PERSONAL DATA

PICHLER (née Kinslechner)	Katharina	
Family Name	First name	
21.12.1986	Vienna	Austrian
Date of birth	Place of birth	Nationality

SCIENTIFIC CURRICULUM VITAE

since **A**pril 2018

Post doc at the Medical University of Vienna in the group of Prof. Reinhard Windhager / Dr. Stefan Tögel (Dept. of Orthopedics and Trauma Surgery, KCLOB) (Vienna/Austria).

Topic: Glycobiology in joint tissues (Focus: Osteoarthritis of the knee)

Emphases:

*The role of galectins *ex-vivo* and *in-vitro* (humans):

-primary chondrocytes

-primary synoviocytes

-primary intervertebral disc cells

-primary meniscal cells

-synovial fluid

*The role of galectins *in-vivo* (mice)

-Osteoarthritis mouse model

*Supervision of PhD and diploma students

Techniques:

*Molecular cell biology (ELISA, RT-qPCR, Western blot, In-Cell Western, FACS)

*Cell culture (primary cell culture systems, co-culture systems)

*3D sphere formation

*Histology, immunohistochemistry, immunofluorescence

*Confocal microscopy, Live-Cell Imaging

*1st authorships:

(K. M. Pichler et al., 2021)

(Katharina M. Pichler et al., 2022)

*1st shared authorship:

(Elshamly et al., 2019)

*Co-authorship:

(Senderek et al., 2020)

(Fuehrer et al., 2021)

(Swoboda et al., 2021)
(Manning et al., 2022)
(Eckel et al., 2025)

March 2020 – June 2024
Maternity leave for two children

November 2017 – April 2018
Postgraduate assistant at the Medical University of Vienna in the group of Prof. Michaela Auer-Grumbach (Dept. of Orthopedics) (Vienna/Austria).

Topic: Neuromuscular diseases (Focus: Genotyping)

Techniques:
*Sanger-Sequencing and analysis
*Molecular cell biology
*Cell culture (PMBCs)

June 2013 – July 2018
PhD program (N094) at the Medical University of Vienna in the group of Dr. Mikula (Institute of Medical Genetics) (Vienna/Austria).

Topic: The Role of Scavenger Receptor Class B Type I in Melanoma and its Contribution to the Metastatic Process.

Emphases:
**In-vitro* experiments (human melanoma cell lines)
**In-vivo* experiments (xenotransplantation)
*Molecular cell biology (FACS, Western blot, qPCR, CRISPR, ELISA)
*Microscopy (confocal, fluorescence, transmitted-light)
*Histology, immunohistochemistry, immunofluorescence
*Migration/Invasion assays, 3D sphere formation
*Exosome isolation
*Statistical analysis

*1st authorships:
(Kinslechner et al., 2017)
(Kinslechner et al., 2019)

*1st shared authorship:

(Schörghofer et al., 2015)

*Co-authorships:

(Preitschopf et al., 2014)

(Preitschopf et al., 2016)

(Schütz et al., 2016)

October 2014 – September 2015

Attendance at Curriculum "Schrittweise" for young scientists of the division Gender Mainstreaming at the Medical University of Vienna

Modules: Stress- and time management
Scientific writing
Team competence
Funding in Austria and EU
Communication strategies

July 2015 – January 2016

Supervision of master student Philipp Rapolter with the topic: Investigating the role of human melanoma expressed SR-BI for cellular vesicle trafficking.

February 2016 – February 2017

Supervision of master student Maria Vallianou with the topic: The role of the SR-BI receptor in the metastatic phenotype of 3D melanoma cell cultures.

May 2012 - May 2013

Scientific researcher at the Medical University of Graz in the group of Prof. Trauner / Prof. Fickert (Experimental and molecular hepatology) (Graz/Austria).

Emphases:

*Lab organization

**In-vivo* experiments (bile duct ligation)

*Histology and stainings of FFPE and kryo slices

*Molecular cell biology (Western blot, qPCR)

*Cell culture

2009-2012

Master program Biomedicine and Biotechnology at University of Veterinary Medicine,

Vienna (Degree: MSc.) (Vienna/Austria).

