

Annex 3: Academic CV and Description of Previous Research Achievements (max. 3 pages)

PERSONAL DETAILS

Prof. Dr. Andreas Bergthaler, Head of Institute (<https://orcid.org/0000-0003-0597-1976>)

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<http://www.meduniwien.ac.at/hp/en/hai/>

DATE OF BIRTH

1 November 1977 in Salzburg, AT. Married, two daughters.

CURRENT POSITION

2022 – Professor of Molecular Immunology and Head of Institute of Hygiene and Applied Immunology

2022 – Adjunct Principal Investigator at the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences, Vienna, Austria

EDUCATION

2016 Habilitation in Virology (Priv.-Doz.), Medical University of Vienna, Vienna, AT

2006 Doctoral degree (Dr. med. vet.), University of Zurich, Zurich, CH

1997 – 2003 Degree of Veterinary Medicine (Mag. med. vet.), Univ. of Vet. Medicine Vienna, Vienna, AT

PROFESSIONAL EXPERIENCE

2011 – 2021 Principal Investigator at CeMM, Austrian Academy of Sciences, Vienna, AT

2008 – 2011 Postdoctoral fellow, Dr. Alan Aderem, Institute for Systems Biology, Seattle, US

2007 – 2008 Postdoctoral fellow, Dr. Daniel D. Pinschewer, University of Geneva, Geneva, CH

2004 – 2006 Doctoral student, Dr. Hans Hengartner and Nobel Laureate Dr. Rolf M. Zinkernagel, Institute of Experimental Immunology, University and ETH Zurich, Zurich, CH

2001 – 2003 Clinical Rotations and research stays at Royal School of Veterinary Studies, Edinburgh, UK; Danish Veterinary Institute, DK; University of Zurich, CH; University of Tokyo, JP

FELLOWSHIPS

2008 – 2010 European Molecular Biology Organisation Long-Term Fellow, DE

2008 – 2010 Fellowship for Advanced Researchers by Swiss National Science Foundation, CH

2004 – 2006 Boehringer Ingelheim Fonds PhD Fellow, DE

TEACHING ACTIVITIES

2022 – Lecturer of adaptive immunology to 650 2nd year medical students, MedUni Vienna, AT

2021 – Lecturer on pathogen surveillance to Master's students, MedUni Vienna, AT

2013 – 2016 Co-lecturer of T cell-mediated Immunity/Immunopathologies, MedUni Vienna, AT

2011 – Lecturer of Viral immunology; and Scientific Integrity, PhD Program, CeMM Vienna, AT

ORGANISATION OF SCIENTIFIC MEETINGS

2022 “Science for Resilience – Learnings from the Pandemic” Conference, Vienna, AT (co-organizer, 150 participants)

2020 AustroVirology Meeting, Vienna, AT (Co-organizer, 90 participants)

2019 2nd AustroMetabolism Workshop, Vienna, AT (Main organizer, 110 participants)

2017 AustroMetabolism Workshop, Vienna, AT (Main organizer, 70 participants)

2016 EU-Life “Inflammation & Immunity in Health and Disease”, Vienna, AT (Co-organizer, 120 participants)

2012 Infection Immunology Symposium, Vienna, AT (Co-organizer, 90 participants)

INSTITUTIONAL RESPONSIBILITIES / COMMUNITY SERVICES

2022 – Member of Working group on Digital Health Data, Austrian High Council of Health, AT

2022 – Head of Committee for Biological Safety, Center for Pathophysiology, MedUni Vienna, AT

2021 – 2023 Member of the top governmental advisory board GECKO for pandemic management

2020 – Member of the National Commission for Genetic Engineering (Expertise: Virology)

2016 – 2018 Member of the CeMM working group EU-LIBRA (Gender Dimension of Research), AT

2014 – Member of the Immunology Research Cluster (IRC), MedUni Vienna, AT

REVIEWING ACTIVITIES (selected)

Reviewer for *Nature*, *Science*, *Immunity*, *Nature Immunology*, *Nature Metabolism*, *Cell Metabolism*, *Cell Reports*, *Journal of Clinical Investigations*, *Trends in Immunology*, *Nature Communications*, *PLoS Biology*, *PLoS Pathogens*, *Hepatology*, *European Journal of Immunology*; Guest editor for *PLoS Pathogens*;
Reviewer for *Agence Nationale de la Recherche (FR)*, *EU H2020 (MSCA-IF, FETOPEN, ERC)*; Panel member for *SC-1-PHE-CORONAVIRUS-2020*, *European Science Foundation (FR)*, *Fondazione Cariplo (IT)*, *L'Oreal Research Stipends for Female Researchers (AT)*, *Research Foundation Flanders (BE)*, *Science Foundation Ireland (IR)*, *Swiss National Science Foundation (CH)*, *Wellcome Trust (UK)*.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

