

UNIVERSITY OF LEEDS
LEEDS INSTITUTE OF CARDIOVASCULAR AND METABOLIC MEDICINE (LICAMM)
BHF 4YEAR PHD PROGRAMME IN CARDIOVASCULAR DISEASE AND DIABETES

TIMETABLE Year 1 - Overview

2017

Week 1

Welcome Day

Home Office Animal Training Course for all relevant students

Week 2

	The challenges of cardiovascular disease and diabetes: now and in the next 50 years	Prof Mark Kearney	Lecture and discussion 1 hr
	Tissue culture: standard operating procedure	Alan Burnett (Chief Technician, LIGHT Building) plus leads for each tissue culture modality (x5)	Laboratory experience and training 1 hr
	The application of 3D bio-printing in cardiovascular research'	Dr Kerrie Smith	Lecture and discussion 1hr
	Practical demonstration of basic laboratory techniques	Nominated experienced LICAMM postdoctoral researcher (currently Emma Hethershaw)	Laboratory experience

Week 3

	Preclinical imaging capabilities and support in the LIGHT Building and CBS facility	Prof Jurgen Schneider and Preclinical Imaging Technologist	Lecture, tour and demonstration 3 hr
	Career in medical science: where are you heading?	Prof David Beech	Lecture and discussion 1 hr

Week 4			
	Angiogenesis and its experimental models	Dr Richard Cubbon	Lecture and discussion 1 hr
	Practical demonstration of retinal angiogenesis analysis		Laboratory experience 3 hr
Week 5			
	Introduction to chemistry capabilities and support in the School of Chemistry	Prof Colin Fishwick, Dr Richard Foster	Short talks, tours and demonstrations by members of the team 3 hr
	Start in the lab: mini project 1	Full-time lab work except when there is a lecture or demonstration	
Week 6			
	Structural biology opportunities in the Astbury Centre	Prof Sheena Radford, Prof Alex Breeze and Dr Stephen Muench	Short talks, tours and demonstrations by members of the team
	Writing a scientific article	Prof David Beech	Lecture/ discussion 1 hr
	How to critique an article	Dr Richard Cubbon	
	3D Bio-printing human tissue – Practical'	Dr Kerrie Smith	Laboratory experience
Week 7			
	Introduction to mathematics, computing and physics opportunities	Prof Carmen Molina-Paris Prof Steve Evans	Short talks, tours and demonstrations by team members 3 hr
	Transgenic mouse technology	Dr Stephen Wheatcroft	Lecture /discussion 1 hr

Week 8			
	Statistical issues in design and analysis of biomedical research	Dr Paul Baxter (Biostatistician)	Lecture and discussion 1 hr
	Practical experience of statistical software using laptops		Computer-based experience 2 hr
Week 9			
	Practicalities of genotyping	Dr Nadira Yuldasheva Senior Scientific Officer	Lecture and discussion 1hr
	Practicalities of mouse anatomy and histology		Laboratory experience 2hr
			Lecture and discussion 1hr
			Laboratory experience 2hr
Week 10			
	Individual sessions with sessions with Programme Directors and with primary supervisor team		
Week 11			
	How to translate research findings into addressing unmet clinical needs	Dr Helen Philippou	Discussion /debate 3 hr
	Diet and cardiovascular risk	Prof Gary Williamson	Lecture, discussion & tour of the Food Science Dept. 2 hr
2018			
Week 12			
	Placental blood flow and uterine growth restriction	Dr Karen Forbes	Lecture 1 hr
	Working with pharmaceutical companies and biotechs: partnerships and licenses	Prof Colin Fishwick, Dr Richard Foster	Short talks/ discussion 2 hr
	Tissue engineering strategies	Dr Helen Berry	Lecture/ discussion 1 hr

