PERSONAL INFORMATION

Name	**Mirela SEDIC** (born BAUMAN)
Job position	Assistant Professor
Institution	University of Rijeka Department of Biotechnology
Address	Radmile Matejčić 2, 51000 Rijeka, Croatia
Phone	+385 91 613 5720
Web	http://www.biotech.uniri.hr/en/projects.html
E-mail	**msedic@biotech.uniri.hr**

WORK EXPERIENCE

• Dates (from – to)	1st April 2011 – onwards
• Name and address of employer	University of Rijeka Department of Biotechnology, Radmile Matejčić 2, 51 000 Rijeka, Croatia
• Dates (from – to)	1st November 2003 – 31st March 2011
• Name and address of employer	Ruđer Bošković Institute, Division of Molecular Medicine, Bijenicka cesta 54, 10 000 Zagreb, Croatia
• Dates (from – to)	1st April 1997 – 31st December 2003
• Name and address of employer	University of Zagreb Faculty of Medicine, Department of Clinical Chemistry and Biochemistry, Šalata 3, 10 000 Zagreb, Croatia

EDUCATION

• Date	15th November 2006
• Name and type of organization providing education and training	University of Zagreb Faculty of Science
• Principal subjects/occupational skills covered	Thesis title:" Biological effects of new amidino-substituted-benzimidazo [1,2-a] quinoline on colon tumour cell lines grown *in vitro*"
• Title of qualification awarded	PhD in Biochemistry
• Dates (from – to)	10th March 2000
• Name and type of organization providing	University of Zagreb Faculty of Science

education and training	
• Principal subjects/occupational skills covered	Thesis title:" "Influence of growth conditions on the sphingoid bases levels and composition in the biomass of the *Candida lipolytica 33* yeast"
• Title of qualification awarded	MSc in Biochemistry
• Dates (from – to)	22nd April 1996
• Name and type of organization providing education and training	University of Zagreb Faculty for Food Science and Biotechnology
• Principal subjects/occupational skills covered	Thesis title:" "Mathematical model of yeasts' metabolism under oxygen saturation conditions"
• Title of qualification awarded	BSc in Biotechnology

METHODOLOGICAL TRAINING

July 1994 - Department of Plant Science, University College Cork, Cork, Ireland

August 1995 – Department of Biochemistry and Molecular Biology, University College London, London, UK

July/August 1996 – Institut für Medizinische Genetik, Universitätsklinikum Charité, Medizinische Fakultät der Humboldt-Universität zu Berlin, Berlin, Germany

April 2001 – Department of Biochemistry, Chandler Medical Center, College of Medicine, University of Kentucky, Lexington, USA

November 2003 – "New Tools for Protein Identification and Expression Profiling" workshop, Applied Biosystems Training Centre, Darmstadt, Germany

September 2004 - Functional Genomics Center Zürich, Zürich, Switzerland

January 2005 – "Proteomics 2-DE Training Program", BIO-RAD Training Centre, Prague, Czech Republic

April 2005 – "Proteomics Road Show" workshop, BIO-RAD, Budapest, Hungary

June 2005 – "Clinical Applications of LC/MS/MS" workshop, Applied Biosystems Training Centre, Darmstadt, Germany

July 2009 "3rd Summer Course on Mass Spectrometry in Biotechnology and Medicine", Centre for Advanced Academic Studies, Dubrovnik, Croatia

December 2009 - Practical Course "Quantitative Proteomics 2009", Institute of Technology, University of Tartu, Tartu, Estonia

October 2012 - Seed Course in Biomedical Imaging MS, FOM Institute AMOLF, Amsterdam (2nd – 4th October 2012)

MOTHER TONGUE CROATIAN

OTHER LANGUAGES

ENGLISH
(Awarded *First Certificate in English* in June 1994, and *Certificate in Advanced English* in June 1995 by the University of Cambridge ESOL Examinations)

- Reading skills: excellent
- Writing skills: excellent
- Verbal skills: excellent

CURRENT RESEARCH INTERESTS

Proteomics and glycoproteomics study of laryngeal cancer
Urinary proteome profiling for biomarker discovery in idiopathic nephrotic syndrome in children
Proteomics study of age-related macular degeneration
Role of sphingolipid metabolism and signalling in colon cancer pathogenesis and treatment
Biological activities and mechanisms of action of newly synthesized anti-cancer compounds

FP7 EXPERT EVALUATOR

HEALTH.2012.

