molecular models

3D Printing for the Life Sciences



elcome to Molecular Models. We offer a complete solution to UK universities for printing biological macromolecules. Our glossy high-resolution 3D models are for hands-on learning in lectures, practicals, research presentations, school and college visits, open days and science fairs.

Bringing a molecule to life by handling and exploring its unique structure can greatly aid understanding and appreciation of molecular shape and function. 3D models offer a hands-on way for lecturers and researchers to show how molecules work and how biochemical processes occur. The models are durable, long-lasting and in addition to their use in lectures and practicals, can be used to aid the impact of bioscience research grants, media communication and science outreach.

We can print absolutely any molecule! This can be primary, secondary, tertiary or quaternary protein structures; DNA or RNA structures; cocrystal structures; plus sugars, lipids, ligands, cofactors, coenzymes, small molecules, chemicals, metabolites, organics or drug interactions. Alongside full-colour printing, we can also include magnets to allow models to be composed of several pieces that 'click' together (e.g. protein-DNA complexes or multisubunit proteins).

> Human oxyhaemoglobin (2DN1)

Human SAP

Bacterial RM controller protein (3CLC)



Each model we make is bespoke and takes about a fortnight to complete. The models are made by 3D powder printing, with full colour and a resolution of 100 μ m. We can print molecules to any size that you require, from 1 cm to 50 cm.

To start, all that we need is a Protein Data Bank (PDB) ID and some ideas of colour and whether you would like mini-magnets to be included. We will provide you with some images and liaise until you are happy to give the go ahead for printing.

email: molecularmodels@port.ac.uk

We have a simple pricing strategy of £25 per cm in the longest dimension; this includes design, colour, magnets if used, VAT and delivery. Thus a 10 cm model would be £250 etc.

Molecular Models comprises a small team of research-active biochemists based in the Molecular Biophysics research labs at the University of Portsmouth.

We are here to help, so please either drop us an email at molecularmodels@port.ac.uk or call 02392 842 057.

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