



CONFERENCE SCHEDULE

Thursday, October 14

11:00	Departure to „Perła Południa” from Kraków
13:00 – 15:00	Lunch – Restaurant
15:15 – 15:30	Welcome and opening remarks
15:30 – 16:30	Memorial of Prof. Jan Chłópek (<i>partially in Polish</i>)
16:30 – 17:00	Coffee break

Session I

17:00 – 17:45	Plenary lecture – Prof. C. James Kirkpatrick <i>Biomaterials in Regenerative Medicine: View of the Past & Vision for the Future</i>
17:45 – 19:00	Oral presentations
19:30 – late	Regional Dinner – Cottage bar "Nad potokiem"

Friday, October 15

7:00 – 8:00	Swimming pool
7:00 – 8:30	Breakfast – restaurant

Session II

8:30 – 9:15	Plenary lecture – Prof. Lucie Bacakova <i>Factors Governing the Differentiation of Stem Cells in Tissue Engineering</i>
9:15 – 9:45	Keynote lecture sponsored by Polbionica – Prof. Michał Wszóła <i>Cure for Type 1 Diabetes with Biotechnology - How Far We Are From Clinical Application?</i>
9:45 – 10:30	Oral presentations
10:30 – 11:00	Coffee break

Session III

11:00 – 12:45	Oral presentations
13:00 – 14:00	Lunch – restaurant

Session IV

14:15 – 15:00	Plenary lecture – Prof. Dorota Bociaga <i>3D Bioprinting - Dedicated Biomaterials and Devices</i>
15:00 – 16:00	Oral presentations
16:00 – 16:15	Break

Session V

16:15 – 17:15	Oral presentations
17:15 – 18:30	Poster session and drinks
19:00 – late	Gala Dinner – 30th Anniversary Conference & 25 years of the Polish Society for Biomaterials

Saturday, October 16

7:00 – 8:00	Breakfast – Restaurant/Swimming pool
8:15 – 13:00	Excursion
13:00 – 14:00	Lunch – Cottage bar “Nad potokiem”
15:00 – 16:00	Rapid Fire Presentations – YSF/Poster session
16:00 – 16:30	Coffee break

Session VI

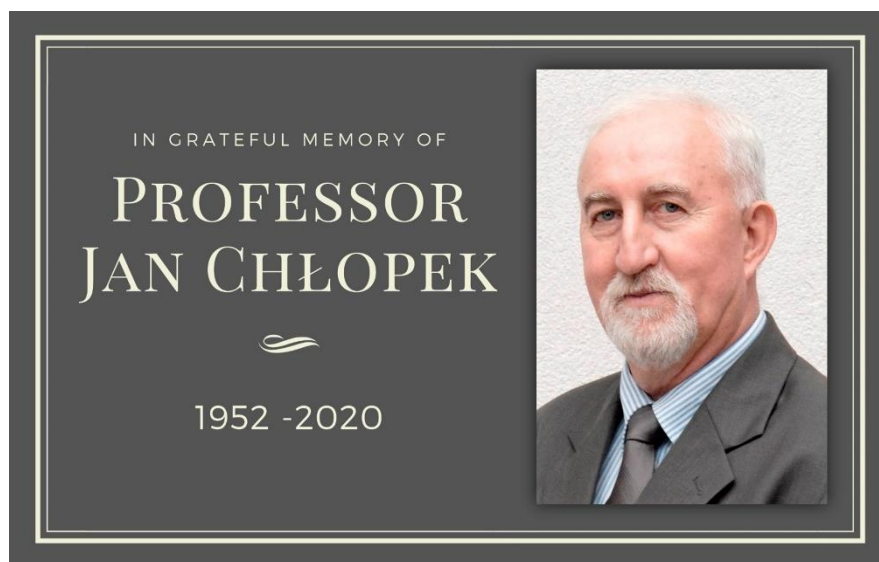
16:30 – 18:30	Oral presentations
18:30 – 18:45	Closing remarks and award session
19:00 – late	Dinner – Cottage bar “Nad potokiem”

Sunday, October 17

7:00 – 8:00	Swimming pool
7:00 – 9:00	Breakfast – restaurant
10:00	Departure to Kraków from „Perła Południa”

Thursday, October 14

11:00	Departure to „Perła Południa” from Kraków
13:00 - 15:00	Lunch – Restaurant
15:15 - 15:30	Welcome and opening remarks – Prof. Elżbieta Pamuła
15:30 - 16:30	Memorial of Prof. Jan Chłopek (<i>partially in Polish</i>)



