

# AN INTRODUCTION TO IMMUNOLOGY: 23- 24 April 2012

This course is aimed primarily at personnel from the pharmaceutical industry, the medical community and academic scientists, although it would be suitable for anyone seeking a grounding in immunology. It stands on a highly successful base of custom built courses and will draw on the resources of a department with extensive expertise to provide a thorough grounding in this important field.

The course will be informal but intensive with limited numbers and a high level of staffing to encourage interaction, questions and discussion. A comprehensive course manual will be provided, and a short preparatory leaflet will be sent to participants in advance of the course. Prior knowledge of immunology is not essential, however a scientific background **is** recommended.

The venue will be the University of Warwick, Coventry, UK. There is easy access by road (M40, M6), rail (75 mins from London, 17 mins from Birmingham) and air (12 miles from Birmingham International Airport). Teaching will be carried out in modern conference facilities at the School of Life Sciences.

## Topics to include:

- Introduction to the cells & their organs (*The haemopoetic system; Innate and acquired immunity; Generation of an immune response; Monoclonal & polyclonal responses; Immunological cross reaction; Clonal selection theory*)
- The nature & diversity of antigen receptors (*Immunoglobulin structure; Classes of immunoglobulin and their functional roles; T cell receptors and diversity*)
- The Major Histocompatibility Complex (MHC) organisation & polymorphism (*Organisation of the genetic cluster and the polymorphism within it*)
- Function of the MHC in antigen processing & presentation (*Loading class I & II MHC with peptides*)
- Effector functions (*Fc receptors; Role of complement*)
- Cytokines and cell-mediated immunity (*Introduction to the major players; Roles in development and differentiation; Cytokine imbalance*)
- Adhesion molecules (*Roles in facilitating and stabilising interactions*)
- Transplant and tumour technology (*Tissue typing, immunosuppression, allograft & cancer immunology*)
- Immunology of infectious disease (*Interaction between pathogens & immunity, cytotoxic cells, viruses & parasites*)
- Autoimmunity (*Mechanisms by which self tolerance are brought about and proposed mechanisms of breakdown*)

A series of small-group tutorials will be conducted, using discussion, graphic displays and experimental material, to illustrate immunological and cellular assays/techniques (*Raising an antibody, western and dot blots, ELISA, immunoaffinity purification, flow cytometry, immunohistology, cell separation, T cell activation and culture, cytokine and T cell assays*).

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## Application Form: (Closing date for applications: 5 April 2012)

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NAME .....

ADDRESS .....

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TELEPHONE .....E-MAIL .....

ORGANISATION.....POSITION HELD.....

The fee of £600 (£525 for NHS or University staff/full time students) includes refreshments and lunch. A list of local hotels can be provided upon request. To register, return completed form with the full fee or a deposit of £150 (cheques payable to "University of Warwick", or an order number with invoicing details). Please note that the deposit of £150 is non-returnable after 5 April 2012 and that no refund in course fee is possible after 13 April 2012. Persons who have made reservations and are unable to attend may substitute another colleague at any time.

**Application form and enquiries to:** Dr Steve Hicks, School of Life Sciences, University of Warwick, Coventry, CV4 7AL, UK. Telephone 024 7652 3540 Facsimile 024 7652 3701 email s.j.hicks@warwick.ac.uk