International Symposium on Tick-Borne Pathogens and Disease
ITPD 2019  Vienna, Austria
8 to 11 September 2019

Under the auspices of the Austrian Society for Hygiene, Microbiology and Preventive Medicine (ÖGHMP)

Organisers
ÖGHMP and ESGBOR

Venue
Parkhotel Schönbrunn, Vienna, Austria

Programme

ÖGHMP
Austrian Society for Hygiene, Microbiology and Preventive Medicine

and

ESGBOR
ESCMID Study Group for Lyme Borreliosis

and

Instand e.V.
Society for promoting Quality Assurance in Medical Laboratories e.V.
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Welcome

It will be a great pleasure to welcome you to the International Symposium on Tick-Borne Pathogens and Disease in Vienna September 8-11, 2019 (ITPD 2019).

The programme will cover a broad spectrum of topics that include ticks, tick-borne pathogens, ecology, epidemiology, immunology, pathogenesis, and laboratory and clinical aspects of the diseases, together with their prevention and therapy. Abstracts have been submitted by researchers and scientists in 29 countries, ranging from Australia via Asia and Europe to North and South America.

Delegates will be offered presentations during plenary and poster sessions. The latter presentations are particularly meant for extensive exchange of knowledge and discussion among the respective research groups.

Your scientific contributions are sure to make this symposium a successful convention of the tick-borne diseases research community. We look forward to experiencing a scientifically rewarding, enjoyable, and personally enriching symposium.

In addition to attending the scientific sessions, we hope that you will also find time to experience the famous atmosphere and cultural flair of Vienna.

On behalf of the Austrian Society for Hygiene, Microbiology and Preventive Medicine as the assisting society, the ESGBOR (ESCMID Study Group on Lyme borreliosis), and on behalf of the organisers we thank all attendees for joining us, and we wish you a very enjoyable and productive stay in Vienna.

Gerold Stanek
Symposium Committees

Organisers
Gerold Stanek, Mateusz Markowicz, Verena Mündler, Michael Reiter, Anna-Margarita Schötta, Michiel Wijnveld, Birgit Willinger

Scientific Committee
Nathalie Boulanger (FR), Heinz Burgmann (AT), Ram Dessau (DK), Randi Eikeland (NO), Volker Fingerle (DE), Joppe Hovius (NL), Klaus-Peter Hunfeld (DE), Benoit Jaulhac (FR), Olaf Kahl (DE), Maria Kazimirova (SK), Wolfgang Kristoferitsch (AT), Michael Leschnik (AT), Reto Lienhard (CH), Per-Eric Lindgren (SE), Sally Mavin (GB), Robert Müllegger (AT), Katharina Ornstein (SE), Tobias Rupprecht (DE), Gerold Stanek (AT), Franc Strle (SI), Klemen Strle (USA), Gary P Wormser (USA), Alje van Dam (NL)

Symposium Secretariat & Registration
AZ Med.Info
Contact: Lisa Thek, Natalie Ubl
Phone: +43 1 531 16-74 or -75
Fax: +43 1 531 16-61
E-mail: azmedinfo@media.co.at

Exhibition & Sponsorship
MAW Exhibition Management
Contact: Kerstin Hamata
Phone: +43 1 536 63-39
Fax: +43 1 535 60 16
E-mail: maw@media.co.at
Venue

Austria Trend
Parkhotel Schönbrunn
Hietzinger Hauptstrasse 10-14, 1130 Vienna

The hotel is located directly next to Schloss Schönbrunn within the elegant residential area of Hietzing. Directly opposite the hotel, the “Hietzinger Tor” leads into the Schloss Schönbrunn palace gardens, with its wide range of sights and attractions such as the Palm House, the Gloriette monument, the historical fountain and the Vienna zoo, the oldest zoo in the world.

A parking garage (fee per day € 26.50) is available at the hotel.

