

## CURRICULUM VITAE



1. **Nume:** Zamfir
2. **Prenume:** Alina-Diana
3. **Data si locul nasterii:** 11.06.1969, Timisoara
4. **Cetatenie:** Romana
5. **Stare civila:** Necasatorita
6. **Studii:**

<u>Institutia</u>	Universitatea de Vest Timisoara Facultatea de Fizica	Universitatea Babes-Bolyai Cluj-Napoca Facultatea de Fizica	Universitatea Wilhelm de Westfalia, Münster, Germania; Institutul de Fizica Medicala si Biofizica
<u>Perioada:</u>	Octombrie, 1987 Iunie, 1992	Martie, 1998 Septembrie, 2001	Sept. 2001-Iulie 2006
<u>Grade sau diplome obtinute</u>	Licentiat Fizica, Diploma de Licenta in Fizica	Doctor in Fizica, Diploma de Doctor in Fizica, directia Fizica Atomului si Moleculei, domeniul restrans: Spectrometrie de Masa	Habilitare/Profesorat universitar: Diploma de <i>Venia legendi</i> in Biofizica, Germania

7. **Titlul stiintific:** Doctor in Fizica; *Privat Dozent* cu *Venia Legendi* in Biofizica (Germania)

### 8. Experienta profesionala:

<b>Perioada:</b>	Septembrie, 1992 Sept. 2005	Septembrie, 1995 prezent	Martie 2000-Martie 2001 Sept. 2001-Iulie 2006	Septembrie 2005- prezent
<b>Locul:</b>	Timisoara, Facultatea de Fizica	Timisoara	Münster, Germania	Univ. Aurel Vlaicu, Arad
<b>Institutia:</b>	Universitatea de Vest Timisoara	Institutul National de Cercetare-Dezvoltare pentru Electrochimie si Materie Condensata Timisoara	Universitatea Wilhelm de Westfalia, Institutul de Fizica Medicala si Biofizica	Facultatea de Inginerie Alimentara, Turism si Protectia Mediului, Dept. de stiinte chimice si biologice
<b>Functia:</b>	Asistent universitar titular	Cercetator stiintific asociat	Cercetator stiintific <i>Privat Dozent</i> /Profesor	Lector (asociat) Conferentiar titular (Martie 2006- Octombrie 2008) Profesor titular (Octombrie 2008- prezent)

<b>Descriere:</b>	Seminarii si lucrari practice de laborator la studii universitare si postuniversitare (Master) la disciplinele: fizica starii solide, metode fizico-chimice de studiu materialelor, defecte structurale.	Coordonarea directiei de cercetare: IMPLEMENTAREA SI OPTIMIZAREA DE NOI TEHNICI: MICROFLUIDICE/ SPECTROMETRIE DE MASA PENTRU APLICATII IN ANALIZE BIOFIZICE SI BIOMEDICALE.	Stagiu de cercetare in cadrul doctoratului (2000-2001) Stagiu postdoctoral (Sept. 2001-Dec.2005). Dec. 2005- Habilitare/Profesorat Coordonarea directiei de cercetare IMPLEMENTAREA SI OPTIMIZAREA DE TEHNICI DE SPECTROMETRIE DE MASA BAZATE PE CHIP PENTRU GLYCOSCREENING IN BIOMEDICINA Cursuri, seminarii si lucrari de laborator "undergraduate studies": curs:Biomedizinische Massenspektrometrie (in Germana), Glycobiotechnology (in Engleza)	Cursuri, seminarii si lucrari de laborator la studii universitare: METODE FIZICO-CHIMICE DE ANALIZA; ANALIZE INSTRUMENTALE Coordonarea directiei de cercetare : IMPLEMENTAREA SI OPTIMIZAREA DE TEHNICI AVANSATE DE SPECTROMETRIE DE MASA SI SEPARATOLOGIE (HPLC/MS, CE/MS, HPLC CHIP ELECTROSPRAY/ MS)
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**9. Locul de munca actual si functia:** Universitatea Aurel Vlaicu, Arad, Profesor titular

**10. Vechimea la locul de munca actual:** 4 ani.

**11. Membru al asociatiilor profesionale:** Societatea Germana de Spectrometrie de Masa, Societatea Americana de Spectrometrie de Masa, Societatea Americana de Glicobiologie, Societatea Romana de Spectrometrie de Masa.

**12. Limbi straine cunoscute:** Engleza (fluent), Germana (fluent), Italiana (foarte bine), Franceza (satisfactor)

**13. Alte competente:**

Referent: al urmatoarelor reviste cotate ISI: Analytical Chemistry (factor de impact 5.5); Electrophoresis (factor de impact: 4.0), Glycobiology (factor de impact: 3.78) Journal of Chromatography A si B (factor de impact: 3.52), Journal of Separation Science (factor de impact: 2.8); Rapid Communications in Mass Spectrometry (factor de impact 3.05); European J. of Neurology (factor de impact 4.7), Sensors and Actuators (factor de impact 2.5). Membru in editorial board: Nanomedicine Journal (din 2008); Scientific and Technical Bulletin of Aurel Vlaicu University of Arad, Series Chemistry, Food Science and Engineering (din 2006).

Referent extern permanent (din 2006): NIH/NIEHS, North Carolina, USA.

Visiting Professor (din 2006): Universitatea din Konstanz, Germania, Departamentul Analytical Chemistry and Biopolymer Analysis; Curs (Schwerpunktkurs): Proteomics, Biological Mass Spectrometry

Editor: Mass Spectrometry in Life Safety, Springer Verlag

Membru in comisii doctorat: Universitatea Politehnica Timisoara, Universitatea de Medicina si Farmacie „Carol Davila” Bucuresti, Universitatea „Dunarea de Jos” Galati, Universitatea din Münster, Germania, Universitatea din Konstanz, Germania

Prorector pentru relatiile internationale (din 2008): Universitatea „Aurel Vlaicu” din Arad

Presedinte al Societatii Romane de Spectrometrie de Masa (din 2009)

#### 14. Specializari si calificari:

**Doctor in Fizica:** domeniul Fizica Atomului si Moleculei, directia: Spectrometrie de Masa.  
**Stagiul de cercetare postdoctoral:** Universitatea din Münster, Germania, Institutul de Fizica Medicala si Biofizica.

**Habilitare:** Profesor/Privat Dozent al Universitatii din Münster, Germania.

#### 15. Premii, distinctii:

**1995-1997:** Salariu de merit, Universitatea de Vest Timisoara

**2002:** Premiul „*Outstanding young researchers*” al Societatii Americane de Glicobiologie, Boston, MA, USA, Nov., 2002

**2005:** *Venia Legendi* in Biofizica, premiul *Frauenhabilitation*, Universitätsklinikum Münster, Germania, Apr., 2005

**2006:** Biographic essay, Who's Who in Science and Technology

**2007:** Salariu de merit, UAV, Arad

**2007:** premiul III al ANCS Cercetare de excelenta, pentru proiectul complex: DETERMINAREA EXPRESIEI GLICOSFINGOLIPIDELOR COMPLEXE IN SISTEMUL NERVOS CENTRAL PRIN DISPOZITIVE DE MICROCHIPURI INTEGRATE POLIFUNCTIONALE CUPLATE CU SPECTROMETRIE DE MASA DE INALTA PERFORMANTA

**2008:** Salariu de merit, UAV, Arad

**2008:** Premiul Academiei de Stiinte Medicale (VIASAN) pentru lucrarea: Investigation of novel under- and over-sulfated regions in decorin glycosaminoglycans by electrospray ionization collision-induced dissociation multistage mass spectrometry

**2010:** Gradatie de merit, UAV, Arad

#### 16. Activitatea didactica

- *La Universitatea din Muenster, Germania:* Cursuri, seminarii si lucrari de laborator “undergraduate studies”: curs: Biomedizinische Massenspektrometrie, curs: Glycobiotechnology; supervizare doctoranzi, masteranzi, diplomanzi
- *La Universitatea “Aurel Vlaicu” Arad:* Cursuri, seminarii si lucrari de laborator la studii universitare: Analize Instrumentale si Metode Fizico-Chimice de Analiza; conducere lucrari de diploma; membru in comisii de licenta
- *Erasmus Cooperation Agreements:*  
Universitatea din Konstanz-Universitatea “Aurel Vlaicu” Arad (Prof. Dr. Dr. h.c. Michael Przybylski-Prof. Dr. Alina Diana Zamfir);  
Universitatea din Münster-Universitatea “Aurel Vlaicu” Arad (Prof. Dr. Daniela Gabriele Seidler- Prof. Dr. Alina Diana Zamfir)
- *La Universitatea din Konstanz Germania (Visiting Professor):* Schwerpunktkurs: Proteomics; Schwerpunktkurs: Biological Mass Spectrometry

#### 17. Activitatea de cercetare

##### **Proiecte de cercetare stiintifica**

1.2003/2004 AT2 CNCSIS (tineret): *DEZVOLTAREA, IMPLEMENTAREA SI OPTIMIZAREA DE NOI TEHNICI SI METODE DE CUPLAJ DIRECT ELECTROFOREZA CAPILARA/SPECTROMETRIE DE MASA (CE/MS). APLICATII IN ANALIZE BIOFIZICE SI BIOMEDICALE.* Valoare: 30 milioane ROL.

##### **director**

2. 2004/2005 AT2 CNCSIS (tineret, continuare) valoare: 100 milioane ROL.

##### **director**

3. 2005/2008 CERCETARE DE EXCELENTA, CE.EX. NR. 14 MODUL I PROIECTE COMPLEXE: *STUDIUL PRIN SPECTROMETRIE DE MASA DE INALTA PERFORMANTA AL GANGLIOZIDELOR IN REGIUNI DEFINITE ALE CREIERULUI UMAN: COMPOZITIE, STRUCTURA SI INTERACTIUNI FUNCTIONALE.* valoare: 1.5 milioane RON.

