

## Curriculum Vitae

**Natascha Sommer** Professor, Dr. med., PhD  
d.o.b. April, 29<sup>th</sup>, 1974, in Nuremberg, Germany

### University Education

2018 Habilitation Internal Medicine, JLU  
2011 PhD, JLU  
2004 Doctorate Medicine, FAU Erlangen-Nürnberg  
1995–2003 Studies of Medicine, Friedrich Alexander University Erlangen-Nürnberg (FAU) and Justus Liebig University Giessen (JLU)

### Scientific Career

Since 2026 Speaker of Section E3 “Tobacco prevention and health care” of the German Respiratory Society (DGP)  
Since 2025 Co-Speaker of the Working Group “Post-acute infectious syndromes” of the German Centers for Health Research (DZG)  
Since 2023 Teaching supervisor of the Department of Medicine Medical Clinic II (Justus Liebig University Giessen)  
Since 2022 Professor of "Mitochondrial signalling in pulmonary vascular and airway diseases"  
Since 2021 Head of the outpatient clinic, Medical Clinic II, JLU  
2019 Board certification „Pneumology“ (LÄK Hessen)  
Since 2018 Junior Area Leader of the Excellence Cluster “Cardiopulmonary System (CPI)”: “Redox regulation: ischemia, hypoxia, and reactive oxygen species”  
2014 Board Certification „Internal Medicine" (LÄK Hessen)  
Since 2013 Member of the German Centre for Lung Research (DZL)  
Member of “Universities of Giessen and Marburg Lung Center (UGLMC)”  
2005 - 2011 International PhD program at the Justus Liebig University  
2004 - 2007 International Graduate Program “Molecular Biology and Medicine of the Lung” (MBML) as part of the “Giessen Graduate School of the Life Sciences (GGL)”  
2004–2014 Internship and Residency, Department of Medicine, JLU

### Awards and Honors

2018 Basic research award of the German Society of Pneumology

### Citation Record

Total citations: 5,171; h-index: 36; (Research Gate March 21<sup>st</sup>, 2026)

### Top-10 selected Publications

Better J, Estiri M, Wetstein M, Pervizaj-Oruqaj L, Malainou C, Ogungbemi-Alt V, Ferrero MR, Langelage M, Kuznetsova I, Vazquez-Armendariz AI, Kimmig L, Pak O, Mansouri S, Savai R, Wilhelm J, Alexopoulos I, **Sommer N**, Herold S, Matt U. Cell type-specific efferocytosis determines functional plasticity of alveolar macrophages. **Sci Immunol**. 2025; 10(107):eadl3852. doi: 10.1126/sciimmunol.adl3852.

Castro CFG, Nardiello C, Hadzic S, Kojonazarov B, Kraut S, Gierhardt M, Schäffer J, Bednorz M, Quanz K, Heger J, Korfei M, Wilhelm J, Hecker M, Bartkuhn M, Arnhold S, Guenther A, Seeger W, Schulz R, Weissmann N, **Sommer N\***, Pak O. The Role of the Redox Enzyme p66Shc in Biological Aging of the Lung. **Aging Dis**. 2024; 15(2):911-926. doi: 10.14336/AD.2023.0715. \*Corresponding Author

Roxlau ET, Pak O, Hadzic S, Garcia-Castro CF, Gredic M, Wu CY, Schäffer J, Selvakumar B, Pichl A, Spiegelberg D, Deutscher J, Bednorz M, Schäfer K, Kraut S, Kosanovic D, Zeidan EM, Kojonazarov B,

Herold S, Strielkov I, Guenther A, Wilhelm J, Khalifa MMA, Taye A, Brandes RP, Hecker M, Grimminger F, Ghofrani HA, Schermuly RT, Seeger W, **Sommer N\***, Weissmann N. Nicotine promotes e-cigarette vapour-induced lung inflammation and structural alterations. **Eur Respir J**. 2023; 61(6):2200951. doi: [10.1183/13993003.00951-2022](https://doi.org/10.1183/13993003.00951-2022). \*Corresponding Author

Gierhardt M, Pak O, Sydykov A, Kraut S, Schäffer J, Garcia C, Veith C, Zeidan EM, Brosien M, Quanz K, Esfandiary A, Saraji A, Hadzic S, Kojonazarov B, Wilhelm J, Ghofrani HA, Schermuly RT, Seeger W, Grimminger F, Herden C, Schulz R, Weissmann N, Heger J, **Sommer N**. Genetic deletion of p66shc and/or cyclophilin D results in decreased pulmonary vascular tone. **Cardiovasc Res** 2022; 118(1):305-315. doi: [10.1093/cvr/cvaa310](https://doi.org/10.1093/cvr/cvaa310).

