



WARWICK

SCHOOL OF LIFE SCIENCES

# An Introduction to Immunology

A course for those seeking a grounding in immunology

10 - 11 July 2017

For further details and an application form please see overleaf or go to [warwick.ac.uk/lifescienceshortcourses](http://warwick.ac.uk/lifescienceshortcourses)

This course is aimed primarily at personnel from the pharmaceutical industry, the medical community and academic scientists, although it is suitable if you are seeking a grounding in immunology. It stands on a highly successful base of custom built courses and draws on the resources of a School with extensive expertise to provide a thorough grounding in this important field.

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

The course is held at the University of Warwick, with easy access by road (M40, M6), rail (75 mins from London, 17 mins from Birmingham) and air (12 miles from Birmingham International Airport). Teaching is carried out in modern facilities at the School of Life Sciences.

## Course Programme will include:

- Introduction to the cells & their organs (*The haemopoietic system; Innate & 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 & their functional roles; T cell receptors & diversity*)
- The Major Histocompatibility Complex (MHC) (*Organisation & polymorphisms*)
- Function of the MHC antigen processing & presentation (*Loading class I & II MHC with peptides*)
- Effector functions (*Fc receptors; Role of complement*)
- Cytokines & cell-mediated immunity (*Introduction to the major players; Roles in development & differentiation; Cytokine imbalance*)
- Adhesion molecules (*Roles in facilitating & stabilising interactions*)
- Transplant & tumour technology (*Tissue typing, immunosuppression, allograft & cancer immunology*)
- Autoimmunity (*Mechanisms by which self tolerance are brought about & proposed mechanisms of breakdown*)
- Immunology of infectious disease (*Interaction between pathogens & immunity; Cytotoxic cells, viruses & parasites*).

Plus, short sessions using discussion, graphic displays and experimental material to illustrate immunological & cellular techniques including raising antibodies, western & dot blots, ELISA, immunoaffinity purification, flow cytometry, immunohistology, cell separation, T cell activation & culture and cytokine & T cell assays.

**The University of Warwick ranks in the top ten of the country's one hundred universities. More than 80% of research in the School was rated as 'World Leading or Internationally Excellent' in REF2014.**

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## Application Form (Closing date for applications: 23 June 2017)

### An Introduction to Immunology 10 - 11 July 2017

Name: .....

Address: .....

Telephone: .....E-mail: .....

Organisation: .....Position: .....

The fee of £650 (£550 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 the completed form with the full fee or a deposit of £150 (cheques made payable to 'University of Warwick' or an order number with invoicing details. Bank transfer details can be provided on request). Please note that the deposit is non-returnable after 23 June 2017 and that no refund in course fee is possible after 3 July 2017. Persons who have made reservations and are unable to attend may substitute another colleague at any time.

Application form and enquiries to: Khyati Morjaria, School of Life Sciences, The University of Warwick, Coventry CV4 7AL

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