# BSc Haematology - Module 1: Haemostasis and Thrombosis

# 8 October - 9 November 2012

Course convenors: Prof M Laffan ([m.laffan@ic.ac.uk](mailto:m.laffan@ic.ac.uk)), Prof D Lane ([d.lane@imperial.ac.uk](mailto:d.lane@imperial.ac.uk)) and Dr A Shlebak ([a.shlebak@imperial.ac.uk](mailto:a.shlebak@imperial.ac.uk))

**Note: all staff IC except:** Richard Manning (HHT); Dr R Liesner, M Mathias (Great Ormond Street Hospital), A. Nathwani (UCL); Dr K Gomez (UCL)

**Week 1:**  Sessions in rooms as indicated

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|  | Mon 8 Oct  Hammersmith | Tues 9 Oct | Wed 10 Oct  Hammersmith | Thurs 11 Oct | Fri 12 Oct  Hammersmith |
| 10.00 -11.00 | Welcome and Introduction to the Module.  Essay titles and instructions for in course assessments. Distribution of research paper.  Initiation of Coagulation  **J.Crawley**  Sub basement Seminar Room 1 & 2 |  | **10.00-11.30**  Molecular modelling workshop  (1.5 hours)  **D Lane & Dr Rens De Groot**    Sub basement Seminar Room 1 & 2 |  | Von Willebrand Factor and primary haemostasis  **T McKinnon and M Laffan**  Sub basement Seminar Room 1 & 2 |
| 11.30-12.30 | Fibrinogen, Fibrin and Fibrinolysis  **D Lane**  Sub basement Seminar Room 1 & 2 |  | Understanding enzymes  **D Lane**  Sub basement Seminar Room 1 & 2 |  | Post translational modification of coagulation proteins  **T MacKinnon and M Laffan**  Sub basement Seminar Room 1 & 2 |
| **Lunch** |  |  |  |  |  |
| 13.30-  14.30 | Antithrombin and heparin  **D Lane**  Sub basement Seminar Room 1 & 2 |  | Recreation |  | Introduction to thrombophilia  **D Lane**  WEC Seminar Room 1 |
| 15.00- 16.00 | Private Study | Private Study |

**Week 2:** all sessions as indicated

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|  | Mon 15 Oct  Hammersmith | Tues 16 Oct  Hammersmith | Wed 17 Oct  Hammersmith | Thurs 18 Oct | Fri 19 Oct |
| 10.00-11.00 | Rare Bleeding disorders    **C Millar**  WEC Lecture Theatre 2 | **Critical Review of Paper.** (mock for in course assessment)  Distribution of paper for assessment    **M Laffan**  Sub basement Seminar Room 1 & 2 | Pathophysiology of Von Willebrand disease  **C Millar**  WEC Lecture Theatre 2 |  |  |
| 11.30-12.30 | Mechanisms of haemostatic failure & laboratory assessment  **M Laffan**  WEC SR4 | Factor V and Factor VIII. Coagulation complexes and the propagation phase of coagulation.  **M Laffan**  Sub basement Seminar Room 1 & 2 |  |  |  |
| **Lunch** |  |  |  |  |  |
| 13.30-14.30 | Haemophilia: a paradigmatic coagulation disorder  **M Laffan**  WEC Seminar Room 4 | Platelet function, including Anti-platelet therapy **M Laffan**  Sub basement Seminar Room 1 & 2 | Recreation |  |  |
| 15.00- 16.00 | The contact activation system.    **M Laffan**  WEC Seminar Room 4 | VWF cleaving protease  **J Crawley**  Sub basement Seminar Room 1 & 2 |  |  |

**Week 3:** all sessions as indicated. Tues 23rd Oct: St Mary’s Hospital, Cockburn Lecture Theatre, Queen Elizabeth Queen Mother building.

