

Curriculum Vitae

Lars Knudsen Professor, Dr. med., MME
d.o.b. April 26th, 1978, in Husum, Germany

University Education

2011-2013 Master's degree in medical education (MME), University of Heidelberg, Germany
2008 Doctorate Medicine, University of Göttingen, Germany
1998-2005 Studies of Medicine, University of Göttingen, Germany

Scientific Career

Since 2019 Full Professorship in Anatomy at Hannover Medical School, Germany
2016 – 2019 Junior Professorship in Anatomy at Hannover Medical School, Germany
2014 – 2015 Clinics for Internal Medicine, General Hospital Großburwedel, Germany
2011 – 2014 Junior Professorship in Anatomy at Hannover Medical School, Germany
2009 – 2011 Institute of Anatomy and Clinics for Pulmonology, Hannover Medical School, Germany
2007 – 2009 Clinics for Pulmonology, University Hospital Bern, Switzerland
2005 – 2007 Clinics for Internal Medicine, General Hospital, Gütersloh, Germany

Awards and Honors

2026 Teaching award at Hannover Medical School
2025 Teaching award at Hannover Medical School
2024 Teaching award at Hannover Medical School
2023 Teaching award at Hannover Medical School
2022 Teaching award at Hannover Medical School
2021 Award for Innovative Medical Education at Hannover Medical School
2021 Teaching award at Hannover Medical School
2020 Teaching award at Hannover Medical School
2017 Teaching award at Hannover Medical School
2013 Young Teacher's Award at Hannover Medical School
2009 Research Award, Pneumo-Update, University of Innsbruck, Austria
2009 Award for the doctoral thesis at the University of Göttingen, Germany

Citation Record

Total citations: 5,641; h-index: 36; h-index since 2021: 27 (Google Scholar March 12th, 2026)

Top-10 selected Publications

Knudsen L, Lopez-Rodriguez E, Berndt L, Steffen L, Ruppert C, Bates JHT, Ochs M, and Smith BJ. Alveolar micromechanics in bleomycin-induced lung injury. *Am J Respir Cell Mol Biol.* 2018; 59(6):757-769. (DOI: 10.1165/rcmb.2018-0044OC)

Beike L, Wrede C, Hegermann J, Lopez-Rodriguez E, Kloth C, Gaudie J, Kolb M, Maus UA, Ochs M, and Knudsen L. Surfactant dysfunction and alveolar collapse are linked with fibrotic septal wall remodeling in the TGF- β 1-induced mouse model of pulmonary fibrosis. *Lab Invest.* 2019; 99(6):830-852. (DOI:10.1038/s41374-019-0189-x)

Lopez-Rodriguez E, Boden C, Echaide M, Perez-Gil J, Kolb M, Gauldie J, Maus UA, Ochs M, and Knudsen L. Surfactant dysfunction during overexpression of TGF- β 1 precedes profibrotic lung remodeling in vivo. *Am J Physiol Lung Cell Mol Physiol*. 2016; 310(11):L1260-71. (DOI: 10.1152/ajplung.00065.2016)

Lutz D, Gazdhar A, Lopez-Rodriguez E, Ruppert C, Mahavadi P, Günther A, Klepetko W, Bates JH, Smith B, Geiser T, Ochs M, and Knudsen L. Alveolar derecruitment and collapse induration as crucial mechanisms in lung injury and fibrosis. *Am J Respir Cell Mol Biol* 2015; 52(2):232-43. (DOI: 10.1165/rcmb.2014-0078OC)

Steffen L, Ruppert C, Hoymann HG, Funke M, Ebener S, Kloth C, Mühlfeld C, Ochs M, Knudsen L*, and Lopez-Rodriguez E*. Surfactant replacement therapy reduces acute lung injury and collapse induration related lung remodeling in the bleomycin model. *Am J Physiol Lung Cell Mol Physiol* 2017; 313(2):L313-L327. (*contributed equally and share last authorship) (DOI: 10.1152/ajplung.00033.2017)

Schipke J, Panpeng S, Wrede C, Hegermann J, Ruwisch J, Werlein C, Jonigk DD, Shin HO, Schupp J, Mühlfeld C, and Knudsen L. On the ultrastructure of aberrant basaloid cells in Idiopathic Pulmonary Fibrosis. *Am J Respir Cell Mol Biol*. 2024; 71(6):746-750. doi: 10.1165/rcmb.2024-0218LE

Zimmermann R, Roeder F, Ruppert C, Smith BJ and Knudsen L. Low-volume ventilation of preinjured lungs degrades lung function via stress concentration and progressive alveolar collapse. *Am J Physiol Lung Cell Mol Physiol*. 2024; 327(1):L19-L39. doi: 10.1152/ajplung.00323.2023

Löwe M, Roeder F, Wedekind D, Dittrich-Breiholz O, Ruwisch J, Hansen J, Ruppert C, Wrede C, Hegermann J, Smith BJ, and Knudsen L. Deep inflations maintain surfactant function and alveolar fluid balance in lungs with reduced surfactant protein B levels during mechanical ventilation. *J Appl Physiol*. 2025; 139(6):1549-1568. doi: 10.1152/jappphysiol.00768.2025

Buchholz HM, Roeder F, Wedekind D, Dittrich-Breiholz O, Ruwisch J, Hansen J, Ruppert C, Smith BJ, and Knudsen L. Reduced surfactant protein B levels impede unfolding of the pulmonary blood-gas barrier during inspiration in mice. *J Appl Physiol*. 2025; 139(1):127-144. doi: 10.1152/jappphysiol.00234.2025.

Schröder LJ, Rückoldt J, Schubert S, Knudsen L, Janciauskiene SM, Werlein C, Knoll M, Engelhardt R, Petzold-Mügge C, Schupp JC, Hoepfer MM, Gottlieb J, Ius F, Zardo P, Lindenberg M, Riehle C, Neubert L, and Kamp JC. Optimized culture of primary human alveolar type II cell-derived 3D organoids from fibrotic lung tissue with phenotypic and metabolic profiling. *Respir Res*. 2026; 27(1):164. doi: 10.1186/s12931-026-03610-9.