ROBERT KOCH INSTITUT

Final Program

6th International Conference on Tularemia

13 – 16 September 2009 | Berlin, Germany

Charité Campus Mitte (CCM)

www.tularemia-network.com

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The **6th International Conference on Tularemia** will be held at Charité, Berlin, from 13 to 16 September 2009. This university hospital complex combines a long history, beginning in 1710 as "Plague-House", with today's very modern achievements. After the re-unification of Germany in 1989, the Charité became the medical school for both the Humboldt University and the Free University of Berlin. With four campuses, it is one of the largest university hospitals in Europe with 15,000 employees and 8,000 students.

It is also the place where many famous physicians and scientists have worked or studied for at least part of their academic lives, such as the Nobel Prize winners Emil Adolf von Behring (1854–1917), Paul Ehrlich (1854–1915), and Rudolf Virchow (1821–1902). In particular, the microbiologist Robert Koch (1843–1910) must be mentioned since the 100th anniversary of his death will be commemorated next year. Notably, Robert Koch established basic methods and approaches which later supported the discovery of *Francisella*. Therefore, the team of the Robert Koch-Institute is pleased to serve as the local organizers of the conference, and we cordially welcome all participants to Berlin.

As with all Tularemia conferences before, the **6th International Conference on Tularemia** hopes to be a top forum for the exchange of knowledge about tularemia and its causative agent, *Francisella tularensis*, and of all aspects of clinical, applied and fundamental research. Over the years since the first conference, the interest in this disease and its causative agent has been steadily growing. In addition to raised awareness because of the agent's possible intentional usage, in some regions of the world it also causes epidemics and affects humans and animals. There is a real need to understand the pathology and biological mechanisms of infection, as well as the epidemiology and ecology of these bacteria, in order to develop new treatments and vaccines. Moreover, *Francisella* is a fascinating model organism for studying the behaviour of facultative intracellular bacteria in interaction with their target cells.

This interest and the increasing need for communication, exchange of experience and materials, and training in diagnostics and research methods has led to the idea of creating a Tularemia International Society. Under the umbrella and with active participation of WHO, a group of scientists has met twice in Berlin at the Robert Koch-Institute to develop this idea. We would like to use this conference to further discuss the idea of a Tularemia Society, with a view to taking the first steps towards launching this Society.

The comprehensive program of the **6th International Conference on Tularemia** is the result of the input by the Tularemia community and the intensive work of the Scientific Committee. We are looking forward to an exciting and useful conference that will provide the platform for new ideas, and serve as a gathering of colleagues and friends.

On behalf of the Scientific Committee and the Local Organizing Committee

Roland Grunow

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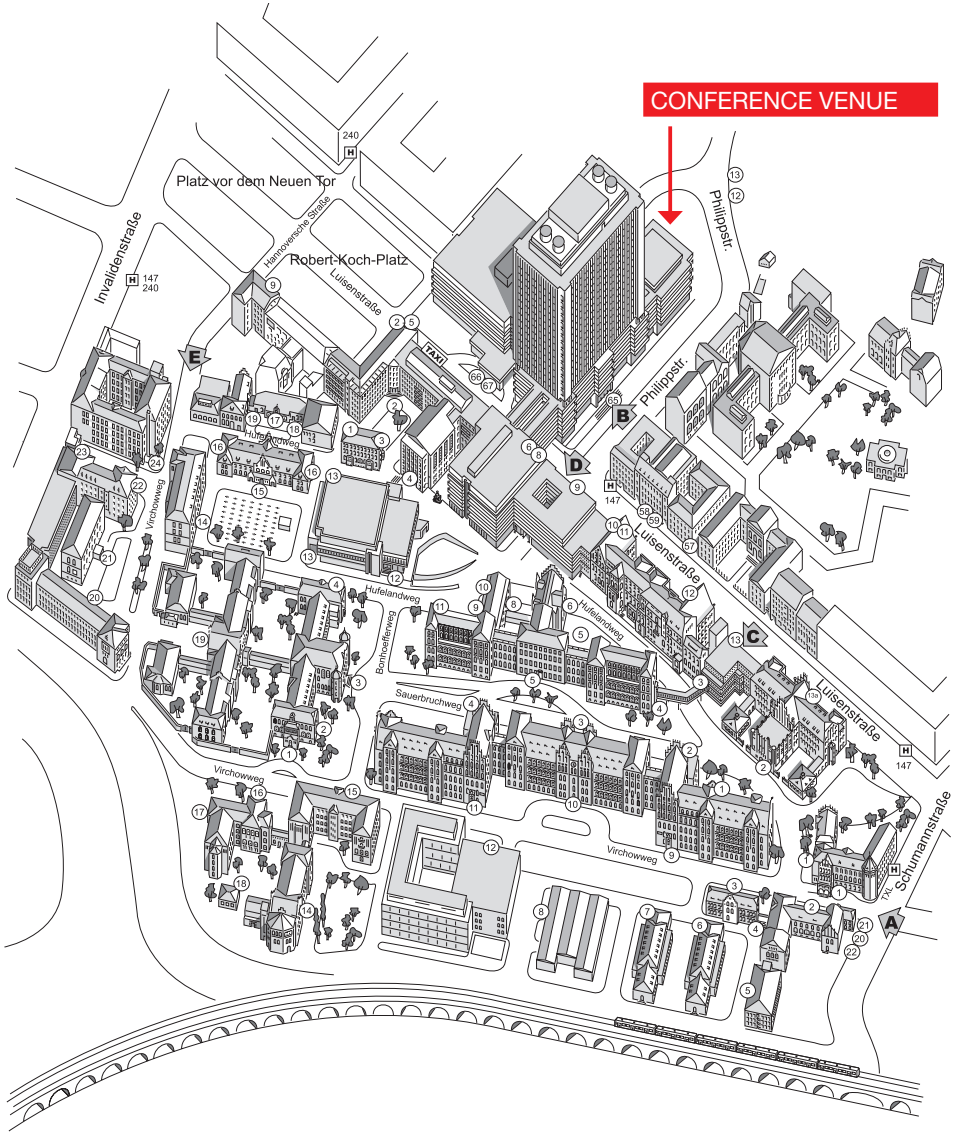

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The congress program is structured thematically and within the scientific program section chronological per day.

