

The 9th International Conference on
L e g i o n e l l a

Rome, 26th - 30th September 2017



Auditorium Antonianum
Viale Manzoni, 1 - 00185
ROME

With the Patronages of



SAPIENZA
UNIVERSITÀ DI ROMA



SIMGBM
Società Italiana di
Microbiologia Generale
e Biotecnologie Microbiche



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA



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WELCOME LETTER



Dear Participants,

It is our pleasure to welcome you to the 9th International Conference on *Legionella* in Rome, Italy, from the 26th to 30th of September 2017.

This year we will celebrate forty years since *Legionella pneumophila* was identified, after the first outbreak of Legionnaires' disease in Philadelphia in 1976.

Since then, we have learnt a lot about these bacteria, we have improved our capability to conduct appropriate epidemiological investigations, and thanks to geographical information analysis and typing methods, we are now able to better identify the source of infection.

We also have recognised the importance of appropriate risk assessment on water systems in order to rapidly apply the best control measures and adopt different disinfection procedures, being aware that there is not a single recipe. In fact, every situation must be thoroughly studied and every intervention must be tailored.

Knowledge on ecological niches of *Legionella* has been expanded. Moreover, the recent DNA sequencing technologies to monitor microbial population in water systems appear to be quite promising for a better understanding of behaviours devised by this intriguing bacterium to survive in the environment.

Regarding diagnostic methods, the introduction of urinary antigen detection has given a boost in detecting cases, but the development and validation of other fast and accurate molecular methods are needed.

The number of identified species is increasing day by day, and in addition to traditional procedures, integrated multi "omics" technologies help to clarify the molecular basis of pathogenesis and evolution of most of these species. However, a better understanding of the interaction between the bacterium and the host, with special reference to the population at risk, would be desirable.

We consider this International Conference a great opportunity to define state of the art about all the aspects concerning *Legionella*, and we do hope that new ideas for future researches and collaborative studies in this field will arise.

We warmly welcome you to Rome, the "Eternal" city. Here, the ancient Romans laid the foundations of their empire, leaving spectacular signs in culture, architecture, city planning, politics and laws, which survived to present day, leaving people coming from all over the world astonished.

The Local Organising Committee is willing to offer you the best hospitality in terms of location, accommodation and, last but not least, good food and the opportunity to choose among a number of guided trips in Rome and surroundings for you and your accompanying persons.

On behalf of the Conference organisers we sincerely welcome you to the 9th International Conference on *Legionella* 2017.

Paola Borella and Maria Luisa Ricci
Chairs, *Legionella* 2017

SCIENTIFIC COMMITTEE

INVITED SPEAKERS

Ashbolt Nicholas

University of Alberta, Alberta, Canada

Brandsema Petra

*Centre for Infectious Disease Control, National
Institute for Public Health and the Environment, RIVM,
Bilthoven, The Netherlands*

de Jong Birgitta

*European Centre for Disease Prevention and Control,
Stockholm, Sweden*

Exner Martin

*Institute for Hygiene and Public Health,
University of Bonn, Bonn, Germany*

Gaia Valeria

*Swiss National Reference Centre for Legionella,
Bellinzona, Switzerland*

Hartland Elizabeth

University of Melbourne, Melbourne, Australia

Jarraud Sophie

National Reference Centre of Legionella, Lyon, France

Kura Fumiaki

National Institute of Infectious Diseases, Tokyo, Japan

Lin Yusen Eason

National Kaohsiung Normal University, Kaohsiung City, Taiwan

Moran-Gilad Jacob

*National Microbiology Focal Point &
Head of Microbiology Cooperation, Jerusalem, Israel*

Pelaz Antolin Carmen

*Institute of Health Carlos III, Majadahonda,
Madrid, Spain*

Roy Craig

*Yale University of Medicine, New Haven,
United States of America*

Stout E. Janet

*Special Pathogens Laboratory, Pittsburgh,
United States of America*

Uldum Søren Anker

Statens Serum Institut, Copenhagen, Denmark

Zamboni Dario Simões

University of São Paulo, São Paulo, Brazil

Berjeaud Jean-Marc

University of Poitiers, Poitiers, France

Buchrieser Carmen

Institut Pasteur, Paris, France

Cooley Laura

*CDC's National Center for Immunization and Respiratory
Diseases, Atlanta, United States of America*

Edelstein Paul Herbert

*University of Pennsylvania, Philadelphia,
United States of America*

Hadjichristodoulou Christos

University of Thessaly, Larissa, Greece

Hilbi Hubert

*Institute of Medical Microbiology, University of Zurich,
Zurich, Switzerland*

Lee Susanne

Director Leegionella Ltd, United Kingdom

Palusinska-Szys Marta

Maria Curie-Skłodowska University, Lublin, Poland

Pruden Amy

Virginia Tech, Blacksburg, United States of America

ORGANIZING COMMITTEE

Boccia Stefania

*Cattolica del Sacro Cuore University, Fondazione
Policlinico 'Agostino Gemelli', Rome, Italy*

De Giusti Maria

Sapienza University, Rome, Italy

Mansi Antonella

Occupational and Environmental Medicine, INAIL, Rome, Italy

Marchesi Isabella

University of Modena and Reggio Emilia, Modena, Italy

Paduano Stefania

University of Modena and Reggio Emilia, Modena, Italy

Rota Maria Cristina

Italian National Institute of Health, Rome, Italy

Scaturro Maria

Italian National Institute of Health, Rome, Italy

Visca Paolo

Roma III University, Rome, Italy

SOCIAL EVENTS

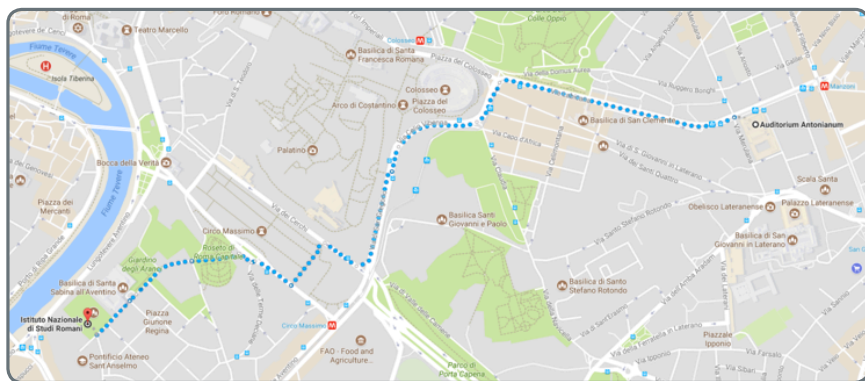
WELCOME COCKTAIL AT THE “ISTITUTO NAZIONALE DI STUDI ROMANI”

The Welcome Cocktail will be held on 26th of September, from 7.30 p.m. to 9.00 p.m., at The Istituto degli Studi Romani. The institute has its location in the former convent of Saints Bonifacio and Alessio, at the top of the hill Aventino, one of the most impressive hills of Rome. The walk (about 2.7 km), that divides the Auditorium Antonianum from the Cocktail venue, shows a view of the best monuments of the Eternal City. It begins from the Colosseum, it runs along the Palatine Hill to finally reach the Circus Maximus. Therefore, the journey from the Conference venue to the Istituto degli Studi Romani offers a precious and unique opportunity to immerse yourself in Roman history.

Transfer from Congress venue to “Istituto Studi Romani” with private bus.

The Istituto degli Studi Romani is in Piazza dei Cavalieri di Malta, 2, 00153 Rome.

<http://www.studiromani.it/html/sede.htm>



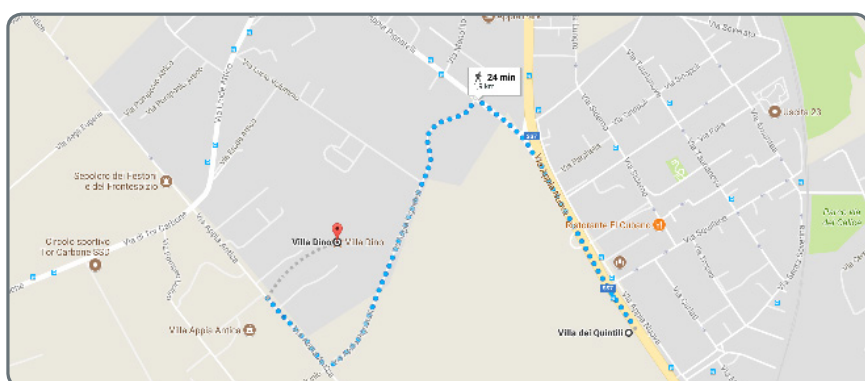
GUIDED TOUR AT “VILLA DEI QUINTILI” AND GALA DINNER AT “VILLA DINO”

On September 28th at 5.45 p.m. it will be held a guided tour of Villa dei Quintili and afterwards the Gala Dinner at Villa Dino. Villa Dino, set within one of the most important archaeological parks in the world, including Villa dei Quintili and the Seneca Mausoleum, is among the largest and most prestigious villa of Rome. Embellished with a huge park, enriched with palm, olive and lemon trees and ancient monuments, Villa Dino offers a reality out of the ordinary.

Transfer from Congress venue to “Villa dei Quintili” and “Villa Dino” with private bus.

Villa dei Quintili is in Via Appia Nuova 1092, 00178 Roma.

Villa Dino is in Via Appia Antica 249/B, 00178 Roma.