Arrival by public transportation
Underground station U4-Hietzing.
The hotel is in close vicinity to Vienna Metro line U4 which connects directly with Station Landstrasse (Wien Mitte/The Mall) where the trains from the airport arrive.
Registration (on site) / General Information

The symposium registration area is located on the ground floor of the hotel next to the exhibition area. On arrival all delegates, accompanying persons and exhibitors must register for the Symposium.

Registration Fees (in EURO)

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Regular fee</td>
<td>€ 460.–</td>
</tr>
<tr>
<td>MD in training*</td>
<td>€ 360.–</td>
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<tr>
<td>Student*</td>
<td>€ 260.–</td>
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<tr>
<td>Symposium dinner</td>
<td>€ 40.–</td>
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<tr>
<td>Accompanying person**</td>
<td>€ 110.–</td>
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*Please submit proof of training/student status
**includes Reception, Symposium Dinner, Coffee Breaks & Access to Exhibition

Payment

Please note that all onsite payments should be made in cash or by credit card (Visa, MasterCard, Amex and Maestro will be accepted). EURO (€) only. Unfortunately, we cannot accept traveller’s cheques, other credit cards, Euro cheques or other currencies.

Opening hours – Registration

- Sunday, 8 September 12.00 – 18.00
- Monday, 9 September 08.00 – 17.30
- Tuesday, 10 September 08.00 – 18.00
- Wednesday, 11 September 08.00 – 12.00

Abstract Book

All delegates will receive an abstract book with their symposium bags as part of the registration fee.

Evening Event

Tuesday, 10 September 2019 at 19.00

Liability

The symposium organisers cannot accept responsibility for personal accidents and damage to the private property of the symposium and exhibition participants or accompanying persons.

Smoking

Symposium participants are requested not to smoke within the venue.
Presentations / Posters

Presentations
Presentations will be given in the 'Ballsaal' (lecture room) of the hotel.

Language
The official language of the symposium is English.

Speakers Information
Only PowerPoint presentations – format 4:3 – are accepted. Speakers should deliver their PowerPoint presentations (USB stick) in the lecture room.

Poster Presentations
Posters will be on display in room 'Österreich-Ungarn'. They should be mounted on Monday morning, 9 September 2019, in the numbered spaces indicated in the programme. Posters may be displayed until 17:30 Tuesday, 10 September 2019.

Poster size
Maximum 130 cm height x 90 cm width (portrait DIN A0 format)

Poster discussions
During the poster presentation you will be invited by the chairperson(s) to briefly present your work at the poster for 3-5 minutes, and then answer questions (a further 5 minutes). The date and time of the relevant presentation will be shown with the poster number and is also in the programme. The posters will be presented in the order in which they are printed in the programme.
Sunday, 8 September 2019

15.30 Welcome and Opening

TICKS AND RESERVOIRS
Chair: Olaf Kahl, Germany

16.00 Ticks in Germany - results of flagging studies A1
Olaf Kahl, Germany

16.20 Increase of tick density over a 15-year period on Chaumont Mountain in Switzerland A2
Cindy Bregnard, Switzerland

16.35 Migratory birds, their ticks and pathogens – a new challenge? A3
Georg Duscher, Austria

16.50 Environmental and behavioural impacts on tick infestation of a Borrelia-amplifying, avian host A4
Robert E. Rollins, Germany

17.05 What is the significance of Candidatus Borrelia kalaharica in the cause of febrile illness in Nigeria? A5
Sally Cutler, United Kingdom

17.30 FOYER RECEPTION
Monday, 9 September 2019

**Epidemiology of Tick-Borne Diseases**
Chair: Per-Eric Lindgren, Sweden

08.30  
**A one-health perspective on ticks and tick-borne pathogens – experiences on transmission dynamics and epidemiology from Scandinavia**  
Per-Eric Lindgren, Sweden

09.00  
**Bacterial tick-borne infections in Austria – outcome of tick bites analysed in a prospective study**  
Mateusz A. Markowicz, Austria

09.15  
**Remote sensing of innate killers**  
Alexander Platonov, Russia

09.30  
**The presence of human tick-borne diseases in South America**  
Adriano Pinter, Brazil

