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Dear Madame/Sir,

It gives me great pleasure to welcome you, on behalf of the Organizing Committee, to the V Central European Congress of Life Sciences – 2013 Eurobiotech in the Royal City of Kraków. The Congress is held under the honorary patronage of the Voivode of the Malopolska Voivodeship, the Marshal of the Malopolska Voivodeship and the Mayor of the Royal Capital City of Kraków.

The Congress has been organized by Cracow University of Technology (member of the Organizing Committee for the first time this year), the University of Agriculture, the Jagiellonian University, Biotechnology Committee of Polish Academy of Sciences, Polish Federation of Biotechnology, Malopolska Center of Biotechnology, Life Science Center in Krakow, Jagiellonian Center of Innovation Ltd. and Targi w Krakowie Ltd.

Satellite sessions devoted to stem cells and bio-business discussions will precede the opening ceremony of the Congress.

The scientific programme of the Eurobiotech 2013 will combine white and green biotechnology topics as well as legislation problems in the biotechnology sector.

Outstanding scientists from Europe, USA and other countries have been invited to deliver lectures on such important issues as nanotechnologies, renewable energy, environmental biotechnology or animal biotechnology in biomedicine and agriculture and many others.

We hope that the V Eurobiotech Congress and the accompanying exhibitions will enable you to exchange your scientific opinions and to present the latest biotechnological achievements and future trends in the area of white and green biotechnologies.

We are convinced that the Congress being of great value to the Polish science will encourage the invited scientists and businessmen to start long-term scientific and business cooperation.

We warmly welcome you to the Congress hoping that its main goal, providing you with a scientific programme of the highest quality, will be achieved and that you will spend wonderful time in our vibrant city with great cultural and historical dignity.

On behalf of the Congress Organizing Committee

Henryk Koloczek
Congress Chair

Krakow, October 2013

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General information

Venue: Congress Center of Agricultural University

Congress Center of Agricultural University is one of the most modern facilities designed to hold congresses, conferences, seminars and other events. Good location and efficient internal infrastructure are undoubtedly its great advantages.

Address:

Congress Center of Agricultural University
Al. 29 Listopada 46
31-425 Krakow

Internet
Wireless Internet is available at the Congress Venue
Plan of the venue
**Events**

**Coffee breaks**
Served in the lobby hall (exhibition area) of the Congress Venue on the following days:
- 8th of October at 3.25 pm – 3.55 pm
- 9th of October at 10.00 am – 10.30 am and at 3.30 pm – 4.00 pm
- 10th of October at 10.00 am – 10.30 am and 4.30 pm – 5.00 pm
- 11th of October at 10.00 am – 10.30 am

**Lunches**
Served in La Strada Restaurant in Arka Club the on the following days:
- 9th of October at 1.00 pm – 1.40 pm
- 10th of October at 1.00 pm – 2.00 pm
- 11th of October at 2.00 pm – 2.30 pm

**Welcome cocktail – 8th October**
All registered Congress participants are kindly invited to join the welcome cocktail on the 8th of October, which takes place from 7.00 pm till 8.30 pm in the lobby of the Congress Venue.

**Address:**
Congress Center of Agricultural University
Al. 29 Listopada 46, Kraków

**Conference get-together party – 9th October at 8.30 pm**
The conference dinner is organized in Klezmer Hois Restaurant which is situated in the heart of Kraków’s Kazimierz (the former Jewish district), 70 metres from the Remuh Synagogue, in the 16th century building that until the Word War II housed the ritual bathhouse, one of the oldest in the city. Klezmer-Hois is a unique restaurant that thanks to the traditional Galician Jewish cuisine as well as décor and artistic atmosphere evokes the ambiance of the pre-war tradition of Jewish Kazimierz. The dinner will be accompanied by concert of traditional Klezmer music.

**Address:**
Klezmer Hois Restaurant
ul. Szeroka 6, Kraków

**IMPORTANT:**
The invitations to a dinner will be handed at the registration desk together with the conference materials and badges. Please remember to bring the invitation with you for a dinner.

**The meeting of Hosting Committee 17th ECB**
The meeting of Hosting Committee 17th ECB will be held at Cracow University of Technology, Faculty of Engineering and Chemical Technology, Rm. 12 at 7.00 pm, Warszawska str 24 on 10th of October, 2013.

**General Meeting of Polish Federation of Biotechnology**
General Meeting of Polish Federation of Biotechnology will be held on 10th of October 2013 at 2.30 pm, in the Congress Centre of Agricultural University. (Green Biotechnology Hall)
Registration and Presentations

Registration
Registration desk will be open at the main hall of Congress Centre of Agriculture University:

8th October (Tuesday): 10.00 am – 6.00 pm
9th October (Wednesday): 8.00 am – 6.00 pm
10th October (Thursday): 8.00 am – 6.00 pm
11th October (Friday): 8.00 am – 2.00 pm

Registration’s desk telephone number:
+48 506 047 202
+48 502 309 683

Presentations
Please deliver your lecture on a USB flash drive, at least 30 minutes before the presentation.

You will be able to use your own computer, but Mac users should have VGA video adapter to connect computer to the projector.
Life Science Open Space

Life Science Open Space (LSOS2013) is a conference dedicated to innovations in the field of life science.

The main objective of the event is to promote the innovative interdisciplinary collaboration in the area of life science by:
- presentations of concrete technology and/or cooperation offers,
- presentations of capabilities, needs and ideas,
- networking and direct partnering-type meetings with people representing a variety of interests.

LSOS 2013 is organized in an approach that will ensure the interaction between inventors and the end-users of such advances.

This networking event will bring together researchers, innovators, developers and users of life science technologies especially interested in:
1. healthcare and therapeutics
2. healthy food
3. lifestyle and beauty
4. e-health and telemedicine
5. direct environment and the human environment
6. education and social awareness
7. biotechnology in applications mentioned above

LSOS 2012 event is organized for the Members and Partners of LifeScience Krakow (LSK) cluster, who would like to take an active part and present their technology or capabilities in order to create awareness and generate opportunities for future collaborations. In this respect the event embodies a knowledge marketplace for LifeScience Krakow cluster and is open to members of European clusters partnering with LSK – including but not limited to EDCA, CEBR, SCANBALT or GIN
## Life Science Open Space

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Eurobiotech 2013 “White and Green Biotechnology”

Tuesday, 8th of October 2013

10.00–18.00 Registration of participants

10.00–18.00 Business session - Life Science Open Space
(Arka Club)
Chair: Kazimierz Murzyn, LifeScience Cluster Krakow

14.00–17.00 Session: Induced pluripotent stem cells: a future of biomedicine (Green Biotechnology Hall II)
Chair: Alicja Józkowicz, Jagiellonian University, Poland

14.00–14.30 Maria Anna Ciemerych-Litwinienko, University of Warsaw, Poland
There and back again: short history of reprogramming. From a somatic cell to an inducible pluripotent cell.

14.30–15.00 Regina Grillari, University of Natural Resources and Life Sciences, Austria
The importance of peeing earnest: urine derived cells as model systems in biology and biomedicine.

15.00–15.25 Leonora Bużańska, Mossakowski Medical Research Centre, Polish Academy of Sciences, Poland
Stem cells in drug development and toxicity testing: implementation of emerging technologies.

15.25–15.55 Coffee break (lobby hall – exhibition area)

15.55–16.20 Jacek Jaworski, The International Institute of Molecular and Cell Biology, Poland
Use of cell reprogramming technologies for neurobiological research

16.20–16.45 Maciej Wiznerowicz, Greater Poland Oncology Center, Poland
Epigenetic mechanisms of human induced pluripotent stem cells (iPS).

16.45–17.10 Alicja Józkowicz, Jagiellonian University, Poland
Hypoxia and oxidative stress in reprogramming and differentiation.

17.10–17.25 Anna Skibińska-Kijek, Abo-LAB
Cell Signaling Antibodies as a Tool for iPSCs Analysis

18.00–19.00 Opening Ceremony
(White Biotechnology lecture hall)
Plenary lecture: Neal C. Stewart Jr., University of Tennessee, Knoxville, TN, USA
Synthetic Plant Biotechnology Tools for Precise Transgene Expression
Chair: Kazimierz Strzałka

19.00–20.30 Welcome cocktail (lobby hall – exhibition area)
Eurobiotech 2013 “White and Green Biotechnology”

Wednesday, 9th of October 2013

9.00–10.00  Plenary lecture: Frank van Breusegem, VIB Gent, Belgium (White Biotechnology lecture hall)
Oxidative Stress Signal Transduction in plants
Chair: Stanisław Karpiński

10.00–10.30  Coffee break  (lobby hall – exhibition area)

White Biotechnology

Session: Nanotechnologies in industrial processes
(White Biotechnology lecture hall)
Coordinator: Henryk Kołoczek
Chair: Zygmunt Kowalski

10.30–11.00  Leszek Tymczyna, Lublin University of Agriculture, Poland
The use of biofiltration and nanosilver in the rendering plants

11.00–11.30  Agata Markowska-Szczupak, West Pomeranian University of Technology, Poland
The use of titanium dioxide for purification, self-cleaning and disinfection in urban infrastructures

11.30–12.00  Marcin Banach, Cracow University of Technology, Poland
Nanosilver – a new product for disinfection treatment

12.00–12.30  Zygmunt Kowalski, Cracow University of Technology, Poland
Pig manure treatment by filtration

12.30–13.00  Katarzyna Gorazda, Cracow University of Technology, Poland
Phosphorus cycle – possibilities for its rebuilding

13.00–13.40  Lunch

Green Biotechnology

Session: Plant Molecular Breeding
(Green Biotechnology Lecture Hall)
Coordinator: Kazimierz Strzałka
Chair: Dariusz Grzebelus

10.30–11.00  Andreas Bachmair, Vienna University, Austria
Engineering of a plant retrotransposon for transposon mutagenesis in crop plants

11.00–11.30  Petr Smykal, Palacky University Olomouc, Czech Republic
Pea resistance genes to Pea Seed-borne Mosaic Virus (PStV), from basic science to applications in breeding

11.30–12.00  Marcin Rapacz, Agricultural University in Krakow, Poland
High through output phenotyping and genotyping – steps for drought tolerance improvement in barley
Europbiotech 2013 “White and Green Biotechnology”

12.00–12.15  Joanna Machczyńska, Piotr Bednarek, Janusz Zimny
In vitro induced variation in Triticale cv. Bogo

12.15–12.30  Alicja Macko – Podgórni, Krzysztof Smola, Dariusz Grzebelus
Conversion of a DArT marker differentiating wild and cultivated carrots to a codominant CAPS marker

Green Biotechnology

Session: Environmental Biotechnology
(Green Biotechnology Lecture Hall)
Chair: Katarzyna Turnau

12.30–13.00  M.N.V. Prasad, Hyderabad University, India
Phytoremediation crops for sustainable biofuels – scope and limitations the session to be continued at 16.00 this afternoon

13.00–13.40  Lunch

Violet Biotechnology

Legislation for biotechnologists
(Green Biotechnology Lecture Hall)
Chair: Tomasz Twardowski

13.40–13.50  opening
Tomasz Twardowski, Biotechnology Committee, PAS, Poland
Biotechnology regulation and society, Anno Domini 2013

13.50–14.10  Andrew Tommey, DuPont Pioneer, Brussels
Plenish, a GM-soya bean with altered fatty acid profile and direct consumer benefits

14.10–14.30  President Alicja Adamczak, Polish Patent Office, Poland
Patenting In Biotechnology and Unitary Patent, Poland and European Patent Organisation
Ewa Waszkowska
European patents for human embryonic stem cells

14.30–14.50  Agnieszka Dalbiak, Ministry of Environment, Poland
Current Legislation of Biotechnology In Poland and EU

14.50–15.10  Sławomir Sowa, IHAR, Poland
Genetically Modified Plants In Polish Agriculture

15.10–15.30  Rainer Friedrich, df-mp, Germany
Recent developments in gene and stem cell patenting in Europe

15.30–16.00  Coffee break
Eurobiotech 2013 “White and Green Biotechnology”

White Biotechnology

Session: Development of renewable energy in biotechnology (White Biotechnology Lecture Hall)
Chair: Henryk Koloczek

16.00–16.45  Irini Angelidaki, Technical University of Denmark
Algae biorefinery

16.45–17.30  Andrei A. Sibirny, UAN, Ukraine
Metabolic Engineering of Non-Conventional Yeasts for Construction of the Advanced Producers of Lignocellulosic Ethanol

17.30–18.15  L. Chrzanowski, Poznan University of Technology, Poland
Rhamnolipids – production and application in bioremediation

18.15–19.00  Roman Mareck, Poznan University of Life Sciences, Poland
Enhancement of biogas production from lignocelluloses materials by biological pretreatment with Trichoderma sp

Green Biotechnology

Session: Environmental Biotechnology - continuation (Green Biotechnology Lecture Hall)
Chair: Katarzyna Turnau

