

Department of Analytical Chemistry

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Projects

APVV

Project Code: [APVV-20-035205](#)
 Title (sl.): Vývoj nových metód vysokoúčinnnej kvapalinovej a plynovej chromatografie so špecifickou selektivitou na analýzu izomérov biologicky aktívnych látok.
 Title (eng.): Development of new high performance liquid and gas chromatography methods with specific selectivity for analysis of biologically active compounds isomers.
 Project duration: 01.05.2006 - 30.09.2009
 Responsible person: **prof. Ing. Jozef Lehotay, DSc.**

APVV

Project Code: [APVV-20-000705](#)
 Title (sl.): Rýchla plynová chromatografia - hmotnostná spektrometria pre analýzu vybraných organických polutantov v environmentálnych a potravinových matriciach.
 Title (eng.): Fast Gas Chromatography - Mass Spectrometry for environmental and food analysis of selected groups of organic pollutants.
 Project duration: 01.05.2006 - 31.10.2009
 Responsible person: **prof. Ing. Eva Matisová, DSc.**

APVV

Project Code: [APVV-0057-06](#)
Title (sl.): Nové elektranalytické techniky a elektrochemické postupy na zvyšovanie efektivity atómovej spektroskopie – stanovenie a chemometrická charakterizácia analytov.
Title (eng.): New Electroanalytical techniques and Procedures of Improvement of Atomic Spectroscopy- Determination and Chemometrical Characterization of Analytes.
Project duration: 01.02.2007 - 31.12.2009
Responsible person: **doc. Ing. Peter Tomčík, PhD.**

APVV

Project Code: [APVV-0319-07](#)
Title (sl.): Vývoj nových profilovacích analytických metód pre kvalitné a bezpečné potraviny.
Title (eng.): Development of novel profiling analytical methods for food quality and safety.
Project duration: 01.09.2008 - 31.12.2010
Responsible person: **Ing. Ivan Špánik, PhD.**

APVV

Project Code: [VMSP-P-0064-09](#)
Title (sl.): Vývoj analytických metód pre problematické zlúčeniny zahrnuté v rámcovej smernici o vode č. 2000/60/ES.
Title (eng.): The development of analytical methods for problematic WFD pollutants.
Project duration: 01.09.2009 - 30.09.2011
Responsible person: **Ing. Peter Oswald, PhD. , Ing. Ivan Špánik, PhD.**

National project

Project Code: [SAV-FM-EHP-2008-02-05](#)
Title (sl.): Analytické metódy pre kvalitné a bezpečné tradičné potravinové výrobky.
Title (eng.): Analytical methods for quality and safe traditional food products.
Project duration: 01.07.2008 - 31.10.2010
Responsible person: **Ing. Ivan Špánik, PhD.**

RAV MŠ SR

Project Code: [4/0103/06](#)
Title (sl.): Využitie biosenzorov, biomateriálov a biosignálov v medicíne.
Title (eng.): Use of biosensors, biomaterials and biosignals in medicine.
Project duration: 01.01.2006 - 31.12.2009
Responsible person: **prof. Ing. Ján Labuda, DSc.**

VEGA

Project Code: [2/7074/7](#)
Title (sl.): Určenie parametrov aktivity potenciálnych inhibítorov aldózareduktázy - príspevok ku terapii chronických komplikácií diabetu.
Title (eng.): Evaluation of activity parameters of potential inhibitors of aldose reductase - a contribution to therapy of chronic diabetic complications.
Project duration: 01.01.2007 - 31.12.2009
Responsible person: **RNDr. Magdaléna Májeková, PhD., Ing. Pavel Májek, PhD.**

VEGA

Project Code: 1/0500/08
Title (sl.): Nové elektroanalytické techniky na stanovenie stopových koncentrácií a chemických foriem arzénu, antimónu a selénu vo vodách pre použitie v laboratóriách i v teréne.
Title (eng.): New electroanalytical techniques for routine determination of trace concentrations and speciation analysis of arsenic, antimony and selenium in water for laboratory and field applications.
Project duration: 01.01.2008 - 31.12.2010
Responsible person: **doc. Ing. Ernest Beinrohr, PhD.**

VEGA

Project Code: [1/0852/08](#)
Title (sl.): Využitie nanotechnológie pri tvorbe DNA a LDL biosenzorov.
Title (eng.): Using of nanotechnology in preparation of DNA and LDL biosensors.
Project duration: 01.01.2008 - 31.12.2010
Responsible person: **Ing. Adriana Ferancová, PhD. (2008), prof. Ing. Ján Labuda, DSc. (since 2009)**

