|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **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**  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **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** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **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** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **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** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **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.** |