LEGEND

PLENARY SESSIONS

SYMPOSIA

POSTER SESSIONS

ROUND TABLE DISCUSSION

TULAREMIA INTERNATIONAL SOCIETY

IMPRINT

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TIME	AUDITORIUM	FOYER
09.30 – 11.00 h		Registration
		Poster Installation of Poster Session 1
11.00 – 12.20 h	Opening Session	
12.20 – 13.30 h		Lunch
13.30 – 15.00 h	S1 – Genomics / Proteomics / Genetics of *Francisella*	
15.00 – 15.30 h		Coffee
15.30 – 17.00 h	S2 – Virulence factors associated with intracellular growth of *Francisella*	
17.00 – 19.30 h	Poster Viewing Part 1	Get-Together
19.30 – 20.15 h	Interactive Round Table Discussion – Comparative Biology of Intracellular Growth	

11.00 – 12.20 h AUDITORIUM

Opening Session – Welcome Address

Opening and Welcome Notes
Jörg Hacker, President of the Robert Koch-Institute (Germany)

The Idea of a Tularemia International Society
May Chu, WHO (Switzerland)

Introduction of the Keynote Speaker
Roland Grunow, Robert Koch-Institute (Germany)

The present and future *Francisella* research
Anders Sjöstedt, University of Umeå (Sweden)

13.30 – 15.00 h AUDITORIUM

S 1 – Genomics / Proteomics / Genetics of *Francisella*

Chairs: Anders Sjöstedt, University Umeå (Sweden)
Vitaly Pavlov, SRC for AMB Obolensk (Russia)

Characterization of an essential virulence factor
Barbara Mann, University of Virginia (USA) *25 min*

Macrophage screen identifies *Francisella* genes required for intracellular replication
David Weiss, Emory University (USA) *25 min*

Determining the function of the cytoplasmic membrane protein RipA
Brittany Mortensen, University of North Carolina-Chapel Hill (USA) *20 min*

Attenuation and protective efficacy of live vaccine strain mutants deficient in capsule-like material
Anna Champion, Virginia Polytechnic and State University (USA) *20 min*

15.30 – 17.00 h AUDITORIUM

S 2 – Virulence Factors Associated with Intracellular Growth of *Francisella*

Chairs: Francis Nano, University of Victoria (Canada)
Alain Charbit, Université Paris Descarte (France)

Intracellular nutrition and *F. tularensis* pathogenesis
Alain Charbit, Université Paris (France) *25 min*

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Type 6 Secretion in *Francisella*?
Francis Nano, University of Victoria (Canada) — *25 min*

***Francisella novicida* and innate immune surveillance mechanisms**
Denise Monack, Stanford University (USA) — *20 min*

Role of Type IV pilin genes in virulence of *Francisella tularensis* subspecies *holarctica* and *tularensis*
Anna-Lena Forslund, FOI Swedish Defence Research Agency (Sweden) — *20 min*

17.30 – 19.00 h — FOYER

P1 – Poster Viewing Part 1

Molecular Analyses and Epidemiology / Persistence and Disease Control

P1-01 **A constraints-based systems approach to metabolic analysis of *Francisella tularensis* during infection**
Simon Daefler, Mount Sinai School of Medicine (United States)

P1-03 ***Francisella novicida* as a model to study tick transmission**
Susan Noh, USDA-Agriculture Research Service (United States)

P1-04 **Molecular typing of *Francisella tularensis* strains isolated in Georgia**
Gvantsa Chanturia, National Center for Disease Control and Public Health (Georgia)

P1-05 **Phenotypical analysis of the putative 2nd polysaccharide gene cluster of *Francisella tularensis***
Rebecca Thomas, Dstl Porton Down (United Kingdom)

P1-06 **Effect of Hfq on *Francisella tularensis* growth and stress resistance**
Jacob Chambers, Southern Illinois University (United States)

P1-07 **Analysis of membrane protein complexes of *F. tularensis* and their response to iron restriction studied by Blue native PAGE and DIGE**
Jana Klimentova, University of Defence, Faculty of Military Health Sciences (Czech Republic)

P1-08 **Production of outer membrane vesicles and tube-like structures by *Francisella tularensis***
William McCaig, Stony Brook University (United States)

P1-09 **The phosphoproteome of pathogenic bacterium *Francisella tularensis***
Petra Spidlova, University of Defence, Faculty of Military Health Sciences (Czech Republic)

P1-10 **Comparative proteome analysis of *Francisella tularensis* LVS and DsbA deletion mutant: identification of potential substrate proteins for the DsbA**
Ivona Pavkova, Faculty of Military Health Science, University of Defence (Czech Republic)

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P1-11 **Analysis of the phenotype associated with the disruption of *mglA* in *Francisella tularensis* LVS underlines its central role in manifestation of virulence**
Galia Zaide, Israel Institue for Biological Research (Israel)

P1-12 **Mapping the presence of *Francisella tularensis* glycoproteins**
Lucie Balonova, University of Defence (Czech Republic)

P1-13 **The only alternative σ factor of *Francisella tularensis* is a genuine heat shock σ factor**
Karin Meibom, Université Paris V René Descartes (France)

P1-14 **Genotyping of the Health Protection Agency *Francisella* strain collection**
Jennie Latham, Health Protection Agency (United Kingdom)

P1-15 **A screen of screens: Genes required for intracellular replication vs. *in vivo* virulence**
Anna Llewellyn, Emory University (United States)

P1-16a **Identification and differentiating of *Francisella* by metabolic profiling**
William Dorman, U.S. Army Medical Research Institute of Infectious Diseases, USAMRIID (United States)

P1-16b **Characterization of the secreted effector protein IglC in *Francisella tularensis* virulence**
Jeffrey Barker, University of Texas at San Antonio / South Texas Center for Emerging Infectious Diseases (United States)

P1-17 **Carbon substrate utilization patterns for the phenotypic differentiation between *Francisella* species and *Francisella tularensis* subspecies**
Martin Weber, Bundeswehr Institute of Microbiology (Germany)

P1-18 **Non-antibiotic selectable markers for *Francisella tularensis* strains LVS and Schu S4**
Stephanie Smith, Battelle Memorial Institute (United States)

P1-19 ***Francisella tularensis* requires FeoB for acquisition of iron, intracellular growth, and virulence**
Huaixin Zheng, Stony Brook University (United States)

P1-20 **A surface exposed protein encoded by *ftt*1103 mediates internalization of *F. tularensis* Schu S4 into host cells**
Aiping Qin, University of Virginia (United States)

P1-21 **Results from screening the *F. novicida* transposon two-allele mutant library**
Xin-He Lai, Oregon Health Science Univeristy (United States)

P1-22 **Identification of *Francisella* loci that impact expression of *ripA***
Todd Kijek, University of North Carolina (United States)

P1-23 **Small molecule control of virulence gene expression in *Francisella tularensis***
James Charity, Harvard Medical School (United States)

P1-24 **Siderophore utilization in *Francisella tularensis* Live Vaccine Strain (LVS)**
Girija Ramakrishnan, University of Virginia (United States)