16.00–16.30  Alan J.M. Baker, University of Queensland, Australia
Metallophytes: a biodiversity and phytotechnological resource for soil clean-up, phytomining and mine site restoration

16.30–17.00  Jaco Vangronsveld, Hasselt University, Belgium
Bioaugmentation with engineering endophytic bacteria improves phytoremediation in the field

17.00–17.30  Irene Lichtscheidl, Vienna University, Austria
Support of Plant Growth by Selected Soil Microbes and Manipulation of Soil Texture in Metal Contaminated Soil

17.30–18.00  Edwin J. P. Cadenas, UNASAM, Huaraz, Peru
Highland plants under extreme conditions and their phytoremediation potential

18.00–18.20  Stefan Sassmann, Vienna University, Austria
A study of heavy metal impact, uptake and structural changes in the moss Physcomitrella patens

18.20–18.40  Wolfram Adlassning, Vienna University, Austria
Metal tolerant mosses: perspectives for bioremediation

18.40–19.00  Paulina Supel, Paweł Kaszycki, Agricultural University, Krakow, Poland
FISH detection of autochthonous bacteria of ceramic clayey raw materials
Thursday, 10th of October 2013

9.00–10.00 Plenary lecture: Prof. L.A.M. (Luuk) van der Wielen, Delft University of Technology, The Netherlands, Industrial Biotechnology (tentative title) (White Biotechnology Lecture Hall)
Chair: Stanisław Bielecki

10.00–10.30 Coffee break

White Biotechnology
Session: Bioeconomy
(White Biotechnology Lecture Hall)
Chair: Stanisław Bielecki

10.30–11.00 Lech Michalczuk, Research Institute of Horticulture, Poland
Agri-food industry - a key element of Polish bioeconomy

11.00–11.30 Andrzej Okruszek, Lodz University of Technology, Poland
Biomass as a source of raw materials for the preparation of environmentally friendly fibrous polymers

11.30–12.00 Paweł Kafarski, Wroclaw University of Technology, Poland
Biotransformations as a tool for Bio refineries

12.00–12.30 Tomasz Kapela, Biotechnika
Bionidustry in Poland - current status, major obstacles, driving force and open opportunities

12.30–13.00 Patricia Osseweijer, Delft University of Technology
Biobased production and answer to societal challenges? The importance of sustainability and communication

13.00–14.00 Lunch

14.00–15.30 Poster session

14.30–15.30 General Meeting of Polish Federation of Biotechnology
(Green Biotechnology Lecture Hall)

Green Biotechnology
Session: Plant Genetic Engineering
(Green Biotechnology Lecture Hall)
Chair: Rafał Barański, Neal C. Stewart

10.30–11.00 Paul Christou, University of Lleida, Spain
The ins and outs of multigene engineering of complex biosynthetic pathways in plants

11.00–11.30 Jan Szopa-Skórkowski, University of Wroclaw, Poland
Biotechnology of flax
Eurobiotech 2013 “White and Green Biotechnology”

11.30–12.00 Phil Mullineaux, University of Essex, UK
Systems biology-led approaches to engineering environmental stress tolerance in plants

12.00–12.30 Wacław Orczyk, Acclimatization and Plant Breeding Institute, National Research Institute, Poland
RNAi in cereal functional genomics

12.30–12.45 Monika Bajko, Monika Olchowa – Pajor, Urszula Tuleja, Paulina Kuczynska, Wojciech Strzałka, Dariusz Łatowski, Kazimierz Strzałka, Jagiellonian University, Poland
Expression of three diadinoxanthin de-epoxidase genes of Pheodactylum tricornutum in Escherichia coli Origami b strain

12.45–13.00 Monika Bojko, Monika Olchawa – Pajor, Urszula Tuleja, Paulina Kuczynska, Wojciech Strzałka, Dariusz Łatowski, Kazimierz Strzałka, Jagiellonian University, Poland
Expression of three diadinoxanthin de-epoxidase genes of Pheodactylum tricornutum in Escherichia coli Origami b strain

13.00–14.00 Lunch

14.00–15.30 Poster session

15.30–16.00 Magda Wróbel-Kwiatkowska, Jan Szopa-Skórkowski, University of Wrocław, Poland
A novel bioplastic fibres for tissue engineering and biodegradable packaging materials

16.00–16.30 Karolina Ludwicka, Stanisław Bielecki, Lodz University of Technology, Poland
Bacterial nanocellulose scaffolds for regenerative medicine

16.30–17.00 Coffee break

17.00–17.30 Barbara Klawnert – Maculewicz, University of Lodz, Poland
Biomedical applications of dendrimers

17.30–18.00 Katarzyna Kubik, Stanisław Bielecki, Lodz University of Technology, Poland
Bionanocellulose production control from molecular point of view

18.00–18.30 Agnieszka Leszczyńska, Krzysztof Pielichowski, Cracow University of Technology, Poland
Functionalised microfibrillary cellulose for bio-based polyamide composites
Green Biotechnology

Session: Animal Biotechnology in Biomedicine
(Green Biotechnology Lecture Hall)
Chairs: Zdzisław Smorąg, Ryszard Słomski

15.30–16.00 Csaba Pribenszky, Szent Istvan University Budapest, Hungary
Stress preconditioning of cells for improved output in cloning, IVF and stem cell research

16.00–16.30 Marlena Szalata, University of Life Sciences, Poznan
Large animal models in biomedical research

16.30–17.00 Coffee break

17.00–17.45 Urszula Mazurek, Medical University of Silesia, Poland
The risk of viral infections in xenotransplantation and prevention strategies

17.45–18.30 Marcin Samiec, National Research Institute of Animal Production, Poland
Novel strategies in the somatic cell cloning of mammals

18.30–19.00 Małgorzata Kimsa
Restriction factor gene expression in normal human dermal fibroblasts after porcine endogenous retrovirus infection

Friday, 11th of October 2013

9.00–10.00 Plenary lecture: Stanisław Karpiński, Warsaw University of Life Sciences, Poland
Teaching from the Plant Kingdom; Energy, Economics and the Environment
(White Biotechnology Lecture Hall)
Chair: Tomasz Twardowski

10.00–10.30 Coffee break

White Biotechnology

Session: Pharmaceutical biotechnology
(White Biotechnology Lecture Hall)
Chairs: Alicja Józkowicz, Katarzyna Kieć-Kononowicz

10.30–11.00 Oliver Kayser, Technical University Dortmund, Technical Biochemistry, Germany
Green Pharma – Synergy between biotechnology and pharmaceutical engineering
Eurobiotech 2013 “White and Green Biotechnology”

11.00–11.30 Anke Schiedel, Pharmazeutisches Institut, Pharmazeutische Chemie I, Universität Bonn, Germany
How to pick the right pocket - the where and how of ligand binding

11.30–12.00 Joanna Bereta, Structural Biology Department, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Poland
Monoclonal antibodies targeting angiogenesis and lymphangiogenesis in cancer therapies

12.00–12.30 Janina Kamińska, Faculty of Biotechnology and Food Sciences, Technical University of Lodz, Poland
Biocatalytic access to chiral intermediates for β-adrenergic receptors antagonists

12.30–13.00 Jerzy Dobrucki, Division of Cell Biophysics, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Poland
New fluorescence methods of visualisation of extracellular matrix in metabolically active tissues

Green Biotechnology
Session: Animal Biotechnology in Agriculture
(Green Biotechnology Lecture Hall)
Chairs: Krystyna Koziec, Arieh Gertler

10.30–11.15 Arieh Gertler, The Hebrew University of Jerusalem, Israel
Leptin and leptin antagonists in research and biotechnology

11.15–12.00 Stefan Kwiatkowski¹, Karl Dawson¹, Maciej Gryszel²
Alltech Biotechnology Center, Alltech Inc. USA¹, Faculty of Chemistry, Warsaw University of Technology, Poland²
Development of non-antibiotic treatment to prevent animal digestive tract from bacterial infections

12.00–12.30 Zofia Madeja, University of Life Sciences, Poznań, Poland
Embryonic Cells Stem (ECS) technology in farm animals - current state of knowledge and prospects for the future

12.30–13.00 Ewa Ochoć, University of Agriculture, Poland
Animals as a tool for metabolic processes modeling

13.00–14.00 Closing ceremony
Chairs: Kazimierz Strzałka, Tomasz Twardowski

14.00–14.30 Lunch

Targi w Krakowie Ltd.
Posters list
Posters list

WHITE BIOTECHNOLOGY

Session 1
Nanotechnologies in industrial processes

P1.1
Preparation of Ag nanoparticles using plant extracts
Nanotechnologies in industrial processes
Zygmunt Sadowski, Hanna Hyż, Szepan Gorzynik
Wroclaw University of Technology, Chemical Engineering Department

P1.2
Studies on the formation of O/W nano-emulsions, by low-energy emulsification method, suitable for cosmeceutical applications
Małgorzata Jaworska¹, Elżbieta Sikora¹, Michał Zielina², Jan Ogonowski¹
¹ Faculty of Chemical Engineering and Technology, Institute of Organic Chemistry and Technology, Krakow University of Technology, ² Faculty of Environmental Engineering, Institute of Water Supply and Environmental Protection, Krakow University of Technology

P1.3
Influence of process parameters on properties of Nanostructured Lipid Carriers (NLC) formulation
Elwira Lasoń, Elżbieta Sikora, Jan Ogonowski
Institute of Organic Chemistry and Technology, Krakow University of Technology, Poland

P1.4
Nanometals as tool in fight against plant pathogens
Agnieszka Sobczak-Kupiec¹, Dagmara Malina¹, Bożena Tyliśczak², Zbigniew J. Burgieł³
¹ Institute of Inorganic Chemistry and Technology, Krakow University of Technology, 24 Warszawska St., 31-155 Krakow, Poland, ² Department of Chemistry and Technology of Polymers, Krakow University of Technology, 24 Warszawska St., 31-155 Krakow, Poland, ³ Department of Plant Protection, University of Agriculture in Krakow, al. 29 Listopada 54, 31-425 Krakow, Poland
Posters list

P1.5
Carbon aerogels based on natural starches - synthesis and characterization
Monika Bakierska, Marcin Molenda, Małgorzata Maria Zaitz, Roman Dziembaj
Faculty of Chemistry, Jagiellonian University

P1.6
Characterization and properties of silver nanoparticles for agro-engineering applications
Agnieszka Sobczak-Kupiec, Katarzyna Bialik-Węs, Bożena Tyliszczak, Dagmara Malina, Zbigniew Burgiel
1 Institute of Inorganic Chemistry and Technology, Krakow University of Technology, ul. Warszawska 24, 31-155 Krakow, Poland, 2 Department of Chemistry and Technology of Polymers, Krakow University of Technology, ul. Warszawska 24, 31-155 Krakow, Poland, 3 Department of Plant Protection, Agricultural University

P1.7
Silver nanoparticles as an effective biocidal factor
Jolanta Pulit, Marcin Banach, Renata Szczygłowska, Mirosław Bryk
1 Krakow University of Technology, Institute of Inorganic Chemistry and Technology, Warszawska St., 24, 31-155 Krakow, Poland, 2 Silesian Environmental Ph.D. Studies Centre, Central Mining Institute, Gwarków Sq., 1, 40-166 Katowice, Poland, 3 Implementing Company

P1.8
The impact of industrial nanoaerosols on the pulmonary surfactant
Dorota Kondej, Tomasz R. Sosnowski
1 Central Institute for Labour Protection – National Research Institute/ Department of Chemical, Aerosol and Biological Hazards/ Czerniakowska 16/ 00-701 Warsaw/ Poland, 2 Warsaw University of Technology/ Faculty of Chemical and Process Engineering/ Waryńskiego 1/ 00-645 Warsaw/ Poland
Posters list

P1.9  
The impact of nanosilver addition on element ions release form light-cured dental composite and compomer into 0,9% NaCl
Krzysztof Sokołowski\textsuperscript{1}, Małgorzata Iwona Szykowska\textsuperscript{2}, Aleksandra Pawłaczyk\textsuperscript{2}, Jerzy Sokołowski\textsuperscript{1}
\textsuperscript{1} Department of Conservative Dentistry, Medical University of Lodz, Pomorska 251, 92-213 Lodz (Poland), \textsuperscript{2} Institute of General and Ecological Chemistry, Technical University of Lodz, Zeromskiego 116, 90-924 Lodz (Poland), \textsuperscript{3} Department of General Dentistry, Medical University of Lodz, Pomorska 251, 92-213 Lodz (Poland)

WHITE BIOTECHNOLOGY

Session 2  
Development of renewable energy in biotechnology

P2.1  
The influence of phytase addition during the enzymatic starch hydrolysis process with the use of basic amylolytic enzymes on yield and the course of alcoholic fermentation process.
Dawid Mikulski, Grzegorz Kłosowski
Department of Biotechnology, Institute of Experimental Biology, Kazimierz Wielki University, 85-667 Bydgoszcz, ul. Chodkiewicza 51, Poland

