



8th International Conference of Young Naturalists  
- "From Biotechnology to Environmental Protection"  
- Interdisciplinary Meeting of Young Naturalists  
7 - 9 November 2013, Zielona Góra

Faculty of Biological Sciences, A-8 building, Szafrana 1, Zielona Góra

## Conference Schedule

### **Thursday 7.11.2013**

8.30 - 12.00 Registration

#### **Introductory session (room 115)**

12.30 – 12.45 *Prof. Leszek Jerzak,  
dr Krystyna Walińska*

Opening ceremony

12.45 – 13.45 *Prof. Jacek Leluk*

The inaugural lecture – “Lethal vitamins, insidious aspirin, and life – sustaining cholesterol; another view on the known substances”

14.00 – 15.00 Lunch (room 124)

#### **Poster session (hall on the ground floor)**

15.30 – 18.00 Presentations of posters by authors

Molecular biology  
Biotechnology  
Environmental Protection

### **Friday 8.11.2013**

#### **Plenary session**

#### **Biotechnology, Molecular biology (room 115)**

##### ***Biotechnology***

9.00-9.20 *Anna Grzybkowska  
Lodz University of Technology, Faculty  
of Chemistry*

Can chlorine kinetic isotope effect really serve as a mechanistic tool for uncatalyzed hydrolysis of atrazine? – an insight from a combination of experiment and computation.

9.20-9.40 *Milena Jabłońska  
Gdansk University of Technology,  
Department Chemistry*

Microorganisms used for energy production

9.40-10.00 *Agnieszka Rusak  
Department of Experimental Surgery  
and Biomaterials Research, Faculty of  
Dentistry, Wrocław Medical University*

The influence of natural phenolics on viability of L929-cells

10.00 – 10.30

**Coffee Break (room 124)**

- 10.30 – 10.50 **Maria Rybarczyk**  
*Gdańsk University of Technology* Carbon with high nitrogen content doped with platinum as cathodic material
- 10.50 – 11.10 **Lucyna Sławik-Dembiczak**  
*Czestochowa University of Technology, Institute of Environmental Engineering* Biogas purification using microalgae

**Molecular biology**

- 11.10 – 11.30 **Kamila Duś-Szachniewicz**  
*Department of Pathology, Wrocław Medical University* How can human cell lines, body fluids and tissues be useful in oncoproteomics ?
- 11.30 – 11.50 **Tomasz Gulanicz**  
*Nicolaus Copernicus University, Toruń* The accumulation of poly(A)RNA in *Arabidopsis thaliana* coilin-mutated cells of NCB-1 and PCB-1 models
- 11.50 – 12.10 **Kamila Kacprzak**  
*University of Zielona Góra, Faculty of Biological Sciences* Anion exchanger 1 and its involvement in erythrocyte and kidney disorders
- 12.10 – 12.30 **Natalia Machalek, Karolina Kacprzak**  
*University of Warmia and Mazury, Faculty of Agriculture and Environmental Management, Olsztyn* Thickness of electrophoresis gel – what is the influence on result of the electrophoresis
- 12.30 – 12.50 **Agnieszka Machul**  
*Department of Microbiology, Jagiellonian University Medical College, Kraków* Does the concentration of glucose affects the quantity and biochemical structure of the *P. aeruginosa* biofilm formed in patients with chronic diabetic foot wounds?
- 12.50 – 13.10 **Diana Mikołajczyk**  
*Department of Microbiology, Jagiellonian University Medical College, Kraków* Enzyme inhibitors effect on the biofilm formation by *Pseudomonas aeruginosa* isolated from chronic diabetic foot infection
- 13.10 – 13.30 **Katarzyna Mystkowska**  
*University of Gdansk, Faculty of Biology* Barkoding DNA as molecular identification key to protected vascular plant in Gdansk Pomerania
- 13.30 – 13.50 **Ludwik Odrzywolek**  
*Jagiellonian University Medical College, Kraków* The distribution of apolipoprotein E gene polymorphism in a Polish Rural population
- 13.50 – 14.10 **Mateusz Rawski**  
*Poznań University of Life Sciences, Faculty of Animal Breeding and Biology, Department of Animal Nutrition and Feed Management* The effects of dietary probiotics on the growth performance and selected microflora populations of common musk turtle (*Sternotherus odoratus*)
- 15.00 – 15.20 **Ludwik Odrzywolek**  
*Jagiellonian University Medical College, Kraków* The structure of sensitizations among patients from Malopolska Region diagnosed for contact allergy: Comparison of the patch test results depending on the composition of the diagnostic series
- 15.20 – 15.40 **Łukasz Smoliński**  
*University of Zielona Góra, Faculty of Biological Sciences* microRNAs (miRNAs) and Copy Number Variations (CNVs) – new revolution in the field of molecular biology and genetics
- 15.40 – 16.00 **Marta Woźniak** Relationship between the oxidative stress-associated

