

# curriculum vitae

## ANA BILAK SIMOVIĆ



Permanent address:  
Bu. Kraljice Marije  
54B/13  
34000 Kragujevac  
Serbia

Mailing address:  
University of Kragujevac  
Faculty of Science  
Department of Chemistry  
R. Domanovića 12,  
P. O. Box 60

Tel: + 381 34 383 362  
Cell-phone: + 381 64 22 96 072  
Email: [anarilak@kg.ac.rs](mailto:anarilak@kg.ac.rs)

+ 381 34 336 223  
Fax: + 381 34 335 040

### Personal Information

*Date of Birth:* 21-08-1985  
*Place of Birth:* Kragujevac, Serbia  
*Nationality:* Serba  
*Marital Status:* Married

### Education

*Primary School:* Kragujevac, Serbia  
1992 - 2000.  
*Secondary School:* Kragujevac, Serbia  
2000 - 2004.  
*Diploma in Chemistry:* Faculty of Science  
University of Kragujevac  
Kragujevac, 2004 - 2009.

Official name of the study/ or  
research programme

PhD in Chemistry  
Inorganic Chemistry  
Faculty of Science  
University of Kragujevac  
Supervisor: Prof. Dr. Živadin D. Bugarčić  
2009-2015.

## Membership in organisation

- Serbian Chemical Society

## Research Experience

29/10/2009 – today

**Faculty of Science, University of Kragujevac,  
Department of Chemistry, Serbia**

Researcher on the Project of Ministry of Science and Technological  
Development of the Republic of Serbia (Project No. 172011)

Title: "*Kinetics and mechanism of the substitution reactions of Ru(II)  
complexes with biologically relevant molecules*"

Supervisor: Prof. Dr Živadin D. Bugarčić

8/11/2010 – 8/11/2011

**Università Degli Studi di Trieste,  
Dipartimento di Scienze Chimiche, Italy**

Research for a part of Ph.D Dissertation

Title: "*Understanding the mechanism of action of ruthenium anticancer  
drugs*"

Supervisor: Prof. Enzo Alessio.

## Fellowship

- ◆ Twelve-month research fellowship by **CSIUT**-Consortium for International Development of the University of Trieste to perform part of the Ph.D. The research took place at the Department of Chemical Sciences, University of Trieste (Italy), under the supervision of Prof. Enzo Alessio. (2010/2011)

## Awards

- ◆ Best graduate student 2009, Faculty of Sciences, Department of Chemistry
- ◆ Student awards-Special mention of Serbian Chemical Society for 2009

- ◆ Best assistant in a student poll for 2014, Faculty of Science, University of Kragujevac

## Teaching experience

*2011 – today*

**Faculty of Science,  
University of Kragujevac, Serbia**

Tutor of undergraduate students for their experimental thesis

*2009 – 2010*

**Regional center for talents  
Kragujevac, Serbia**

Supervisor of talented students of primary school for their research work

## Knowledge

*Languages:*

English: Good

Serbian: Mother language

*Computers:*

- Skilled in the use of:

- The Internet in search and use of pertinent information.
- Microsoft Office 2007 (Word, Excel, PowerPoint)
- Origin – Statistical analysis programs
- ChemDraw, ChemSketch etc – Chemistry related softwares
- Photoshop, CorelDraw – graphics related softwares

## Relevant scientific techniques

*Techniques of Structural Characterization:*

- 1D and 2D Nuclear Magnetic Resonance(NMR)
- Ultraviolet-Visible Spectroscopy (UV-Vis)
- High Performance Liquid Chromatography (HPLC)
- Infrared (IR) Spectroscopy

Poster

- ◆ **Ana Rilak**, Biljana Petrović, Sanja Grgurić-Šipka, Ivanka Ivanovic  
*Kinetics of the substitution reactions of some Ru(II/III) complexes with N-donor biologically relevant nucleophiles*  
48<sup>th</sup> Meeting of the Serbian Chemical Society  
Novi Sad, Serbia, April 17-18, 2010, NH06 **M64**
  
- ◆ **Ana Rilak**, Živadin D. Bugarčić  
*Interaction of Ru(II)-terpyridine complexes with some nitrogen- and sulfur-donor ligands,*  
8<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries,  
Belgrade, Serbia, June 27-29, 2013, BS-Sy P08 **M34**
  
- ◆ **Ana Rilak**, Ralph Puchta, Živadin D. Bugarčić,  
*Interaction of Ru(II)-terpyridine complexes with some sulfur- and nitrogen-containing ligands,*  
12<sup>th</sup> European Biological Inorganic Chemistry Conference,  
Zurich, Switzerland, August 24-28, 2014, PO49 **M34**
  
- ◆ **Ana Rilak**, Ioannis Bratsos, Ennio Zangrando, Jakob Kljun, Iztok Turel, Živadin D. Bugarčić and Enzo Alessio,  
*New water-soluble Ru(II)-terpyridine complexes for anticancer activity: synthesis, characterization, activation kinetics and interaction with guanine derivatives,*  
22<sup>nd</sup> Young Research Fellows Meeting Biology and Chemistry: a Permanent Dialogue,  
Paris, France, February 4-6, 2015, PO-019 **M34**
  
