

# 21<sup>st</sup> International Conference on POLYSACCHARIDES-GLYCOSCIENCE

## Preliminary Programme



5–7 November, 2025



Novotného lávka 5, Prague,  
Czech Republic



**5<sup>th</sup> November 2025**

**18:00 Glass of wine – unofficial openings**

**Vinný újezd**

Újezd 19, 150 00 Malá Strana

<https://www.vinnyujezd.cz/>



**Tram stop – Újezd or Helichova- (Tram numbers: 1, 5, 9, 12, 15, 18, 20, 22, 23, 25)**



This place is located in the historical centre of Prague under Petřín hill, at about 800 meters from Charles Bridge.

**6<sup>th</sup> November 2025**

**8:00 - 9:00 Registration**

**9:00 - 9:10 Opening Ceremony**

Novotného Lávk 5, Prague 1

- Keynote lecture: 30+10 min. discussion
- Oral presentation: 10+5 min. discussion
- Poster size is recommended max. width 90 cm and max. height 110 cm.

**9:00 WELCOME**

**JANA ČOPÍKOVÁ and ALEŠ RAJCHL, UNIVERSITY OF CHEMISTRY AND TECHNOLOGY, PRAGUE**

**ORAL SESSION**

| <b>9:10 – 12:30</b>  |                                                                                                                                                                                                                                            | <b>Oral session 1</b><br><b>Chairman: Jacek Lewandowicz</b> |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 9:10 – 9:50          | <u>Ulrica Edlund</u><br><b>Keynote lecture:</b> From native tissues to bioproducts: 3D visualization of polysaccharides and other biopolymers in biomass                                                                                   |                                                             |
| 9:50 – 10:05         | <u>Leonhartsberger S. *</u> , Carmona P., Mann K.-J., Kozich M., Stanetty Ch., Mihovilovic M. D.<br>Polysaccharides as sustainable flocculants for wastewater treatment                                                                    |                                                             |
| 10:05 – 10:20        | <u>Zieher J.</u> , Stingl R., Veigel S., Gindl-Altmutter W., Beaumont M., Rosenau T., Hettegger H.*<br>Environmentally Friendly Approaches for the Tuning of Cellulosic Paper Properties through Polysaccharide-Reinforced Silica Coatings |                                                             |
| 10:20 – 10:30        | <u>P. Drašar</u> Chemistry Europe                                                                                                                                                                                                          |                                                             |
| <b>10:30 – 11:00</b> |                                                                                                                                                                                                                                            | <b>Coffee break / poster section</b>                        |
| 11:00 – 11:40        | <u>Stephen C. Fry</u><br><b>Keynote lecture:</b> In-vivo action of lyases on pectic polysaccharide domains during fruit softening                                                                                                          |                                                             |
| 11:40 – 11:55        | <u>Rusu A. G. *</u> , Niță L. E., Ghilan A., Simionescu N., Șerban A. M., Vieru A., Tarțau-Mititelu L.<br>Versatile chitosan/oligopeptides-based nanogels featuring dual propulsion for potential medical applications                     |                                                             |
| 11:55 – 12:10        | <u>Hettegger H. *</u> , Lehrhofer A. F., Bacher M., Melikhov I., Sulaeva I., Lindner W., Kohout M., Kamitakahara H., Potthast A., Rosenau T.<br>Elution "revolution": Reversing chiral separation by swapping D- for L-cellulose           |                                                             |

12:10 – 12:25 Fila D.\*, Kolodyńska D., Hubicki Z.  
An effective approach to critical raw materials recovery with a novel biopolymer adsorbent

**12:30 – 13:30** **Lunch break**

**13:30 – 16:00** **Oral session 2**  
**Chairman: Simon Leonhartsberger**

13:30 – 14:10 Idalina José Monteiro Gonçalves  
**Keynote lecture:** From industrial waste to high-performance bioplastics

14:10 – 14:25 Zhao Ch.\*  
Marine Green Algal Saccharides and Their Pharmaceutical Applications

14:25 – 14:40 Latečka F., Vašíček O., Münster L., Humpolíček P., Vícha J.\*  
Modifying schizophyllan: Impact of molecular weight on solubility and biological activity

