

## Personal details

Name and surname Malgorzata Brindell  
Nationality Polish  
Date of birth 18<sup>th</sup> September 1975  
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## Education

1999 – 2004  
*Dissertation:* PhD, Faculty of Chemistry, Jagiellonian University, Krakow, Poland.  
Mechanistic study on thermal and photochemical reactions of selected Ru(II) and Pt(II) complexes with oligonucleotides in context of their application in anticancer therapy.

1994 – 1999  
*Dissertation:* M.Sc., Faculty of Chemistry, Jagiellonian University, Krakow, Poland.  
Kinetics and mechanism for platination of guanine-containing single-stranded oligonucleotides. Influence on the reactivity by addition of Mg<sup>2+</sup> and non-reacting DNA, and a variation of the ionic strength.

## Professional Experience (in Poland)

From October 2004 to present Assistant position at Faculty of Chemistry, Jagiellonian University, Krakow, Poland. (Physicochemistry of Coordination Compounds and Bioinorganic Chemistry Group) A position with research, teaching and management responsibilities.

September 2004 – October 1999 PhD student, at Faculty of Chemistry, Jagiellonian University, Krakow, Poland.

September 2000 – October 1999 Training as an assistant at Faculty of Chemistry, Jagiellonian University, Krakow, Poland.

September 1998 Training as a teacher in the Secondary School

September 1997 Training as a teacher in the Primary School

## Professional Experience (abroad)

11.1998 - 04.1999 postgraduate student, Inorganic Chemistry, Lund University (Sweden), Socrates Scholarship

08.1999 - 10.1999 visiting scientist, Inorganic Chemistry, Lund University (Sweden)

08.2000 - 10.2000 visiting scientist, Inorganic Chemistry, Lund University (Sweden)

01.2001 - 04.2001 visiting scientist, Inorganic Chemistry, Lund University (Sweden)

03.2002 - 05.2002 visiting scientist, Inorganic Chemistry, Lund University (Sweden), Swedish Institute scholarship

07.2003 - 09.2003 visiting scientist, Biophysical and Bioanalytical Chemistry, Warwick University, (UK); Marie Curie Training Site

03.2004 - 06.2004 visiting scientist, Inorganic and Metallorganic Chemistry, University in Ferrara (Italy)

22.08 - 02.09.2005 short scientific mission, Erlangen-Nurberg University (Germany)

05.04 – 14.04.2005 invited teacher, Biochemistry, Lund University (Sweden), Socrates/Erasmus, Teaching Staff Mobility

07.2006 – 11.2007 post doc position Institute for Inorganic Chemistry, Erlangen-Nurberg University (Germany), Marie Curie Research Training Networks „Transition Metal Chemistry and Catalysis in Aqueous Media”

## Other activities and awards

- September 2006 Member for organizing committee for the conference 3<sup>rd</sup> *Central European Conference Chemistry Towards Biology*, Krakow, 8-12 September, 2006
- January 2006 Member for organizing committee for the conference 35<sup>th</sup> *Inorganic Reaction Mechanism Meeting*, Krakow, 4-7 January, 2006
- July 2005 Member for organizing committee for the conference *European Variety in Chemistry Education*, Krakow, 4-7 July, 2005
- 2005 Fellowship from Rector of the Jagiellonian University
- 2003, 2006 Awarded by Ministry of National Education and Science

## Research topics and technical skills

- Research topics* biomedical and bioinorganic chemistry of metal compounds (metal complexes in anticancer therapy, interaction of anticancer drugs with DNA), photochemistry and photophysics of coordination compounds (application of light for activation of metallodrugs), kinetics and reaction mechanisms;
- Technical skills* familiar with various techniques such as HPLC, MALDI-TOF, UV-Vis spectroscopy, stopped-flow and laser flash photolysis; general laboratory skills

## Scientific papers and presentations

### Publications

- (1) G. Stochel, A. Drzewiecka, E. Kuliś, M. Palarczyk, M. Pawelec, A. Wanat, M. Wolak, „Photochemistry and photophysics of coordination compounds in medicine” in „*Challenges for Coordination Chemistry in the New Century*”, ed. M. Melník, A. Sirota, Slovak Technical University Press, Bratislava, tom 5 (2001), 301-306.
- (2) Wanat A., Wolak M., Orzeł Ł., Brindell M., van Eldik R., Stochel G., “Laser flash photolysis as a tool in elucidating mechanism of nitric oxide binding to metalloproteins”, *Coord. Chem. Rev.* 2002, 229, 37-49.
- (3) M. Brindell, S.C.K. Elmroth, G. Stochel „Mechanistic information on the reaction of *cis*- and *trans*-[RuCl<sub>2</sub>(DMSO)<sub>4</sub>] with d(T<sub>2</sub>GGT<sub>2</sub>) derived from MALDI-TOF and HPLC studies” *J. Inorg. Biochem.* 2004, 98, 1367-1377
- (4) A. Sykfont-Snygg, M. Brindell, S.C.K. Elmroth, G. Stochel, „Access to preassociation sites in the direct vicinity of the target site controls the rate of platination of G-N7 in single-stranded DNA”, *Dalton Trans.*, 2005, 1221-1227.
- (5) K. Szaciłowski, W. Macyk, A. Drzewiecka-Matuszek, M. Brindell, G. Stochel „Bioinorganic Photochemistry. Frontiers and mechanisms.”, *Chem. Rev.*, 2005, 105, 2647-2494.
- (6) M. Brindell, E. Kuliś, S.C.K. Elmroth, K. Urbańska, G. Stochel, „Light-induced anticancer activity of [RuCl<sub>2</sub>(DMSO)<sub>4</sub>] complexes”, *J. Med. Chem.* 2005, 48, 7298-7304.
- (7) J. Koeckhoven, C. O'Donnell and M. Brindell „Portfolios for students and staff.” In *Proceedings of ECTN New Appointed University Chemistry Teaching Staff Malta* 22-27 July, 2005, pp 6-8. M. Brindell, A. Chmura, W. Macyk and K. Szaciłowski „Application of problem solving method in teaching of bioinorganic chemistry.” In *Proceedings of European Variety in Chemistry Education Kraków* 5-7 June, 2005.