P2.2  
Determination of the impact of lactose supplementation of synthetic cellulolytic media on the activity of cellulase complex
Dorota Macko, Beata Miklaszewska, Dawid Mikulski, Grzegorz Kłosowski
Department of Biotechnology, Institute of Experimental Biology, Kazimierz Wielki University

P2.3  
Perspectives of biofuel production from cellulosic crop waste
Dariusz Dziga\textsuperscript{1}, Dominika Jagiello-Flasińska\textsuperscript{2}
\textsuperscript{1} Department of Plant Physiology and Development, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Gronosta- jowa 7, Krakow, Poland, \textsuperscript{2} Department of Plant Biotechnology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Gronosta- jowa 7, Krakow, Poland
Posters list

P2.4
Biogas generation from sewage sludge in the anaerobic digestion process
Mariusz Małkowski, Paweł Wolski, Lidia Wolny
Institute of Environmental Engineering, Czestochowa University of Technology

P2.5
Zeolite nano-adsorbents for fuel ethanol dehydration
Tomasz Tokarz
Wydział Inżynierii I Technologii Chemicznej Politechniki Krakowskiej
Instytut Chemii i Technologii Organicznej; Katedra Technologii Organicznej i Procesów Rafinerijnych

P2.6
Production of butane-2,3-diol by Bacillus licheniformis NCIMB 8059 in batch and fed-batch cultures and its up-scaling
Joanna Krysiak¹, Ewa Gromek¹, Halina Kalinowska¹, Marianna Turkiewicz¹, Aneta Białkowska¹, Siegmund Lang²
¹ Institute of Technical Biochemistry Lodz University of Technology, ² Institute of Biochemistry, Biotechnology and Bioinformatics Braunschweig University of Technology

P2.7
Biogas from physical modified excess sludge of pulp industry
Mariusz Barański, Lidia Wolny, Iwona Zawieja
Institute of Environmental Engineering, Czestochowa University of Technology

P2.8
Polymer-enzyme catalyst systems for the hydrolysis of cellulose
Joanna Świder¹, Katarzyna Gawełek¹, Ewa Witek¹, Edyta Podstawka-Proniewicz¹, Anna Konieczna-Molenda²
¹ Faculty of Chemistry, Jagiellonian University, Ingardena 3 Str., 30-060 Krakow, Poland, ² Department of Chemistry and Physics, University of Agriculture, Balicka 122 Str., 30-149 Krakow, Poland
Posters list

P2.9
Effect of cellulase immobilization upon digestion of cellulose
Katarzyna Gawełek¹, Agnieszka Tąta¹, Ewa Witek¹,
Edyta Podstawka-Proniewicz¹, Anna Konieczna-Molenda²
¹ Faculty of Chemistry, Jagiellonian University, Ingardena 3 Str., 30-060
Krakow, Poland, ² Department of Chemistry and Physics, University of
Agriculture, Balicka 122 Str., 30-149 Krakow, Poland

P2.10
Application of wastes from alcohol distillation in two-step process
of biohydrogen production
Roman Zagrodnik
Faculty of Chemistry, Adam Mickiewicz University, Umultowska 89b,
61-614 Poznan, Poland

P2.11
Electrochemical studies of chemically modified and native Sinorhizo-
biurn melilati laccase
Anna Pawlik, Grzegorz Janusz, Jerzy Rogalski
Maria Curie-Skłodowska University, Faculty of Biology and Biotechnolo-
gy, Department of Biochemistry

P2.12
Micelle-mediated extraction of elderberry blossom by whey protein
and naturally-derived surfactants
Karolina Sliwa, Anna Tomaszkiewicz-Potępa, Elżbieta Sikora,
Jan Ogorewski
Faculty of Chemical Engineering and Technology, Krakow University of
Technology

P2.13
Biosynthesis of 2,3-butanediol from waste biomass by Raoultel-
la Planticola CECT 843
Mariusz Lesiecki, Adrian Czerniak
Department of Biotechnology and Food Microbiology, Poznan University
of Life Sciences, Poland
Posters list

WHITE BIOTECHNOLOGY

Session 3
Bioeconomy

P3.1
Isolation of bacterial strains capable of converting glycerol into succinic acid

Marcin Podleśny, Piotr Jarocki, Jakub Wyrostek, Tomasz Czernecki, Zdzisław Targoński
Department of Biotechnology, Human Nutrition and Food Commodities, University of Life Sciences in Lublin

WHITE BIOTECHNOLOGY

Session 4
Bioplastics and biobased polymers

P4.1
Oxidative polymerization of lignins by laccase in water-organic solvent system

Ionita Firuta Fitigau1,4, Francisc Peter1, Carmen Gabriela Boeriu2,3
1 “Politehnica” University of Timișoara, Faculty of Industrial Chemistry and Environmental Engineering, C. Telbíz 6, 300001 Timișoara, Romania, 2 Wageningen UR Food & Biobased Research, Bornse Weiland 9, 6708 WG Wageningen, Netherlands, 3 University “Aurel Vlaicu” of Arad, Department of Life Sciences, str. E. Dragoi nr 2, Arad, Romania, 4 National Institute of Research-Development for Electrochemistry and Condensed Matter, A. P. Podeanu 144, 300569 Timișoara, Romania

P4.2
Biocatalytic synthesis of gluconolactone and ε-caprolactone copolymers

Anamaria Todea1, Lajos Nagy2, Valentin Badea1, Sandor Keki1, Francisc Peter1
1 University “Politehnica” of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, C. Telbíz 6, 300001 Timișoara, Romania, 2 Department of Applied Chemistry, University of Debrecen, H-4010 Debrecen, Hungary
P4.3
New methods of poly(itaconic acid) synthesis
Szczepan Bednarz, Diana Blażejewska, Alicja Błaszczyk, Aleksandra Nowak, Piotr Krzywda
Krakow University of Technology, Faculty of Chemical Engineering and Technology

P4.4
Medium engineering for 2-methylbutyl-1ol esters synthesis
Mirosława Szczęsna-Antczak, Emilia Grabarczyk, Agnieszka Borowska, Jakub Szeląg, Katarzyna Chudzik, Magdalena Żakowicz-Siuda, Tadeusz Antczak
Institute of Technical Biochemistry, Lodz University of Technology, Stefanowskiego Str. 4/10, 90-924 Lodz, Poland

P4.5
An influence of water content on enzymatic transesterification
Jakub Szeląg, Mirosława Szczęsna-Antczak, Łukasz Stańczyk, Małgorzata Piotrowicz-Wasiak, Tadeusz Antczak
Institute of Technical Biochemistry, Technical University of Lodz, Stefanowskiego Str. 4/10, 90-924 Lodz, Poland

P4.6
Synthesis of fluorescent polyesters from citric acid
Wiktor Kasprzyk, Szczepan Bednarz, Dariusz Bogdał
Chair of Biotechnology and Physical Chemistry, Faculty of Chemical Engineering and Technology, Warszawska 24 St. 31-155 Krakow, Poland

P4.7
Application of selectively-hydrogenated rapeseed oil for modification of flexible foams
Sylwia Dworakowska, Dariusz Bogdał, Federica Zaccheria, Nicoletta Ravasio
1 Department of Biotechnology and Physical Chemistry, Krakow University of Technology, Warszawska 24, Krakow, Poland; 2 CNR-Institute of Molecular Science and Technologies, Via Golgi 19, Milan, Italy
Posters list

P4.8
Microwave-enhanced chemical modification of chitosan
Marek Stawiński, Marek Piątkowski
Chair of Biotechnology and Physical Chemistry, Krakow University of Technology, Krakow, Poland

WHITE BIOTECHNOLOGY

Session 5
Pharmaceutical Biotechnology

P5.1
The impact of immobilized metal affinity chromatography (IMAC) resins on DNA aptamer selection
Ewa Kowalska, Filip Bartnicki, Katarzyna Pels, Wojciech Strzalka
Department of Plant Biotechnology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland

P5.2
Bcl-2 family gene expression on HeLa cells treated with Physalis peruviana ethanol extracts
Ozgur Çakir¹, Bilgin Candar Çakir², Murat Pekmez¹, Kerem Fidan¹
¹ Istanbul University, ² Istanbul Kultur University

P5.3
Antibacterial and antioxidant activities of Physalis peruviana
Murat Pekmez¹, Fatma Elif Çepni¹, Bilgin Candar Çakir², Özgür Çakir¹
¹ Istanbul University, ² Istanbul Kultur University

P5.4
Arbutin production via biotransformation of hydroquinone in in vitro cultures of Aronia melanocarpa (Michx.) Elliott
Inga Kwiecień, Agnieszka Szopa, Kornelia Madej, Halina Ekiert
Chair and Department of Pharmaceutical Botany, Jagiellonian University, Collegium Medicum, 9 Medyczna Street, 30-688 Krakow, Poland
Posters list

P5.5
The accumulation of phenolic acids in agitating cultures of *Ruta graveolens* L

Agnieszka Szewczyk, Marzena Surzyn, Halina Ekiert
Department of Pharmaceutical Botany, Jagiellonian University, Collegium Medicum, 9 Medyczna St., 30-688 Krakow, Poland

P5.6
The influence of L-phenylalanine, methyl jasmonate and sucrose concentration on the accumulation of phenolic acids in *Exacum affine* Balf. f. shoot culture

Ewa Skrzypczak-Pietraszek, Joanna Słota
Chair and Department of Pharmaceutical Botany, Jagiellonian University, Collegium Medicum, 9 Medyczna Street, 30-688 Krakow, Poland

P5.7

Marek Grosicki, Anna Cukier, Katarzyna Kieć-Kononowicz
Jagiellonian University Medical College, Faculty of Pharmacy, Department of Technology and Biotechnology of Drugs, 30-688 Krakow, Poland

P5.8
Antibacterial activity of essential oils obtained from leaves and fruits of a native plant from South America, *Schinus areira*

Marta H. Alabrudzinska¹, Liliana S. Celaya¹, Ana C. Molina¹, Carmen I. Viturro², Silvia Moreno³
¹Intercollegiate Faculty of Biotechnology, University of Gdansk and Medical University of Gdansk, Gdansk, PC 80-822, Poland, ²PRONOA Laboratory, F.I., National University of Jujuy, S. S. de Jujuy PC 4600, Argentina, ³Plant Biochemistry laboratory, Institute Leloir Foundation, IIBBA-CONICET, Buenos Aires, PC 1405. Argentina

P5.9
Cell wall proteins of *Candida albicans* and non-albicans Candida species as the binders for human proteins and potential therapeutict targets.

Justyna Karkowska-Kuleta¹, Sylwia Kedracka-Krok¹, Karolina Seweryn¹, Maria Rapola-Kozik¹, Andrzej Kozik¹
Posters list

P5.10
Quercetin decreases myelosuppression and oxidative DNA damage induced by etoposide in bone marrow of rats
Monika A. Papież
Department of Cytobiology, Faculty of Pharmacy, Jagiellonian University Medical College, Krakow, Poland

P5.11
Application of immobilized ethylbenzene dehydrogenase and whole-cell recombinant phenylethanol dehydrogenase system for synthesis of chiral alcohols
Maciej Szaleniec¹, Agnieszka Dudzik¹, Mateusz Tataruch¹, Wojciech Snoch¹, Joanna Opalińska-Piskorz¹, Jolanta Bryjak², Małgorzata Witka¹, Johann Heider³
1 Jerzy Haber Institute of Catalysis and Surface Chemistry PAS, ul. Niezapomianek 8, 30-239 Krakow, Poland, 2 Department of Bioinorganic Chemistry, Wroclaw Technical University, Wybrzeże Wyspianskiego 27, 50-370 Wroclaw, Poland, 3 Laboratory of Microbial Biochemistry, Philipps-University of Marburg, Karl-von-Frisch Strasse 8, D-3504 Marburg, Germany

P5.12
Studies on sintering process of bone-derived hydroxyapatite
Dagmara Malina, Kamila Biernat, Agnieszka Sobczak-Kupiec
Institute of Inorganic Chemistry and Technology, Krakow University of Technology, 24 Warszawska St., 31-155 Krakow, Poland

P5.13
Sugar analogs as a novel therapeutic agents against cancer
Anna Czubatka¹, Pawel Tokarz², Zbigniew Witczak¹, Tomasz Paplawski¹
1 Department of Molecular Genetics, University of Lodz, Lodz, 90-236, Poland, 2 Department of Organic Chemistry, University of Lodz, Lodz, 91-403, Poland, 3 Department of Pharmaceutical Sciences, Nesbitt School of Pharmacy, Wilkes University, Wilkes-Barre, PA 18766, USA
**Posters list**

**P5.14**
Fluorometric assay for screening the new multidrug-resistant strains of Pseudomonas aeruginosa with efflux pumps overexpression

