

## MS39-P23 X-ray crystallography facility at the Biological Research Center, Szeged

Katalin Mato<sup>1</sup>, Valéria Bugris<sup>1,2</sup>, Zsolt Filákovics<sup>1</sup>, Veronika Harmath<sup>1,2</sup>, Sandor Brockhauser<sup>1,2,3</sup>

1. Biological Research Center, Hungarian Academy of Sciences, Temesvári krt. 62, H-6726 Szeged, Hungary
2. University of Szeged, Rerrich Béla tér 1, H-6720 Szeged, Hungary
3. Extreme Light Infrastructure, Attosecond Light Pulse Source, Tisza Lajos krt. 85-87, H-6728 Szeged, Hungary

email: mato.katalin@brc.mta.hu

New X-ray crystallography facility was opened at the Biological Research Centre of the Hungarian Academy of Sciences (BRC) in Szeged. In collaboration with the University of Szeged, this facility set itself the objectives to help and coordinate both small molecule and macromolecular crystallographic works of the surrounding research groups in the whole region. The facility equipped with a microfocus X-ray diffractometer and a crystallization lab serves for solving the structures of both small molecules and proteins, which involves lots of scientific opportunities for the collaboration. The diffractometer facilitates data collection from two crystals independently and simultaneously. A MAR 345 detector on one hand side and a Bruker Smart 6000 CCD detector sitting on a Kappa Goniometer on the other hand provide an ideal setup for collecting atomic resolution datasets from small molecule or protein crystals. Using the microfocus generator also small and weakly diffracting crystals can be screened or high resolution data sets can be collected from good quality crystals. Low temperature data collection can be carried out routinely using an Oxford 700 cryostream system. Together with other techniques, the X-ray crystallography group emphasizes the importance of determination of molecular structure at atomic level and making modern instrumentation available for routine and automated use. Additionally, the facility personnel also provides pioneering work in promoting the education of crystallography in the region. Here, we present this new X-ray crystallography facility.

**Keywords:** X-ray crystallography facility, small molecule and macromolecular crystallographic works