Emphases:

*Transgene animal models

*Molecular cell biology

*Metabolomics and proteomics

*Histology

*Fluorescence in situ hybridization

March 2011 – April 2012

Master thesis at the Medical University of Vienna in the group of Prof. Schiestl (Institute of Cancer Research) (Vienna/Austria).

Topic: The influence of intestinal flora on genetic instability and cancer predisposition in p53- deficient mice.

Emphases:

*Mouse Breeding of three colonies

*Molecular cell biology

*Histology and stainings

2010

Summer internship at University Hospital Basel (Basel/Switzerland)

Emphases:

*Microbubble development and cardiovascular imaging in mice

*Co-Authorship:

(Khanicheh et al., 2012)

August 2009 – January 2011

Part-time employment at the Veterinary University of Vienna in the group of Prof. Schoder (Dept. Milk hygiene) (Vienna/Austria).

Emphases:

*Microbiology

*Listeria Monitoring

2006-2009

Bachelor program Biotechnical Processes at University of Applied Sciences, Tulln

(Degree: BSc.) (Lower Austria/Austria).

Emphases:

*Microbiology

*Chemical analysis

February 2009 – May 2009

Bachelor thesis at Zuckerforschung GesmbH Tulln (Division: Starch Technology)

SOFTWARE

*Microsoft Office Package (Excel, Word, Power Point, Access)

*GraphPad Prism (Statistic software)

*SPSS (Statistic software)

*FlowJo (FACS-Analysis software)

*Adobe Photoshop (Image editing software)

*Image J (Image editing software)

*Mendeley (Reference software)

*GSEA (Gene set enrichment analysis)

LABORATORY DEVICES

*Confocal microscope (Leica TSC SP8, Zeiss LSM700)

*Transmitted-light bright-field microscope

*Fluorescence microscope

*Rotation microtome

*Kryo microtome

*BD FACSCalibur, BD Fortessa

*BSL1

*Nanosight

*Odyssey

*Live-Cell Imager Incucyte

ANIMALS (MICE)

*Chow preparation

*Breeding

*Genotyping

*Applications (subcutan, intraperitoneal, intradermal, gavage)

*Blood withdrawal (eye, caudal vena cava)

*Xenotransplantation (melanoma cells)

*Anesthesia (Isoflurane)

*Bile duct ligation and cannulation

*Dissection

INTERNATIONAL EXPERIENCE

Country: Switzerland

Date: 01/07/2010 – 31/08/2010

Basic research of arteriosclerosis, Cardiovascular Molecular Imaging

The aim of the study was to design microbubbles which are binding to ligands at inflamed sites at endothelial cells indicating arteriosclerosis by contrast-enhanced ultrasound molecular imaging. After injection of tumor necrosis factor α, P-selectin or intercellular adhesion molecule-2 was detected in the murine thigh. Therefor microbubbles were developed differing in size and length. My part was to create these microbubbles and to conjugate and label them. Further I have also been a helping hand when in vivo experiments were performed to detect ligand-ligand attachments. Concluding can be said that microbubble targeting to endothelial ligands is influenced by (1) the tether length of the ligand and (2) the degree to which the endothelial target is projected from the cell surface.

MISCELLANEOUS

Oral presentations

Institute of cancer research
Topic: The Influence of Intestinal Flora on Genetic Instability and Cancer Predisposition in p53-deficient Mice.
22. February 2012; Hörsaalcontainer, Borschkegasse 8a, 1090 Vienna, Austria

14th International Life Science Meeting
Topic: Role of the HDL Receptor SR-BI in Cancer Progression.
5./6. April 2017; IMC Fachhochschule Krems, Trakt G1, 3500 Krems, Austria

Institute of Medical Genetics
Topic: SR-BI expression in human metastatic melanoma is associated with increased protein glycosylation and STAT5 activation driving the malignant phenotype.
23. May 2017; Seminarraum 103, Währingerstrasse 10, 1090 Vienna, Austria

