

PROGRAM

Wednesday, 16th March 2010

Arrival

12:00 – 18:00 Registration

Pre – conference Lecture

18:00 – 19:00 **Robert Konrat:** NMR - A Scientific Cornucopia or Much Ado about Nothing?

19:30 – 23:00 Welcome Party

Thursday, 17th March 2010

9:00

Opening

Tibor Liptaj

Marta Cimbáková, Ministry of Education of the Slovak Republic

Jaromír Pastorek, President of Slovak Academy of Sciences

Ján Šajbidor, dean of the Faculty of Chemical and Food Technology

Basic Aspects

Chair: **Jan Schraml**

9:20 – 10:20 **Lars Hanson:** Is Quantum Mechanics really needed to understand basic Magnetic Resonance?

10:20 – 11:20 **Stan Sykora:** Do we Really Understand Magnetic Resonance?

11:20 – 11:50 Coffee break

11:50 – 12:20 **Norbert Müller:** NMR Noise

12:20 – 13:20 **Csaba Szantay Jr.:** NMR and the Uncertainty Principle

13:20 – 14:30 Lunch

Novel Methods

Chair: **Wiktor Kozminski**

14:30 – 15:30 **Markus Zweckstetter:** Intrinsically Disordered Proteins

15:30 – 16:00 **Ěriks Kupče:** NMR with Multiple Receivers

16:00 – 16:20 **Jan Stanek:** An Algorithm for Artifact Suppression in Sparsely Sampled Multidimensional NMR Spectra

16:20 – 16:50 Coffee break

16:50 – 17:20 **Vladislav Orekhov:** Multidimensional NMR Spectroscopy with Non-uniform Sampling

17:20 – 17:40 **Vratislava Blechta, Jan Schraml:** Detection of NMR Spectra Edited by Signs of Coupling Constants

17:40 – 18:00 **Demetrios Argyropoulos –**

18:00 – 18:20 **Vadim Zorin -**

18:30 – 20:00 Dinner

Evening Lecture

20:00- 21:00 **Stefan Jurga:** NMR Relaxation in Soft Matter

Poster Session

21:00 - Poster session, drinks
Meeting of the Program Committee

Friday, 18th March 2010

Small Molecules, Small Quantities

Chair: **Csaba Szantay**

9:00 – 10:00 **Bernd Schneider:** Proton NMR Spectroscopy of Natural Products Revisited

10:00 – 10:30 **Jean -Luc Wolfender:** Challenges and Opportunities for the de Novo Structural Analysis of Natural Products at Microgram Scale

10:30 – 10:50 **Gábor Tárkányi, Péter Király:** The Self-Association Promoted Conformational Transition

10:50 – 11:20 Coffee break

11:20 – 11:50 **Predrag Novak :** Small Molecule NMR: From Mixtures to Interactions

11:50 – 12:10 **Jiří Vlach, Hana Dvořáková, Markéta Šimánová, Pavel Lhoták:** Residual Dipolar Couplings As A Tool For The Determination Of Pinched Cone Geometry Of Calix[4]Arenes

12:10 – 12:30 **Jan Schraml, Milan Kurfürst and Vratislav Blechta:** The Relative Signs Of Coupling Constants from Inadequate Experiment on Equivalent Nuclei - An Educational Example

12:30 – 12:50 **Zsuzsanna Sánta:** Chirality and NMR – a Gnawed Bone?

12:50 – 13:10 **Maria Misiak, Wiktor Kozminski:** Three-Dimensional NMR Spectroscopy of Organic Molecules

13:10 – 14:30 Lunch

Relaxation

Chair: **Ján Imrich**

- 14:30 – 15:30 **Josef Kowalewski**: Introduction to NMR Relaxation
- 15:30 – 16:00 **Danuta Kruk**: Relaxation in paramagnetic systems
- 16:00 – 16:30 **Katalin E. Kövér, Gyula Batta**: Heteronuclear NMR Relaxation as a Sensitive Sensor of Motional Properties of Proteins

