gesson, and R. Foisner. 2010. Lamina-Independent Lamins in the Nuclear Interior Serve Important Functions. *Cold Spring Harb Symp Quant Biol.* 75:533-43. doi: 10.1101/sqb.2010.75.018.

Dechat, T., S.A. Adam, P. Taimen, T. Shimi, and R.D. Goldman. 2010. Nuclear Lamins. *Cold Spring Harb Perspect Biol.* 2:a000547. doi: 10.1101/cshperspect.a000547.

Eriksson, J.E., T. Dechat, B. Grin, B. Helfand, M. Mendez, H.M. Pallari, and R.D. Goldman. 2009. Introducing intermediate filaments: from discovery to disease. *J Clin Invest.* 119:1763-1771. doi: 10.1172/JCI38339.

Dechat, T., S.A. Adam, and R.D. Goldman. 2009. Nuclear lamins and chromatin: when structure meets function. *Adv Enzyme Regul.* 49:157-166. doi: 10.1016/j.advenzreg.2008.12.003.

Dechat, T., K. Pflieger, K. Sengupta, T. Shimi, D.K. Shumaker, L. Solimando, and R.D. Goldman. 2008. Nuclear lamins: major factors in the structural organization and function of the nucleus and chromatin. *Genes Dev.* 22:832-853. doi: 10.1101/gad.1652708.

Mattout, A., T. Dechat, S.A. Adam, R.D. Goldman, and Y. Gruenbaum. 2006. Nuclear lamins, diseases and aging. *Curr Opin Cell Biol.* 18:335-341. doi: 10.1016/j.ceb.2006.03.007.

Vlcek, S., T. Dechat, and R. Foisner. 2001. Nuclear envelope and nuclear matrix: interactions and dynamics. *Cell Mol Life Sci.* 58:1758-1765. doi: 10.1007/PL00000815.

Dechat, T., S. Vlcek, and R. Foisner. 2000. Review: Lamina-associated polypeptide 2 isoforms and related proteins in cell cycle-dependent nuclear structure dynamics. *J Struct Biol.* 129:335-345. doi: 10.1006/jsbi.2000.4212.