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| **BSc in Cardiovascular Sciences 2012/2013 Module 1- Molecular and Cellular Cardiology**  *Module organisers: Dr Cesare Terracciano, Professor Steven Marston and Professor Ralph Knoell.*  **Venue: Seminar room, Sub-Basement, Commonwealth Building, Hammersmith Hospital Campus (unless stated otherwise)** | **9.15-10.15** | **10.45-11.45** | **11.45-12.45** | | | **13.30-14.30** | | | **14.30-15.30** | | | **16.00-17.00** |
| **Monday**  **08 October**  **2012**  **SBS 6, CWB.** | Introduction to the Course / Tutorial Assignment.  **A Hughes** | **1100** Early Heart Development  **T Brand** | **1200** Heart morphogenesis  **T Brand** | | | **1400** Later stages of heart development  **T Brand** | | | | **SDL** | | |
| Introduction to module 1 – **CT/RK** |
| **Tuesday**  **09 October**  **2012**  **SBS 1 & 2, CWB.** | **0900**  Extracardiac cell populations  **J Schlueter** | **1000**  The Zebrafish Model  **K Poon** | **1100** The molecula basis of CHD.  **T Brand** | | **1200** Muscle Contraction  **H. Al Kayat** | | | Statistics  **A.Hughes** | | | **SDL** | |
| **Wednesday**  **10 October**  **2012**  **SBS 6, CWB.** | Electrophysiological techniques**.**  **C Terracciano** | **10.30** Origin of the membrane potential  **K MacLeod** | **11.30** Ion channel gating  **K MacLeod** | | |  | | | | | | |
| **Thursday**  **11 October**  **2012**  **SBS 1 & 2, CWB.** | Basic cardiac conduction  **A** **Lyon** | Action Potential 1  **K MacLeod** | Action Potential 2  **K MacLeod** | | | Laboratory visit ICTEM reception  **K Macleod / C Terracciano** | | | | | **SDL** | |
| **Friday**  **12 October**  **2012**  **SBS 6, CWB.** | Ion Transporters 1  **K MacLeod** | Ion Transporters 2  **C Terracciano** | | Sarcolemmal ionic movements in EC coupling  **C Terracciano** | | | **SDL** | | | | | |

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|  | **9.15-10.15** | **10.45-11.45** | | | | **11.45-12.45** | | **13.30-14.30** | | | | **14.30-15.30** | | **16.00-17.00** |
| **Monday**  **15 October**  **2012**  **SBS 7, CWB.** |  | Sarcoplasmic reticular ion movements in EC coupling  **C Terracciano** | | | | Force frequency relationship and other contractile phenomena  **K MacLeod** | | Cell-based Arrhythmias  **K MacLeod** | | | **SDL – PREPARE FOR JOURNAL CLUB** | | | |
| **Tuesday**  **16 October**  **2012**  **SBS 8, CWB.** | Derangements in ion currents in hypertrophy and heart failure –  **C Terracciano** | Journal Club Cardiac Development – **T Brand (A & C SBS 8) / S Simrick (B & D SBS 4)** | | | | | | **TUTORIAL ASSIGNMENT** | | **SDL – PREPARE FOR JOURNAL CLUB** | | | | |
| **Wednesday 17 October**  **2012**  **SBS 6, CWB.** | Myocardial Genetics Introduction  **R Knoell** | | | Adrenergic Signalling  **Sian Harding** |  | | | |  | | | | | |
| **Thursday**  **18 October**  **2012**  **SBS 6, CWB.** | Dilated cardiomyopathy (DCM)  **R Knoell** | Journal Club Physiology –  **Priya Dias Group A & C (SBS 6)**  **Christian Bollensdorff Group B & D (SR2 WEC)** | | | | | | **MARK TUTORIAL ASSIGNMENT** | | | | | | |
| **Friday**  **19 October**  **2012**  **SBS 8, CWB.** | Hypertrophic cardiomyopathy (HCM)  **R Knoell** | | Arrhythmogenic right ventricular cardiomyopathy (ARVC)  **R Knoell** | | | | Cardiac Fibroblasts  **Patrizia Camelliti** | | Myocyte function in hypertrophy and heart failure.  **S Harding** | | | Cardiopoiesis: Genetic circuits for cardiac muscle cell creation by stem cells.  **M Schneider** | **SDL- PREPARE FOR JOURNAL CLUB** | |