10.00  
**Human babesiosis: molecular characterization of a new etiological agent in the “Babesia divergens species complex”**  
Laurence Malandrin, France

10.15  
**Break**

**Tick Research**
Chair: Pierre Eduard Fournier, France

10.45  
**Ticks are rich sources of anti-haemostatics**  
Maria Kazimirova, Slovakia

11.15  
**Artificial feeding of ticks**  
Michiel Wijnveld, Austria

11.30  
**Transmission of Rickettsia raoultii and Rickettsia massiliae DNA by Dermacentor reticulatus and Rhipicephalus sanguineus sensu lato ticks during artificial feeding**  
Emanuela Olivieri, Italy

11.45  
**Tick attachment cement as biomimetic template for a potential tissue glue**  
Sylvia Nürnberger, Austria

12.00  
**Lunch Break**
Poster session I 13.00 to 15.15 Monday, 9 September 2019

CLINICAL ASPECTS OF LYME BORRELIOSIS 1
Chair: Wolfgang Kristoferitsch, Austria

P1 Clinical manifestations of early European Lyme neuroborreliosis
Katarina Ogrinc, Slovenia

P2 Lyme neuroborreliosis in children
Mojca Rožič, Slovenia

P3 Acute facial nerve palsy in children in a Lyme borreliosis-endemic area in the Netherlands
Reitze A. Bruinsma, Netherlands

P4 A case of cervical myelitis as uncommon manifestation of neuroborreliosis in half-year monitoring
Barbara Oczko-Grzesik, Poland

P5 Neuroborreliosis: retrospective analysis of hospitalised patients
Alena Koščalova, Slovakia

P6 Does treatment with corticosteroids influence the outcome of peripheral facial palsy in patients with confirmed Lyme borreliosis?
Tereza Rojko, Slovenia

P7 A severe case of Lyme neuroborreliosis presenting with myelitis and complete tetraplegia
Sigurdur Skarphedinsson, Denmark

P8 Can infection with Borrelia burgdorferi lead to neuronal loss or dysfunction in the brain?
Adam Garkowski, Poland

P9 Perceptions, representations and experiences of patients presenting nonspecific symptoms in a context of suspicion of Lyme borreliosis
Alice Raffetin, France

P10 Lyme borreliosis or not Lyme borreliosis? A multidisciplinary approach achieves an accurate diagnosis and improves patient-centred medical support
Alice Raffetin, France
TICK-BORNE ENCEPHALITIS

Chairs: Joanna Zajkowska, Poland
        Petra Bogovič, Slovenia

P11  Human tick-borne encephalitis and correlation with rodents and
     big game in Croatia in the period from 2006 to 2017
     Oktavija Đaković Rode, Croatia

P12  The molecular-epidemiological characteristic of tick-borne
     encephalitis natural foci and other tick-borne infections in the
     Baikal region of Russia
     Dmitriy O. Kiselev, Russia, presentation by Irina V. Kozlova

P13  Cytokine response in vaccine breakthrough patients with
     tick-borne encephalitis
     Miša Pavletič, Slovenia

P14  Active surveillance for the incidence of tick-borne encephalitis
     in Poland on non-endemic areas
     Joanna Zajkowska, Poland

P15  Factors associated with levels of IgG antibodies to tick-borne
     encephalitis virus during early meningo-encephalitic phase
     of tick-borne encephalitis
     Petra Bogovič, Slovenia

P16  First human case of tick-borne encephalitis on the Island
     of Funen, Denmark
     Nanna Skaarup Andersen, Denmark

P17  Significance and value of laboratory data in tick-borne encephalitis
     virus infection: a north-eastern Italy experience
     Nicole Barp, Italy

P18  Ticks and tick-borne pathogens: emerging health threats on the
     Italian side of the Western Alps
     Aitor Garcia-Vozmediano, Italy

P19  Diversity and prevalence of tick-borne pathogens in engorged
     Ixodes ricinus ticks collected from humans in Romania
     Zsuzsa Kalmár, Romania

