

# BIP MoCuHer:

## Molecules in Cultural Heritage

**Venue:** Faculty of Science, University of South Bohemia (PřF JU), České Budějovice

**Dates:** 21 August 2026 (online) and 24–29 August 2026 (on-site)

The BIP “Molecules in Cultural Heritage” organized by the Faculty of Science at the University of South Bohemia in České Budějovice from August 24-29, 2026, reflects the university’s active involvement in the KreativEU consortium. Its mission is to foster scientific innovation while honoring academic tradition and cultural heritage. Focusing on structural biology, biochemistry, and biophysics, the event is primarily intended to broader scientific community as well as for Master's and doctoral universities’ students. Through lectures by leading national and international experts, poster sessions, and networking opportunities, the conference promotes the exchange of knowledge, enhances student mobility, and strengthens international collaboration.

### Conference speakers

#### USB representatives and KreativEU representatives:

Prologue by the USB representative

Prologue by the FSc USB representative – Dean [**František Vácha**]

Prologue by the KreativEU representatives – TBA [**Silviu Miloiu, Lucie Jerouskova, Radka Zavodska**]

#### Speakers:

**Dipl.-Min.in Dr.in rer.nat. Klaudia Hradil**, X-Ray Center, TU Wien, Austria

**Prof. Sergio Martínez-Rodríguez**, Faculty of Medicine, University of Granada, Spain

**Dr. Jose A. Gavira**, Laboratorio de Estudios Cristalográficos, CSIC – UGR, Granada, Spain

**Dr. Isaac Rodríguez Ruiz**, Laboratoire de Génie Chimique de Toulouse (LGC-CNRS), France

**Prof. Claude Sauter**, Institut de Biologie Moléculaire et Cellulaire (CNRS-Unistra), Strasbourg, France

**Prof. Dr. Hab. Silviu Miloiu**, Valahia University of Targoviste & KreativEU - Knowledge & Creativity European University, Dambovita, Romania

**Assoc. Prof. Lucia Nováková**, Trnavská univerzita in Trnava, Slovakia

**Assoc. Prof. Pavlina Rezacova**, Inst of Organic Chemistry and Biochemistry, AS CR, Praha, CR

**Dr. Guillermo Escolano Casado**, Mendel University, Brno, CR

**Dr. Kanika Dulta**, Mendel University, Brno, CR

**Prof. Roman Tuma**, Faculty of Science, University of South Bohemia Ceske Budejovice, CR

**Prof. Vitezslav Stranak**, Faculty of Science, Uni of South Bohemia Ceske Budejovice, CR

**Dr. Milan Dopita**, Faculty of Mathematics and Physics, Charles University, Praha, CR



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# MoCuHer: <sup>BIP</sup>

## Molecules in Cultural Heritage

The Blended Intensive Programme (BIP) Molecules in Cultural Heritage (MoCuHer) is an international educational and networking event organized within the framework of the KreativEU Alliance. The programme combines online and in-person activities and reflects the university's commitment to scientific innovation, interdisciplinary education, and international cooperation in the fields of molecular and structural biology, biochemistry, biophysics, nanotechnology, and cultural heritage.

The BIP is intended primarily for Master's and doctoral students from partner universities interested in structural biology and modern analytical approaches applied to cultural heritage research. Approximately 20 participants will take part in lectures, laboratory workshops, student presentations, excursions, and networking activities.

**The programme consists of several interconnected components:**

### **International Expert Lectures**

The core of the programme will include lectures delivered by leading European scientists and researchers from universities and research centres associated with the KreativEU alliance and partner institutions. Topics will focus on X-ray techniques, protein crystallography, RNA research, nanotechnology, sustainability, and molecular approaches to cultural heritage preservation.

### **Laboratory Workshops and Hands-on Training**

Participants will engage in practical laboratory sessions and demonstrations focused on modern structural biology and analytical techniques. These activities will support the development of technical skills and encourage direct interaction between students and experts in an international research environment.

### **Student Presentations and Scientific Networking**

Students will present their own projects and research ideas through presentations and poster sessions, followed by expert feedback and discussion. Informal networking events, guided discussions, and collaborative activities will provide opportunities for establishing international academic contacts and future cooperation.

### **Scientific Excursion to the TU Wien and Cultural Heritage Activities**

An international excursion to the TU Wien X-ray Centre will introduce participants to advanced research infrastructure and scientific collaboration opportunities. The programme will also include participation in local cultural heritage activities and the festival "City for the People, People for the City 2026" in České Budějovice, highlighting the connection between science, society, and cultural heritage.

By combining scientific education, practical training, intercultural exchange, and networking, the MoCuHer BIP supports the development of an international academic environment and contributes to strengthening collaboration within the KreativEU alliance.



