

Scientific CV

Personal Data

Univ.-Prof. Dr. med. Winfried Franz PICKL



Date of Birth July 20, 1964
Place of Birth Klagenfurt
Nationality Austria
Spoken
Languages German (native), English, Italian
Acad. Degree M.D.
Current Position Professor for Translational Immunology, MedUni Vienna
Specializations Clinical Immunology
Principal Investigator Clinical Studies (Prüfarzt)-Diploma
Austrian Medical Association
Work Address Institute of Immunology
Center for Pathophysiology, Infectiology and Immunology
Division of Cellular Immunology and Immunoematology
Medical University of Vienna
Lazarettgasse 19, 1090 Vienna, Austria
T: +43 (0)1 40160-33245
F: +43 (0)1 40160-933245
M: +43 (0)664 8476271
ORCID: 0000-0003-0430-4952
E-mail: winfried.pickl@meduniwien.ac.at
<http://immunologie.meduniwien.ac.at>
<http://www.allergy-research-program.at/>
<http://www.phd-mcca.at/>
<https://www.kl.ac.at/en/research/working-groups/danube-arc>
<http://www.efis.org>
<http://www.iuisonline.org>
<https://www.ncbi.nlm.nih.gov/pubmed/?term=pickl-w>

Main areas of research

Biology of antigen-presentation and T cell activation with a special focus on translational immunology, including allergic diseases, translational immunology and clinical immunology

Qualification

M.D. and board certified specialist in clinical immunology including 2 ½ years of international research experience at the Department of Molecular Biology and Genetics, Harvard Medical School. At present, Professor for Translational Immunology, Principal Investigator, Speaker of the PhD Program Molecular, Cellular and Clinical Allergology, MCCA, and head of the Division of Cellular Immunology and Immunoematology, Head of Immunodiagnostic Laboratory, Institute of Immunology, Medical University of Vienna. Professional skills in molecular, cellular and humoral immunology, hematology, blood group serology and tissue typing. Extensive experience in project development and management, extended academic teaching experience. High-level functions in

national and international councils and board (e.g., President Austrian Society for Allergology and Immunology (2014-2016), Council Member International Union of Immunological Societies, IUIS (2014-2019) and Treasurer European Federation of Immunological Societies, EFIS (2016-2024).

Scientific Education and Career History

1983	High school degree with distinction, High School for Business Administration, Klagenfurt, Austria
1983-1989	Medical student, University of Vienna Medical School, Vienna, Austria
1989-1991	Doctoral thesis, Institute of Blood Group Serology and Tissue Typing, University of Vienna Medical School, Vienna, Austria
July 1991	M.D. degree, University of Vienna Medical School, Vienna, Austria
1991	Research Fellow, Institute of Blood Group Serology and Tissue Typing, University of Vienna Medical School, Vienna, Austria
1992-1994	Research fellow, Institute of Immunology, University of Vienna Medical School, Vienna, Austria
1994	Training as military assistant doctor, Vienna and Innsbruck medical corps, Austrian Armed Forces, Austria
1995	Training in surgery and dermatology, Austrian Armed Forces Military Hospital, Vienna, Austria
1995-1997	Research fellow, Institute of Immunology, University of Vienna Medical School, Vienna, Austria (Prof. Walter Knapp)
1996	Assistance professor in immunology, Institute of Immunology, University of Vienna Medical School, Vienna, Austria
1998-2000	Post-doctoral research fellow in molecular biology and genetics, Department of Molecular Biology, Harvard Medical School, Boston, MA (Prof. Brian Seed)
1999	Habilitation in immunology and Associate Professorship, Institute of Immunology, University of Vienna Medical School, Vienna, Austria
2002	Training in internal medicine and hemato-oncology at the Department of Internal Medicine, Vienna General Hospital, Vienna, Austria (Prof. Lechner)
2002	Board certified specialist in immunology, Austrian Medical Association
2002	Head Division of Cellular Immunology and Immunoematology, Institute of Immunology, University of Vienna Medical School, Vienna, Austria
2005-today	Head cellular diagnostic laboratory, Institute of Immunology, Vienna, Austria
2012-2014	President elect of the Austrian Society for Allergology and Immunology
2014-2016	President of the Austrian Society for Allergology and Immunology http://www.oegai.org/html/
2012-now	Deputy-speaker of the FWF-funded special research program F46 “Towards prevention and therapy of allergy” at the Medical University of Vienna, Austria. http://www.allergy-research-program.at/cms/
2013-today	Speaker of the FWF-funded PhD program “Molecular, cellular and clinical allergology” at the Medical University of Vienna. http://www.phd-mcca.at/
2015	President of the European Congress of Immunology 2015, ECI 2015. http://www.eci-vienna2015.org
2016-2024	Treasurer of the European Federation of Immunological Societies, EFIS, http://www.efis.org
2014-2019	Council Member, International Union of Immunological Societies http://www.iuisonline.org

