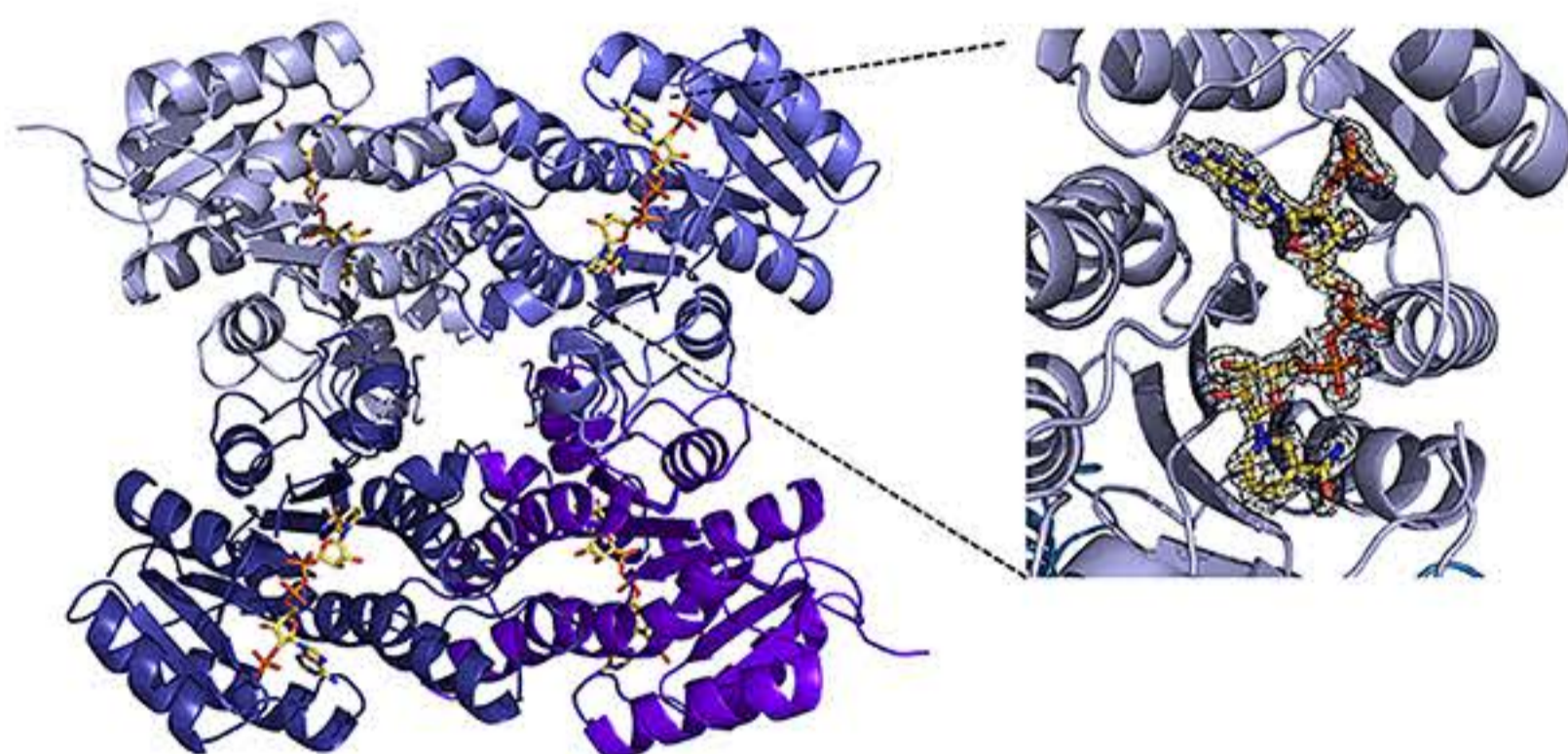


Facility Update

First users at MAX IV

The first user experiment has been performed at the BioMAX beamline and the crystal structure of an enzyme/cofactor complex has been successfully determined at 1.8 Å resolution by Gunter Schneider's group at Karolinska Institutet (Stockholm, Sweden).



The tetramer of FabG with the cofactor NADP bound in each active site (left), and the 2Fo-Fc electron density map of the NADP ligand contoured at 1σ (right). Figure provided by Dr. Robert Schnell, Karolinska Institutet.



BioMAX has also seen its first industrial users from Adroit Science (Lund, Sweden) carrying out a powder diffraction experiment to study drug formulations.

The BioMAX experiment setup is now completed with the last components installed in the beginning of 2017 and their integration into the beamline control software MXCuBE3 is in progress. To fully support the high performance of the Eiger 16M detector, a high-performance IT infrastructure, including network, storage and computation environment is currently being taken into operation. During 2017 the BioMAX beamline commissioning, to optimise the performance, will continue in parallel with an increasing number of user experiments.



New beamlines taking light

During mid-February two more beamlines – Balder and HIPPIE – received first light from the 3 GeV ring. In March the next beamline – Veritas – is expected to take beam for the first time.

Balder is dedicated to XAS and XES in medium and hard X-ray energy range, 2.4-40 keV, serving a wide range of areas, such as catalysis and biogeochemical research as well as materials science and energy research just to mention a few.



Konstantin Klementiev (left) and Yngve Cerenius (right) in the optics hutch of Balder.

HIPPIE is a state-of-the-art beamline for APXPS in the soft X-ray energy range, 110-2000 eV (full range), 263-1200 eV (full circular polarisation). The objective is to address the pressure and materials gaps, to relax the vacuum constraints, which traditionally have limited the processes and systems possible to study, and to move from model to real – and thereby often much more complicated – materials systems.

For updates on the development of beamlines at MAX IV, please visit our website www.maxiv.se