14:40 – 14:55 Zeng K.\*, Luc Y.-T., Zhang K., Groth T.  
Development of thermoresponsive multilayers based on polysaccharides for tissue engineering

14:55 – 15:10 Darko C. N. S.\*, Humayun S., Goosen N. J., Tuvikene R.  
Sulfated polysaccharides from Gelidium pristoides as antidiabetic agents and immunostimulators of RAW264.7 cells

15:10 – 15:25 Abdullah S.\*, Thiaba S.  
Glutathione/Coenzyme Q10 Nano Hydrogel In Vivo Evaluation to Promote Wound Healing

15:25 – 15:40 Arreola S. L. B.\*  
Bioprocess optimization for prebiotic carbohydrates production from agro-industrial substrates: Advancing circular bioeconomy

15:40 – 15:55 Bourasa H., Buwalda S., Tilliera Y., Nedelec J.-M., Roscellia A., Luton F., Corinusc A., Marchat D., Budtova T.\*  
Starch and starch-hydroxyapatite aerogels and xerogels: hierarchically structured bio-based materials for potential cancellous bone repair

**16:00 – 16:30** **Coffee break / poster section**

**16:30 – 18:00** **Oral session 3**  
**Chairwoman: Lenka Frankova**

16:30 – 16:45 Cheng L.\*  
Starch structural phase transition: insights into its role in determining starch functionality

16:45 – 17:00 Zhang S., Sun X., Fan X., Malde A. K., Robert G.\*  
Combining simulation and experiment to produce new starches

- 17:00 – 17:15 Zhuang J., Li Ch.\*  
Impact of rice protein addition on long-term retrogradation kinetics and in vitro digestibility of rice starch depends on starch fine molecular structures
- 17:15 – 17:30 Li Ch.\*  
Starch structural phase transition: insights into its role in determining starch functionality
- 17:30 – 17:45 Zhoua Z., Zhanga Q., Lib L., Liuc D., Denga X., Maa Y., Nga W. H., Zhud J., Wonge W. T., Lia Ch.\*  
Amylose content modulates lycopene isomerization and anti-oxidative activity of starch-lycopene complexes during small intestinal digestion

**20:00 – 24:00**

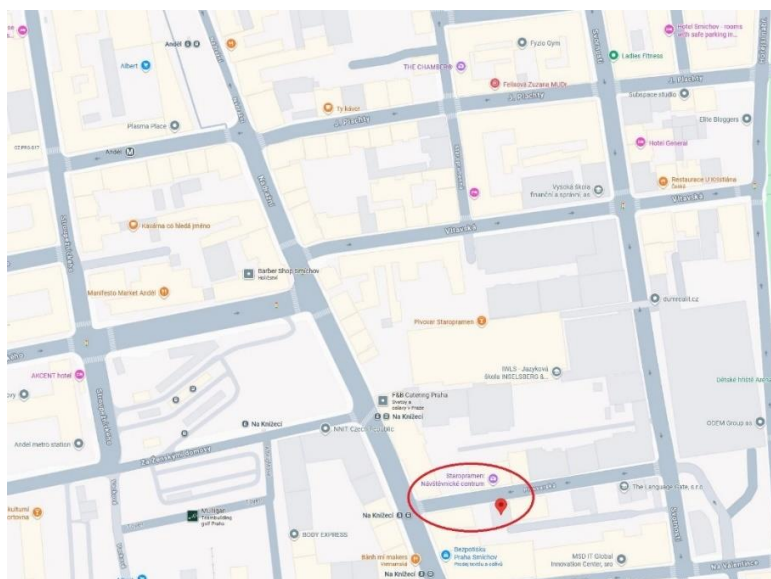
**Conference dinner**

**19:00** Departure from Novotného lávka (from the metro station Staroměstská (green line A) direction Depo Hostivař to the metro station Můstek (green line A) transfer to yellow line (B) to the station Anděl (exit direction Knížecí)  
**19:30** Arrival to Staropramen - brewery  
**20:00** Welcome and start of dinner  
**21:00** Guided tour of the brewery  
**24:00** Expected end

We invite you to the heart of the Staropramen (brewery), where you will have the opportunity to learn about the technology how to brew a beer, and also you will also have the opportunity to taste it and tap beer. You will learn the individual steps of beer production and how to make it to order. This brewery focusses on the production of worldwide known beer. You will find the map below:



Prague Brewery Tour Staropramen, Pivovarská 9, Prague 5, <https://www.centrumstaropramen.cz/eng/>



**7<sup>th</sup> November 2025**

Novotného Lávk 5, Prague 1

**ORAL SESSION**

| <b>9:00 – 12:00</b>  |                                                                                                                                                                                                      | <b>Oral session 4</b><br><b>Chairman: Michaela Havrlentova</b> |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 9:00 – 9:40          | <u>Rupert Kargl</u><br><b>Keynote lecture:</b> Polysaccharides for Tailored Microstructures in Biomaterials                                                                                          |                                                                |
| 9:40 – 9:55          | <u>Buller J.*</u> , <u>Wetzel H.</u><br>Selective C6 Oxidation of Starch with Laccase-TEMPO: Advancing Green Biocatalysis for Polysaccharides                                                        |                                                                |
| 9:55 – 10:10         | <u>Elschner T.*</u> , <u>Schörich J.</u> , <u>Fischer S.</u><br>Pros and Cons for synthetic methods of phenolic cellulose esters                                                                     |                                                                |
| 10:10 – 10:25        | <u>Humayun S.</u> , <u>Tuvikene R.*</u><br>Influence of Cationic Species on $\beta$ -Agarase-Mediated Depolymerization of Agarans                                                                    |                                                                |
| <b>10:30 – 11:00</b> |                                                                                                                                                                                                      | <b>Coffee break / poster section</b>                           |
| 11:00 – 11:40        | <u>Patrick Martin</u><br><b>Keynote lecture:</b> Polysaccharides at the Center of „One Health“                                                                                                       |                                                                |
| 11:40 – 11:55        | <u>Quezada G. R.*</u> , <u>Gracia K.</u> , <u>Veloso F.</u> , <u>Aguayo M. G.</u><br>Biopolymer-based flocculants as sustainable alternatives for mining tailings treatment                          |                                                                |
| 11:55 – 12:10        | <u>Rausch A.*</u> , <u>Bunzel M.</u><br>Single-standard calibration for HILIC-UHPLC-FLD quantification of (A)XOS                                                                                     |                                                                |
| 12:10 – 12:25        | <u>Sitter L.*</u> , <u>Bunzel M.</u><br>Advanced HPAEC-PAD/MS profiling method for structural characterization of cereal arabinoxylans                                                               |                                                                |
| 12:25 – 12:40        | <u>Loquet A.*</u><br>New solid-state NMR approaches to decipher the molecular organization of polysaccharides in intact cell walls                                                                   |                                                                |
| 12:40 – 12:55        | <u>Fila K.</u> , <u>Muhammedaly S. A. K.</u> , <u>Chibrikov V.</u> , <u>Cybulska J.*</u> , <u>Zdunek A.</u><br>Transformation of apple pectin conformation induced by postharvest maturity processes |                                                                |
| 12:55 – 13:10        | <u>Wang Y.</u> , <u>Guo Z.</u> , <u>De Vos P.</u> , <u>Tian L.*</u><br>Mining Structure–Activity Relationships of Pomelo Peel Cell Wall Polysaccharides for Gut Microbiota Modulation                |                                                                |
| <b>13:10 – 14:00</b> |                                                                                                                                                                                                      | <b>Coffee break / poster section</b>                           |

14:00 – 17:30

**Oral session 5**  
**Chairman: Roman Bleha**

- 14:00 – 14:40     Maciej Wojtczak  
**Keynote lecture:** From Processing Residues and Process Disruptors to Regenerative Resources: Structural and Exopolysaccharides as a Challenge and Opportunity for the Sugar Industry
- 14:40 – 14:55     *Mzoughi Z., Soltania M., Lassoued M. A., Le Cerc D., Majdou H.*  
Development and Bioactivity Assessment of a Polysaccharide-Based Cosmetic Formulation from Cucumis sativus for Skin Photoprotection and Anti-Aging
- 14:55 – 15:10     Rausch A.\*, Bunzel M.  
Single-standard calibration for HILIC-UHPLC-FLD quantification of (A)XOS
- 15:10 – 15:25     Kapusta O.\*, Barczak M., Gugala-Fekner D., Szerement J.  
Mechanically enhanced silica-alginate hybrid hydrogels via polycondensation of tetraethoxysilane and sodium alginate