2018-today	Member International Scientific Council, University of Rijeka, Rijeka, Croatia
2020-today	Head of the Diagnostic Laboratory of the Institute of Immunology, Medical University of Vienna
2020-today	Member Examination Board Clinical Immunology Austrian Medical Associations
2021-today	Committee member “Spezialisierungskommission Allergologie” Austrian Medical Association
2021-2023	Guest Professor Karl Landsteiner University, Krems, Austria
2022	Principal Investigator Clinical Studies (Prüfarzt), Austrian Medical Chamber
2023	Professor for Translational Immunology, Medical University of Vienna

Major scientific contributions

1. Determination of the immune response to SARS-CoV-2 infection and development of test systems for the identification of SARS-CoV-2 immunity (Gattinger et al., *Allergy*, 76(3):878-883, 2021; Kratzer et al., *Allergy* 76(3):751-765, 2021; Agerer et al., *Sci Immunol*, 6(57):eabg6461. doi: 10.1126/sciimmunol.abg6461, 2021).
2. Studies on dendritic cell biology with a focus on the differentiation of precursors of dendritic cells to mature forms of dendritic cells: First to show that highly purified monocytes can be differentiated towards dendritic cells: (Pickl et al., *J Immunol* 157(9):3850-9, 1996; Pickl et al., *Methods Mol Med* 64:283-96, 2001; Strobl et al., *Blood* 90(4):1425-34, 1997; Strobl et al., *J Immunol* 161(2):740-8, 1998; Oehler et al., *J Exp Med* 187(7):1019-28, 1998).
3. Enveloped viruses are budding from the lipid-raft rich regions of the plasma membrane of infected cells: Basis for the decoration of virus-like nanoparticles with molecules of choice for their use as antigen-presenting platforms and as novel forms of vaccines: (Pickl et al., *J Virol* 75(15):7175-83, 2001; Derdak et al., *Proc Natl Acad Sci U S A* 103(35):13144-9, 2006; Kueng et al., *J Virol* 81(16):8666-76, 2007; Leb et al., *J Allergy Clin Immunol* 124(1):121-8, 2009; Kueng et al., *FASEB J* 24(5):1572-82, 2010; Ketteler et al., *J Virol Methods* 167(2):178-85, 2010; Kueng et al., *Int Arch Allergy Immunol* 154(2):89-110, 2011; Wojta-Stremayr et al., *Sensors* 13(7):8722-49, 2013; Kratzer et al., *Allergy* 74(2):246-260, 2019).
4. Cloning of human allergen-specific T cell receptors and creation of *in vitro* systems for the systematic evaluation of the co-stimulation requirements of T helper cells, their polarization and their differentiation into functional T regulatory cells: (Leb et al., *J Allergy Clin Immunol* 121(1):64-71, 2008; Jahn-Schmid et al., *J Immunol* 181(5):3636-42, 2008; Leitner et al., *J Immunol Methods* 362(1-2):131-41, 2010; Schmetterer et al., *J Allergy Clin Immunol* 127(1):238-45, 2011; Jahn-Schmid et al., *Int Arch Allergy Immunol* 156(1):27-42, 2011; Neunkirchner et al., *J Immunol* 187(8):4077-87, 2011; Roszkopf et al., *Sci Rep.* 6:31580, 2016; Selb et al., *J Allergy Clin Immunol* 139(1):290-299, 2017).
5. Creation of humanized allergy mice by expression of birch and mugwort specific T cell receptors in HLA-DR transgenic mice: (Neunkirchner et al., *EBioMedicine* 31:66-78, 2018; Kratzer et al., *Allergy* 74(2):246-260, 2019).
6. Identification of new activation antigens on T lymphocytes and characterization of substances influencing T cell activation: (Pickl et al., *J Immunol* 1;158(5):2107-15, 1997; Waclavicek et al., *J Immunol* 159(11):5345-54, 1997; Waclavicek et al., *J Immunol* 161(9):4671-8, 1998; Pickl et al., *Tissue Antigens* 48(1):15-21, 1996; Schmidt et al., *Sci Rep* 7:42191, 2017; Prodingner et al., *J Leukoc Biol* 99(4):583-94, 2016).
7. Development of diagnostic algorithms based on B lymphocyte subsets for the identification of chronic graft-versus-host disease after bone marrow transplantation: (Greinix et al., *Biol Blood Marrow Transplant* 21(2):250-8, 2015; Kuzmina et al., *Blood* 121(10):1886-95, 2013; Kuzmina

