



**3rd EWGLI Training Course:  
“Legionnaires’ disease: investigating outbreaks and  
incidents – risk assessment, sampling and control”  
Colindale, London  
30<sup>th</sup> October to 2<sup>nd</sup> November 2006**

### **Target Audience**

This course is part funded by the EC and is open to EWGLI members and other scientific / technical / epidemiological staff who may be involved in the environmental investigation of outbreaks of Legionnaires’ disease. Prior experience is not essential but a basic knowledge of microbiology, of the *Legionella* the organism, diseases caused, and diagnostic methods will be assumed. Participants will also be expected to have read the European Guidelines for Control and Prevention of Travel Associated Legionnaires’ Disease ([http://www.ewgli.org/data/european\\_guidelines.htm](http://www.ewgli.org/data/european_guidelines.htm)) and will also find it useful to have read the SCA document on sampling for legionellae *The determination of Legionella bacteria in waters and other environmental samples (2005) - Part 1 - Rationale of surveying and sampling.* ([http://www.environment-agency.gov.uk/commondata/acrobat/book\\_200\\_1028650.pdf](http://www.environment-agency.gov.uk/commondata/acrobat/book_200_1028650.pdf))

### **Objectives**

A practically based course to enable participants: to recognise potential sources of legionnaires’ disease; to be familiar with the factors that modulate the risk from potential sources; to appreciate the methods commonly applied to control the risk; to have an understanding of the use, methods and problems of sampling for *Legionella* species, the interpretation of typing and to understand how to perform an assessment of the risk from legionnaires’ disease in a building or other facility.

### **Venue**

Health Protection Agency – Centre for Infections, 61 Colindale Avenue, London NW9 5EQ, United Kingdom.

### **Date and time**

The course will start at 09:00 on Monday 30<sup>th</sup> October and finish at 12:00 on Thursday 2<sup>nd</sup> November 2006.

(Please note that you should allow about 2 hours to travel to Heathrow Airport from Colindale. Thus to ensure participants can attend the whole course we advise you that you should not arrange your return flights before 16:00 on the Thursday.)

### **Organiser**

Dr John V. Lee  
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## **Tutors**

### **Dr John V Lee and Dr Sandra Lai**

Water and Environmental Microbiology Reference Unit, HPA Centre for Infections

### **Dr Susanne Surman-Lee**

HPA London Food Water and Environmental Laboratory

### **Dr Carol Joseph**

Respiratory Diseases Department HPA Centre for Infections

### **Dr Tim Harrison and Dr Norman Fry**

Respiratory and Systemic Infections Laboratory, HPA Centre for Infections

### **Dr Sebastian Crespi**

Biocontrol S A, Polyclinica Miramar, Palma de Mallorca, Spain

### **Dr Vladimir Drasar**

National Legionella Reference Laboratory, Vyskov, Czech Republic

## **Format**

The course will take three and a half days and include lectures, workshops involving desk-top risk assessments and outbreak investigations and field trips to look at aspects of risk assessment and sampling.

## **Course content**

### **Epidemiology**

Brief epidemiological history, types of disease the current situation in Europe and the rest of the world, international developments in surveillance, principles of investigation of clusters or cases and single cases, modes of transmission.

### **Diagnostics and the organism**

Species causing disease, methods of diagnosis, potential problems, growth requirements, cultural characteristics, colony recognition and typing methods.

### **Biology and ecology of *Legionella* species – the scientific basis to control**

Where the organisms occur in nature, growth requirements, the importance of other organisms, significance of other organisms and biofilms to survival, temperature and growth, aerosol formation, methods of detection, media QC, reproducibility of sampling results.

### **Principles of control of legionellae in man made water systems**

Factors affecting survival and growth in different types of man-made water systems, importance of scale, corrosion, stagnation, and dirt in the promotion of growth; modes of transmission, aerosols, the fundamental principles of control common to all water systems.

### **Hot and cold water systems and spa pools**

Descriptions of hot and cold water systems, spa pools and other systems that potentially can be sources including humidifiers and closed loop systems, the features that may encourage growth within them and

the methods of control including temperature control and chlorination and “alternatives” such as copper/silver ionisation, chlorine dioxide and UV.

### **Cooling towers and other cooling systems**

Features of wet cooling systems, types of cooling tower, evaporative condensers, features encouraging growth and the methods of controlling them.

### **Basics of water treatment**

The chemical bases of corrosion and scale formation, the methods of controlling them, concentration factor and a means of controlling it, basic dynamics of disinfection, oxidising and non oxidising biocides and their application, control equipment, what you should be looking for on-site and in the water treatment company report.

### **Other risk systems**

Interactive discussion of other recognised and potential risk systems including: solar heating,; food and other humidification systems; air scrubbers, effluent treatment plants, vehicle washes; horticultural systems; machine tools; closed systems during maintenance etc.

### **Fundamentals of risk assessment**

Basic logic of risk assessment, key features, equipment needed, identifying the hazards, determining the risks, establishing a method of control, monitoring, record keeping, audit, the management structure and training.

### **The legislative background**

The framework behind the European Guidelines, the responsibilities of environmental health officers or their equivalents, and possible future developments.

### **Sampling and outbreak investigations**

The principles of outbreak investigation, identifying potential sources, the importance of sampling, key samples, key interactions, personal protection, emergency disinfection, continuity of evidence.

### **Workshops**

Exercise 1: Using illustrations from real investigations and risk assessments participants will discuss the risk assessment of systems or their components.

Exercise 2: Participants will be divided into groups to carry out interactive desk top exercises including risk assessments and outbreak investigations of scenarios based on real life.

### **Field trips**

Participants will be taken on visits to premises to review the control of some real risk systems in buildings in London. These visits have been organised with the kind collaboration of Environmental Health Officers from some local authorities in London.

### **Participants**

There will be space for a maximum of 16 individuals to participate, therefore registration requests should be sent as soon as possible.

## Costs

Participants will be provided four nights bed and breakfast (Sunday 29<sup>th</sup> October to Thursday 2<sup>nd</sup> November) at the Hampstead Britannia Hotel that is pleasantly situated a short journey away from Colindale on the underground (Northern Line) and is convenient if you wish to travel into central London. Coffee, tea and lunch will be provided during each day and there will be a course dinner (smart casual dress) for all participants on the Tuesday night. Other expenses including travel (second / economy class air or rail fares) and evening meals will be reimbursed up to a maximum of **£138** or **€200** per person. Expenses cannot be paid in other currencies. If the participant is accompanied by a partner they will have to pay the double room supplements. Similarly, additional nights at the hotel will have to be paid by the participant.

## Booking

To book your place on the course fill in the registration form and email or fax it to:

Mrs Vivienne Fitch (Training Co-ordinator)  
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