- ◆ Romana Masnikosa, Marija Nišavić, **Ana Rilak**, Marija Matković and Ivo Crnolatac,  
*The binding of novel water-soluble terpyridine complexes with anticancer activity to human serum transport proteins as seen through spectroscopy and calorimetry,*  
9<sup>th</sup> Summer Course for Mass Spectrometry in Biotechnology and Medicine, CAAS,  
Dubrovnik, Croatia, 2015, P31. **M34**
  
- ◆ Maja Nešić, Dunja Drakulić, **Ana Rilak**, Marija Nišavić, Iva Popović, Marija Radoičić, Zoran Šaponjić, Marijana Petković,  
*Preparation of nanosystem for fast screening of serum proteins which bind metallo-drugs,*  
9<sup>th</sup> Central and Eastern European Proteomic Conference,  
Poznan, Poland, June 15-18, 2015. **M34**

### Oral presentation

- ◆ **Ana Rilak**, Živadin D. Bugarčić, Ioannis Bratsos, Enzo Alessio, Ennio Zangrando, *Interaction of half sandwich Ru(II) coordination compounds with guanine derivatives*, Golden Jubilee Meeting of the Serbian Chemical Society, Belgrade, Serbia, June 14-15, 2012, NH01 **M64**

### Invited lecture

- ◆ **Ana Rilak**, Živadin D. Bugarčić, Ioannis Bratsos, Enzo Alessio, Ennio Zangrando, *New meridional Ru(II)-terpyridine complexes: synthesis, characterization, activation kinetics and interaction with guanine derivatives*, First international conference of young chemists of Serbia, Belgrade, Serbia, October 19-20, 2012, HS PP3 **M62**

## Publications

- ◆ **Ana Rilak**, Biljana Petrović, Sanja Grgurić-Šipka, Živoslav Tešić, Živadin D. Bugarčić, *"Kinetics and mechanism of the reactions of Ru(II)-arene complex with some biologically relevant ligands"*, Polyhedron, **30** (2011) 2339-2344.  
ISSN: 0277-5387  
DOI: 10.1016/j.poly.2011.06.019 **M22**
- ◆ **Ana Rilak**, Ioannis Bratsos, Ennio Zangrando, Jakob Kljun, Iztok Turel, Živadin D. Bugarčić and Enzo Alessio, *"Factors that influence the antiproliferative activity of half sandwich Ru<sup>II</sup>-[9]aneS3 coordination compounds: activation kinetics and interaction with guanine derivatives"*, Dalton Transactions, **41** (2012) 11608-11618.  
ISSN: 1477-9226  
DOI: 10.1039/c2dt31225e **M21**
- ◆ Aleksandar Mijatović, Biljana Šmit, **Ana Rilak**, Biljana Petrović, Dragan Čanović, Živadin D. Bugarčić, *"NMR kinetic studies of the interactions between [Ru(terpy)(bipy)(H<sub>2</sub>O)]<sup>2+</sup> and some sulfur-donor ligands"*, Inorganica Chimica Acta, **394** (2013) 552-557.  
ISSN: 0020-1693  
DOI: 10.1016/j.ica.2012.09.016 **M22**
- ◆ **Ana Rilak**, Ioannis Bratsos, Ennio Zangrando, Jakob Kljun, Iztok Turel, Živadin D. Bugarčić and Enzo Alessio,

*"New water-soluble Ruthenium(II) terpyridine complexes for anticancer activity: synthesis, characterization, activation kinetics and interaction with guanine derivatives"*,  
Inorganic Chemistry, **53** (2014) 6113-6126.

ISSN: 0020-1669

DOI: 10.1021/ic5005215

**M21**

- ◆ **Ana Rilak**, Ralph Puchta and Živadin D. Bugarčić,  
*"Mechanism of the reactions of ruthenium(II) polypyridyl complexes with thiourea, sulfur-containing amino acids and nitrogen-containing heterocycles"*,  
Polyhedron, **91** (2015) 73-83.

ISSN: 0277-5387

DOI: 10.1016/j.poly.2015.02.030

**M22**

- ◆ Dejan Lazić, Aleksandar Arsenijević, Ralph Puchta, Živadin D. Bugarčić and **Ana Rilak**,  
*"DNA binding properties, histidine interaction and cytotoxicity studies of water soluble ruthenium(II) terpyridine complexes"*,

Dalton Transaction, **45** (2016) 4633-4646.

ISSN: 1477-9226

DOI: 10.1039/C5DT04132E

**M21**

- ◆ Marija Nišavić, Romana Masnikosa, Ana Butorac, Kristina Perica, **Ana Rilak**, Amela Hozić, Marijana Petković and Mario Cindrić,

*"Elucidation of the binding sites of two novel Ru (II) complexes on bovine serum albumin"*,  
Journal of Inorganic Biochemistry, **159** (2016) 89-95.

ISSN: 0162-0134

DOI: 10.1016/j.jinorgbio.2016.02.034

**M21**

## Other publications

- ◆ **Ana Rilak** and Živadin D. Bugarčić,  
*"Interaction of platinum group metal complexes with biomolecules. Application and importance in medicine"*.

Chemical review, Serbian Chemical Society, **55** (2014) 30-37.

ISSN: 04406826

**M53**

- ◆ **Ana Rilak** and Živadin D. Bugarčić,  
*"Anticancer ruthenium complexes"*.

Chemical review, Serbian Chemical Society, **57** (2016) 9-16.

ISSN: 04406826

**M53**