Gniewomir Latacz, Zuzanna Rowińska, Anna Matys, Katarzyna Kieć-Kononowicz
Department of Technology and Biotechnology of Drugs, Jagiellonian University Medical College, Krakow, Medyczna 9, 30-688 Krakow, Poland

**P5.15**
Production of triterpenoids with cell and tissue cultures
Magdalena Malinowska, Elżbieta Sikora, Jan Ogonowski
Krakow University of Technology

**P5.16**
Determination of antioxidant activity of black tea extract
Magdalena Malinowska, Kamil Kurleto, Grzegorz Kurowski, Barbara Laskowska, Elżbieta Sikora, Otmar Vogt
Krakow University of Technology

**P5.17**
Homology Modeling of Steroid C25 Dehydrogenase
Agnieszka Rugor1, Stefan Mordarski2, Jakub Staroń2, Andrzej Bojarski2, Maciej Szaleniec1
1 Jerzy Haber Institute of Catalysis and Surface Chemistry, PAS, Niezapominajek 8, 30-239 Krakow, Poland, 2 Institute of Pharmacology, PAS, Smętna 12, 31-343 Krakow, Poland

**P5.18**
Bacterial steroid C-25 dehydrogenase – a novel biocatalyst for regioselective hydroxylation of steroid compounds
Natalia Zawada, Agnieszka Rugor, Mateusz Tataruch, Maciej Szaleniec, Daniel Knack
Jerzy Haber Institute of Catalysis and Surface Chemistry, PAS, Niezapominajek 8, 30-239 Krakow, Poland
Posters list

P5.19
Screening of porous carriers for covalent immobilization of pepsin and laccase

Katarzyna Szalołata¹, Monika Osirszko-Jaroszuk¹, Kamila Wizlo¹, Jolanta Bryjak², Anna Jaross-Wilkołazka

¹ Maria Curie-Skłodowska University, Department of Biochemistry, Lublin, Poland, ² Wroclaw University of Technology, Department of Bioorganic Chemistry, Wroclaw, Poland

P5.20
Poly(AA-co-MMA) micro- and nanoparticles for controlled drug delivery

Katarzyna Bialik-Wąs, Bożena Tyliśczak, Krzysztof Pielichowski

Department of Chemistry and Technology of Polymers, Krakow University of Technology, ul. Warszawska 24, 31-155 Krakow, Poland

P5.21
Effect of conjugated linoleic acid (CLA) on serum lipid profile and markers of liver function in rats fed different dietary fat sources

Magdalena Franczyk-Żarów¹, Edyta Maślak¹, Renata B. Kostogrys¹

¹ Department of Human Nutrition, Faculty of Food Technology, Agricultural University of Krakow, ul. Balicka 122, 30-149 Krakow, Poland, ² Jagiellonian Centre for Experimental Therapeutics (JCET), Jagiellonian University, Bobrzsynkiego 14, Krakow, Poland

P5.22
Novel class of primosomal protein B from Clostridium thermocellum

Marta Śpibida, Marta Marszałkowska, Marcin Olszewski

Gdansk University of Technology, Department of Microbiology, ul. Narutowicza 11/12, 80-233 Gdansk, Poland

P5.23
The antioxidant quercetin modifies etoposide action in HL-60 cells

Monika Papież

Department of Cytobiology, Faculty of Pharmacy, Jagiellonian University Medical College, Krakow, Poland
P5.24
Salvia lavandulifolia from Spain: aromatic profile by enantioselective gas chromatography-mass spectrometry
Ana Belen Cutillas1, Alejandro Carrasco1, Vanessa Ortiz1, Ramiro Martinez-Gutierrez2, Francisco Javier Martinez4, Mariano Sanchez5, Virginio Tomas1, Jose Tudela1
1 GENZ-Grupo de Investigacion Enzimologia (www.um.es/genz), Departamento de Bioquimica y Biologia Molecular-A, Campus de Excelencia Internacional Regional Campus Mare Nostrum, Universidad de Murcia, Murcia, Spain, 2 Departamento de Quimica Analitica, Universidad de Murcia, 3 NOVOZYMES SPAIN S.A. (www.novozymes.com), 4 Esencias Martinez-Lozano S.A. (www.esenciaslozano.com), 5 Europermanent S.L.

P5.25
Permeation of iodine from iodine-enriched yeast through porcine intestine
Florian Ryszka1, Barbara Dolinska1,2, Michal Ziebinski1,2, Dagmara Chyra1, Zbigniew Dobrzański3
1 Pharmaceutical Research and Production Plant "Biochefa", Sosnowiec, Poland, 2 Department of Applied Pharmacy and Drug Technology, Medical University of Silesia, Sosnowiec, Poland, 3 Department of Animal Hygiene and Animal Welfare, Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland

P5.26
Novel class of primosomal protein B from Clostridium thermocellum
Marta Śpibida, Marta Marszałkowska, Marcin Olszewski
Gdansk University of Technology, Department of Microbiology, ul. Narutowicza 11/12, 80-233 Gdansk, Poland

P5.27
A novel DNA polymerase from hyperthermophilic bacterium Thermovibrio ammonificans: gene cloning, expression, and characterization
Marta Marszałkowska, Sandra Zakrzewska, Marta Śpibida, Marcin Olszewski
Department of Microbiology, Faculty of Chemistry, Gdansk University of Technology, ul. Narutowicza 11/12, 80-233 Gdansk, Poland
Posters list

P5.28
Screening of carriers for lipase immobilization suitable for reactions in water, biphasic and pure organic solvent systems
Zofia Hrydziuszko¹, Agnieszka Dmytryk¹, Paulina Majewska¹, Katarzyna Szymańska², Jolanta Liesiene³, Jolanta Bryjak¹
¹ Wroclaw University of Technology, Faculty of Chemistry, Department of Bioorganic Chemistry, Poland, ² Silesian University of Technology, Department of Chemical Engineering, Poland, ³ Kaunas University of Technology, Faculty of Chemical Technology, Lithuania

P5.29
The effect of new hydantoin derivatives on the increase of ciprofloxacin efficacy in drug-resistant E. coli
Anna Matys, Ewa Otrębska, Jakub Mazurkiewicz, Daria Studnicka, Beata Mastek, Jadwiga Handzlik, Katarzyna Kieć-Kononowicz
Department of Technology and Biotechnology of Drugs, Jagiellonian University, Collegium Medicum, Faculty of Pharmacy, Krakow, Poland

P5.30
Laccase activity and stability in the presence of menthol-based ionic liquids
Joanna Feder-Kubis¹, Jolanta Bryjak²
¹ Wroclaw University of Technology, Faculty of Chemistry, Department of Chemical Engineering, ² Wroclaw University of Technology, Faculty of Chemistry, Department of Bioorganic Chemistry

P5.31
Antiradical capacity of fruits of Polish raspberry and blackberry cultivars – an electron paramagnetic resonance spectrometry study
Anna Kostecka-Gugała, Aleksandra Mech-Nowak, Paweł Kaszycki
Department of Biochemistry, Institute of Plant Biology and Biotechnology, Faculty of Horticulture, University of Agriculture in Krakow, al. 29 Listopada 54, 31-425 Krakow, Poland

P5.32
Development of novel cell line, expressing human histamine H4 receptor and its use in affinity testing of potent receptor ligands.
Tadeusz Karcz, Katarzyna Kieć-Kononowicz
Department of Technology and Biotechnology of Drugs, Jagiellonian University Medical College, Krakow, Poland
Posters list

P5.33
The effect of egg yolk lipids enriched with CLA on cytotoxicity of human melanoma cell line WM793.
Dominik Domagała¹, Aneta Koronowicz¹, Jarosław Oczkowicz¹, Elżbieta Sikora¹, Piotr Laidler¹, Teresa Leszczyńska¹
¹Uniwersytet Rolniczy w Krakowie, Katedra Żywienia Człowieka, ²Collegium Medicum, Uniwersytet Jagielloński

GREEN BIOTECHNOLOGY

Session 6
Plant Molecular Breeding

P6.1
New sources of phenolic compounds and anthocyanins for biotechnology
Nijole Anisimoviene¹, Jurga Jankauskienė¹, Mildą Jodinskienė¹, Vidmantas Bendokas², Vidmantas Stanys², Tadeušas Šikšnianas²
¹Institute of Botany of Nature Research Centre, ²Institute of Horticulture, Lithuanian Research Centre for Agriculture and Forestry

P6.2
Selection efficiency of converted DARt markers in spring barley breeding for drought tolerance
Magdalena Wójcik-Jagła¹, Anna Füst¹, Marcin Rapacz¹, Mirosław Tyrka²
¹Department of Plant Physiology, University of Agriculture in Krakow, ²Department of Biochemistry and Biotechnology, Rzeszow University of Technology

P6.3
Studies on micropropagation of Polish garlic (Allium sativum L.) varieties
Alicja Chuda

University of Agriculture in Krakow, Faculty of Horticulture, Institute of Plant Biology and Biotechnology, Department of Genetics, Plant Breeding and Seed Science, Al. 29 Listopada 54, 31-425 Krakow, Poland
Posters list

P6.4
Analysis of mitochondrial transcripts associated with cytoplasmic male-sterility in cauliflower (Brassica oleracea L. var. botrytis)
Gabriela Machaj, Marek Szklarczyk
Department of Genetics, Plant Breeding and Seed Science, University of Agriculture in Krakow, Al. 29 Listopada 54, Krakow

P6.5
The role of nitric oxide in calamine plant species response to lead stress during in vitro culture
Ewa Muszyńska, Ewa Hanus-Fajerska
Department of Botany and Plant Physiology, University of Agriculture in Krakow

P6.6
Evaluation of the nucleotide sequences of DNA rearrangements in wheat-rye hybrids using ISSR-PCR, IRAP-PCR, REMAP-PCR and “ITAP-PCR”
Izabela Szućko, Stanisława Maria Rogalska
Chair of Cell Biology, University of Szczecin, Wąska 13, PL-70415 Szczecin, Poland

P6.7
Intergenic Spacer length variability in cultivated, weedy and wild rye species
Lidia Skuza, Ewa Filip, Izabela Szućko
Chair of Cell Biology, University of Szczecin, Wąska 13, PL-70415 Szczecin, Poland

P6.8
Intra-population genetic diversity of cultivated carrot (Daucus carota L.) assessed by analysis of microsatellite markers
Anna Maksylewicz, Rafał Baranski
University of Agriculture in Krakow, Institute of Plant Biology and Biotechnology, Unit of Genetics, Plant Breeding and Seed Science Al. 29 Listopada 54, 31-425 Krakow, Poland
Posters list

P6.9
Detection of *Plasmodiophora brassicae* in soil by PCR method
Anna Czubatka, Józef Robak, Agnieszka Czajka, Wojciech Szczechura, Mirosława Staniaszek
Research Institute of Horticulture, ul. Konstytucji 3 Maja 1/3, 96-100 Skierniewice, Poland

P6.10
Chromosomal distribution of repetitive DNA sequences and karyotyping in *Cucumis melo* var. *melliferus*
Kohei Yagi, Ewa Siedlecka, Zbigniew Przybecki, Stefan Malepszy, Wojciech Pląder
Department of Plant Genetics, Breeding and Biotechnology, Faculty of Horticulture and Landscape Architecture, Warsaw University of Life Sciences - SGGW, Nowoursynowska, Warsaw, Poland

P6.11
The effect of temperature on growth, and several parameters of *Pheodactylum tricornutum* in batch cultures
Monika Bojko¹, Klaudia Brzostowska¹, Paulina Kuczyńska¹, Dariusz Latowski¹, Monika Olchawa-Pajor¹, Weronika Krzeszowiec¹, Kazimierz Strzałka¹
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P6.12
DNA markers as a tool for selection of tomato plants with resistance to *Fusarium oxysporum* f.sp. *radicis-lycopersici*
Mirosława Staniaszek, Wojciech Szczechura, Elżbieta Kozik, Marzena Nowakowska, Hanna Habdas
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Posters list

P6.13
Effect of different conditions for cell immobilization and phytosulfokine supplementation on somatic embryogenesis in protoplast cultures of Daucus species
Katarzyna Maćkowska, Ewa Grzebelus
University of Agriculture in Krakow, Dept. of Genetics, Plant Breeding and Seed Science

P6.14
Characterization of wheat mRNAs expressed during grain development
Magdalena Simlat, Michał Nowak, Patrycja Wiecezrek, Maria Moś
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P6.15
Molecular and cytogenetic verification of the F1 and F2 hybrids between Betula nana and Betula utilis ‘Doorenbos’
Małgorzata Czernicka, Jarosław Pławiak, Piotr Muras
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GREEN BIOTECHNOLOGY

Session 7
Environmental Biotechnology

P7.1
The influence of phytase addition during the enzymatic starch hydrolysis process with the use of basic amylolytic enzymes on yield and the course of alcoholic fermentation process.
Dawid Mikulski, Grzegorz Kłosowski
Department of Biotechnology, Institute of Experimental Biology, Kazimierz Wielki University, 85-667 Bydgoszcz, ul. Chodkiewicza 51, Poland
Posters list