SCIENTIFIC PROGRAMME

TUESDAY, SEPTEMBER 26TH, 2017

- 13:00-18:45 Registration and exhibition
- 16:15-17:00 Welcome address and conference opening
Paola Borella University of Modena and Reggio Emilia, Modena, Italy
Maria Luisa Ricci Italian National Institute Health, Rome, Italy
Chairs, *Legionella* 2017 Organizing Committee
- 17:00-18:30 **SESSION 1 - GLOBAL TREND OF LEGIONNAIRES' DISEASE**
Chairs: **Valeria Gaia**, **Giovanni Rezza**
- 17:00-17:45 Legionnaires' Disease, a Brief History
Paul H. Edelstein
University of Pennsylvania, Philadelphia, United States of America
Lectio Magistralis
- 17:45-18:15 Legionnaires' Disease from a European Perspective
Birgitta de Jong (*Invited speaker*)
European Centre for Disease Prevention and Control, Stockholm, Sweden
- 18:15-18:45 A Watershed Moment: The Increasing Challenge of Legionnaires' Disease in the United States
Laura A. Cooley (*Invited speaker*)
Center for Disease Control, Atlanta, United States of America
- 19:30-21:00 Welcome Cocktail at the "*Istituto Nazionale di Studi Romani*"
<http://www.studiromani.it/html/sede.htm>

WEDNESDAY, SEPTEMBER 27TH, 2017

- 08:30-18:00 Registration and exhibition
- 08:30-10:30 **SESSION 2 - PATHOGENESIS, IMMUNOLOGY AND HOST CELL INTERACTIONS**
Chairs: **Carmen Buchrieser**, **Dario S. Zamboni**
- 08:30-09:00 Modulation of Membrane Dynamics and Cell Migration by *Legionella*
Hubert Hilbi (*Invited speaker*)
University of Zurich, Zurich, Switzerland
- 09:00-09:30 A New Approach to Identify *Legionella pneumophila* Effector Mutants with Distinct Virulence Phenotypes
Craig Roy (*Invited speaker*)
Yale University of Medicine, New Haven, United States of America
- 09:30-09:45 The Dot/Icm Type IV Secretion System Effector LtpM Defines a New Family of Modular Glycosyltransferases
Gunnar Neels Schroeder
Queen's University Belfast, Belfast, Northern Ireland
- 09:45-10:00 New Insights Into the *Legionella* Type 1 Secretion System
Hussein Kanaan
University of Lyon, Lyon, France
- 10:00-10:15 *Legionella pneumophila* Modulates Mitochondrial Dynamics To Trigger Metabolic Repurposing of Infected Macrophages
Pedro Escoll
Institute Pasteur, Paris, France

SCIENTIFIC PROGRAMME

- 10:15-10:30 Manipulation of Host Metabolism by *Legionella pneumophila* Effectors that Activate and Inhibit mTORC1
Justin A. De Leon
University of California, Berkeley, United States of America
- 10:30-11:00 Coffee Break
- 11:00-13:00 **SESSION 2 - PATHOGENESIS, IMMUNOLOGY AND HOST CELL INTERACTION (CONTINUED)**
Chairs: **Craig Roy, Carmen Buchrieser**
- 11:00-11:30 Recognition of *Legionella* by Intracellular Receptors in Macrophages
Dario S. Zamboni (Invited speaker)
University of São Paulo, São Paulo, Brazil
- 11:30-12:00 The Role of Lipids in *Legionella*-Host Interaction
Marta Palusinska-Szys (Invited speaker)
Maria Curie-Skłodowska University, Lublin, Poland
- 12:00-12:15 ER Remodeling by the Large GTPase Atlatin (Sey1/Atl3) Promotes Vacuolar Growth of *Legionella pneumophila*
Bernhard Steiner
University of Zurich, Zurich, Switzerland
- 12:15-12:30 SnpL, a Nucleomodulin Effector Protein of *Legionella pneumophila* Targets Host Transcription Elongation Machinery
Shivani Pasricha
University of Melbourne, Melbourne, Australia
- 12:30-12:45 Structural Insights Into *Legionella* RidL-Vps29 Retromer Subunit Interaction Reveal Displacement of the Regulator TBC1D5
Kevin Bärlocher
University of Zurich, Zurich, Switzerland
- 12:45-13:00 When Life Gives You Lemons in the Form of Oxidants...:
A Peek Into the Molecular Underpinnings of How *Legionella* Copes with Oxidative Stress in Water
Nissanka Mendis
McGill University, Montreal, Canada
- 13:00-14:00 Lunch
- 14:00-15:30 **POSTER SESSION 1 - ROOMS EXHIBITION AREA**
• PATHOGENESIS AND IMMUNOLOGY • GENETICS AND GENOMICS
- 15:30-16:45 **SESSION 3 - GENETICS AND GENOMICS**
Chairs: **Hubert Hilbi, Sophie Jarraud**
- 15:30-16:00 Molecular Mimicry of Eukaryotic Proteins, a Main Virulence Strategy of *Legionella*
Carmen Buchrieser (Invited speaker)
Institute Pasteur, Paris, France
- 16:00-16:15 Retroelement-Guided Protein Diversification in *Legionella pneumophila*
Diego Arambula
University of California, Los Angeles, United States of America
- 16:15-16:30 Genetics of Widely Distributed Natural Transformability in *Legionella pneumophila* Clinical Isolates
Xavier Charpentier
International Centre of Research and Infectology, University of Lyon, Lyon, France

SCIENTIFIC PROGRAMME

- 16:30-16:45 Evolution of Host-Adaptation in the Bacterial Order *Legionellales*
Lionel Guy
Uppsala University, Uppsala, Sweden
- 16:45-17:15 Coffee Break
- 17:15-18:00 **SESSION 3 - GENETICS AND GENOMICS (CONTINUED)**
Chairs: **Jacob Moran-Gilad**, **Christopher Ginevra**
- 17:15-17:30 Genomic Evolutionary History of Legionnaires' Disease in Scotland
Bryan Wee
University of Edinburgh, Edinburgh, United Kindom
- 17:30-17:45 The *Legionella* Genus Genome: a Global View of the Genus Evolution
Laura Gomez-Valero
Institute Pasteur, Paris, France
- 17:45-18:00 Whole Genome Sequence Analysis of the *Legionella pneumophila* Population Within the Water System of a Large Occupational Building
Vicky Chalker
Public Health England, London, United Kingdom

THURSDAY, SEPTEMBER 28TH, 2017

- 08:30-16:45 Registration and exhibition
- 08:30-09:30 **SESSION 4 - CLINICAL ASPECTS, TREATMENT, ROUTE OF EXPOSURE AND HOST RELATIONSHIP**
Chairs: **Laura A. Cooley**, **Maria Cristina Rota**
- 08:30-09:00 Clinical Characteristics of *Legionella* Infection
Paul H. Edelstein (Invited speaker)
University of Pennsylvania, Philadelphia, United States of America
- 09:00-09:15 Route of Exposure to Aerosol and Legionnaires' Disease or Pontiac Fever
Richard Bentham
Flinders University, Adelaide, Australia
- 09:15-09:30 *Legionella* Aerosols from Shower to an Ex Vivo Human-Porcine Respiratory Model
Severine Allegra
University of Lyon, Lyon, France
- 09:30-10:00 Coffee Break
- 10:00-12:00 **SESSION 5 - DIAGNOSIS AND TYPING**
Chairs: **Søren Anker Uldum**, **Christian Lück**
- 10:00-10:30 Diagnosis and *Legionella* Typing of Atypical Forms of Legionellosis
Sophie Jarraud (Invited speaker)
National Reference Center of *Legionella*, University of Lyon, Lyon, France
- 10:30-11:00 The Future of *Legionella* Typing in the Genomics Era
Jacob Moran-Gilad (Invited speaker)
National Microbiology Focal Point & Head of Microbiology Cooperation, Jerusalem, Israel

SCIENTIFIC PROGRAMME

- 11:00-11:15 LegioTyper: a Fully Automated and Rapid Detection Method for Serotyping of *Legionella pneumophila*
Anne Gründel
Dresden University of Technology, Dresden, Germany
- 11:15-11:30 The Average Nucleotide Identity Index is a Taxonomic Tool That Can Also Be Useful for Determining the Epidemiological Relationship Between *Legionella pneumophila* Genomes
Maria José Figueras
University Rovira i Virgili, Reus, Spain
- 11:30-11:45 Utility of Rapid Techniques in the Legionnaires' Disease Outbreak in Manzanares, Spain, December 2015-February 2016
Juan Carlos Montero
Regional Public Health Laboratory - Health Sciences Institute Talavera de la Reina, Spain
- 11:45-12:00 Could Legionnaires' Disease diagnosis Criteria Be Improved? Evidence from Two Independent Real Time PCR Assays
Maria Scaturro
Italian National Institute of Health Rome, Italy
- 12:00-13:00 **SESSION PROUDLY SPONSORED BY INDEXX**
Comparing Modern and Traditional Culture-Based Methods for Detection of *Legionella* and the Significance of Quantification of *Legionella Pneumophila* Vs. All *Legionella* Species
- 12:00-12:05 Welcome to participants and Introduction to Legiolert
Dan Broder
Staff Scientist at IDEXX, Portland, Maine, United States of America
- 12:05-12:15 Performance of Legiolert vs. ISO 11731-2:2004 in German Potable Waters
Martin Exner
University of Bonn, Bonn, Germany
- 12:15-12:25 Performance of Legiolert vs. ISO 11731:1998 in Italian Waters
Maria Luisa Ricci
Italian National Institute Health, Rome, Italy
- 12:25-13:00 **ROUND TABLE DISCUSSION:**
The Merits and Concerns Associated with Exclusive Detection of *L. Pneumophila* in Conjunction with a Water Safety Plan
Participants: **Martin Exner, Maria Luisa Ricci, Amy Pruden, Nicholas Ashbolt**
- 13:00-14:00 Lunch
- 13:30-15:00 **POSTER SESSION 2 - ROOMS EXHIBITION AREA**
• EPIDEMIOLOGY AND SURVEILLANCE • OUTBREAKS INVESTIGATION AND CASE REPORT
• CLINICAL ASPECTS AND TREATMENTS • DIAGNOSIS AND TYPING
- 15:00-16:45 **SESSION 6 - SURVEILLANCE AND OUTBREAKS INVESTIGATIONS**
Chairs: **Pedra Brandsema, Carmen Pelaz Antolin**
- 15:00-15:15 Legionnaires' Disease from the Other Side of the World: the New Zealand Perspective
David R. Murdoch
University of Otago, Christchurch, New Zealand
- 15:15-15:30 A National Cross-Sectional Study to Uncover the Hidden Burden of Legionnaires' Disease: The LegiNZ Study
David R. Murdoch
University of Otago, Christchurch, New Zealand

SCIENTIFIC PROGRAMME

- 15:30-15:45 Community-Acquired Cases of Legionnaires' Disease: the Proportion Technically Preventable by Applying the German Drinking Water Ordinance?
Udo Buchholz
Robert Koch Institute, Berlin, Germany
- 15:45-16:00 *Legionella pneumophila* in the Flint Water Supply: A Molecular Epidemiology and Virulence Assessment
Michele Swanson
University of Michigan, Ann Arbor, United States of America
- 16:00-16:15 Spatial Distribution of Legionellosis at the Small Area Level in the City of Barcelona: 2000-2016
Pau Gallés
Public Health Agency of Barcelona, Barcelona, Spain
- 16:15-16:30 Factors Associated With the Occurrence of Further Cases in Accommodations Associated With a Cluster of Travel-Associated Legionnaires' Disease Cases After Implementation of Control Measures
Julien Beauté
European Centre for Disease Prevention and Control, Stockholm, Sweden
- 16:30-16:45 Epidemiology and Microbiology of Recurrent Accommodation Sites Implications for Surveillance and Prevention
Sebastian Crespi
Biolinea Int., Palma de Mallorca, Spain
- 16:45-23:30 Tour of "Villa dei Quintili" and Gala Dinner at "Villa Dino"