et al., Blood 117(7):2265-74, 2011; Kuzmina et al., Blood 114(3):744-6, 2009; Greinix et al., Biol Blood Marrow Transplant 14(2):208-19, 2008).

Current research activities

1. Development of virus-like nanoparticle-based allergy vaccines
2. Use of altered peptide ligands for the induction of allergen-specific tolerance
3. Creation of humanized transgenic mouse models for allergy research (birch)
4. Identification of targeted drugs which are able to modulate T helper cell differentiation
5. Creation of chimeric antigen receptors (CARs) targeting allergen-specific T or B lymphocytes or plasma cells
6. Investigation in patients receiving B cell targeted drugs whether allergen-specific B cell memory is long-lived
7. Identification and characterization of patients with known and novel immunodeficiencies
8. Development of novel diagnostic cellular test for the determination of SARS-CoV-2 immunity
9. Development of virus-like nanoparticle-based vaccines for SARS-CoV-2

Professional Awards and Honors

1991	Award for the best thesis, Austrian Society for Allergology and Immunology, ÖGAI
1993	National award in Rheumatology, Ministry of Health, Science and Education
1998	Erwin Schrödinger research fellowship, Austrian Science Foundation, FWF
1999	APART research fellowship, Austrian Academy of Sciences, ÖAW
2007	Karl Landsteiner Award of the Austrian Society for Allergology and Immunology

Professional Awards and Honors to PhD or MD students

2012	Clemens von Pirquet award of the Austrian Society for Allergology and Immunology to PhD student Alina Neunkirchner
2012	Award for the best thesis to PhD student Klaus Schmetterer, Austrian Society for Allergology and Immunology, ÖGAI
2012	ÖGAI travel grant awarded for the 2nd European Congress of Immunology, Glasgow, UK, to Bharani Srinivasan
2012	Poster Prize of the Center for Pathophysiology, Infectiology and Immunology at the 3rd center retreat, to PhD student Alina Neunkirchner
2013	AAI Trainee Abstract Award Immunology 2013, Honolulu, Hawaii, USA, to PostDoc Alina Neunkirchner
2013	AAI travel grant Immunology 2013, Honolulu, Hawaii, USA, to PostDoc Alina Neunkirchner
2013	ÖGAI travel grant for the 15th International Congress of Immunology in Milano, Italy, to PhD student Daniela Wojta-Stremayr
2015	Award for outstanding poster presentation, MCCA-ICA Joint PhD-Student Symposium 2015, Salzburg, Austria, to PhD student Bernhard Kratzer
2015	AAI Trainee Abstract Award Immunology 2015, New Orleans, LA, USA, to PostDoc Alina Neunkirchner

