

## **CGA/19/08 – Bio-engineering of a scaffold-free elastic artery.**

Blockage of arteries often leads to heart attack and leg amputation. The best treatment currently available is replacement of the diseased artery with a healthy blood vessel taken from another part of the patient. However, many patients do not have blood vessels suitable for this purpose. Artificial grafts (essentially plastic tubes) have not proved successful substitutes for arteries. This application combines expertise in vascular biology and bioengineering to generate a 3 layered bio-artificial artery by 'seeding' cells and elastic fibres into a pre-formed mould. Successful generation of a bio-artificial artery promises a potential new treatment for blocked blood vessels.