P20  Ixodes-borne pathogens in the Akfadou forest in Algeria
     Pierre H. Boyer, France
LABORATORY TESTING IN TICK-BORNE DISEASES

Chairs: Mateusz Markowicz, Austria
       Eva Ružić-Sabljić, Slovenia

P21 Diagnostic of Lyme borreliosis: comparison of serological assays in twelve clinical laboratories in northern Europe
       Malin Lager, Sweden

P22 Performance of LightMix® Modular Borrelia spp. on samples from official proficiency panels
       Tjaša Cerar Kišek, Slovenia

P23 Development of a novel easy to use protein microarray for Borrelia diagnostics
       Ingrid Albrecht-Walz, Germany

P24 Point-of-care detection of recent Borrelia infections using Sofia Lyme+ as Tier-1 assay
       Marlies van Lent, Netherlands

P25 Sensitivity and specificity of a novel tier 1 Lyme assay in Europe
       Anja Garritsen, Netherlands

P26 Victory: validation of cellular tests for Lyme borreliosis
       Freek R. van de Schoor, Netherlands

P27 The utility of Borrelia-specific T cells as diagnostic biomarkers of Lyme disease
       Amir Ameri, Denmark

P28 A droplet digital PCR assay for direct detection of Borrelia bacteria DNA in cerebrospinal fluid specimens
       Trine Andreasen, Denmark

P29 New application of dried blood spot to the diagnosis of relapsing fevers
       Nathalie Boulanger, France

P30 Unconventional diagnostic tests for Lyme borreliosis: a systematic review
       Antoine Grillon, France
IMMUNOLOGICAL ASPECTS
Chairs: Peter Kraiczy, Germany
               Michael Reiter, Austria

P31  Inflammatory responses in Borrelia afzelii culture positive patients with early disseminated or early localized Lyme borreliosis
     Daša Stupica, Slovenia

P32  Neutrophil extracellular traps (NETs) in the cerebrospinal fluid of children and adults with Lyme neuroborreliosis
     Johanna Sjöwall, Sweden

P33  Cytokine responses in immunocompetent versus immunosuppressed neoehrlichiosis patients
     Linda Wass, Sweden

P34  Toll-like receptors: deciphering their role toward Borrelia species
     Verena Mündler, Austria

P35  Determination of the complement-inhibitory activity of different outer surface proteins of Borrelia recurrentis
     Florian Röttgerding, Germany

P36  Epidemiological, clinical and laboratory characteristics of Slovenian patients with proven human granulocytic anaplasmosis
     Stanka Lotrič-Furlan, Slovenia

P37  Serodiagnosis of Lyme borreliosis – is IgM in serum more harmful than helpful?
     Henrik Hillerdal, Sweden

P38  Alpha-gal allergy after a tick bite: A case report from Austria
     Franz Allerberger, Austria

P39  Finger-Stick Whole Blood Tier 1 Lyme Assay: Method Comparison in a CLIA Setting
     Ashlee King, USA, presentation by Juergen Becker, Germany
Poster session I 13.00 to 15.15  Monday, 9 September 2019

TICKS AND MICROBES 1
Chairs: Gábor Földvári, Hungary
Michiel Wijnveld, Austria

P40  Population structure of Borrelia turcica from Greece and Turkey
Sabrina Hepner, Germany

P41  First detection of Amblyomma variegatum and molecular finding of Rickettsia africae in Sardinia, Italy
Elisabetta Pintore, Italy

P42  Could a bacterial symbiont be a potential serological marker for the tick bite? The case of Midichloria mitochondrii in Ixodes ricinus
Alessandra Cafiso, Italy

P43  Urbanization of ticks: underestimated risk of getting a tick-borne disease in popular recreational areas in Tallinn, Estonia.
Julia Geller, Estonia

P44  Electrophoretic identification of allozyme variability of tick populations Ixodes persulcatus in suburban anthropogenic zones of the city of Irkutsk
Irina V. Kozlova, Russia

P45  Prevalence of pathogens in ticks collected from humans in Belgium
Tinne Lernout, Belgium