**director**

4. 2006/2008 CERCETARE DE EXCELENTA, NR. 98/CE.EX. MODUL III: *INTEGRAREA UNUI CENTRU ROMAN DE SPECTROMETRIE DE MASA BIOMEDICALA DE INALTA PERFORMANTA IN ARIA DE CERCETARE INTERNATIONALA SI EUROPEANA,* valoare 200.000 RON **director**

5. 2006/2008 CERCETARE DE EXCELENTA, NR. 111/CE.EX. MODUL I: *DETERMINAREA EXPRESIEI GLICOSFINGOLIPIDELOR COMPLEXE IN SISTEMUL NERVOS CENTRAL PRIN DISPOZITIVE DE MICROCHIPURI INTEGRATE POLIFUNCTIONALE CUPLATE CU SPECTROMETRIE DE MASA DE INALTA PERFORMANTA,* valoare: 1.5 milioane RON

**Responsabil echipa partenera P1**

6. 2007/2010 PNCD II NR. 40401: *IDENTIFICAREA SI CARACTERIZAREA BIOMARKERILOR CANCERULUI DE CREIER EXPRIMATI IN SER SI FLUID CEFALORAHIDIAN PRIN METODE GLICOMICE MODERNE BAZATE PE SPECTROMETRIE DE MASA,* valoare: 2 milioane RON

**Responsabil echipa partenera P1**

7. 2002-2005 program special de cercetare (Sonderforschungsbereich, SFB) 492, proiectul Z2 *DEZVOLTAREA DE METODE SPECTROMETRICE DE MASA PENTRU ANALIZA COMPUSILOR DIN MATRICI EXTRACELULARE* finantat de catre Societatea Germana de Cercetare (Deutscheforschungsgemeinschaft, DFG) in valoare de 400.000 Euro.

**Membru-responsabil spectrometrie de masa: IMPB Uni Münster**

8. 2005-2008 program special de cercetare (Sonderforschungsbereich, SFB) 492, proiectul Z2 *DEZVOLTAREA DE METODE SPECTROMETRICE DE MASA PENTRU ANALIZA COMPUSILOR DIN MATRICI EXTRACELULARE* finantat de catre Societatea Germana de Cercetare (Deutscheforschungsgemeinschaft, DFG) (*reaprobat-continuate*) valoare: 400.000 Euro.

**Membru-asociat IMPB Uni Münster (colaborare externa)**

9. 2007 Grant NATO COLLABORATIVE PROGRAMMES SECTION; ADVANCED RESEARCH WORKSHOP „APPLICATION OF MASS SPECTROMETRY IN LIFE SAFETY”, valoare 38.000 Euro

**Co-director**

10. Bilateral Cooperative project: Romania-Germania; DFG/CNCSIS *CHARACTERIZATION OF GLYCOSAMINOGLYCAN STRUCTURAL MOTIFS AND N-GLYCAN STRUCTURES OF DECORIN-LIKE MOLECULE IN MELANOMA CELL LINES IN VITRO AND IN AN IN VIVO-LIKE SYSTEM AS POTENTIAL TARGETS FOR SUGAR MIMICS*

**Co-director**

11. 2009-2012 *FOLATE-BASED NANOBIODEVICES FOR INTEGRATED DIAGNOSIS/THERAPY TARGETING CHRONIC INFLAMMATORY DISEASES* FP7-NMP-2008-LARGE-2 CP-IP 228827-2 acronim: NANOFOL; valoare 380.000 Euro

**Membru (responsabil UAV-spectrometrie de masa)**

12. *ESTABLISHMENT AND VALIDATION OF DIAGNOSTIC SCREENING METHODOLOGY OF PATIENTS WITH LYSOSOMAL STORAGE DISEASES (LSDS) USING LC-MSMS TECHNOLOGY;* Contract No. 0915\_2009\_GN1P2; GENZYME CEE GMBH; val: 45.040 Euro

**Director**

## LISTA DE LUCRARI

**Prof. Dr. Alina-Diana ZAMFIR**

### **A) TEZA DE DOCTORAT**

**IONIZAREA PRIN ELECTROSPRAY IN SPECTROMETRIA DE MASA, UNIVERSITATEA BABES-BOLYAI, CLUJ-NAPOCA, 2001**

### **B) CARTI, CAPITOLE DE CARTI**

#### **CARTI, MANUALE PUBLICATE**

C1. Metode fizice de studiu al materialelor solide

M.A. Balint, **A. D. Zamfir**

Tipografia Universitatii de Vest din Timisoara, 1995

C2. Metode fizico-chimice de analiza

**A.D. Zamfir**, N. Dinca, "Aurel Vlaicu", Univ. Arad Ed., 2005, ISBN: 973-752-012-2

C3. Analiza instrumentala. Indrumator de lucrari practice de laborator

**A. D. Zamfir**, N. Dinca, F. Harja Ed. Univ. "Aurel Vlaicu", Arad, 2005

C4. Sisteme avansate de ionizare prin microchip pentru spectrometria de masa si aplicatii

**A. D. Zamfir**, Ed. Canonica, Cluj-Napoca, 2008, ISBN 978-973-88608-7-2

C5. Ionizarea prin electrospray în spectrometria de masa

**A. D. Zamfir**, Ed. Canonica, Cluj-Napoca, 2008, ISBN 978-973-88729-2-9

C6. Applications of Mass Spectrometry in Life Safety

C. Popescu, **A.D. Zamfir**, N. Dinca (editori)

Ed. *Springer Verlag*, Germania, ISBN 978-1-4020-8810-0 (Print) 978-1-4020-8811-7 (Online), 238 pg., 2008

#### **CAPITOLE DE CARTI**

Cc1. Mapping and sequencing of carbohydrates by fully automated chip-based nanospray quadrupole time-of-flight tandem mass spectrometry

**A.D.Zamfir**, A. Sterling, S. Vakhrushev, H. Niebel, M. Allen, J. Peter-Katalinić

in: *Advances in Mass Spectrometry*, Ashcroft, A.E., Brenton, G., Monaghan, J.J. Eds., Vol. 16, Elsevier, Amsterdam 2004, CD-ROM Suppl. No. 629

Cc2. Protein carbohydrate analysis: gel-based staining, liquid chromatography, mass spectrometry, and microarray screening

I. Shin, **A. D. Zamfir**, Bin Ye

in: *Methods in Molecular Biology: Tissue Proteomics-Pathways, Biomarkers, and Drug Discovery*, vol. 44, pg. 19-39, 2008; B. Liu Ed., Humana Press Inc., Totowa, N.J., USA

Cc3. Structural analysis of chondroitin sulfate disaccharides by electrospray ionization high capacity ion trap mass spectrometry

A. Muresan, M. Galusca, D. G. Seidler, N. Dinca, **A. D. Zamfir**

in: *Applications of Mass Spectrometry in Life Safety*, Ed. *Springer Verlag*, Germany ISBN 978-1-4020-8810-0; pg. 85-95; 2008

Cc4. Mapping and sequencing of gangliosides from anencephaly by electrospray ionization high capacity ion trap mass spectrometry

C. Mosoarca, Ž. Vukelić, **A.D. Zamfir**

in: Applications of Mass Spectrometry in Life Safety, Ed. *Springer Verlag*, Germany

ISBN 978-1-4020-8810-0; pg. 71-82; 2008

Cc5. Electrospray Ionization tandem mass spectrometric investigation of essential oils from *Melissa officinalis* (Labiatae Family) and *Pellargonium* ssp. (Geraniaceae Family)

C. Toma, I.B. Pancan, M. Chirita, F.M. Vata, **A.D. Zamfir**

in: Applications of Mass Spectrometry in Life Safety, Ed. *Springer Verlag*, Germany

ISBN 978-1-4020-8810-0; pg. 213-220; 2008

### **C) ARTICOLE STIINTIFICE IN REVISTE COTATE ISI CU FACTOR DE IMPACT**

L1. Capillary electrophoresis and off-line CE/ESI-QTOF tandem MS of carbohydrates

**A.D. Zamfir**, S. König, J. Althoff, J. Peter-Katalinic

*J. Chromatogr. A* 895, 291-299, 2000

L2. Glycoscreening by sheathless on-line capillary electrophoresis/electrospray quadrupole time-of flight tandem mass spectrometry

**A.D. Zamfir**, J. Peter-Katalinic

*Electrophoresis* 22, 2448-2457, 2001

L3. A capillary electrophoresis and off-line capillary electrophoresis/electrospray ionization quadrupole time-of-flight tandem mass spectrometry approach for ganglioside analysis

**A.D. Zamfir**, Ž. Vukelic, J. Peter-Katalinic

*Electrophoresis* 23, 2894-2903, 2002

L4. Structural characterization of chondroitin/dermatan sulfate oligosaccharides from bovine aorta by capillary electrophoresis and electrospray ionization quadrupole time-of-flight tandem mass spectrometry

**A. D. Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinic

*Rapid Commun. Mass Spectrom.* 16, 2015-2024, 2002

L5. Characterization of peptides by capillary zone electrophoresis and electrospray ionization quadrupole time-of-flight tandem mass spectrometry

L. Bindila, **A.D. Zamfir**, J. Peter-Katalinic

*J. Sep. Science* 15, 1101-1111, 2002

L6. Structural investigation of chondroitin/dermatan sulfate oligosaccharides from human skin fibroblast decorin

**A.D. Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinic

*Glycobiology* 11, 733-742, 2002

L7. Glucosylsulfones. Valuable syntons in obtaining C,O-glycosides

E. Sisu, V. Rusu, I. Sisu, **A.D. Zamfir**, J. Peter-Katalinic, C. Csunderlik

*Revista de Chimie* 53, 779-781, 2002

L8. The synthesis of lactose block - a valuable synton in glycosphingolipids synthesis

E. Sisu, I. Sisu, **A.D. Zamfir**, N. Dinca, C. Csunderlik, V. Rusu, J. Peter-Katalinic

*Revista de Chimie* 53, 648-651 2002

L9. Sialylation analysis of O-glycosylated sialylated peptides from urine of patients suffering from Schindler's disease by Fourier transform ion cyclotron resonance mass spectrometry and sustained off-resonance irradiation collision-induced dissociation

M. Froesch, L. Bindila, **A.D. Zamfir**, J. Peter-Katalinic

*Rapid Commun. Mass Spectrom.* 17, 2822-2832, 2003

L10. New glycosyl derivatives of 5-substituted-3-mercapto-1,2,4-triazole

E. Sisu, A. Lascu, V. Bercean, M.T. Caproiu, **A.D. Zamfir**, I. Sisu, C. Neanu, C. Csunderlik, V. Rusu, J. Peter-Katalinić

*Revista de Chimie* 54, 181-183, 2003

L11. Fully automated chip-based mass spectrometry for complex carbohydrate system analysis

**A.D. Zamfir**, S. Vakhrushev, A. Sterling, H. Niebel, M. Allen, J. Peter-Katalinić

*Anal. Chem.* 76, 2046-2054, 2004

L12. On-line sheathless capillary electrophoresis/nanoelectrospray ionization-tandem mass spectrometry for the analysis of glycosaminoglycan oligosaccharides

**A.D. Zamfir**, D. Seidler, E. Schonherr, H. Kresse, J. Peter-Katalinić

*Electrophoresis* 25, 2010-2016, 2004

L13. Fully automated chip-based nanoelectrospray tandem mass spectrometry of gangliosides from human cerebellum