FRIDAY, SEPTEMBER 29TH, 2017

- 08:15-19:30 Registration and exhibition
- 08:15-10:00 **SESSION 7 - ECOLOGY OF *LEGIONELLA* AND INTERACTION WITH ENVIRONMENTAL RESERVOIRS**
Chairs: **Alexander Kirschner, David R. Murdoch**
- 08:15-08:45 The Original Cat and Mouse Interplay: With Picky Amoebae and Persistent *Legionella pneumophila*
Nicholas J. Ashbolt (Invited speaker)
University of Alberta, Edmonton, Canada
- 08:45-09:15 Natural Antimicrobial Substances to Control Proliferation of *Legionella pneumophila*
Jean Marc Berjeaud (Invited speaker)
University of Poitiers, Poitiers, France
- 09:15-09:30 Survival Patterns and Virulence of Viable but Non-Culturable *Legionellae* Induced by Starvation
Barbara Schrammel
Medical University of Vienna, Vienna, Austria
- 09:30-09:45 *Legionella pneumophila* Prevents Cell Division and DNA Replication of *Acanthamoeba castellanii*
Ascel Samba-Louaka
University of Poitiers, Poitiers, France
- 09:45-10:00 Temperature Induced Viable but Non-Culturable *Legionella pneumophila* Cells are Virulent Against Amoebae and Macrophage-Like Cells
Silvia Cervero-Aragó
Medical University of Vienna, Vienna, Austria
- 10:00-10:30 Coffee break

SCIENTIFIC PROGRAMME

- 10:30-12:00 **SESSION 8 - *LEGIONELLA* DETECTION AND DIFFUSION IN THE ARTIFICIAL THE RESERVOIRS**
Chairs: **Nicholas J. Ashbolt, Susanne Lee**
- 10:30-11:00 *Legionella* Colonization of Water Systems Aboard Passenger Ships and Differences with Accommodation Sites (Hotels Etc)
Christos Hadjichristodoulou (Invited speaker)
University of Thessaly, Larissa, Greece
- 11:00-11:30 *Legionella* Detection in Environments and Their Impacts on the Occurrence of Legionellosis in Japan
Kura Fumiaki (Invited speaker)
National Institute of Infectious Diseases Tokyo, Japan
- 11:30-11:45 Prevalence and Diversity of *Legionella* in US Cooling Towers
Brian H. Raphael
Centers for Disease Control and Prevention, Atlanta, United States of America
- 11:45-12:00 Identification of Cooling Tower Microbiota Supporting the Growth of *Legionella pneumophila*
Sebastien P. Faucher
McGill University, Montréal, Canada
- 12:00-13:00 **SESSION PROUDLY SPONSORED BY PALL**
Can *Legionella* be controlled by engineering measures?
Chair & welcome and opening
Martin Exner (Invited speaker)
University of Bonn, Bonn, Germany
- 12:00-12:30 Compliance with Drinking Water System Regulation: The German Approach
Roland Suchenwirth
Lower Saxony Health Authorities, Hannover, Germany
- 12:30-13:00 Technical prerequisites for a safe Drinking Water System for *Legionella*
Stefan Pleischl
University of Bonn, Bonn, Germany
- 13:00-14:00 Lunch
- 13:30-15:30 **POSTER SESSION 3 - ROOMS EXHIBITION AREA**
• MISCELLANEUS • MICROBIAL ECOLOGY • PREVENTION AND CONTROL
- 14:00-14:30 **ESGLI BUSINESS MEETING**
- 15:30-17:15 **SESSION 9 - PREVENTIVE AND CONTROL STRATEGIES**
Chairs: **Paola Borella, Sebastian Crespi**
- 15:30-16:00 The Evaluation of Mandatory *Legionella* Environmental Surveillance in Healthcare Facilities in Taiwan: Clinical and Environmental Perspectives
Yusen E. Lin (Invited speaker)
National Kaohsiung Normal University, Kaohsiung City, Taiwan
- 16:00-16:30 Controlling *Legionella* in Building Water Systems: How Does Monochloramine Measure Up?
Janet E. Stout
Special Pathogens Laboratory, Pittsburgh, United States of America
- 16:30-16:45 Corrosive Effect on Various Pipe Materials Following Different Treatments for *Legionella* Spp Control in Hospital Water Systems
Isabella Marchesi
University of Modena and Reggio Emilia, Modena, Italy

SCIENTIFIC PROGRAMME

- 16:45-17:15 **Sponsored presentation (Grundfos)** Experiences in-situ Prepared Chlorine Dioxide in *Legionella* Treatment
Michael Skovgaard
Senior Manager, Global Programs GPMA Dosing & Disinfection
- 17:15-17:45 Coffee Break
- 17:45-19:00 **SESSION 9 - PREVENTIVE AND CONTROL STRATEGIES (CONTINUED)**
Chairs: **Janet E. Stout, Yusen E. Lin**
- 17:45-18:00 A Multicenter Study on *Legionella* Air Contamination in Italian Healthcare Facilities: Comparison of Different Sampling Methods
Osvolda De Giglio
University of Bari, Bari, Italy
- 18:00-18:15 Maxi Impact of Temperature, Copper and Silver Exposure on the Viability and Recovery of Clinical and Environmental Strains of *Legionella pneumophila*
Michèle Prévost
Polytechnique Montréal, Montréal, Canada
- 18:15-18:30 Prevention and Control of *Legionella* spp. Colonization in Dental Units
Beatrice Casini
University of Pisa, Pisa, Italy
- 18:30-18:45 *Legionella* Colonization Of Hotel Water Supply Systems In Touristic Places Of Greece: Associations With System Characteristics and Physicochemical Parameters
Varvara Mouchtouri
Department of Medicine University of Tessaly, Larissa, Greece
- 18:45-19:00 Risk Assessment of *Legionella* in Hospital Washbasins: Water and Aerosol
Pasqualina Laganà
University of Messina, Messina, Italy
- 19:00-19:30 **ROUND TABLE:**
discussion on the topics (critical aspects, pros and cons, etc.) presented in the session of the day

SATURDAY, SEPTEMBER 30TH, 2017

- 08:30-13:30 Registration and exhibition
- 08:30-11:00 **SESSION 10 - LEGIONELLA GUIDELINES IN DIFFERENT COUNTRIES**
Chairs: **Birgitta de Jong, Maria Luisa Ricci**
- 08:30-09:00 European *Legionella* Guidelines
Susanne Lee (Invited speaker)
Legionella LTD., United Kingdom
- 09:00-09:30 U.S. Guidance and Standards
Janet E. Stout (Invited speaker)
Special Pathogens Laboratory, Pittsburgh, United States of America
- 09:30-10:00 The German Experiences with *Legionella* Risk Regulation
Martin Exner (Invited speaker)
University of Bonn, Bonn, Germany

SCIENTIFIC PROGRAMME

- 10:00-10:20 *Legionella* Guidelines in the Russian Federation:
Harmonization in Accordance to International Standards
Igor Tartakovskiy
Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia
- 10:20-10:40 *Legionella* Regulation in Australia
Richard Bentham
Flinders University, Adelaide, Australia
- 10:40-11:00 Italian *Legionella* Guidelines: a Special Focus on Dental Unit Waterlines
Maria Luisa Ricci
Italian National Institute Health, Rome, Italy
- 11:00-11:30 Coffee break
- 11:30-13:30 **SESSION 11 - CHALLENGES OF *LEGIONELLA* AND FUTURE PERSPECTIVES**
Chairs: **Paul H. Edelstein, Janet E. Stout**
- 11:30-12:00 Advancing a Framework for Prebiotic/Probiotic Control of *Legionella*
in Distribution Systems and Puilding Plumbing
Amy Pruden (Invited speaker)
Virginia Tech in Blacksburg, Virginia, United States of America
- 12:00-12:30 Technology Advancement Supporting *Legionella* Control in Dubai
Redha H. Salman
Health and Safety Department-Dubai Municipality, Dubai UAE
- 12:30-13:00 The European Perspectives of *Legionella* Surveillance and Control
Valeria Gaia (Invited speaker)
Swiss National Reference Centre for *Legionella*, Bellinzona, Switzerland
- 13:00-13:30 Presentation of *Legionella* 2021

Closing remarks: **Paola Borella and Maria Luisa Ricci**

GENERAL INFORMATION

CONGRESS DETAILS

DATES

26th - 30th September 2017

CONGRESS VENUE

Auditorium Antonianum
Viale Manzoni, 1 - 00185 - Rome

LANGUAGE

The official language of the Congress is English.

BADGES AND CONFERENCE MATERIALS

Name badges and conference material will be provided on-site to all registered delegates at the conference registration, from 26th - 30th September 2017. Badges are to be worn at all times, for reasons of security and identification. You will not be permitted to enter any building or room without your badges.

CERTIFICATE OF ATTENDANCE

All register delegates are entitled to a certificate of attendens. Certificates can be collected from the conference secretariat on the last day of the Conference.

LIABILITY AND INSURANCE

Delegates and exhibitors are advised to take out adequate insurance cover against any risk of loss, damage, injury or liability before travelling to the Conference. Neither the Conference Organisers nor its contractors shall accept liability for personal injury or loss/damage to property and belongings of delegates during the Conference or their stay in Rome.

MOBILE PHONES

Delegates are kindly requested to switch off their mobile phones during the Conference sessions.

PROGRAMME CHANGES

Due to circumstances beyond the control of the Congress Organisers, last-minute changes to the programme may be unavoidable.

LATE REGISTRATION FEE (IN EURO)

Registration types and fees

REGISTRATION Fee Categories	ON SITE
Full rate	€ 770
Italian Scientific Societies	€ 693
Student	€ 500
Low income Countries	€ 560
Gala Dinner and tour Villa dei Quintili	€ 105

ALL PRICES INCLUDE VAT 22%.

PLEASE, VERIFY IF REDUCTION OR NO VAT ARE DUE IN YOUR POSITION (for example, no VAT is due by the Italian Public Health Operators. For further information, please contact registration@legionella2017.com or +39 06 36381573 / +39 0637513142 before the registration)

STUDENT: this voice includes students attending degree, PhD course, Specialization School.
Students must please bring Student ID to the Conference.

