Róża Kucharczyk – Poland

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Graduated in molecular biology from the University of Warsaw. She earned her PhD in biochemistry in 2001 and did a postdoctoral fellowship in the laboratory of Prof. Jean-Paul di Rago at the Institute of Biochemistry and Cellular Genetics, CNRS, in Bordeaux, France. Since 2014 works as a professor at IBB PAS. Upon returning to Poland, she continued the research on the mechanisms of neurodegenerative diseases caused by mutations in the mitochondrial genome. For her research, she uses baker's yeast, as it is one of the two organisms currently available where targeted modification of the mitochondrial genome is possible. In this area, she is a unique expert on a global scale. In her research, along with her colleagues, she described the pathogenesis mechanism for 24 mutations in the MT-ATP6 gene, which encodes subunit a of ATP synthase - the enzyme that produces ATP.

The second area of her research aims to understand how ATP synthase is regulated through post-translational modifications, particularly ampylation by the only identified ampylase in baker's yeast so far - the Fmp40 protein. She is a co-author of 53 articles, most of which describe the molecular basis of pathogenesis caused by ATP synthase dysfunctions and the potential use of baker's yeast as a model for the search for potential drugs. She was awarded the Minister of Education and Science Award in 2023 for research on the mechanisms of mitochondrial diseases and the creation of a system for selecting cellular proteins that are mainly located outside the mitochondria, but also have a pool located in the mitochondrial matrix.