Poster presentations

Scientific Symposium Austrian Society of Toxicology (ASTOX)
24./25. November 2011; Hauptuniversität Wien, Department für Ernährungswissenschaften A-1090 Vienna, Austria

16th World Congress on Cancers of the Skin
31.8.-2.9.2016, Hofburg, Heldenplatz, A-1010 Vienna, Austria

Young Scientist Association, PHD-Symposium 2017
8./9. June 2017; Medical University of Vienna, AKH, A-1090 Vienna, Austria

Osteoarthritis research society international (OARSI)
2.-5. May 2019, Toronto, Canada

Scientific Advisory Board Meeting, Ludwig Boltzmann Institute for Arthritis and Rehabilitation
26. November 2019, Medical University of Vienna, AKH, A-1090 Vienna, Austria

PUBLICATION LIST

Eckel, O., Mirea, M. A., Gschwendtner, A., Pistek, M., Kinslechner, K., Röhrl, C., Stangl, H., Hengstschläger, M., & Mikula, M. (2025). *Expression of the cholesterol transporter SR-B1 in melanoma cells facilitates inflammatory signaling leading to reduced cholesterol synthesis*. https://doi.org/10.1016/J.NEO.2025.101154

Elshamly, M., Kinslechner, K., Grohs, J. G., Weinmann, D., Walzer, S. M., Windhager, R., Gabius, H., & Toegel, S. (2019). Galectins-1 and -3 in Human Intervertebral Disc Degeneration: Non-Uniform Distribution Profiles and Activation of Disease Markers Involving NF-kB by Galectin-1. *Journal of Orthopaedic Research*, *37*(10), 1–13. https://doi.org/10.1002/jor.24351

Fuehrer, J., Pichler, K. M., Fischer, A., Giurea, A., Weinmann, D., Altmann, F., Windhager, R., Gabius, H.-J., & Toegel, S. (2021). N-Glycan profiling of chondrocytes and fibroblast-like synoviocytes: Towards functional glycomics in osteoarthritis. *Proteomics. Clinical Applications*, e2000057. https://doi.org/10.1002/prca.202000057

Khanicheh, E., Mitterhuber, M., Kinslechner, K., Xu, L., Lindner, J. R., & Kaufmann, B. A. (2012). Factors Affecting the Endothelial Retention of Targeted Microbubbles: Influence of Microbubble Shell Design and Cell Surface Projection of the Endothelial Target Molecule. *Journal of the American Society of Echocardiography: Official Publication of the American Society of Echocardiography*, *25*(4), 460–466. https://doi.org/10.1016/j.echo.2011.12.016

Kinslechner, K., Schörghofer, D., Schütz, B., Vallianou, M., Wingelhofer, B., Mikulits, W., Röhrl, C., Hengstschläger, M., Moriggl, R., Stangl, H., & Mikula, M. (2017). Malignant Phenotypes in Metastatic Melanoma are Governed by SR-BI and its Association with Glycosylation and STAT5 Activation. *Molecular Cancer Research*, *19*, 1–13. https://doi.org/10.1158/1541-7786.MCR-17-0292

Kinslechner, K., Schütz, B., Pistek, M., Rapolter, P., Weitzenböck, H. P., Hundsberger, H., Mikulits, W., Grillari, J., Röhrl, C., Hengstschläger, M., Stangl, H., & Mikula, M. (2019). Loss of SR-BI Down-Regulates MITF and Suppresses Extracellular Vesicle Release in Human Melanoma. *International Journal of Molecular Science*, *20*(5), 1063. https://doi.org/10.3390/ijms20051063

Manning, J. C., Baldoneschi, V., Romero-Hernández, L. L., Pichler, K. M., García Caballero, G., André, S., Kutzner, T. J., Ludwig, A. K., Zullo, V., Richichi, B., Windhager, R., Kaltner, H., Toegel, S., Gabius, H. J., Murphy, P. V., & Nativi, C. (2022). Targeting osteoarthritis-associated galectins and an induced effector class by a ditopic bifunctional reagent: Impact of its glycan part on binding measured in the tissue context. *Bioorganic & Medicinal Chemistry*, *75*. https://doi.org/10.1016/J.BMC.2022.117068