VEGA

Project Code: [1/0827/08](#)
Title (sl.): Vývoj rýchlych a účinných metód analýzy organických zlúčenín, dôležitých z hľadiska kvality životného prostredia, v selektívnych jedno- a viackolónových zostavách plynovej chromatografie v spojení s hmotnostnou spektrometriou v režimoch EI/CI/NCI.
Title (eng.): Development of fast and efficient methods of analysis in selective gas chromatographic single- and multicolumn setups hyphenated to mass spectrometry with EI/CI/NCI spectra measurements for organic compounds of environmental concern.
Project duration: 01.01.2008 - 31.12.2010
Responsible person: **prof. Ing. Ján Krupčík, DSc.**

VEGA

Project Code: [1/0058/08](#)
Title (sl.): Analytické a termodynamické štúdium separácie opticky aktívnych látok metódou HPLC v on-line spojení s DAD, NMR a polarimetrickou detekciou. Príprava nových selektívnych sorbentov použiteľných pri príprave vzorky.

Title (eng.): Analytical and thermodynamic study of the separation of the optically active compounds by HPLC method with on-line DAD, NMR and polarimetric detection. The preparation of new selective sorbents used for the preparation of the samples.
 Project duration: 01.01.2008 - 31.12.2010
 Responsible person: **prof. Ing. Jozef Lehotay, DSc.**

VEGA

Project Code: [1/0318/08](#)
 Title (sl.): Kombinácia fluorescenčnej spektroskopie a chemometrie pre analýzu mnohozložkových zmesí.
 Title (eng.): Fluorescence Spectroscopy Combined with Chemometrics for Analysis of Multi-component Mixtures.
 Project duration: 01.01.2008 - 31.12.2010
 Responsible person: **doc. Ing. Jana Sádecká, PhD.**

VEGA

Project Code: [1/0066/09](#)
 Title (sl.): Nové metodologické a chemometrické prístupy pri riešení problémov environmentálnych a klinických analýz.
 Title (eng.): New methodological and chemometrical approaches for solving problems in environmental and clinical analysis.
 Project duration: 01.01.2009 - 31.12.2011
 Responsible person: **doc. Ing. Peter Tomčík, PhD.**

VEGA

Project Code: [1/0390/09](#)
 Title (sl.): Rýchla plynová chromatografia na analýzu endokrinných disruptorov v matriciach životného prostredia.
 Title (eng.): Fast Gas Chromatography for Analysis of Endocrine Disruptors in Environmental Matrices.
 Project duration: 01.01.2009 - 31.12.2011
 Responsible person: **prof. Ing. Eva Matisová, DSc.**

List of bachelor (BT), diploma (DT) and dissertation (DissT) theses

Type	Final Thesis	Supervisor	Enter
BT	Mária Trpkošová Analýza mliečnych výrobkov metódou SPME-GC-MS	Ing. Ivan Špánik, PhD.	➔
DT	Ing. Lucia Senešiová Analýza substituovaných fenolov metódami GC a GC-MS v dvojkolónových zostavách	doc. Ing. Eva Benická, PhD.	➔
BT	Bc. Vladimíra Kubričanová DNA biosenzor v prietokovom elektrochemickom usporiadaní	prof. Ing. Ján Labuda, DSc.	➔
DT	Ing. Ľudovít Žiak Fluorescence Spectroscopy in Multi-component analysis	doc. Ing. Jana Sádecká, PhD.	➔
DT	Ing. Ľubomír Píš Charakterizácia liehovín aromatizovaných borievkami fluorescenčnou spektroskopiou	doc. Ing. Jana Sádecká, PhD.	➔