P46  Detection and characterisation of Borrelia and other pathogens found in ticks
Daniel Carter, United Kingdom

P47  Detection of pathogens in UK ticks using molecular inversion probes
Mia White, United Kingdom

P48  First case of imported Borrelia miyamotoi infection in Austria
Selma Tobudic, Austria

P49  Tick-borne pathogens detected in blood of immunosuppressed Norwegian patients living in an endemic area
Hanne Quarsten, Norway
ASPECTS OF TICK-BORNE DISEASES

Chair: Benoit Jaulhac, France

15.15  Adaptive immune responses in Lyme borreliosis - relation to pathogenesis and clinical disease course
Anna J. Henningsson, Sweden

15.45  Association of statin use and microbiological and clinical characteristics of early Lyme borreliosis
Daša Stupica, Slovenia

16.00  Candidatus Neoehrlichia mikurensis in febrile patients and ticks in the Alsace region of France
Pierre H. Boyer, France

16.15  BREAK

16.30  Immune-mediated versus infective polyarthritis in dogs – do tick-borne pathogens play a role?
Katalina Staufer, Austria

16.45  Informing or scaring: predictors of tick bite anxiety and avoidance of green spaces
Cees C. van den Wijngaard, Netherlands

17.00  From zero to 100: practical aspects in the management of dermatoborrelioses
Robert R. Müllegger, Austria

17.15  Borrelia miyamotoi meningitis in one immuno-competent and one immunocompromised individual – report of two cases diagnosed in Sweden
Anna J. Henningsson, Sweden

17.30  GET TOGETHER
## RESEARCH ON ARTHROPOD-BORNE PATHOGENS

**Chair:** Maarten J. Voordouw, Canada

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>08.30</td>
<td><strong>Structural dynamics of tick-borne encephalitis virus and its biological implications</strong></td>
<td>Karin Stiasny, Austria</td>
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<tr>
<td>09.00</td>
<td><strong>Experimental infection with the Lyme disease pathogen in the rodent host dramatically changes the microbial community in blood-feeding ticks</strong></td>
<td>Maarten J. Voordouw, Canada</td>
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<tr>
<td>09.15</td>
<td><strong>The search for Borrelia and other tick-borne pathogens down under</strong></td>
<td>Charlotte Oskam, Australia</td>
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<tr>
<td>09.30</td>
<td><strong>Tick eggs as a source for the whole genome sequencing of transovarially transmitted Borrelia miyamotoi</strong></td>
<td>Markéta Nováková, Czech Republic</td>
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<tr>
<td>09.45</td>
<td><strong>Molecular analysis of variability among Borrelia miyamotoi strains from the Czech Republic</strong></td>
<td>Jan Janeček, Czech Republic</td>
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<tr>
<td>10.00</td>
<td><strong>Spirochaetal bacteria isolated from mosquitoes constitute a novel genus Entomospira genus novum within the order Spirochaetales</strong></td>
<td>Gabriele Margos, Germany</td>
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<tr>
<td>10.15</td>
<td><strong>BREAK</strong></td>
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**PATHOGENESIS AND IMMUNOLOGY**

**Chair:** Hannes Stockinger, Austria

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>10.45</td>
<td><strong>Microbial genetic variation in Lyme disease pathogenesis</strong></td>
<td>Klemen Strle, United States of America</td>
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<tr>
<td>11.15</td>
<td><strong>Borrelia-induced inhibition of antigen presentation</strong></td>
<td>Michelle A. E. Brouwer, Netherlands</td>
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<tr>
<td>11.30</td>
<td><strong>Profiling the early interaction between human dendritic cells and the causative agent of Lyme disease Borrelia burgdorferi</strong></td>
<td>Maria G. Gutierrez-Hoffmann, United States of America</td>
</tr>
<tr>
<td>11.45</td>
<td><strong>Borrelia mayonii resists complement-mediated killing by inhibiting activation of the alternative and terminal pathway</strong></td>
<td>Peter Kraiczy, Germany</td>
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<tr>
<td>12.00</td>
<td><strong>LUNCH BREAK</strong></td>
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CLINICAL ASPECTS OF LYME BORRELIOSIS 2

