

## Curriculum Vitae

**Antje Munder** Dr. med. vet.  
d.o.b. July 28th, 1969, Remscheid, Germany

### University Education

2003 Doctorate Veterinary Medicine, Tierärztliche Hochschule Hannover (TiHo), Germany  
1993–1998 Studies of Veterinary Medicine, TiHo Hannover, Germany

### Scientific Career

2001 – 2003 Doctoral studies in association with the DFG graduate college 705, Institute of Laboratory Animal Science, Hannover Medical School 2003; doctoral thesis 'Untersuchung der murinen, pulmonalen Infektion mit *Listeria monocytogenes* im Hinblick auf eine mögliche Eignung des Bakteriums als Vektor für die somatische Gentherapie der Cystischen Fibrose', Tierärztliche Hochschule Hannover, certificate: Dr. med. vet.; excellence grade: 'summa cum laude'  
1999 Licence to practice veterinary medicine, Tierärztekammer Niedersachsen

### Academic Appointments

Since 2023 – Senior Scientist, Research Group 'Prof. Anna-Maria Dittrich, Pediatric Pneumology, MHH  
2008 – 2023 Senior Scientist, Clinical Research Group 'Pseudomonas Genomics and Molecular Pathology of Cystic Fibrosis', MHH  
2003 – 2007 Postdoctoral fellow Clinical Research Group 'Pseudomonas Genomics and Molecular Pathology of Cystic Fibrosis', Clinic for Pediatric Pneumology, Allergology and Neonatology, Hannover Medical School, head: Prof. Dr. med. Dr. rer. nat. Burkhard Tümmler, MHH

### Academic Activities

Since 2012 Principal investigator within the DZL, BREATH Faculty, disease area cystic fibrosis and bronchiectasis  
Since 2016 Faculty member Forschungsgemeinschaft Mukoviszidose (FGM)  
Since 2015 Teaching and practical lessons in 'Laboratory Animal Sciences, Uni Bremen and Hannover Medical School  
Since 2015 Faculty member Biomedical Research in Endstage and Obstructive Lung Disease Hannover (BREATH), Hannover, Member of the German Center for Lung Research (DZL)  
Since 2015 Mentoring and supervising of PhD and medical students, master and bachelor students, Hannover Medical School, Germany  
2014 – 2015 Mentee 7. Ina-Pichlmayr-Mentoring, Hannover Medical School, Germany  
Since 2012 Reviewer for several academic journals (BMC Microbiology, Microbes and Infection, Journal of Breath Research)

### Citation Record

Total citations: 2,474; h-index:23; h-index since 2021: 15 (Google Scholar April 20<sup>th</sup>, 2026)

## Top-10 selected Publications

Moura-Alves P, Faé K, Houthuys E, Dorhoi A, Kreuchwig A, Furkert J, Barison N, Diehl A, **Munder A**, Constant P, Skrahina T, Gühlich-Bornhof U, Klemm M, Koehler AB, Bandermann S, Goosmann C, Mollenkopf HJ, Hurwitz R, Brinkmann V, Fillatreau S, Daffe M, Tümmler B, Kolbe M, Oschkinat H, Krause G, Kaufmann SH. AhR sensing of bacterial pigments regulates antibacterial defence. **Nature**. 2014 Aug 28;512(7515):387-92. doi: 10.1038/nature13684.

Klockgether J, **Munder A**, Neugebauer J, Davenport CF, Stanke F, Larbig KD, Heeb S, Schöck U, Pohl TM, Wiehlmann L, Tümmler B. Genome diversity of *Pseudomonas aeruginosa* PAO1 laboratory strains. **J Bacteriol**. 2010 Feb;192(4):1113-21. doi: 10.1128/JB.01515-09. Epub 2009 Dec 18.

