

CURRICULUM VITAE

Name: Dipl.-Ing. Vladimir Mlynarik, PhD, DSc

Business address : High Field MR Center, Medical University of Vienna, 1090 Vienna, Austria

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Date of birth: April 30, 1951

Education and academic degrees:

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| Oct 1,1969-June 29,1974 | Faculty of Chemical Technology, Slovak Technical University, Bratislava, Slovakia; specialization: physical chemistry (Ing.) |
| Sept 1,1974-Aug 31,1977 | Doctoral study, Slovak Technical University, Bratislava (PhD in physical chemistry) |
| Oct 7, 2002 | Doctor of Science degree, Slovak Technical University, Bratislava (DSc in phys. chemistry) |

Employment:

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| Sept 1,1974-Aug 31,1977 | NMR Laboratory, Slovak Technical University, Bratislava, research assistant |
| Sept 1,1977-Aug 31,1978 | military service |
| Sept 1,1977-Jan 15,1992 | Czechoslovak Institute of Metrology, Department of Physical Chemistry, Bratislava, research fellow |
| Jan 16,1992-Dec 31,1994 | Magnetic Resonance, Radiodiagnostic Clinic, Derer Hospital, Bratislava, research fellow |
| Jan 1,1995-June 30,1996 | POLY-bios Research Center, Trieste, Italy, postdoctoral stay |
| July 1,1996-Oct 31,2004 | Magnetic Resonance, Radiodiagnostic Clinic, Derer Hospital, Bratislava, research fellow (a part-time contract from April 4,1997) |
| Apr 15,1997-May 31,2005 | Ludwig-Boltzmann Institute (1996-1998), the Radiodiagnostic Clinic and the Institute of Medical Physics, University of Vienna (from 1.1.2004 Medical University of Vienna), research fellow |
| June 1,2005 - May 31,2013 | Centre for Biomedical Imaging, EPFL, Lausanne, senior research associate |
| Aug. 1,2013 - April 30,2016 | High Field MR Center, Dept. of Biomedical Imaging and Image-Guided Therapy, Medical University of Vienna, Austria |
| May 1, 2016 - | Institute for Clinical Molecular MR Imaging in the Musculoskeletal Field, Karl Landsteiner Society, Vienna, Austria |

Fields of research:

- development of methods for MR imaging, MR microscopy, localized MR spectroscopy and high-resolution MR spectroscopic imaging
- studies of the neurochemical profile in transgenic mice and in rats under normal and pathologic conditions
- studies of dynamic processes and relaxation in isotropic media and in biological tissues *in vitro* and *in vivo*
- multiple-quantum spectroscopy
- quantitative analysis of organic reference materials

Research projects supervised:

- EU BIOMED 1 Concerted Action "Cancer and brain disease characterization and therapy assessment by quantitative magnetic resonance spectroscopy." Biomedical and Health Research Programme, Proj. No. PL 920432, 1993–1996. Local supervisor (Derer Hospital).
- Transforming magnetic resonance spectroscopy into a clinical tool (TRANSACT), FP7-PEOPLE-2012-ITN, Proj. No.316679, 2012–15. Local supervisor (EPFL).

Educational activities:

Continuous medical education:

1998, 1999 **Basic Principles of MRI and MRS** - lectures, Inst. for Continuous Medical Education, Bratislava

Education of pre-graduate students:

2001, 2002 **Biomedical applications of NMR** – a teaching course for students of Biomedical Physics, Comenius University, Bratislava

2002- **Basic Principles of Magnetic Resonance Spectroscopy and Imaging** – a teaching course for students of biomedical physics (Master programme), Comenius University, Bratislava

Education of doctoral students:

2007- **Doctoral course in Medical Imaging** – lectures in a teaching course for graduate students, EPFL. Course supervisors: R. Gruetter, M.-M. Mishkovsky

Supervising 9 undergraduated students and 6 doctoral students.