16:30 - 17:00	Coffee break
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Session I

17:00 - 17:45	Plenary Lecture – Prof. C. James Kirkpatrick <i>Biomaterials in Regenerative Medicine: View of the Past & Vision for the Future</i>
17:45 – 18:00	Wojciech Pajerski, Paulina Chytrosz, Monika Gołda-Cępa, Mirosława Pawlyta, Witold Reczyński, Dorota Ochońska, Monika Brzychczy-Włoch, Andrzej Kotarba <i>Functionalization of Carbon Biomaterials Surfaces: Functional Groups and Nanoparticles</i>
18:00 – 18:15	Agata Przekora , Paulina Kazimierczak, Michał Wójcik <i>Human Spongy Bone Explant - A Useful Ex Vivo Model for Implant Osseointegration Testing</i>
18:15 - 18:30	Magdalena Wytrwal-Sarna , Ewa Oclon, Mirosław Kucharski, Katarzyna Szmajnta, Mariusz Kepczyński, Krzysztof Szczubińska <i>Lipid-Polymer Nanocarriers for Cartilage Regeneration</i>
18:30 – 18:45	Alicja Kazek-Kęsik , Alicja Sadkowska, Katarzyna Reczyńska-Kolman, Izabela Kalemba-Rec, Monika Śmiga-Matuszowicz, Elżbieta Pamuła, Wojciech Simka <i>Modification of Titanium Implant Surface for Animals</i>
18:45 - 19:00	Małgorzata Gonsior-Kustos , Roman Kustos <i>What New EU Regulation Means for Nanomaterials Development Dedicated for Medical Devices Utilisation</i>
19:30 - late	Regional Dinner – Cottage bar “Nad potokiem”

Friday, October 15

7:00 - 8:00 Swimming pool
7:00 - 8:30 Breakfast – restaurant

Session II

8:30 – 9:15 **Plenary lecture – Prof. Lucie Backova**
Factors Governing the Differentiation of Stem Cells in Tissue Engineering

9:15 – 9:45 **Keynote lecture sponsored by Polbionica – Prof. Michał Wszola**
Cure for Type 1 Diabetes with Biotechnology – How Far We Are from Clinical Application?

9:45 - 10:00 **Anna Karewicz**, Adrianna Machowska, Karolina Karnas, Joanna Dulińska-Litewka, Czesław Kapusta
Magnetic Nanoparticles for Cancer Cells Capture

10:00 – 10:15 **Paulina Kazmierczak**, Agata Przekora
The Effect of Nano-HA-Based Biomaterial on Macrophage Polarization and Osteogenic Differentiation In Co-Culture System In Vitro

10:15 – 10:30 **Moein Zarei**, Mirosława El Fray
Curcumin Loaded P3HB-MCNTs Electrospun Scaffolds – In Vitro and In Vivo Study

10:30 - 11:00 Coffee break – Poster viewing

Session III

11:00 – 11:15 Piotr Rychter, Renata Barczyńska-Felusiak, Kamila Lewicka, Małgorzata Pastusiak, Bożena Kaczmarczyk, Michał Sobota, Andrzej Wanic, Arkadiusz Orchel, Anna Kaps, Marzena Jaworska-Kik, **Piotr Dobrzyński**
Synthesis of Bacteriostatic Polylactide by Using Zirconium (IV) and Zinc (II) Chelate Complexes with Amino-Acids Based Ligands

11:15 – 11:30 **Andrzej S. Swinarew**, Klaudia Kubik, Jadwiga Gabor, Jarosław Paluch, Magdalena Popczyk, Arkadiusz Stanula, Hubert Okła, Adam Świerczyński
Modern Porous Polymer and Carbon Materials Based on Polyurethanes for Applications in Medical Diagnostics

11:30 – 11:45 **Monika Gołda-Cępa**, Paulina Chytrosz, Waldemar Kulig, Lukasz Ćwiklik, Andrzej Kotarba
Surface Functionalization of Polyurethane Biomaterials: Combined Experimental and Molecular Dynamics Simulations Approach

11:45 – 12:00 **Maciej Guzik**, Adam Szeligowski, Tomasz Witko, Katarzyna Harażna, Daria Solarz, Karolina Feliksiak, Szymon Skibiński, Tomasz Majka, Krzysztof Pielichowski, Martyna Seta
Polyhydroxyalkanoate Biopolymers for Medical Applications