Type	Final Thesis	Supervisor	Enter
DisT	Ing. Ľubomír Švorc, PhD. Kryštalová štruktúra a štúdium vzťahu štruktúra – biologická aktivita derivátov 1,4-dihydropyridínu a indolizínu	doc. Ing. Viktor Vrábek, PhD.	➔
BT	Natália Meliorisová Možnosti využitia konvenčnej GC a rýchlej GC v analýze pesticídov vo vodách.	Ing. Andrea Hercegová, PhD.	➔
DisT	Ing. Renáta Húšková, PhD. Rýchla GC-MS pre analýzu vybraných organických polutantov	prof. Ing. Eva Matisová, DSc.	➔
BT	Bc. Petronela Ochodnická Separácia levanduľového a ružového oleja metódou GC-MS a komprehensívnou GC x GC	Ing. Janka Memersheimerová, PhD.	➔
BT	Jozef Sochr Spojenie elektrochemických a spektrochemických metód v analýze vzoriek životného prostredia	doc. Ing. Ernest Beinrohr, PhD.	➔
BT	Monika Borbélyová Stanovenie karamelu fluorescenčnou spektroskopiou	doc. Ing. Jana Sádecká, PhD.	➔
BT	Mária Furdová Stanovenie kvercetínu v extrakte chmelu metódou HPLC	Ing. Dr. Jaroslav Škubák	➔
BT	Michaela Tomková Stanovenie kyseliny elagovej fluorescenčnou spektroskopiou	doc. Ing. Jana Sádecká, PhD.	➔
BT	Bc. Peter Machata Stanovenie vybraných reziduí pesticídov vo vzorkách životného prostredia rýchlou GC	Ing. Andrea Hercegová, PhD.	➔
BT	Ivana Lapuníková Study of chromatographic properties of some compounds with antituberculous effect	Ing. Dr. Jaroslav Škubák	➔
DT	Ing. Martin Kovačič Štúdium podmienok GC a GC-MS analýzy polárnych organických kontaminantov vody a pôdy	doc. Ing. Eva Benická, PhD.	➔
DisT	Ing. Antónia Janáčová, PhD. Štúdium rôznych kombinácií predúpravy vzorky s jedno- a viacrozmernými chromatografickými technikami v analýze potravín	Ing. Ivan Špánik, PhD.	➔
DT	Ing. Matej Horváth Štúdium rýchlej GC-MS na analýzu endokrinných disruptorov patriacich do skupiny pesticídov	Ing. Svetlana Hrouzková, PhD.	➔
BT	Bc. Katarína Pavlová Štúdium vplyvu metanolu, etanolu a zložiek mobilnej fázy na tvorbu asociačných komplexov diazepámu metódou HPLC - NMR	Ing. Dr. Jaroslav Škubák	➔
BT	Miriam Markovičová Štúdium vplyvu propanolu, i-propanolu, butanolu a t-butanolu na tvorbu asociačných komplexov diazepámu metódou HPLC- NMR	Ing. Dr. Jaroslav Škubák	➔
DT	Ing. Denisa Kurczová Vnútrolektródová coulometrická titrácia na stanovenie dusitanov v pitných vodách	doc. Ing. Ernest Beinrohr, PhD.	➔
BT	Bc. Zuzana Šusterová Výber a porovnanie rozdielnych metód predúpravy vzorky pre identifikáciu organických zlúčenín vo včelích produktoch.	Ing. Ivan Špánik, PhD.	➔
BT	Magdaléna Srnková Využitie nových stacionárnych fáz v analýze polárnych organických zlúčenín plynovou chromatografiou	doc. Ing. Eva Benická, PhD.	➔