**A.D. Zamfir**, Z. Vukelic, L. Bindila, R. Almeida, A. Sterling, M. Allen, J. Peter-Katalinić

*J. American Soc. Mass Spectrom.* 15, 1649-1657, 2004

L14. Off-line capillary electrophoresis/fully automated chip-based electrospray ionization quadrupole time-of-flight mass spectrometry and tandem mass spectrometry for glycoconjugate analysis

L. Bindila, R. Almeida, A. Sterling, M. Allen, J. Peter-Katalinić, **A.D. Zamfir**

*J. Mass Spectrom.* 39, 1190-1201, 2004

L15. Coupling of fully automated chip electrospray to Fourier transform ion cyclotron resonance mass spectrometry for high-performance glycoscreening and sequencing

M. Froesch, L. Bindila, G. Baykut, M. Allen, J. Peter-Katalinić, **A.D. Zamfir**

*Rapid Commun. Mass Spectrom.* 18, 3084-3092, 2004

L16. A thin chip microsyringe system coupled to Fourier transform ion cyclotron resonance mass spectrometry for glycopeptide screening

L. Bindila, M. Froesch, N. Lion, Ž. Vukelic, J. Rossier, H. Girault, J. Peter-Katalinić, **A.D. Zamfir**

*Rapid Commun. Mass Spectrom.* 18, 2913-2920, 2004

L17. O<sub>2</sub>An cross-ring cleavage as a general diagnostic tool for glycan assignment in glycoconjugate mixtures

S. Y. Vakhrushev, **A.D. Zamfir**, J. Peter-Katalinić

*J. American Soc. Mass Spectrom.* 15, 1863-1868, 2004

L18. Capillary electrophoresis-mass spectrometry for glycoscreening in biomedical research

**A.D. Zamfir**, J. Peter-Katalinić

*Electrophoresis* 25, 1949-1963, 2004

L19. Chip electrospray mass spectrometry for carbohydrate analysis

**A.D. Zamfir**, L. Bindila, N. Lion, M. Allen, H. H. Girault, J. Peter-Katalinić,

*Electrophoresis* 26, 3650-3673, 2005

20. Screening and sequencing of complex sialylated and sulfated glycosphingolipid mixtures by negative ion electrospray Fourier transform ion cyclotron resonance mass spectrometry

Ž. Vukelic\*, **A.D. Zamfir**\*, L. Bindila, M. Froesch, S. Usuki, R. Yu, J. Peter-Katalinić

\*equal contribution

*J. American Soc. Mass Spectrom.* 16, 571-580, 2005

L21. Thin chip microsyringe system coupled to quadrupole time-of-flight mass spectrometer for glycoconjugate analysis

**A.D. Zamfir**, N. Lion, Ž. Vukelic, L. Bindila, J. Rossier, H. Girault, J. Peter-Katalinić  
*Lab. Chip* 5, 298-307, 2005

L22. Sheathless reverse polarity capillary electrophoresis/electrospray mass spectrometry for the analysis of underivatized glycans

L. Bindila, J. Peter-Katalinić, **A.D. Zamfir**  
*Electrophoresis* 26, 1488-1499, 2005

L23. Determination of *Mammillaria gracillis* N-glycan patterns by ESI Q-TOF mass spectrometry

B. Balen, **A.D. Zamfir**, S. Vakhrushev, M. Krsnik-Rasol, J. Peter-Katalinić  
*Croat. Chem. Acta* 78, 463-477, 2005

L24. Electrospray ionization quadrupole time-of-flight tandem mass spectrometric analysis of hexamethylene diamine-modified maltodextrin and dextran

E. Sisu, Wouter T.E. Bosker, Wilhem Norde, Teddy M. Slaghek, Jan W. Timmermans, J. Peter-Katalinić, M. A. Cohen-Stuart, **A.D. Zamfir**  
*Rapid. Commun. Mass Spectrom.* 20, 209-218, 2006

L25. Glycoproteomic survey of *Mammillaria gracillis* tissues grown in vitro

B. Balen, M. Krsnik-Rasol, **A.D. Zamfir**, J. Milosevic, S.Y. Vakhrushev, J. Peter-Katalinić  
*J. Proteome Res.* 5, 1658-66, 2006

L26. Analysis of human hippocampus gangliosides by fully-automated chip-based nanoelectrospray tandem mass spectrometry

Z. Vukelic, M. Zarei, J. Peter-Katalinić, **A.D. Zamfir**  
*J. Chromatogr. A.* 1130, 238-45, 2006

L27. Copper-coated microsyringe interface for on-line sheathless capillary electrophoresis electrospray mass spectrometry of carbohydrates

**A.D. Zamfir**, N. Dinca, E. Sisu, J. Peter-Katalinić  
*J. Sep. Science* 29, 414-22, 2006

L28. Identification of a high-affinity-binding oligosaccharide by (+) nanoelectrospray quadrupole time-of-flight tandem mass spectrometry of a noncovalent enzyme-ligand complex

F.H. Cederkvist\*, **A.D. Zamfir**\*, S. Bahrke, V.G. Eijssink, M. Sorlie, M. Peter, J. Peter Katalinić, M.G. Peter; \*equal contribution  
*Angew. Chem. Int. Ed. Engl.* 45, 2429-34, 2006

L29. Human gliosarcoma-associated ganglioside composition is complex and highly distinctive as evidenced by high-performance mass spectrometric determination and structural characterization

Ž. Vukelić, S. Kalanj Bogнар, M. Froesch, L. Bindila, B. Radić, M. Allen, J. Peter Katalinić, **A.D. Zamfir**  
*Glycobiology* 17, 504-515, 2007

L30. N-glycan heterogeneity of cactus glycoproteins induced by tissue culture conditions

B. Balen · M. Krsnik-Rasol, · **A.D. Zamfir**, · I. Zadro, · S. Vakhrushev, · J. Peter-Katalinić  
*J. Biomolec. Techn.* 18, 150-160, 2007

L31. Galactosaminoglycan function and oligosaccharide structure determination

D. G. Seidler, J. Peter-Katalinić, **A.D. Zamfir**  
*Scient. World J.* 19, 233-241, 2007

L32. Recent advances in sheathless interfacing of capillary electrophoresis and electrospray ionization mass spectrometry

**A. D. Zamfir**

*J. Chromatogr. A* 1159, 2–13, 2007

L33. Analysis of oversulfation in a dermatan sulfate oligosaccharide fraction from bovine aorta by nanoelectrospray ionization quadrupole time-of-flight and Fourier-transform ion cyclotron resonance mass spectrometry

M.Morman\*, **A. D. Zamfir\***, D.G.Seidler, H.Kresse, J.Peter-Katalinić; \*equal contribution

*J. American. Soc. Mass Spectrom.* 18, 179-187, 2007

L34. A novel approach for ganglioside structural analysis based on electrospray multiple stage mass spectrometry

**A. D. Zamfir**, Ž.Vukelić, A. Schneider, E. Sisu, N. Dinca, A. Ingendoh

*J. Biomolec. Techn.* 18, 188–193, 2007

L35. Synthesis and characterization of some new 2-hydroxy-N-(3-trifluoromethyl-phenyl)-benzamide derivatives

I. Ienascu, A.X. Lupea, I. Popescu, S. Tomas, **A.D. Zamfir**

*Revista de Chimie* 59, 56-59, 2008

L36. Synthesis and characterization of some new 2-hydroxy-N-(2-trifluoromethyl-phenyl)-benzamide derivatives

I. Ienascu, A.X. Lupea, I. Popescu, C. Mosoarca, **A.D. Zamfir**

*Rev. Roum. Chem.* 53, 273-276, 2008

L37. Enhanced electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry of long-chain polysaccharides

I. Perdivara, E. Sisu, I. Sisu, N. Dinca, K.B. Tomer, M. Przybylski, **A.D. Zamfir**

*Rapid Commun. Mass Spectrom.* 22, 773-782, 2008

L38. Coupling of fully automated chip-based electrospray ionization to high capacity ion trap mass spectrometer for ganglioside analysis

R. Almeida, C. Mosoarca, M. Chirita, V. Udrescu, N. Dinca, Ž. Vukelić, M. Allen, **A. D. Zamfir**

*Anal. Biochem.* 378, 43–52, 2008

L39. Glycosylation analysis of glycoproteins and proteoglycans using CE–MS strategies

S. Amon, **A.D. Zamfir**, A. Rizzi

*Electrophoresis*, 29, 2485-2507, 2008

L40. Protein carbohydrate Analysis: gel-based staining, liquid chromatography, mass spectrometry, and microarray screening

I. Shin, **A.D. Zamfir**, B.Ye

*Methods Mol. Biol.* 441, 19-39, 2008

L41. Electrospray ionization tandem mass spectrometric investigation of *Melissa officinalis* oil

C. Toma, I. B. Pancan, M. Chirita, A. D. Zamfir

*Farmacia* 1, 510-517, 2008

L42. Synthesis and structural characterization of amino-functionalized polysaccharides

