

## Cardiovascular & Metabolic Disorders Program

Name	Project
<p data-bbox="134 467 459 521"><a href="#">Prof Derek Hausenloy</a> <a href="mailto:derek.hausenloy@duke-nus.edu.sg">derek.hausenloy@duke-nus.edu.sg</a></p>	<p data-bbox="684 245 1050 272"><b><u>Cardioprotection: Bench to Bedside</u></b></p> <p data-bbox="684 310 1944 493">Ischaemic heart disease is the leading cause of death and disability in Singapore and worldwide. As such novel treatment strategies are required to protect the heart against acute ischaemia/reperfusion injury (IRI) - this is essential and is required to preserve cardiac function and prevent the onset of heart failure. <b>We use a translational approach to cardioprotection with the identification of novel therapeutic targets at the laboratory ‘bench’ using pre-clinical models of acute IRI, and investigate their therapeutic potential in proof-of-concept clinical studies and multi-centre clinical outcome randomised controlled trials in the setting of cardiac bypass surgery and acute myocardial infarction (AMI).</b></p> <p data-bbox="684 532 1012 553"><b>Main research interests include:</b></p> <ul data-bbox="684 565 1892 743" style="list-style-type: none"><li>• Mitochondria as targets for cardioprotection</li><li>• Ischaemic conditioning – underlying signalling pathways and clinical application</li><li>• Effect of co-morbidities such as diabetes on cardioprotection</li><li>• Pre-clinical and clinical cardiac MRI and hybrid PET/MR studies to investigate the pathophysiology of acute IRI and assess cardioprotection in the setting of AMI and post-ischaemic heart failure.</li><li>• Clinical proof-of-concept and multi-centre outcome studies in cardiac surgery and AMI patients</li></ul>