HEALTH.2013.

REVIEWER FOR SCIENTIFIC JOURNALS

Hormone and Metabolic Research (2004)
Journal of Cancer Research and Clinical Oncology (2007)
Bioinformatics and Biology Insights (2007)
Polycyclic Aromatic Compounds (2010)
Current Medicinal Chemistry (2011 - 2012)

PATENTS

CINDRIC M., KRALJEVIC PAVELIC S., HOCK K., **SEDIC M**. „PROTEOMICS PROFILES AND DETECTION METHODS OF PROTEINS IN BLOOD PLASMA FOR THE DIAGNOSIS OF SAHH DEFICIENCY“, WORLD INTELLECTUAL PROPERTY ORGANIZATION, WO/2010/052510, 14.05.2010.

LIST OF THE MOST RELEVANT PUBLICATIONS

Benci K, Mandić L, Suhina T, **Sedić M**, Klobučar M, Kraljević Pavelić S, Pavelić K, Wittine K, Mintas M. Novel coumarin derivatives

containing 1,2,4-triazole, 4,5-dicyanoimidazole and purine moieties: synthesis and evaluation of their cytostatic activity. **Molecules**. 2012 Sep 12;17(9):11010-25.

Sedic M, Pavelic SK, Hock K. Using functional genomics to identify drug targets: a Dupuytren's disease example. **Methods Mol Biol.** 2012;910:15-31.

Sedic M, Kraljevic Pavelic S, Cindric M, Vissers JP, Peronja M, Josic D, Cuk M, Fumic K, Pavelic K, Baric I. Plasma biomarker identification in S-adenosylhomocysteine hydrolase deficiency. **Electrophoresis**. 2011 Aug;32(15):1970-5.

Wittine K, Babić MS, Košutić M, Cetina M, Rissanen K, Pavelić SK, Paravić AT, **Sedić M**, Pavelić K, Mintas M. The new 5- or 6-azapyrimidine and cyanuric acid derivatives of l-ascorbic acid bearing the free C-5 hydroxy or C-4 amino group at the ethylenic spacer: CD-spectral absolute configuration determination and biological activity evaluations. **Eur J Med Chem**. 2011 Jul;46(7):2770-85.

Kraljevic Pavelic S**, Sedic M,** Bosnjak H, Spaventi S, Pavelic K. Metastasis: new perspectives on an old problem. **Mol Cancer.** 2011 Feb 22;10:22.

Pavelić SK, **Sedić M**, Poznić M, Rajić Z, Zorc B, Pavelić K, Balzarini J, Mintas M. Evaluation of in vitro biological activity of O-alkylated hydroxamic derivatives of some nonsteroidal anti-inflammatory drugs. **Anticancer Res**. 2010 Oct;30(10):3987-94.

Sedic M, Jurisic D, Stanec Z, Hock K, Pavelic K, Kraljevic Pavelic S. Functional genomics in identification of drug targets in Dupuytren's contracture. **Front Biosci.** 2010 Jan 1;15:57-64.

Kraljevic Pavelic S, **Sedic M,** Hock K, Vucinic S, Jurisic D, Gehrig P, Scott M, Schlapbach R, Cacev T, Kapitanovic S, Pavelic K. An integrated proteomics approach for studying the molecular pathogenesis of Dupuytren's disease. **J Pathol.** 2009;217(4):524-33.

Sedic M, Poznic M, Gehrig P, Scott M, Schlapbach R, Hranjec M, Karminski-Zamola G, Pavelic K, Kraljevic Pavelic S. Differential antiproliferative mechanisms of novel derivative of benzimidazo[1,2-alpha]quinoline in colon cancer cells depending on their p53 status. **Mol Cancer Ther.** 2008;7(7):2121-32.

Hranjec M, Kralj M, Piantanida I, **Sedić M**, Suman L, Pavelić K, Karminski-Zamola G. Novel cyano- and amidino-substituted derivatives of styryl-2-benzimidazoles and benzimidazo[1,2-a]quinolines. Synthesis, photochemical synthesis, DNA binding, and antitumor evaluation, part 3. **J Med Chem.** 2007 Nov 15;50(23):5696-711.

