

**6th ClostPath International Conference:
Clostridia: The Impact of Genomics on Disease Control**

Istituto Superiore di Sanità, Rome, Italy 19-23 October 2009

MONDAY 19th OCTOBER 2009

15:30 - 18:00 Registration

16:30 - 17:00 Welcome Address

17:00 - 18:00 **Keynote Lecture** - The Impact of Genomics on Understanding Clostridial Pathogens - G Gottschalk - Göttingen Genomics Laboratory, Germany

18:00 - 19:30 Welcome Cocktail at the Istituto Superiore di Sanità

TUESDAY 20th OCTOBER 2009

Session I : Molecular Epidemiology & Laboratory Diagnosis

CHAIR PERSON – Paola Mastrantonio

9:00 - 9:30 - Application of Molecular Methods to Diagnose CDI and to Study its Epidemiology - E. J. Kuijper - Leiden University Medical Center, The Netherlands

9:30 - 9:50 - Novel Mass Spectral Approaches Based upon Surface-Associated and Stable Intra-Cellular Proteins for the High Throughput Identification of *C. difficile*. - L. Rajakaruna - HPA, London, UK

9:50 - 10:10 - Antibody-Mediated Enhanced Cytotoxicity of *Clostridium difficile* Toxin: Application in Diagnosis - H. Feng - Tufts USA

10:10 - 10:30 - The Enterotoxin Gene (CPE) is Plasmid-Borne in *Clostridium perfringens* Type A Isolates Related to Sudden Infant Death Syndrome - A. Heikinheimo - University of Helsinki, Finland

10:30 - 11:00 Coffee break

Session II: Clostridial Toxins – Part 1

CHAIR PERSON – Maja Rupnik

11:00 - 11:30 - The Role of NetB toxin in Necrotic Enteritis - R. J Moore - Australian Animal Health Laboratory, Geelong, Australia

11:30 - 11:50 - Studies of *C. perfringens* Enterotoxin: Claudin Interactions: Therapeutic Implications? - S.L.Robertson - University of Pittsburgh, USA

11:50 - 12:10 - What Does the 3D-Structure of *Clostridium perfringens* Enterotoxin Reveal? - A. K. Basak - Birkbeck College, London, UK

12:10 - 12:30 - TcsL is an Essential Virulence Factor in *Clostridium sordellii* - G.P. Carter - Monash University, Clayton, Australia

12:30 - 14:00 Lunch

Session III : Clostridial Toxins – Part 2

CHAIR PERSON – Rick Titball

14:00 – 14:30 - *Clostridium difficile* Toxins A and B: Progress in the Understanding of their Mode of Action - I. Just - Hannover Medical School, Germany

14:30 - 14:50 - Toxin B is Essential for Virulence of *Clostridium difficile* - D. Lyras – Monash University, Clayton , Australia

14:50 - 15:10 - Deciphering the Role of TcdE in the Toxin Secretion of *Clostridium difficile* - B. Dupuy - Institut Pasteur, Paris, France

15:10 - 15:30 - TcdE: The Silent Member in the Paloc of *Clostridium difficile*? – A. Olling - Hannover Medical School, Germany

15:30 - 15:50 - A Novel Function of *C. difficile* Transferase and Related Actin-ADP-Ribosylating Toxins - K. Aktories - Albert-Ludwigs-Universität, Freiburg, Germany

15:50 – 16:15 Coffee break

16:15 - 18:00 Poster session I-III

WEDNESDAY 21st OCTOBER 2009

Session IV: Genomics, Metabolomics & Transcriptomics – Part 1

CHAIR PERSON – Wolfgang Liebl

9:00 - 9:30 - Insights Gained From the Study of *Clostridium botulinum* Genomes - T. J. Smith - USAMRIID - Fort Dietrick, USA

9:30 - 9:50 - An Online Resource for Clostridium Genetic Tools - J.T. Heap - University of Nottingham, UK

9:50 - 10:10 - Cold Tolerance of *Clostridium botulinum* - M. Lindström - University of Helsinki, Finland

10:10 - 10:30 - Global Gene Regulation in Response to Cysteine Availability in *Clostridium perfringens* - I. Martin-Verstraete - Institut Pasteur, Paris, France

10:30 - 11:00 Coffee break

Session V: Genomics, Metabolomics & Transcriptomics – Part 2

CHAIR PERSON – Nigel Minton

11:00 - 11:30 - Comparative Genome and Phenotypic Analysis of *Clostridium difficile* O27 Strains Provides Insight into the Evolution of a Hypervirulent Bacterium – R.A. Stabler - London School of Hygiene & Tropical Medicine, London, UK

11:30 - 11:50 - Comparative Proteomic Analysis of *Clostridium difficile* - C. Chilton – HPA Centre for Infections, London, UK

