

An international conference under the title: “Mechanism of radionuclides and heavy metals bioaccumulation and their relevance for biomonitoring” took place in Warsaw University, Faculty of Biology, Poland on October 7–8, 2005. A lot of famous researchers from the United Kingdom, the Czech Republic, the Slovak Republic, Germany, Bulgaria, Spain, the USA and Poland participated in the conference.

The sessions were headed by Professors: Katarzyna Turnau from the Institute of Environmental Sciences, the Jagiellonian University (Poland), Philip White from the University of Warwick (UK), Richard Tykva from the Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, from Prague, Martin Paulus from Trier University (Germany), Juraj Lesný from the Department of Biotechnology, Faculty of Natural Science, University Cyril and Methodius from Trnava (the Slovak Republic) and Dr Andrea Čipáková from Regional Public Health Authority in Košice (the Slovak Republic). Some other speakers also participated in the conference: Prof. Dirk Schlodt from the Research Center Jülich (Germany), Prof. Josef Augustín, Dr Martin Pipiška and Dr Miroslav Horník from the Department of Biotechnology, University Cyril and Methodius from Trnava (the Slovak Republic), Dr Dagmara Strumińska from the University of Gdańsk, Faculty of Chemistry (Poland), Dr Anna Sophia Knox from Savannah River National Laboratory (USA), Dr Grażyna Bystrzejewska-Piotrowska, Warsaw University, and the following graduates: Magdalena Hawieńczyk, Michał Bazała and Dariusz Pianka from the Isotope Laboratory, Faculty of Biology, Warsaw University (Poland). Numerous students from the

Faculty of Biology of Warsaw University participated in the conference: the students from the Student Association of Radiobiology, the students studying Isotopic Techniques and the students studying Monitoring and Bioindication.

During the four scientific sessions sixteen lectures were given covering the following topics:

- The genetics of radiocaesium accumulation in plants;
- Effect of monitoring strategies and reference data of the German Environmental Specimen Banking Program;
- Bioaccumulation of ^{137}Cs and ^{60}Co by *Helianthus annuus*;
- Influence of time, temperature, pH and inhibitors on bioaccumulation of radiocaesium – ^{137}Cs by lichen *Hypogymnia physodes*;
- Bioaccumulation of ^{226}Ra in the plants growing near uranium facilities;
- Removal of radionuclides and heavy metals from polluted waters by means of natural wetland;
- Radiostrontium uptake by lichen *Hypogymnia physodes*;
- Plutonium isotopes ^{238}Pu , $^{239+240}\text{Pu}$ and ^{241}Pu in the Baltic Sea ecosystem;
- Role of mycorrhizal fungi in phytoremediation and toxicity monitoring;
- Migration of radiocaesium in individual parts of the environment;
- Cationic interaction in caesium uptake by king oyster mushroom (*Pleurotus eryngii*);
- Bioaccumulation of ^{137}Cs in wild mushrooms collected in Poland and Slovakia;



- Platinum bioaccumulation by mustard plants (*Sinapis alba* L.);
- Elevated uptake of Th and U by netted chain fern (*Woodwardia areolata*);
- New approaches on arsenic analysis – a vision towards a new biotechnological method;
- Preliminary study of platinum accumulation in the fruitbodies of a model fungus: king oyster mushroom (*Pleurotus eryngii*).

The conference was organized by the Cembra Center of Excellence established at the Faculty of Biology of Warsaw University and financed from the 5th Framework Programme of the European Union (www.cembra.pl). CEMERA project is coordinated by Prof. Aleksandra Skłodowska. The main objective of the project is to create a leader in Central Europe in the area of complex environmental protection closely tied to the quality of life of an individual. Our activity is based on the interdisciplinary research groups composed of scientists from Poland, the EU and NAS countries.

The participants of this conference appreciated the need of common meetings in the circle of biologists, chemists and physicists for better understanding the problems of bioaccumulation of radionuclides and heavy metals. I would like to underline that we can introduce our young scientists, graduates and students into the area of science, too. This is possible first of all thanks to the European Union funds. This is especially important because for the majority of these young people it was their first contact with the international world of science. This can also be a clue for the future investigations. This conference provided an ample knowledge concerning the ways and mechanisms of bioaccumulation of radionuclides and heavy metals. It also indicates practical application of isotopic techniques. We are very happy with having the chance to get the experience with the young scientists.

Dr Grażyna Bystrzejska-Piotrowska
CEMERA, 1st Work Package Leader
Conference organizer