Chairs: Tobias Rupprecht, Germany
      Katharina Ornstein, Sweden

P50 Neuroborreliosis in north-eastern Poland - tips for the practitioners
     Joanna Zajkowska, Poland

P51 The LymeProspect KIDS study into long-term effects of Lyme borreliosis in children
     Anna D. Tulen, Netherlands

P52 Lyme borreliosis – a scientific approach to reduce diagnostic and therapeutic uncertainties (BorrSci). An update
     Harald Reiso, Norway

P53 Non-specific symptoms in children referred to a Lyme center
     Tizza P. Zomer, Netherlands

P54 Erythema migrans: course and outcome in patients treated with inhibitors of Tumor Necrosis Factor-alfa (TNF-α)
     Vera Maraspin, Slovenia

P55 Hospitalizations for Lyme borreliosis in Belgium, 2008-2016
     Laurence Geebelen, Belgium

P56 CXCL13 in laboratory diagnosis of Lyme neuroborreliosis – evaluation of the ReaScan CXCL13 assay on fresh, frozen and cold-stored CSF samples
     Anna J. Henningsson, Sweden

P57 Retrospective comparison of two chemokine CXCL13 assays for the diagnosis of Lyme neuroborreliosis on a representative sample from a Dutch hospital
     Tamara van Gorkom, Netherlands

P58 Tick-Borne Encephalitis Virus and Lyme Borrelia Causing Coinfection or Coincidence: Dilemma in Clinical Practice
     Maša Velušček, Slovenia

P59 Complex CSF Diagnostics of Tick-borne Neuroinfections
     Ondřej Sobek, Czech Republic
## Poster session II  13.00 to 15.15  Tuesday, 10 September 2019

**TICKS AND MICROBES 2**

Chairs: Gabriele Margos, Germany  
Anna-Margarita Schötta, Austria

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<tr>
<th>Poster No.</th>
<th>Title</th>
<th>Presenter and Institution</th>
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<tbody>
<tr>
<td>P60</td>
<td><strong>Update on Borrelia taxonomy</strong></td>
<td>Gabriele Margos, Germany</td>
</tr>
<tr>
<td>P61</td>
<td><strong>Detection and Multi-Locus Sequence Typing (MLST) of Borreliaburgdorferi sensu lato strains in ticks collected in Vienna, Austria</strong></td>
<td>Theresa Stelzer, Austria</td>
</tr>
<tr>
<td>P62</td>
<td><strong>Multilocus sequence typing of Borrelia burgdorferi sensu lato strains detected in clinical samples</strong></td>
<td>Anna-Margarita Schötta, Austria</td>
</tr>
<tr>
<td>P63</td>
<td><strong>Optimized fixation of actin filaments for indirect immunofluorescence staining of rickettsiae</strong></td>
<td>Zuzana Sekeyova, Slovakia</td>
</tr>
<tr>
<td>P64</td>
<td><strong>Identification and genetic characterization of the etiological agent of horse piroplasmidosis in Eastern Siberia</strong></td>
<td>Irina V. Kozlova, Russia</td>
</tr>
<tr>
<td>P65</td>
<td><strong>Study of the genetic variability of Babesia in the territory of the Irkutsk region</strong></td>
<td>Irina V. Kozlova, Russia</td>
</tr>
<tr>
<td>P66</td>
<td><strong>Babesia crassa–like infection in Slovenia</strong></td>
<td>Katja Strašek Smrdel, Slovenia</td>
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<tr>
<td>P67</td>
<td><strong>Molecular survey of piroplasms (Babesia spp., Hepatozoon spp.) in micromammals in Romania</strong></td>
<td>Andra Toma-Naic, Romania</td>
</tr>
<tr>
<td>P68</td>
<td><strong>Genetic diversity of representatives of the species Rickettsia in natural foci of the Irkutsk region (Russia)</strong></td>
<td>Irina V. Kozlova, Russia</td>
</tr>
<tr>
<td>P69</td>
<td><strong>Laboratory diagnosis of Human Granulocytic Anaplasmosis in South Korea</strong></td>
<td>Kyu Jam Hwang, South Korea</td>
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International Symposium on Tick-Borne Pathogens and Disease
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Poster session II  13.00 to 15.15  Tuesday, 10 September 2019