SEE LOW INCOME COUNTRIES

Afghanistan	Lesotho
Albania	Liberia
Algeria	Libya
American Samoa	Macedonia, FYR
Angola	Madagascar
Argentina	Malawi
Armenia	Malaysia
Azerbaijan	Maldives
Bangladesh	Mali
Belarus	Marshall Islands
Belize	Mauritania
Benin	Mauritius
Bhutan	Mexico
Bolivia	Micronesia, Fed. Sts.
Bosnia and Herzegovina	Moldova
Botswana	Mongolia
Brazil	Montenegro
Bulgaria	Morocco
Burkina Faso	Mozambique
Burundi	Myanmar
Cambodia	Namibia
Cameroon	Nepal
Cape Verde	Nicaragua
Central African Republic	Niger
Chad	Nigeria
China	Pakistan
Colombia	Palau
Comoros	Panama
Congo, Dem. Rep.	Papua New Guinea
Congo, Rep.	Paraguay
Costa Rica	Peru
Côte d'Ivoire	Philippines
Croatia	Romania
Cuba	Rwanda
Djibouti	Samoa
Dominica	São Tomé and Príncipe
Dominican Republic	Senegal
Ecuador	Serbia
Egypt, Arab Rep.	Seychelles
El Salvador	Sierra Leone
Equatorial Guinea	Solomon Islands
Eritrea	Somalia
Ethiopia	South Africa
Fiji	Sri Lanka
Gabon	St. Lucia
Gambia	St. Vincent and the Grenadines
Georgia	Sudan
Ghana	Suriname
Grenada	Swaziland
Guatemala	Syrian Arab Republic
Guinea	Tajikistan
Guinea-Bissau	Tanzania
Guyana	Thailand
Haiti	Timor-Leste
Honduras	Togo
Hungary	Tonga
India	Tunisia
Indonesia	Turkey
Iran, Islamic Rep.	Turkmenistan
Iraq	Uganda
Jamaica	Ukraine
Jordan	Uzbekistan
Kazakhstan	Vanuatu
Kenya	Venezuela, RB
Kiribati	Vietnam
Korea, Dem Rep.	West Bank and Gaza
Kosova	Yemen, Rep.
Kyrgyz Republic	Zambia
Lao PDR	Zimbabwe
Lebanon	

GENERAL INFORMATION

THE REGISTRATION INCLUDES

- Participation in the congress activities
- Congress Kit
- E.C.M.
- Opening cocktail (26th September 2017)
- Congress lunches (27th - 29th September 2017)
- Coffee breaks (27th - 30th September 2017)
- Certificate of attendance

SUBSTITUTIONS/NAME CHANGES

All participant substitutions who are already registered should be sent with a written request to the Organising Secretariat, specifying the name of the substituted person. Every name change will be charged of € 40,00 + 22% VAT.

E.C.M. ACCREDITATION (only for italian participants)

This event gives right to: Nr. 6 CME credits to Physician Ref. (555 - 202428)

Educational aims: Main Guides, Protocols, Procedures for the categories: Physician, Biologist, Nurse, Biomedical Laboratory Technologist, Occupational Health and Safety Officer.

Discipline: Hematology, Gastro-enterology, Medical Genetics, Geriatrics, Respiratory diseases, Contagious diseases, Clinical and Toxicology Pharmacology, Medical Genetic Laboratory, Microbiology and Virology, Hygiene, Epidemiology and Public Health, Occupational Medicine and workplace safety, General Medicine (family doctor), Epidemiology.

OBTAINING TRAINING CREDITS

To obtain training credits, participants need to participate in the congress scientific activities planned for every day; once the congress is over, they will hand in their personal data, together with the scientific self-evaluation and approval questionnaires, fully filled out.

PARTICIPATION CERTIFICATE AND E.C.M. CERTIFICATE

At the end of the congress, all regularly registered participants will be issued a certificate of participation, while the E.C.M. certificate will be available on-line 90 days after the end of the event (subject to attribution by the Ministry of Health). Participants will be able to download their Italian certificates with the credits obtained, by connecting to the website www.ideacpa.com and following the simple procedures.

European certificates will be sent by email to the address written on the approval questionnaire after 90 days of the end of the congress.

PROGRAMME ON LINE

The programme will be available on line only on the official congress web site:

www.legionella2017.com

CONFERENCE VENUE

The 9th International Conference on *Legionella* will be held at the Auditorium Antonianum, viale Manzoni, 1 Rome.

<http://www.auditoriumantonianum.it/en/>

The congress venue is located in a strategic and central area of Rome, just 1400 metres far from the principal train Termini and 100 metres far from underground station Manzoni.

HOW TO GET THERE

From both the international airport of Rome you can reach the centre of Rome quickly by train, buses or private coaches.

• TO/FROM FIUMICINO AIRPORT

TRAINS FROM/TO THE FIUMICINO AIRPORT

From the railway station, located in the airport, near the Arrivals and Departures terminals, you can reach the city centre in many, frequent Trenitalia's connections:

- Leonardo Express, a non-stop service exclusively for airport passengers to/from Rome Termini railway station leaving every 15 minutes* with a journey time of 32 minutes
- Regional FL1 trains to/from other stations in Rome, including Rome Tiburtina, with departures every 15 minutes on weekdays and every 30 minutes on weekends and holidays
- * - departures every 30' from Fiumicino Airport before 07.08 and after 21.08 and between 10.08/10.38 and 14.08/14.38
- departures every 30' from Rome Termini before 06.20 and after 20.20 and between 09.50/10.20 and 13.50/14.20

For more information: www.trenitalia.com

BUSES FROM/TO THE AIRPORT

A lots of buses companies are available from/to the city from "Leonardo da Vinci" Airport:

COTRAL

- The scheduled bus stops are opposite Terminal 2, Arrivals. To reach them follow the "Regional Bus Station" signs.
- Information on the service: tickets can be purchased at the authorized sales point (news stands, tobacconists, etc.) or, with a surcharge, on-board the bus.
- It takes about an hour.

For more information: www.cotralspa.it

SIT BUS SHUTTLE

- The buses stop at the BUS hub adjacent to the Terminal 3 exits - Arrivals, bus rank no. 1. To reach them follow the "Regional Bus Station" signs.
 - Information on the service: the service operates every day, from Monday to Sunday. Tickets can be purchased online or directly on board the bus. The journey is about 55 minutes and buses leave about every 30 minutes.
- <http://www.sitbusshuttle.com/en/>

T.A.M. S.R.L.

- The buses stop at the BUS hub adjacent to the Terminal 3 exits, Arrivals, bus rank no. 4. To reach them follow the "Bus Station" signs
 - Information on the service: the service operates every day, from Monday to Sunday. Tickets can be purchased directly on board the bus. The journey is about 45 minutes - leaving every 30 minutes
- <http://www.tambus.it>

TERRAVISION

- The buses stop at the BUS hub adjacent to the Terminal 3 exits, Arrivals, bus rank no. 3. To reach them follow the "Bus Station" signs.
 - Information on the service: the service operates every day, from Monday to Sunday. Tickets can be purchased online or on board the bus. The journey is about 55 minutes and buses leave about every 30 minutes.
- www.terravision.eu

ATRAL - SCHIAFFINI

- The buses stop at the BUS hub adjacent to the Terminal 3 exits, Arrivals, bus rank no. 4. To reach them follow the "Bus Station" signs.
 - The service operates every day, from Monday to Sunday.
 - Tickets can be purchased online, directly on board the bus or at the authorized agents in the Arrivals hall, Terminal 3
- <http://www.romeairportbus.com>

• TO/FROM CIAMPINO AIRPORT

TRAINS From/to CIAMPINO AIRPORT

The nearest train station to the Giovan Battista Pastine Airport is in the town of Ciampino, connected to the airport by COTRAL/SCHIAFFINI buses every 30 minutes. The journey time is, on average, 5 minutes. The cost of the ticket, for sale both on board and from the ground staff is 1,50 euro.

BUSES FROM/TO THE CIAMPINO AIRPORT

A daily connection between the airport and Rome Termini railway station is provided by these companies:

ATRAL - COTRAL - SIT - TERRAVISION - SCHIAFFINI

All the bus stops are opposite International Departures. For information on timetables, routes, and the cost of tickets see the websites of the various bus companies

• ARRIVING FROM TERMINI STATION

- By foot, 1400 metres (about 15 minutes)
- By underground, line A (direction Anagnina), MANZONI station (100 metres)
- By bus, line 714, MERULANA/LABICANA stop

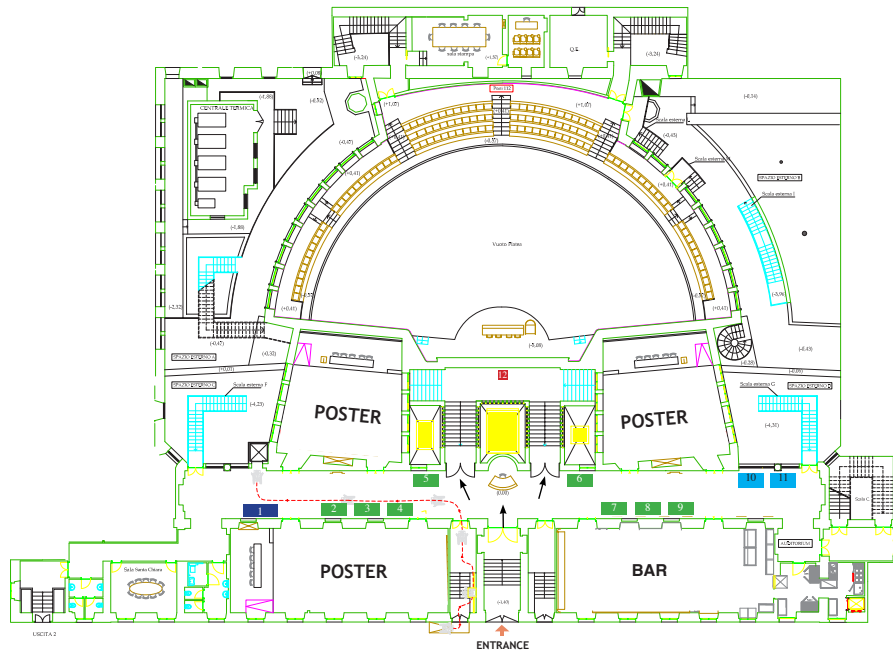
Other buses to/from the congress venue:

- Line 3 or 810, MANZONI/MERULANA stop
- Line 16 or 717, MERULANA/LABICANA

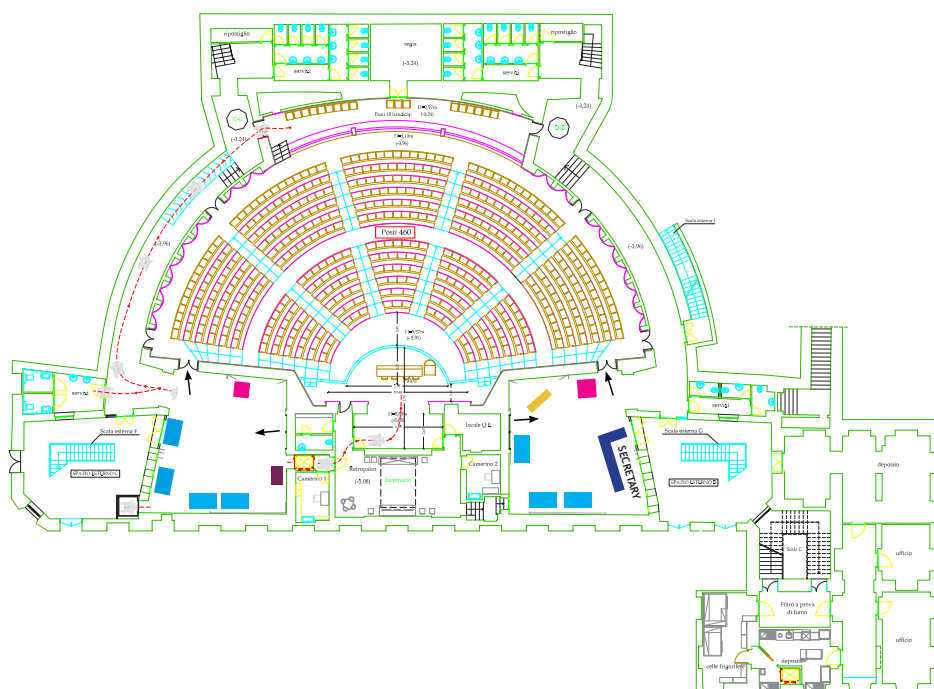
For more information consult the Local public transport website
<http://www.atac.roma.it/page.asp?p=52>

VENUE MAP

LEVEL 0



LEVEL - 1





ABOUT ROME

VISA

Some participants may need a visa to travel to Italy.
Participants are invited to check with the Italian consulate in their country.
The Organising Secretariat is not responsible for obtaining visas and does not provide financial support for them.

CURRENCY

Italy is a part of the European Currency Unit and the official currency is Euro (€).
Banks in Italy are usually open Monday to Friday 9:00 AM - 15:30 PM

CLIMATE

The climate in Rome is generally mild and continental.
The average temperature in Rome in September ranges from 15°C to 25°C

LANGUAGE

Italian is the first language. The most common foreign language is English

TIME

Italy is GMT+1
Rome 12:00 - London 11:00 - New York 12:00 - Sidney 22:00

TELECOMMUNICATIONS

The area code for Italy from abroad is: +39

EMERGENCY NUMBERS

- Breakdown Service ACI - 803116
- Police - 113
- Carabinieri - 112
- Fire Brigade - 115
- Local Police - 0667691
- Customs - 117
- Police Station - 064686
- First Aid - 118
- Italian Red Cross Ambulance - 06 5510
- Chemist's Open On A Holiday - 06 228941
- Urgent Blood Transfusion - Policlinico Umberto I - 06 49970860 - 06 49970861
- Urgent Blood Transfusion - S. Giovanni Hospital - 06 77055563
- Permanent First Aid Station - 06 4826741 - 06 58201030
- Roman Green Cross Ambulance - 06 24302222

ELECTRICITY

The voltage in Rome for private homes (and thus for hotels) is 220/240 Volts

TRANSPORTATION

During the day, buses and trams start the service at 5:30 am and run all day until Midnight in all directions. Night buses start the service at 00:30 am until 5:30 am. Buses leave from Piazza dei Cinquecento (Termini Train Station) and Venice Square (Piazza Venezia) every 30 minutes in all directions. You can buy tickets for 1 euro on board.

For more information about all routes, check the official Rome Public Transportation Agency, ATAC. There you'll find all the up-to-date information on routes, tickets, underground and urban railways, public transport maps, wait times, and all information to get around Rome. On the ATAC website there is also a useful service: route planner that allows you to enter your starting point and the destination addresses and it will provide a map of the route you should take including the buses necessary to get there.

BY TAXI

Taxis can be called by phone or can be caught directly from the appropriate reserved taxi points, located in various parts of the city centre and in other suburban areas.

Otherwise you can call one of these phone taxi numbers (remember, the meter starts from the time you call, not when you get in!)

- Ph. 06 3570 • Ph. 06 4994 • Ph. 06 6645 • Ph. 06 5551 • Ph. 06 8822

CONFERENCE INFORMATION

AUDIOVISUAL EQUIPMENT / SPEAKER'S READY ROOM

A Speaker's Ready Room will be operating throughout the duration of the congress. Speakers are kindly requested to hand in their presentation (USB-key, CD-ROM, DVD) at least three (3) hours before their scheduled presentation time. If your presentation is scheduled early in the morning, you are kindly requested to check your presentation at the Speaker's Ready Room the day before. All version of MS Power Point are accepted, including Mac. If you are using embedded video clips in your presentation, please remember to submit video files separately. The following equipment will be available.

- PC
- Data video Projector (Power Point presentations)
- Laser Pointer
- Microphones

ORAL COMMUNICATIONS

If you are presenting a free communication, you are kindly requested to observe the following points:

- Please declare any relevant link to industry or other conflicts of interest at the beginning of your presentation
- Please speak slowly and clearly. English is a working language of the congress, but not necessarily the native language of the delegates

POSTER PRESENTATION

For Posters to be exhibited, please note the following:

- The necessary material for displayed will be available in the poster area
- Posters panel numbers will be displayed at the top of the panel
- The corresponding poster panel number for each poster presented has been provided by the Congress Organizers, along with abstract presentation guidelines
- Please note the posters should be 70 cm (width) x 100 cm (height) maximum
- As a courtesy to other presenters, participants are kindly requested not to move or remove posters numbers or change the order of the assigned poster boards
- It is essential that presenters clear their poster board promptly and within the scheduled time. Material left on a poster board after to removal deadline will be discarded
- The Congress Organizers are not responsible for materials left behind that are stolen or damaged

MOUNTING AND DISMANTLING OF POSTERS

Poster Session 1:

Mounting	Sept 27 th , 2017	H. 08:30
Dismantling	Sept 27 th , 2017	H. 18:00

Poster Session 2:

Mounting	Sept 28 th , 2017	H. 08:15
Dismantling	Sept 28 th , 2017	H. 16:45

Poster Session 3:

Mounting	Sept 29 th , 2017	H. 08:15
Dismantling	Sept 29 th , 2017	H. 19:30

POSTERS

POSTER SESSION 1 - WEDNESDAY, SEPTEMBER 27TH, 2017

N°	TITLES	AUTHORS
1	Characterization of <i>Legionella</i> RCC1 domain effector proteins	Leoni Swart A., Schütz S., Steiner B., Hannemann M., Itzen A., Panse V.G., Hilbi H.
2	LegK4 from <i>Legionella pneumophila</i> , a bacterial protein kinase that targets the host cell nucleus	Blache Q., Baïlo N., Michard C., Doublet P.
3	Disulfide loop cleavage of <i>Legionella pneumophila</i> PlaA boosts lysophospholipase a but diminishes glycerophospholipid cholesterol acyltransferase activity	Hiller M., Lang C., Flieger A.
4	Evolution of virulence traits during mutation accumulation evolution experiment in <i>legionella pneumophila</i>	Carrillo G., Ginevra C., Jaboulay C., Doublet P., Jarraud J., Kay E.
5	<i>Legionella</i> triggers the AIM2 Inflammasome that engages active but unprocessed Caspase-1 to induce noncanonical activation of the NLRP3 Inflammasome	Cunha D.L., Alexandre L. N. Silva, Ribeiro J. M., Fonseca Lincoln L., P. A. Mascarenhas D., F.S Quirino G., Santos L.L., S.D. Lima-Junior, Zamboni S.D.
6	Export of the Phospholipase PlaB of <i>Legionella pneumophila</i>	Wiebke M. Aursch P., Wissing J., Jänsch L., Flieger A.
7	<i>Legionella pneumophila</i> 's growth and infection dynamics in <i>Acanthamoeba polyphaga</i> , <i>Dictyostelium discoideum</i> , and U937 macrophages	Moreno AB., Guy L.
8	Inducing apoptosis to promote <i>Legionella</i> clearance by macrophages	Naderer T.
9	Effect of human antimicrobial peptides against <i>Legionella pneumophila</i>	Vandewalle M., Guillemot J., Chapalain A., Lina G., Doublet P., Jarraud S., Ginevra C.
10	Orchestration of Dot/Icm bacterial effector expression and secretion by nucleoid-associated proteins and cyclic-di-GMP metabolizing enzymes during <i>Legionella</i> infectious cycle	Vianney A., Allombert J., Jaboulay C., Andréa C., Baïlo N., Buchrieser C., Doublet P., Kay E.
11	Bacterial transcript analysis reveals a compensatory role for the <i>L. pneumophila</i> type II-dependent LapA aminopeptidase and PlaC acyltransferase during infection of <i>Acanthamoeba</i>	White RC., Gunderson FF., Cianciotto NP.
12	The GDSL hydrolase PlaD is a Dot/Icm secreted effector of <i>Legionella pneumophila</i> and confers high toxicity to eukaryotic cells	Hiller M., Lang C., Flieger A.
13	Cytotoxic glycosyltransferase effectors of <i>Legionella</i>	Levanova N., Belyi Y., Schroeder G. N., Aktories K., Jank T.
14	Intracellular growth defect of the <i>iroT</i> mutant of the <i>Legionella pneumophila</i> despite its hypertoxicity	Miyake M., Tsushima Y., Marukawa T., Kuniyasu K., Sugiyama A., Yoshida I., Abu Kwaik Y., Imai Y.
15	Caspase-8 participates in the Naip5/NLRC4/ASC inflammasome that is responsible for recognition and restriction of <i>Legionella pneumophila</i> replication in macrophages	Mascarenhas D. P. A., Cerqueira D. M., Pereira M. S. F., Castanheira F.V.S., Fernandes T. D., Manin G. Z., Cunha L. D., Zamboni D. S.
16	<i>Legionella</i> effector AnkX disrupts host cell endocycling in a phosphocholination-dependent manner	Neunuebell M. R., Allgood S. C., Badjo B. P., Noll R. R., Lein S., Pike C.
17	Comparative whole genome sequence analysis of a <i>Legionella pneumophila</i> sg 6 clinical strain and its spontaneous avirulent mutant	Ricci M. L., Equestre M., Salaris S., Marcantonio C., Orsini M., Scaturro M.
18	Rapid adaptations to the accidental human host in <i>Legionella pneumophila</i>	Leenheer D., Pelaz C., Morin M., Hallin E., Klingenberg D., Jarraud S., Ginevra C., Guy L.

