

Current trends in Biomedicine

Bacterial type IV secretion systems in human disease

2008 Workshops

Organized jointly by the

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Scope

Bacterial type IV secretion systems are versatile macromolecular transporters that play a dual role in bacterial infection. First, as bacterial conjugation systems these nanomachines mediate the transfer of mobile DNA elements between bacteria and thereby facilitate the spread of pathogenicity factors and antibiotic resistances within bacterial populations. Second, type IV secretion systems facilitate the direct translocation of macromolecular pathogenicity factors from the bacterial cytoplasm into the cytosol of infected host cells. Several human pathogens, such as *Helicobacter pylori*, *Legionella pneumophila*, and *Bartonella henselae*, utilize type IV secretion systems to translocate a number of different effector proteins that individually can subvert cellular functions to the benefit of the pathogen. For many of these pathogens, important biological questions are being addressed, including the biochemical mechanisms by which effector proteins are delivered, how they function and the overall effect the full repertoire of effector proteins has on a disease process. The aim of this workshop is to bring together scientists working on different aspects of type IV secretion in order to communicate recent advances in our understanding of the role and function of type IV secretion systems in human disease. Discussions will focus on the structure of the type IV machinery, the secretion mechanism, the nature of the translocated effectors and their specific roles in manipulating the human host.

Format of the Workshop

The workshop will bring together 17 speakers and a maximum of 50 participants (including speakers). The scientific programme will start in the morning of Tuesday, October 14, and will end around noon on Thursday, October 16. Ample time for informal discussion will be reserved. Participants will be invited to present a poster.

Venue of the Workshop

The workshop will be held in Baeza, at the "Sede Antonio Machado", a XVII century building turned into a Conference Centre of the Universidad Internacional de Andalucía (UNIA). This Seat includes a recently restored residence, where participants will be accommodated. Baeza is a World Historic Heritage town, renowned for its Renaissance and Gothic buildings.

Organized by:

Christoph Dehio. Biozentrum, University of Basel. Basel, Switzerland.

Matxalen Llosa. Instituto de Biomedicina y Biotecnología de Cantabria, CSIC-Universidad de Cantabria. Santander, Spain.

Craig R. Roy. Yale University School of Medicine. New Haven, USA.

Speakers

Steffen Backert. Department of Medical Microbiology, Otto von Guericke University. Magdeburg, Germany.

Christian Baron. Université de Montréal, Département de Biochimie. Montréal, QC, Canada.

Peter J. Christie. Department of Microbiology and Molecular Genetics, University of Texas-Houston Medical School. Houston, TX, USA.

Fernando de la Cruz. Departamento de Biología Molecular, Universidad de Cantabria e Instituto de Biomedicina y Biotecnología de Cantabria (CSIC-UC-IDICAN). Santander, Spain.

Christoph Dehio. Focal Area Infection Biology, Biozentrum, University of Basel. Basel, Switzerland.

Joseph P. Dillard. Department of Medical Microbiology and Immunology, University of Wisconsin-Madison. Madison, WI, USA.

Jean-Pierre Gorvel. Centre d'Immunologie de Marseille Luminy, INSERM U631, CNRS, Aix-Marseille University. Marseille, France.

Rainer Haas. Max von Pettenkofer-Institute for Hygiene and Medical Microbiology, Ludwig-Maximilians-University. Munich, Germany.

Robert A. Heinzen. Coxiella Pathogenesis Section, Laboratory of Intracellular Parasites, Rocky Mountain Laboratories, National Institute of Allergy and Infectious Diseases, NIH. Hamilton, MT, USA.

Matxalen Llosa. Departamento de Biología Molecular, Universidad de Cantabria, e Instituto de Biomedicina y Biotecnología de Cantabria (CSIC-UC-IDICAN). Santander, Spain.

Yasuko Rikihisa. Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University. Columbus, OH, USA.

Craig R. Roy. Section of Microbial Pathogenesis, Yale University School of Medicine, Boyer Center for Molecular Medicine. New Haven, CT, USA.

Rodolfo A. Ugalde. Instituto de Investigaciones Biotecnológicas, Universidad Nacional de General San Martín, CONICET. Buenos Aires, Argentina.

Annette C. Vergunst. INSERM Espri26, Université de Montpellier 1, UFR Médecine. Nîmes, France.

Joseph P. Vogel. Department of Molecular Microbiology, Washington University. St. Louis, MO, USA.

Gabriel Waksman. Institute of Structural Molecular Biology, Birkbeck College and University College London. London, United Kingdom.

Patricia Zambryski. Department of Plant and Microbial Biology, University of California, Berkeley. Berkeley, CA, USA.

Baeza, Spain
14-16 October 2008

Deadline:
25 July 2008

Venue:

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More information and application:

<http://www.unia.es/biomedicineworkshops/workshops2008.htm>