BIOLOGY OF BORRELIA
Chair: Natalie Rudenko, Czech Republic

P70  Detection of persistent forms of Borrelia burgdorferi sensu stricto in infected mice after antibiotic treatment: cultivation of viable spirochetes from the sites of secondary infection
Natalie Rudenko, Czech Republic

P71  Interaction of Borrelia burgdorferi with cultured tick cells
Eva Špitalská, Slovakia

P72  Interaction of Borrelia burgdorferi with cultured Vero cells
Eva Špitalská, Slovakia

P73  Reinfection with Borrelia burgdorferi sensu lato – comparison of isolates obtained from erythema migrans
Eva Ružić-Sabljić, Slovenia

P74  LC-MS/MS based metabolomics of Borrelia infection in mouse model
Otto Glader, Finland

P75  Complement-mediated serum susceptibility of Borrelia burgdorferi sensu lato strains from Serbia
Gorana Veinović, Serbia

P76  Co-infection and competition between strains of Borrelia afzelii in immature Ixodes ricinus ticks
Dolores Genné, Switzerland

P77  Subtypes of Borrelia burgdorferi sensu lato strains from Serbia characterized by pulsed-field gel electrophoresis after MluI restriction of genomic DNA
Sanja Ćakić, Serbia

P78  Cruising for bruising?
Ulrich Schwab, United Kingdom
Poster session II  13.00 to 15.15  Tuesday, 10 September 2019

RESERVOIRS, VETERINARY ASPECTS, EPIDEMIOLOGY

Chairs: Pierre Eduard Fournier, France
       Reto Lienhard, Switzerland

P79  Molecular detection of vector-borne pathogens in keds and ticks from deer from the Krkonoše Mountains National Park in the Czech Republic
     Katerina Kybicová, Czech Republic

P80  The borrelial myocarditis in dog – 1st case report
     Pavel Schánilec, Czech Republic

P81  Study of animal-attached ticks for Rickettsia spp. presence and first evidence of Siberian Rickettsia species in Europe
     Maria Vikentjeva, Estonia

P82  Molecular investigation of pathogenic and symbiotic bacteria in African hard ticks infesting wild and domestic animals
     Emanuela Olivieri, Italy

P83  Lyme borreliosis spirochaetes in red foxes (Vulpes vulpes) from Serbia
     Snežana Tomanović, Serbia

P84  Rickettsiae and haemosporidians in migratory and non-migratory birds in Slovakia
     Eva Špitalská, Slovakia

P85  Survey of tick-borne severe fever with thrombocytopenia syndrome (SFTS) Phlebovirus in animals
     Chae Joon-Seok, South Korea

P86  First detection and molecular identification of the zoonotic Anaplasma capra in captive deer in France
     Laurence Malandrin, France

P87  Epidemiology of Lyme borreliosis in Scotland
     Chin Lim, United Kingdom

P88  Human seroprevalence of antibodies to tick-borne microbes in southern Norway
     Erik Thomas Thortveit, Norway

P89  Historical Perspective on the Seroprevalence of Lyme Borreliosis in Finland
     Julia Cuellar, Finland
EPIDEMIOLOGY
Chairs: Volker Fingerle, Germany
       Adriano Pinter, Brazil

P90 Epidemiology of Lyme borreliosis through two surveillance systems: general practitioners and hospitalizations, France, 2005-2017
       Alexandra Septfons, France

P91 Serological study Lyme disease for high-risk group of tick-borne diseases in South Korea
       Seon Do Hwang, South Korea

P92 Pathogen prevalence in ticks parasitizing humans; a citizens science application
       Werner Tischhauser, Switzerland

P93 Risk mapping and classification for identifying local tick prevention needs in Flemish municipalities
       Katrien Tersago, Belgium

