



# International Symposium on Tick-Borne Pathogens and Disease

**ITPD 2017 Vienna, Austria  
24 to 26 September 2017**

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

## Organisers

ÖGHMP and ESGBOR/ESCMID Study Group for Lyme Borreliosis

## Venue

Parkhotel Schönbrunn, Vienna, Austria

# Programme



**ÖGHMP**  
Österreichische Gesellschaft  
für Hygiene, Mikrobiologie und  
Präventivmedizin

## ÖGHMP

Austrian Society for Hygiene, Microbiology and  
Preventive Medicine

and



**ESCMID**

## ESGBOR

ESCMID Study Group for Lyme Borreliosis



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### **Welcome**

It is with great pleasure that we welcome you to the first International Symposium on Tick-Borne Pathogens and Disease (ITPD 2017) in Vienna from September 24-26, 2017. ITPD is a new activity between ESGBOR and ÖGHMP. It is intended as a biennial meeting.

The programme will cover a broad spectrum of topics including ticks, tick-borne pathogens, ecology, epidemiology, laboratory and clinical aspects of the diseases, prevention, and therapy. Delegates will be offered key note lectures, oral and poster presentations.

The poster presentations are particularly meant for extensive exchange of knowledge and discussion among the respective research groups.

Your scientific contribution, your interest, and your good mood will make this Symposium a successful convention of the tick-borne diseases research community. We are looking forward to experience a scientifically rewarding and personally enriching symposium.

We hope that, besides attending the scientific sessions, you will also find enough time to enjoy the atmosphere and the cultural flair of Vienna, a world-renown center for music and fine arts.

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

For the organisers  
*Gerold Stanek and Ram Dessau*



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### Symposium Committees

#### ITPD 2017

##### Organisers

##### **ESGBOR Steering Committee**

Ram Dessau, Tobias Rupprecht, Gerold Stanek (ESGBOR executives); Alje van Dam, Volker Fingerle, Joppe Hovius, Klaus-Peter Hunfeld, Benoit Jaulhac, Olaf Kahl, Wolfgang Kristoferitsch, Per-Eric Lindgren, Mateusz Markowicz, Sally Mavin, Katharina Ornstein, Franc Strle

##### **Topics**

- Tick research
- Tick-borne pathogens
- Taxonomy of the Borrelia
- Tick-borne diseases: anaplasmosis, bartonellosis, borrelioses, relapsing fever, rickettsioses, tick-borne meningoencephalitis, others
- Pathogenicity, Immunology
- Diagnosis and management of tick-borne diseases
- Laboratory support in diagnosis of tick-borne diseases: relevance & interpretation of results
- Prevention

##### **Symposium Secretariat & Registration**

##### **AZ Med.Info**

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Phone: +43 1 531 16-76 or 73

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E-mail: [azmedinfo@media.co.at](mailto:azmedinfo@media.co.at)

##### **Exhibition & Sponsorship**



MAW Exhibition Management

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### 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.





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### Registration (on site) / General Information

The symposium registration area is located in the basement 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)	Cash	Credit Card
Regular Fee	€ 450.–	€ 460.–
MD in training*	€ 350.–	€ 360.–
Student*	€ 250.–	€ 260.–
Accompanying person	€ 110.–	€ 110.–
Daily charge	€ 180.–	€ 180.–
Symposium dinner	€ 40.–	€ 40.–

\*Please submit proof of training/student status

### Cancellation

Cancellation must be made in writing, by registered letter or fax, to the Symposium Secretariat.

Registration fees will be refunded if written cancellation was received:

- before **July 24, 2017**: 75% refund
- between **July 24 and August 28, 2017**: 25% refund
- after **August 28, 2017**: NO REFUND

### 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, 24 September	12.00 – 18.00
Monday, 25 September	08.00 – 18.00
Tuesday, 26 September	08.00 – 17.30

### Opening hours – Exhibition

Monday, 25 September	09.00 – 18.00
Tuesday, 26 September	09.00 – 17.30

### Abstract Book

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

### Symposium Dinner

Monday, 25 September 2017 at 19.30

### 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.



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### **Presentations / Posters**

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 at least half an hour prior to the start of the respective session.

#### **Poster Presentations**

Posters will be on display in room 'Österreich-Ungarn'.

They should be mounted on Monday morning, 25 September 2017, in the numbered spaces indicated in the programme.

Posters may be displayed for the duration of the symposium.

#### **Poster size**

Maximum 130 cm height x 90 cm width

#### **Poster discussions**

During the poster presentation you will be invited by the chairperson(s) to briefly present your work at the poster for 2-3 minutes, and then answer questions (a further 5 minutes or so).

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.