P7.2
The Kinetic reduction of Cr(VI) by yeast cells of Saccharomyces cerevisiae, Phaffia rhodozyma and their protoplasts.
Jarosław Chwastowski, Henryk Kołoczek
Krakow University of Technology, Department of Inorganic Technology and Environmental Biotechnology

P7.3
The citricacid-modified enzyme-resistant dextrin from potato starch as potential prebiotic.
Katarzyna Śliżewska¹, Renata Barczyńska², Janusz Kapuśniak²
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P7.4
Comparison of ARDRA and ARISA fingerprinting patterns analysis as a methods in early bulking activated sludge symptoms detection
Dagna Sołtysik, Daria Matczyńska, Ilona Bednarek
Department of Biotechnology and Genetic Engineering, Medical University of Silesia in Katowice, Narcyzów 1, 41-200 Sosnowiec, Poland

P7.5
Phytofiltration laboratory prototype of uranium-contaminated waters
Paulo Favas¹,², João Pratas³
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P7.6
Biological activity of lipopolysaccharide from cyanobacterium Synechococcus PCC 7002
Agnieszka Rombel-Bryzek¹, Anna Krop-Wątorek¹,²
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Posters list

P7.7
Influence of imidazolium ionic liquids on activated sludge process
Dorota Gendaszewska, Ewa Liwarska-Bizukojć, Cedric Maton, Chris V. Stevens
1 Technical University of Lodz, Institute of Fermentation Technology and Microbiology, Lodz, Poland, 2 Ghent University, Department of Sustainable Chemistry and Technology, Ghent, Belgium

P7.8
Treatment of fibreboard wastewater by combined ozone, membrane bioreactor and activated carbon process
Dorota Krzemińska, Magdalena Madeła, Ewa Neczaj
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P7.9
Treatment of fibreboard wastewater by combined fenton’s process, membrane bioreactor and activated carbon process
Dorota Krzemińska, Magdalena Madeła, Ewa Neczaj
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P7.10
Alga Spirogyra sp. – biosensor of surface water contamination with heavy metals
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P7.11
Kinetics and equilibria of heavy metal sorption by aqueous plants Elodea canadensis L. and Myriophyllum spicatum L.
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Posters list

P7.12
Heavy metal sorption by moss Pleurozium shreberi and lichen Hypogymnia physodes
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P7.13
Preparative scale production of immobilized lipase preparations for continuous bioconversion processes
Lukasz Stanczyk, Katarzyna Struszczyk-Swita, Mirosława Szczesna-Antczak, Tadeusz Antczak
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P7.14
Changes in dynamics of ascorbate-glutathione metabolism in response to trace metal stress in Pisum sativum
Aneta Piechalak1, Arleta Malecka1, Agnieszka Kutrowska1, Anetta Hanc2, Danuta Baralkiewicz2, Barbara Tomaszewska1
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P7.15
Biological denitrification of wastewater: Metabolic activity in a microbial consortium
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Posters list

P7.16
Influence of radical reactions on the kinetics of PAH biodegradation in aqueous media

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P7.17
Different patterns of SOD generation and scavenging in barley SSD lines during drought

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P7.18
Influence of additional carbon sources on pentachlorophenol transformation

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P7.19
The influence of bioaugmentation and biosurfactant addition on bioremediation efficiency of diesel-oil contaminated soil: feasibility during field studies

Alicja Szulc, Daria Pęziak, Aleksandra Piotrowska, Marta Woźniak, Mateusz Sydow, Łukasz Ławniczak, Anna Parus, Łukasz Chrzanowski

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Posters list

P7.20
Contributions of rhamnolipids to natural or induced bioremediation
Alicja Szulc¹, Marta Woźniak¹, Mateusz Sydow¹, Piotr Lisiecki¹, Grzegorz Framski¹, Roman Marecik¹, Kamila Myszka¹, Łukasz Chrzanowski¹

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P7.21
Biodegradation of ionic liquids by microbial consortia in aqueous media
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P7.22
Influence of 1-alkoxymethyl-2-methyl-5-hydroxypyridinium chloride homologues on biodegradation of diesel fuel by a microbial consortium
Jakub Idkowiak¹, Bogdan Wyrwas¹, Agnieszka Zgoła-Grześkowiak², Anna Syguda¹, Joanna Wojtera-Kwiczor¹, Anna Gielnik¹, Łukasz Ławniczak¹, Łukasz Chrzanowski¹

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P7.23
Biodegradation of diesel/biodiesel blends in sandy soil
Piotr Lisiecki¹, Daria Peziak¹, Aleksandra Piotrowska¹, Łukasz Ławniczak¹, Anna Parus¹, Grzegorz Framski¹, Jacek Staniewski¹, Łukasz Chrzanowski¹

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Posters list

P7.24
The influence of biodiesel on the biodegradation of hydrocarbons in aqueous microcosms

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P7.25
Preferential degradation of Triton X-100 and polyethylene glycols during biodegradation of diesel fuel

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Marta Woźniak¹, Mateusz Sydow¹, Alicja Szulc¹, Bogdan Wyrwas¹,
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P7.26
Biological treatment of spent metalworking fluids by non-autochthonous bacterial consortia

Łukasz Ławniczak¹, Daria Pęziak¹, Aleksandra Piotrowska¹,
Marta Woźniak¹, Mateusz Sydow¹, Alicja Szulc¹, Roman Marecik¹,
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P7.27
Bioavailability of hydrocarbons to bacterial consortia during Triton X-100-mediated biodegradation in aqueous media

S Daria Pęziak¹, Aleksandra Piotrowska¹, Marta Woźniak¹,
Mateusz Sydow¹, Alicja Szulc¹, Jakub Idkowiak¹, Bogdan Wyrwas¹,
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P7.28
Rhamnolipids increase biodegradation of diesel oil in the presence of chlorophenols
Daria Pęziak, Aleksandra Piotrowska, Grzegorz Framski, Bogdan Wyrwas, Roman Marecik, Kamila Myszka, Agnieszka Piotrowska-Cyplik, Łukasz Chrzanowski
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P7.29
Simultaneous degradation of phenol and alkanes by unconventional yeast strains
Aleksandra Piotrowska, Daria Pęziak, Marta Ważniak, Mateusz Sydow, Alicja Szulc, Jakub Idkowiak, Bogdan Wyrwas, Łukasz Chrzanowski
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P7.30
Biodegradation of Triton X-100 by a bacterial community isolated from activated sludge
Aleksandra Piotrowska, Daria Pęziak, Marta Ważniak, Mateusz Sydow, Grzegorz Framski, Bogdan Wyrwas, Agnieszka Zgoła-Grześkowiak, Łukasz Chrzanowski
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P7.31
Biodegradation of diesel and biodiesel fuels under various aeration conditions
Mateusz Sydow, Daria Pęziak, Aleksandra Piotrowska, Marta Ważniak, Piotr Lisiecki, Lukasz Ławniczak, Roman Marecik, Łukasz Chrzanowski
Posters list

P7.32
Biodegradation of rhamnolipids and its effect on bacterial community composition during diesel oil degradation

Marta Woźniak¹, Mateusz Sydow¹, Alicja Szulc¹, Piotr Lisiecki¹, Anna Parus¹, Katarzyna Mucha¹, Roman Marecki¹, Łukasz Chrzanowski¹

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P7.33
Environmental fate of selected ionic liquids introduced into terrestrial microcosms

Łukasz Chrzanowski¹, Daria Pęziak¹, Aleksandra Piotrowska¹, Bogdan Wyrwas², Agnieszka Zgoła-Grześkowiak¹, Anna Syguda¹, Joanna Wojtera-Kwiczor¹, Łukasz Ławniczak¹

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P7.34
Phytotoxic effect of rhamnolipids supplementation during biodegradation of diesel oil in soil

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Posters list

P7.35
Removal of atrazine in the presence of wetland plant species
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P7.36
Utilisation of betaine in vinasse stillage by a mixed culture of aerobic bacteria under non-controlled pH
Agnieszka Ryznar-Luty, Edmund Cibis, Małgorzata Krzywonos
Wroclaw University of Economics, Department of Bioprocess Engineering

P7.37
Bacterial changeability monitoring of activated sludge bacterial communities in SBR bioreactors treating reject water with PCR-DGGE
Aleksandra Ziembińska, Grzegorz Cema, Anna Meresta, Agata Karto, Lesław Płonka
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P7.38
Semiquantitative ICP-MS analysis as a tool in the study of new hyperaccumulators
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P7.39
Supporting the process of biosorption
Paulina Olesiak, Longina Stępniak
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Posters list

P7.40
Effect of tannic acid on Acidithiobacillus ferrooxidans biofilm formed on the concrete
Weronika Dec, Beata Cwalina, Paweł Stachura, Joanna Michalska
Silesian University of Technology

P7.41
Textile dyes synthesis by alkalic laccase from soil-dwelling fungus Rhizoctonia pratcocola
Kamila Wlizło, Jolanta Polak, Anna Jarosz-Wilkotazka
Maria Curie-Skłodowska University, Department of Biochemistry, Lublin, Poland

P7.42
Immobilization of cellobiose dehydrogenase from Cerrena unicolor to silica beads supports
Justyna Sulej, Monika Osiańska-Jaroszuk, Jerzy Rogalski
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P7.43
The use of Miscanthus giganteus and Phalaris arundinacea in the process of phytoremediation of soils
Karolina Rosikoń, Małgorzata Kacprzak
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P7.44
Identification of lipid derivatives in HepG2 cells.
Joanna Gdula-Argasinska1, Aneta Garbacik2, Małgorzata Tyszka-Czochara1, Michał Wozniakiewicz2
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P7.45
Removal heavy metals from wastewaters by yeast biomass.
Sławomir Wierzb1, Adam Latała1
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Posters list

P7.46
Bacillus spp. and their metabolites present ecofriendly alternative to synthetic chemicals for plant growth enhancement in many different applications
Katarzyna Grata, Małgorzata Nabrdalik
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P7.47
Traditional methods of plant protection employing chemical substances may be replaced with a biological alternative based on non-pathogenic microorganisms
Małgorzata Nabrdalik, Katarzyna Grata
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P7.48
Isolation of biosurfactant producing strains from environmental samples
Marta Woźniak¹, Kamila Myszka¹, Mateusz Sydow¹, Alicja Szulc¹, Łukasz Ławniczak¹, Aleksandra Piotrowska¹, Daria Pęziak¹, Anna Parus¹, Łukasz Chrzanowski¹
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P7.49
Substrate preferences in an environmental microbial consortium degrading diesel oil
Mateusz Sydow¹, Daria Pęziak¹, Aleksandra Piotrowska¹, Marta Woźniak¹, Łukasz Ławniczak¹, Anna Parus¹, Roman Marecik¹, Łukasz Chrzanowski¹
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Posters list

P7.50
Biodegradation of diesel/biodiesel blends in urban soil
Łukasz Chrzanowski\(^1\), Piotr Lisiecki\(^1\), Orzegorz Franski\(^1\), Anna Syguda\(^1\), Roman Marecik\(^1\), Kamila Myszka\(^2\), Jacek Staniewski\(^1\), Łukasz Ławniczak\(^1\)

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P7.51
Identification and phylogenetic analysis of Rhizopus spp. based on 28S rRNA gene
Adam Kuzdraliński, Sylwia Kowalczyk, Elwira Komań, Agnieszka Glibowska, Jakub Wyrostek, Zdzisław Targoński
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P7.52
Metal cross-talk in Indian mustard results in induced uptake of Cd and Pb when supplemented with Zn
Agnieszka Kutrowska\(^1\), Aneta Piechalak\(^1\), Arleta Małecka\(^1\), Anetta Hanć\(^2\), Danuta Baratkiewicz\(^2\), Barbara Tomaszewska\(^1\)

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P7.53
High density polyethylene as a carbon source for Achromobacter xylosidans
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P7.54
The influence of vermicomposting on heavy metals contained in sewage sludge
Hanine Suleiman¹, Agnieszka Rosat², Barbara Płytycz³, Małgorzata Kacprzak⁴, Franck Vandenbulcke⁵
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P7.55
The effect of phosphate starvation and mycorrhizae on the gene expression of phosphate transporters in greenhouse tomato
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P7.56
Effect of composting process on the changes of some organic compounds
Marcin Milczarek, Ewa Neczaj, Dorota Kusal
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P7.57
Isolation and characterization of plant growth-promoting rhizobacteria (PGPR) from Arabidopsis thaliana (L.) Heynh. and Morus alba L. grown on heavy metals rich acid soil
Anna Grobelak, Anna Naporá, Anna Grosser, Małgorzata Kacprzak
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P7.58
Biogenic catalysis in sulphide minerals weathering processes and acid mine drainage genesis
Maria Kusnerová¹, Maria Prasčakova¹, Anna K. Nowak², Zbigniew Wzorek²
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Posters list

