

Curriculum vitae: Sylvia KNAPP

Current Position: Full Professor of Infection Biology, Head of Research Division of Infection Biology
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Main Research Interests

- Innate immune response to medically relevant bacterial and viral infections (lung, sepsis, MAS)
- Postnatal innate immune development
- Macrophage plasticity in homeostasis and disease
- Disease tolerance & innate training effects on host defense against infections.

Scientific Education and Career History

1986 - 1993 Study of Medicine, University of Vienna, Austria & Free University Berlin, Germany
 1993 - 1994 Research Associate, Department of Medicine 1, University of Vienna
 1994 - 2000 Residency in Internal Medicine, University of Vienna; Board-certification (Internist)
 2001 - 2005 PhD Studies at the University of Amsterdam, Academic Medical Center, Laboratory of Experimental Internal Medicine, the Netherlands
 2004 Habilitation in Internal Medicine, University of Vienna (Assoc. Prof.)
 2005 - 2012 Staff Physician, Intensive Care Unit, Head of Infection Lab, Div. of Infectious Diseases, Dept of Medicine 1, Medical University of Vienna
 2006 - 2021 Principal Investigator at CeMM - Research Center for Molecular Medicine of the Austrian Academy of Sciences
 Since 2012 Full Professor of Infection Biology at the Medical University of Vienna

Career-related Fellowships/Recognition (selected)

2014 Member of the Austrian Academy of Sciences
 2001 - 2003 Erwin Schrödinger Fellowship by the Austrian Science Fund FWF
 2003 - 2004 Marie Curie Fellowship by the EU

Supervision of Graduate Students and Postdoctoral Fellows

Since 2005 Supervisor of 7 Postdocs, 18 PhD students (11 finished), 14 Master/Diploma students
 Fellowships and prizes won by lab members Postdoctoral Fellowships: Marie Skłodowska Curie Fellowship; Elise Richter Fellowship; Young Independent Researcher Group Fellowship; PhD Fellowships: L'Oréal Fellowship for women in science; DOC Fellowship by the Austrian Academy of Sciences; EMBO short-term fellowship; Boehringer Ingelheim short term fellowships (3x); Prizes: Clemens von Pirquet Award (2x); International Sepsis Forum Award; Erste Bank Award (3x); DORA Award; Excellence award by the Ministry of Sciences; YSA best presentation awards (10x)

Teaching Coordination Activities (selected)

2010 – 2020 Deputy Speaker: FWF/MedUni Wien PhD program “Cell Communication in Health and Disease”

- 2015 – 2018 PhD program coordinator CeMM, Center for Molecular Medicine of the Austrian Academy of Sciences
- Since 2019 Vice Dean for doctoral studies at the MedUni Wien

Institutional Responsibilities (Experience in Scientific Management and Organization) (selected)

- 2015-2018 Director of Medical Affairs, CeMM, Center for Molecular Medicine of the Austrian Academy of Sciences
- Since 2018 Member of the Supervisory Board (Universitätsrat) of the Medical University Graz
- Since 2019 Vice-Dean for doctoral studies at the MedUni Wien
- Since 2019 Vice-chair of the arbitration commission at MedUni Wien

Commission of Trust (selected)

- 2004 – now Reviewer for: Cell, Nature, Science, Nature Immunol, Nature Biotech, Science Translat Med, Science Immunol, J Clin Invest, Nature Comm, Blood, Cell Reports
- Since 2007 Grant Reviewer for: ERC Starting Grants, German Research Fund (DFG), Swedish Research Fund, Medical Research Council (MRC, UK), Dutch Science Fund (NWO), Agence Nationale de la Recherche (ANR, France), Wellcome Trust (UK)
- Since 2014 Member of the Senate of the Christian Doppler Research Society
- Since 2018 Vice President of the Ludwig Boltzmann Research Society
- Since 2019 Member of the Scientific Advisory Board of the Forum Alpbach
- Since 2020 Vice President of the College of Physicians in Vienna

10 Most Important Publications

117 scientific papers; the publications received more than >12000 citations with a current life-time Hirsch h Index of 58 (based on Google Scholar).

