Virology – Fundamental Laboratory techniques & Practices

Public Health England (PHE) has been a leader in the field of Virology for over 40 years. This 4-day course is run by the Novel and Dangerous Pathogens (NADP) Training Group from PHE-Porton Down and will be carried out at the state of the art CATIM laboratory facility at the University of the West of England.

The course is aimed at Containment Level 2 laboratory users with a basic background in microbiology and scientists familiar with virology but requiring wet-lab virology training. The course would be particularly beneficial for, but not limited to, individuals embarking on a Ph.D in a Virology-based field or a Biomedical Scientist degree.

It has been designed to provide a strong foundation of the principles and practices of working with viruses at Containment Level 2. As the roots of modern day Virology lie in cell culture, the course covers training in aseptic technique and good laboratory practices as well as training in molecular virology diagnostic techniques. The content material has been carefully designed and is delivered by PHE-Porton staff who are experts in their respective fields of virology and training. Delegates will work in a Containment level 2 laboratory with live cells and animal viruses that are non-pathogenic to humans during the training.

An assessment is included as part of the course and can be used to provide evidence of continued Professional Development. The course has been accredited 24 CPD credits by the Institute of Biomedical Science (IBMS).

The course additionally provides an excellent opportunity to become part of a far-reaching network of virologists.
The course is **limited to 8 delegate places** and the content includes:

**Lecture-based theory**
- An Introduction to Virology
- Cell culture in Virology
- Hazard groups & working in containment
- Classification of viruses
- Quantification & Visualisation of viruses
- Serology: Host immune responses (ELISA)
- Virology in the clinical setting
- Influenza A virus – past, present, future
- Molecular diagnostics in virology
- Emerging Zoonotic Viruses

**Lab-based practical training**
- Aseptic Technique
- Seeding cell culture plates with specific cell densities
- Setting up / Shutting down an MSC II cabinet for virus work
- Infection of cells *in vitro*
- Plaque assay / TCID50
- Real-time video visualisation of Cytopathic effect
- Haemagglutination Inhibition Assay
- Virus isolation and harvest from infected cells
- Correct freezing and thawing of virus
- Virus nucleic acid extraction
- Real-time RT-PCR

**Date:** Tuesday 5th – Friday 8th November 2013

**Location:** Centre for Alternative Testing and In-Vitro Monitoring (CATIM), University of the West of England, Frenchay Campus, Bristol, BS16 1QY.

**Cost:** TBC

**To book and for more information send and email to:** nadp.training@phe.gov.uk and bret.dash@uwe.ac.uk