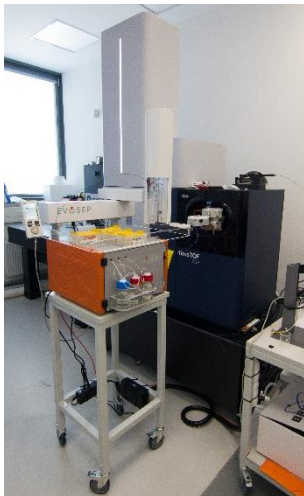


Updates from the Centre of Molecular Structure

CF Crystallization of Proteins and Nucleic Acids

The Crystallization CF greatly improved its screening equipment by installation of the SONICC instrument (Formulatrix). SONICC is using Second Harmonic Generation (SHG) and Ultraviolet Two-Photon Excited Fluorescence (UV-TPEF) in a completely automated imager to quickly image high throughput crystallization plates and positively identify protein crystals. SONICC is connected to the current RI1000 crystallisation hotel and is able to detect even extremely thin crystals, microcrystals <math><1 \mu\text{m}</math>, and crystals obscured in birefringent LCP.



CF Structural Mass Spectrometry

A new quadrupole time of flight mass spectrometer timsTOF SCP from Bruker Daltonics is now installed in the Structural Mass Spectrometry core facility of CMS. The instrument provides extremely high speed and sensitivity to tackle proteomes of single cells or post-translational modifications in a few cells. The trapped ion mobility spectrometry (TIMS) device accumulates and concentrates ions of a given mass and mobility, enabling a unique increase in sensitivity and speed. Besides single cell proteomics, the new mass spectrometer allows highly sensitive identification and quantification of peptides and proteins.

CF Protein Production

We are happy to announce that Miroslava Alblová is the new head of the Protein Production facility. If you would like to discuss any potential project please contact Mirka at Miroslava.alblova@ibt.cas.cz or directly fill out your project proposal at <https://www.ciisb.org/open-access/proposal-submission>.



Access to use the Centre of Molecular Structure

CMS is a member of several research infrastructures and projects which enable our users to select different ways of accessing our services based on various criteria such as funding, project duration, or area of research. This initial selection of the best way of accessing CMS can be challenging so on the following page we would like to summarize the different modes and give you a brief overview of the differences.

If you have any questions regarding which mode of access to use, please feel free to contact us at magdalena.schneiderova@ibt.cas.cz

We are looking forward to meeting you in CMS,

Miroslava Alblová (Protein Production), **Tatsiana Charnavets** (Biophysical Techniques), **Olga Dzmitruk** (Biophysical Techniques), **Tereza Nepokojová** (Protein Production), **Jiří Pavlíček** (Crystallization of Proteins and Nucleic Acids), **Petr Pompach** (Structural Mass Spectrometry), **Pavla Vaňková** (Structural Mass Spectrometry), **Jan Stránský** (Diffraction Techniques), **Michal Strnad** (IT), **Lubica Škultétyová** (technician), **Magdalena Schneiderová** (admin), **Jan Dohnálek** (CMS Head)

You can realize your projects at CMS via an online application at ciisb.org/open-access/proposal-submission.

Access to the CMS techniques can be granted via the funding scheme of Instruct-ERIC as well (instruct-eric.org/submit-proposal).

Commercial subjects are also welcome to use CMS facilities. For a listing of the offered services see ibt.cas.cz/cs/servisni-pracoviste/centrum-molekularni-struktury/#companies

Find out more information at ciisb.org, ibt.cas.cz/core-facility/CMS/, instruct-eric.org/centre/biocev/, biocev.eu/en/services/centre-of-molecular-structure.3
or contact magdalena.schneiderova@ibt.cas.cz, jan.dohnalek@ibt.cas.cz

CIISB – Czech Infrastructure for Integrative Structural Biology

- Proposal submission: <https://www.ciisb.org/open-access/proposal-submission>
- Who can apply: all researchers from research institutes and universities
- Financing: access is paid by user, prices are partially covered by MEYS funding
- CMS core facilities: all facilities
- Duration of access: accepted projects are valid for 1 year; it depends on the user and facility availability how many times or how often access will be used



Instruct-ERIC – The European Research Infrastructure Consortium for Structural Biology Research

- Proposal submission: <https://instruct-eric.org/submit-proposal/?t=instructeric>
- Who can apply: all researchers
- Financing: access for users from Instruct-ERIC member countries is free of charge; travel costs are also reimbursed
- CMS core facilities: all facilities
- Duration of access: access is funded based on project needs, typically in units of days
- Instruct also announces calls for transnational 3-6 month internships where travel costs are reimbursed and additional funding for consumables can be obtained



MOSBRI – Molecular-Scale Biophysics Research Infrastructure

- Proposal submission: <https://www.mosbri.eu/apply-for-tna/>
- Who can apply: researchers from EU and associated countries applying to an abroad facility
- Financing: access is free of charge for user; user receives reimbursements for travel costs
- CMS core facilities: Biophysical Techniques; Crystallization of Proteins and Nucleic Acids; Diffraction Techniques; Optical Tweezers
- Duration of access: access is funded based on project needs, typically in units of days/weeks



ISIDORe – European large-scale research infrastructure for epidemic-prone pathogens

- Proposal submission: <https://isidore-project.eu/calls/>
- Who can apply: researchers from EU and associated countries applying to an abroad facility; projects focused on infectious diseases
- Financing: access is free of charge for user
- CMS core facilities: all facilities
- Duration of access: access is funded based on project needs, typically in units of days