- Gawish R, Starkl P, Pimenov L, Hladik A, Lakovits K, Oberndorfer F, Cronin SJ, Ohradanova-Repic A, Wirnsberger G, Agerer B, Endler L, Capraz T, Perthold JW, Cikes D, Kogelgruber R, Hagelkruys A, Montserrat N, Mirazimi A, Boon L, Stockinger H, Bergthaler A, Oostenbrink C, Penninger JM, **Knapp S**. ACE2 is the critical in vivo receptor for SARS-CoV-2 in a novel COVID-19 mouse model with TNF- and IFN γ -driven immunopathology. *Elife* 2022, 11: e74623. 10.7554/eLife.74623
- Watzenbock ML, Gorki AD, Quattrone F, Gawish R, Schwarz S, Lambers C, Jaksch P, Lakovits K, Zahalka S, Rahimi N, Starkl P, Symmank D, Artner T, Pattaroni C, Fortelny N, Klavins K, Frommlet F, Marsland BJ, Hoetzenecker K, Widder S, **Knapp S**. Multi-omics profiling predicts allograft function after lung transplantation. *Eur Respir J* 2021: 2003292. 10.1183/13993003.03292-2020
- Starkl P, Watzenboeck ML, Popov LM, Zahalka S, Hladik A, Lakovits K, Radhouani M, Haschemi A, Marichal T, Reber LL, Gaudenzio N, Sibilano R, Stulik L, Fontaine F, Mueller AC, Amieva MR, Galli SJ, **Knapp S**. IgE Effector Mechanisms, in Concert with Mast Cells, Contribute to Acquired Host Defense against *Staphylococcus aureus*. *Immunity* 2020, 53(4): 793-804.e799. 10.1016/j.immuni.2020.08.002
- Cohen M, Giladi A, Gorki AD, Solodkin DG, Zada M, Hladik A, Miklosi A, Salame TM, Halpern KB, David E, Itzkovitz S, Harkany T, **Knapp S**, Amit I. Lung Single-Cell Signaling Interaction Map Reveals Basophil Role in Macrophage Imprinting. *Cell* 2018, 175(4): 1031-1044 e1018. 10.1016/j.cell.2018.09.009
- Saluzzo S, Gorki AD, Rana BM, Martins R, Scanlon S, Starkl P, Lakovits K, Hladik A, Korosec A, Sharif O, Warszawska JM, Jolin H, Mesteri I, McKenzie AN, **Knapp S**. First-Breath-Induced Type 2 Pathways Shape the Lung Immune Environment. *Cell reports* 2017, 18(8): 1893-1905. 10.1016/j.celrep.2017.01.071

6. Martins R, Maier J, Gorki AD, Huber KV, Sharif O, Starkl P, Saluzzo S, Quattrone F, Gawish R, Lakovits K, Aichinger MC, Radic-Sarikas B, Lardeau CH, Hladik A, Korosec A, Brown M, Vahtomeri K, Duggan M, Kerjaschki D, Esterbauer H, Colinge J, Eisenbarth SC, Decker T, Bennett KL, Kubicek S, Sixt M, Superti-Furga G, **Knapp S**. Heme drives hemolysis-induced susceptibility to infection via disruption of phagocyte functions. *Nature immunology* 2016, 17(12): 1361-1372. 10.1038/ni.3590
7. Warszawska JM, Gawish R, Sharif O, Sigel S, Doninger B, Lakovits K, Mesteri I, Nairz M, Boon L, Spiel A, Fuhrmann V, Strobl B, Muller M, Schenk P, Weiss G, **Knapp S**. Lipocalin 2 deactivates macrophages and worsens pneumococcal pneumonia outcomes. *J Clin Invest* 2013, 123(8): 3363-3372. 10.1172/JCI67911
8. Matt U, Sharif O, Martins R, Furtner T, Langeberg L, Gawish R, Elbau I, Zivkovic A, Lakovits K, Oskolkova O, Doninger B, Vychytal A, Perkmann T, Schabbauer G, Binder CJ, Bochkov VN, Scott JD, **Knapp S**. WAVE1 mediates suppression of phagocytosis by phospholipid-derived DAMPs. *J Clin Invest* 2013, 123(7): 3014-3024. 10.1172/JCI60681
9. Baumann CL, Aspalter IM, Sharif O, Pichlmair A, Bluml S, Grebien F, Bruckner M, Pasierbek P, Aumayr K, Planyavsky M, Bennett KL, Colinge J, **Knapp S***, Superti-Furga G*. CD14 is a coreceptor of Toll-like receptors 7 and 9. *J Exp Med* 2010, 207(12): 2689-2701. 10.1084/jem.20101111 (*corresp. authors)
10. **Knapp S**, Leemans JC, Florquin S, Branger J, Maris NA, Pater J, van Rooijen N, van der Poll T. Alveolar macrophages have a protective antiinflammatory role during murine pneumococcal pneumonia. *Am J Respir Crit Care Med* 2003, 167(2): 171-179. 10.1164/rccm.200207-698OC