I. Sisu, V. Udrescu, C. Flangea, S. Tudor, N. Dinca, L. Rusnac, **A.D. Zamfir**, E.Sisu

*Cent. Eur. J. Chem.* 7, 66-73, 2009

- L43. Fully automated chip-based negative mode nanoelectrospray mass spectrometry of fructooligosaccharides produced by heterologously expressed levansucrase from *Pseudomonas syringae* pv. tomato DC3000  
T. Visnapuu, **A. D. Zamfir**, C. Mosoarca, M. D. Stanescu, T. Alamäe  
*Rapid Commun. Mass Spectrom.* 23, 1337–1346, 2009
- L44. Analysis of novel over- and undersulfated glycosaminoglycan sequences by enzyme cleavage and multiple stage mass spectrometry  
**A. D. Zamfir**, C. Flangea, A. Serb, E. Sisu, N. Dinca, P. Bruckner, D. G. Seidler  
*Proteomics* 9, 3435–3444, 2009
- L45. High-throughput analysis of gangliosides in defined regions of fetal brain by fully automated chip-based nanoelectrospray ionization multistage mass spectrometry  
A. Serb, C. Schiopu, C. Flangea, Ž. Vukelić, E. Sisu, L. Zagrean, **A. D. Zamfir**  
*Eur. J. Mass Spectrom.* 15, 541–553, 2009
- L46. Discrimination of GalNAc (4S/6S) sulfation sites in chondroitin sulfate disaccharides by chip-based nanoelectrospray multistage mass spectrometry  
C. Flangea, A. Serb, C. Schiopu, S. Tudor, E. Sisu, D. G. Seidler, **A. D. Zamfir**  
*Cent. Eur. J. Chem.* 7, 752–759, 2009
- L47. Top-down glycolipidomics: fragmentation analysis of ganglioside oligosaccharide core and ceramide moiety by chip-nanoelectrospray collision-induced dissociation MS<sup>2</sup>-MS<sup>6</sup>  
A. Serb, C. Schiopu, C. Flangea, E. Sisu, **A. D. Zamfir**  
*J. Mass Spectrom.* 44, 1434–1442, 2009
- L48. Determination of sulfation pattern in brain glycosaminoglycans by chip-based electrospray ionization ion trap mass spectrometry  
C. Flangea, C. Schiopu, E. Sisu, A. Serb, M. Przybylski, D. G. Seidler, **A. D. Zamfir**  
*Anal. Bioanal. Chem.* 395, 2489–2498, 2009
- L49. Determination of ganglioside composition and structure in human brain hemangioma by chip-based nanoelectrospray ionization tandem mass spectrometry  
C. Schiopu, A. Serb, F. Capitan, C. Flangea, E. Sisu, Z. Vukelic, M. Przybylski, **A. D. Zamfir**  
*Anal. Bioanal. Chem.* 395, 2465–2477, 2009
- L50. Qualitative and quantitative analysis of gallic acid in *Alchemilla vulgaris*, *Allium ursinum*, *Acorus calamus* and *Solidago virga-aurea* by chip-electrospray ionization mass spectrometry and high performance liquid chromatography  
D. Condrat, C. Mosoarca, **A. D. Zamfir**, F. Crişan, M. Szabo, A. Lupea  
*Cent. Eur. J. Chem.* 8, 530–535, 2010
- L51. Modern developments in mass spectrometry of chondroitin and dermatan sulfate glycosaminoglycans  
E. Sisu, C. Flangea, A. Serb, **A. D. Zamfir**  
*Amino Acids*, DOI 10.1007/s00726-010-0682-4 (in press), 2010
- L52. Glycosylation analysis of proteins, proteoglycans and glycolipids by CE-MS  
**A. D. Zamfir**, C. Flangea, F. Altmann, A. M. Rizzi  
*Adv. Chromatogr.* (in press uncorrected proofs), 2010
- L53. Application of chip-based nanoelectrospray ion trap mass spectrometry to compositional and structural analysis of gangliosides in human fetal cerebellum  
C. Mosoarca, C. Novaconi, R. Ghiulai, Ž. Vukelić, **A. D. Zamfir**  
*Anal. Lett.* (in press uncorrected proofs), 2010

## D) LUCRARI PREZENTATE LA CONGRESE SI CONFERINTE DE SPECIALITATE INTERNATIONALE

P1. Capillary Electrophoresis & Mass Spectrometry of Complex Carbohydrates

**A.D.Zamfir**, S. König, J. Althoff, J.Peter-Katalinić

Oral Presentation: 13th Int.Symp.High Performance Capillary Electrophoresis and Related Microscale Techniques, Saarbrücken, Germany, Feb.20-24, 2000, Book of Abstracts, p. 136

P2. Capillary Electrophoresis and ESI-QTOF Mass Spectrometry for Identification of Carbohydrates

**A.D.Zamfir**, S. König, S., J. Althoff, J.Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, Berlin, Feb 27 - March 1 2000, Book of Abstracts, p.142

P3. Strategies for Sequencing Complex Oligosaccharides by Mass Spectrometry

M. Jovanović, B.Maček, D. Šagi, **A.D.Zamfir**, S. König, J. Peter-Katalinić

Poster: VII-th International Summer Course on Biophysics, Rovinj, Croatia, Sept.14-25, 2000

P4. High Sensitivity Separation and Analysis by Capillary Electrophoresis and Nano-Electrospray Mass Spectrometry

**A.D.Zamfir**, S. König, J. Peter-Katalinić

Poster: International Congress on Nanobiotechnology, Munster, Germany, Sept 27-29, 2000

P5. Screening of Complex Glycopeptide Mixtures by on-line Capillary Electrophoresis/Electrospray Ionization Time-of-Flight Mass Spectrometry

**A.D.Zamfir**, S. König, D. Schindler, J. Peter-Katalinić

Poster: 5th Conference of the American Society of Glycobiology, Boston, MA, USA, Nov 8-12, 2000

Abstract published in Glycobiology, 10, 10, 1102, 2000

P6. Glycoscreening by on-line Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, J. Peter-Katalinić

Oral Presentation: HPCE 2001, 14th Int. Symposium On Microscale Separations and Analysis, incl. Genomics and Proteomics, Boston, MA, USA, January 13-18, 2001, Book of Abstracts, p.215

P7. Identification of Complex Glycopeptide Mixtures by On-line Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, München, Germany, March 4-7 2001, Book of Abstracts, p.155

P8. Capillary Electrophoresis and Off-line Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-Flight Mass Spectrometry of Gangliosides,

Ž.Vukelic, **A.D.Zamfir**, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, München, Germany, March 4-7, 2001, Book of Abstracts, p.156

P9. Rapid mapping of bacterial peptido-glycans

**A.D.Zamfir**, J. Peter-Katalinić, A. Beckedorf

Oral Presentation: Technologie Transfer Meeting "Infektionskrankheiten", Frankfurt Conference Center, 21 May 2001

P10. Sheathless CE/ESI-QTOF-MS interface for identification of carbohydrates

**A.D.Zamfir**, J. Peter-Katalinić

Oral Presentation: the 49th American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, May, 27- 31, Chicago, 2001

P11. Glycoproteomics of Hereditary Diseases

J. Peter-Katalinić, T. Marquardt, D. Šagi, **A.D.Zamfir**, D. Schindler

Oral Presentation: Fifth International Symposium on Mass Spectrometry in the Health & Life Sciences: Molecular & Cellular Proteomics, San Francisco, CA., USA, Aug. 9-12, 26-30, 2001

P12. Capillary Electrophoresis/Electrospray Ionization Time-of-Flight Mass Spectrometry for the Analysis of Neutral and Negatively Charged Carbohydrates

**A.D.Zamfir**, J. Peter-Katalinić

Poster: 1<sup>st</sup> Summer Course on Mass Spectrometry in Biotechnology and Medicine, Dubrovnik, Croatia, Sept. 16-21, 2001

P13. Practical Approach for Identification of Complex Ganglioside Mixtures by High Performance Capillary Electrophoresis-Nano-electrospray Quadrupole Time-of-Flight Tandem Mass Spectrometry

Z. Vukelić, **A.D.Zamfir**, J. Peter-Katalinić

Poster: 1<sup>st</sup> Summer Course on Mass Spectrometry in Biotechnology and Medicine, Dubrovnik, Croatia, Sept. 16-21, 2001

P14. Nanoscale Analysis of Biomolecules by on-line Sheathless Capillary Electrophoresis-Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, J. Peter-Katalinić

Poster: International Congress on Nanobiotechnology, Münster, Germany, Sept. 24-25, 2001

P15. Identification of O-Glycans in Complex Mixtures from Urine of Patients Suffering from Schindler's Disease by on-line CE-ESI-QTOF MS

**A.D.Zamfir**, D. Schindler, J. Peter-Katalinić

Poster: 6<sup>th</sup> Conference of the American Society of Glycobiology, San Francisco, Ca. USA, Nov. 15-20, 2001

P16. Structural identification of Glycosaminoglycans from Bovine Aorta by High performance Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-flight Tandem Mass Spectrometry

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Oral Presentation: German Society for Mass Spectrometry Conference, Heidelberg, March 3-6, 2002, V30

P17. Structural Characterization of Insect Glycosphingolipids by Nano-Electrospray Ionization Quadrupole time-of-flight Tandem Mass Spectrometry

A. Brodarac, J. Müthing, **A.D.Zamfir**, V. Jäger, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, Heidelberg, March 3-6, 2002, P33

P18. Characterization of Anionic Glycosaminoglycan Oligosaccharides Derived from Shark Cartilage Degradation by Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, G. Nareyeck, H. Kresse, J. Peter-Katalinić

Oral presentation: HPCE 2002, 15th Int. Symposium on Microscale Separations and Analysis, incl. Genomics and Proteomics, Stockholm, Sweden, April 13-19, 2002

P19. High Performance Capillary Electrophoresis/ Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry: Application to Glycosaminoglycans from Human Decorin

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Oral Presentation: Proc. of the 50<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Orlando, Fl. USA, June 2- 7, 2002, O709

P20. Novel Method for Mapping and Sequencing of Gangliosides by Capillary Electrophoresis/Electrospray Ionization Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, Z. Vukelic, J. Peter-Katalinić

Poster: Proc. of the 50<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Orlando, Fl. USA, June 2- 7, 2002, P712

P21. Glycomics and Mass Spectrometry

**A.D.Zamfir**, D. Sagi, M. Mormann, J. Peter-Katalinić

Poster: International Conference on Carbohydrates, Cairns, Australia, 6-11 July 2002

P22. Capillary Electrophoresis and Nanoelectrospray Ionization Mass Spectrometry on Peptides

L. Bindila, **A.D.Zamfir**, J. Peter-Katalinić

Oral Presentation: International Anniversary Conference, Timisoara, Romania, July 5, 2002, Pp11

P23. On-line Sheathless Capillary Electrophoresis-Nanoelectrospray Mass Spectrometry for Bioanalyses

L. Bindila, **A.D.Zamfir**, J. Peter-Katalinić

Poster: International Conference of Nanoanalytics and Advanced Materials, Timisoara, Romania, 19-21 Sept., 2002

P24. Massenspektrometrische Untersuchung von Glycosaminoglykanen

J. Peter-Katalinić, **A.D.Zamfir**, M. Mormann, D. Seidler, H. Kresse

Poster: SFB 492 Symposium, Universität Münster, Oct. 3, 2002

P25. Identification of Eicosasaccharide Structures in Glycosaminoglycans from Human Decorin by online CE/ESI-MS and tandem MS

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Poster: 7th Conference of the American Society of Glycobiology, Boston, MA, USA, Nov. 9-13, 2002

P26. Identification of Oligosaccharides in Glycosaminoglycans from Human Decorin by on-line CE/ESIMS and tandem MS

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Poster: XIII<sup>th</sup> Joint Meeting on Glycobiology, Raestfeld, Germany, Nov. 21-23, 2002

P27. Novel Strategies Employing on-line Sheathless Capillary Electrophoresis Nanoelectrospray Ionization Mass Spectrometry for Glycoscreening

Invited lecture: **A.D.Zamfir**, J. Peter-Katalinić

International Conference of Physics, Timisoara, Romania, Nov.28-29, 2002

P28. Advanced of CE/tandem MS Glycoscreening in Biomedical Research

J. Peter-Katalinić **A.D.Zamfir**

Oral Presentation: HPCE 2003, 16th Int. Symposium on Microscale Separations and Analysis, Jan.16-23, 2003, San Diego, CA, USA