Kraljevic S, **Sedic M**, Scott M, Gehrig P, Schlapbach R, Pavelic K. Casting light on molecular events underlying anti-cancer drug treatment: what can be seen from the proteomics point of view? **Cancer Treat Rev.** 2006;32(8):619-29.

Fontana S, De Leo G, **Sedic M**, Kraljevic Pavelic S, Alessandro R. Proteomics in antitumor research. **Drug Discovery Today: Technologies.** 2006; 3(4):441-449.

Ribar S, Mesaric M, **Sedic M**. Sphingoid bases as possible diagnostic parameters. **Croat Med J.** 2003 Apr;44(2):165-70.

Ribar S, Mesarić M, **Bauman M**. High-performance liquid chromatographic determination of sphinganine and sphingosine in serum and urine of subjects from an endemic nephropathy area in Croatia. **J Chromatogr B Biomed Sci Appl.** 2001 25;754(2):511-9.

THE MOST RELEVANT CONFERENCE PRESENTATIONS IN THE LAST TWO YEARS

Lee Gethings; Johannes Vissers; John Shockcor; Stephen McDonald; Sandra Kraljević Pavelić; **Mirela Sedic**; Maja Lemac; Danica Batinić; James Langridge; Olga Vasieva; LeRoy Martin. *Multi-omic and functional network analysis of paediatric urine from patients diagnosed with idiopathic nephrotic syndrome*. US HUPO 9th Annual Conference "Translational Proteomics: Biology, Technology and Clinical Advances", March 10 - 13, 2013, Baltimore, MD, USA.

Sandra Kraljević Pavelić**, Mirela Sedić**, Lee Gethings, Johannes Vissers, John P. Shockcor, Stephen McDonald, Maja Lemac, Danica Batinić and James Langridge, *Identification of candidate protein biomarkers in urine from children with idiopathic nephrotic syndrome*. Mass Spectrometry in Biotechnology and Medicine, The 6th MSBM Summer School, 8. – 14. 07. 2012., Dubrovnik, Croatia

Mirela Sedic, Sandra Kraljevic Pavelic, Marko Klobucar, Peter Gehrig, Paolo Nanni, Lana Kovac Bilic, Mario Bilic, Drago Prgomet, Ralph Schlapbach, Kresimir Pavelic and Jasna Peter-Katalinic. *A PROTEOMIC APPROACH TO UNRAVEL MOLECULAR ALTERATIONS UNDERLYING LARYNGEAL CANCER.* FEBS3+ Meeting "From molecules to life and back", 13-16. 06. 2012., Opatija, Croatia

Brad J Williams; Lee A Gethings; Sandra Kraljević Pavelić; **Mirela Sedic**; John P Shockcor; Stephen McDonald; Joahnnes PC Vissers; Maja Lemac; Danica Batinić; James Langridge. *An ion mobility enabled data independent multi-omics approach to quantitatively characterize urine from children diagnosed with idiopathic nephrotic syndrome.* HUPO 2012, HUPO 11th Annual World Congress, September 9 - 13, 2012, Boston, Massachusetts, USA.

DEPARTMENT OF BIOTECHNOLOGY

Systems Biomedicine (lecturer)
Bioassays for Drug Discovery (lecturer)

UNDERGRADUATE AND GRADUATE COURSES

Biochemistry (lecturer)
Introduction into scientific research (lecturer)
Sphingolipids – biological roles and therapeutic significance (Course leader)
Drug toxicity (Course leader)

CC Publications

1. K. Benci, L. Mandić, T. Suhina, M. Sedić, M. Klobučar, S. Kraljević Pavelić, K. Pavelić, K. Wittine, M. Mintas, *Molecules*. **17** (2012) 11010**-**11025. (IF= 2.386; Q2; Cit=1)

2. T. Gazivoda Kraljević, A. Bistrović, M. Dedić, S.Kraljević Pavelić, M. Sedić, S. Raić-Malić, *Tetrahedron Lett.* **53** (2012) 5144**-**5147. (IF= 2.397; Q2; Cit=1)