American Association of Immunologists	German Society of Immunology
Austrian Society for Allergology & Immunology	International Cytokine & Interferon Society
Society for Virology (GfV e.V.)	Swiss Society for Allergology & Immunology

SUPERVISION AND MENTORING

2011 - Supervision of 8 postdoctoral fellows, 11 PhD students, 9 master students, 11 interns, 5 research assistants, 3 animal caretakers and 7 pupils. CeMM and MedUni Vienna, AT

Dr. Alexandra Popa (fmr. Data Scientist)	Principal Investigator, Boehringer Ingelheim, Vienna, AT
Dr. Alexander Lercher (fmr. PhD stud.)	Postdoctoral Fellow, Rockefeller University, New York, US
Dr. Hatoon Baazim (fmr. PhD student)	Postdoctoral Fellow, Harvard University, Boston, US
Dr. Bojan Vilagos (fmr. Postdoc)	Senior Research Scientist, Allcyte, Vienna, AT
M.Sc. MBA Udo Richson (fmr. Master stud.)	Manager Strategic Projects, Eli Lilly & co., Frankfurt a.M., DE
Dr. Christopher Schliehe (fmr. Postdoc)	Ass. Professor, Erasmus Univ. Med. Center, Rotterdam, NL

PUBLIC OUTREACH ACTIVITIES (selected)

2021 – 2022 Co-initiator of Austria-wide Breaking the Wave Live Webinar Series with Austrian Red Cross
2020 – 2022 990 interviews to national and international print, radio and TV media
2020 – >80 talks about SARS-CoV-2 to diverse audiences, AT
2018 Participant in BE OPEN – Science & Society Science Festival, Vienna, AT
2015 – Young Science Ambassador for regular visits to high school workshops as part of the outreach program of the Austrian Agency for International Cooperation in Education
2012 – Supervision of the annual CeMM stand at the Long Night of Research, Vienna, AT
2012 – Supervision and mentoring of pupils as summer interns, Vienna, AT

ADDITIONAL ACTIVITIES (selected)

2011 – Co-founder of Hookipa Pharma: Clinical stage, 120+ staff (Nasdaq: Hook)
2000 – 2003 Co-founder and ex-president of the Austrian student science platform “Club Biotech”

AWARDS

2020 Finalist as Science Breakthrough of the Year in the Life Sciences, Falling Walls Remote, Berlin, DE
2019 Nomination for “Austrian of the Year in the Category Research”, Austrian Broadcasting Company ORF and the newspaper Die Presse, Vienna, AT
2017 Austrian Infection Research Prize, Austrian Society for Infectious Diseases & Tropical Medicine, AT
2016 Milstein Young Investigator Award of the Intl. Cytokine & Interferon Society, San Francisco, US
2016 Georges-Köhler Prize of the German Society for Immunology (DGfI), Hamburg, DE
2016 Löffler-Frosch-Prize of the Society of Virology (GFV e.V.), Münster, DE
2006 Award for Distinguished Doctoral Thesis, University of Zurich, CH
2006 Golden Honour Medal for Special Merits, University of Veterinary Medicine Vienna, AT

CAREER BREAKS

1 – 2/2019 Paternity leave (two months)
9/1996 – 8/1997 Civil Service at a home for elderly people (12 months), Vorchdorf, AT

FUNDING ID

Throughout my career I obtained >15.1 million EUR of third-party funding. This includes one ERC Starting Grant, one FWF Cluster of Excellence project, six Austrian Science Fund (FWF) stand-alone projects, one Horizon 2020 ITN Marie-Sklodowska-Curie Actions project, one grant of the Vienna Science and Technology Fund (WWTF), philanthropic funds as well as research contracts with the Federal Ministry for Social Affairs, Health, Care and Consumer Protection and the Austrian Agency of Health and Food Safety (AGES).

PUBLICATION and PATENT ID

I co-authored 86 publications (Total citations: 5193, h-index 38, Google Scholar May 30th 2023; PubMed list: <http://goo.gl/vagUWM>) and last-authored 20 studies in journals such as *Nature Immunology*, *Immunity*, *Science Immunology*, *Science Translational Immunology*, *Cancer Cell* and *Nature Biotechnology*. 1 patent.

