Target Audience
35 – 50 researchers, experts, fellows working in Legionella infection surveillance and prevention, epidemiologists, clinicians, environmental and clinical microbiologists, hygienie and public health supervisors, practitioners in risk assessment and infection control, technicians of prevention and disinfection treatment application.

Faculty Members
Paola Borella, Modena, Italy
Beatrice Casini, Pisa, Italy
Maria Anna Coniglio, Catania, Italy
Birgitta de Jong, Stockholm, Sweden
Jerome Den Boer, Haarlem, The Netherlands
Valeria Gaia, Bellinzona, Switzerland
Carolina Garcia-Vidal, Barcelona, Spain
Jaana Kusnetsov, Kuopio, Finland
John Lee, London, United Kingdom
Susanne Lee, London, United Kingdom
Carmen Pelaz, Madrid, Spain
Gaetano Privitera, Pisa, Italy
Vincenzo Romano-Spica, Rome, Italy
Søren Anker Uldum, Copenhagen, Denmark

Administrative Contact Person
Fiorella Ruggiu
Director of Ettore Majorana Foundation and Centre for Scientific Culture
Via Guarnotta, 26
91016 Erice (Sicily), Italy
Phone +39 092 386 91 33
Fax +39 092 386 92 26
fiorella.ruggiu@ccsem.infn.it

Scientific picture outside: Legionella spp are gram-negative, non-encapsulated, aerobic bacteria living in aquatic environments. They require specific culture media for detection and isolation. Water aerosols are the main source of exposure and Legionella pneumonia prevention is based on environmental contamination control.
Course Objectives
The widespread environmental contamination and growth of legionellae in water systems and associated equipment, in both public and private buildings, represents a health risk for those exposed. Buildings which pose a significant risk, if adequate controls are not in place, include particularly tourist accommodation, spa and health facilities. The problem can and needs to be faced by appropriate identification of risk and effective preventive and control strategies, as detailed in the recent revision of the European guidelines.

The main objective of the course is to increase the theoretical and practical knowledge and update on how to minimise the contamination and colonisation of water systems by Legionella. Risk assessment of systems and surveillance, including investigations into potential sources of environmental contamination, before and after the appearance of single cases/clusters will be detailed. Clinical characteristic and diagnostic tests for detection of Legionella pneumonia will be examined. Preventive measures and strategies taking into consideration both the susceptibility of persons and environmental factors will be presented, together with new and traditional disinfection evidence based systems. Practical examples and exercises will be studied by small groups of participants.

Younger participants aiming to reach a skilled expertise for future employment in the sector are warmly invited to participate. The course aims also to expand cross working relationships and increase communication to improve the collaboration between the different professionals working in Legionella management, including clinicians, persons responsible for buildings, public health operators, researchers and persons involved in installation and maintenance of water and air distribution systems.

Wednesday, 2 April 2014
14:00 Arrival and registration
17:00 Opening ceremony. Gaetano Mana Faras, Giuseppe Giannone (Directors School of Epidemiology, Biostatistics and Preventive Medicine, Erice, Italy) and Jeroen Den Boer (Chair of ESGLI)
17:20 Course presentation. Paola Borella (University of Modena and Reggio Emilia, Italy)

Keynote lectures
17:30 The etiological agent: Legionella pneumophila and other Legionella spp.
Valeria Gaia
18:30 Legionella spp, from environmental source to man: environmental habitats and microbiological ecology. Joana Kusnetsov

Thursday, 3 April 2014
Risk factors and disease characteristics
09:00 Epidemiology of Legionnaires' Disease in Europe. Birgitta de Jong (ECDC, Sweden)
09:20 Risk factors for environmental transmission from cooling towers and water systems. John Lee
09:40 Risk factors for legionellosis acquisition. Jeroen Den Boer
10:10 Diagnosis, clinical aspects and treatment. Carolina Gonco-Vidal
10:30 Coffee break