Department of Pathology, Wrocław  
Medical University

Src activator and c Src tyrosine kinase in the  
mechanism of photodynamic therapy

16.00 – 16.20

**Barbara Ziolkowska**  
Department of Pathology, Wrocław  
Medical University

The autophagic response to photodynamic therapy

## Anthropology, Zoology, Botany (room 213)

### Anthropology

9.00-9.20

**Wahili Chiari Arcia**  
Institute of Archaeology, University of  
Wrocław

Biological and cultural aspects of albinism among  
Kuna people

9.20-9.40

**Aleksandra Kuzan**  
Research and Development Centre,  
Regional Specialized Hospital in  
Wrocław  
Department of Medical Biochemistry,  
Wrocław Medical University

The content of osteopontin in the arteries and the  
degree of atherosclerosis and calcification

9.40-10.00

**Oliwia Patrzykąt**  
University of Zielona Góra, Faculty of  
Biological Sciences

The morphological analysis of the teeth in the case  
study of the preserved human cranium

### Zoology

10.00 – 10.20

**Anna Dzierżyńska**  
Nicolaus Copernicus University,  
Department of Invertebrate Zoology,  
Toruń

The impact of a competitor *Dikerogammarus villosus*  
and predatory fish *Babka gymnotrachelus* on the  
habitat selection by an invasive gammarid  
*Pontogammarus robustoides*

10.20 – 10.40

**Justyna Kierat**  
Institute of Environmental Sciences,  
Faculty of Biology and Earth Sciences,  
Jagiellonian University, Kraków

Local mate competition in red mason bees (*Osmia  
rufa* L.)

10.40 – 11.10

**Coffee Break (room 124)**

11.10 – 11.30

**Bartosz Kierończyk**  
Poznań University of Life Sciences,  
Faculty of Animal Breeding and  
Biology, Department of Animal  
Nutrition and Feed Management

Mineral nutrition of *Achatina fulica* using choice  
feeding experimental design

11.30 – 11.50

**Michał Mięsikowski, Barbara  
Wojciechowska, Natalia  
Wojciechowska**  
Laboratory of Histology and  
Embryology of Vertebrates, Nicolaus  
Copernicus University, Toruń

Effects of nitrate on the early development of bony  
fish - preliminary results

11.50 – 12.10

**Dawid Mika**  
High School No. 3 by Stanisław  
Wyspiański in Jastrzębie-Zdroj

Origin and early evolution of lampreys  
(Petromyzontiformes)

12.10 – 12.30

**Piotr Piliczewski**  
Szczecin University, Faculty of Biology

Hybridization among snakes of the genus  
*Lampropeltis* (Serpentes; Colubridae; Colubrinae)

