

## Curriculum Vitae – Assoc. Prof. Priv. Doz. Mag. Dr. Gernot Schabbauer

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### Personal Data

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Date of Birth	18.08.1972
Place of Birth	Tulln (Austria)
Nationality	Austrian
Marital Status	married to Olga Schabbauer; two daughters, Enie (6) and Neele (4)

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### Research Interests

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The role of signaling pathways, such as the PI3K/PTEN axis, in myeloid cells modulating the inflammatory as well as the innate and adaptive immune response in different pathological settings.

### Education

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1999 – 2002	Doctoral Studies in Genetics at the University of Vienna, Austria
1992 – 1998	Diploma Studies in Biology (specialization in Genetics and Biochemistry) at the University of Vienna, Austria

### Career History

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since 7/2015	Associate Professor
since 1/2014	Assistant Professor
2011	Habilitation in Vascular Biology at the Medical University of Vienna
since 10/2010	Assistant, Group Leader: Center for Physiology and Pharmacology, Institute for Physiology, Medical University of Vienna, Austria

2007 – 9/2010	Senior Post Doc (Selbstantragsteller), Junior Group Leader: Department of Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria
2005 – 2007	Senior Post Doc: Department of Vascular Biology and Thrombosis Research (Prof Bernd Binder), Medical University of Vienna, Austria
2003 – 2005	Schrödinger Postdoctoral Fellow: Institute of Immunology (Prof Nigel Mackman), The Scripps Research Institute La Jolla, USA

### Teaching Experience

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2005-	Head and co-supervisor of undergraduate and graduate (Masters, Diploma and PhD) students
2005-	Lector at the Medical University of Vienna
2006-	Lector at the University for Applied Science Campus Vienna
2007-	Lector at the University for Applied Science Krems

### Research Grants and Fellowships

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Several grants awarded from the Austrian Science Fund (FWF).

Several funded projects with industrial cooperation partners.

### Publication List (in chronological order):

37 publications in peer reviewed journals (citations: >1100; h-index: 19 according to scopus)