11:50 - 12:10 - Transcriptional Profiling of *Clostridium difficile* and Caco-2 Cells During Infection - T. Janvilisri - Cornell University, Ithaca, USA

12:10 - 12:30 - Understanding the Pathogenesis of *Clostridium difficile* by an *in vivo* Transcriptomic Approach - C. Janoir - Faculté de Pharmacie, Chatenay-Malabry, France

12:30 - 14:00 Lunch

Session VI: Regulation of Virulence Genes

CHAIR PERSON – Julian Rood

14:00 - 14:30 - Complex Regulatory Networks for Virulence in *C. perfringens* - T. Shimizu - Kanazawa University – Japan

14:30 - 14:50 - Regulation of NetB Production in *Clostridium perfringens* - J.K. Cheung - Monash University, Clayton, Australia

14:50 - 15:10 - Impact of Carbon Catabolite Repression in the *C. difficile* Physiopathology - A. Antunes - Institut Pasteur, Paris, France

15:10 - 15:30 - Elucidating the Mechanisms of Sporulation in *Clostridium difficile* - A. Faulds-Pain - University of Nottingham and HPA, UK

15:30 - 16:00 Coffee break

16:00 Networking Discussions

THURSDAY 22nd OCTOBER 2009

Session VII: Host-Pathogen Interactions

CHAIR PERSON – Glenn Songer

9:00 - 9:30 - Understanding the Role of Antibiotics in Inducing *Clostridium difficile* infection - M. Wilcox - University of Leeds, UK

9:30 - 9:50 - Passage of Botulinum Neurotoxin A through the Intestinal Barrier - M. R. Popoff - Institut Pasteur, Paris, France

9:50 - 10:10 - Biogenesis of the *C. difficile* S-Layer - R. P. Fagan - Imperial College London, London, UK

10:10 - 10:30 - Contact with Enterocytes Causes Vir S/Vir R-Mediated Upregulation of Beta Toxin Production by *C. perfringens* Type C Isolates - B. McClane - University of Pittsburgh, USA

10:30 - 11:00 Coffee break

Session VIII: Veterinary Diseases and Animal Models

CHAIR PERSON – Miia Lindström

11:00 - 11:30 - Main Clostridial Diseases in Animals – V. Båverud - National Veterinary Institute, Uppsala, Sweden
11:30 - 11:50 - Mouse Models for Studying *Clostridium perfringens* Type C Infections - F.A. Uzal - University of California, Davis, USA
11:50 - 12:10 - Epidemiology of Enterotoxaemia in Flemish Veal Calves - B. Pardon – Ghent University, Belgium
12:10 - 12:30 - Prevalence of *Clostridium difficile* in Piglets With and Without Diarrhoea in Australia - T.V. Riley - The University of Western Australia, Nedlands, Australia
12:30 - 14:00 Lunch

Session IX: Treatment & Exploitation

CHAIR PERSON – Bruce McClane

14:00 - 14:30 - Clostridia Associated Infections: New Weapons From Emerging Vaccines? - I. Castagliuolo - University of Padova, Italy
14:30 - 14:50 - A Live Recombinant Oral Vaccine Expressing *Clostridium perfringens* Antigens Confers Protection of Broiler Chickens Against Necrotic Enteritis - J. F. Prescott - University of Guelph, Canada
14:50 - 15:20 - Clostridial Neurotoxins as a Platform for Novel Therapeutics - K. Foster - Syntaxin Limited, Abingdon, UK
15:20 - 15:40 - Vaccination with Parenteral Toxoid B Protects Hamsters Against Lethal Challenge with Toxin A-Negative/B-Positive *Clostridium difficile* but does not Prevent Colonization - S. Johnson - Hines VA Hospital, Chicago, USA
15:40 - 16:00 Antibody-Based Therapeutics for *Clostridium difficile* Infection - C. Shone - HPA, Porton Down, Salisbury, UK
16:00 - 16:30 Coffee break
16:30 - 18:00 Poster session IV-IX
20:00 - 23:00 Farewell Dinner at “Taverna dei Mercanti”, Trastevere, Rome

FRIDAY 23rd OCTOBER 2009

Special Public Session

9:30 - 10:15 - Clostridium Infections: Afflictions For All Seasons - Sherwood Gorbach - Tufts University School of Medicine, Boston, USA
10:15 - 10:30 - Training the next generation of European Clostridium Researchers - Nigel Minton – Nottingham University, UK
10:30 - 11:00 Coffee Break
11:00 - 11:20 - *Clostridium botulinum* in Italy - Paolo Aureli - Istituto Superiore di Sanità, Italy
11:20 - 11:40 - *Clostridium difficile* in Italy - Paola Mastrantonio - Istituto Superiore di Sanità, Italy
11:40 - 12:00 Questions & Answers