POSTERS

N°	TITLES	AUTHORS
19	The small regulatory RNA lpr0010 plays a role in <i>Legionella pneumophila</i> 's survival in water	Saoud J., Massé È., Faucher S.
20	Investigating the use of metagenomic sequencing for <i>Legionella</i> detection	Carney S., Cox M. J., Cookson W. O., Chalker V. J., Moffatt M. F.
21	Assessing genetic diversity for <i>Legionella pneumophila</i> sequence type 1 isolate discrimination	Mercante J. W., Caravas J. A., Ishaq M. K., Kozak-Muiznieks N. A., Morrison S. S., Raphael B. H.
22	Characterising the genome of <i>Legionella longbeachae</i> serogroup 1 clinical isolates	Slow S., Anderson T., Harte D., Murdoch D. R., Winter D., Biggs P. J.
23	Characterization of a novel transcriptional regulator in <i>Legionella pneumophila</i>	Graham C., Patel P., Brassinga A. K. C.
24	Role of the trans-encoded srnas lpr0014 and lpr0059 in the virulence of <i>Legionella pneumophila</i>	Mani T., Faucher S.
25	Looking into microbial dark matter in sediment and soil samples using metagenomics	Graells T., Guy L.
POSTER SESSION 2 - THURSDAY, SEPTEMBER 28 TH , 2017		
1	A legionellosis case linked to contaminated hot tub water: importance of amoebae to isolate environmental <i>Legionella pneumophila</i>	Dey R., Dlusskaya E.A., Tyrrell G.J., Ashbolt N.J.
2	Molecular and epidemiological analysis of <i>Legionella pneumophila</i> strains in an outbreak at bath facilities in Japan	Amemura-Maekawa J., Kuroki T., Ohya H., Furukawa I., Suzuki M., Masaoka T., Aikawa K., Hibi K., Morita M., Lee K., Ohnishi M., Kura F.
3	Pontiac fever outbreak during all doctors hen party	Scaturro M., Rota M. C., Caporali M. G., Pasticci M. B., Tozzi G., Ciani C., Mencacci A., Ricci M. L.
4	hotel whirlpool bath as a source of legionnaires' disease and Pontiac fever outbreak?	Räsänen P.S., Ruotsalainen E., Broas M., Huuononen K., Metso J., Jääskeläinen A.J., Kakriainen A., Yli-Ikka T., Jaakola S., Kinnunen M., Mentula S., Kusnetsov J., Lyytikäinen O.
5	Experience of public health officials in the investigation of a <i>Legionella</i> outbreak associated with one hotel	Serres M., Feliu T., Aguilar C., Minguell S., Coll C., Bieto M.
6	<i>Legionella pneumophila</i> on tap: simulating disinfection measures of case study apartment buildings	"Van Kenhove E., Janssens A., Laverge J., Ghent University, Ghent, Belgium"
7	A 1-year surveillance of Legionnaire's disease including a 2-month outbreak in Parma (Northern Italy)	Calderaro A., Martinelli M., Larini S., Piscopo G., Ruggeri A., Di Maio A., Montecchini S., Dell'Anna M.L., Buttrini M., Arcangeletti M.C., Medici M.C., De Conto F., Chezzi C.
8	outcome of a 12 month national study of legionnaires' disease in New Zealand: theleginz study	Chambers S.T.
9	Improved isolation of <i>Legionella longbeachae</i> bacteria from potting mix products	Mohammadi A., Anderson T., Lewis J., Scott-Thomas A., Chambers S.T., Murdoch D.R.
10	EMA or PMA combined with qPCR cannot be used to detect viable naturally grown <i>Legionella pneumophila</i> cells from aquatic environments	Wullings B.A., Van der Wielen P.W.J.J.
11	Validation of a qPCR assay for the simultaneous detection of <i>Legionella pneumophila</i> and <i>L. pneumophila</i> SG1 in respiratory specimens and water samples	Bellido B., Pelaz C.

POSTERS

N°	TITLES	AUTHORS
12	Performance of the BinaxNOW® <i>Legionella</i> Urinary antigen rapid test in conjunction with the Alere reader	Beraud L., Montoya A., Ranc A.G., Descours G., Ginevra C., Lina G., Jarraud S.
13	Specific real-time PCR for detection and identification of <i>Legionella pneumophila</i> serogroup 1 ST1	Ginevra C., Chastang C., David S., Mentasti M., Yakunin E., Chalker V.J., Chalifa-Caspi V., Valinsky L., Jarraud S., Moran-Gilad J.
14	Mixed <i>Legionella longbeachae</i> infection identified using <i>mip</i> gene sequence analysis	Harte D., Piercy M.
15	Hospital outbreak and post-outbreak investigation of Legionnaires Disease (LD) using Whole Genome Sequencing (WGS)	Decker B.K., Chen L., Kreiswirth B.N., Harris P., Muder R., Merz K.J., Sonel A.F., Clancy C.J.
16	Simultaneous detection of <i>Legionella</i> spp., <i>Legionella pneumophila</i> and <i>Legionella pneumophila</i> sg-1 using a modified real time PCR recently described assay	Echahidi F., Soetens O., De Mendonça R., Meghraoui A., Piérard D., Roisin S., Wybo I.
17	Antimicrobial susceptibility testing of clinical and environmental <i>Legionella</i> spp. isolates in Greece, by M.I.C. gradient strips	Flountzi A., Velonakis E. N., Koutsiomani T., Vatopoulos A.
18	C4diagnostics Lp kit for rapid detection of legionellosis	Fugier E., Dumont A., Muller A., Paillusson N., Dukan S.
19	The German LeTriWa Project: microbiological results from community acquired legionnaires disease (CALD) cases	Gagell C., Lück C., Jahn H.J., Buchholz U., Reber F., Lehfeld A-S., Brodhun B., Haas W., Schaefer B., Stemmler F., Otto C., Bärwolff S., Beyer A., Geuß-Fosu U., Hänel M., Larscheid P., Mähl P., Morawski K., Peters U., Pitzing R., von Welczek A., Widders G., Wischnewski N., Eichendorff C., Hinzmann A., Nürnberger E, Schmidt S., Schumacher J., Sissolak D., Zuschneid I., Angermair S., Arastéh K., Behrens S., Borchardt J., Creutz P., Danckert J., Deja M., Elias J., Gastmeier P., Kahnert H., Laun R., Lehmke J., Leistner R., Naumann M-B., Pankow W., Pross M., Scherübl H., Stocker H., Sturm A., Wilbrandt B.
20	Sequence based typing of <i>Legionella pneumophila</i> strains isolated in respiratory clinical specimens between 2008 and 2016 in Emilia Romagna region, Italy	Fregni Serpini G., Grottola A., Meacci M., Meccugni B., Gennari B W., Tagliazucchi S., Forbicini G., Nanni N., Magnani R., Vecchi E., Simone M.L., Rabacchi C., Scaturro M., Fabio A., Ricci M.L., Pecorari M.
21	NF validation of a fast real-time PCR method for the quantification of <i>legionella</i> spp. and <i>Legionella pneumophila</i> in “clean” water samples	Poty F., Samuels E., Bouton S., Hallier-Soulier S.
22	High resolution identification of <i>Legionella pneumophila</i> genotypes in respiratory tract secretions	Jaber L., Amro M., Abu Tair H., Bahader S., R. Zayed A., Al-Alam H., Butmeh S., Abu- Hilal D., Brettar I., G. Höfle M., M. Bitar D.
23	Comparison of the analytical sensitivity of two rapid point-of-care (POC) urinary antigen diagnostic tests for <i>Legionella</i> serogroups 3, 4, and 6	Lollar R., Grippa L., Baldrice J., Tamerius J.
24	NHLS - NICD	Carrim M., Wolter N., du Plessis M., Stewart R., de Gouveia L., Von Gottberg A.

POSTERS

N°	TITLES	AUTHORS
25	Molecular typing of <i>Legionella pneumophila</i> isolates in Belgium from 2011 to 2016	Meghraoui A., Echahidi F., Argudín MA., Deplano A., Soetens O., De Mendonça R., Nonhoff C., Piérard D., Wybo I., Roisin S.
26	Evaluation of an Immunoview <i>Legionella longbeachae</i> Urinary Antigen Test	Podmore R., Schousboe M., Murdoch D.
27	Fast and reliable quantification of <i>Legionella</i> spp. and <i>L. pneumophila</i> with simultaneous detection of <i>L. pneumophila</i> serogroup 1 in water by real-time PCR including live/dead discrimination	Priller F., Helbig S., Donath M., Ziehbarth H., Junge B., Grönewald C., Berghof-Jäger K.
28	Method comparison of the Quidel Sofia <i>Legionella</i> fluorescent immunoassay (FIA) with the Alere BinaxNow (Binax) assay in urine samples from patients	Badoux P., Euser S.M., Kosten L., P.F. Ijzerman E.d.
29	Legionnaires' disease in immunocompromised patients: beware of toilets!	Ginevra C., Nesa N., Descours G., Campèse C., Tankovic J., Beraud L., Ranc AG., Jarraud S., Barbut F.
30	Contribution of molecular biology to surveillance of legionellosis risk in Hotels and Industry in Abidjan	Coulibaly-Kalpy J., Monemo P., Koffi K.S., Sylla A., Ehuié P., Kissiédo E., Kacou-N'gazona S., Koffi-Akoua C., Dosso M.
31	Comparative performance Legiolert™ vs. standard methods for the quantification of <i>Legionella pneumophila</i> in potable and nonpotable water samples	Broder D., Knight T., Pednault A., Newport V., Swalla B.
32	Weather factors affect <i>Legionella</i> positivity differently across two hospital water systems (WS)	Decker B.K., Kelly M.B., Walker J.D., Sonel A.F., Clancy C.J.
33	Adaptation of Legiolert™ for amoebal co-culture of VBNC cells	Dey R. and Ashbolt N.J.
34	Prevalence and Diversity of <i>Legionella pneumophila</i> in the Defense Setting	Yakunin E., Ohayon S., Schnaidman B., Marva E., Agmon V., Eizenkraft A., Wagnert L., Grotto I., Valinsky L., Moran-Gilad J.
35	Detection and identification of <i>Legionella</i> species in aerosols from the area nearby asphalt roads and bath water in public bath facilities in Toyama prefecture, Japan	Kanatani J., Isobe J., Norimoto S., Kimata K., Uchida U., Kura F., Amemura-Maekawa J., Watahiki M.
36	Genomic relatedness of virulence <i>Legionella</i> strains from different water supply sources	Kazanova T., Kalediene L.
37	Challenges and opportunities for legionellosis surveillance using information technology	Kilgore P.E., Zervos M.J., Alaga K.C., Alsaghayer A., Salim A.M., McElmurry S.P.
38	How is Sweden different? - Epidemiological typing of clinical isolates of <i>Legionella pneumophila</i> 2012-2016	Morin M., Aili M., Schöning C., Hallin E.
39	Climatic conditions as risk factors for the colonization of hotel water systems by <i>legionella</i> species: preliminary results of an 12-year study in Crete (Greece)	Papadakis A., Chochlakis D., Yachnakis E., Keramarou M., Sandalakis V., Tselentis Y., Gikas P., Psaroulaki A.
40	Population structure and minimum core genome typing of <i>Legionella pneumophila</i>	Qin T., Zhang W., Zhou H., Ren H., Xu J.
41	Research of <i>Legionella</i> spp in Bosnia and Herzegovina	Obradovic Z., Besic A., Obradovic A.