12.30 – 12.50

**Monika Ratajczak**

The mechanical properties of the spinal cord in a state

	<i>University of Zielona Gora, Faculty of Mechanical Engineering, University of Zielona Gora, Faculty of Biological Sciences</i>	of uniaxial tension
12.50 – 13.10	<b>Mateusz Rawski</b> <i>Poznań University of Life Sciences Faculty of Animal Breeding and Biology, Department of Animal Nutrition and Feed Management</i>	Veterinary issues in captive breeding of African helmeted turtle ( <i>Pelomedusa subrufa</i> Lacépède, 1788) – case report
13.10 – 13.30	<b>Tomasz Rek</b> <i>Szczecin University, Faculty of Biology</i>	Bird mortality on the roads running through the urban area and beyond
13.30 – 13.50	<b>Edwin Sieredziński</b> <i>Faculty of Biology, University of Warsaw</i>	Hybridization and animal phylogenetic development mechanisms
13.50 – 14.10	<b>Łukasz Steczko</b> <i>Adam Mickiewicz University, Faculty of Biology, Department of Animal Morphology, Poznań</i>	Evolutionary history of feather mites (Astigmata)
15.00 – 15.20	<b>Ita Szczepańska</b> <i>University of Zielona Gora, Faculty of Mechanical Engineering, University of Zielona Gora, Faculty of Biological Sciences</i>	An innovative method for the treatment of hip dysplasia in small dogs
15.20 – 15.40	<b>Paulina Szymańska</b> <i>Department of Animal Physiology, Faculty of Biology and Environmental Protection, Nicolaus Copernicus University, Toruń</i>	Correlation between capacity for facultative non-shivering thermogenesis (NST) and resting metabolic rate of bank voles <i>Myodes</i> (= <i>Clethrionomys</i> ) glareolus selected for high metabolic rate
<b>Botany</b>		
15.40 – 16.00	<b>Agnieszka Cabala</b> <i>Wrocław University Environmental and Life Sciences, The Faculty of Life Sciences and Technology</i>	The effect of a dose and a type of fertilization on decorative value of the selected ornamental perennial species
16.00 – 16.20	<b>Marcin Dyderski, Anna Gdula</b> <i>The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences</i>	Expansion of the alien woody plants in the Warta river valley in Poznań
16.20 – 16.40	<b>Ewelina Paluch</b> <i>Department of Plant Physiology, Faculty of Biology, Adam Mickiewicz University, Poznań</i>	Effect of drought stress on plasma membrane protein levels of mycorrhized maize root
16.40 – 17.00	<b>Agnieszka Rogula</b> <i>Medical University of Wrocław, Chair and Department of Pharmacognosy, Wrocław University of Environmental and Life Science Department of Fruit, Vegetable and Cereals Technology</i>	Estimation of agrimoniin and allagic acid content in different strawberry fructification phases
17.00 – 17.20	<b>Agnieszka Stelmasik</b> <i>Adam Mickiewicz University, Department of General Botany, Institute</i>	The mystery of underground death in plants

## Ecology, Environmental Protection (room 219)

### Ecology

- 9.00-9.20 **Michał Adamczyk**  
*Institute for Chemical Processing of Coal, Zabrze* Utilization of carbon dioxide in the cultivation of microalgae
- 9.20-9.40 **Wojciech Borzyszkowski**  
*The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences* Biometric analysis of *Tsuga canadensis* (Carr.) stand on experimental site in Rogów Arboretum
- 9.40-10.00 **Anna Gdula, Marcin Dyderski**  
*The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences* How does plant cover affect population of *Osmunda regalis* L. in the 'Baszków' nature reserve?
- 10.00 – 10.20 **Wojciech Borzyszkowski**  
*The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences* Methods for determination of biomass plants in the forest ecosystem
- 10.20 – 10.40 **Aleksandra Jakubowska**  
*Adam Mickiewicz University, Faculty of Biology, Poznań* Temporal features of bird song and the territorial defense in the ortolan bunting *Emberiza hortulana*
- 10.40 – 11.00 **Anna Kowalska, Luiza Dawidowicz, Marek Lorenc**  
*Department of Botany, Department of Horticulture and Landscape Architecture, University of Life Sciences, Poznań, Department of Horticulture and Landscape Architecture, University of Life Sciences, Poznań* Wilda – garden project for residents
- 11.00 – 11.20 **Joanna Kowolik**  
*Jagiellonian University, Kraków* Don't be fooled by scale insects
- 11.20 – 11.50** **Coffee Break (room 124)**
- 11.50 – 12.10 **Weronika Kraczkowska**  
*Adam Mickiewicz University, Faculty of Biology, Institute of Environmental Biology, Department of Avian Biology and Ecology, Poznań* Breeding ecology of the urban population of Fieldfare (*Turdus pilaris* L.) in Poznań
- 12.10 – 12.30 **Natalia Królikowska**  
*Faculty of Biology, Adam Mickiewicz University in Poznań* Mechanisms of territories clustering in songbirds: Wood Warbler as a case study
- 12.30 – 12.50 **Katarzyna Myślicka**  
*University of Zielona Góra, Faculty of Biological Sciences* Influence of climate on leaf morphological variation
- 12.50 – 13.10 **Sandra Wajchman**  
*Poznań University of Life Sciences, Faculty of Forestry* The development of forest landscape in urban and suburban areas