TEN MOST IMPORTANT PUBLICATIONS (relevant to this proposal)

1: Amman F, Markt R, (35 co-authors), Insam H, Bergthaler A. Viral variant-resolved wastewater surveillance of SARS-CoV-2 at national scale. *Nature Biotechnology*. 2022 Jul 18. doi: 10.1038/s41587-022-01387-y. Epub ahead of print. PMID: 35851376. (40 citations).

2: Popa A, Genger JW, Nicholson M, (30 co-authors), Puchhammer-Stöckl E, Allerberger F, Michor F, Bock C, Bergthaler A. Mutational dynamics and transmission properties of SARS-CoV-2 superspreading events in Austria. *Science Translational Medicine*. 2020 Dec 9;12(573):eabe2555. (197 citations)

3: Agerer B, Koblishke M, Gudipati V, (37 co-authors), Huppa JB, Aberle JH, Bergthaler A. SARS-CoV-2 mutations in MHC-I-restricted epitopes evade CD8⁺ T cell responses. *Science Immunology*. 2021 Mar 4;6(57):eabg6461. DOI: 10.1126/sciimmunol.abg6461. (126 citations)

4: Lercher A, Bhattacharya A, Popa AM, Caldera M, Schlapansky MF, Baazim H, Agerer B, Gürtl B, Kosack L, Májek P, Brunner JS, Vitko D, Pinter T, Genger JW, Orlova A, Pikor N, Reil D, Ozsvár-Kozma M, Kalinke U, Ludewig B, Moriggl R, Bennett KL, Menche J, Cheng PN, Schabbauer G, Trauner T, Klavins K, Bergthaler A. Type I interferon signaling disrupts the hepatic urea cycle and alters systemic metabolism to suppress T cell function. *Immunity*. 2019 Nov 26. pii: S1074-7613(19)30458-3. PMID: 31784108 (62 citation)

5: Baazim H, Schweiger M, Moschinger M, Xu H, Scherer T, Popa A, Gallage S, Ali A, Khamina K, Kosack L, Vilagos B, Smyth M, Lercher A, Friske J, Merkler D, Aderem A, Helbich TH, Heikenwälder M, Lang PA, Zechner R and Bergthaler A. CD8(+) T cells induce cachexia during chronic viral infection. *Nature Immunology*. 2019 Jun;20(6):701-710. PMID: 31110314. (57 citations)

6: Krausgruber T, Fortelny N, Fife-Gernedl V, Senekowitsch M, Schuster LC, Lercher A, Neme A, Schmidl C, Rendeiro F, Bergthaler A, Bock C. Structural cells are key regulators of organ-specific immune responses. *Nature*. 2020 Jul;583(7815):296-302. PMID: 32612232 (252 citations)

7: Lercher A, Baazim A, Bergthaler A. Systemic immunometabolism: challenges and opportunities. *Immunity*. 2020 Sep 15;53(3):496-509. <https://doi.org/10.1016/j.immuni.2020.08.012> (63 citations)

8: Schliehe C, Flynn EK, Vilagos B, Richson U, Swaminathan S, Bosnjak B, Bauer L, Kandasamy RK, Griesshammer IM, Kosack L, Schmitz F, Litvak V, Sissons J, Lercher A, Bhattacharya A, Khamina K, Trivett AL, Tessarollo L, Mesteri I, Hladik A, Merkler D, Kubicek S, Knapp S, Epstein MM, Symer DE, Aderem A, Bergthaler A. The methyltransferase Setdb2 mediates virus-induced susceptibility to bacterial superinfection. *Nature Immunology*. 2015 Jan;16(1):67-74. PMID: 25419628. (116 citations)

9: Kosack L, Wingelhofer B, Popa A, Orlova A, Agerer B, Vilagos B, Majek P, Parapatics K, Lercher A, Ringler A, Klughammer J, Smyth M, Khamina K, Baazim H, de Araujo ED, Rosa DA, Park J, Tin G, Ahmar S, Gunning PT, Bock C, Siddle HV, Woods GM, Kubicek S, Murchison EP, Bennett KL, Moriggl R*, Bergthaler A*. ERBB-STAT3 axis drives Tasmanian devil facial tumor disease. *Cancer Cell*. 2019 Jan 14;35(1):125-139.e9. PMID: 30645971 (43 citations)

10: Baazim H, Antonio-Herrera L, Bergthaler A. The interplay of immunology and cachexia in infection and cancer. *Nature Reviews Immunology*. 2021 Oct 4:1-13. doi: 10.1038/s41577-021-00624-w (50 citations)