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P1-25 **Use of a *Galleria mellonella* alternative host system for the identification of *Francisella* virulence factors**
Nathan Fisher, United States Army Medical Research Institute of Infectious Disease (United States)

P1-26 **Identification of *Francisella tularensis* live vaccine strain CuZn superoxide dismutase as critical for resistance to H host generated reactive oxygen/nitrogen species**
Chandra Bakshi, Albany Medical College (United States)

P1-27 ***Francisella* secretes proteins encoded in the Pathogenicity Island**
Rebekah Hare-Sanford, University of Alaska Fairbanks (United States)

P1-28 **Type IV pilin-like proteins of *Francisella tularensis* contribute to virulence in a context-dependent manner**
Nicole Ark, University of Virginia (United States)

P1-29 **Comparison of mutational patterns of laboratory and naturally propagated *F. tularensis* strains**
Andreas Sjödin, FOI – Swedish Defence Research Agency (Sweden)

P1-30 **Membrane lipoproteins in *Francisella tularensis* ssp. *holarctica* pathogenicity**
Adela Straskova,University of Defence, Faculty of Military Health Sciences (Czech Republic)

P1-31 **Analysis of proteins of *Francisella tularensis* in the site of infection by laser microdissection and tandem mass spectrometry**
Martin Hubalek, University of Defence (Czech Republic)

P1-32 **Protein secretion via outer membrane vesicles in *F. tularensis***
Klara Konecna, Faculty of Military Health Science, University of Defence (Czech Republic)

P1-33 **Idenfication of *Francisella* genes required for virulence and escape into the cytoplasm of macrophages**
Rexford Asare, University of Louisville (United States)

P1-34 **Validation of Etest® for the determination of antibiotic susceptibilities of *Francisella tularensis***
Eric Valade, IRBA/CRSSA (France)

P1-35 **Tularemia wet-lab exercise**
Mats Forsman, Sweden Defence Research Agency (Sweden)

P1-36 **Development of reference material to perform proficiency tests for the diagnosis of highly pathogenic bacteria, including *Francisella tularensis***
Uschi Sauer, Robert Koch-Institute (Germany)

P1-37 **Rapid identification of *Francisella tularensis* by pyrosequencing of a 16S rDNA fragment**
Benjamin Edvinsson, Swedish Institute for Infectious Disease Control, SMI (Sweden)

P1-39 **Therapy approach and problems in treatment tularemic patients in Serbia**
Marina Djordjevic, Clinical Center University of Nis (Serbia)

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P1-40 **Detection of *Francisella tularensis* in the European hare by real-time TaqMan PCR**
Nora Madani, French Food Safety Agency (AFSSA) (France)

P1-41 **Antimicrobial susceptibility patterns of *Francisella* species from Central Europe with standardized broth microdilution testing**
Enrico Georgi, Bundeswehr Institute of Microbiology (Germany)

P1-42 **Prolonged course of tick-borne ulceroglandular tularemia in a 20-year-old patient in Germany – case report**
Christoph Luebbert, Martin Luther University Halle-Wittenberg (Germany)

P1-43 **First isolation of *Francisella tularensis* subspecies *holarctica* from foxes (*Vulpes vulpes*) in Germany**
Herbert Nattermann, Robert Koch-Institute (Germany)

P1-44 **Evaluation of an immunochromatographic test (ICT) for the rapid and reliable serodiagnosis of human tularemia and the detection of anti-*F. tularensis* antibodies in serum from different mammalian species**
Wolf Splettstoesser, Bundeswehr Institute of Microbiology (Germany)

P1-45 **Enhanced growth of *Francisella tularensis* in a liquid nutrient medium (medium T)**
Daniela Jacob, Robert Koch-Institute (Germany)

P1-46 **Prevalence of *Francisella tularensis* in European brown hare populations in Lower Saxony, Germany**
Martin Runge, LAVES – Veterinary Institute Hannover (Germany)

19.30 – 20.15 h AUDITORIUM

Interactive Round-Table Discussion
Comparative Biology of Intracellular Growth

Chairs: Marcus Horwitz, UCLA (USA)
Discussants: Marcus Horwitz, UCLA (USA)
Yousef Abu-Kwaik, University of Louisville (USA)
Karsten Hueffer, University of Alaska Fairbanks (USA)

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TIME	AUDITORIUM	FOYER
08.30 – 09.00 h		Removal of Posters from Poster Session 1
09.00 – 10.30 h	S3 – Molecular and Biochemical Analysis of *Francisella*	
10.30 – 11.00 h		Coffee
11.00 – 12.15 h	S4 – Short Presentations	
12.15 – 13.30 h		Lunch
		Poster Installation of Poster Session 2
13.30 – 15.00 h	S5 – Molecular Epidemiology, Population Genetics and Taxonomy of *Francisella*	
15.00 – 15.30 h		Coffee
15.30 – 16.40 h	S6 – Molecular mechanisms for *F. tularensis* persistence and targets for disease control	
16.50 – 17.30 h	Meeting on Formation of the Tularemia International Society	
17.30 – 20.00 h	Poster Viewing Part 2	Get-Together

09.00 – 10.30 h AUDITORIUM

S 3 – Molecular and Biochemical Analysis of *Francisella*

Chairs: Karl Klose, University of Texas at San Antonio (USA)
Petra Oyston, Defence Science and Technology Laboratory, DSTL (United Kingdom)

The *Francisella tularensis* Pathogenicity Island Encodes a Secretion System that is required for Phagosome Escape and Virulence
Karl Klose, University of Texas at San Antonio (USA) *25 min*

Small molecule control of *Francisella* virulence gene expression
Simon Dove, Harvard Medical School (USA) *25 min*

Global regulation in *Francisella tularensis*
Petra Oyston, Defence Science and Technology Laboratory, DSTL (United Kingdom) *20 min*

A genome-scale phenotype map of *Francisella novicida*
Colin Manoil, University of Washington (USA) *20 min*

11.00 – 12.15 h AUDITORIUM

S 4 – Short Presentations

Chairs: May Chu, WHO (Switzerland)
Sam Telford, Tufts University (USA)

Heterologous expression of *Francisella tularensis* type IV pili genes in *Neisseria gonorrhoeae* confirms that PilA can form functional pili
Emelie Salomonsson, FOI – CBRN Defence and Security (Sweden) *15 min*

Identification of *F. tularensis* from environmental water specimens in tularemia epidemics in Turkey by both culture and real time TaqMan PCR methods
Aynur Karadenizli, Kocaeli University Medical Faculty (Turkey) *15 min*

Characterization of a novel *Francisella* sp. from blood and urine of a patient with an unusual clinical presentation
Raquel Escudero, National Center of Microbiology, ISCIII (Spain) *10 min*