Seimetz M, **Sommer N\***, Bednorz M, Pak O, Veith C, Hadzic S, Gredic M, Parajuli N, Kojonazarov B, Kraut S, Wilhelm J, Knoepp F, Henneke I, Pichl A, Kanbagli ZI, Scheibe S, Fysikopoulos A, Wu CY, Klepetko W, Jaksch P, Eichstaedt C, Grünig E, Hinderhofer K, Geiszt M, Müller N, Rezende F, Buchmann G, Wittig I, Hecker M, Hecker A, Padberg W, Dorfmüller P, Gattenlöhner S, Vogelmeier CF, Günther A, Karnati S, Baumgart-Vogt E, Schermuly RT, Ghofrani HA, Seeger W, Schröder K, Grimminger F, Brandes RP, Weissmann N. NADPH oxidase subunit NOXO1 is a target for emphysema treatment in COPD. **Nat Metab** 2020; 2(6):532-546. doi: [10.1038/s42255-020-0215-8](https://doi.org/10.1038/s42255-020-0215-8). \*equal contribution.

**Sommer N**, Alebrahimdehkordi N, Pak O, Knoepp F, Strielkov I, Scheibe S, Dufour E, Andjelković A, Sydykov A, Saraji A, Petrovic A, Quanz K, Hecker M, Kumar M, Wahl J, Kraut S, Seeger W, Schermuly RT, Ghofrani HA, Ramser K, Braun T, Jacobs HT, Weissmann N, Szibor M. Bypassing mitochondrial complex III using alternative oxidase inhibits acute pulmonary oxygen sensing. **Sci Adv** 2020; 6(16):eaba0694. doi: [10.1126/sciadv.aba0694](https://doi.org/10.1126/sciadv.aba0694).

Pichl A, **Sommer N\***, Bednorz M, Seimetz M, Hadzic S, Kuhnert S, Kraut S, Roxlau ET, Kojonazarov B, Wilhelm J, Gredic M, Gall H, Tello K, Richter MJ, Pak O, Petrovic A, Hecker M, Schermuly RT, Grimminger F, Seeger W, Ghofrani HA, Weissmann N. Riociguat for treatment of pulmonary hypertension in COPD: a translational study. **Eur Respir J** 2019; 53(6):1802445. doi: [10.1183/13993003.02445-2018](https://doi.org/10.1183/13993003.02445-2018). \*equal contribution.

Pak O, Scheibe S, Esfandiary A, Gierhardt M, Sydykov A, Logan A, Fysikopoulos A, Veit F, Hecker M, Kroschel F, Quanz K, Erb A, Schäfer K, Fassbinder M, Alebrahimdehkordi N, Ghofrani HA, Schermuly RT, Brandes RP, Seeger W, Murphy MP, Weissmann N, **Sommer N**. Impact of the mitochondria-targeted antioxidant MitoQ on hypoxia-induced pulmonary hypertension. **Eur Respir J** 2018; 1:1701024. doi: [10.1183/13993003.01024-2017](https://doi.org/10.1183/13993003.01024-2017).

**Sommer N**, Hüttemann M, Pak O, Scheibe S, Knoepp F, Sinkler C, Malczyk M, Gierhardt M, Esfandiary A, Kraut S, Jonas F, Veith C, Aras S, Sydykov A, Alebrahimdehkordi N, Giehl K, Hecker M, Brandes RP, Seeger W, Grimminger F, Ghofrani HA, Schermuly RT, Grossman LI, Weissmann N. Mitochondrial Complex IV Subunit 4 Isoform 2 Is Essential for Acute Pulmonary Oxygen Sensing. **Circ Res** 2017; 121(4):424-438. doi: [10.1161/CIRCRESAHA.116.310482](https://doi.org/10.1161/CIRCRESAHA.116.310482).

**Sommer N**, Pak O, Schörner S, Derfuss T, Krug A, Gnaiger E, Ghofrani HA, Schermuly RT, Huckstorf C, Seeger W, Grimminger F, Weissmann N. Mitochondrial cytochrome redox states and respiration in acute pulmonary oxygen sensing. **Eur Respir J** 2010; 36(5):1056-66. doi: [10.1183/09031936.00013809](https://doi.org/10.1183/09031936.00013809).