**P7.59**
A very dynamic development of the industry in recent years is the major cause of water and soil pollution

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**P7.60**
Biodegradation of soot components by soil bacteria

Barbara Kalicka¹, Marek Chyc², Monika Bojko¹, Kazimierz Strzałka¹, Dariusz Latowski³

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**P7.61**
Biodiesel-derived crude glycerol as a substrate for fumaric acid production by fungus of the genus Rhizopus

Elwira Komoń, Jakub Wyrostek, Adam Kuzdrański, Zdzisław Targoński

University of Life Sciences in Lublin

**P7.62**
Effectiveness of eco-friendly, natural products in in vitro rooting of *Prunus domestica* L. microshoots.

Alina Wszzowska, Barbara Nowak, Anna Koltun

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**P7.63**
Monoaromatic hydrocarbon degradation by selected bacterial strain

Przemysław Petryszak, Paweł Kaszycki

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Posters list

P7.64
The improvement of fumaric acid production through coutilization of glycerol and pectin by *Rhizopus oryzae* ATCC 20344
Jakub Wyrostek, Elwira Komona, Adam Kuzdra, Zdzislaw Targoński
University of Life Sciences in Lublin

P7.65
Biostimulation of xenobiotic-degrading bacterial consortia with oxygen-releasing compo
Pawel Kaszynski, Paula Banaś, Przemyslaw Petryszak
Department of Biochemistry, Institute of Plant Biology and Biotechnology, Faculty of Horticulture, University of Agriculture in Krakow

P7.66
Analysis of physico-chemical properties of porous carriers for bacteria immobilization
Dagmara Leśniak, Paulina Worsztynowicz
Poznan University of Life Science, Department of Food Biotechnology and Microbiology

P7.67
The cultivation of endophytic methanotrophs isolated from different species *Sphagnum* as perspective for environmental bioengineering
Zofia Stepienewska, Agnieszka Kuzniar
The John Paul II Catholic University of Lublin, Department of Biochemistry and Environmental Chemistry Ul. Konstantynow 11, 20-708 Lublin, Poland

P7.69
The physiological response of perennial grasses grown on heavy-metal polluted soil
Krystyna Rybka¹, Grzegorz Żurek¹, Marta Pogrzeba², Jacek Krzyżak², Kamil Prakapik³
¹ Plant Breeding and Acclimatization Institute IHAR-PIB, Radzików, 05-870 Blonie, Poland, ² Phytoremediation Team, Institute for Ecology of Industrial Areas, 40-844 Katowice, Poland
Posters list

**P7.69**
Utilisation of betaine in vinasse stillage by a mixed culture of aerobic bacteria under non-controlled pH
Agnieszka Ryznar-Luty, Edmund Cibis, Małgorzata Krzywonos
Wroclaw University of Economics, Department of Bioprocess Engineering

**P7.70**
Use of biotechnological methods in reforestation of degraded land
Rafał Ważyń, Katarzyna Turnau

1 Jagiellonian University, Malopolska Centre of Biotechnology, Gronostajowa 7, 30-387 Krakow, 2 Jagiellonian University, Institute of Environmental Sciences, Gronostajowa 7, 30-387 Krakow

GREEN BIOTECHNOLOGY

**Session 8**
Plant Genetic Engineering

**P8.1**
Comparative analysis of Gal4 and split-ubiquitin-based yeast two-hybrid systems for Arabidopsis thaliana Proliferating Cell Nuclear Antigen studies
Agata Jakubowska, Olga Sztatelman, Wojciech Strzałka
Department of Plant Biotechnology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Gronostajowa 7, 30-378 Krakow, Poland

**P8.2**
Efficient Agrobacterium rhizogenes-mediated transformation of haploid and diploid sugar beet (Beta vulgaris L.) explants
Magdalena Klimek-Chodacka, Iwona Zapala, Rafal Barański
Unit of Genetics, Plant Breeding and Seed Science, Institute of Plant Biology and Biotechnology, Faculty of Horticulture, University of Agriculture in Krakow, Al. 29 Listopada 54, 31-425 Krakow, Poland
Posters list

P8.3
DesC desaturase of cyanobacterium *Synechococcus vulcanus* expression in canola plants does not improve the low positive temperature growth

Mariia Slyvets1,2, Liudmyla Sakhno1, Yuri Sheludko1

1 Institute of Cell Biology and Genetic Engineering NAS of Ukraine, 2 National Technical University of Ukraine “Kyiv Polytechnic Institute”

P8.4
A method of epoxides determination in bacterial cells

Paulina Kuczynska1, Sylwia Leskiewicz1,2, Wojciech Strzalka1, Monika Olchawa-Pajor1, Monika Bojko1, Dariusz Latowski1, Kazimierz Strzalka1

1 Department of Plant Physiology and Biochemistry, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, 2 Faculty of Chemistry, Jagiellonian University

P8.5
Comparison of expression and activity of violaxanthin and diadinoxanthin de-epoxidases in *Escherichia coli* Origami b strain

Monika Olchawa-Pajor1, Monika Bojko1, Wojciech Strzalka1, Paulina Kuczyńska1, Dariusz Latowski1, Kazimierz Strzalka1

1 Department of Plant Physiology and Biochemistry, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Gronostajowa 7, 30-387 Krakow, Poland, 2 Department of Plant Biotechnology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University

P8.6
Identification and analysis of *WUSCHEL (WUS/WOX)* and *CLAVATA* genes in cucumber (*Cucumis sativus* L.)

Michał Wojcieszek1, Magdalena Pawełkowicz1, Marcin Olszak1, Agata Jędrzejuk1, Zbigniew Przybecki1, Wojciech Burza1

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Posters list

P8.7
Protoplasts of Lathyrus sp. – optimization of isolation procedure
Barbara Piwowarczyk¹, Wojciech Rybiński²
¹ Department of Botany and Plant Physiology, Faculty of Horticulture, University of Agriculture in Krakow, Poland, ² Institute of Plant Genetics, Polish Academy of Sciences, Poznan, Poland

P8.8
Processing of plant tissue bearing S-HBsAg for an oral vaccine against hepatitis B.
Marcin Czyż¹, Tomasz Pniewski¹, Józef Kapusta¹, Radosław Dembczyński¹, Roman Marecik¹, Andrzej Płucienniczak¹
¹ Institute of Plant Genetics, Polish Academy of Sciences, Poznan, Poland, ² Institute of Biotechnology and Antibiotics, Warszawa, Poland, ³ Poznan Life Science University, Poland

GREEN BIOTECHNOLOGY

Session 9
Animal Biotechnology in Biomedicine

P9.1
Infection of Human Cell Lines with Porcine Endogenous Retroviruses
Sabina Gałka, Dagana Sołtysik, Daria Matczyńska, Daniel Sypniewski, Tomasz Loch, Ewa Nowak, Ilona Bednarek
Department of Biotechnology and Genetic Engineering, Medical University of Silesia in Katowice, Narcyzów 1, 41-200 Sosnowiec, Poland

P9.2
The influence of porcine endogenous retrovirus infection on the expression of toll-like receptor genes in human dermal fibroblasts
Magdalena Kimsa¹, Sławomir Dudek¹, Małgorzata Kimsa¹, Barbara Strafa-Mrazik¹, Joanna Gola¹, Celina Kruszniwksa-Rajs¹, Jolanta Adamska¹, Urszula Mazurek¹
¹ Department of Molecular Biology, Medical University of Silesia, Narcyzów 1, 41-200 Sosnowiec, Poland, ² Department of Pharmacognosy and Phytochemistry, Medical University of Silesia, Jagiellonska 4, 41-200 Sosnowiec, Poland
Posters list

P9.3
Cyclosporine a and expression of genes associated with cell cycle in normal human dermal fibroblasts cultured in vitro
Grzegorz Hibner¹, Adam Wilczok¹, Tomasz Janikowski², Urszula Mazurek¹
¹ Department of Biopharmacy, Medical University of Silesia, Narcyzów 1, 41-200 Sosnowiec, Poland, ² Department of Molecular Biology, Medical University of Silesia, Narcyzów 1, 41-200 Sosnowiec, Poland

P9.4
Expression of wnt/β-catenin signalling pathway target genes in endometrial cancer
Tomasz Janikowski¹, Grzegorz Cwynar², Agnieszka Jęda¹, Grzegorz Hibner³, Joanna Ordel¹, Andrzej Witek², Urszula Mazurek¹
¹ Department of Molecular Biology, Medical University of Silesia, Narcyzów 1, 41-200 Sosnowiec, Poland, ² Department and Clinic of Obstetric and Gynecology, Medical University of Silesia, ul. Medyków 16, 40-752 Katowice, ³ Department of Biopharmacy, Medical University of Silesia, Narcyzów 1, 41-200 Sosnowiec

P9.5
Changes in the transcriptome of genes related to tnf induced pathways in perv infected cells
Joanna Gola, Barbara Strzałka-Mrozik, Magdalena Kimsa, Małgorzata Kimsa, Jolanta Adamska, Celina Kruszniwskaja-Rajs, Urszula Mazurek
Department of Molecular Biology, Medical University of Silesia, 1 Narcyzów St., 41-200 Sosnowiec, Poland

P9.6
Abundance of blastocysts developed in vitro from porcine cloned embryos reconstructed with cell nuclei of adult bone marrow-descended mesenchymal stem cells
Marcin Samiec, Jolanta Opiela, Jurij Koseniuk
National Research Institute of Animal Production, Department of Biotechnology of Animal Reproduction, Balice n. Krakow, Poland

P9.7
Scriptaid-induced epigenetic modulation of adult dermal fibroblast cells before their use for somatic cell nuclear transfer in pigs
Marcin Samiec, Maria Skrzyszowska
National Research Institute of Animal Production, Department of Biotechnology of Animal Reproduction, Balice n. Krakow, Poland
Posters list

**P9.8**
The effects of the alloferon and its analogues on the immune responses and heart beating in Tenebrio molitor beetle
Arkadiusz Urbański¹, Elżbieta Czarniewska², Szymon Chowański², Jan Lubawy³, Mariola Kuczer³, Edward Baraniak³, Grzegorz Rosiński²

¹ Department of Systematical Zoology, Faculty of Biology, Adam Mickiewicz University, Poznan, Poland, ² Department of Animal Physiology and Development, Faculty of Biology, Adam Mickiewicz University, Poznan, Poland, ³ Faculty of Chemistry, University of Wroclaw, Wroclaw, Poland

**P9.9**
Can we use the beetle heart as a model of cardiac ageing?
Karolina Włocki, Monika Szymczak, Joanna Pacholska-Bogalska, Grzegorz Rosiński
Department of Animal Physiology and Developmental Biology, Faculty of Biology, Adam Mickiewicz University

**P9.10**
Identification of 77 novel SNPs within entire intron A of the Pregnancy-Associated Glycoprotein 2-like gene subfamily (PAG2-L) in cross-breed pigs*
Martyna Bieniek, Grzegorz Panasiewicz, Aleksandra Zamojska, Bozena Szafranska

Department of Animal Physiology, Faculty of Biology and Biotechnology, University of Warmia and Mazury in Olsztyn, 10-719 Olsztyn-Kortowo, Poland

**P9.11**
Identification of 5 novel SNPs within intron E & F of porcine Pregnancy-Associated Glycoprotein 2-like subfamily (pPAG2-L) in two hybrid lines*
Grzegorz Panasiewicz¹, Aleksandra Zamojska¹, Martyna Bieniek¹, Roman Jędryczko¹, Bozena Szafranska¹

¹ Department of Animal Physiology, Faculty of Biology and Biotechnology, University of Warmia and Mazury in Olsztyn, 10-719 Olsztyn-Kortowo, ¹ Veterinary Diagnostic Laboratory, 11-036 Gietrzwałd
P9.12
Novel glycoprotein family within human placenta detected with polyclonals against recombinant or native porcine Pregnancy-Associated Glycoproteins

Marta Majewska¹, Aleksandra Zamojska¹, Grzegorz Panasiewicz², Martyna Bieniek², Zbigniew Łaganowski³, Bozena Szafranska²

¹ Department of Human Physiology, Faculty of Medical Sciences, University of Warmia and Mazury in Olsztyn, 10-082 Olsztyn; ² Department of Animal Physiology, Faculty of Biology and Biotechnology, University of Warmia and Mazury in Olsztyn, 10-719 Olsztyn-Kortowo; ³ The Woman’s Health Clinic, 10-684 Olsztyn, Poland

P9.13
Antibacterial peptides from WPC hydrolisate.