Week 13			
	The challenges of hypertension	Prof Paul Stewart	Lecture and discussion 1 hr
	White, brown and beige fat	Dr Lee Roberts	Lecture and discussion 1 hr
	Techniques for studying adipose tissue biology		Demonstration and lab experience 3 hr
Week 14			
	Nitric oxide and reactive oxygen species	Dr Piruthivi Sukumar	Lecture and discussion
	Techniques for measuring nitric oxide and reactive oxygen species		Demonstration and lab experience
Week 15			
	Observation of invasive and non-invasive cardiology investigations in the cardiology clinic		
	Diabetes in the clinic		
Week 16			
	Gasotransmitter regulation of ion channels: relevance to cardiovascular disease	Prof Chris Peers	Lecture and discussion 1 hr
Week 17			
	Membrane protein structure determination and inhibitor design	Dr Stephen Muench	Lecture and discussion 1 hr
	Computer modelling of membrane proteins and the docking of small-molecules (tbc)	Dr Stephen Muench and Dr Richard Foster	Demonstration and hands-on software experience 3 hr
Week 18			
	Topic relating to the projects of 2016 entry students		Lecture and laboratory demonstration 2 hr each

Week 19			
	Start in the lab: mini project 2	Full-time lab work except there is a teaching/demonstration	
Week 20			
	Cardiovascular “big data”	Dr Mar Pujades Rodriguez	Lecture and discussion 1 hr
	Visit to the Clinical Research Facility	Prof John Greenwood (Cardiologist) and Prof Alistair Hall (Cardiologist)	Tour and clinical experience 1 hr
	Visit to the Clinical Trials Unit	David Cairns Deborah Stocken	Tour and clinical experience 1 hr
Week 21			
	The coagulation cascade and the intricate balance between life and death	Dr Kerrie Smith	Lecture/discussion 1 hr
	Techniques for studying haemostasis and thrombosis		Demonstration / lab experience 3 hr
Week 22			
	Cardiovascular Research Retreat Off-Campus for ~40 attendees		
Week 23			
	Work on the review article		
Week 24 Easter Break			
Week 25			
	Super-resolution fluorescence microscopy	Prof Michelle Peckham	Lecture and discussion 1 hr
		Prof Michelle Peckham Alistair Curd	Demonstration and discussion

Week 26			
	Growth factor receptors: structural biology	Prof John Ladbury	Lecture and discussion 1 hr
	Growth factor receptor cell biology and signalling pathways	Dr Sreenivasan Ponnambalam	Lecture and discussion 1 hr
	Growth factor binding proteins	Dr Stephen Wheatcroft	Lecture and discussion 1 hr
	Introduction to cell biology studies using fluorescence imaging techniques	Dr Lynn McKeown	Lecture, discussion and demonstration 2 hr
Week 27			
	Project work		
Week 28			
	Preclinical ultrasound imaging	Dr Marc Bailey	Lecture /Demonstration 3hr
	Positron emission tomography (PET) imaging for cardiovascular	Dr Charalampos Tsoumpas & Richa Gandhi	Lecture/ Demonstration 4hr
Week 29			
	Spin out companies	Dr Helen Berry	Lecture/discussion 1 hr
	Decellularisation techniques and methodology for validating engineered tissues		Lab demonstration 3 hr
Week 30			
Individual sessions with sessions with Programme Directors and with primary supervisor team			
Week 31- 33			
	Meetings to consider 3-year project plans and BHF proposals Students to submit their draft 3-year project proposals		
	Student 3-month visit proposal meeting		

Annual Presentation Event – June/July	
Weeks 34 onwards	
	Submit the 3-year project proposal to BHF
	Project work for the 3-year project
	Submission of the draft transfer report to the supervisor team (“transfer” indicates formal evaluation of suitability for transfer from the Provisional to Full PhD Programme)
	Student first 1 st author publication
	One Year progress report to the Graduate School
October	Welcoming events for the 2018 entry students
	Submission of the transfer report to the Programme Administrator
November	Scientific presentation event by 2017-entry students
	One-to-one meetings with the Programme Director to discuss the draft transfer report and publication progress