Description of *'Francisella novicida'* FSC454^T as a novel species of the genus *Francisella*
Hans-Jürgen Busse, Institute of Bacteriology, Mycology & Hygiene se (Austria) *10 min*

Identification of potential tularemia biomarkers from *Francisella* infected plasma
James Chambers, University of Texas at San Antonio (USA) *15 min*

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13.30 – 15.00 h AUDITORIUM

S 5 – Molecular Epidemiology, Population Genetics and Taxonomy of *Francisella*

Chairs: Anders Johansson, University Umeå, FOI (Sweden)
Raquel Escudero, Instituto de Salud Carlos III (Spain)
Fang Zhang, Beijing Institute of Microbiology and Epidemiology (China)

Phylogeography of *Francisella tularensis*: Whole genome sequences and SNP analysis defining the clade and lineage structure of a highly clonal complex
Paul Keim, Northern Arizona University (USA) *25 min*

A1b, a subpopulation of *F. tularensis* subsp. *tularensis* associated with mortality in humans
Jeannine Petersen, Centers of Disease Control and Prevention (USA) *25 min*

A radical change in bacterial population structure was linked to the evolution of *Francisella tularensis*
Pär Larsson, Swedish Defence Research Agency, FOI (Sweden) *20 min*

Clash of clones? Distinct geographical distribution of an emerging subclone of *Francisella tularensis holarctica* in Germany and Central Europe
Wolf Splettstoesser, Bundeswehr Institute of Microbiology (Germany) *20 min*

15.30 – 16.40 h AUDITORIUM

S 6 – Molecular Mechanisms for *F. tularensis* Persistence and Targets for Disease Control

Chairs: Mats Forsman, FOI (Sweden)
Jeannine Petersen, Centers for Disease Control (USA)

QseC-inhibitors as potential therapeutics to *Francisella tularensis*
Vanessa Sperandio, UT Southwestern Medical Center (USA) *25 min*

Environmental amoebae as potential reservoirs for *Francisella tularensis*: Identification of molecular determinants of environmental persistence
Amy Rasley, Lawrence Livermore National Laboratory (USA) *25 min*

Interaction of mosquito larvae with *Francisella tularensis* LVS biofilms
Tamara McNealy, Clemson University, Biological Sciences (USA) *20 min*

16.50 – 17.30 h AUDITORIUM

Meeting on Formation of the Tularemia International Society

- Presentation of Board Candidates
- Formalities
- Election of the Board

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17.30 – 20.00 h FOYER

P2 – Poster Viewing Part 2

Epidemiology and Ecology / Cell Biology / Host Response and Vaccines

P2-01 ***Francisella* Sec secretion contributes to attachment during biofilm formation and chitin colonization**
Jeffrey Margolis, Stanford University (United States)

P2-03 **Evaluation of the vector competence of *Dermacentor variabilis* (American dog tick) for transmission of *Francisella tularensis***
Sara Reese, Centers for Disease Control and Prevention (United States)

P2-05 **Isolation of *Francisella tularensis* from mandibular lymph nodes of red foxes indicates active natural foci in Austria**
Erwin Hofer, Institute for Veterinary Disease Control in Mödling, Austrian Agency for Health and Food Safety (AGES), (Austria)

P2-06 **Association and uptake of *Francisella tularensis* subspecies *holarctica* into mosquitoes**
Peter Mathisen, Swedish Defence Research Agency (FOI) and Umeå University (Sweden)

P2-07 **Tularemia distribution 1924 – 1974 – Review of tularemia infections in man researched from published reports, local and national Infectious Disease notification systems**
Andrew Pearson, Health Protection Agency (United Kingdom)

P2-08 **Extra- and intracellular proliferation of *Francisella tularensis* (LVS) in presence of amoebae**
Roland Grunow, Robert Koch-Institute (Germany)

P2-09 **Application of multiple-locus variable number tandem repeat analysis (MLVA) for subtyping of Swedish isolates of *Francisella tularensis***
Tara Wahab, Swedish Institute for Infectious Disease Control (Sweden)

P2-10 **An outbreak of tularaemia in Tuscany, Central Italy, linked to a natural spring water**
Massimo Fabbi, Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna (Italy)

P2-11 **Development of a Multiple-Locus Variable number of tandem repeat Analysis (MLVA) for Chinese *Francisella tularensis* and its application to some strains**
Fang Zhang, The Center for Disease Control and Prevention of Lanzhou Command (China)

P2-12 ***Francisella*-like endosymbiont in *Dermacentor reticulatus* collected in North of Portugal**
Isabel Lopes de Carvalho, Instituto Nacional de Saúde Dr. Ricardo Jorge (Portugal)

P2-13 **Longterm follow up of a natural focus of tularemia in south-west Slovakia**
Vanda Výrosteková, Comenius University, Medical Faculty (Slovakia)
Acknowledgements: This work was supported by grants VEGA 1/4281/07, 2/7020/7 and APVT-51-004702

P2-14 **The course of tularemia in Kosovo since the first outbreak in 1999**
Roland Grunow, Robert Koch-Institute (Germany)

P2-15 **Epidemiologic situation in the occurrence of tularemia in Slovakia, 1997 – 2008**
Vanda Výrosteková, Comenius University, Medical Faculty (Slovakia)
Acknowledgements: This work was supported by grants VEGA 1/4281/07 and APVT-51-004702 To

P2-16 **Tularaemia seroprevalence studies under foxes and raccoon dogs in Germany**
Andrea Kuehn, Robert Koch-Institute (Germany)

P2-17 **Monitoring the survival of fish *Francisella* pathogens in aquatic microcosms**
Samuel Duodu, National Veterinary Institute (Norway)

P2-18 **Rodent population dynamics and human tularaemia epidemics: Historical perspective on the antiquity of tularaemia foci deduced from the association of lemming fever and tularemia-like disease in man and rodents**
Andrew Pearson, Health Protection Agency (United Kingdom)

P2-19 **Descriptive epidemiology of tularaemia cases in two areas of Sweden during outbreaks between 1966 and 1973**
Andrew Pearson, Health Protection Agency (United Kingdom)

P2-20 **Oropharyngeal tularemia – Clinical epidemiology of oropharyngeal tularemia in Scandinavia 1924 – 1974**
Andrew Pearson, Health Protection Agency (United Kingdom)

P2-21 **A real-time PCR array for hierarchal identification of environmental and human pathogenic *Francisella***
Kerstin Svensson, Swedish Defence Research Agency (FOI) (Sweden)

P2-22 **The role of functionally distinct T cell subsets and antibody in protection against pulmonary infections of *Francisella tularensis* Schu S4**
Rebecca Anderson, NIH/NIAID/LICP (United States)