Paulina Worsztynowicz, Dagmara Leśniak, Włodzimierz Grajek

Poznan University of Life Sciences

GREEN BIOTECHNOLOGY

Session 10
Animal Biotechnology in Agriculture

P10.1
Cytogenetic mapping of the HSPB genes in the domestic Bovids

Barbara Daniłak-Czech, Katarzyna Kruczek, Anna Kozubskà-Sobocińska, Barbara Rejduch, Agnieszka Bąk

Department of Animal Cytogenetics and Molecular Genetics, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice/Krakow, Poland

P10.2
Chromosomal assignment of the small heat shock proteins genes in the pig genome

Barbara Daniłak-Czech, Katarzyna Kruczek, Anna Kozubskà-Sobocińska, Barbara Rejduch, Agnieszka Bąk

Department of Animal Cytogenetics and Molecular Genetics, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice/Krakow, Poland
Posters list

P10.3
Comparative mapping of UCP2 and UCP3 genes in the pig genome
Anna Kozub ska-Sobocińska, Agnieszka Bąk, Barbara Danielak-Czech, Barbara Rejduch, Małgorzata Miszczak
Department of Animal Cytogenetics and Molecular Genetics, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice/Krakow, Poland

P10.4
Visfatin as a bioindicator of endothelial cells dysfunction
Ewa Octoń, Krystyna Pierzchata-Koziec, Joanna Zubel-Łojek, Anna Latacz
University of Agriculture in Krakow, Department of Animal Physiology and Endocrinology, Al. Mickiewicza 24/28, 30-059 Krakow, Poland

P10.5
An universal method for the quantitative determination of cattle and horse components contaminating raw and processed pork meat
Małgorzata Natonek-Wiśniewska, Piotr Krzyścin, Katarzyna Kruczek
Department of Animal Cytogenetics and Molecular Genetics, National Research Institute of Animal Production, Balice, Poland

P10.6
A real-time quantitative PCR detection method for beef, pork, chicken and mutton components in foods
Małgorzata Natonek-Wiśniewska, Piotr Krzyścin, Katarzyna Kruczek
Department of Animal Cytogenetics and Molecular Genetics, National Research Institute of Animal Production, Balice, Poland

P10.7
New polymorphisms in regulatory regions of CAPN3 gene in broiler chickens
Katarzyna Piórkowska¹, Joanna Doktar², Katarzyna Półtowicz³, Katarzyna Ropka-Molik⁴
¹ Laboratory of Genomics, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland, ² Department of Animal Genetics and Breeding, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland
P10.8
Different culture media affect growth rate and morphology of porcine bone marrow-derived mesenchymal stromal cells— the preliminary results of media screening suitable for both porcine MSCs and bovine embryo in vitro culture

Jolanta Opiela, Michał Bochenek, Joanna Romanek, Zdzisław Smorąg
Department of Biotechnology of Animal Reproduction, National Research Institute of Animal Production, 32-083 Balice n. Krakow

P10.9
The impact of long-term in vitro culture and differentiation of porcine mesenchymal stem cells (pMSC) on the cell cycle distribution and nuclear DNA profile

Jolanta Opiela, Marcin Samiec, Michał Bochenek, Joanna Romanek
Department of Biotechnology of Animal Reproduction, National Research Institute of Animal Production, 32-083 Balice n. Krakow, Poland

P10.10
RNA-seq analysis of differentially expressed genes in muscle tissue of Pietrain and Puławska pigs

Katarzyna Ropka-Molik¹, Kacper Żukowski¹, Robert Eckert², Artur Gurgul¹, Katarzyna Piórkowska¹
¹ Laboratory of Genomics, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland, ² Department of Animal Genetics and Breeding, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland

P10.11
An increase of piglets survivability after “biolactin” per os administration

Barbara Gajda¹, Barbara Szczęśniak-Fabiańczyk¹, Katarzyna Poniedziałek-Kempny¹, Izabela Mandryk¹, Florian Ryszka¹, Barbara Dobatko¹, Lucyna Leszczyńska², Zdzisław Smorąg¹
¹ Department of Biotechnology of Animal Reproduction, National Research Institute of Animal Production, Krakowska 1, 32-083 Balice/Krakow, Poland, ² Pharmaceutical Research and Production Plant (FZNP)
Posters list

P10.12
Association of calpastatin gene polymorphisms and meat quality traits in pig
Anna Bereta¹, Katarzyna Ropka-Molik¹, Miroslaw Tyra²,
Marian Rożycki²
¹ Laboratory of Genomics National Research Institute of Animal Production National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland,
² Department of Animal Genetics and Breeding National Research Institute of Animal Production National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland

P10.13
Genetic characterization of Hucul horse populations based on microsatellite polymorphism
Agnieszka Fornal, Anna Radko, Agata Piestrzyńska-Kajtoch
National Research Institute of Animal Production, Department of Cytogenetics and Molecular Genetics of Animals, Balice n. Krakow, Poland

P10.14
The impact of varied values of High Hydrostatic Pressure applied on porcine Mesenchymal Stem Cells on their survival rate and early apoptosis after cryopreservation
Joanna Romanek, Jolanta Opiela, Zdzisław Smorąg
Department of Biotechnology of Animal Reproduction National Research Institute of Animal Production, Krakowska 1, 32-083 Balice, Poland

P10.15
Analysis of the changes in the expression profile of liver transcriptome by RNA-seq in pigs fed with various diet supplements
Maria Oczkowicz¹, Katarzyna Ropka-Molik¹,
Małgorzata Świątkiewicz³, Kacper Żukowski³, Artur Gurgul¹
¹ National Research Institute of Animal Production, Laboratory of Genomics,
³ National Research Institute of Animal Production, Department of Animal Nutrition And Feed Science,
³ National Research Institute of Animal Production, Department of Animal Breeding and Genetics
Posters list

P10.16
Regulation of Tenebrio molitor heart beating by monoamines and tropane alkaloids
Szymon Chowański, Jan Lubawy, Arkadiusz Urbański, Marta Spochacz, Grzegorz Smykalla, Grzegorz Rosiński
Department of Animal Physiology and Development, Faculty of Biology, Adam Mickiewicz University in Poznan

P10.17
Genetic polymorphisms of lep and lepr genes in relation with production and reproduction traits in cattle
Anna Trakovická, Nina Moravčíková, Radovan Kasarda
Slovak University of Agriculture in Nitra, Department of Animal Genetics and Breeding Biology, Tr. A. Hlinku 2, 949 76 Nitra, The Slovak Republic

P10.18
Prp4 kinase is required for proper segregation of chromosomes during meiosis in Schizosaccharomyces pombe
Miroslava Požgajová, Ľuboš Čipák, Anna Trakovická
\(^1\) Slovak University of Agriculture, Tr. A. Hlinku 2, 94976 Nitra, Slovakia, \(^2\) Max F. Perutz Laboratories, Dr. Bohr-Gasse 9, A-1030 Vienna, Austria

P10.19
Genetic diversity in populations of Slovak Spotted cattle based on snps analyses
Nina Moravčíková, Anna Trakovická, Alica Navrátilová
Slovak University of Agriculture in Nitra, Department of Animal Genetics and Breeding Biology, Tr. A. Hlinku 2, 949 76 Nitra, The Slovak Republic

P10.20
Analysis of Slovak Spotted breed for bovine beta casein A1 variant as risk factor for human health
Martina Miluchová, Michal Gábor, Anna Trakovická
Slovak University of Agriculture in Nitra, Department of Genetics and Breeding Biology, 949 76 – Nitra, Tr. A Hlinku, 2, Slovakia
Posters list

**P10.21**
Analysis of CAPN1 and CAST gene polymorphisms in native dual purpose breeds of cattle in Slovakia

Michal Gábor, Martina Miluchová, Anna Trakovická
Slovak University of Agriculture in Nitra, Department of Genetics and Breeding Biology, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia

**P10.22**
Allatostatins as potential bioinsecticides?

Jan Lubawy¹, Arkadiusz Urbański², Szymon Chowański¹, Ewelina Paluch¹, Mariola Kuczer¹, Grzegorz Rosiński¹

¹ Department of Animal Physiology and Development, Adam Mickiewicz University in Poznan, ² Department of Systematic Zoology, Adam Mickiewicz University in Poznan, ³ Department of Plant Physiology, Adam Mickiewicz University in Poznan, ⁴ Faculty of Chemistry, University of Wroclaw

**P10.23**
Relationships between type traits and functional productive life in Slovak Holstein Cows

Eva Strapáková¹, Peter Strapák¹, Juraj Candrák¹

¹ Slovak University of Agriculture in Nitra

**Session 11**
Legislation for biotechnologists

**P11.1**
Conjoint duty for biotechnologists

Sebastian Kwiatkowski¹ ² ³

¹ University of Warsaw, ² Faculty of Biology, ³ Students Scientific Association of Genetics and Epigenetics UW

**Satellite panels**
Induced pluripotent stem cells: a future of biomedicine

**P1.1**
Role of heme oxygenase-1 in generation and differentiation of iPS cells

Jacek Stepniewski, Tomasz Pacholczak, Alicja Jozkowicz, Jozef Dulak
Department of Medical Biotechnology, Faculty of Biochemistry, Biophysics, and Biotechnology, Jagiellonian University, Granostajowa 7, 30-387 Krakow
Posters list

P1.2

Differentiation of iPS toward endothelial cells

Neli Kachamakova-Trojanowska¹, Michael Beilharz², Karolina Bukowska-Strakova¹, Jacek Stępniewski¹, Antonia Chmura-Skirlińska¹, Jozef Dulak³, Alicja Jozkowicz¹

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P1.3

Application of epigenetic switch for generation of human iPS cells

Wróblewska Joanna¹, Kulcenty Katarzyna¹, Oleksiewicz Urszula¹, Suchorska Wiktoria¹,², Jannik Andersen⁴, Giulio Draetta⁴, Mostoslavsky Gustavo³ and Wiznerowicz Maciej¹,²

¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland, ²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland, ³Boston University School of Medicine, Dept. of Medicine, Boston, MA, USA, ⁴Institute for Applied Cancer Science, University of Texas MD Anderson Cancer Center, Houston, TX, USA

P1.4

Dynamics of retroelements activity during reprogramming of human fibroblast to induced pluripotent stem cells (iPSc).

Katarzyna Tomczak¹,², Urszula Oleksiewicz² and Maciej Wiznerowicz²,³

¹Postgraduate School of Molecular Medicine, Medical University of Warsaw, Warsaw, ²Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland, ³Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland

P1.5

KAP1 protein is involved in reprogramming of human induced pluripotent stem cells (iPS)

Katarzyna Kulcenty¹, Urszula Oleksiewicz¹, Maciej Wiznerowicz²,³

¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland, ²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland
Posters list

P1.6
TRIM28/KAP1 triggers DNA methylation of cellular promoters during reprogramming of human fibroblasts to induced pluripotent cells.

Marta Gładych¹, Urszula Oleksiewicz¹ and Maciej Wiznerowicz１,²
¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland,
²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland

P1.7
Role of TRIM28/KAP1 protein in reprogramming of mouse fibroblasts to induced pluripotent stem cells (miPSCs).

Marta Klimczak¹, Anna Misiewicz¹, Andrzej Mackiewicz¹,² and Maciej Wiznerowicz¹,²
¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland,
²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland

P1.8
Differentiation of induced pluripotent stem cells (iPSC) into functional neurons

Sylwia Mazurek¹, Joanna Wróblewska¹, and Maciej Wiznerowicz¹,²
¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland,
²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland

P1.9
TRIM28/KAP1 protein controls self-renewal of human induced pluripotent stem cells.

Wojciech Barczak¹, Katarzyna Kulcenty¹ and Maciej Wiznerowicz¹,²
¹Gene Therapy Laboratory, Department of Cancer Immunology, Poznan University of Medical Sciences, Chair of Medical Biotechnology, Poland,
²Gene Therapy Laboratory, Department of Cancer Immunology, Greater Poland Cancer Centre, Poland
## Exhibitor list

<table>
<thead>
<tr>
<th>Exhibitors list</th>
<th>Stand number</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anima</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Bentley Polska Sp. z o.o.</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Cytogen Polska Sp. z o.o.</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Enbio Technology Sp. z o.o.</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Eppendorf Poland Sp. z o.o.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lab – JOT Ltd. Sp. z o.o.</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Laboratorias.net</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Mettler Toledo Sp. z o.o.</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>MP BIOMEDICALS</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Polska Federacja Biotechnologii</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Promega GmbH</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Shim – Pol A.M. Borzymowski</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Sigma Aldrich Sp. z o.o.</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Urząd Patentowy RP</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Województwo Małopolskie – Centrum Business</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>In Małopolska</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ANIMA – wyłączny dystrybutor firmy Tecniplast i IWT w Polsce. Wyposażamy zwierzętarnie oraz jednostki naukowo-badawcze w całym kraju.


VIVARI „W służbie nauce – z myślą o zwierzętach”. Oferujemy wyposażenie zwierzętarni, laboratoriów oraz ośrodków naukowych, prowadzących badania na zwierzętach.
Naszym nadrzędnym celem jest pełna satysfakcja klienta (również czworonożnego).