16:00 – 16:30

**Young Science Award**

16:30 – 16:45

**ICPG closing**

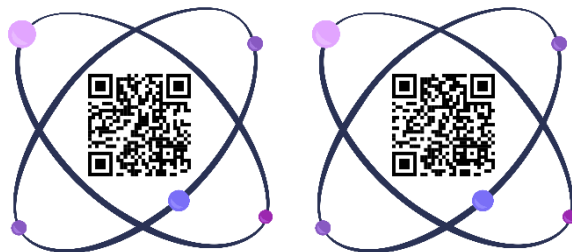
**POSTERS**

1.                    Černá A., Hrabáček V.\*,  
Münster L., Vicha J.                    Thermoresponsively modified golden nanoparticles synthesized using dialdehyde cellulose for repeatable catalytic reactions
2.                    Uhliariková M.\*, Matulová  
M., Capek P.                    Studies on the structure of a viscous exopolysaccharide produced by the green microalgae *Dictyosphaerium tetrachotomum* Fott
3.                    Švec I.\*, Sluková M., Bleha  
R., Korman R.                    Viscosity profiles of selected hydrocolloids
6.                    Huh K. M.\*, Le T. P.                    Synthesis of polymeric prodrug thermogel of dexamethasone for targeted and controlled drug delivery
7.                    Nita L. E.\*, Nacu I., Rusu  
A. G., Ghilan A., Verestiuc  
L., Chiriac A. P.                    Hyaluronic acid-based hydrogels as 3D printed patches

8. *Maroulas K. N., Tolkou A. K., Ntougias S., Katsoyiannis I., Kyzas G. Z.\** Functionalization of chitosan and graphene oxide doped with heteroatoms (P, N) as adsorbent for the removal of fluoride and As(III) from water
9. *Chiorean M., Fasching N., Winter A., Rosenau T., Beaumont M.\** Valorization of water plants and wetland biomass for bio-based packaging materials
10. *Mzoughi Z., Dems L., Chraief I., Le Cer D., Majdoub H.* Influence of extraction techniques on the physicochemical properties of Polysaccharides derived from Lemon peels: Potential for cosmetic applications
11. *Kim D. E., Le T. P., Huh K. M.\** Self-Degradable Glycol Chitosan-Based Thermoresponsive Hydrogel: Design and Physicochemical Characterization
12. *Schrammová M., Muchová M., Münster L., Humpolíček P., García-García P., Delgado A., Évora C., Reyes R., Vícha J.*\* Chitosan-based composite hydrogels for bone tissue engineering
13. *Humayun R., Tuvikene R.*\* Hybrid Galactans from Endocladia muricata Enhances Immune Activation via TLR-4 Signaling Pathway
14. *Smrčková P.\*, Bauerová M., Šárka E. Švec I.* Nutritionally valuable laboratory extrudates prepared from legumes
15. *Sushytskyi L.\*, Rajsinglova L., Lukac P., Synytsya A., Vannucci L.* Rhamnan- and xylogalactofuranan-rich fraction from *Parachlorella kessleri* HY1 for co-treatment with dendritic cell vaccine in a mouse colorectal carcinoma model
16. *Saha A.\*, Paul A. Ch., Saha N., Saha P.* Optimization of biopolymer production from ganoderma lucidum: effects of culture condition on biomass yield
17. *Synytsya A.\*, Bleha R., Smrckova P., Horackova S., Vrchotova B., Stetina J.* Exopolysaccharides produced by *Limosilactobacillus fermentum* MM1V: Fractionation and structural analysis of the fractions

Poster size is recommended max. width 90 cm and max. height 110 cm.

## Follow us on our web or LinkedIn:



Thank you for joining our 21<sup>th</sup> ICPG conference. We look forward to meeting you at the anniversary 22<sup>nd</sup> ICPG, which will be from

**11<sup>th</sup> to 13<sup>th</sup> November 2026** in Prague.

On behalf of the Scientific and Organising Committees

Roman Bleha, Jana Čopíková, Evžen Šárka



## 21<sup>st</sup> ICPG Sponsors



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