P2-23 **The efficacy of oral vaccination with a defined *Francisella* vaccine strain in inducing protective immunity against pneumonic tularemia**
Jieh-Juen Yu, University of Texas at San Antonio (United States)

P2-24 ***Francisella tularensis* suppresses the proinflammatory response of endothelial cells via the endothelial protein C receptor**
DeAnna Bublitz, Stony Brook University (United States)

P2-25 **Early immune responses to the Live vaccine strain and Schu S4 infection in cynomolgus macaques**
Amanda DuBois, University of New Mexico (United States)

P2-26 **The pathology of *Francisella tularensis* Schu S4 in Cynomolgus macaques**
Julie Hutt, Lovelace Respiratory Research Institute (United States)

P2-27 ***Francisella tularensis* targets protein kinase C-alpha to arrest phagosome maturation at a novel stage prior to compartment disruption and escape**
Lee-Ann Allen, University of Iowa (United States)

P2-28 **T cell Epitope Identification in *F. tularensis***
Jeffrey Frelinger, University of North Carolina (United States)

P2-29 **Characterization of aerosol infection with *F. tularensis* Schu S4 in cynomolgus macaques and LD_{50}determination**
Michelle Valderas, Lovelace Biomedical and Environmental Research Institute (United States)

P2-30 **Innate immune signalling in response to *Francisella tularensis***
Richard Saint, DSTL (United Kingdom)

P2-31 **Pyrin enhances IL-1β processing and release in response to *Francisella***
Mikhail Gavrilin, The Ohio State University (United States)

P2-32 **A partial screen for *Francisella tularensis* virulence determinants using *Drosophila melanogaster***
Svenja Stöven, Umeå University (Sweden)

P2-33 **miR155 targets SHIP to enhance host response against *Francisella* infection**
Thomas Cremer, The Ohio State University (United States)

P2-34 **The mode of phagocytic uptake determines *Francisella tularensis* subsp. *tularensis* Schu S4 intracellular fate**
Henriette Geier, Rocky Mountain Laboratories (United States)

P2-35 **A novel role for *Francisella tularensis* antioxidant enzymes in modulating human macrophage signaling and activation**
Amanda Melillo, Albany Medical College (United States)

P2-36 **A capsule-deficient mutant of *Francisella tularensis* live vaccine strain is significantly more attenuated than LVS yet induces comparable protection in mice against *F. tularensis* challenge**
Qingmei Jia, School of Medicine, University of California (United States)

P2-37 **Intranasal Immunization with *Francisella tularensis* LPS and the TLR2 ligand PorB protect mice from pulmonary tularemia and is correlated with increased BALT in lungs of these mice**
Lee Wetzler, Boston University School of Medicine (United States)

P2-40 **Analyses of phagocytic ability of rat macrophages for *Francisella tularensis***
Heather Ray, University of Texas at San Antonio (United States)

P2-41 **Activation of apoptotic pathways in the course of B cell infection with *Francisella tularensis***
Zuzana Krocova, FMHS UoD (Czech Republic)

P2-42 **The role of IL-17A in *F. tularensis* LVS infection**
Siobhan Cowley, FDA (United States)

P2-43 **Depletion of dendritic cells impairs the innate response to *Francisella tularensis* LVS**
Samantha Roberts, FDA (United States)

P2-44 **Passive immunization with immunoglobulin G protects against a lethal respiratory infection with type A *Francisella tularensis* in Fischer 344 rats**
Gopi Mara Koosham, University of New Mexico School of Medicine (United States)

P2-45 **Importance of B cells in parenteral murine infection with *Francisella novicida***
Alicia Chou, FDA (United States)

P2-46 **Dendritic cells serve as a vehicle for *Francisella tularensis* dissemination following airways infection**
Baruch Velan, Israel Institute for Biological Research (Israel)

P2-47 **Full virulence is restored by reintroduction of two virulence loci into the live vaccine strain (LVS) of *Francisella tularensis***
Kerstin Kuoppa, FOI Swedish Defence Research Agency (Sweden)

P2-48 **Advanced phage display – perspective approach for preparing of *Francisella tularensis* monoclonal antibodies**
Klara Kubelkova, University of Defence, Faculty of Military Health Sciences (Czech Republic)

P2-49 **Optimization of aerosol generation techniques for *Francisella tularensis* LVS and Schu S4 strains**
Robert Sherwood, Lovelace Respiratory Research Institute (United States)

P2-50 **Drosophila RNAi screen for host factors required for *Francisella tularensis* infection**
Christine Akimana, University of Louisville (United States)

P2-51 **Development of a *Francisella tularensis* Schu S4 aerosol challenge model in the rhesus macaque**
H. Gelhaus, Battelle Biomedical Reseach Center (United States)

P2-52 **Development and characterization of rodent and nonhuman primate inhalation exposure systems**
Kristopher Van Zandt, Battelle Biomedical Research Center (United States)

P2-53 **Exposure of Swiss Webster mice to aerosolized *Francisella tularensis* Schu S4**
Kristopher Van Zandt, Battelle Biomedical Research Center (United States)

P2-54 **Susceptibility to disease following intraperitoneal infection with *Francisella tularensis* differs between Fisher 344 and Sprague-Dawley rat strains**
Claudine Raymond, National Research Council of Canada,Canada,

P2-55 **Protective efficacy of a *Francisella tularensis* type A complemented O-antigen mutant against murine tularemia**
Cheryl Ryder, Virginia-Maryland Regional College of Veterinary Medicine at Virginia Tech, Center for Molecular Medicine and Infectious Disease (United States)

SCIENTIFIC PROGRAM

P2-56 ***Francisella tularensis* LVS fails to induce phagocytosis-induced cell death in human neutrophils and prolongs cell lifespan**
Justin Schwartz, University of Iowa (United States)

P2-57 **A comparison of the host responses between humans and nonhuman primates to *Francisella tularensis* infection**
Luis DaSilva, USAMRIID (United States)

P2-59 **Enhancing *Francisella tularensis* vaccine efficacy through stimulation of innate immunity**
Deanna Tarwacki, University of Pittsburgh (United States)

P2-60 **Virulence comparisons between Schu S4 (A1a) and A1a, A1b, A2 and type B strains using temperature as a surrogate endpoint for death**
Claudia Molins, Centers for Disease Control and Prevention (United States)

P2-61 **Evaluation of defined *Francisella tularensis* subsp. *tularensis* attenuated strains for vaccine efficacy in a murine model**
Karl Klose, University of Texas at San Antonio (United States)

