



Senior Researcher

Katarina SIPOSOVA

Biophysicist and protein biochemist focused on amyloid aggregation, and has become well oriented in nanochemistry

Research activities are focused on study of the biochemical and biophysical properties of proteins, associated with neurodegenerative diseases:

- identification of the conditions leading to formation of protein amyloid aggregates and studying of morphological features of amyloid structures
- investigation of the interference of protein amyloid aggregation with nanoparticles and model membranes, as well as study of structural and functional consequences of those interactions; monitoring the potential impact of these interactions on possible structural changes after applying radiation, photodynamic therapy
- designing and development of a novel “drug delivery system”

Personal Info

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Scopus ID: 36678328000

Experience

- 2017 - present **Senior Researcher**
Department of Biophysics, Institute of Experimental Physics, Slovak Academy of Sciences (IEP SAS), Kosice, Slovakia
- 2013 - 2017 **Researcher**
Department of Biophysics, Institute of Experimental Physics, Slovak Academy of Sciences (IEP SAS), Kosice, Slovakia

The position was supported in part by “*Supportive Fund of S. Schwarz for Creation of Postdoctoral Positions at Slovak Academy of Sciences*” from 01/2014 to 12/2017
- 2010 - 2013 **Research assistant**
Department of Biophysics IEP SAS, Kosice, Slovakia
- 2003 - 2004 **Laboratory technician**
Dep. of Clinical Biochemistry, Klaudians Hospital in Mlada Boleslav, Czech Republic
- 2002 - 2003 **Laboratory technician**
Dep. of Clinical Biochemistry, Children’s Hospital, Kosice, Slovakia

Since February 2017 till august 2019 she was a “*Scientific secretary*” of Institute of Experimental Physics, Slovak Academy of Sciences in Kosice

Education

- 2017 - 2015 **Engineer**
in Environmental Engineering (Wastes Treatment and Recycling), Faculty of Metallurgy, Technical University in Kosice, Slovakia
- 2013 - 2009 **Doctor of Philosophy**
in Biochemistry, Department of Biochemistry, Faculty of Sciences, University of Pavol Jozef Safarik (UPJS) in Kosice, Slovakia
- 2010 - 2011 **RNDr. degree**
Doctoral degrees gained after graduation and rigorous examination; Dep. of Biochemistry, Faculty of Sciences, UPJS, Kosice, Slovakia
- 2004 - 2009 **Master degree**
in Chemistry-Biochemistry, Dep. of Biochemistry, Faculty of Science, UPJS, Kosice, Slovakia

Current Running Projects

International

Program: SAS-MOST Slovak-Taiwan bilateral project

Anti-amyloid activity of zeolite-based composites and analysis with real-time 3D super-resolution imaging; Duration: 1.1.2022 – 31.12.2024

Project Leader

Program: NATO

Novel composites based on cerium oxide nanoparticles and carbon enterosorbents for acute radiation sickness therapy; Duration: 15.7.2020 - 14.7.2023

Member of Research team

Program: SK-DAAD bilateral project

Self-assembly and functionalization of nanofibrillar DNA-spider silk hybrid materials; Duration: 1.1.2022 – 31.12.2023

Project Leader

National

Program: Slovak Research and Development Agency (APVV)

The development of translationally relevant regenerative and reparative strategies after spinal cord trauma; Duration: 1.7.2020 - 31.6.2024

Member of Research team

Program: VEGA

Study and modification of properties of spider protein overexpressed in *Escherichia coli*; Duration: 1.1.2022 – 31.12.2025

Project Leader

Program: VEGA

New insight into the role of hydrophobic interactions in formation and stability of proteins aggregates. link to oxidative stress; Duration: 1.1.2022 – 31.12.2023

Member of Research team

Honors

Danubius Young Scientist Award, Zagreb, Croatia, 2017

Slovak Academy of Sciences Award for young researcher, 2017

Award of Slovak Biophysical Society for Young Scientist, Martin, 2014

Young Scientist Award of Institute of Experimental Physics, Kosice, Slovakia, 2011

Supportive Fund of S. Schwarz for Creation of Postdoctoral Positions at Slovak Academy of Sciences (01/2014-12/2017)

Metrics

Total number of publications: ~40

Total number of citations: > 350

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