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1. Bluml, S., E. Sahin, V. Saferding, E. Goncalves-Alves, E. Hainzl, B. Niederreiter, A. Hladik, T. Lohmeyer, J. S. Brunner, M. Bonelli, M. I. Koenders, W. B. van den Berg, G. Superti-Furga, J. S. Smolen, **G. Schabbauer**, and K. Redlich. 2015. Phosphatase and tensin homolog (PTEN) in antigen-presenting cells controls Th17-mediated autoimmune arthritis. *Arthritis Res Ther.* 17: 230.
  2. Unseld, M., J. M. Breuss, C. Pausz, E. Pablik, **G. Schabbauer**, C. C. Zielinski, P. Uhrin, and G. W. Prager. 2015. In vivo Tube Assay: An Optimised Protocol of the Directed in vivo Angiogenesis Assay by Implementing Immunohistochemistry. *J Vasc. Res* 52: 116-126.
  3. Sahin, E., J. S. Brunner, J. B. Kral, M. Kuttke, L. Hanzl, H. Datler, H. Paar, N. Neuwinger, V. Saferding, E. Zinser, A. Halfmann, K. Soukup, E. Hainzl, T. Lohmeyer, B. Niederreiter, T. Haider, A. M. Dohnal, G. Kronke, S. Bluml, and **G. Schabbauer**. 2015. Loss of Phosphatase and Tensin Homolog in APCs Impedes Th17-Mediated Autoimmune Encephalomyelitis. *J Immunol* 195: 2560-2570.
  4. Soukup, K., A. Halfmann, B. M. Le, E. Sahin, S. Vittori, F. Poyer, C. Schuh, R. Luger, B. Niederreiter, T. Haider, D. Stoiber, S. Bluml, **G. Schabbauer**, A. Kotlyarov, M. Gaestel, T. Felzmann, and A. M. Dohnal. 2015. The MAPK-Activated Kinase MK2 Attenuates Dendritic Cell-Mediated Th1 Differentiation and Autoimmune Encephalomyelitis. *J Immunol* 195: 541-552.
  5. Unseld, M., A. Chilla, C. Pausz, R. Mawas, J. Breuss, C. Zielinski, **G. Schabbauer**, and G. W. Prager. 2015. PTEN expression in endothelial cells is down-regulated by uPAR to promote angiogenesis. *Thromb. Haemost.* 114: 379-389.
  6. Bluml, S., M. Friedrich, T. Lohmeyer, E. Sahin, V. Saferding, J. Brunner, A. Puchner, P. Mandl, B. Niederreiter, J. S. Smolen, **G. Schabbauer**, and K. Redlich. 2015. Loss of
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- phosphatase and tensin homolog (PTEN) in myeloid cells controls inflammatory bone destruction by regulating the osteoclastogenic potential of myeloid cells. *Ann. Rheum. Dis.* 74(1):227-33.
7. Sahin, E., S. Haubenwallner, M. Kuttke, I. Kollmann, A. Halfmann, A. B. Dohnal, L. Chen, P. Cheng, B. Hoesel, E. Einwallner, J. Brunner, J. B. Kral, W. C. Schrottmaier, K. Thell, V. Saferding, S. Bluml, and **G. Schabbauer**. 2014. Macrophage PTEN regulates expression and secretion of arginase I modulating innate and adaptive immune responses. *J Immunol* 193: 1717-1727.
  8. Schrottmaier, W. C., O. V. Oskolkova, **G. Schabbauer**, and T. Afonyushkin. 2014. MicroRNA miR-320a modulates induction of HO-1, GCLM and OKL38 by oxidized phospholipids in endothelial cells. *Atherosclerosis* 235: 1-8.
  9. Ipseiz, N., S. Uderhardt, C. Scholtyssek, M. Steffen, G. Schabbauer, A. Bozec, G. Schett, and G. Kronke. 2014. The nuclear receptor Nr4a1 mediates anti-inflammatory effects of apoptotic cells. *J Immunol* 192: 4852-4858.
  10. Assinger, A., J. Kral, K. C. Yaiw, W. Schrottmaier, E. Kurzejamska, Y. Wang, A. A. Mohammad, P. Religa, A. Rahbar, **G. Schabbauer**, L. M. Butler, and C. Soderberg-Naucler. 2014. Human Cytomegalovirus-Platelet Interaction Triggers Toll-Like Receptor 2-Dependent Proinflammatory and Proangiogenic Responses. *Arterioscler. Thromb. Vasc. Biol.* 34: 801-809.
  11. Badrnya, S., W. C. Schrottmaier, J. B. Kral, K. C. Yaiw, I. Volf, **G. Schabbauer**, C. Soderberg-Naucler, and A. Assinger. 2014. Platelets mediate oxidized low-density lipoprotein-induced monocyte extravasation and foam cell formation. *Arterioscler. Thromb. Vasc. Biol.* 34: 571-580.