Membership:

- International Society for Magnetic Resonance in Medicine (from 2006)
- European Society for Magnetic Resonance in Medicine and Biology (from 2002)

Moderator of a session:

- *The 18th International Bone densitometry workshop*, June 15-19, 2008, Pugnochiuso, Italy. Session 4: Bone structure and function –I.
- *ISMRM 19th Annual Meeting & Exhibition*, May 7-13, 2011, Montreal, Canada. Session name: Spectroscopy localization.
- *International Workshop "Magnetic Resonance Studies"*, June 25-27, 2012, Oberschwarzenberg, Austria. Scientific session 1.
- *11th International Conference MEASUREMENT 2017*, May 29-31, 2017, Smolenice, Slovakia. Session name: Measurement in Biomedicine I.
- *ESMRMB 39th Annual Scientific Meeting*, October 4–7, 2023, Basel, Switzerland. Session name: Improving Sensitivity of Molecular MR.

Invited lectures:

- *Joint Annual Meeting ISMRM-ESMRMB*, May 1-7, 2010, Stockholm. Sunrise Educational Course: Potentials & Challenges of High-Field MRS: Lecture title: Ultra High-Field MRS of Rodents.
- *Magnetic Moments in Central Europe 2011*, March 16-20, 2011, Tatranská Lomnica, Slovakia. Lecture title: Proton Spectroscopic Imaging of Rodent Brain and Its Practical Applications.
- *International Workshop "Magnetic Resonance Studies"*, June 25-27, 2012, Oberschwarzenberg, Austria. Lecture title: High-Field MRS of Rodents.
- *ESMRMB 2012 Congress*, October 4–6, Lisbon. Teaching Session: New sources of contrast in musculoskeletal MRI. Lecture title: Relaxation Mechanisms in Articular Cartilage.
- *ESMRMB 2013 Congress*, October 3–4, Toulouse. Teaching Session: MRI/MRS of animal models of neurodegenerative diseases Lecture title: MRS of transgenic AD and HD models.
- *Seminar of the Medical Section of Slovak Chemical Society*, January 24, 2014, Bratislava, Slovakia. Lecture title: Use of ¹H MR spectroscopy of rodent brain in studying mechanisms of degenerative and metabolic diseases.
- *Magnetic Moments in Central Europe 2015*, February 25 - March 1, 2015, Krynica-Zdrój, Poland. Lecture title: Chemical Exchange Saturation Transfer (CEST) MR Imaging.
- *PENN-CEST 2015*, October 25-28, 2015, Philadelphia, USA. Lecture title: Technical Improvements in gagCEST of Knee Cartilage at 7 Tesla.
- *11th International Conference MEASUREMENT 2017*, May 29-31, Smolenice, Slovakia. Lecture title: Magnetic Resonance Fingerprinting – Principles and First Clinical Results.

Scientific evaluation and activities:

Publications in peer-reviewed international journals: 143

Top cited article in NMR in Biomedicine: 2020-21, 2021-22
Proceedings papers (>2pages): 5
Book chapters: 7
Short abstracts/proceedings papers (≤ 2 pages): 230
Invited scientific lectures: 9
Scopus, January 2024: h-index: 42, citations total 5500

Member of Editorial Board: Journal of Alzheimer's Disease (associate editor, 2013-2014)
Oriental Journal of Chemistry (guest editor of Special Issue 1, 2019)

Reviewing papers for scientific journals: About 140 papers submitted to Magn Reson Med, J Magn Reson Imaging, NMR Biomed, J Magn Reson, Magn Reson Imaging, Invest Radiol, Phys Med Biol, Osteoarthr Cart, Spectrosc Lett, Eur J Radiol, J Developmental Neurosci, J Neurosci Meth, J Nutr Metab, New J Phys, Meas Sci Technol, J Neurochem, J Alz Dis, Neuropsychiatr Dis Treat, Physiol Res, Biomed Phys Eng Express, J Orthop Res, Magn Reson Mat Phys.

A distinguished reviewer of MRM and JMRI in 2009, 2010, 2011, 2015-18 and of JMRI in 2012 and 2013.

Vienna, 30.01.2024