

# CURRICULUM VITAE

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

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## **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  |
| August 1, 2013 -          | High Field MR Center, Dept. of Biomedical Imaging and Image-Guided Therapy, Medical University of 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:

2007-2012 **Doctoral course in Medical Imaging** – lectures in a teaching course for graduate students, EPFL. Course supervisor: R. Gruetter

Supervising 9 undergraduated students (Juraj Bella 1984, Alessandro Piras 1995-6, Michal Bittšanský 2003, Paolo Guerreiro 2008, Nicolas Costers 2008-09, Mélanie Craveiro 2008-09, Malte Alf 2008-10, Sharon Janssens 2009-10, Lili Sun-Reimer 2010) und 7 doctoral students (A. Degrassi 1995-96, Stephan Gruber 1999-2001, RNDr. S. Kašparová 1997-2001, Peter Bystrický 2000-02, Lijing Xin 2006-9, Paola Porcari 2012, Markus Schreiner 2015-)

**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 18<sup>th</sup> International Bone densitometry workshop*, June 15-19, 2008, Pugnoli, 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.

**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 <sup>1</sup>H 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.

**Scientific evaluation and activities:**

Publications in peer-reviewed international journals: 114  
Proceedings papers (>2pages): 5  
Book sections: 6  
Short abstracts/proceedings papers (≤ 2 pages): 230  
Invited scientific lectures: 7  
Scopus, August 2015: h-index: 31, citations total 2790, average citation per item: 22, impact factor total: 320

**Member of Editorial Board:** Journal of Alzheimer's Disease (associate editor, 2013-2014),  
International Journal of Brain Science (editor, 2013-)

**Reviewing papers for scientific journals:** Until August 2015 about 115 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.

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