- 2015** AAI travel grant Immunology 2015, New Orleans, LA, USA, to PostDoc Alina Neunkirchner
- 2015** ÖGAI best poster presentation award, Austrian Society for Allergology and Immunology (ÖGAI) to PhD student Martin Candia
- 2015** Bright Sparks award of the European Federation of Immunological Societies, EFIS, during ECI 2015, Vienna, Austria, to PostDoc Alina Neunkirchner
- 2016** Best poster presentation award, Joint PhD Symposium 'Bridge Gaps Cross Roads', Vienna, Austria, to PhD student Martin Candia
- 2016** Best oral presentation award, EAACI 2016 Congress, Vienna, Austria, to PhD student Bernhard Kratzer
- 2017** Best oral presentation award, ÖGAI annual congress, Vienna, Austria, to PhD student Bernhard Kratzer
- 2018** EFIS-EJI Travel grant for the 5th European Congress of Immunology, Amsterdam, Netherlands to PhD Student Bernhard Kratzer
- 2018** Bright sparks, 5th European Congress of Immunology, Amsterdam, Netherlands to PhD student Bernhard Kratzer
- 2018** EFIS-EJI Travel grant for the 5th European Congress of Immunology, Amsterdam, Netherlands to PhD student Peter Tauber
- 2019** Travel Grant from the Austrian Society for Immunology and Allergology for the World immune regulation meeting (WIRM XIII), Davos, Switzerland to PostDoc Bernhard Kratzer
- 2022** Joachim Ganzer Förderpreis of the German Society of Allergy and Clinical Immunology to PhD-Student Maja Zabel
- 2022** Best Poster presentation at the joint-meeting of the Austrian Society of Allergology and Immunology with the German Society for Immunology in Hannover to PhD-Student Al Nasar Ahmed Sehgal

Mentoring

1999-2021 21 awards to group members

Since 1999 28 Theses supervised

Patents

Author of three patent applications

Publications

Total number of scientific publications: **195** (pubmed)

Overall impact factor: **1796**

Overall number of citations: **8936** (Scopus)

Hirsch-index: **52** (scopus)

Selected 10 most important academic publications in the career to date (corresponding author bold face)

1. Kratzer, B., L. C. Schlax, P. Gattinger, P. Waidhofer-Söllner, D. Trapin, P.A. Tauber, A. N. A. Sehgal, U. Körmöczi, A. Rottal, M. Feichter, T. Oberhofer, K. Grabmeier-Pfistershammer, K. Borochova, Y. Dorofeeva, I. Tulaeva, M. Weber, B. Mühl, A. Kropfmüller, B. Negrin, M. Kundi, R. Valenta and **W. F. Pickl**. 2022. Combined assessment of S- and N-specific IL-2 and IL-13 secretion and CD69 neo-expression for discrimination of post-infection and post-vaccination