  12. Thell, K., R. Hellinger, **G. Schabbauer**, and C. W. Gruber. 2014. Immunosuppressive peptides and their therapeutic applications. *Drug Discov. Today* 19(5):645-53
  13. Matt, U., O. Sharif, R. Martins, T. Furtner, L. Langeberg, R. Gawish, I. Elbau, A. Zivkovic, K. Lakovits, O. Oskolkova, B. Doninger, A. Vychytil, T. Perkmann, **G. Schabbauer**, C. J. Binder, V. N. Bochkov, J. D. Scott, and S. Knapp. 2013. WAVE1 mediates suppression of phagocytosis by phospholipid-derived DAMPs. *J. Clin. Invest* 123: 3014-3024.
  14. Grundemann, C., K. Thell, K. Lengen, M. Garcia-Kaufer, Y. H. Huang, R. Huber, D. J. Craik, **G. Schabbauer**, and C. W. Gruber. 2013. Cyclotides Suppress Human T-Lymphocyte Proliferation by an Interleukin 2-Dependent Mechanism. *PLoS One* 8: e68016.
  15. Guenzl, P. M., R. Raim, J. Kral, J. Brunner, E. Sahin, and **G. Schabbauer**. 2013. Insulin hypersensitivity induced by hepatic PTEN gene ablation protects from murine endotoxemia. *PLoS One* 8: e67013.
  16. Uhrin, P., T. Perkmann, B. Binder, and **G. Schabbauer**. 2013. ISG12 is a critical modulator of innate immune responses in murine models of sepsis. *Immunobiology* 218: 1207-1216.
  17. **G. Schabbauer**. 2012. Polymicrobial sepsis models: CLP versus CASP. *Drug Discovery Today: Disease Models*. Volume 9, Issue 1, March 2012, Pages e17-e21
  18. Assinger, A., M. Laky, **G. Schabbauer**, A. M. Hirschl, E. Buchberger, B. R. Binder, and I. Volf. 2011. Efficient phagocytosis of periodontopathogens by neutrophils requires plasma factors, platelets and TLR2. *J. Thromb. Haemost.* 9:799
  19. Oskolkova, O. V., T. Afonyushkin, B. Preinerstorfer, W. Bicker, S. E. von, E. Hainzl, S. Demyanets, **G. Schabbauer**, W. Lindner, A. D. Tselepis, J. Wojta, B. R. Binder, and V. N. Bochkov. 2010. Oxidized phospholipids are more potent antagonists of lipopolysaccharide than inducers of inflammation. *J. Immunol.* 185:7706.
  20. Gunzl, P., K. Bauer, E. Hainzl, U. Matt, B. Dillinger, B. Mahr, S. Knapp, B. R. Binder, and **G. Schabbauer**. 2010. Anti-inflammatory properties of the PI3K pathway are mediated by IL-10/DUSP regulation. *J. Leukoc. Biol.* 88:1259.
  21. **Schabbauer, G.\***, U. Matt, P.\* Gunzl, J. Warszawska, T. Furtner, E. Hainzl, I. Elbau, I. Mesteri, B. Doninger, B. R. Binder, and S. Knapp. 2010. Myeloid PTEN promotes inflammation but impairs bactericidal activities during murine pneumococcal pneumonia. *J. Immunol.* 185:468.
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22. Matt, U., J. M. Warszawska, M. Bauer, W. Dietl, I. Mesteri, B. Doninger, I. Haslinger, **G. Schabbauer**, T. Perkmann, C. J. Binder, S. Reingruber, P. Petzelbauer, and S. Knapp. 2009. Bbeta(15-42) protects against acid-induced acute lung injury and secondary pseudomonas pneumonia in vivo. *Am. J. Respir. Crit Care Med.* 180:1208.
  23. Kronke, G., J. Katzenbeisser, S. Uderhardt, M. M. Zaiss, C. Scholtysek, **G. Schabbauer**, A. Zarbock, M. I. Koenders, R. Axmann, J. Zwerina, H. W. Baenckler, B. W. van den, R. E. Voll, H. Kuhn, L. A. Joosten, and G. Schett. 2009. 12/15-lipoxygenase counteracts inflammation and tissue damage in arthritis. *J. Immunol.* 183:3383.
  24. von, S. E., O. V. Oskolkova, **G. Schabbauer**, F. Gruber, S. Bluml, M. Genest, A. Kadl, C. Marsik, S. Knapp, J. Chow, N. Leitinger, B. R. Binder, and V. N. Bochkov. 2009. Multi-hit inhibition of circulating and cell-associated components of the toll-like receptor 4 pathway by oxidized phospholipids. *Arterioscler. Thromb. Vasc. Biol.* 29:356.
  25. Gunzl, P., and **G. Schabbauer**. 2008. Recent advances in the genetic analysis of PTEN and PI3K innate immune properties. *Immunobiology* 213:759.
