Bioinformatics at OPPF-UK. Jonathan Diprose, a,b
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The Oxford Protein Production Facility UK (OPPF-UK) is a National Resource Centre for protein production and crystallization in the UK[1]. OPPF-UK operates as a free-at-the-point-of-use user facility with a peer-reviewed application process for UK academics and as part of the European Union-funded P-Cube[2] and Instruct[3] transnational access programmes. The processes available include construct design, cloning, bacterial and eukaryotic expression and crystallization. OPPF-UK runs a standard set of bioinformatic analyses on target proteins including sequence alignment against various public databases and the prediction of signal sequences, glycosylation sites, transmembrane helices and disordered regions, with results stored in a database (OPTIC[4]). OPPF-UK has also implemented informatics systems based on OPTIC and the Protein Information Management System (PiMS/xtalPiMS[5,6]) to assist in construct design and the management of samples, experiments and results. The presentation will cover how OPPF-UK makes use of these tools, and others, to improve its efficiency and success rate.


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