P29. Considerations of CE-QTOF and FTICR MS for Glycomics of Glycosaminoglycans

J. Peter-Katalinić, **A.D.Zamfir**, M. Mormann, D. Seidler, H. Kresse  
Oral Presentation: 5<sup>th</sup> Iglar MS Tage, Universität Innsbruck, Austria, Feb. 19-21, 2003

P30. Capillary Electrophoresis/Electrospray Ionization Mass Spectrometry of Glycoconjugates  
**A.D.Zamfir**

Invited lecture: Workshop on Mass Spectrometry of Glycoconjugates at the German Society for Mass Spectrometry Conference, Münster, Germany, 9-12 March, 2003

P31. CE/VE-MS/MS for Structural Analysis of Glycosaminoglycans from Human Skin Fibroblast Decorin

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Oral Presentation: German Society for Mass Spectrometry Conference, Münster, Germany, 9-12 March, 2003

P32. Sheathless CE/ESI-MS and tandem MS for Biomedical Analysis

**A.D.Zamfir**, J. Peter-Katalinić

Invited lecture: International Symposium on Instrumentalized Analytical Chemistry, Düsseldorf, 25-27 March, 2003

P33. Glycomics of Glycosaminoglycans by Capillary Electrophoresis/Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, D. Seidler, H. Kresse, J. Peter-Katalinić

Oral Presentation: Proc. of the 51<sup>st</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Montreal, Canada, 8-12 June, 2003

P34. MS to MS/MS Automatic Switching for Glycoscreening in Congenital Disorders of Glycosylation

S. Vakhrushev, **A.D.Zamfir**, J. Peter-Katalinić

Poster: Proc. of the 51<sup>st</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Montreal, Canada, 8-12 June, 2003

P35. Mapping of O-Glycosylated Amino Acids Related to Schindler Disease by Negative Ion Nano ESI FTICR and SORI CID at 9.4 T

M. Froesch, **A.D.Zamfir**, J. Peter-Katalinić

Poster: Proc. of the 51<sup>st</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Montreal, Canada, 8-12 June, 2003

P36. CE-QTOF and FTICR MS for Glycomics of Glycosaminoglycans

**A.D.Zamfir**, D. Seidler, H. Kresse, M. Mormann, J. Peter-Katalinić

Poster: 16<sup>th</sup> International Mass Spectrometry Conference, Edinburgh, Scotland, U.K., Aug. 31-Sept 5, 2003

P37. Mapping and Sequencing of Carbohydrates by Fully Automated Chip-Based Nanospray Quadrupole Time-of-Flight Tandem Mass Spectrometry

**A.D.Zamfir**, A. Sterling, S. Vakhrushev, H. Niebel, M. Allen, J. Peter-Katalinić

Poster: 16<sup>th</sup> International Mass Spectrometry Conference, Edinburgh, Scotland, U.K., Aug. 31-Sept 5, 2003; in: Advances in Mass Spectrometry (Ashcroft, A.E., Brenton, G., Monaghan, J.J. Eds.), Vol. 16, Elsevier, Amsterdam 2004, CD-ROM Suppl. No. 629

P38. Capillary Electrophoresis/Electrospray Ionization Mass Spectrometry for Glycoconjugate Analysis

**A.D.Zamfir**, J. Peter-Katalinić

Poster: 9th International Summer School on Biophysics and Supramolecular Structure, Rovinj, Croatia, 14-26 Sept. 2003

P39. Identification of Glycosaminoglycan Glycoforms by Mass Spectrometry

**A.D.Zamfir**, D. Seidler, H. Kresse, M. Mormann, J. Peter-Katalinić

Poster: Charite-Universitätsmedizin Berlin, Nov. 14, 2003

P40. Identification of Sialylated and Sulfated Glycosphingolipids by FTICR MS and SORI CID Tandem MS

L. Bindila, M. Froesch, **A.D.Zamfir**, S. Usuki, R. K. Yu, J. Peter-Katalinić, Z. Vukelic

Poster: XIV<sup>th</sup> Joint Meeting on Glycobiology, Lille, France, 20-22 Nov. 2003

P41. Analysis and Sequencing of Sialylated Glycopeptides from Urine of Patients Suffering from Schindler Disease by NanoESI FTICR SORI CID Tandem MS

M. Froesch, L. Bindila, **A.D.Zamfir**, J. Peter-Katalinić

Poster: XIV<sup>th</sup> Joint Meeting on Glycobiology, Lille, France, 20-22 Nov. 2003

P42. Combination of Computational Algorithm and Fully Automated Chip-Based Nanospray Quadrupole Time-of-Flight Tandem Mass Spectrometry for Analysis of Complex Glycoconjugate Mixtures

S. Vakhrushev, **A.D.Zamfir**, A. Sterling, H. Niebel, M. Allen, J. Peter-Katalinić

Oral Presentation: XIV<sup>th</sup> Joint Meeting on Glycobiology, Lille, France, 20-22 Nov. 2003

P43. Potentials of Modern Mass Spectrometric Methods in Neuroscience Research and Neuropathological Diagnostics: Mapping and Sequencing of Brain Gangliosides

Z. Vukelic, V. Metelmann-Strupat, **A.D.Zamfir**, L. Bindila, M. Froesch, J. Peter-Katalinić

Invited lecture: 1st Croatian Neuroscience Meeting, Zagreb, Croatia, Nov. 21-22, 2003

P44. Glycomics of Glycosaminoglycans

**A.D.Zamfir**, D. Seidler, H. Kresse, M. Mormann, J. Peter-Katalinić

Poster: 8th Conference of the American Society of Glycobiology, San Diego, CA, USA, 3-6, 2003

P45. Negative Ion NanoESI FTICR MS of Glycosphingolipids

L. Bindila, M. Froesch, **A.D.Zamfir**, S. Usuki, Z. Vukelic, R. K. Yu, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, Leipzig, Germany, 7-10 March, 2004

P46. Microheterogeneity of N-Glycoforms in Bovine Serum Transferrin

J. Milosevic, P. Rehulka, L. Bindila, **A. D. Zamfir**, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, Leipzig, Germany, 7-10 March, 2004

P47. Implementation of Fully Automated Chip-Based NanoElectrospray Mass Spectrometry in Glycomics

**A.D.Zamfir**, A. Sterling, R. Almeida, M. Allen, J. Peter-Katalinić

Oral Presentation: German Society for Mass Spectrometry Conference, Leipzig, Germany, 7-10 March, 2004

P48. Ionization and Fragmentation of Highly Sialylated Glycosphingolipids by FTICR MS

M. Froesch, L. Bindila, Z. Vukelic, **A.D.Zamfir**, J. Peter-Katalinić

Poster: 7<sup>th</sup> European FTMS Conference, Konstanz, Germany, Conference, 28 March-01 April, 2004

P49. FTICR of Glycoconjugates

M. Mormann, M. Froesch, L. Bindila, Z. Vukelic, **A.D.Zamfir**, J. Peter-Katalinić

Invited lecture: 7<sup>th</sup> European FTMS Conference, Konstanz, Germany, 28 March-01 April, 2004

P50. Fully Automated Chip-Based NanoElectrospray Tandem Mass Spectrometry: A Novel Concept in Glycomics

**A.D.Zamfir**, R. Almeida, A. Sterling, M. Allen, J. Henion, J. Peter-Katalinić

Oral presentation: Proc. of the 52<sup>nd</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, 23-28 May, 2004

P51. Off-line Capillary Electrophoresis/Fully Automated Chip NanoESI QTOF MS for Glycoconjugate Analysis

R. Almeida, L. Bindila, **A.D.Zamfir**, A. Sterling, M. Allen, J. Peter-Katalinić

Poster: Proc. of the 52<sup>nd</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, 23-28 May, 2004

P52. FTICR MS of Sialylated Gangliosides from Human Brain Biopsies

M. Froesch, Z. Vukelic, L. Bindila, **A.D.Zamfir**, J. Peter-Katalinić

Poster: Proc. of the 52<sup>nd</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, 23-28 May, 2004

P53. Structural and Quantitative Analysis of Gangliosides from Gliosarcoma and Meningioma

S. Kalanj-Bognar, Ž. Vukelic, **A.D.Zamfir**, L. Bindila, M. Froesch, J. Peter-Katalinić

Poster: Congress of the Croatian Society for Biochemistry and Molecular Biology, Bjelolasica, Croatia, September 30-October 2, 2004

P54. Novel Trends in N- and O-Glycoproteomics

J. Peter-Katalinić, L. Bindila, M. Froesch, M. Mormann, D. Šagi, S. Vakhrushev, **A.D.Zamfir**

Invited lecture: 3<sup>rd</sup> Swedish Proteomics Society Symposium, Lund, October 2-5, 2004

P55. Fully-Automated chip-Based NanoElectrospray Tandem Mass Spectrometry of Gangliosides from Human Cerebellum

**A.D.Zamfir**, L. Bindila, R. Almeida, A. Sterling, Ž. Vukelic, M. Allen, J. Peter-Katalinić

Invited lecture: Advion User Meeting, 21<sup>th</sup> LC/MS Montreux Symposium, Montreux, Switzerland, November 10-12, 2004

P56. Implementation of Chip Electrospray Mass Spectrometry in Structural Glycobiology

M. Froesch, L. Bindila, Z. Vukelic, J. Peter-Katalinić, **A. D. Zamfir**

Oral presentation: 15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Wageningen, Niederlande, November 29-30, 2004, Glycoconjugate J. 21, 398, 2004

P57. Coupling of Fully Automated ChipESI to FT-ICR Mass Spectrometry for High-Performance Glycoscreening and Sequencing

M. Froesch, L. Bindila, G. Baykut, M. Allen, J. Peter-Katalinić, **A.D.Zamfir**

Poster: 15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Wageningen, Niederlande, November 29-30, 2004, Glycoconjugate J. 21, 404, 2004

P58. Thin Polymer Chip Coupled to Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for Glycopeptide Screening

L. Bindila, M. Froesch, N. Lion, J. S. Rossier, H. H. Girault, **A.D.Zamfir**, J. Peter-Katalinić

Poster: 15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Wageningen, Niederlande, November 29-30, 2004, Glycoconjugate J. 21, 400, 2004

P59. Thin chip polymer microsyrays for glycoconjugate analysis of Schindler disease patients

**A.D.Zamfir**

Invited lecture: Jahrestagung der Schweizerischen Proteomgesellschaft, SPS'04 Inselehospital Bern, Switzerland, December 6-8, 2004

P60. Chip-Based Ionization Mass Spectrometry for Glycoscreening in Biomedical Research

**A.D.Zamfir**, Ž. Vukelic, L. Bindila, M. Froesch, J. Peter-Katalinić

Oral presentation: 18th International Symposium on Microscale Bioseparations, New Orleans, LA, USA, February 12-17, 2005