- cellular SARS-CoV-2-specific immune response. *Allergy*. Jun 12:10.1111/all.15406. doi: 10.1111/all.15406
2. Zabel, M., M. Weber, B. Kratzer, C. Köhler, B. Jahn-Schmid, G. Gadermaier, P. Gattinger, U. Bidovec-Stojkovič, P. Korošec, U. Smole, G. Wurzinger, K.W. Chen, C.B. Panaitescu, L. Klimek, I. Pablos, K. Niespodziana, A. Neunkirchner, W. Keller, R. Valenta R and **W. F. Pickl**. 2022. Art v 1 IgE epitopes of patients and humanized mice are conformational. *J Allergy Clin Immunol*. Jun 20:S0091-6749(22)00701-1. doi: 10.1016/j.jaci.2022.04.031.
 3. Kratzer, B., D. Trapin, P. Ettl, U. Kormoczi, A. Rottal, F. Tuppy, M. Feichter, P. Gattinger, K. Borochova, Y. Dorofeeva, I. Tulaeva, M. Weber, K. Grabmeier-Pfistershammer, P. A. Tauber, M. Gerdov, B. Muhl, T. Perkmann, I. Fae, S. Wenda, H. Fuhrer, R. Henning, R. Valenta, and **W. F. Pickl**. 2021. Immunological imprint of COVID-19 on human peripheral blood leukocyte populations. *Allergy* 76: 751-765. DOI: 10.1111/all.14647.
 4. Neunkirchner, A., B. Kratzer, C. Köhler, U. Smole, L. F. Mager, K. G. Schmetterer, D. Trapin, V. Leb-Reichl, E. Rosloniec, R. Naumann, L. Kenner, B. Jahn-Schmid, B. Bohle, R. Valenta, and **W. F. Pickl**. 2018. Genetic restriction of antigen-presentation dictates allergic sensitization and disease in humanized mice. *EBioMedicine* 31: 66-76. doi: 10.1016/j.ebiom.2018.04.001;
 5. Kuzmina, Z, K. Krenn, V. Petkov, U. Körmöczi, R. Weigl, A. Rottal, P. Kalhs, M. Mitterbauer, L. Ponhold, G. Dekan, H. T. Greinix, **W. F. Pickl**. 2013. CD19(+)/CD21(low) B cells and patients at risk for NIH-defined chronic graft-versus-host disease with bronchiolitis obliterans syndrome. *Blood* 121:1886-95. doi: 10.1182/blood-2012-06-435008.
 6. Kuzmina, Z, H. T. Greinix, R. Weigl, U. Körmöczi, A. Rottal, S. Frantal, S. Eder, **W. F. Pickl**. 2011. Significant differences in B-cell subpopulations characterize patients with chronic graft-versus-host disease-associated dysgammaglobulinemia. *Blood* 117:2265-74. doi: 10.1182/blood-2010-07-295766.
 7. Leb, V. M., B. Jahn-Schmid, K. G. Schmetterer, H. J. Kueng, D. Haiderer, A. Neunkirchner, G. F. Fischer, K. Nissler, A. Hartl, J. Thalhammer, B. Bohle, B. Seed, and **W. F. Pickl**. 2008. Molecular and functional analysis of the antigen receptor of Art v 1-specific helper T lymphocytes. *J Allergy Clin Immunol* 121: 64-71. doi: 10.1016/j.jaci.2007.10.006;
 8. Derdak, S. V., H. J. Kueng, V. M. Leb, A. Neunkirchner, K. G. Schmetterer, E. Bielek, O. Majdic, W. Knapp, B. Seed, and **W. F. Pickl**. 2006. Direct stimulation of T lymphocytes by immunosomes: virus-like particles decorated with T cell receptor/CD3 ligands plus costimulatory molecules. *Proc Natl Acad Sci U S A* 103: 13144-13149. doi: 10.1073/pnas.0602283103;
 9. **Pickl, W. F.**, F. X. Pimentel-Muñoz, and B. Seed. 2001. Lipid rafts and pseudotyping. *J Virol*. 75:7175-83. doi: 10.1128/JVI.75.15.7175-7183.2001.
 10. **Pickl, W. F.**, O. Majdic, P. Kohl, J. Stockl, E. Riedl, C. Scheinecker, C. Bello-Fernandez, and W. Knapp. 1996. Molecular and functional characteristics of dendritic cells generated from highly purified CD14⁺ peripheral blood monocytes. *J Immunol* 157: 3850-3859. <http://www.jimmunol.org/content/157/9/3850.long>;

Most important scientific/scholarly research achievements apart from academic publications¹

1. 2013-today: Speaker of the FWF-funded PhD program “Molecular, cellular and clinical allergology” at the Medical University of Vienna. <http://www.phd-mcca.at/> which is now continuing in the Danube Allergy Research Cluster <https://www.kl.ac.at/en/research/working-groups/danube-arc>

2. 2016-2024: Treasurer of the European Federation of Immunological Societies, EFIS, <http://www.efis.org>
3. 2014-2019: Council Member, International Union of Immunological Societies, <http://www.iuisonline.org>
4. 2015: President of the European Congress of Immunology 2015, ECI 2015. <http://www.eci-vienna2015.org>
5. 2014-2016: President of the Austrian Society for Allergology and Immunology <http://www.oegai.org/html/>
6. 1999: APART Fellowship Recipient of the Austrian Science Fund (FWF)
7. 1998: Erwin Schrödinger Fellowship Recipient (for Harvard, USA) of the Austrian Science Fund (FWF)