  26. Kidd, L. B.\*, **G. A. Schabbauer\***, J. P. Luyendyk, T. D. Holscher, R. E. Tilley, M. Tencati, and N. Mackman. 2008. Insulin activation of the phosphatidylinositol 3-kinase/protein kinase B (Akt) pathway reduces lipopolysaccharide-induced inflammation in mice. *J. Pharmacol. Exp. Ther.* 326:348.
  27. **Schabbauer, G.**, J. Luyendyk, K. Crozat, Z. Jiang, N. Mackman, S. Bahram, and P. Georgel. 2008. TLR4/CD14-mediated PI3K activation is an essential component of interferon-dependent VSV resistance in macrophages. *Mol. Immunol.* 45:2790.
  28. Luyendyk, J. P.\*, **G. A. Schabbauer\***, M. Tencati, T. Holscher, R. Pawlinski, and N. Mackman. 2008. Genetic analysis of the role of the PI3K-Akt pathway in lipopolysaccharide-induced cytokine and tissue factor gene expression in monocytes/macrophages. *J. Immunol.* 180:4218.
  29. **Schabbauer, G.**, B. Schweighofer, D. Mechtcheriakova, M. Lucerna, B. R. Binder, and E. Hofer. 2007. Nuclear factor of activated T cells and early growth response-1 cooperate to mediate tissue factor gene induction by vascular endothelial growth factor in endothelial cells. *Thromb. Haemost.* 97:988.
  30. Frank, R. D., T. Holscher, **G. Schabbauer**, M. Tencati, R. Pawlinski, J. I. Weitz, and N. Mackman. 2006. A non-anticoagulant synthetic pentasaccharide reduces inflammation in a murine model of kidney ischemia-reperfusion injury. *Thromb. Haemost.* 96:802.
  31. Lucerna, M., J. Pomyje, D. Mechtcheriakova, A. Kadl, F. Gruber, M. Bilban, Y. Sobanov, **G. Schabbauer**, J. Breuss, O. Wagner, M. Bischoff, M. Clauss, B. R. Binder, and E. Hofer. 2006. Sustained expression of early growth response protein-1 blocks angiogenesis and tumor growth. *Cancer Res.* 66:6708.
  32. Frank, R. D., **G. Schabbauer**, T. Holscher, Y. Sato, M. Tencati, R. Pawlinski, and N. Mackman. 2005. The synthetic pentasaccharide fondaparinux reduces coagulation, inflammation and neutrophil accumulation in kidney ischemia-reperfusion injury. *J. Thromb. Haemost.* 3:531.
  33. **Schabbauer, G.**, M. Tencati, B. Pedersen, R. Pawlinski, and N. Mackman. 2004. PI3K-Akt pathway suppresses coagulation and inflammation in endotoxemic mice. *Arterioscler. Thromb. Vasc. Biol.* 24:1963.
  34. Reddy, K. V., G. Bhattacharjee, **G. Schabbauer**, A. Hollis, K. Kempf, M. Tencati, M. O'Connell, M. Guha, and N. Mackman. 2004. Dexamethasone enhances LPS induction of tissue factor expression in human monocytic cells by increasing tissue factor mRNA stability. *J. Leukoc. Biol.* 76:145.
  35. Pawlinski, R., B. Pedersen, **G. Schabbauer**, M. Tencati, T. Holscher, W. Boisvert, P. Ndrade-Gordon, R. D. Frank, and N. Mackman. 2004. Role of tissue factor and protease-activated receptors in a mouse model of endotoxemia. *Blood* 103:1342.
  36. Lucerna, M., D. Mechtcheriakova, A. Kadl, **G. Schabbauer**, R. Schafer, F. Gruber, Y. Koshelnick, H. D. Muller, K. Issbrucker, M. Clauss, B. R. Binder, and E. Hofer. 2003. NAB2, a corepressor of EGR-1, inhibits vascular endothelial growth factor-mediated gene
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induction and angiogenic responses of endothelial cells. *J. Biol. Chem.* 278:11433.

37. Mechtcheriakova, D., **G. Schabbauer**, M. Lucerna, M. Clauss, M. R. De, B. R. Binder, and E. Hofer. 2001. Specificity, diversity, and convergence in VEGF and TNF-alpha signaling events leading to tissue factor up-regulation via EGR-1 in endothelial cells. *FASEB J.* 15:230.

\* indicates equally contributing first author

underline indicates corresponding author

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