

# Markéta Martínková

Born May 17, 1976 in Opava, Czech Republic (maiden name Mikšánová)

## Education

1999	Charles University, Prague, CZ	M.Sc. (Mgr.)	Biochemistry
2001	Charles University, Prague, CZ	RNDr.	Biochemistry
2003	Charles University, Prague, CZ	Ph.D.	Biochemistry

## Positions and Employment

1999-2003	Research Scientist, Department of Biochemistry, Faculty of Science, Charles University, Prague, CZ
2004-2006	Postdoctoral fellow at Professor Toru Shimizu laboratory, Tohoku University, IMRAM, Sendai, Japan
2006-2013	Assistant Professor, Department of Biochemistry, Faculty of Science, Charles University, Prague, CZ
2013 –	Vice-Dean of Education, Student Affairs and Doctoral Study, Faculty of Science, Charles University, Prague, CZ
2013 –	Associate Professor (docent) of biochemistry, Faculty of Science, Charles University, Prague, CZ

## Research Stays Abroad and Other Experience

2004-2006	Tohoku University, IMRAM, Sendai, Japan (27 months)
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## Honors and Prizes

2002	„PRIX DE CHIMIE“ Chemistry price awarded by the French embassy in Czech Republic and the Rhodia company
2004	Japan Society for the Promotion of Science Postdoctoral Fellowship

## Publications and citation record

ResearcherID in “Web of Science“: **E-3748-2012**; ORCID ID: 0000-0002-0865-8785

## Areas of Scientific Interest

- Activation of carcinogens mediated by **heme enzymes** (cytochromes P450, peroxidases) and reductases - structure-function relationships of activation enzymes
- Metabolism of various chemical compounds (*o*-anisidine, *o*-nitroanisole, Remazol Brilliant Blue R, phenol) by animal, plant and microbial organisms including human
- Initiation of carcinogenesis caused by chemical carcinogens on molecular level (mainly mechanism of DNA adduct formation)
- Regulation of protein expression (mainly regulation of translation - family of the eIF-2a kinases, in particular heme regulated eIF-2a kinase - HRI) - structures and roles of **thiolate-heme proteins**
- **Heme-containing sensor proteins** – structure-function relationships and mechanism of signal transduction

## **Educational Activities and Lectures**

- From 1999 to 2004 participation in 3 practical courses
- From 2009 to 2011 participation in a lecture „Biochemistry I for students of KATA MC250P40A“
- From 2009 a lecture „Clinical and analytical biochemistry MC250P19“ together with its practical course „ Practical course in clinical biochemistry MC250C44“
- From 2017 a member of the Scientific Council of Faculty of Science
- From 2019 a member of the Subject area board of Biochemistry
- From 2020 a guarantor of Bachelor and Master Biochemistry study programs
- 2 + 2 Ph.D. students, 5 + 0 M.Sc. students, 16 + 4 Bc. students

## **International Collaboration**

The scientific team has cooperation with the Laboratory of Pediatric Infection Diseases, Nijmegen, Netherlands (Dr. Marien de Jonge), the Cyprus University of Technology (Prof. Constantinos Varotsis and Dr. Eftychia Pinakoulaki), the Laboratoire d'Optique et Bioscience, France (Dr. Marten Vos), the Université Montpellier (Dr. Reinhard Lange) and the Michigan State University, East Lansing, USA (Assoc. Prof. Robert Abramovitch).

## **Languages**

English - fluently; German and Russian – passive; basic Japanese

## **Selected projects funding**

JPIAMR 2019-087; 2020-2022; Prevention of antibiotic resistance by TARGETed Treatment of pneumonia in children (TARGET) (international consortium, principal investigator)

GAČR 15-19883S; 2015-2017; Molecular mechanisms of intraprotein/interdomain signal transduction in model heme sensor proteins

IPSEN Pharma, os.; 2014-2015; External sponsored study “Comparison of the adsorption capacity and trapping effectiveness of diosmectite and charcoal on the compounds causing the 10 most frequent intoxications in acute medicine”

## **Contact:**

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