The laboratory in Legionella investigation
11:00 Environmental sampling in both routine and outbreak situations. Paola Borella
11:20 Isolation of Legionella spp from environmental and biological samples. Carmen Pelaz
11:40 Comparison of tests for diagnosis of infections. Saren Andersen
12:20 Molecular investigations in clinical diagnosis and epidemiology of Legionella spp. Vincenzo Romano-Spica
13:00 Lunch

Exercises (small groups) and discussion on the work done
15:00 Risk factors for environmental contamination by Legionella and the identification of persons "at risk". All teachers involved
16:30 Coffee break
17:00 Sampling, isolation techniques, identification and diagnostic tests. All teachers involved

Friday, 4 April 2014
Management and control in community and health environments
09:00 Risk assessment and water safety plans in buildings. Susanne Lee
09:45 Touristic accommodation. European Legionnaires’ Disease Surveillance Network. Birgitta de Jong (ECDC, Sweden)
10:30 Legionella risks from spa pools, hot tubs, leisure and health centres. Susanne Lee
11:00 Coffee break
11:30 Management and control in healthcare facilities. Gaetano Privitera and Beatrice Casini
12:00 Control and disinfection systems: innovative and conventional procedures. Carolina Gonco and Maria Anna Coniglio
13:00 Lunch

Exercises (small groups) and discussion on the work done
15:00 Problem solving on nosocomial and community-acquired cases of legionellosis. All teachers involved
16:30 Coffee break
17:00 Round Table: open issues on community-acquired cases of legionellosis. All teachers involved
19:00 Closing ceremony

Saturday, 5 April 2014
Visit to an archaeological site (on voluntary basis)

Course Programme

Keynote lectures
17:30 The etiological agent: Legionella pneumophila and other Legionella spp.
Valeria Gaia
18:30 Legionella spp, from environmental source to man: environmental habitats and microbiological ecology. Joana Kusnetsov

Risk factors and disease characteristics
09:00 Epidemiology of Legionnaires’ Disease in Europe. Birgitta de Jong (ECDC, Sweden)
09:20 Risk factors for environmental transmission from cooling towers and water systems. John Lee
09:40 Risk factors for legionellosis acquisition. Jeroen Den Boer
10:10 Diagnosis, clinical aspects and treatment. Carolina Gonco-Vidal
10:30 Coffee break

The laboratory in Legionella investigation
11:00 Environmental sampling in both routine and outbreak situations. Paola Borella
11:20 Isolation of Legionella spp from environmental and biological samples. Carmen Pelaz
11:40 Comparison of tests for diagnosis of infections. Saren Andersen
12:20 Molecular investigations in clinical diagnosis and epidemiology of Legionella spp. Vincenzo Romano-Spica
13:00 Lunch

Exercises (small groups) and discussion on the work done
15:00 Risk factors for environmental contamination by Legionella and the identification of persons “at risk”. All teachers involved
16:30 Coffee break
17:00 Sampling, isolation techniques, identification and diagnostic tests. All teachers involved

Friday, 4 April 2014
Management and control in community and health environments
09:00 Risk assessment and water safety plans in buildings. Susanne Lee
09:45 Touristic accommodation. European Legionnaires’ Disease Surveillance Network. Birgitta de Jong (ECDC, Sweden)
10:30 Legionella risks from spa pools, hot tubs, leisure and health centres. Susanne Lee
11:00 Coffee break
11:30 Management and control in healthcare facilities. Gaetano Privitera and Beatrice Casini
12:00 Control and disinfection systems: innovative and conventional procedures. Carolina Gonco and Maria Anna Coniglio
13:00 Lunch

Exercises (small groups) and discussion on the work done
15:00 Problem solving on nosocomial and community-acquired cases of legionellosis. All teachers involved
16:30 Coffee break
17:00 Round Table: open issues on community-acquired cases of legionellosis. All teachers involved
19:00 Closing ceremony

Saturday, 5 April 2014
Visit to an archaeological site (on voluntary basis)