Każdy nasz Klient traktowany jest z najwyższą troską. Gwarantujemy:
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- niekonwencjonalne podejście,
- profesjonalną obsługę,
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- natychmiastową reakcję na zamówienia i terminową realizację dostaw.
Firma Bentley Polska Sp. zo.o. jest jednym z wiodących dostawców specjalistycznej aparatury mikrobiologicznej przeznaczonej dla uczelni, instytutów naukowych, laboratoriów badawczych i farmaceutycznych oraz sektora medycznego. Aparatura działająca w oparciu o najnowocześniejsze osiągnięcia techniki spełnia oczekiwania najbardziej wymagających klientów.

W naszej szerokiej ofercie dostępne są:
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- Komory do hodowli bakterii bezlętkowych oraz hodowli komórkowej/tkankowej,
- Precyzyjne liczniki kolonii i stref zahamowania wzrostu,
- Aparaty do liczenia drobnoustrojów metodą impedancji,
- Luminometry,
oraz inny podstawowy sprzęt laboratoryjny.


Zapraszamy do zapoznania się ze szczegółami naszej oferty na stronie www.cytogen.com.pl."
Firma Enbio Technology Sp. z o.o. swój rodowód wywodzi ze spółki Vitroservice, której podstawową działalnością była produkcja roślin metodą In-vitro. Jako dostawca musieliśmy spełniać najwyższe standardy jakościowe, co wymagało pracy nad ciągłym doskonaleniem procesów stosowanych w firmie i zaowocowało wynalezieniem unikatowych w skali światowej urządzeń do sterylizacji płynów i mas opartych na technologii mikrofalowej. Mikrofalowy autoklaw EnbioJet jest najnowszym osiągnięciem technologicznym spółki i przeznaczony jest do sterylizacji podłoży mikrobiologicznych. Cały proces sterylizacji w autoklawie EnbioJet trwa ok. 7 min. (od włożenia do wyjęcia kolby), a eksponacja na wysoką temperaturę jest jeszcze krótsza (60–90 sekund).

Enbio Technology Sp. z o.o. has its roots in Vitroservice company, core activity of which was plant production by In-vitro method. As a supplier we had to meet the highest quality standards. Continuous improvement of processes used in the company to meet these requirements resulted in the invention and construction of the worldwide unique microwave devices designed for sterilization of liquids and substances. EnbioJet microwave autoclave is the newest achievement of the company and is designed for sterilization of microbiological media. The entire sterilization process in the EnbioJet autoclave takes about 7 min. (from insertion to removal of the flask), and exposure to high temperature is even shorter (60-90 seconds).
Międzynarodowy koncern biotechnologiczny Eppendorf powstał w Hamburgu w 1945 r. Dziś posiada własne filie w 20 krajach świata i zatrudnia ponad 2500 pracowników. Otwierając w 2011 r. firmę Eppendorf Poland Sp. z o.o., grupa realizuje strategię pozostawania w najbliższym kontakcie ze swoimi odbiorcami – środowiskiem naukowym, medycznym, farmaceutycznym i przemysłem biotechnologicznym oraz z partnerami biznesowymi. W 2011 roku obchodziliśmy 50. rocznicę wynalezienia przez Eppendorf pierwszej pipety tłokowej, która zrewolucjonizowała technikę pracy w laboratorium. Blisko pięćdziesięcioletnią historią mają również nasze wirówki, z których pierwsza miała swoją premierę w 1964 r. Przez wszystkie lata, które minęły od tamtych pionierskich osiągnięć, Eppendorf pozostawał wierny swoim podstawowym zasadom: najwyższej jakości, bezpieczeństwu i ergonomicji projektowanych urządzeń i systemów. Pozostając zawsze w awangardzie jeśli chodzi o innowacje technologiczne, nie zapominaliśmy o komforcie pracy użytkownika, elastyczności rozwiązań i co szczególnie ważne w dzisiejszej dobie – ochronie środowiska naturalnego.

Nasze portfolio produktów obejmuje praktycznie wszystkie dziedziny nauk biologicznych. Oprócz wspomnianych już pipet i wirówek, zawiera dozowniki, materiały zużywalne, systemy automatycznego pipetowania, amplifikacji DNA metodą PCR, mikromanipulatory komórkowe i elektroporatory. Cennym uzupełnieniem tej oferty są produkty amerykańskiej firmy New Brunswick Scientific, która wchodzi w skład naszej grupy, znajdujące szerokie zastosowanie w dziedzinach związanych z hodowlami tkankowymi, przechowywaniem komórek, oraz w przemyśle biotechnologicznym.
df-mp offers sophisticated services covering all technical fields. The firm’s commitment to excellence has led to the firm’s recognition as one of Germany’s leading intellectual property firms.

Our patent lawyers are experts in patent drafting and prosecution, challenging the patents of third parties as well as in defending patents in opposition and nullity proceedings. We advise our clients on patent infringement in EU and US. df-mp has considerable experience in providing opinions on potential litigation, freedom-to-operate and due diligence projects. We can maximize patent portfolios and develop patent extension strategies for our clients.

df-mp’s clients appreciate our international focus and our multinational, multilingual team. Having firm members with qualifications and experience in intellectual property law in the European and U.S. legal systems, df-mp is uniquely able to develop strategies and concepts that are customized for both. df-mp was noted as a top firm in Germany in "IAM 1000: The World’s Leading Patent Practitioners 2013" since the firm “operates at the cutting edge of … biotechnology, pharmaceutical and chemistry areas” and “multinationals flock here for the group’s cross-border experience.”
Lab-JOT Ltd. Sp. z o.o. powstała w grudniu 2011 r. i kontynuuje działalność prywatnej firmy Lab-JOT Tomasz Dzieczewski założonej w 1993 r.

METTLER-TOLEDO jest wiodącym w świecie producentem i dostawcą wag do laboratorium, przemysłu oraz handlu detalicznego. Firma posiada także wiodącą pozycję rynkową w odniesieniu do innych urządzeń analitycznych oraz kontroli produktów.

W naszej ofercie znajdują się m.in.: wagi analityczne i precyzyjne, mikrowagi, komparatory, wagoszarki, aparaty do miareczkowania, gęstościomierze, refraktometry, pH-/jono-/konduktometry, elektrody, systemy analizy termicznej, automatyczne reaktory laboratoryjne, systemy do automatyzacji badań chemicznych oraz usługi serwisowe do wszystkich oferowanych urządzeń.

METTLER TOLEDO RAININ oferuje najszerszy wybór wygodnych dla dłoni pipet jedno- i wielokanałowych, manualnych i elektronicznych, czystych biologicznie końcówek oraz związanych z tym usług. Wszystko zaprojektowane z myślą, aby stworzyć wydajny, zintegrowany system.
MP Biomedicals is a world-wide corporation, with ISO-certified and FDA-approved manufacturing and distribution facilities throughout the globe and headquartered in Southern California. The company manufactures and sells more than 55,000 products and is one of the only companies in the industry to offer a comprehensive line of life science, fine chemical and diagnostic products. A vast network of global distributors and satellite facilities and offices throughout Europe, Asia, Australia and the Americas assures customers top quality products delivered when and where needed.
Polska Federacja Biotechnologii (stowarzyszenie non-profit) zainaugurowała swoją działalność we wrześniu 2004 roku, stając się nową platformą rozwoju i popularyzacji osiągnięć biotechnologicznych w Polsce. Misją Federacji jest służenie rozwojowi biotechnologii w Polsce w celu przyspieszenia postępu naukowego, gospodarczego i społecznego kraju przez stworzenie krajowej platformy skoordynowanych działań w obszarze badań, wdrożeń, edukacji i produkcji biotechnologicznej.

POLISH FEDERATION OF BIOTECHNOLOGY

Polish Federation of Biotechnology (an independent non-profit organisation) was established in September 2004. Since then, it became a new platform for progression and popularization of biotechnology achievements in Poland. The mission of Federation is to stimulate biotechnology development in order to improve scientific, economic and social progress in our country. PFB is dedicated to coordinate various R&D, education and production activities, as far as biotechnology is concerned.
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Promega is a leader in providing innovative solutions and technical support to the life sciences industry. Promega Corporation’s 2,000 products enable scientists worldwide to advance their research in the life sciences, particularly in genomics, proteomics, and cellular analysis. Promega products are also used to support molecular diagnostics and human identification. Founded in 1978, Promega Corporation is headquartered in Madison, Wisconsin, USA, with branches in 15 countries and over 50 global distributors. Promega’s products consist of kits and reagents as well as Integrated Solutions for life sciences research and drug discovery.
Firma „SHIM-POL A. M. Borzymowski” E. Borzymowska-Reszka, A. Reszka Spółka Jawna jest wyłącznym przedstawicielem w Polsce koncernu Shimadzu w zakresie sprzedaży aparatury kontrolno-pomiarowej stosowanej do analizy chemicznej w laboratoriach chemicznych, biologicznych, farmaceutycznych, medycznych oraz w laboratoriach ochrony środowiska.

Oferujemy Państwu chromatografy UHPLC, HPLC, GC; spektrofotometry UV-Vis, FTIR, RF i AAS; spektrometry mas typu GC-MS, LC-MS/MS, LCMS-IT-TOF oraz MALDI-TOF-TOF; analizatory TOC – węgla organicznego i azotu w roztworach i ciałach stałych.

Firma Shimadzu jest liderem w produkcji ultraszybkich spektrometrów mas typu potrójny kwadrupol. Przyrządy LC-MS/MS 8030 i 8040 są jedynymi przyrządami w pełni przystosowanymi do szybkiej chromatografii UHPLC pozwalając bowiem na zbieranie danych z szybkością 15000 Da/s bez utraty rozdzielczości oraz o ultraszybką zmianę polaryzacji w 15 ms. Natomiast model LC-MS/MS 8030 jest liderem na rynku w zakresie uzyskiwanych czułości. Z myślą o laboratoriach kryminalistycznych firma Shimadzu dla swoich spektrometrów mas proponuje bibliotekę wraz z pakietem metod analitycznych dedykowaną do tego typu laboratoriów.

Oferujemy również spektroskopy do analizy powierzchni takie jak ESCA-XPS, SIMS, ISS i Auger’a, oraz analizatory fluorescencji rentgenowskiej (EDX).

Posiadamy w Polsce rozbudowaną autoryzowaną seć serwisową (Warszawa, Kraków, Lublin, Bydgoszcz, Wrocław, Poznań).
Sigma-Aldrich is a leading Life Science and High Technology company committed to Enabling Science to Improve the Quality of Life. Its chemical and biochemical products and kits are used in scientific research, biotechnology, pharmaceutical development and other high technology manufacturing. Over one million scientists and technologists use its products. Sigma-Aldrich operates in 40 countries and has 9,000 employees providing excellent service worldwide.
Urząd Patentowy Rzeczypospolitej Polskiej, wypełniając szeroki zakres zadań dotyczących ochrony własności przemysłowej, jest jedną z kluczowych instytucji związanych z działaniami na rzecz rozwoju innowacyjnej gospodarki.

Do zadań Urzędu należy w szczególności:
- przyjmowanie i badanie zgłoszeń oraz orzekanie w sprawach o udzielenie ochrony na wynalazki, znaki towarowe, wzory użytkowe, wzory przemysłowe, oznaczenia geograficzne oraz topografie układów scalonych;
- rozstrzyganie spraw w postępowaniu spornym;
- prowadzenie publicznie dostępnych rejestrów zawierających informacje na temat stanu prawnego przedmiotów własności przemysłowej chronionych na terytorium Polski na mocy przepisów krajowych;
- udział w pracach organów międzynarodowych w związku z przynależnością Rzeczypospolitej Polskiej do Światowej Organizacji Własności Intelektualnej, Unii Europejskiej, Europejskiej Organizacji Patentowej, Konwencji paryskiej o ochronie własności przemysłowej oraz innych umów międzynarodowych.
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Województwo Małopolskie to region, który może poszczycić się wysokim poziomem rozwoju gospodarczego, stale rozwijającą się innowacyjnością, obecnością sektora wysokich technologii. Małopolska otwarta jest na inwestorów, którzy coraz chętniej lokują tutaj swoje firmy. To dlatego w roku 2009 z inicjatywy Województwa Małopolskiego, Małopolskiej Agencji Rozwoju Regionalnego S.A. oraz Krakowskiego Parku Technologicznego Sp. z o.o. powołano Centrum Business in Małopolska (CEBiM). W 2011 roku do CEBiM dołączyły także Małopolskie Parki Przemysłowe Sp. z o.o. Głównym celem CEBiM jest pozyskiwanie nowych inwestycji zagranicznych w regionie oraz wspieranie rozwoju międzynarodowej wymiany handlowej przedsiębiorstw z Małopolski. W ramach realizowanych projektów CEBiM przygotowuje bieżące analizy regionalnego rynku pracy, rynku nieruchomości, sektora BPO oraz nowoczesnych technologii i branży badawczo-rozwojowej. CEBiM jest regionalnym partnerem Polskiej Agencji Informacji i Inwestycji Zagranicznych, posiada międzynarodową sieć kontaktów instytucjonalnych i partnerów biznesowych.