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42	First results of the case-control “LeTriWa” study on community-acquired Legionnaires’ Disease in Berlin: No indication of infection among household members of Legionnaires’ Disease cases	Jahn H.J., Buchholz U., Reber F., Lehfeld A.S., Brodhun B., Haas W., Lück C., Gagell C., Schaefer B., Stemmler F., Otto C., Bärwolff S., Beyer A., Geuß-Fosu U., Hänel M., Larscheid P., Mähl P., Morawski K., Peters U., Pitzing R., von Welczeck A., Widders G., Wischnewski N., Eichendorff C., Hinzmann A., Klosinski M., Nürnberger E., Schilling B., Schmidt S., Schumacher J., Sissolak D., Zuschneid I., Angermair S., Arastéh K., Behrens S., Borchardt J., Creutz P., Danckert J., Deja M., Elias J., Gastmeier P., Kahnert H., Laun R., Lehmke J., Leistner R., Naumann M-B., Pankow W., Pross M., Scherübl H., Stocker H., Sturm A., Wilbrandt B.
43	Healthcare-associated Legionnaires’ disease: surveillance data from 20 states and one large metropolitan area - United States, 2015	Smith J.C., Barskey A., Soda E., Shah P., Cooley L.
44	Monitoring and control of <i>Legionella</i> in a private hospital group in South Africa, 2015 - 2016	Stewart R., Cleghorn J., Thomas T., Wolter N., Carrim M., Duse A., Von Gottberg A.
45	A snapshot of the prevalence and molecular diversity of <i>Legionella pneumophila</i> strains in water systems of Israeli hotels	Yakunin E., Kostyal E., Yavlovich A., Agmon V., Grotto I., Valinsky L., Moran-Gilad J.
46	How is travel-associated legionnaires’ disease reporting rate associated with travel volume?	Robesyn E., de Jong B., Beauté J., Payne L., Stålsby Lundborg C., Faes C.
47	Travel - associated legionnaires’ disease - United States, 2015	Edens C., Barskey A., Cooley L.
48	Colonization and persistence of <i>Legionella pneumophila</i> ST328 in a hospital	Graells T., Guy L., Padilla E.
49	Distribution of <i>Legionella</i> species in windshield washer fluid of motor vehicles in Toyama, Japan	Isobe J., Jun-ichi K., Keiko K., Amemura-Maekawa J., Fumiaki K., Masanori W.
50	<i>Legionella</i> detection in wastewater using culture and real-time quantitative PCR methods	Zamfir M., Bartha B., Walser S.M., Brenner B., Huber S., Höller C., Seidel M., Herr CEW.
51	Surveillance of <i>legionella</i> speciation and serotypings from environmental water samples in Taiwan - a 74 institution survey	Jui-Chen H., Wan-Rong Y., Yusen E. L.
52	Use of rep-PCR for molecular genotyping and inventory among isolates from nosocomial legionnaires’ disease infections	Jui-Chen H., Wan-Rong Y., Yusen E.L.
53	<i>Legionella longbeachae</i> in England and Wales - results of enhanced surveillance, October 2013 - December 2016	Collins S., Afshar B., Mentasti M., Naik F., Smith R., Kirrage D., David S., Ready D., Chalker V.
54	Risk factors of <i>legionella</i> growth in water system: 29 years epidemiological study in Crete (Greece)	Papadakis A., Chochlakis D., Keramarou M., Sandalakis V., Tselenis Y., Gikas P., Psaroulaki A.

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N°	TITLES	AUTHORS
1	Effectiveness of monochloramine at different dosage in reducing <i>Legionella</i> water contamination avoiding formation of potentially toxic by-products	Paduano S., Marchesi I., Vecchi E., Saini N., Bolognesi A., Borella P., Sircana L., Bargellini A.
2	Influence of climate on <i>Legionella</i> contamination in automobile windshield washer fluid	Schwake D.O., Brown C., Marr L.C.
3	Comparison of fish and culture methods in the examine of heterotrophic bacteria, <i>legionella</i> bacteria and free - living amoeba in cooling tower waters and biofilm samples	Zeybek Z., Doğruöz güngör N., Türetgen I.
4	Isolation of amoeba associated <i>Legionella pneumophila</i> in water systems of three South African public hospitals	Muchesa P., Leifels M., Jurzik L., George Barnard T., Bartie C.
5	Activity of <i>Legionella</i> bacteria in the cooling water of metal industry	Räsänen P.S., Pitkänen T., Kusnetsov J.
6	Diversity of <i>Legionella</i> in lab-scale activated sludge systems	Nogueira R., Pal R., Rosenwinkel K.H., Purohit H.
7	New concentration method for drinking water samples improving <i>Legionella</i> detection developed in Aquavalens project	Saucedo G., Puigdomènech C., Arnedo M.J., Juárez R., Galofré B., González S.
8	Prevalence of <i>Legionella pneumophila</i> at thermal spas in Algeria	Boilattabi N., Bouanane-Darenfed A.
9	Co-occurrence of <i>Legionella</i> spp. and free living protozoa in drinking water supply systems in Latvia	Valcina O., Pule D., Malisevs A., Trofimova J., Makarova S., Grantina-levina L., Berzins A., Krumina A.
10	Analysis of enviromental drivers and geographical distribution of relevant <i>L. pneumophila</i> MLVA genotypes from the west bank	Zayed A.R., Marina P., Butmeh S., Salah A., Al-Allam H., Abu Tair L., Bahader S.A., Brettar I., Höfle MG., Bitar D.M.
11	The potential adversary effect of <i>Bacillus</i> species on <i>Legionella pneumophila</i> colonization of cooling towers	Paranjape K., Faucher S.P.
12	Distribution and molecular characteristics of <i>Legionella</i> spp. strains isolated from cooling tower and hot spring in Kobe City, Japan	Nakanishi N., Tanaka S., Arikawa K., Iwamoto T.
13	Occurrence of <i>Legionella</i> in UK household showers	Stevenson D., Collins S., Walker J., Bennett A.
14	Detection of <i>Legionella</i> spp. by a new colorimetric Probe Alternation Link Self-Assembly Reaction (PALSAR) method	Morinaka R., Amemura-Maekawa J., Kanatani J., Sasaki M., Isobe J., Haraguchi H., Futo S., Kura F.
15	High prevalence of <i>Legionella</i> in non-passenger merchant vessels - is new guidance required?	Collins S.L., Stevenson D., Mentasti M., Shaw A., Johnson A., Crossley L., Willis C.
16	A new <i>Legionella</i> Monitoring Planin an old hospital water network in continuous hyperchlorination: first results	Marinelli L., Del Cimmuto A., Cottarelli A., Di Bella O., Barbato D., La Torre G., Renzini V., De Giusti M.
17	Investigation the effects of various stress factors on <i>Legionella pneumophila</i> in biofilm layer	Vatansever C., Turetgen I.
18	Use of terminal filters to prevent Legionnaires' disease: measure filter efficacy	Antonioli P., Perrone P., De Lorenzi S., Salvatorelli G.

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19	<i>Legionella</i> prevention in water systems in hospitals: Stakeholders and the process seen from Facility Management	Leiblein T.W., Tucker M., Ashall M., Al Khaddar R., Lee S., Gollnisch C., Hofer S.
20	Rapid detection of <i>Legionella pneumophila</i> by IMS and flow cytometry	Aguilar C., Rachmühl C., Stöckli M., Ehler A.K., Julian A., Morger D., Kesperue H.A.
21	Usefulness of flow cytometry to detect, quantify and evaluate cytotoxicity of <i>Legionella</i> viable but not cultivable	Allegra S., Girardot F., Riffard S.
22	Sampling of <i>Legionella</i> in bioaerosol: an INAIL patent	Gioffrè A., Samele P., Iavicoli S.
23	Comprehensive hospital water system (WS) surveillance identifies factors associated with recovery of <i>Legionella</i>	Brooke K., Decker M.D., Harris P. L., Toy L.D., M. Cloud-Woods S., E. Baumgart L., Muder R., J. Clancy C., F. Sonel A.
24	Prevention of legionellosis in oil industry	Carducci A., Janis B.
25	Evaluation of the efficacy of 3 and 4 months of use microfilters on <i>Legionella pneumophila</i> in real life conditions in a healthcare facility	Cassier P., Coudrais S., Gardes S., Gerbier-Colomban S., Vanhems P., Raymond M.
26	Evaluation of <i>Legionella</i> contamination in water distribution systems of prisons in Sicily (Italy)	Coniglio M.A., Laganà P., Giammanco A., Calà C., Fasciana T., Distefano S., Mascarella C., Piricò V., Pulvirenti D., Mortellaro S., Lavima G., Melfi M., Ingallinella V., Buonora C., Quartarone G., Calì A., La Valle S., Delia S., Palermo M.
27	<i>Legionella</i> and amoeba in hospital cooling tower: monitoring and control	Demarie V., Avanzini C., Giorgione N., Carcieri A., Franzin L.
28	Monochloramine-based "SANIKILL®" patented technology for shock and long-term disinfection of housing water distribution systems	Di Marino O., Doniselli N., Comazzi A., Viganò S.
29	Preliminary data on detection and quantification of viable and VBNC <i>Legionella</i> spp. by culture and PMA-qPCR in water distribution system treated with monochloramine.	Ditomasoa S., Giacomuzzia M., Ricciardia E., Gremob F., Griffab D., Spinac E., Procaccic V., Barezzanid L., Mezzogorid A., Vetroned A., Zottia CM.
30	Inspection body accreditation according to DIN EN ISO/IEC 17020 - a quality assurance measure for cause identification of <i>Legionella</i> contamination in water installations	Gollnisch C.
31	A new fast method to control the Legionellosis risk: the Legio EZ-Test™	Dumont A., Fugier E., Muller A., Paillusson N., Dukan S.
32	CYTO-WATER: A new system for rapid detection and quantification of <i>Legionella</i> in industrial water samples	Soria E., Catalán V., Yáñez A., Fernández-Fuentes M.A., Mellado V., Parker A., Buxton A., Trouchet D., Pérez J.M., Coll T., Amaya W., Hurth C., Jofre M., Martínez P., Pruneri V., Götzen R., Viader G., González S.
33	Can total aerobic bacteria predict the presence of <i>Legionella</i> spp. in cooling towers?	Figueras M.J., Sanchis M., Barbany Salas J.
34	Effect of nanosecond pulsed electric field on <i>Legionella pneumophila</i> in cooling water	Guionet A., Helmi K., Zaepffel C., Packan D., Garnier J.P., Jaffrezic M.P., Ingrand V., Blanckaert V., Teissié J., David F.