- (9) M. Brindell, G. Stochel, V. Bertolasi, R. Boaretto and S. Sostero „Photochemistry of *trans*- and *cis*-[RuCl<sub>2</sub>(DMSO)<sub>4</sub>] in aqueous and nonaqueous solutions.” *Eur. J. Inorg. Chem.*, 2007 (*in press*).
- (10) M. Brindell, D. Piotrowska, A. A. Shoukry, G. Stochel and R. van Eldik „Kinetics and mechanism of the reduction of (ImH)[*trans*-RuCl<sub>4</sub>(dmsO)(Im)] by ascorbic acid in acidic aqueous solution.” *J. Biol. Inorg. Chem.*, 2007 (*in press*).

*Presentations* 22 presentations to scientific meetings, among others:

- (1) M. Brindell, E. Kuliś, S.K.C. Elmroth, M. Meus, K. Urbańska, G. Stochel „Anticancer activity of *cis*- and *trans*-[Ru(DMSO)<sub>4</sub>Cl<sub>2</sub>] in the presence and absence of light.”, *Inorganic Reaction mechanisms: Insights into chemical challenges*, Kloster Banz, Niemcy, 2002, Book of Abstr. P12.(poster)
- (2) M. Brindell, G. Stochel, M.J. Hannon, A. Rodger; “Study of covalent and non-covalent interactions of ruthenium complexes with an oligonucleotide and DNA by MALDI-TOF mass spectrometry, circular dichroism and linear dichroism.” *Biophysical Chemistry Conference “Structural characterisation of biomacromolecules and biomolecule assemblies”*, Coventry, Wielka Brytania, 2003 (poster)
- (3) M. Brindell, G. Stochel, S. Sostero, O. Traverso “Light-induced reactions of *cis*- and *trans*-[RuCl<sub>2</sub>(DMSO)<sub>4</sub>] with nucleotides.” IUPAC Symposium on Photochemistry, Granada, 17-22 July 2004; Book of Abstr pp 243 (poster).
- (4) G. Stochel, M. Brindell, A. Drzewiecka-Matuszek, A. Franke, A. Chmura, A. Jańczyk, K. Szaciłowski, W. Macyk „Bioinorganic Photochemistry – Case Studies” 16<sup>th</sup> ISPPCC, California, USA; 2-6 July, 2005; Book of Abstr P-47 (poster)
- (5) M. Brindell, E. Kuliś, K. Urbańska, G. Stochel „Activation of Ru(II)-chloro-DMSO complexes by light in context of their pharmaceutical application X International Symposium on Bioinorganic Chemistry. Challenge for a new generation” Szklarska Poręba, 20-25 September, 2005; Book of Abstr pp 51 (poster).
- (6) M. Brindell, D. Piotrowska, A. Szumlańska, R. van Eldik, G. Stochel “Kinetics and mechanism of the reduction of (ImH)[*trans*-RuCl<sub>4</sub>(dmsO)(Im)] by ascorbic acid in acidic aqueous solution.”, *Inorganic Reaction Mechanism Meeting*, Kraków, 4-7 January, 2006, Book of Abstr P45 (poster).
- (7) M. Brindell, G. Stochel „Ru(II)-chloro-dmsO complexes – metal-based phototherapeutic agents.”, 3<sup>rd</sup> *Central European Conference: Chemistry Towards Biology*, Krakow, Poland, 8-12 September, 2006 (lecture).
- (8) M. Brindell, G. Stochel, R. van Eldik „Catalytic aspects of the reduction of (ImH)[*trans*-RuCl<sub>4</sub>(dmsO)(Im)] by ascorbic acid.” *AQUACHEM Annual Meeting*, Debrecen Hungary, 12-14 January, 2007 (lecture).

### **Additional skills**

*Languages* Polish – mother tongue  
English – fluent in writing and speaking  
German – basic level

*Personal abilities* good communication and interpersonal skills, flexible, organised and operated; responsible and decisive,

### **Extra-curricular activities**

Tourism, hiking, climbing, skiing, basketball, biking and reading books.