Selected publications

Journals

- [1] Sádecká, Jana - Tóthová, Jana - Májek, Pavel: Classification of brandies and wine distillates using front face. In: Food Chemistry. - ISSN 0308-8146. - Vol. 117, Iss. 3 (2009), p. 491-498.
- [2] Húšková, Renáta - Matisová, Eva - Hrouzková, Svetlana - Švorc, Ľubomír: Analysis of pesticide residues by fast gas chromatography in combination with negative chemical ionization mass spectrometry. In: Journal of Chromatography. - ISSN 0021-9673. - A 1216 (2009), p. 6326-6334.
- [3] Húšková, Renáta - Matisová, Eva - Švorc, Ľubomír - Mocák, Ján - Kirchner, Michal: Comparison of negative chemical ionization and electron impact ionization in gas chromatography - mass spectrometry of endocrine disrupting pesticides. In: Journal of Chromatography. - ISSN 0021-9673. - A 1216 (2009), p. 4927-4932.
- [4] Vrábel, Viktor - Švorc, Ľubomír - Bradiaková, Ivana - Marchalín, Štefan - Krutošíková, Alžbeta : Crystal and Molecular Structure of 4-piperidin-1-yl-2-[3-(Trifluoromethyl)phenyl] furo[2,3-c]-pyridine. In: Acta Chimica Slovaca. - ISSN 1337-978X. - Vol. 2, No. 1 (2009), p. 107-114.
- [5] Labuda, Ján- Beinrohr, Ernest- Šimková, Darina : Detection of in vitro damage to DNA using carbon electrodes in flow-through cell. - , 2009. In: Chemické listy. - ISSN 0009-2770. - Vol. 103 - S. - , 2009, p. 240-241.
- [6] Hroboňová, Katarína - Lehotay, Jozef - Čižmárik, Jozef: Determination of Some Organic Acids in Propolis by HPLC Using Two Columns with On-Line SPE System. In: Journal of Liquid Chromatography and Related Technologies. - ISSN 1082-6076. - Vol. 32, Iss. 1 (2009), p. 125 - 135.
- [7] Galandová, Júlia - Ovádeková, Renáta - Ferancová, Adriana - Labuda, Ján: Disposable DNA biosensor with the carbon nanotubes-polyethyleneimine interface at a screen-printed carbon electrode for tests of DNA layer damage by quinazolines. In: Analytical and Bioanalytical Chemistry. - ISSN 1618-2642. - Vol. 394, Iss. 3 (2009), p. 855-861.
- [8] Labuda, Ján - Ovádeková, Renáta - Galandová, Júlia: DNA-based biosensor for the detection of strong damage to DNA by the quinazoline derivative as a potential anticancer agent. In: Microchimica Acta. - ISSN 0026-3672. - Vol. 164 (2009), p. 371-377.
- [9] Manová, Alena - Beinrohr, Ernest: Electrochemistry or AAS for Trace Analysis of Metals. 2009. In: Chemické listy. - ISSN 0009-2770. - Vol. 103 - S. - , 2009, p. 266.
- [10] Hroboňová, Katarína - Lehotay, Jozef - Bruchatá, Katarína - Čižmáriková, Ružena: Enantioselective HPLC Analysis and In-vitro Study Decomposition of Potential beta Blocker Drug in Guinea Pig Serum. In: Journal of Liquid Chromatography and Related Technologies. - ISSN 1082-6076. - Vol. 32, Iss. 1 (2009), p. 80 - 94.
- [11] Beinrohr, Ernest - Šimková, Darina - Labuda, Ján: Flow-through electrochemical system with the DNA-based biosensor for the evaluation of deep DNA damage by chemicals and effect of antioxidants, 2009. In: Acta Chimica Slovaca. - ISSN 1337-978X. - Vol. 2, No. 2. - , 2009, p. 137-146.
- [12] Mydlová-Memersheimerová, Janka - Tienpont, Bart - David, Frank - Krupčík, Ján - Sandra, Pat: Gas chromatography of 209 polychlorinated biphenyl congeners on an extremely efficient nonselective capillary column. In: Journal of Chromatography. ISSN 0021-9673. - A 1216 (2009), p. 6043-6062.
- [13] Hroboňová, Katarína - Lehotay, Jozef - Jablonský, Michal - Katuščák, Svetozár: HPLC

- determination of sacharides in processing of modelling of speedy ageing of paper. In: Chemické listy. - ISSN 0009-2770. - Vol. 103, No. 9 (2009), p. 744 - 751. (in Slovak)
- [14] Lehotay, Jozef - Lachová, Miroslava - Mocák, Ján: Imprinted polymers in analytical chemistry. In: Nova Biotechnologica. ISSN 1337-8783. – Vol. 9, No. 3 (2009), p. 341-347.
- [15] Galandová, Júlia - Trnková, Libuše - Mikelová, Radka - Labuda, Ján: Investigation of the DNA-based biosensor with chitosan-carbon nanotubes interface by cyclic and elimination voltammetry. In: Electroanalysis. - ISSN 1040-0397. - Vol. 21, Iss. 3-5 (2009), p. 563-572.
- [16] Lachová, Miroslava - Lehotay, Jozef- Skačáni, Ivan - Čižmárik, Jozef: Isolation of Some Derivatives of Phenylcarbamic Acid from Human Plasma using Molecularly Imprinted Polymers. In: Journal of Liquid Chromatography and Related Technologies. ISSN 1082-6076. - Vol. 32, Iss. 1 (2009), p. 167 - 181.
- [17] Tomčík, Peter - Klbiková, Veronika - Bustin, Dušan: Criteria fo Using Approximative Relations for the Calculation of Simple Protolytic Equilibria. Weak Bases and Hydrolyzed Salts. In: Chemické listy. - ISSN 0009-2770. - Vol. 103, No. 6 (2009), p. 514-519. (in Slovak)
- [18] Lachová, Miroslava - Lehotay, Jozef - Skačáni, Ivan - Čižmárik, Jozef: Molecularly imprinted solid-phase extraction of 1-methyl-2-piperidinoethylesters of alkoxyphenylcarbamic acid from human plasma, comparison with classical solid. In: Journal of Liquid Chromatography and Related Technologies. - ISSN 1082-6076. - Vol. 32, Is. 16 (2009), p. 2293-2306.
- [19] Galandová, Júlia - Labuda, Ján: Polymer interfaces used in electrochemical DNA-based biosensors. In: Chemical Papers. - ISSN 0366-6352. - Vol. 63, No. 1 (2009), p. 1-14.
- [20] Tomčík, Peter - Rievaj, Michal - Bustin, Dušan - Compton, R.G: Reactive Carbon Paste Electrode for the Detection of Biologically Important Species, 2009. In: Chemické listy. - ISSN 0009-2770. - Vol. 103 - S. - , 2009, p. 250-251
- [21] Meričko, Damián - Lehotay, Jozef - Skačáni, Ivan: THERMODYNAMIC APPROACH TO ENANTIOSEPARATION OF ARYL- METHYL SULFOXIDES ON TEICOPLANIN AGLYCON STATIONARY PHASE. In: Journal of Liquid Chromatography and Related Technologies. - ISSN 1082-6076. - Vol. 32, Iss. 1 (2009), p. 331 - 347.
- [22] Tóthová, Jana - Sádecká, Jana - Májek, Pavel: Total Luminescence Spectroscopy for Differentiating Between Brandies and Wine Distillates. - , 2009. In: Czech Journal of Food Sciences. - ISSN 1212-1800. - Vol. 27, No. 6. - , 2009, p. 425-431.
- [23] Tarapčík, Pavol: The Competition Problems of Chemical Olympiad Category A and their solutions, National competition, Practical exercises in analytical chemistry. In: Chemické rozhľady. - ISSN 1335-8391. - Vol. 10, No. 1 (2009), p. 36-43. (in Slovak)
- [24] Meričko, Damián - Lehotay, Jozef- Skačáni, Ivan: USING TEICOPLANIN-BASED CHIRAL STACIONARY PHASE FOR EXPLORE OF TEMPERATURE EFFECTS ON ENANTIOSEPARATION AND DETERMINATION OF CHIRAL SULFOXIDES IN RAT SERUM. In: Journal of Liquid Chromatography and Related Technologies. - ISSN 1082-6076. - Vol. 32, Iss. 1 (2009), p. 182 - 200.
- [25] Švorc, Ľubomír - Vrabel, Viktor - Žúžiová, Jozefína- Marchalín, Štefan- Kožíšek, Jozef: (3aR,8aS,9S,9aR)-9-Hydroxyperhydrofuro[3,2- f]indolizin-6-one. In: ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE. - ISSN 1600-5368. - E65 (2009), o1731-o1732.

