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Keynote talk 1 - Neutrons in Integrated Structural Biology

Monday 10 May 2021 13:20 (40 minutes)

The recent past has seen rapid growth for research in structural molecular biology. High-throughput techniques for the characterisation of biological structures are providing large amounts of information over length scales from atomic through to cellular and tissue levels of organization. There is now increasing emphasis on interdisciplinary and multi-technique approaches, and centres for integrated structural biology are being created and developed throughout the world, notably at locations that host large facilities such as synchrotron radiation and neutron beam sources, and cryo-electron microscopy. This progress, and the scientific yields arising, is driven by continuous technical development at the large facilities themselves, as well as through developments in associated methodologies for sample production and characterization. These, as well as broader infrastructural development, including engagement with the user communities, and crucially, training, will be of huge importance in narrowing the gap between the current state-of-the-art for structural biology and fundamental knowledge in the life sciences and applications in medicine.
A summary of this context will be given along with illustrative examples over a range of biological/biomedical science.

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