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35	Comparison of the anti- <i>legionella</i> fill material against standard polypropylene fill material in recirculating model water system	Türetgen I., Vatansever C., Dobrita D.
36	Microarray-based rapid verification and risk assessment of <i>Legionella</i> by on-chip amplification and live/dead differentiation	Kober C., Niessner R., Seidel M.
37	Long term effectiveness of chlorine dioxide disinfection against <i>Legionella spp</i> : evidence from a large teaching hospital in Rome	Laurenti P., Raponi M., Boccia S., de Waure C., Sezzatini R., Bruno S., Damiani G., Vincenti S.
38	Water safety in the operating rooms-benefits of using filters to prevent microbial contamination	Manoni N., Belgiovine R., Brigida L.
39	Control measures for legionellosis in italian hospitals: a national survey	Montagna M.T., De Giglio O., Rutigliano S., Pacifico C., Napoli C., Agodi A., Auxilia F., Baldovin T., Bisetto F., Brusaferro S., Buseti M., Calagreti G., Casini B., Cristina M.L., Di Luzio R., Fiorio M., Formoso M., Liguori G., Martini E., Molino A., Mondello P., Mura J., Novati R., Orsi G.B., Patroni A., Poli A., Privitera G., Ripabelli G., Rocchetti A., Rose F., Sarti M., Savini S., Silvestri A., Sodano L., Tardivo S., Teti V., Torregrossa M.V., Torri E., Veronesi L., Zarrilli R., Goglio A., Moro M., Pasquarella C.
40	Aptamers: New frontiers in <i>Legionella</i> detection	Saad M., Faucher SP., Tabrizian M.
41	Energy efficiency and hygiene in drinking water installations	Petzold M., Koshkolda T., Löser J., Hoppe S., Lück C., Rühling K.
42	Removal of <i>L. pneumophila</i> by (super)cavitation	Sarc A., Kosel J., Stopar D., Oder M., Dular M.
43	Maximpact of temperature, copper and silver exposure on the viability and recovery of clinical and environmental strains of <i>Legionella pneumophila</i>	Prévost M., Doberva M., Faucher S., Allegra S., Bédard E.
44	Bacterias from <i>Legionella</i> group in thermal water used in swimming pools	Mika A., Kmiecik E., Wątor K.
45	Evaluation of Laboratory kits for <i>Legionella</i> detection by Real Time PCR	Mucci N., Cianfanelli C., Braconcini M., Gianfranceschi G., Santucci S., Valeriani F.
46	Air-bubbles, a “green” new alternative for biofilm removal	Navalón P., Martínez J., Yáñez M.A., Creeswijk S., Catalán V.
47	Hospital-acquired <i>Legionella</i> infection: addressing new challenges and critical issues in the application of the water safety plan	Pierobon A., Lorenzoni M., Berti C., Rosato L., Baldovin T.

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48	Does storage time of samples influence the recovery of <i>Legionella</i> in waters? A study in real environmental water samples	Poznanski E., Romanin E., Freguglia M., Stenico A.
49	<i>Legionella</i> in waterworks: effectiveness evaluation of an innovative method of prevention and control	Boschetto G., Baldovin T., Bertoncello C., Brioni A.
50	Surveillance and containment of <i>Legionella pneumophila</i> in water plumbing systems of the hospital of Padua, Italy	Richter S.N., Sciro M., Vanuzzo M.C., Narne E., Rossi L., Palù G.
51	Validation and effectiveness of a rapid method for <i>Legionella</i> detection (legipid®) in Health Centers	Saa-Casal A., Muñoz-Miguel J., Salvador-Aguilá M., Calvo-Valencia M., Ortega-Llavador B., González Steinbauer C., Ortí-Lucas R.M.
52	Effectiveness of neutral electrolyzed oxidizing water (NEOW) device to reduce <i>Legionella</i> in a water distribution system: comparison between culture, qPCR and PMA-qPCR	Bonetta S.a., Pignata C., Bonetta S.i., Meucci L., Giacosa D., Marino E., Gilli G., Carraro E.
53	A successful experience in controlling hospital acquired <i>Legionella</i> infections: a 6 year experience in a university hospital in north Italy	Cutti S., Muzzi A., Corbella M., Lodola L., Monzillo E., Lanave M., Bonadeo E., Marena C.
54	ISO methods may significantly underestimate <i>Legionella</i> concentration	Shelton B.G., Flanders W.D., Sauerborn Klobučar R.
55	Influence of water temperature on the growth of <i>Legionella</i> in real environmental samples: surveillance in South Tyrol 2011-2016	Stenico A., Seeber M., Romanin E., Prast A. M., Mupo M. R., Blasior P., Oberlechner A., Sigmund T., Ties N., Koch E., Poznanski E.
56	Comparison of chlorine dioxide and Anolyte for a continuous hot water disinfection in a nursing home	Totaro M., Casini B., Valentini P., Frendo L., Porretta A., Privitera G., Baggiani A.
57	Contextualization of italian national guidelines for the prevention and control of legionellosis in a large teaching hospital in Rome	Vincenti S., Boccia S., Berloco F., Cambieri A., Laurenti P.
58	Five-year follow-up of a multifaceted response to an outbreak of Legionnaire's Disease (LD) at a U.S. Veterans Affairs (VA) healthcare system	Decker B.K., Harris P.L., Muder R.R., Sonel A.F., Clancy C.J.
59	A comprehensive system for the prevention of legionellosis in a hospital	Gimigliano M., Talarico F., Minchella P.
60	Breakpoint chlorination as control of <i>Legionella</i> in bath water using flow cytometry	Taguri T., Cai G., Ebisu-Ojim H., Amemura-Maekawa J., Kura F.
61	<i>Legionella</i> control without <i>Legionella</i> testing is guessing	Shelton B.G., Kirkland K.H., Flanders W.D.

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62	Evaluation of <i>Legionella pneumophila</i> cellular viability and nucleic acids stability using copan srk tm environmental collection kit	Martinelli M., Mesumeci R., Calaresu E., Perdoni F., Baisotti V., Zanellato E., Frugoni S., Cocuzza C.
63	Dental unit waterlines: <i>Legionella</i> monitoring and disinfection	Franzin., Demarie V., Mussano P., Arrigoni C., Tealdi R., Mainardi G., Caldarola F., Prandi C., Tegani E., Romano C., Avanzini
64	Assessment of flow cytometry for monitoring microbial water quality monitoring in cooling tower water and oxidizing biocide treatment efficiency in cooling tower	Helmi K., David F., Di Martino P., Ingrand V.
65	ATPmetry - a rapid microbial risk assessment tool for investigation in a suspect Legionnaires' case	Neyrat L., Belotti L., Hernandez C., Foegle J., Deboscker S., Boulay C., Raymond M., Lavigne T.
66	Cultural and RT PCR method comparison: the Udine Arpa Friuli Venezia Giulia Laboratory expertise	Franchi M., Felice A., Pillinini D.
67	Example of management of two groups of dental units in the water safety plan for hospital-acquired <i>Legionella</i> prevention	Lorenzoni M., Pierobon A., Rosato L., Berti C.
68	Genotyping approach on environmental monitoring of <i>Legionella spp.</i> in a hospital hot water network	Mancini B., Iervolino M., Pellati T., Cristino S.
69	Industrial cooling tower, treatment and control measures to prevent <i>Legionella spp</i>	Iervolino M., Mancini B., Cristino S.
70	Legionellosis in Campania: report of the year 2016 and fifteen years of activity of <i>Legionella</i> Reference Laboratory	Rossi A.M., Di Leo F., Lucibello T., Pagano M., Coppola A., Petrosino A., Siani M., Lambiase E., Frusciante M.
71	International return of experience of the application of a comprehensive <i>Legionella</i> risk management scheme on cooling towers and domestic hot water systems in health care facilities	La Mura S., Hercule-Bobroff S., Mathiot J.M.
72	Assessment of new terminal antibacteric filters sbs model wf series for water network applying to network points of sanitary structures for prevention of legionellosis	Sensoli E., Mariotti E.
73	Poseidon Project: Photonics against <i>Legionella</i>	Pierobon R., Bellò B., Vicini I., Rossi G.
74	<i>Legionella</i> detection in Jordan: preliminary data on accommodation sites and water systems	Laboratories Directorate, Water Authority, Amman-Jordan
75	Quantification of <i>Legionella</i> in sanitary water samples by a qPCR method	Ceppetelli V., Omiccioli E., Amagliani G., Grottoli A., Barbadoro P., Ponzio E., Napolitano L., Savini S, Magnani M., Brandi G., D'Errico M.
76	Frequency of free-living amoebae in Italian man-made water environments	Briancesco R., Bonadonna L.
77	Using the DSS to evaluate the effect of chlorine dioxide on biofilm	Pereira A., Martins J.

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