Conferences

- [1] Janáčková, Antónia - Špánik, Ivan: A comparative study of various sample preparation methods for characterisation of volatile organic compounds in slovakian unifloral honey. In: 33rd International Symposium on Capillary Chromatography and Electrophoresis and 6th GCxGC symposium, May 17-21, 2009, Oregon USA: Abstract Book, 2009. - p. 108.
- [2] Manová, Alena - Beinrohr, Ernest: AAS for Trace Analysis of Metals. In: ChemZi - Chemické zvesti, ISSN 1336-7242. - Vol. 5, No. 9 (2009), p. 71.
- [3] Májek, Pavel - Sádecká, Jana - Píš, Ľubomír: Application of fluorescence spectroscopy and Chemometrics to the exploratory analysis of juniper-flavoured spirit drinks. - , 2009. In: 4th International Symposium on Recent Advances in Food Analysis, November 4-6, 2009, Prague : Book of Abstracts. - , 2009. - ISBN 978-80-7080-726-2. - p. 460.
- [4] Labuda, Ján: Bioanalytical chemistry of new bioanalytes using nucleic acid biosensors. In: ChemZi - Chemické zvesti, ISSN 1336-7242. - Vol. 5, No. 9 (2009), p. 138.
- [5] Hrouzková, Svetlana - Horváth, Matej - Matisová, Eva - Andraščíková, Mária - Ďurčanská, Jarmila: Development and Validation of Fast GC-MS Method with Electron Ionization/Chemical Ionization for Analysis of Endocrine Disrupting Pesticides, 2009. In: 6th International Symposium of Mediterranean Group on Pesticide Research (MGPR), 27-30, October, 2009, Cairo, Egypt, 2009, Plant Protection Research Institute, ARC, Cairo, Egypt, p. 61-62
- [6] Šimková, Darina - Labuda, Ján: Electrochemical flow-through system with DNA biosensor for biomedical and food technology applications. - 5 p. In: 2nd International Symposium on Applied Sciences in Biomedical and Communication Technologies, November 24-27, 2009, Bratislava: CD Abstracts. - , 2009. - nestr.
- [7] Labuda, Ján: Electrochemical nucleic acid-based biosensors: terms and methodology: Programme and Abstracts. In: 42nd IUPAC Congress Chemistry Solutions, 2-7 August 2009. RSC, 2009. - nestr.
- [8] Hercegová, Andrea - Matisová, Eva: Fast GC of Pesticides in Water. In: International Conference on xenobiotics in the Urban water Cycle Xenowac 2009, Cyprus, 11-13 March 2009, ISBN 978-9963-671-89-2. - nestr.
- [9] Hrouzková, Svetlana - Matisová, Eva - Húšková, Renáta: Fast GC-MS Analysis of Endocrine Disrupting Pesticides. In: 13. Österreichische Chemietage, August 24-27, 2009 : Book of Abstracts. Gesellschaft Österreichischer Chemiker, 2009. - ISBN 978-3-900554-66-8. - OP-51.
- [10] Špánik, Ivan - Janáčková, Antónia - Novák, Pavel: GCxGC-TOF-MS analysis of traditional alcoholic beverages from Slovakia. In: 33rd International Symposium on Capillary Chromatography and Electrophoresis and 6th GCxGC symposium, May 17-21, 2009, Oregon USA: Abstract Book., 2009. - p. 32.
- [11] Škubák, Jaroslav - Liptaj, Tibor- Lehotay, Jozef : HPLC-NMR Study of Association Complexes: 8th Balaton Symposium on High Separation Science. In: 8th Balaton Symposium on High Separation Science: Book of Abstract. Hungarian Society for Separation Science, 2009. ISBN 978-963-06-7878-0, p. 21.
- [12] Tomčík, Peter - Rievaj, Miroslav - Bustin, Dušan - Compton, R.G: Influence of Surfactants on Deposition process when Cadmium is DEtermined on Boron Doped Diamond Electrode, In: ChemZi - Chemické zvesti. - ISSN 1336-7242. - Vol. 5, No. 9 (2009), nestr.
- [13] Beníková, Katarína - Ferancová, Adriana - Sirotová, Ľudmila- Labuda, Ján : Preparation of DNA-nanostructured-chitosan modified electrochemical sensor and its application for evaluation of dna