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|  | **9.15-10.15** | **10.45-11.45** | | | **11.45-12.45** | | | | **13.30-14.30** | | | **14.30-15.30** | **16.00-17.00** |
| **Monday**  **22 October**  **2012**  **SBS 7, CWB.** | Gene Therapy for heart disease  **A Lyon** | **1030am** Journal Club Myocardial genetics  **R Knoell and B Buyandelger Groups A, B,C**  **and D SBS 7, CWB.** | | | | | | | **1400 TUTORIAL**  **GROUP A**  **(C Terracciano)** | | **1500 TUTORIAL GROUP B**  **(M Schachter)** | | **1600 TUTORIAL GROUP D**  **(S Harding)** |
| **1400 TUTORIAL**  **GROUP E (A Hughes – ICCH StM campus)** | | **1500 TUTORIAL GROUP C (T Tillin ICCH, StM campus)** | |
| **Tuesday**  **23 October**  **2012**  **SBS 8, CWB.** |  | | hESC and iPS cells  **Sian Harding** | | | | Alteration of extracellular matrix in the heart during remodelling  **P Dias** | | **SDL – PREPARE FOR JOURNAL CLUB** | | | | |
| **Wednesday**  **24 October**  **2012** | **COMMEMMORATION DAY** | | | | | | | | | | | | |
| **Thursday**  **25 October**  **2012**  **SBS 6, CWB.** | **BHF Symposium** | | | | | | | | | | | | |
| **Friday**  **26 October**  **2012**  **SBS 6, CWB.** | Myocardial infarction  **R Knoell** | | | Myocardial hypertrophy  **R Knoell** | | Cell therapy for heart disease  **S Harding** | | Cardiac Tissue Engineering  **S Harding** | | **SDL – PREPARE FOR JOURNAL CLUB** | | | |

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|  | **9.15-10.15** | | **10.45-11.45** | | | **11.45-12.45** | | **13.30-14.30** | | **14.30-15.30** | **16.00-17.00** | |
| **Monday**  **29 October**  **2012**  **SBS 8, CWB.** | **0915-1000**  **Q & A session**  Myocardial Genetics  **R Knoell** | **1030-1115**  **Q& A session**  Contractility **–**  **S Marston** | | | **1115-1200**  **Q & A session**  Electrophysiology –  **C Terracciano/**  **K MacLeod** | | **Journal Club** Regeneration –  **G Foldes Group A & C (Reception, ICTEM, 428) / N Hellen Group B & D (Reception, ICTEM, 427)** | | | | |  |
| **Tuesday**  **30 October**  **2012**  **SBS 6, CWB.** |  | | **Q & A session**  Regeneration  **S Harding** | | | **Q& A session**  Cardiac Development  **T Brand/J Schlueter** | | | **SDL – CONSOLIDATION OF MODULE** | | | |
| **Wednesday**  **31 October**  **2012**  **SBS 6, CWB.** | **SDL** | | |  | | | | | | | | |
| **Thursday**  **1 November**  **2012**  **SBS 8, CWB.** | **SDL – ICA** | | | | | | | | | | | |
| **Friday**  **2 November**  **2012**  **SBS 8, CWB.** | **SDL – ICA** | | | | | | | | | | | |

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|  | **9.15-10.15** | **10.45-11.45** | | **11.45-12.45** | | **13.30-14.30** | | **14.30-15.30** | | **16.00-17.00** | |
| **Monday**  **5 November**  **2012** | **SDL - ICA** | | | | | | | | | | |
| **Tuesday**  **6 November**  **2012** | **SDL - ICA** | | | | | | | | | | |
| **Wednesday**  **7 November**  **2012** | **SDL - ICA** | | | |  | | | | | | |
| **Thursday**  **8 November**  **2012** | **SDL - ICA** | | | | | | | | | |
| **Friday**  **9 November**  **2012** | **SDL - ICA** | | **12:00** Timed In course assessment 2 (contractility) followed by 20 minute feed-back session and end of module. **G16 LT, SAFB, SK campus.**  **S Marston & C Terracciano.** | | | | **SDL - ICA** | | **17.00** In course assessment 1 (Development) **Electronic submission of essay via Blackboard.** | |