12:00 – 12:15 **Piotr Piszczek**, Barbara Kubiak, Aleksandra Radtke, Partycja Golińska, Michał Sobota
Multinuclear Titanium(IV)-Oxo Complexes as The Novelty Antimicrobial Agents

12:15 – 12:30 Filip Koper, Tomasz Świergosz, Anna Żaba, Agata Flis, Martina Trávníčková, Lucie Bačáková, Elżbieta Pamuła, Dariusz Bogdał, **Wiktor Kasprzyk**
Structure-Property Correlation Studies of Cross-Linked Citric Acid-Based Elastomers

12:30 – 12:45 **Joanna Czechowska**, Ewelina Cichoń, Anna Belcarz, Anna Ślósarczyk, Piotr Pańtak, Szymon Skibiński, Aneta Zima
Gold Nanoparticles and Silicon as Effective Modifiers of Hybrid-Type, Chemically Bonded Biomaterials

13:00 - 14:00 Lunch – restaurant

Session IV

- 14:15 – 15:00 **Plenary lecture - Prof. Dorota Bociąga**
3D Bioprinting – Dedicated Biomaterials and Devices
- 15:00 - 15:15 Marcin Elgalal, Piotr Komorowski, Krzysztof Makowski, Andrzej Styczyński, Bożena Rokita, Tomasz Kubiak, Jacek Sawicki, **Bogdan Walkowiak**
Design and Manufacture of Customized Medical Implants - Final Report
- 15:15 - 15:30 **Juergen M. Lackner**, Roman Major, Manfred Haiberger, Guillaume Clement, Daniel Bomze, Martin Schwentenwein, Guenter Russmueller, Paulina Trzaskowska, Michał Charkiewicz, Magdalena Kwaśny, Bernd Pretenthaler, Reinhard Kaindl, Wolfgang Waldhauser
Development of a 3D-Printed PCL-TiAlNb Material Composite with Anti-Microbial ZnO Coating for Next-Generation Maxillofacial Implants
- 15:30 - 15:45 Ryszard Uklejewski, **Adam Patalas**, Mariusz Winiecki, Piotr Rogala
Design of Initial Fixation in Bone of Customized Innovative Hip Resurfacing Endoprosthesis Based on Validated Numerical Model of The Biomimetic Multi-Spiked Connecting Scaffold Embedding in Bone and Data From The Human Osteoarthritic Femoral Heads – CT Assessment
- 15:45 - 16:00 Josefin Blell, Elin Pernevik, Mickis Gullstrand, Shubhankar Nath, Himjyot Jaiswal, Volodymyr Kuzmenko, **Itedale Namro Redwan**
3D Bioprinted Human Tissue Models for Pharmaceutical and Cosmetic Product Testing
- 16:00 – 16:15 Break

Session V

- 16:15 – 16:30 **Roman Major**, Maciej Gawlikowski, Przemysław Kurtyka, Roman Kustos, Juergen M. Lackner
Photosensitive Polymeric Materials Dedicated to Lightweight Heart Pump Rotor Design
- 16:30 - 16:45 **Aleksandra Radtke**, Gabriela Gąsior
Biodegradable Iron-Based Materials for Cardiac Purposes - What Was Done and What More Can Be Done?
- 16:45 – 17:00 **Michał Sobota**, Mateusz Stojko, Jakub Włodarczyk, Katarzyna Jelonek, Joanna Jaworska, Monika Musiał-Kulik, Małgorzata Pastusiak, Piotr Dobrzyński, Janusz Kasperczyk
Influence of Crimping Process on Radial Strength of Vascular Stent Made of Various Bioresorbable Polymers
- 17:00 – 17:15 **Przemysław Kurtyka**, Roman Major, Roman Kustos, Jerzy Zalewski, Justyna Więcek, Amanda Bartkowiak, Marcin Kaczmarek, Kamil Jozsko, Aniela Grajoszek
Effect of Textured Surface Topography Parameters on Cells Proliferation and Tissue Growth in the Mechanical Circulatory Support Application
- 17:15 - 18:30 **Poster session and drinks**
- 19:00 - late **Gala Dinner – 30th Anniversary Conference & 25 years of the Polish Society for Biomaterials**

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15:00 - 16:00	Rapid Fire Presentations - YSF
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16:00 - 16:30	Coffee break
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Session VI