- damage by malondialdehyde and oxidized edib. In: Proceedings of the 5th International Students Conference, "Modern Analytical Chemistry", 21-22 September, Prague, 2009, Charles University Prague. ISBN 978-80-86561-41-7, p. 6 - 10.
- [14] Labuda, Ján: Present state in electrochemical nucleic acid-based biosensors. In: Trends in Biomedical Engineering. Proceedings of the 8th Czech-Slovak Conference, Bratislava, Slovak Republic, 16.-18.9.2009. – Bratislava, STU in Bratislava, 2009. - ISBN 978-80-227-3105-8. - p. 217-218.
- [15] Andraščíková, Mária - Hrouzková, Svetlana - Matisová, Eva: Selected endocrine disrupting chemicals and their analysis by capillary gas chromatography-mass spectrometry. In: Proceedings of the 5th International Students Conference, "Modern Analytical Chemistry", 21-22 September, Prague, 2009, Charles University Prague, 2009. - ISBN 978-80-86561-41-7. - p. 1-5.
- [16] Beníková, Katarína - Ferancová, Adriana - Sirotová, Ľudmila - Labuda, Ján : Sensing of DNA damage by malondialdehyd and oxidized edible oils by using nanostructured DNA-chitosan modified electrodes. In: 13. Österreichische Chemietage, August 24-27, 2009 : Book of Abstracts, Gesellschaft Österreichischer Chemiker, ISBN 978-3-900554-66-8. - PO-97.
- [17] Špánik, Ivan - Janáčková, Antónia- Repaská, Katarína: SPME-GC-MS analysis of Slovakian juniperus flavoured spirit BOROVIČKA. In: 33rd International Symposium on Capillary Chromatography and Electrophoresis and 6th GCxGC symposium, May 17-21, 2009, Oregon USA: Abstract Book, 2009. - p. 96.
- [18] Janáčková, Antónia - Špánik, Ivan: SPME-GCxGC-TOFMS Analysis of Slovakian Traditional Alcoholic Beverages. In: 4th International Symposium on Recent Advances in Food Analysis, November 4-6, 2009, Prague: Book of Abstracts, 2009. ISBN 978-80-7080-726-2. - p. 469
- [19] Matisová, Eva - Hercegová, Andrea - Andraščíková, Mária - Krascsenits, Zoltán : Study of Calibration Approaches of Pesticides in Water by Fast GC-MS. In: International Conference on xenobiotics in the Urban water Cycle Xenowac 2009, Cyprus, 11-13 March 2009, ISBN 978-9963-671-89-2.
- [20] Lehotay, Jozef: Study of Selectivity of Molecular Imprinted Solid-Phase Extraction. In: 52. Zjazd Polskiego Towarzystwa Chemicznego. - : PTCH Lodz, 2009. - p. 171.
- [21] Janáčková, Antónia - Špánik, Ivan: The Use of Two-dimensional Gas Chromatography in Food. In: 4th International Symposium on Recent Advances in Food Analysis, November 4-6, 2009, Prague: Book of Abstracts, 2009. - ISBN 978-80-7080-726-2. - p. 453
- [22] Manová, Alena - Beinrohr, Ernest: Trace analysis of metals with AAS or with electrochemistry? : Chemistry Solutions, 2-7 August 2009, SECC, Glasgow, Scotland, UK. In: 42nd IUPAC Congress Chemistry Solutions, 2-7 August 2009, RSC, 2009. - P602_010.
- [23] Lehotay, Jozef - Škubák, Jaroslav: Using of Chiral Stationary Phases in HPLC: 15th International Symposium on Separation Methods. In: 8th Balaton Symposium on High Separation Science: Book of Abstract. - : Hungarian Society for Separation Science, 2009. - ISBN 978-963-06-7878-0. - p. 44.
- [24] Tomčík, Peter - Rievaj, Miroslav - Bustin, Dušan - Čerňanská, Monika: Application of microelectronic structures for the determination of iodides in foodstuffs. In: Zborník prednáškových a posterových príspevkov LABORALIM 2009 Recent progress in analytical methods of food B. Bystrica, 3.-4. 2. 2009, Vydavateľstvo STU, 2009. - ISBN 978-80-227-3071-6. - p. 51-56. (in Slovak)