3. K. Wittine, M. Stipković Babić, D. Makuc, J. Plavec, S.Kraljević Pavelić, M. Sedić, K. Pavelić, P. Leyssene, J. Neytse, J. Balzarini, M. Mintas, *Bioorg.& Med. Chem.* **20** (2012) 3675**-**3685. (IF= 2.903; Q2; Cit=2)

4. S. Kraljević Pavelić, M. Sedić, H. Bošnjak, Š. Spaventi, K. Pavelić, *Molecular cancer*. **10** (2011) 23**-**36. (IF= 3.993; Q2; Cit=13)

5. M. Sedić, S. Kraljević Pavelić, M. Cindrić, P. J. Vissers, M. Peronja, Đ. Josić, M. Ćuk, K. Fumić, K. Pavelić, I. Barić, *Electrophoresis*. **32** (2011) 1970**-**1975. (IF= 3.303; Q1; Cit=0)

6. K. Wittine, M. Stipković Babić, M. Košutić, M. Cetina, K. Rissanen, S. Kraljević Pavelić, A. Tomljenović Paravić, M. Sedić, K. Pavelić, M. Mintas, *Eur. J. Med. Chem.* **46** (2011) 2770**-**2785. (IF= 3.346; Q1; Cit=2)

7. K. Benci, K. Wittine, M. Radan, M. Cetina, M. Sedić, S. Kraljević Pavelić, K. Pavelić, E. deClercq, M. Mintas, *Bioorg. Med. Chem.* **18** (2010) 6249**-**6257. (IF= 2.978; Q2; Cit=2)

8. S. Kraljević Pavelić, M. Sedić, M., Poznić, Z. Rajić, B. Zorc, K. Pavelić, J. Balzarini, M. Mintas, *Anticancer research*. **30** (2010) 3987**-**3994. (IF= 1.656; Q3; Cit=2)

9. R. Pavišić,I. Dodig, A. Horvatić, L. Mijić, M. Sedić, M. Rajić Linarić, I. Gruić Sovulj, T. Preočanin, M. Bukvić Krajačić, M. Cindrić, *European journal of pharmaceutics and biopharmaceutics*. **76** (2010) 357**-**365. (IF=4.304; Q1; Cit=3)

10. R. Pavišić, K. Hock, I. Mijić, A. Horvatić, M. Gecan, M. Sedić, M. Bukvić Krajačić, M. Cindrić, *International journal of pharmaceutics*. **387** (2010)110**-**119. (IF=3.607; Q1; Cit=4)

11. M. Sedić, D. Jurišić, Z. Stanec, K. Hock, K. Pavelić, S. Kraljević Pavelić, *Frontiers in bioscience*. **15** (2010) 57**-**64. (IF=3.520; Q2; Cit=2)

12. S. Kraljević Pavelić, M. Sedić, K. Hock, S. Vučinić, D. Jurišić, P. Gehrig, M. Scott, R. Schlapbach, T. Čačev, S. Kapitanović, K. Pavelić, *Journal of Pathology*. **217** (2009) 524-533. (IF= 6.466; Q1; Cit=8)

13. M. Sedić, M. Poznić, P. Gehrig, M. Scott, R. Schlapbach, M. Hranjec, G. Karminski-Zamola, K. Pavelić, S. Kraljević Pavelić, *Molecular Cancer Therapeutics*. **7** (2008) 2121-2132. (IF= 5.003; Q1; Cit= 9)

14. M. Hranjec, M. Kralj, I. Piantanida, M. Sedić, L. Šuman, K. Pavelić, G. Karminski-Zamola, *Journal of Medicinal Chemistry*. **50** (2007) 5696-5711. (IF= 4.895; Q1; Cit= 56)

15. S. Kraljević, M. Sedić, M. Scott, P. Gehrig, R. Schlapbach, K. Pavelić, *Cancer Treatment Reviews*. **32** (2006) 619-629. (IF= 4.370; Q2; Cit= 15)

16. M. Kralj, S. Kraljević, M. Sedić, A. Kurjak, K. Pavelić, *Journal of perinatal medicine*. **33** (2005) 5-16. (IF= 0.899; Q3; Cit= 3)

17. S. Ribar, M. Mesarić, M. Sedić, *Croatian Medical Journal*. **44** (2003) 165-170. (IF= 0.943; Q2; Cit= 5)