16:30 - 16:45	Ewelina Pabjańczyk-Wlazo , Nina Tarzyńska, Anna Bednarowicz, Grzegorz Szparaga, Adam Puszkarz <i>The Polymeric EPD - The Influence of Process Parameters and Solution Characteristics on the Electrophoretic Modification of Fibrous Carriers</i>
16:45 - 17:00	Katarzyna Bialik-Wąs , Małgorzata Miastkowska, Klaudia Pluta, Dagmara Malina <i>Advanced Bio-Hybrid Materials Incorporated with The Nanocarrier-Drug System as Multi-Compartmental Dressings Supporting The Treatment of Psoriasis</i>
17:00 - 17:15	Dagmara Malina , Katarzyna Bialik-Wąs, Klaudia Pluta <i>Effect of Sodium Alginate/Poly(Vinyl Alcohol) Ratio and Aloe Vera Extract Amount on Selected Characteristics of Hydrogel Matrix Intended for Biomedicine</i>
17:15 - 17:30	Magdalena Jarosz , Grzegorz D. Sulka <i>Multifunctional Biomaterials Based on Nanostructured Anodic Titanium Dioxide</i>
17:30 - 17:45	Agnieszka Dubiel , Damian Nakonieczny, Witold Walke, Justyna Majewska, Grzegorz Dzido, Paweł Nuckowski, Krzysztof Matus <i>Modification of The Surface of Spherical Aluminosilicates with Graphene Oxide</i>
17:45 - 18:00	Anna-Maria Tryba , Małgorzata Krok-Borkowicz, Natalia Piergies, Justyna Frączyk, Beata Kolesińska, Czesława Paluszkiwicz, Elżbieta Pamuła <i>Poly(L-Lactide-co-Glycolide) Membranes Modified with RGD-Poly-(2-Oxazoline) for Biomedical Application</i>
18:00 - 18:15	Anna Michalicha , Agata Roguska, Agata Przekora, Barbara Budzyńska, Anna Belcarz <i>Poly(L-Dopa)-Modification of Curdlan Hydrogel for Safe and Effective Drug Binding and Release</i>
18:15 - 18:30	Anna Taratuta , Zbigniew Paszenda, Julia Lisoń, Alicja Kazek-Kęsik, Magdalena Antonowicz, Marcin Basiaga <i>Effect of Ta₂O₅ Layer on the Antibacterial and Physicochemical Properties of NiTi Alloy</i>
18:30 - 18:45	Closing remarks and award session
19:00 - late	Dinner – Cottage bar “Nad potokiem”

Sunday, October 17

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BIO TECHNOLOGIES



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In Sygnis Bio Technologies we strive to provide our partners with the most inventive approach to bioengineering. We are a leading provider of scientific equipment on the Polish market, with a strong focus on high resolution live cell imaging and tissue engineering. Our portfolio combines a multitude of techniques i.e.: 3D bioprinting, biopatterning, live cell and super-resolution imaging.

We are the only distributor of CELLINK, 3D bioprinting market leader, for Eastern Europe and bioprinting 3D solutions partner for "Bionic Pancreas" of FBiRN. We are one of a few experts in the field of 3D holotomographic imaging. We offer cutting edge technology to the scientific world, such as Cellink holographic multiphoton bioprinter - Holograph X.

Sygnis Bio Technologies leads multiple innovative technological and biotechnological projects. Since the very foundation of the company, we have been developing tailored solutions for our customers, using great experience, educational and technical background of its employees and broad market research.

Contact information

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Keynote Lecture and Conference Sponsor

POLBIONICA is a biotech company established by the Foundation on Research and Development of Science to commercialise 3D bionic pancreas research and thinks boldly about the future.

The application of the bionic pancreas in clinical practice will revolutionise the treatment of diabetes and become one of the greatest medical successes of the 21st century. Concerning the growing number of patients with type I diabetes and the limitations of available treatments, functional 3D bioprinting is a viable option to overcome the problem of organ shortage and will also reduce the number of complications associated with surgery and the use of long-term immunosuppression after transplantation.

In late 2020, we completed the preclinical phase of 3D bionic pancreas research; we are developing very promising results and we are also preparing for the clinical phase. While working on the 3D bionic pancreas bioprinting project, we created proprietary products crucial for the 3D bioprinting development. These include customised bio inks, a bioreactor, and innovative bioprinting methods.

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