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Integrative structural biology of pathological tau protein, an appealing therapeutic target for Alzheimer's disease modifying drugs

H2020-MSCA-RISE-2019-873127

D6.3 InterTau Summer School II

Work Package:	WP6
Task:	-
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Responsible partner:	MU
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Dissemination level:	Public

1 Introduction

Deliverable 6.3 marks the second and final major training event held as part of the InterTAU project. Organized by MU, the InterTAU Summer School II brought together primarily PhD students and early-career researchers, along with their peer mentors—experienced scientists in the field. Several of the participants, both students and mentors, had previously taken part in secondments under the InterTAU project. The Summer School was from June 23rd to June 27th, 2025 and was titled *"Integrative Structural Biology Course for Tackling Alzheimer's Disease"*, focused on structural biology of disordered proteins and their cellular forms, studied by solution and solidstate NMR techniques corroborated by cutting-edge cryo-EM methodologies.
Comprehensive details were available for interested participants on the official event website https://www.ceitec.eu/intertau-summer-school-ii/a5137 .

2 Methods

2.1 BACKGROUND OF MENTORS AND STUDENTS.

Participants of the summer schools came from a large variety of life science and medical disciplines. They were not only from CEITEC MU but also from other Masaryk University faculties and from InterTAU partner institutions such as INSAS, LIOS, Sanata Dharma University and Biovendor company. Other students came from University of Belgrade and University College London. The diverse backgrounds and origins of participants contributed to the variety and richness of the audience in a positive way.

The speakers were selected based on their diverse backgrounds, knowledge and expertise: senior scientists of InterTAU project partners, with a keynote speaker Angela M. Gronenborn from University of Pittsburgh. Please see the picture bellow to see full list of speakers:

Keynote speaker: Angela M Gronenborn, University of Pittsburgh

Jozef Hritz	CEITEC Masaryk University
Alons Lends	Latvian Institute of Organic Synthesis
Jiří Nováček	CEITEC Masaryk University
Chris Oostenbrink	BOKU University
Ondrej Cehlár	Slovak Academy of Science
Rostislav Škrabana	Slovak Academy of Science
Lukáš Žídek	CEITEC Masaryk University
Jochen Prehn	University of Medicine and Health Sciences

Despite many similar events taking place at the same time, we managed to gather 27 students

2.2 VENUE, PROGRAMME, ORGANIZATION

The summer school consisted of two parts. The first one was a theoretical part held in Mikulov in hotel Galant, while the second part focused on hands-on training at CEITEC MU, in their core facilities (Biomolecular Interactions and Crystallography, Josef Dadok National NMR Centre, and Cryo-electron microscopy and tomography core facility).

The goal of the event was a more in-depth knowledge sharing generated within InterTau activities and an in-person introduction to diverse organizational environs and approaches to research, thus making the most of the interdisciplinary and inter-sectoral character of the consortium.

To exploit the presence of principal investigators from partner organizations, InterTAU project final meeting was organized during the Summer School II, in hybrid form and took place on June 26th.

3 Results

3.1 SCIENTIFIC FORMATION

During the summer school fundamentals of main experimental and computational methods of integrative structural biology were explained. It was followed by lectures presenting their possible applications in the fields of Alzheimer's and Parkinson's diseases as well as in oncology. Most of presented applications originated within the involved research groups in the project. Finally, students not only visited high end instrumentations used in X-ray crystallography, bioNMR spectroscopy and cryoEM (core-facities at CEITEC-MU) but were given chance to both observe performance of tutorial experiments and also trying their own.

3.2 NETWORKING

During numerous informal discussions, students actively exchanged ideas with both their peers and mentors. Additionally, during the lectures, participants engaged actively with the lecturers, which brought many new and interesting insights These conversations not only enriched their understanding of the subject matter but also served as a platform for initiating meaningful connections. In many cases, students began planning future collaborations that extend beyond the scope of the InterTAU project.

3. List of Attachments

Photographs from the event can be found on the event´s website:
https://www.ceitec.eu/intertau-summer-school-ii/a5137/gallery


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