Pichler, K. M., Weinmann, D., Schmidt, S., Kubista, B., Lass, R., Martelanz, L., Alphonsus, J., Windhager, R., Gabius, H. J., & Toegel, S. (2021). The Dysregulated Galectin Network Activates NF-κB to Induce Disease Markers and Matrix Degeneration in 3D Pellet Cultures of Osteoarthritic Chondrocytes. *Calcified Tissue International*, *108*(3), 377–390. https://doi.org/10.1007/s00223-020-00774-4

Pichler, Katharina M., Fischer, A., Alphonsus, J., Chiari, C., Schmitdt, S., Kenn, M., Schreiner, W., Weinamnn, D., Rothbauer, M., Windhager, R., Gabius, H.-J., & Toegel, S. (2022). Galectin network in osteoarthritis: galectin-4 programs a pathogenic signature of gene and effector expression in human chondrocytes in vitro _ Enhanced Reader.pdf. *Histochemistry and Cell Biology*, *157*, 139–151. https://doi.org/https://doi.org/10.1007&s00418-021-02053-1

Preitschopf, A., Li, K., Schörghofer, D., Kinslechner, K., Schütz, B., Thi Thanh Pham, H., Rosner, M., Joo, G. J., Röhrl, C., Weichhart, T., Stangl, H., Lubec, G., Hengstschläger, M., & Mikula, M. (2014). mTORC1 is essential for early steps during Schwann cell differentiation of amniotic fluid stem cells and regulates lipogenic gene expression. *PloS One*, *9*(9), e107004. https://doi.org/10.1371/journal.pone.0107004

Preitschopf, A., Schörghofer, D., Kinslechner, K., Schütz, B., Zwickl, H., Rosner, M., Joo, J. G., Nehrer, S., Hengstschläger, M., & Mikula, M. (2016). Rapamycin-Induced Hypoxia Inducible Factor 2A Is Essential for Chondrogenic Differentiation of Amniotic Fluid Stem Cells. *Stem Cells Translational Medicine*, *5*, 1014–1025.

Schörghofer, D., Kinslechner, K., Preitschopf, A., Schütz, B., Röhrl, C., Hengstschläger, M., Stangl, H., & Mikula, M. (2015). The HDL receptor SR-BI is associated with human prostate cancer progression and plays a possible role in establishing androgen independence. *Reproductive Biology and Endocrinology : RB&E*, *13*(88). https://doi.org/10.1186/s12958-015-0087-z

Schütz, B., Koppensteiner, A., Schörghofer, D., Kinslechner, K., Timelthaler, G., Eferl, R., Hengstschläger, M., Missbichler, A., Hundsberger, H., & Mikula, M. (2016). Generation of metastatic melanoma specific antibodies by affinity purification. *Scientific Reports*, *6*(Ccc), 37253. https://doi.org/10.1038/srep37253

Senderek, J., Lassuthova, P., Kabzińska, D., Abreu, L., Baets, J., Beetz, C., Braathen, G. J., Brenner, D., Dalton, J., Dankwa, L., Deconinck, T., De Jonghe, P., Dräger, B., Eggermann, K., Ellis, M., Fischer, C., Stojkovic, T., Herrmann, D. N., Horvath, R., … Auer-Grumbach, M. (2020). The genetic landscape of axonal neuropathies in the middle-aged and elderly: Focus on MME. *Neurology*, *95*(24), e3163–e3179. https://doi.org/10.1212/WNL.0000000000011132

Swoboda, A., Soukup, R., Eckel, O., Kinslechner, K., Wingelhofer, B., Schörghofer, D., Sternberg, C., Pham, H. T. T., Vallianou, M., Horvath, J., Stoiber, D., Kenner, L., Larue, L., Poli, V., Beermann, F., Yokota, T., Kubicek, S., Krausgruber, T., Rendeiro, A. F., … Moriggl, R. (2021). STAT3 promotes melanoma metastasis by CEBP-induced repression of the MITF pathway. *Oncogene*, *40*(6), 1091–1105. https://doi.org/10.1038/s41388-020-01584-6