P2-62 **A hypothetical outer membrane lipoprotein of *Francisella novicida* mediates evasion of IFN-γ induced inhibition within murine macrophages**
Jieh-Juen Yu, University of Texas at San Antonio (United States)

P2-63 **Binding of serum complement regulatory proteins to *Francisella***
Sunita Gulati, University of Massachusetts Medical School (United States)

P2-64 **Phase shift; A novel path to *Francisella* vaccine development**
Guillermo Madico, Boston University Medical Center (United States)

P2-65 **Characterization of a nonhuman primate aerosol exposure system for generation, delivery, and collection of *Francisella tularensis* DVC Schu S4**
Lawrence Wolfraim, DynPort Vaccine Company LLC (United States)

Sunday, 13 Sep
Monday, 14 Sep
Tuesday, 15 Sep
Wednesday, 16 Sep

TIME	AUDITORIUM	FOYER
09.00 – 10.30 h	S7 – Epidemiology and ecology of *F. tularensis*	
10.30 – 11.00 h		Coffee
11.00 – 12.15 h	S8 – Short Presentations	
12.15 – 13.30 h		Lunch
13.30 – 15.00 h	S9 – Cell Biology	
15.00 – 15.30 h		Coffee
15.30 – 17.20 h	S10 – Responses of host cells to *Francisella*	

19.30 – 23.00 h	Gala Dinner at TV Tower

09.00 – 10.30 h AUDITORIUM

S 7 – Epidemiology and Ecology of *F. tularensis*

Chairs: Sam Telford, Tufts University (USA)
Erik Bäck, Örebro Universital Hospital (Sweden)
Lela Bakanidze, National Center for Disease Control and Medical Statistics (Georgia)

Tularemia Outbreak in Castilla y León, Spain, 2007: an update
Alberto Pérez Rubio, Regional Office for Public Health in Castilla y León (Spain) *25 min*

Late summer mosquito abundance is associated with human outbreaks of tularemia in Dalarna, Sweden
Anders Johansson, Umeå University (Sweden) *25 min*

Analysis of clinical manifestations of typhoidal/pulmonary tularaemia in an emergent area
Emma Löfström, Örebro University Hospital (Sweden) *20 min*

Nonrandom mating among infected and uninfected *D. variablilis* in a natural focus: evidence for transovarial transmission?
Heidi Goethert, Tufts Cummings School of Veterinary Medicine (USA) *20 min*

11.00 – 12.15 h AUDITORIUM

S 8 – Short Presentations

Chairs: Todor Kantardjiev, National Center of Infectious and Parasitic Diseases (Bulgaria)
Roland Grunow, Robert Koch-Institute (Germany)

Fate of the complex formed between nucleolin present on membrane of human cells and LVS surface elongation factor Tu (EF-Tu) during LVS infection
Monique Barel, Université Paris V René Descartes (France) *15 min*

Differences in virulence between subspecies of *Francisella tularensis* are reflected in different gene expression profiles of human neutrophils
Erik Seibold, Bundeswehr Institute of Microbiology (Germany) *15 min*

Identification of *Francisella tularensis* genes necessary for the induction of prostaglandin E2 from infected macrophages
Matthew Woolard, Louisiana State University Health Science Center (USA) *15 min*

Defining the correlates of protective immunity to type A *Francisella tularensis*
Jason Huntley, UT Southwestern Medical Center (USA) *15 min*

The 58-kDa major virulence factor, FTT0918, of *Francisella tularensis* is required for utilization of iron
Helena Lindgren, Umeå University (Sweden) *15 min*

Sunday, 13 Sep
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SCIENTIFIC PROGRAM

13.30 – 15.00 h AUDITORIUM

S 9 – Cell Biology

Chairs: Jean Celli, NIAID / National Institutes of Health (USA)
Lee-Ann Allen, University of Iowa (USA)

Intracellular transcriptional profiling of *Francisella* reveals novel determinants of intracellular proliferation
Jean Celli, NIAID / National Institutes of Health (USA) *25 min*

Protein kinase C signaling and global disruption of macrophage membrane trafficking by *Francisella tularensis*
Lee-Ann Allen, University of Iowa (USA) *25 min*

Integrating *Francisella's* intracellular lifestyle
Simon Daefler, Mount Sinai School of Medicine (USA) *20 min*

Mast cell-mediated signaling in reduction of *Francisella tularensis* Schu S4 intramacrophage replication and apoptosis
Annette Rodriguez, University of Texas at San Antonio (USA) *20 min*

15.30 – 17.20 h AUDITORIUM

S 10 – Responses of Host Cells to *Francisella*

Chairs: Marina Santic, University of Rijeka (Croatia)
Susheela Tridandapani, Ohio State University (USA)

Modulation of the host cell biology by *Francisella tularensis*
Marina Santic, University of Rijeka (Croatia) *25 min*

Genome-wide analysis of human monocytes infected with *F. tularensis* identifies new targets of host response subversion
Susheela Tridandapani, Ohio State University (USA) *25 min*

Primary human alveolar type II epithelial (ATII) cells modulate human macrophage responses to *Francisella tularensis* Schu 4
Tonyia Eaves-Pyles, University of Texas at San Antonio (USA) *20 min*

Erythrocyte invasion by *Francisella tularensis*
Gerard Nau, University of Pittsburgh School of Medicine (USA) *20 min*

Quantitative proteomic profiling of host – pathogen interaction: The interaction of *Francisella tularensis* LVS with macrophages using J774.2 cell line
Anetta Hartlova, University of Defence (Czech Republic) *20 min*

Sunday, 13 Sep
Monday, 14 Sep
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TIME	AUDITORIUM	FOYER
09.00 – 10.00 h	S11 – Status of Non-Human Primate Models of *Francisella* Infection	
09.55 – 10.15 h		Coffee
10.15 – 12.05 h	S12 – Mechanisms of Immunity, Vaccination and Immunotherapy	
12.05 – 12.15 h	Closing Remarks	
12.15 – 13.00 h	Meeting of the Tularemia International Society	
from 13.00 h	Social-scientific event Visit of the Robert Koch Memorial Bus-Sight-seeing tour Berlin	

09.00 – 10.00 h AUDITORIUM

S 11 – Status of Non-Human Primate Models of *Francisella* Infection

Chairs: Rick Lyons, University of New Mexico (USA)
Jiri Stulik, University of Defence (Czech Republic)

Humoral immunity to *Francisella tularensis* strain LVS fails to uniformly protect Cynomolgus macaques from disease induced by aerosol infection with strain Schu S4
Julie Wilder, Lovelace Respiratory Research Institute (USA) *20 min*

Exposure of cynomolgus macaques to aerosolized *Francisella tularensis* Schu S4
H. Carl Gelhaus, Battelle Biomedical Reseach Center (USA) *15 min*