Ackermann M, Kempf H, Hetzel M, Hesse C, Hashtchin AR, Brinkert K, Schott JW, Haake K, Kühnel MP, Glage S, Figueiredo C, Jonigk D, Sewald K, Schambach A, Wronski S, Moritz T, Martin U, Zweigerdt R, **Munder A**, Lachmann N. Bioreactor-based mass production of human iPSC-derived macrophages enables immunotherapies against bacterial airway infections. **Nat Commun**. 2018 Nov 30;9(1):5088. doi: 10.1038/s41467-018-07570-7.

Guan S, **Munder A**, Hedtfeld S, Braubach P, Glage S, Zhang L, Lienenklaus S, Schultze A, Hasenpusch G, Garrels W, Stanke F, Miskey C, Johler SM, Kumar Y, Tümmler B, Rudolph C, Ivics Z, Rosenecker J. Self-assembled peptide-poloxamine nanoparticles enable in vitro and in vivo genome restoration for cystic fibrosis. **Nat Nanotechnol**. 2019 Mar;14(3):287-297. doi: 10.1038/s41565-018-0358-x.

Hilker R, **Munder A**, Klockgether J, Losada PM, Chouvarine P, Cramer N, Davenport CF, Dethlefsen S, Fischer S, Peng H, Schönfelder T, Türk O, Wiehlmann L, Wölbeling F, Gulbins E, Goesmann A, Tümmler B. Interclonal gradient of virulence in the *Pseudomonas aeruginosa* pangenome from disease and environment. **Environ Microbiol**. 2015 Jan;17(1):29-46. doi: 10.1111/1462-2920.12606.

Garvis S, **Munder A**, Ball G, de Bentzmann S, Wiehlmann L, Ewbank JJ, Tümmler B, Filloux A. *Caenorhabditis elegans* semi-automated liquid screen reveals a specialized role for the chemotaxis gene *cheB2* in *Pseudomonas aeruginosa* virulence. **PLoS Pathog**. 2009 Aug;5(8):e1000540. doi: 10.1371/journal.ppat.1000540. Epub 2009 Aug 7.

Kumar A, **Munder A**, Aravind R, Eapen SJ, Tümmler B, Raaijmakers JM. Friend or foe: genetic and functional characterization of plant endophytic *Pseudomonas aeruginosa*. *Environ Microbiol*. 2013 Mar;15(3):764-79. doi: 10.1111/1462-2920.12031.

Bohn YS, Brandes G, Rakhimova E, Horatzek S, Salunkhe P, **Munder A**, van Barneveld A, Jordan D, Bredenbruch F, Häussler S, Riedel K, Eberl L, Jensen PØ, Bjarnsholt T, Moser C, Hoiby N, Tümmler B, Wiehlmann L. Multiple roles of *Pseudomonas aeruginosa* TBCF10839 PilY1 in motility, transport and infection. **Mol Microbiol**. 2009 Feb;71(3):730-47. doi: 10.1111/j.1365-2958.2008.06559.x. Epub 2008 Dec 1.

Bode J, Dutow P, Sommer K, Janik K, Glage S, Tümmler B, **Munder A**, Laudeley R, Sachse KW, Klos A. A new role of the complement system: C3 provides protection in a mouse model of lung infection with intracellular *Chlamydia psittaci*. **PLoS One**. 2012;7(11):e50327. doi: 10.1371/journal.pone.0050327. Epub 2012 Nov 26.

Hollenhorst MI, Nandigama R, Evers SB, Gamayun I, Abdel Wadood N, Salah A, Pieper M, Wyatt A, Stukalov A, Gebhardt A, Nadolni W, Burow W, Herr C, Beisswenger C, Kusumakshi S, Ectors F, Kichko TI, Hübner L, Reeh P, **Munder A**, Wienhold SM, Witzenrath M, Bals R, Flockerzi V, Gudermann T, Bischoff M, Lipp P, Zierler S, Chubanov V, Pichlmair A, König P, Boehm U, Krasteva-Christ G. Bitter taste signaling in tracheal epithelial brush cells elicits innate immune responses to bacterial infection. **J Clin Invest**. 2022 Jul 1;132(13):e150951. doi: 10.1172/JCI150951.