16:30 – 16:50 **Pavel Srb, Jiří Vlach, Jan Prchal, Marián Grocký, Jan Lang, and Richard Hrabal**: Thorough Analysis Of Protein Backbone Flexibility on ns Timescale by NMR Relaxation and Molecular Dynamics Simulations

16:50 – 17:20 Coffee break

Diffusion

Chair: **Janez Plavec**

17:20 – 18:20 **Davy Sinnaeve, José C. Martins**: The Diffusion Dimension in High-Resolution NMR Spectroscopy: From Principles to Applications

18:20 – 18:50 **Mathias Nilson**: Advances in DOSY Techniques and Applications

18:50 – 19:20 **Myriam Malet-Martino**: What Can We Do With Dose NMR In The Pharmaceutical Field?

19:20 – 19:40 **Mária Šoltésová, Ladislav Benda, Jiří Czernek, Jan Lang**: Characterization of Molecular Clusters of Ethanol by Diffusion Measurements and Calculations

20:00 – **Dinner at Koliba Restaurant**

Saturday, 19th March 2010

Bio NMR

Chair: **Georg Kontaxis**

9:00 – 10:00 **Pau Bernadó, Jascha Blobel, Miquel Pons**: Petty interactions shape your life. Dealing with weak protein-protein interactions by NMR and SAXS

10:00 – 10:30 **Nicolas Codevyle**: Functions and properties of Siderocalins, an NMR view

10:30 – 10:50 **Primož Šket, Janez Plavec**: Four Stranded G - Quadruplexes in Solution

10:50 – 11:20 Coffee break

11:20 – 11:50 **Claudio Dalvit**: ¹⁹F NMR spectroscopy for efficient and sensitive fragment-based screening and for probing the fluorine-protein interactions: Implications for drug design

- 11:50– 12:10 **Ivana Biljan, Gregor Ilc, Gabriele Giachin, Igor Zhukov, Giuseppe Legname, Janez Plavec:** NMR Studies of Human Prion Proteins with Pathological Mutations
- 12:10– 12:30 **Morkos Henen, Nicolas Coudeville, Laila Abouzeid, Alaa El-Din Barghash, Hassan Eisa, Robert Konrat:** Chemistry and NMR Studies of the Beta-Catenin-Tcf4 Interaction - A Potential Antitumor Target
- 12:30 – 12:50 **Slavomíra Husárová, Mária Matulová, Peter Capek, Martine Sancelme, Anne-Marie Delort:** Exopolysaccharides Produced by Bacillus sp. 3b6, Bacterium from Cloud Water: Their Implication in Atmospheric Chemistry
- 13:10 – 14:00 Lunch
- 14:00 – 19:00 Social Program
- 19:30 – Farewell Party

Sunday, 20th March 2010

In-vivo NMR

Chair: **Ivan Frollo**

- 8:30 – 9:30 **Ivan Tkáč:** Single voxel in vivo NMR spectroscopy of brain: Principles and applications
- 9:30 – 10:00 **Vladimír Mlynárik:** Proton spectroscopic imaging of brain and its practical applications
- 10:00 – 10:30 **Martin Krššák:** Metabolic Profiling and Fluxes by Multinuclear In vivo NMR Spectroscopy
- 10:30 – 11:00 Coffee break
- 11:00 – 11:30 **Anne-Marie Delort:** In vivo NMR Applied to Microbiology
- 11:30 – 11:50 **Michal Bittšanský, Veronika Husárová, Igor Ondrejka, Valeria Kerna, Dušan Dobrota:** Changes of ¹H Metabolites in Hippocampus in Vivo During the Therapy of Major Depressive Disorder
- 11:50 – 12:10 **Marek Chmelik, Martin Krššák, Michal Považan, Martin Tkacov, Stephan Gruber, Siegfried Trattnig, Wolfgang Bogner:** In vivo ³¹P MRS at 7T: First Results
- 12:10 – 12:30 Conference Closing
- 12:30 – 13:30 Lunch

Departure