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## Molecules in Cultural Heritage

### Program

**Friday, August 21, 2026, online** instructions and introduction of participants

**On-site** - Venue: Faculty of Science, University of South Bohemia in Ceske Budejovice

**Monday, August 24, 2026** = Opening Day

**13:00–14:00** | Registration & Welcome Coffee

**14:00–14:45** | Opening Remarks by Conference Chair [Ivana Kuta Smatanova]

Prologue by the USB and FSc USB representatives [Lucie Jeroušková and František Vácha]

Prologue by the KreativEU representative - Valahia University of Targoviste [Silviu Miloiu]

Prologue by the USB and KreativEU representative – Member of Steering Committee [Radka Závodská]

**14:50–15:35** | Plenary Lecture 1 - 130 years of seeing the invisible: The story of X-Ray Discovery [Pavlina Rezacova]

**15:35–16:00** | Coffee / Tea Break

**16:00–16:45** | Lecture 2 – X-ray Techniques in Structural Biology and Heritage Science [Klaudia Hradil]

**16:45–17:45** | Lecture 3 – Eco-Cultural Heritage: Conceptual Innovations and Applied Methodologies for the 21st Century [Silviu Miloiu, Lucia Novakova]

**17:45–18:30** | Lecture 4 – From the Braggs to Bill Astbury and the advent of modern structural molecular biology [Roman Tuma]

**19:00–22:00** | Networking & Get-to-Know Session, Informal Welcome Dinner

**Tuesday, August 25, 2026** = Lecture Day + Lab hands-on Training

**09:30–10:15** | Lecture 5 - Holographic microscopy and its applications in your laboratory [Katerina Teznerova, Altium International s.r.o.]

**10:15–11:00** Lecture 6 | RNA in the history of molecular and structural biology [Claude Sauter]

**11:00–11:15** | Coffee / Tea Break

**11:15–12:30** | Lab Walking Tour & Informal Networking

**13:00–14:30** | Time for lunch

**14:30–17:30** | Laboratory Workshops by Altium (Hands-on Training)

**18:00–19:00** | Guided Discussion: Reflection on Laboratory Results and Methods



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**On-site** – Venue: Faculty of Science, University of South Bohemia in Ceske Budejovice

**Wednesday, August 26, 2026** = Lecture Day

**09:30–10:15** | Lecture 7 Protein purification in and beyond the crystallography world [Sergio Martinez-Rodriguez]

**10:15–11:00** | Lecture 8 Pharma & Biotechnological Use of Protein Crystals [Jose A. Gavira-Gallardo]

**11:00–11:15** | Coffee / Tea Break

**11:15–12:00** | Lecture 9 Nucleation under confinement: from salt weathering to biomolecular phase transitions [Isaac Rodriguez Ruiz]

**12:00–12:45** | Lecture 10 From petroleum-based plastics to biofilms: A journey through the molecular heritage of plastics toward a more sustainable lifestyle [Guillermo Escolano Casado]

**13:00–14:30** | Time for lunch

**14:30–17:00** | Escape room: <https://www.saancb.cz/en/elementor-6124/>

**17:00–20:00** | Work on student's projects

**Thursday, August 27, 2026** = Excursion to Vienna (TU Wien X-ray Centre)

**08:30** | Departure from České Budějovice

**11:30–12:30** | Visit to TU Wien X-ray Centre

**12:30–13:30** | Time for lunch

**13:30–15:30** | Expert Lecture &/or Meeting with a Senior Principal Scientist at the TU Wien X-ray Centre (Scientific discussion)

Visit of Analytical Instrumentation Center – XPS, Meitner-Auger spectroscopy

**16:00** | Departure to České Budějovice

**19:00** | Arrival to České Budějovice

**20:00** | Optional Group Dinner



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**On-site** - Venue: Faculty of Science, University of South Bohemia in Ceske Budejovice

**Friday, August 28, 2026** = Advanced Lecture, Internationalization & Student Presentations

**09:30–10:15** | Lecture 11 Green Nanotechnology in Cultural Heritage: Plant-Based Nanoparticle Coatings as Protective Layers [Kanika Dulta]

**10:15–11:00** | Lecture 12 Functional nanostructured surfaces: from design to sensing applications [Vítězslav Straňák]

**11:00–11:15** | Coffee/Tea Break

**11:15–12:00** | Lecture 13 Exploring the Morphology and Structure of Fe-Based Nanomaterials for Pharmaceutical Applications Using X-ray Scattering Methods [Milan Dopita]

**12:00–12:45** | Lecture 14 Trnava Uni International [TRUNI International representatives]

**11:00–12:30** | Student Presentations, Poster Session & Expert Feedback

**13:00–14:30** | Time for lunch

**14:30–18:30** | The festival "City for the People, People for the City 2026" - Cultural Heritage in Budweis

**19:00** | Farewell Dinner & Networking Evening

**Saturday, August 29, 2026** = Cultural Heritage & Closing

**09:00–12:00** | The festival "City for the People, People for the City 2026" - Cultural Heritage in Budweis

**12:00** | Official End of MoCuHer BIP 2026

**Note:** As most participants are attending MoCuHer within the framework of their own Erasmus mobilities, please note that only coffee, tea, and two dinners will be covered by the organizers. Participants are expected to pay for their own lunches. If you would like to join the lecturers for lunch, the price of a meal is approximately EUR 15.



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