Comparison of aerosolized *F. tularensis* in three species of nonhuman primates
Aysegul Nalca, USAMRIID (USA) *10 min*

Discussion of status of NHP models *10 min*

10.15 – 12.05 h AUDITORIUM

S 12 – Mechanisms of Immunity, Vaccination and Immunotherapy

Chairs: Wayne Conlan, National Research Council Canada (Canada)
Dennis Metzger, Albany Medical College (USA)

Novel live vaccine candidates against airborne *Francisella tularensis*
Wayne Conlan, National Research Council Canada (Canada) *25 min*

Type A *F. tularensis* induces caspase-3-dependent macrophage death in infected tissues
Michael Parmely, University of Kansas Medical Center (USA) *20 min*

Molecular Mechanisms Responsible for Antibody-Mediated Clearance of *F. tularensis*
Dennis Metzger, Albany Medical College (USA) *25 min*

Essential elements of protective immunity to *Francisella*
Karen Elkins, CBER / FDA (USA) *20 min*

Derivation of a panel of potential correlates of vaccine-induced protection against *Francisella tularensis* LVS
Roberto De Pascalis, CBER / FDA (USA) *20 min*

12.05 – 12.15 h AUDITORIUM

Closing Remarks

12.15 – 13.00 h AUDITORIUM

First Meeting of the Tularemia International Society

Sunday, 13 Sep
Monday, 14 Sep
Tuesday, 15 Sep
Wednesday, 16 Sep

The Organizers gratefully acknowledge the support of the following associations and companies.

ROBERT KOCH INSTITUT

Robert Koch-Institute, Germany

[dstl]

Defence Science and Technology Laboratory, UK

National Institutes of Health

National Institutes of Health, USA

National Institute of Allergy and Infectious Diseases

National Institute of Allergy and Infectious Diseases, USA

Congress Location
University Hospital Charité
Charité Campus Mitte (CCM)
Charitéplatz 1
10117 Berlin, Germany

Registration Counter
The registration desk in the entrance hall of the CCM will be open as follows:

Opening Hours

Sunday,	13 Sep	09.00 – 20.00 h
Monday,	14 Sep	08.00 – 19.00 h
Tuesday,	15 Sep	08.30 – 17.30 h
Wednesday,	16 Sep	08.30 – 13.00 h

Registration Fees
Registration fee for participants includes:
- Admission to Scientific Sessions
- Congress Bag with numerous Congress Documents
- Abstract CD
- Lunch, Tea and Coffee Breaks
- Get Together on Sunday, 13 September 2009 and Monday, 14 September 2009
- Gala Dinner at TV Tower on Tuesday, 15 September 2009 (registration required)

Media Check
The Auditorium is equipped with computer projection. Speakers are asked to hand in their presentations at least two hours before their speech in the media check (Conference A). Speakers having a presentation during the first time slot in the morning are asked to hand in their slides the day before.

Opening Hours

Sunday,	13 Sep	09.00 – 20.00 h
Monday,	14 Sep	08.00 – 19.00 h
Tuesday,	15 Sep	08.30 – 17.30 h
Wednesday,	16 Sep	08.30 – 13.00 h

Congress Language
The congress language is English.

Poster Exhibition
- Scientific Posters will be displayed in the foyer of the Auditorium.
- The size of your poster should not exceed 100 cm width and 130 cm height.
- The posters of session P1 should be set-up on Sunday, 13 September 2009, between 09.00 h and 10.00 h. Those should be removed until Monday, 14 September 2009, 09.00 h.
- The posters of session P2 should be set-up on Monday, 14 September 2009, between 12.15 h and 13.30 h. Those should be removed until Tuesday, 15 September 2009, 09.00 h.

A poster information desk will be located next to the registration desk. Lists indicating title, author and poster number will be displayed at the desk. Material for fixing the poster will be provided by the staff of the poster help desk. The poster desk staff will be on your disposal to answer your questions and provide help locating the poster on site.

- Please do not use your own adherence materials! In case of negligence, claims for compensation may be raised.

Poster Award
The Poster Prize is generously supported by the National Institute of Health, USA and will be awarded at the Gala Dinner at TV Tower on Tuesday, 15 September 2009.

Cloakroom
The cloakroom is centrally located on the entrance level across the registration desk.

Coffee Breaks / Lunch
The coffee breaks and lunches are included in the registration fee. *They will be served on the entrance foyer and foyer of the Auditorium.*

Certificate of Attendance
All participants receive a certificate of attendance.

BERLIN INFORMATION

Berlin, the Capital of Germany, is located at the heart of Europe and also, after EU enlargement in 2004, at the centre of the European Community. With more than 3 million inhabitants, Berlin is the largest city in Germany.

History has left an unforgettable mark on Berlin. It is not only the city's memorials which evoke images of it's unique, turbulent history. Nearly 20 years after the fall of the Berlin Wall, the city never ceases to change and develop.

With about 170 museums and more than 300 galleries the capital boasts a highly impressive range of unique, internationally renowned collections. More than 150 theatres, 3 first-class opera houses, 8 major symphony orchestras, 2 major musical theatres, variety theatres as well as countless cabarets provide entertainment to suit every possible taste.

Discovering Berlin will be a memorable experience for all congress delegates. The city and its charming surroundings, with its famous places of cultural and historical interest, offer a unique range of cultural and recreational attractions.

Climate
Germany has a temperate climate. The average temperature in September for Berlin is 15 °C / 45 °F.

Credit Cards
EC cards and credit cards (American Express, Visa, Diners Club, Eurocard, Mastercard) are accepted virtually everywhere.

Currency
1 euro = 100 cents
Coins: 1, 2, 5, 10, 20, 50 Cents; 1, 2 euros
Bills: 5, 10, 20, 50, 100, 200, 500 euros
Cash can be obtained around the clock from cash points with EC cards and all common international credit cards.

Electricity
Electricity in Germany is supplied at 220 V – 50 Hz.

Insurance
Delegates are advised to take out their own medical, travel and accident insurance. The organizers cannot accept responsibility for personal injuries, loss or damage to private property belonging to delegates and/or accompanying

Time
Germany is on Central European Time (CET) and is one hour ahead of Greenwich Mean Time, 6 hours ahead of Eastern Standard Time and 9 hours ahead of Pacific Standard Time. Summer Time extends from the last Sunday in March to the last Sunday in October.

Tipping
Although all prices officially include a service charge, tipping is recommended – as long as you are satisfied: Taxi: 10 %, Restaurant: 10 – 15 %, Porter (hotel): € 2 – 3 depending on the standard of the hotel, Chambermaid: € 2 – 3 depending on the standard of the hotel, Hairdresser: 10 %.