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|  | Mon 22 Oct  Hammersmith | Tues 23 Oct  St Mary’s QEQM | Wed 24 Oct | Thurs 25 Oct  Hammersmith | Fri 26 Oct  Hammersmith |
| 10.00-11.00 | Vascular disease:Stroke  **Dr P Sharma**  Sub basement Seminar Room 1 & 2 | Autoimmunity (HIT, acquired haemophilia)  **A Shlebak**  Cockburn Lecture Theatre |  | Acquired haemostatic defects (DIC, CPB, uraemia)  **N Salooja**  WEC Seminar Room 1 | Haemostasis and arterial thrombosis  **M Laffan**  Sub basement Seminar Room 1 & 2 |
| 11.30-12.30 | Platelet function and antiplatelet agentsM Laffan Sub basement Seminar Room 1 & 2 | Novel approaches to assessment of haemostatic capacity  **M Laffan**  Cockburn Lecture Theatre |  | Metabolic disorders associated with thrombosis.  **N Salooja**  WEC Lecture Theatre 1 | Managing thrombosis: factors contributing to the balance of risk.    **M Laffan** Sub basement Seminar Room 1 & 2 |
| **Lunch** |  |  |  |  |  |
| 14.00-15.00 | Hereditary platelet disorders **M Mathias and R Liesner**  WEC Seminar Room 5 | Haemostasis and malignancy    **A Shlebak**  Cockburn Lecture Theatre | Recreation | The multiple roles of thrombin in directing coagulation  **D Lane**  WEC Lecture Theatre 1 | The Role of the Endothelium  **Dr Wojciak-Stothard**  WEC Lecture Theatre 2 |
| 15.00- 16.00 | Pregnancy, Oestrogens and the coagulation system.  **C Millar**  WEC Seminar Room 5 |  | Developmental haemostasis in the neonate  **I Roberts** WEC Lecture Theatre 1 |  |
| 16.00 | Assessment feedback  **C Millar**  WEC Seminar Room 5 |  |  |  |

**Week 4:** Session locations as indicated. Tuesday 30th Oct: Cockburn lecture theatre St Mary’s Hospital, Queen Elizabeth Queen Mother building.

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|  | Mon 29 Oct | Tues 30 Oct  St Mary’s QEQM | Wed 31 Oct  Hammersmith | Thurs 1 Nov | Fri 2 Nov  Hammersmith |
| 09.00-10.00 |  |  | Warfarin and heparin: pharmacological mechanisms & monitoring. Wolfson SR III and IV **K Gomez**  WEC SR 3 + SR 4 |  | The abnormal Endothelium  **Dr Wojciak-Stothard**  WEC Lecture Theatre 1 |
| 10.00-11.00 |  | Thrombosis and embolism: genesis and detection  **A Shlebak**  Cockburn Lecture Theatre | New anticoagulant agents: design and practice Wolfson SR III and IVK Gomez WEC SR 3 + SR 4 |  | Protein C pathway  **J.Crawley**  Sub basement Seminar Room 1 & 2 |
| 11.30-12.30 |  | The antiphospholipid syndrome. A Shlebak Cockburn Lecture Theatre |  |  | Coagulation inflammation and sepsis  **J Crawley**  Sub basement Seminar Room 1 & 2 |
| **Lunch** |  |  |  |  |  |
| 13.30-14.30 |  |  | Recreation |  | Gene therapy for haemophilia  **Amit Nathwani**  Sub basement Seminar Room 1 & 2 |
| 15.00-16.00 |  |  |  |

**Week 5:** Tues: Assessment Sub-basement Seminar Room 1&2, Commonwealth building sub basement.

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|  | Mon 5 Nov | Tues 6 Nov  Hammersmith | Wed 7 Nov | Thurs 8 Nov | Fri 9 Nov |
| 10.00-12.00 |  | In course examination: Written questions forming a critical review of a research paper  Sub basement Seminar Room 1 & 2 |  | Optional Anticoagulation clinic. Out patient clinic B. Hammersmith hospital M Laffan | Essay submission  Via Blackboard electronic portal **by 12.00pm midday** |
| 13.00-14.00 |  |  |  |  |  |
| 14.00-17.00 | Optional lab experience. Practical laboratory haemostasis HH (~5)  **M Laffan/R Manning** |  | Recreation | Optional  AC clinic OP at SMH (~4) **A Shlebak**  **OR**  Practical laboratory haemostasis Haematology lab, G block Hammersmith Hospital (~6) **M Laffan/R Manning** |  |