## **Environmental Protection**

- 13.10 – 13.30 **Izabela Belz, Wojciech Borzyszkowski**  
*The Forestry Student's Association,  
Faculty of Forestry, Poznań University  
of Life Sciences* The image of The State Forests National Forest Holding in society
- 13.30 – 13.50 **Leszek Gersztyn**  
*Wrocław University of Environmental  
and Life Science, Institute of Soil  
Science and Environmental Protection* The influence of sewage sludge on growth and intake of heavy metals by perennial ryegrass (*Lolium Perenne* L.) from uncontaminated soils
- 13.50 – 14.10 **Bartłomiej Glina**  
*Institute of Soil Science and  
Environmental Protection, Wrocław  
University of Environmental and Life  
Sciences* Chemical composition of peat waters of selected peatland areas in the central part of Sudetes
- 11.50 – 12.10 **Jakub Jakubowski, Krzysztof Polowy**  
*Poznan University of Life Sciences,  
Faculty of Forestry, Department of  
Forest Technology* Technical solutions for biomass procurement in the forest
- 12.10 – 12.30 **Maciej Jędrzejczak, Artur Skitek**  
*Faculty of Biology, Adam Mickiewicz  
University, Poznań* The regression of rare and protected plants species on the selected areas of strict protection in the Wielkopolska National Park: state of resources, cause of vanishing
- 12.30 – 12.50 **Agata Kiałka**  
*University of Wrocław* Specificity of butterfly-ant myrmecophilous relationships and population size in the Large Blue *Phengaris (=Maculinea)* (Lepidoptera: Lycaenidae) at Bystrzyca valley (Natura 2000 „Łęgi nad Bystrzycą” and „Dolina Widawy”)
- 12.50 – 13.10 **Krzysztof Kolenda, Mikołaj Kaczmarcki**  
*Department of Evolutionary Biology and  
Conservation of Vertebrates, University  
of Wrocław,  
Institute of Zoology, Poznan University  
of Life Science* Overexploitation of amphibian populations in the age of their global extinction
- 13.10 – 13.30 **Łukasz Mendyk**  
*Department of Soil Science and  
Landscape Management, Faculty of  
Earth Sciences, Nicolaus Copernicus  
University, Toruń* Properties of soil organic matter in soils derived from lake sediments in Sumowskie Lakes catchment
- 13.30 – 13.50 **Piotr Olszewski**  
*Faculty of Biology and Environment  
Protection, Chair of Ecology and  
Biogeography, Toruń* Preliminary research on potter wasp (Hymenoptera: Eumenidae) in valley areas of North Poland
- 13.50 – 14.10 **Paulina Anna Rutkowska**  
*Nicolaus Copernicus University, Faculty  
of Earth Science, Toruń* The rate of podzolization in the chronosequence of soils under pine timber forest on dunes in the Toruń Basin
- 15.00 – 15.20 **Agnieszka Sala**  
*University of Wrocław, Faculty of  
Biological Science, Department of  
Evolutionary Biology and Ecology,  
Division of Invertebrate Biology* Bionomics, population structure and threats subpopulation of the Violet Cooper *Lycaena helle* (Denis et Schiffermüller, 1775) (Lepidoptera: Lycaenidae) on the Natura 2000 "Bierutów"

- 15.20 – 15.40 **Sebastian Salata**  
*Department of Biodiversity and  
 Evolutionary Taxonomy University of  
 Wrocław* Results of myrmecological stocktaking of the Stołowe  
 Mountains National Park fauna
- 15.40 – 16.00 **Emil Mariusz Szymański**  
*Wrocław University of Economics  
 Faculty of Economics, Management and  
 Tourism* Meaning of protection of honey bees against mites  
*Varroa destructor*
- 16.00 – 16.20 **Adrian Wieruszewski**  
*University of Zielona Góra, Faculty of  
 Biological Sciences* The importance of allotments in the conservation of  
 biodiversity
- 14.00 – 15.00 Lunch (room 124)**

### **Poster session (hall on the ground floor)**

- 15.30 – 18.00 Presentations of posters by authors  
 Botany  
 Ecology  
 Anthropology  
 Zoology
- 20.00 – 24.00 Integration meeting (Minibrowar “Haust”, Pl. Pocztowy 9, Zielona Góra)

## **Saturday 9.11.2013**

- 9.30 – 11.30 City tour
- 12.00 – 13.30 Presentation of awards and closing ceremony (room 115)
- 13.30 Farewell treat