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Projects

VEGA

Project Code: 2/0093/08
Title (sl.): Následky akútnej ischémie mozgu v závislosti od veku zvierat a ich ovplyvnenie pyridoindolmi a inými oxidantami.
Title (eng.): Consequences of acute brain ischemia in relation to the age of animals and the effect of pyrolidones and other antioxidants.
Project duration: 01.01.2008 – 31.12.2010
Responsible person: **doc. Ing. Tibor Liptaj, PhD.**

VEGA

Project Code: 2/0083/09
Title (sl.): Energetický metabolizmus mozgu sledovaný pomocou magnetickej rezonancie ako podklad pre štúdium mechanizmov hypoxicko-ischemického poškodenia mozgu novorodenca.
Title (eng.): Energetic metabolism of brain monitored by magnetic resonance as the basis for the study of mechanism of hypoxi-ischemic damage of the brain of newborn.
Project duration: 01.01.2009 – 31.12.2011
Responsible person: RNDr. Ivo Juránek, PhD., **RNDr. Svatava Kašparová, PhD.**

APVV

Project Code: 51-017905
Title (sl.): Molekulové mechanizmy pôsobenia nových liečiv, ovplyvňujúcich oxidačný stres – významný etiopatogenický faktor početných chorôb.
Title (eng.): Molecular mechanisms of the new drugs affecting oxidative stress – the important factor of the number of illnesses.
Project duration: 01.03.2006 – 31.03.2009
Responsible person: **doc. Ing. Tibor Liptaj, PhD.**

SP

Project Code: 2003SP200280203
Title (sl.): Dobudovanie špičkového laboratória so zameraním na nukleárnu magneticnú rezonanciu.
Title (eng.): Establishment of the top-class nuclear magnetic resonance laboratory.
Project duration: 01.06.2003 – 31.12.2010
Responsible person: **doc. Ing. Tibor Liptaj, PhD.**