SUPPORTING PROGRAM

Through Berlin's Past, Present and Future in the Fast Lane

This bus tour (approx. 3 hrs.) covers the sights and famous memorial sites, as well as the contradictions and contrasting sides of Berlin. You'll get off the bus and into the scene of things at a number of places to learn more about the city's many facets. You are guided to the historic city center, to both the former and current East and West Berlin, across Potsdamer Platz, to government sites old and new, across Stalinist boulevards and modern avenues.

Wednesday, 16 September 2009, 13.30 h

Price: 35 € incl. VAT

as per 2nd September 2009.

Further contact details can be provided by the Chairman of the Local Organizing Committee on request.

LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
Abu Kwaik	Yousef		USA
Akimana	Christine	University of Louisville	USA
Al Khodor	Souhaila	University of Louisville	USA
Allen	Lee-Ann	University of Iowa	USA
Anda	Pedro	Instituto de Salud Carlos III	Spain
Anderson	Rebecca		USA
Ariel	Naomi	Israel Institute for Biological Research	Israel
Ark	Nicole	University of Virginia Health System	USA
Arulanandam	Bernard	University of Texas at San Antonio	USA
Bäck	Erik	Örebro University Hosital	Sweden
Bakanidze	Lela	National Center for Disease Control	Georgia
Bakshi	Chandra Shekhar	Albany Medical College	USA
Balonova	Lucie	University of Defence, Faculty of Military Health Sciences	Czech Republic
Barduhn	Anne	Robert Koch-Institute	Germany
Barel	Monique	INSERM	France
Bar-Haim	Erez		Israel
Barker	Jeffrey	University of Texas at San Antonio	USA
Barry	Eileen	Bechtel National Inc	USA
Becker	Silke	Robert Koch-Institute	Germany
Belisle	John	Colorado State University	USA
Benach	Jorge		USA
Bosio	Catharine	Rocky Mountain Laboratories	USA
Boskani	Talar	Swedish Institute for Infectious Disease Control	Sweden
Braunstein	Gavin	Defense Threat Reduction Agency	USA
Bröms	Jeanette	Umea University	Sweden
Bublitz	DeAnna		USA
Busse	Hans-Juergen	Veterinary University Vienna	Austria
Celli	Jean	Rocky Mountain Laboratories, NIAID, NIH	USA
Cerveny	Lukas	University of Defence	Czech Republic

LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
Chambers	Jacob	Southern Ilinois University – Carbondale	USA
Chambers	James	University of Texas at San Antonio	USA
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Charity	James	Harvard Medical School	USA
Chou	Alicia	FDA / CBER	USA
Chu	May	World Health Organization	Switzerland
Cohen	Ofer	IIBR	Israel
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DaSilva	Luis	USAMRIID	USA
de Pascalis	Roberto	Laboratory of Mycobacterial Disease	USA
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Dorman	William	USAMRIID	USA
Dove	Simon	Children's Hospital	USA
Drevinek	Michal	Natl. Institute for NBC Protection	Czech Republic
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Fisher	Nathan	USAMRIID	USA
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LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
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Hazlett	Karsten	Albany Medical College	USA
Hernychova	Lenka	Faculty of Military Health Sciences	Czech Republic
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Hubalek	Martin	Institute of Molecular Pathology, FMHS UD	Czech Republic
Hueffer	Karsten	University of Alaska	USA
Huntley	Jason	University of Texas Southwestern Medical Center	USA
Hutt	Julie	Lovelace Respiratory Research Institute	USA
Inzana	Thomas	Virginia Tech	USA

LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
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Jones	Crystal	Emory University	USA
Jones	Jonathan	Stanford University	USA
Kadzhaev	Konstantin	Umea University	Sweden
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Keim	Paul		USA
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Klein	Iris	Robert Koch-Institute	Germany
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Lindgren	Lena	Umea University	Sweden
Lindgren	Marie	Umea University	Sweden
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Llewellyn	Anna	Emory University	USA
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Löfström	Emma		Sweden

LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
Lopes de Carvalho	Isabel	CEVDI / INSA	Portugal
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Macela	Ales	University of Defense	Czech Republic
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Nano	Francis	University of Victoria	Canada
Nattermann	Herbert	Robert Koch-Institute	Germany
Nau	Gerard	University of Pittsburgh School of Medicine	USA
Noh	Susan	Animal Disease Research Unit	USA
Noppa	Laila	FOI Swedish Defence Research Agency	Sweden
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Ramakrishan	Girija		USA
Ray	Heather	University of Texas at San Antonio	USA
Raymond	Claudine	National Research Council of Canada	Canada
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Reisp	Katharina	Austrian Agency for Health and Food Safety	Austria
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Rodriguez	Annette	University of Texas at San Antonio	USA
Rodriguez Gay	Carolina	Sanofi Pasteur MSD	Spain
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Runge	Martin	LAVES – Veterinary Institute Hannover	Germany
Saint	Richard	DSTL Porton Down	United Kingdom
Salomonsson	Emelie	FOI – Swedish Defence Research Agency	Sweden
Sammons-Jackson	Wendy	USAMRIID	USA
Santic	Marina	Medical Faculty	Croatia
Sauer	Uschi	Robert Koch-Institute	Germany
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Schmiedl	Andreas	Institut Vivion / Sevion GmbH	Germany
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Schmoldt	Sabine	Institut für Mikrobiologie der Bundeswehr	Germany
Schürch	Nadia	Spiez Laboratory	Switzerland
Schwartz	Justin	University of Iowa	USA
Seibold-Krämer	Erik	Bundeswehr Institute for Microbiology	Germany

LAST NAME	FIRST NAME	INSTITUTE	COUNTRY
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Shavishvili	Merab	National Center for Disease Control	Georgia
Shea	April	USAMRIID/Akimeka Technologies, LLC	USA
Sherwood	Robert	Lovelace Respiratory Research Institute	USA
Sheshko	Valeria	University of Defence, Faculty of Military Health Sciences	Czech Republic
Signarovitz	Aimee	University of Texas at San Antonio	USA
Simsek	Hülya	Refik Saydam National Public Health Agency	Turkey
Sjöstedt	Anders	Umea University	Sweden
Smith	Stephanie	Battelle Memorial Institute	USA
Sperandio	Vanessa	UT Southwestern Medical Center	USA
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Splettstoesser	Wolf D.	Bundeswehr Institute of Microbiology	Germany
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Straskova	Adela	University of Defence, Faculty of Military Health Sciences	Czech Republic
Stulik	Siri	Faculty of Military Health Sciences, University of Defence	Czech Republic
Svensson	Kerstin	Swedish Defence Research Agency (FOI)	Sweden
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