

**Mgr. Andrea Bábelová, Ph.D** – is a Scientific Researcher at the Department of Laboratory Diagnostic Methods in Healthcare and a senior research scientist at the Institute of Experimental Pharmacology and Toxicology, Centre of Experimental Medicine of the Slovak Academy of Sciences. She received her PhD from the University of Münster and was awarded the prestigious Excellence Cluster Cardio-Pulmonary System (ECCPS) fellowship, during which she conducted research at the Institute of General Pharmacology and Toxicology at Goethe University Frankfurt, focusing on the role of small proteoglycans in inflammatory responses. Her subsequent research at the Institute for Cardiovascular Physiology at Goethe University further expanded her expertise in extracellular matrix regulation of the kidney and vascular system, with a particular emphasis on inflammation and fibrosis as key drivers of chronic kidney diseases. Following the award of a SASPRO grant, co-funded by the European Union (FP7 and Marie Skłodowska-Curie Actions) and the Slovak Academy of Sciences, Dr. Bábelová entered the field of nanobiology. Her research at Cancer Research Institute, Biomedical Research Center of the SAS, focused on nanomedicine, nanotoxicology, and the therapeutic and diagnostic potential of nanomaterials, including their biosafety aspects. Currently, her research focuses on innovative materials and their applications in the diagnosis and treatment of chronic kidney diseases. Dr. Bábelová also supervises Master's and PhD students and actively contributes to the scientific community as an Associate Editor of *AJP–Cell Physiology* and as an ad hoc reviewer for several international journals.

**Born:** 1976

**Ph.D.:** 2007

#### **Publications:**

1. SCHAEFER, Liliana – **BABELOVA, Andrea** – KISS, Eva – HAUSSEER, Heinz-Juergen – BALIOVA, Martina – KRZYZANKOVA, Miroslava – MARSCHE, Gunther – YOUNG, Marian F – MIHALIK, Daniel – GOETTE, Martin – MALLE, Ernst – SCHAEFER, Roland M – GROENE, Hermann-Josef. The matrix component biglycan is proinflammatory and signals through Toll-like receptors 4 and 2 in macrophages. In *Journal of Clinical Investigation*, 2005, vol. 115, no. 8, pp. 2223-2233. (2024: 13.6 – IF, Q1 – JCR, 4.721 – SJR, Q1 – SJR). ISSN 0021-9738. Dostupné na: <https://doi.org/10.1172/JCI23755>
2. **BABELOVA, Andrea** – MORETH, Kristin – TSALASTRA-GREUL, Wasiliki – ZENG-BROUWERS, Jinyang – EICKELBERG, Oliver – YOUNG, Marian F – BRUCKNER, Peter – PFEILSCHIFTER, Josef – SCHAEFER, Roland M – GROENE, Hermann-Josef – SCHAEFER, Liliana. Biglycan, a danger signal that activates the NLRP3 inflammasome via toll-like and P2X receptors. In *Journal of Biological Chemistry*, 2009, vol. 284, no. 36, pp. 24035-24048. (2024: 3.9 – IF, Q2 – JCR, 1.705 – SJR, Q1 – SJR). eISSN 1083-351X. Dostupné na: <https://doi.org/10.1074/jbc.M109.014266>
3. MORETH, Kristin – BRODBECK, Rebekka – **BABELOVA, Andrea** – GRETZ, Norbert – SPIEKER, Tilmann – ZENG-BROUWERS, Jinyang – PFEILSCHIFTER, Josef – YOUNG, Marian F – SCHAEFER, Roland M – SCHAEFER, Liliana. The proteoglycan biglycan regulates expression of the B cell chemoattractant CXCL13 and

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4. **BABELOVA, Andrea** – AVANIADI, Despina – JUNG, Oliver – FORK, Christian – BECKMANN, Janet – KOSOWSKI, Judith – WEISSMANN, Norbert – ANILKUMAR, Narayana – SHAH, Ajay M – SCHAEFER, Liliana, SCHROEDER, Katrin – BRANDES, Ralf P. Role of Nox4 in murine models of kidney disease. In Free Radical Biology and Medicine, 2012, vol. 53, no. 4, pp. 842-853. (2024: 8.2 – IF, Q1 – JCR, 2.065 – SJR, Q1 – SJR). ISSN 0891-5849. Dostupné na: <https://doi.org/10.1016/j.freeradbiomed.2012.06.027>
5. GOETTSCHE, Claudia\* – **BABELOVA, Andrea\*** – TRUMMER, Olivia – ERBEN, Reinhold G – RAUNER, Martina – RAMMELT, Stefan – WEISSMANN, Norbert – WEINBERGER, Valeska – BENKHOFF, Sebastian – KAMPSCHULTE, Marian – OBERMAYER-PIETSCH, Barbara – HOFBAUER, Lorenz C – BRANDES, Ralf P – SCHROEDER, Katrin. NADPH oxidase 4 limits bone mass by promoting osteoclastogenesis. In Journal of Clinical Investigation, 2013, vol. 123, no. 11, pp. 4731-4738. (2024: 13.6 – IF, Q1 – JCR, 4.721 – SJR, Q1 – SJR). ISSN 0021-9738. Dostupné na: <https://doi.org/10.1172/JCI67603>