

E0055

The ILL-EMBL Deuteration Laboratory – A Platform for Isotope-Labeling of Biological Macromolecules. F. Meilleur¹, M. Moulin¹, V. Laux¹, M-T. Dauvergne³, M. Weidenhaupt³, M. Spano^{1,3}, I. Parrot^{1,2}, P. Callow^{1,2}, S. Teixeira^{1,2}, J.B. Artero¹, V.T. Forsyth^{1,2}, P.A. Timmins¹, M. Haertlein¹, ¹Inst. Laue Langevin, BP 156, 38042 Grenoble, France, ²Lennard Jones Laboratories, School of Chemistry and Physics, Keele Univ., Staffordshire, ST5 5BG, UK, ³EMBL Grenoble Outstation, BP 181, 38042 Grenoble, France

The ILL, in collaboration with the EMBL-Grenoble, has established a joint laboratory to support the deuteration of biological molecules for neutron scattering experiments. This initiative as part of the Partnership for Structural Biology Programme provides the tools and facilities required for the complete, partial or selective isotopic-labelling of complex bio-molecules such as proteins, nucleic acids, lipids and sugars.

The laboratory has developed procedures for deuterium labelling in high cell density culture, primarily in *E. coli* and is testing the feasibility of alternative labelling strategies.

Access to the Deuteration facility is via a peer review procedure, details of which can be found at <http://www.ill.fr/deuteration>. The facility's user program has to date provided a variety of deuterated samples for experiments in protein crystallography, fibre diffraction, small angle scattering and reflectometry, some examples of which are described in the poster.