P61. Determination of ganglioside expression in human gliosarcoma by chip electrospray tandemmass spectrometry

**A.D.Zamfir**, L. Bindila, Ž. Vukelic, J. Peter-Katalinić

Poster: German Society for Mass Spectrometry Conference, Rostock, Germany, 6-9 March, 2005

P62. High-performance glycoscreening and sequencing by chip-enhanced ESI-FTICR spectrometry

M. Froesch, L. Bindila, G. Baykut, N. Lion, H. Girault, M. Allen, J. Peter-Katalinić, **A.D.Zamfir**

Oral presentation: German Society for Mass Spectrometry Conference, Rostock, Germany, 6-9 March, 2005

P63. On-line reverse polarity capillary electrophoresis coupled to electrospray quadrupole time-of flight mass spectrometry for analysis of glycopeptides from Schindler's disease

L. Bindila, J. Peter-Katalinić, **A.D.Zamfir**

Poster: German Society for Mass Spectrometry Conference, Rostock, Germany, 6-9 March, 2005

P64. FTICR mass spectrometry for glycoconjugate analysis

**A.D.Zamfir**

Invited lecture, GSF, München, May 10, 2005

P65. Challenges in mass spectrometry-based glycomics

**A.D.Zamfir**

Invited lecture, University of Konstanz, September 13, 2005

P66. Implementation of microfluidics/electrospray mass spectrometry in glycolipidomics: determination of ganglioside expression in human brain tumors

**A.D.Zamfir**, Ž. Vukelic, S. Kalanj-Bognar, J. Peter-Katalinić

Oral presentation: Proc. of the 53<sup>rd</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, San Antonio, Texas, USA, 5-9 June, 2005

P67. Biomarker discovery in human gliosarcoma by fully automated chip-based mass spectrometry

R. Almeida, Ž. Vukelic, L. Bindila, S. Kalanj-Bognar, J. Peter-Katalinić, **A.D.Zamfir**

LC/MS symposium, Ithaca, USA, July 20-22, 2005

P68. Determination of ganglioside pattern in human hippocampus by fully automated chip-based nanoelectrospray mass spectrometry

M. Zarei, Ž. Vukelic, J. Peter-Katalinić, **A.D.Zamfir**

Poster: 16<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Glykobiologie“, Hannover, Germany, October, 27-29, 2005

P69. Structural analysis of sulfated and O-acetylated glycopeptides in urine of Schindler disease patients by on-line capillary electrophoresis/mass spectrometry

L. Bindila, **A.D.Zamfir**, J. Peter-Katalinić

Poster: 16<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereining voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Hannover, Germany, October, 27-29, 2005

P70. Capillary electrophoresis and chip-based mass spectrometry

**A.D.Zamfir**

Invited lecture: Chemistry Institute of Romanian Academy, Timisoara, Romania, 15.12.2005

P71. Lab-on-a-chip: a new perspective in analytical and instrumental chemistry

**A.D.Zamfir**

Invited lecture: Chemistry Institute of Romanian Academy, Timisoara, Romania, 22.12.2005

P72. Analysis of human hippocampus gangliosides by fully-automated chip-base nanoelectrospray tandem mass spectrometry

**A.D.Zamfir**, M. Zarei, Z. Vukelic, J. Peter-Katalinić

Poster: 19<sup>th</sup> International Symposium on Microscale Bioseparations, Amsterdam, The Netherlands, January 22-26, 2006

P73. Implementation of microfluidic chip MS in glycolipidomics. Application to biomarker discovery

**A.D.Zamfir**, J. Peter-Katalinić

Oral presentation: 19<sup>th</sup> International Symposium on Microscale Bioseparations, Amsterdam, The Netherlands, January 22-26, 2006

P74. Multimethodological mass spectrometry approach for compositional and structural analysis of human brain gangliosides

M. Zarei, S. Vakhrushev, Z. Vukelić, A. Schneider, A. Ingendoh, J. Peter-Katalinić, **A.D.Zamfir**

Oral presentation: German Society for Mass Spectrometry Conference, Mainz, Germany, 5-9 March, 2006

P75. Human gliosarcoma-associated gangliosides: a high performance mass spectrometric determination

Z. Vukelić, S. Kalanj-Bognar, E. Sisu, I. Grozescu, **A.D.Zamfir**

Oral presentation: International Conference on Perspectives in Central Nervous System Malignancies, Budapest, April, 7-8, 2006

P76. Fully automated chip-based nanoelectrospray tandem mass spectrometry for the determination of noncovalent protein-carbohydrate interaction

**A.D.Zamfir**, M. Peter, J. Peter-Katalinić

Oral Presentation: Proc. of the 52<sup>nd</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, Seattle, Washington, USA, 27-30 May, 2006

P77. Human glioblastoma gangliosides-mass spectrometry investigation

**A.D.Zamfir**

Invited lecture: International Conference on Neuronal Excitability, Bucharest, Romania, Sept. 1-3, 2006

P78. Fully automated chip-based electrospray mass spectrometry-a novel concept in glycomics for biomedical research

**A.D.Zamfir**, E. Sisu, Ž. Vukelić, C. Flangea, I. Grozescu, J. Henion, J Peter-Katalinić

Oral presentation: International NanoBioSpec Conference, Cluj-Napoca, Sept. 3-6, 2006

P79. High performance electrospray and matrix-assisted laser desorption/ionization time-of-flight mass spectrometry of modified maltodextrins and dextrans

E. Sisu, I. Sisu, I. Scurtu, N. Dinca, A. Serb, C. Neanu, J. Peter-Katalinić, **A.D.Zamfir**  
Poster presentation: International NanoBioSpec. Conference, Cluj-Napoca, Sept. 3-6, 2006

P80. Identification of a high-affinity binding oligosaccharide by (+) nanoelectrospray quadrupole time-of-flight mass spectrometry of a non-covalent enzyme-ligand complex

**A.D.Zamfir**, F. H. Cederkvist, S. Bahrke, V.G.H. Eijssink, M. Sørli, J. Peter-Katalinić, M.G. Peter

Invited lecture: 7<sup>th</sup> European Chitin Society Conference, Montpellier, France, Sept. 6-9, 2006

P81. Determination of ganglioside pattern in human hippocampus by chip-based nanoelectrospray ionization tandem mass spectrometry

Z. Vukelić, M. Zarei, J. Peter-Katalinić, **A.D.Zamfir**

Poster presentation: International Conference of the Croatian Biochemical Society, Vodice, Croatia, Oct. 4-9, 2006

P82. Chip electrospray mass spectrometry for glycoscreening in biomedical research

**A.D.Zamfir**

Invited lecture: International Conference of the Croatian Biochemical Society, Vodice, Croatia, Oct. 4-9, 2006

P83. Glycomics and systems biology: new targets for microfluidics-mass spectrometry

**A.D.Zamfir**

Oral Presentation: International Conference Research and Education in Innovation Era, Arad, Romania, Nov. 9-12, 2006

P84. Z. Vukelić, C. Ratiu, A. Serb, C. Flangea, E. Sisu, I. Grozescu, **A.D.Zamfir**

High capacity ion trap multiple stage sequencing of human brain gangliosides

Poster Presentation: International Conference Research and Education in Innovation Era, Arad, Romania, Nov. 9-12, 2006

P85. Novel mass spectrometric strategies for determination of protein O- and N-glycosylation

**A.D.Zamfir**

Invited lecture, University of Konstanz, Germany, Nov. 21, 2006

P86. Mass spectrometry of carbohydrates

**A. D. Zamfir**

Invited lecture: University of Konstanz, Germany, Nov. 23, 2006

P87. A Novel method for structural analysis of human brain gangliosides based on nanoelectrospray multiple stage sequencing mass spectrometry

**A. D. Zamfir**, Ž. Vukelić, A. Schneider, E. Sisu, A. Ingendoh

Invited Keynote lecture: Vienna MS Forum, Vienna, Austria, Feb. 19-22, 2007

P88. Structural analysis of human decorin dermatan sulfate by nanoelectrospray ionization quadrupole time-of-flight tandem mass spectrometry

F. Harja, C. Flangea, D. G. Seidler, N. Dinca, E. Sisu, **A. D. Zamfir**

Poster: German Society for Mass Spectrometry Conference, Bremen, Germany, 11-14 March, 2007

P89. Mapping and sequencing of gangliosides from defined regions of human brain by nanoelectrospray ionization quadrupole time-of-flight tandem mass spectrometry

A. F. Serb, F. Harja, Ž. Vukelić, N. Dinca, E. Sisu, **A. D. Zamfir**

Poster: German Society for Mass Spectrometry Conference, Bremen, Germany, 11-14 March, 2007

P90. Electrospray ionization mass spectrometry: principles and biomedical applications

**A.D. Zamfir**

Invited lecture: Institute for Physiological Chemistry, May, 19, 2007, Muenster, Germania,

P91. Structural analysis of chondroitin/dermatan sulfate glycosaminoglycans from human decorin by electrospray ionization multiple stage mass spectrometry

D. G. Seidler, C. Flangea, A. Schneider, A. Serb, E. Sisu, A. Ingendoh, **A. D. Zamfir**

Oral presentation: 54<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, June 2-7, 2007, Indianapolis, Indiana, USA

P92. Electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry of long chain polysaccharides

I. Perdivara, E. Sisu, I. Sisu, M. Przybylski, **A. D. Zamfir**

Poster presentation: 54<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, June 2-7, 2007, Indianapolis, Indiana, USA

P93. Principles and applications of electrospray ionization mass spectrometry

**A. D. Zamfir**

Invited Plenary lecture: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P94. Applications of fully automated chip-based electrospray in biological mass spectrometry

**A. D. Zamfir**

Invited Tutorial lecture: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P95. NanoESI QTOF and MALDI TOF MS of modified maltodextrins and dextrans

V. Udrescu, Ioana Sisu, N. Dinca, A. Lascu, C. Neanu E. Sisu, L. Rusnac, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P96. Mapping and sequencing of gangliosides from anencephaly by electrospray ionization high capacity ion trap mass spectrometry

C. Mosoarca, Ž. Vukelić, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P97. Determination of decorin glycosaminoglycan oversulfation by electrospray ionization quadrupole time-of-flight tandem mass spectrometry

C. Flangea, A. F. Serb, E. Sisu, N. Dinca, **A. D. Zamfir**, D. G. Seidler

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P98. Compositional and structural analysis of long chain polysaccharides by electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry

Irina Perdivara, E. Sisu, I. Sisu, M. Przybylski, K. B. Tomer, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P99. Comparative study upon ganglioside pattern in defined regions of human cerebrum using nanoelectrospray ionization quadrupole time-of-flight mass spectrometry

