

## **The ELIBIO Biolab.**

### **Bio-sample preparation and characterization at ELI**

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The lasers of ELI-Beamlines and XFELs provide new capabilities in light and optics which can be used to create breakthrough science in biology with the potential to elucidate the both the structure of single biological molecules and also the dynamics of biological reactions.

In order to fully exploit the photon beams of ELI-Beamlines in life sciences it is vital to be able to produce and characterise and deliver biological samples and to deliver them reliably to the beams. An onsite bio-lab complex allows us to minimise the delay between production and investigation of unstable samples and to perform preparatory optimisation experiments and complementary measurements to experiments at ELI-BL and X-ray Free Electron Lasers.

To this end we have constructed and equipped a Bio-laboratory complex of approximately 400 sq. m. This is situated less than 100m from the main experimental halls. The complex is comprised of a central open space surrounded by a suite of specialised rooms including its own dedicated laser spectroscopy laboratory, areas for optical and electron microscopy, crystallisation and for work on sample delivery. Further detail will be presented in the talk.