P94 Annual serological testing for Lyme in a population with high occupational tick bite exposure
       Marlies van Lent, Netherlands

P95 Abiotic and biotic drivers of tick distribution, abundance, and seasonality in urban environments
       Silvia-Diana Borșan, Romania

P96 Ixodes ricinus, Borrelia afzelii and massive analysis of cDNA ends (MACE), the perfect recipe for an antidote?
       Jos J. A. Trentelman, Netherlands

P97 Glycerophosphoryl diester phosphodiesterase does not support indirect diagnosis of Borrelia miyamotoi infection
       Michael Reiter, Austria

P98 Prevalence and evolution of Borrelia bavariensis and B. garinii in Eurasia
       Noémie S. Becker, Germany

P99 Sero-survey for scrub typhus and murine typhus among forestry workers in South Korea
       Seon Do Hwang, South Korea
TICK-BORNE DISEASES
Chair: Franc Strle, Slovenia

15.15 Research investigation on Crimean Congo haemorrhagic fever (CCHF) in a European endemic area
Tatjana Avšič-Županc, Slovenia

15.45 An overview of multiple studies on the emerging tick-borne pathogen Borrelia miyamotoi in Russia: 2009-2019
Alexander Platonov, Russia

16.05 Chronic and “chronic” Lyme borreliosis
Franc Strle, Slovenia

16.25 BREAK

16.40 Multidisciplinary management of patients with presumed Lyme borreliosis in a reference center in France
Kevin Bouiller and Benoit Jaulhac, France

17.00 Medical assessment and follow-up of patients with chronic complaints and suspected tick-borne diseases
Randi Eikeland, Norway

17.20 END OF SESSION

19.00 NETWORKING DINNER
## Wednesday, 11 September 2019

### DIAGNOSTIC ASPECTS OF TICK-BORNE DISEASES
Chair: Ram B. Dessau, Denmark

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<tr>
<th>Time</th>
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<tr>
<td>08.30</td>
<td>Development of proteomics for the direct diagnosis of Lyme borreliosis</td>
<td>Nathalie Boulanger, France</td>
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<td>09.00</td>
<td>Standardization and quality control of antibody detection for Lyme borreliosis. One assay for all - one ring to rule them all?</td>
<td>Ram B. Dessau, Denmark</td>
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<td>09.15</td>
<td>Serologic risk-stratification by a novel C6-peptide IgG1 subclass antibody test</td>
<td>Dag Nyman, Finland</td>
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<td>09.45</td>
<td>Validity of the LTT as diagnostic and follow-up marker for Lyme neuroborreliosis</td>
<td>Gert Summer, Germany</td>
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10.00 BREAK
PREVENTION OF TICK-BORNE DISEASES
Chair: Joppe Hovius, Netherlands

10.30  Tick global, act local. Emergence and elimination of a Rickettsia massiliae-infected Rhipicephalus sanguineus population in Central-Europe
Gábor Földvári, Hungary

10.45  A Phase 1 study assessing the safety, immunogenicity and dose-response of VLA15, a multivalent recombinant OspA based vaccine candidate against Lyme borreliosis
Nicole Bézay, Austria

11.00  Feeding-induced salivary gland genes of Ixodes ricinus ticks as targets for anti-tick vaccines
Abhijeet Nayak, Netherlands

11.15  Identification of novel Ixodes vaccine candidates using Yeast Surface Display technology; going down the rabbit hole?
Jos J. A. Trentelman, Netherlands

11.30  Prevention of Early Summer Meningoencephalitis also known as TBE
Michael Kunze, Austria

12.00  CLOSING OF THE SYMPOSIUM
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Ah Lee Kyeong
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Anne-Charlotte Livolsi
Unn Ljøstad
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Åslaug Rudjord Lorentzen
Stanka Lotrič Furlan
Alena Lukavská
Mihaela Lupše
Lara Lusa
Laura Maers
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Victor Maleev
Elodie Maluenda
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Vera Maraspin
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J. Sjöwall
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