A. F. Serb, C. Flangea, N. Dinca, E. Sisu, F. Harja, **A. D. Zamfir**, Ž. Vukelić

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P100. Mass spectrometric determination of ganglioside expression and structure in human neocortex

M. I. Chirita, A. F. Serb, E. Sisu, Ž. Vukelić, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P101. Microspray high capacity ion trap multiple stage mass spectrometry of polysaccharides functionalized with aromatic amines

I. Sisu, E. Sisu, N. Dinca, Vasile Rusu, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P102. Structural analysis of chondroitin/dermatan sulfate disaccharides by electrospray ionization high capacity ion trap mass spectrometry

A. Muresan, M. Galusca, D. G. Seidler, N. Dinca, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P103. A novel approach for investigation of unusual sulfation motifs in chondroitin/dermatan sulfate from a specific proteoglycan by multiple stage mass spectrometry

**A. D. Zamfir**, E. Sisu, C. Flangea, A. F. Serb, N. Dinca, P. Bruckner, D. G. Seidler

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P104. Electrospray ionization mass spectrometry of novel o-hydroxy-benzamide derivatives

I. M.C. Ienascu, C. Mosoarca, I. M. Popescu, A. X. Lupea, **A. D. Zamfir**

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P105. Electrospray ionization tandem mass spectrometric investigation of *Melissa officinalis* oil

D. Tibeia, F. Vata, M. Chirita, I. B. Pancan, **A. D. Zamfir**, C. C. Toma

Poster: 1<sup>st</sup> Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety under NATO auspices, Sept. 23-27, 2007, Herculane, Romania

P106. Determination of unusual sulfation motifs in chondroitin/dermatan sulfate from a specific proteoglycan by multiple stage mass spectrometry

D. G. Seidler, E. Sisu, C. Flangea, A. F. Serb, N. Dinca, P. Bruckner, **A. D. Zamfir**

Oral presentation: 18<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Nov. 5-8, 2007, Lille, France

P107. Determination of ganglioside expression and structure in human neocortex by electrospray ionization multiple stage mass spectrometry

M. I. Chirita, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: 18<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Nov. 5-8, 2007, Lille, France

P108. Survey upon ganglioside expression in anencephaly vs. normal fetal brain by electrospray ionization multiple stage mass spectrometry

C. Mosoarca, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: 18<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, Nov. 5-8, 2007, Lille, France

P109. Fully automated chip-based electrospray ionization multistage CID/ETD mass spectrometry for glycoconjugate analysis

**A. D. Zamfir**, V. Udrescu, R. Almeida, F. Harja, N. Dinca, L. Rusnac, M. Allen

Invited keynote lecture: Austrian Mass Spectrometry Forum, Feb. 18-22, 2008, Vienna, Austria

P110. Glycomics of brain glycosaminoglycans by chip ESI MS<sup>n</sup>

C. Flangea, C. Mosoarca, A. F. Serb, E. Sisu, D. G. Seidler, **A.D. Zamfir**

Poster: Germany Society for Mass Spectrometry Conference, DGMS, March 3-6, 2008, Giessen, Germany

P111. High throughput brain ganglioside mapping and multistage sequencing by fully automated chip-based nanoelectrospray high capacity ion trap mass spectrometry

A. F. Serb, C. Mosoarca, C. Flangea, E. Sisu, Ž. Vukelić, **A. D. Zamfir**

Poster: Germany Society for Mass Spectrometry Conference, DGMS, March 3-6, 2008, Giessen, Germany

P112. Novel mass spectrometric methods and protocols for protein glycosylation analysis

**A.D. Zamfir**

Invited lecture, April 28-May 5, 2008, Konstanz, Germany

P113. Fully automated chip-based electrospray ionization multistage mass spectrometry of long chain polysaccharides functionalized with aromatic amines

V. Udrescu, E. Sisu, I. Sisu, L. Rusnac, M. Allen, R. Almeida, **A.D. Zamfir**

Poster presentation: 56<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, June 1-6, 2008, Denver, Colorado, USA

P114. Coupling of fully automated chip-based electrospray ionization to high capacity ion trap mass spectrometer for high throughput ganglioside analysis

C. Mosoarca, M. Chirita, R. Almeida, M. Allen, M. Allen, **A.D. Zamfir**

Poster presentation: 56<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, June 1-6, 2008, Denver, Colorado, USA

115. Coupling of NanoMate Robot to High Capacity Ion Trap Mass Spectrometer for Glycoconjugate Analysis

M. Chirita, A. Serb, E. Sisu, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

116. Mass Spectrometric Mapping and Sequencing of Gangliosides Expressed in Normal Adult Human Cerebellum

A. Ienin, E. Şişu, Ž. Vukelić, **Alina D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

117. Investigation of volatile oil extracted from *Melissa officinalis* by electrospray ionization tandem mass spectrometry

C.C. Toma, I. B. Pancan, M. Chiriță, **A. D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

118. Identification of sulfation pattern in mouse brain glycosaminoglycans by high performance electrospray ionization mass spectrometry

C. Flangea, C. Mosoarca, A. F. Serb, E. Sisu, D.G. Seidler, **A.D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

119. Synthesis and characterization of maltodextrins modified with aromatic amines

I. Sisu, E. Sisu, **A. D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

120. A novel method to enhance mass spectrometric analysis of long chain polysaccharides  
V. Udrescu, L. Rusnac, I. Sisu, E.Sisu, R. Almeida, **A. D. Zamfir**

Poster presentation: Conferinta Internationala de Chimie, 29-31 Mai 2008, Timisoara, Romania

121. Determination and structural characterization of anencephaly-associated gangliosides by advanced mass spectrometry based on chip electrospray ionization and multistage sequencing.

Poster presentation: **A. D. Zamfir**, C. Mosoarca, C.Flangea, Z. Vukelić, E. Sisu

6<sup>th</sup> FENS Forum of European Neuroscience Societies, July 12-18 2008, Geneva, Switzerland

122. Comparative assay on ganglioside differential expression in defined regions of human brain by modern mass spectrometric methods

A. F. Serb, C. Flangea, Z. Vukelić, E. Sisu, L. Zagrean, **A. D. Zamfir**

Poster presentation: 6<sup>th</sup> FENS Forum of European Neuroscience Societies, July 12-18 2008, Geneva, Switzerland

123. Glycomics of human fetal brain gangliosides by chip electrospray ionization multistage mass spectrometry

**A. D. Zamfir**

Invited lecture: 24<sup>th</sup> International Carbohydrate Symposium July 27 - August 1 2008, Oslo, Norway

124. Analysis of oversulfation in a dermatan sulfate octasaccharide from human skin fibroblast decorin by nanoelectrospray ionization quadrupole time-of-flight tandem mass spectrometry

C.Flangea, A. Serb, F.Harja, D. G. Seidler, N. Dinca, E. Sisu, **A. D. Zamfir**

Poster presentation: 5<sup>th</sup> International Conference on Condensed Matter Physics, July 16-18, 2008, Timisoara, Romania

125. High performance mass spectrometric investigation of glycosphingolipid differential expression in human brain

A. F. Serb, C. Flangea, F. Harja, I. Sisu, Z.Szabadai, N.Dinca, E. Sisu, **A. D. Zamfir**

Poster presentation: 5<sup>th</sup> International Conference on Condensed Matter Physics, July 16-18, 2008, Timisoara, Romania

126. Lab-on-a chip: a novel concept in glycomics

**A. D. Zamfir**

Oral presentation: 5<sup>th</sup> International Conference on Condensed Matter Physics, July 16-18, 2008, Timisoara, Romania

127. NanoMate/HCT MS o noua tehnica pentru analiza carbohidratilor cu aplicatii in biomedicina

**A. D. Zamfir**, V. Udrescu, C. Flangea, E. Sisu, N. Dinca, L. Rusnac

Oral presentation: Simpozionul National al Academiei de Stiinte Medicale din Romania, 28-30 Sept. 2008, Sinaia, Romania

128. Compositional and structural determination of brain gangliosides from mass spectrometric data by software-assisted assignment

C. Schiopu, E. Sisu, Z. Vukelic, **A.D. Zamfir**

Oral presentation: Neuroscience Workshop-Conferinta Internationala ANCS: Diaspora in Cercetarea Stiintifica Romaneasca, 17-19 Sept. 2008, Bucuresti, Romania

129. Fetal brain glycolipids exhibit filogenetic and topologic specificity as revealed by fully automated chip-electrospray multistage ion trap mass spectrometry  
A. Serb, E. Sisu, Z. Vukelic, L. Zagrean, **A.D. Zamfir**  
Oral presentation: Neuroscience Workshop-Conferinta Internationala ANCS: Diaspora in Cercetarea Stiintifica Romaneasca, 17-19 Sept. 2008, Bucuresti, Romania
130. Profiling of gangliosides expressed in human hemangioma by fully-automated chip-based nanoelectrospray tandem mass spectrometry  
A. Serb, C. Schiopu, C.Flangea, E.Sisu, S. Tudor, Ž. Vukelić, **A.D. Zamfir**  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
131. Identification of sialylated and sulfated glycosphingolipids by Fourier transform ion cyclotron resonance mass spectrometry  
**A.D. Zamfir**, Ž. Vukelić  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
132. Investigation of unusual sulfation motifs in chondroitin/dermatan sulfate from a specific proteoglycan by multistage mass spectrometry  
**A.D. Zamfir**, D.G. Seidler  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
133. Computer software for interpretation of brain ganglioside mass spectra  
C. Schiopu, E. Sisu, S. Nadaban, C. Fifor, Z. Vukelic, **A.D. Zamfir**  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
134. Investigation of glycosaminoglycan sulfation pattern by high performance chip electrospray multistage mass spectrometry  
C.Flangea, A. Serb, F.Harja, S. Tudor, I. Pancan, E. Sisu, D. G. Seidler, **A. D. Zamfir**  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
135. A novel procedure for derivatization of long chain polysaccharides to enhance fully automated chip-based nanoelectrospray multistage mass spectrometric analysis  
E. Sisu, I. Sisu, C.Flangea, V. Udrescu, N. Dinca, **A. D. Zamfir**  
Poster presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
136. Identification of a novel glycosaminoglycan sequence in human decorin by electrospray ionization multistage ion trap mass spectrometry  
**A. D. Zamfir**, E. Sisu, C.Flangea, A. Serb, D. G. Seidler  
Oral presentation: 2<sup>nd</sup> International Symposium Research and Education in Innovation Era, 20-21 Nov., 2008, Arad, Romania
137. Potentials of a fully automated chip-based nanoelectrospray ionization high capacity trap mass spectrometry in neuroglycolipidomics: characterization of ganglioside composition specificity in selected fetal human brain regions  
Ž.Vukelić, D. Marinčić, A.Serb, **A. D. Zamfir**  
Invited lecture: Austrian Mass Spectrometry Forum, Feb. 17-19, 2009, Vienna, Austria
138. Novel saccharide sequence analysis of glycosaminoglycans by enzyme cleavage and multistage MS: unusual exuronic acid sulfation in decorin  
C. Flangea, C. Schiopu, E. Sisu, N. Dinca, D. G. Seidler, **A. D. Zamfir**