Selected publications

Journals

- [1] Boor, P. - Celec, P. - Behuliak, Michal - Grančič, Peter - Kebis, Anton - Kukan, Marián - Prónayová, Nadežda - Liptaj, Tibor - Ostendorf, Tammo - Šebeková, K.: Regular moderate exercise reduces advanced glycation and ameliorates early diabetic nephropathy in obese Zucker rats. In: METABOLISM-CLINICAL AND EXPERIMENTAL. - ISSN 0026-0495. - Vol. 58, Iss. 11 (2009), p. 1669-1677.
- [2] Horecký, Jaromír - Bačiak, Ladislav - Kašparová, Svatava - Pacheco, G. - Aliev, F.G. - Vančová, Olga: Minimally invasive surgical approach for three-vessel occlusion as a model of vascular dementia in rat-brain bioenergetics assay. In: Journal of the Neurological Sciences. - ISSN 0022-510X. - Vol. 283 (2009), p. 178-181.
- [3] Juránek, Ivan - Bačiak, Ladislav: Hypoxia-ischemia of the brain: Examples of MR imaging and spectroscopy in animal research. In: Neurochemistry International. : The Journal for the publication of cellular and molecular aspects of neurochemistry. - ISSN 0197-0186. - Vol. 54 (2009) (www.elsevier.com/locate/neuint), p. 471-480.
- [4] Mučaji, Pavel - Nagy, Milan - Liptaj, Tibor - Prónayová, Nadežda - Švajdlenka, Emil: Separation of luteolin-7-rutinoside and luteolin-7-neohesperidoside isolated from *Ligustrum vulgare* L. In: Journal of Planar Chromatography. - ISSN 0933-4173. - Vol. 22, No. 4 (2009), p. 301-304.
- [5] Proksa, Bohumil - Hercek, Richard - Liptaj, Tibor - Prónayová, Nadežda: 10 α -hydroxy- β -isomorphine, side product of the synthesis of 10 α -hydroxymorphone. In: Monatshefte für Chemie - Chemical Monthly. - ISSN 0026-9247. - ISSN 1434-4475. - Vol. 140 (2009), p. 485-487.
- [6] Světlík, Ján - Veizerová, Lucia - Liptaj, Tibor - Kubista, Jiří: Transformation of pyrimidines with oxygen bridge with nitrogen nucleophiles and characterisation of the final products. In: Arkivoc. - ISSN 1424-6376. - 2009 (x) (2009), p. 79-86.

Conferences

- [1] Boor, P. - Celec, P. - Behuliak, Michal - Grančič, Peter - Kebis, Anton - Kukan, Marián - Prónayová, Nadežda - Liptaj, Tibor - Ostendorf, Tammo - Heidland, A. - Šebeková, K.: Regular moderate exercise reduces advanced glycation and renal injury in obese Zucker rats. In: 10th International Symposium on the Maillard Reaction. Palm Cove, Australia, August 29-31, 2009. - , 2009. - p. 117.
- [2] Boor, P. - Celec, P. - Behuliak, Michal - Grančič, Peter - Kebis, Anton - Kukan, Marián - Klenovicsová, K. - Prónayová, Nadežda - Liptaj, Tibor - Ostendorf, Tammo - Heidland, A. - Šebeková, K.: Renoprotective effect of physical exercise in evolution of diabetic nephropathy in obese Zucker rats. In: 33. kongres Slovenskej nefrologickej spoločnosti s medzinárodnou účasťou, Nitra, 7.-9.10.2009. - : Slovenská lekárska spoločnosť, 2009. - p. 44. (in Slovak)
- [3] Kaliňák, Michal - Liptaj, Tibor: Prvý nástrel na metaboliku *Trichoderma viride*: Program and Book of Abstracts. In: Magnetic Moments in Central Europe, February 11-15, 2009: Program and Book of Abstracts. - : Slovenian NMR Centre, Ljubljana, Slovenia, 2009. - ISBN 978-961-6104-13-5. - p. 80.
- [4] Škubák, Jaroslav - Liptaj, Tibor - Kaliňák, Michal - Galba, Jaroslav - Lehotay, Jozef: HPLC STUDY of Diazepam - Detection of Different Forms via HPLC-NMR, HPLC-MS-MS. In: 52. Zjazd Polskiego Towarzystwa Chemicznego. - : PTCh Lodz, 2009. - PC-05-119.

- [5] Škubák, Jaroslav - Liptaj, Tibor- Lehotay, Jozef : HPLC-NMR Study of Association Complexes: 8th Balaton Symposium on High Separation Science. In: 8th Balaton Symposium on High Separation Science: Book of Abstract. - : Hungarian Society for Separation Science, 2009. - ISBN 978-963-06-7878-0. - p. 21.
- [6] Škubák, Jaroslav - Liptaj, Tibor - Kaliňák, Michal - Lehotay, Jozef: STUDY OF DIAZEPAM BEHAVIOUR IN CHIRAL SURROUNDING IN PRESENT OF ALCOHOL BY HPLC-NMR : Energetika, ekológia, ekonomika 2009. In: Power Engineering - Ecology - Economy: 8th National Conference with International Participation. High Tatras, Slovak Republic, 27.-29.5.2009. - Bratislava : STU v Bratislave, 2009. - ISBN 978-80-89402-08-3. - (in Slovak)
- [7] Škubák, Jaroslav - Liptaj, Tibor - Galba, Jaroslav - Lehotay, Jozef: STUDY OF DIAZEPAM. DETECTION OF DIFFERENT FORMS BY HPLC-NMR. In: 29-th International Symposium "Industrial Toxicology 09", June 16-18 2009, Svit, Slovak Republik. - : ZSVTS, 2009. - ISBN 978-80-969710-3-9. - p. 61.