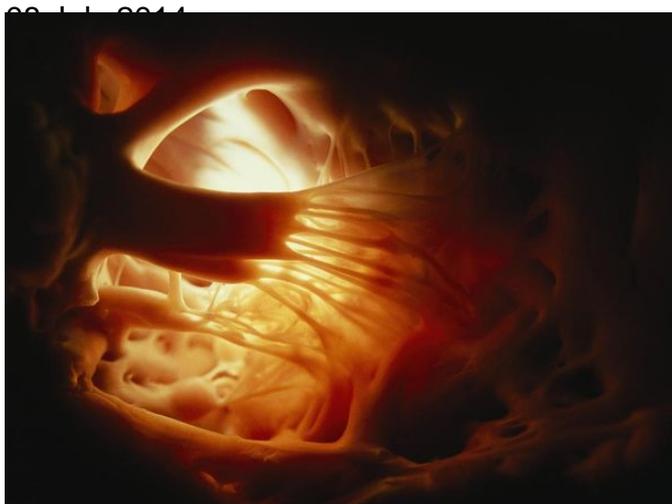


Treatments for heart attack patients a step closer



A new Phase III clinical trial in patients with

heart disease has just commenced following years of seminal research work at the NIHR Cambridge Biomedical Research Centre (BRC). The LATITUDE-TIMI 60 trial funded by GlaxoSmithKline plc (GSK), will evaluate the effects of a new drug called losmapimod in patients presenting with acute coronary syndrome (specifically, heart attacks).

Through academic-industry collaborations between the NIHR Cambridge Biomedical Research Centre and GSK, losmapimod was identified as a potentially useful drug for patients with heart disease. GSK have operated an on-site Clinical Unit Cambridge (CUC) since 1999 and in that time have worked closely with NHS consultants and academics in creating a Phase I/II unit on the campus.

Three Phase I/II trials of losmapimod were conducted and led from Cambridge between 2006 until 2011 by the Cardiovascular team at the Cambridge BRC together with colleagues from Cardiff and St Bartholomew's. These trials included assessment of losmapimod's effect on blood vessel health (endothelial function) in subjects with high cholesterol levels. Endothelial function is one of the first markers of health, which deteriorates before plaques form in arteries of patients with cardiovascular disease.

Subsequently, a novel Phase II investigational trial coordinated from Cambridge, with three

other centres in St Bartholomew's, King's College London and Oxford was conducted to investigate whether losmapimod reduced signs of blood vessel inflammation in patients with established cardiovascular disease using an imaging technique called FDG PET-CT imaging, which was optimised for detecting patients at risk in Cambridge in 2002. A further trial compared the use of an intravenous route to oral dosing to examine bioavailability of the drug for optimum dosing in heart attack patients.

Dr Joseph Cheriyan, Consultant Physician & Clinical Pharmacologist commented, "We have been very fortunate to work with GSK on some early, mechanistic studies that demonstrated the potential benefits of a novel anti-inflammatory therapy in patients with heart attacks. Many efforts are being channelled to reduce the burden of disease of heart attack patients from a clotting perspective, but this is a novel and interesting route to address the question from an inflammation perspective".

This experimental, mechanistic work in humans led to a Phase II trial, the SOLSTICE study, coordinated by the Duke Clinical Research Institute in USA, which recruited 535 heart attack patients, and has recently reported in the Lancet, June 2014. This latest trial investigated the safety of losmapimod in patients who presented with non-ST elevation myocardial infarction, a type of heart attack.

GSK has announced the start of its' pivotal Phase III study, LATITUDE-TIMI 60, to evaluate the effects of losmapimod in 25,500 patients across 500 hospitals worldwide, presenting with acute coronary syndromes (specifically, heart attack). The study will assess whether losmapimod can reduce the burden of cardiovascular deaths and disease when administered orally twice a day for a period of three months immediately after presentation with an acute coronary syndrome.

Professor Nick Morrell, theme lead for Cardiovascular studies at the BRC, commented. 'This research represents an outstanding example of academic and industrial partnership in Cambridge to develop an entirely novel approach to the treatment of coronary artery disease, the major cause of heart attacks. It shows what can be done with the infrastructure provided by the NIHR BRC to cardiovascular research.'