Oral presentation: Austrian Mass Spectrometry Forum, Feb. 17-19, 2009, Vienna, Austria

139. A new Mass Spectrometry Society – Perspectives and plans

**A.D. Zamfir**

Invited lecture: Anniversary Conference, 20 years of Analytical Chemistry in Konstanz, March 5-7, 2009, Konstanz, Germany

140. Chip-based nanoelectrospray multistage mass spectrometry in neuroglycolipidomics: high-throughput analysis of gangliosides in defined regions of fetal brain

A.F. Serb, C. Schiopu, D. Marinčić, Ž. Vukelić, **A.D. Zamfir**

Oral presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

141. Investigation of novel under- and over-sulfated regions in decorin glycosaminoglycans by electrospray ionization collision-induced dissociation multistage mass spectrometry

C. Flangea, E. Sisu, N. Dinca, D.G. Seidler, **A. D. Zamfir**

Poster presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

142. A novel procedure for derivatization of long chain polysaccharides to enhance chip-based nanoelectrospray tandem mass spectrometric analysis

C. Flangea, I.Sisu, N. Dinca, E. Sisu, **A. D. Zamfir**

Poster presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

143. Chip-based nanoelectrospray high capacity ion trap mass spectrometry of gangliosides from precentral vs. postcentral gyrus of fetal human brain

D.Marinčić, Ž.Vukelić, C. Schiopu, M. Kos, **A. D. Zamfir**

Poster presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

144. Screening and sequencing of fructooligosaccharides produced by heterologously expressed levansucrase from *Pseudomonas syringae* pv. tomato DC3000 by fully automated chip based mass spectrometry

C. Mosoarca, T. Visnapuu, T. Alamäe, **A. D. Zamfir**

Poster presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

145. High-throughput mass spectrometric determination of ganglioside expression and structure in human fetal cerebellum

R. M. Ghiulai, C. Mosoarca, C. Novaconi, D. Marinčić, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: 42<sup>nd</sup> German Society for Mass Spectrometry Conference, Konstanz, Germany, March 8-11, 2009

146. Chip-based mass spectrometry for glycomics and glycoproteomics

**A. D. Zamfir**

Invited lecture: University of Konstanz, May 13, 2009

147. Analysis of brain chondroitin/dermatan sulfate glycosaminoglycans by fully automated chip-based nanoelectrospray multistage mass spectrometry

C. Flangea, E. Sisu, D. G. Seidler, **A. D. Zamfir**

Poster presentation: 57<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, May 31-June 6, 2009, Philadelphia, USA

148. Compositional and structural analysis of gangliosides in human cerebrospinal fluid by chip-based nanoelectrospray ionization tandem mass spectrometry

A. Serb, C. Schiopu, D. Marinčić, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: 57<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, May 31-June 6, 2009, Philadelphia, USA

149. Combining fully-automated chip-nanoelectrospray ion trap mass spectrometry and GanglioSoft 1.2 computer software for identification of human hemangioma gangliosides

C.Schiopu, A. Serb, E. Sisu, Ž. Vukelić, **A. D. Zamfir**

Poster presentation: 57<sup>th</sup> American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics, May 31-June 6, 2009, Philadelphia, USA

150. Glycolipidomics by chip-based multistage mass spectrometry

**A.D. Zamfir**

Invited lecture: International Workshop on high performance mass spectrometry 2009 - New developments and applications in life sciences, August 26-28, 2009, Konstanz, Germany

151. A novel method for glycosaminoglycan analysis based on enzyme cleavage and chip nanoelectrospray ion trap mass spectrometry

C. Flangea, E. Sisu, D.G. Seidler, **A. D. Zamfir**

Invited lecture: International Workshop on high performance mass spectrometry 2009 - New developments and applications in life sciences, August 26-28, 2009, Konstanz, Germany

152. Glycomics of proteoglycans by fully automated chip-based nanoelectrospray multistage mass spectrometry

**A.D. Zamfir**

Invited keynote lecture: 18<sup>th</sup> International Mass Spectrometry Conference, Aug.30-Sept. 5, 2009, Bremen, Germany

153. Glycomics of brain glycosaminoglycans by chip-based electrospray ionization ion trap multistage mass spectrometry

C. Flangea, E. Sisu, D. G. Seidler, Ž. Vukelić, **A.D. Zamfir**

Poster presentation: 3<sup>rd</sup> Croatian Neuroscience Meeting, Sept. 26-29, 2009, Zadar, Croatia

154. Gangliosides of adult human brain precentral and postcentral gyrus: a chip-mass spectrometry based composition and structure analysis

J.Jeličić, V. Ivkovic, D. Marincić, **A.D. Zamfir**, Ž. Vukelic

Poster presentation: 3<sup>rd</sup> Croatian Neuroscience Meeting, Sept. 26-29, 2009, Zadar, Croatia

155. Characterization of ganglioside composition of selected fetal human brain regions combining chip-based mass spectrometry and thin-layer chromatography

D.Marinčić, **A. D. Zamfir**, M. Kos, Ž. Vukelić

Poster presentation: 3<sup>rd</sup> Croatian Neuroscience Meeting, Sept. 26-29, 2009, Zadar, Croatia

156. Top-down glycolipidomics by fully automated chip-based nanoelectrospray collision-induced dissociation MS2-MS6

C.Schiopu, A. Serb, C. Flangea, E.Sisu, **A.D. Zamfir**

Invited keynote lecture: Austrian Mass Spectrometry Forum, Feb. 15-18, 2010, Vienna, Austria

157. Structural analysis of chondroitin/dermatan sulfate oligosaccharides from biglycan by fully automated chip-nanoelectrospray ion trap mass spectrometry

C. Flangea, E.Sisu, D. G. Seidler, **A.D. Zamfir**

Poster presentation: 43<sup>rd</sup> German Society for Mass Spectrometry Conference, March 3-6, 2010, Halle, Germany

158. High throughput sequencing of polysialylated gangliosides by chip-nanoelectrospray multistage collision-induced dissociation

C.Schiopu, A. Serb, C. Flangea, E.Sisu, **A.D. Zamfir**

Poster presentation: 43<sup>rd</sup> German Society for Mass Spectrometry Conference, March 3-6, 2010, Halle, Germany

159. Applications of SAW-ESI MS to structural and bioaffinity characterization of  $\beta$  – amyloid peptides

A. R. Muresan, S. Slamnoiu, C.Vlad, **A. D. Zamfir**, M. Przybylski

Poster presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

160. Affinity binding study of A $\beta$  –autoantibody CDR peptide to A $\beta$ -(12-40) peptide

M. Galusca, C.Cozma, M. Uysal, **A.D. Zamfir**, M. Przybylski

Poster presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

161. Composition and structure analysis of gangliosides from adult and fetal human brain precentral and postcentral gyrus by combining mass spectrometry and thin-layer chromatography

D.Marinčić, J. Jeličić, V. Ivković, C. Schiopu, M. Kos, **A.D. Zamfir**, Ž. Vukelić

Poster presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

162. Compositional and structural analysis of gangliosides in defined regions of human brain by fully automated chip-nanoelectrospray multistage mass spectrometry

A. F. Serb, C. Flangea, E. Sisu, Ž.Vukelić, **A. D. Zamfir**

Oral Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

163. Fully automated chip based nanoelectrospray mass spectrometry of fructooligosaccharides synthesized by LscA on sucrose substrates

C. Mosoarca, T. Visnapuu, T. Alamae, A. Chiriac, **A. D. Zamfir**

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

164. Structural analysis of ganglioside expressed in different human matrices by chip-based nanoelectrospray ionization multistage mass spectrometry

A.Lenin, R.Oprean, E. Sisu, Z. Vukelic, **A.D. Zamfir**

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

165. Synthesis and mass spectrometric characterization of bolaform glycoderivatives with unsaturated spacer

M. Pascariu, C. Mosoarca, **A.D. Zamfir**, L. M. Rusnac

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

166. Screening and sequencing of fetal cerebellum gangliosides by NanoMate high-capacity ion trap mass spectrometry

R. M. Ghiulai, C. Mosoarca, C.R. Novaconi, Ž. Vukelić, **A.D. Zamfir**

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

167. Chip-based nanoelectrospray ionization mass spectrometry of Biglycan chondroitin/dermatan sulfate oligosaccharides

C.Flangea, R. Aldea, E. Sisu, D. Seidler, **A.D. Zamfir**

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

168. A novel derivatization method to enhance chip-nanoelectrospray analysis of long chain polysaccharides

V. L. Udrescu, E. Sisu, I. Sisu, N. Dinca, I. Pancan, L. Rusnac, **A.D. Zamfir**

Poster Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

169. Analysis of heterooligofructans produced by levansucrase proteins using chip-based nanoelectrospray mass spectrometry

T. Visnapuu, C. Mosoarca, **A. D. Zamfir**, T. Alamäe

Oral Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

170. Top-down fragmentation of complex brain gangliosides

A. Serb, C. Flangea, C. Schiopu, E. Sisu, Ž. Vukelić, **A.D. Zamfir**

Oral Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

171. Diagnosis for Fabry disease by fluorometry and mass spectrometry

C. Cozma, S. Dilly, M. Galusca, **A. D. Zamfir**, M. Przybylski

Oral Presentation: 1<sup>st</sup> International Conference of the Romanian Society for Mass Spectrometry, April 25-29, 2010, Sinaia, Romania

172. Advanced chip-based mass spectrometry reveals a specific ganglioside expression in human brain hemangioma vs. normal brain tissue

A. Serb, C. Schiopu, E. Sisu, A. M. Zagrean, Z. Vukelic, **A.D. Zamfir**, L. Zagrean

Poster Presentation: 7<sup>th</sup> FENS Forum of European Neuroscience Society, Amsterdam, Netherlands, July 3-7, 2010

173. Chip-based nanoESI multistage mass spectrometry in neuroglycolipidomics: characterization of ganglioside composition specificity in defined regions of fetal human brain

L. Zagrean, A. Serb, V. Udrescu, E. Sisu, A. M. Zagrean, V. Belengeanu, Z. Vukelic, **A.D. Zamfir**,

Poster Presentation: 7<sup>th</sup> FENS Forum of European Neuroscience Society, Amsterdam, Netherlands, July 3-7, 2010