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### Programme Overview

	<b>Sunday 24 September 2017</b>		<b>Monday 25 September 2017</b>	<b>Tuesday 26 September 2017</b>
12.00	Registration 12.00-18.00	08.30	Risk assessment Eco-epidemiology	Lyme borreliosis management Long-term outcomes erythema migrans & acrodermatitis
		10.00	<b>Break</b>	<b>Break</b>
		10.15	Tick saliva Tick cement Tick-borne disease in dogs	Laboratory testing Relapsing fever borreliae Lyme borreliosis OspA Vaccine
		12.00	<b>Lunch Break</b>	<b>Lunch Break</b>
		12.45	Poster Presentations 4 parallel sessions selected topics <u>P1-P12</u> Borrelia miyamotoi detection, transmission, genetics, GlpQ, B. burgdorferi sl genomics <u>P13-P24</u> Ticks, tick-borne infections, ecology, tick cement <u>P25-37</u> Epidemiology of Lyme borreliosis <u>P38-P49</u> Detection of B. miyamotoi & B. burgdorferi sl, Lyme neuroborreliosis	Poster Presentations 4 parallel sessions selected topics <u>P50-P62</u> Lyme neuroborreliosis, comparative studies <u>P63-P75</u> Host-pathogen interaction, Rickettsiae <u>P76-86</u> Detection of tick-borne pathogens, vaccines <u>P87-P96</u> Tick-borne encephalitis, Relapsing fever and other tick-borne pathogens
		15.00	<b>Break</b>	<b>Break</b>
15.00	Opening	15.15	Immune responses and pathogenesis of B. burgdorferi sl Experimental infection with B. miyamotoi Culture of Candidatus Neoehrlichia mikurensis Borrelia	Tick-borne encephalitis Long-term outcome of TBE Resistance against TBEV Unusual TBE
15.30	Hard ticks as vectors Proteomics			Closing of the Symposium
18.00	Foyer Reception	19.30	Symposium Dinner	





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### Programme

Sunday, 24 September 2017

15.00

#### **Opening**

Welcome and introduction  
Gerold Stanek and Ram Dessau

15:30

Key note

#### **Hard ticks as vectors – basic science and critical considerations**

Olaf Kahl, Berlin

#### **Proteomic approaches to identify Ixodes species and its associated pathogens**

Nathalie Boulanger, Strasbourg

#### **Pandora's flying box – Borrelia burgdorferi s.l. prevalence in Ixodes species from birds throughout Europe**

Ana Claudia Norte, Coimbra

#### **Ixodes ricinus winter survival and spring emergence in Norway**

Naomi Målbakken, Kristiansand

#### **Competition between strains of B. afzelii in the rodent host and the tick vector**

Maarten Voordouw, Neuchâtel

#### **Ixodes pavlovskyi: known tick species, unknown vector**

Nina Tikunova, Novosibirsk

18.00

Foyer Reception



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### Programme

Monday, 25 September 2017

- Chair: Klaus-Peter Hunfeld, Frankfurt
- 08.30 Key note  
**The outcomes of tick bites – the Scandinavian experience**  
Per-Eric Lindgren, Linköping
- Molecular detection of tick-borne pathogens in humans with a tick bite or erythema migrans, in the Netherlands**  
Agnetha Hofhuis, Bilthoven
- Estonia - an endemic region of major tick-borne infections: Situation over a decade**  
Julia Geller, Tallinn
- Molecular eco-epidemiology of borreliosis in Slovakia**  
Marketa Derdakova, Bratislava
- Estimating the risk associated with Ixodes ricinus parasitism: towards the development of serological markers for the tick bite**  
Chiara Bazzocchi, Milano
- Chair: Jean Tsao, East Lansing, USA
- 10.15 Key note  
**Tick saliva and its role in pathogen transmission**  
Patricia Nuttal, Oxford
- The sticky aspect of ticks – the tick cement plug for bionic bio-adhesive research**  
Sylvia Nürnberger, Vienna
- Active water vapour uptake in unfed and engorged ticks at cold temperatures and ecological implications**  
Olaf Kahl, Berlin
- The transformation and visualization of a fully infectious fluorescent European species of Lyme disease Borrelia, Borrelia afzelii**  
Ryan Rego, Ceske Budejovice
- Key note  
**Canine breed predisposition in tick-borne diseases**  
Michael Leschnik, Vienna



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**Poster Sessions 12.45 to 15.00**

**Monday, 25 September 2017**

Chair for posters P1-P12: Joppe Hovius, Amsterdam

- P1 **Genetics aspects of *Borrelia miyamotoi***  
Alexander Platonov, Moscow
- P2 ***Borrelia miyamotoi* antigenic proteins and differential expression of its proteins**  
Kathryn Lethbridge, Lexington
- P3 **Transovarial transmission rate and filial infection prevalence of *Borrelia miyamotoi* from *Ixodes scapularis* collected from hunter harvested white-tailed deer**  
Seungeun Han, Lansing, USA
- P4 **Investigating *Borrelia miyamotoi* infection prevalence and density of infected larval, nymphal, and adult *Ixodes scapularis* in Wisconsin: implications for disease risk**  
Seungeun Han, Lansing, USA
- P5 ***Borrelia miyamotoi*, a connection between Lyme disease and relapsing fever?**  
Brandee Stone, Grand Forks, USA
- P6 **Long-term follow-up of patients with *Borrelia miyamotoi* disease in Russia**  
Alexander Platonov, Moscow
- P7 **In vitro susceptibility of the relapsing fever spirochete *Borrelia miyamotoi* to antimicrobial agents**  
Joris Koetsveld, Amsterdam
- P8 **Detection of anti-*Borrelia miyamotoi* antibodies in retrospective and prospective cohorts**  
Dieuwertje Hoornstra, Amsterdam
- P9 ***Borrelia miyamotoi* infection in Austria suggested by antibodies to glycerophosphoryl diester phosphodiesterase**  
Michael Reiter, Austria
- P10 **Antibody responses to GlpQ and variable major proteins in patients with *Borrelia miyamotoi* disease**  
Joris Koetsveld, Amsterdam
- P11 **Antibody response in *Borrelia miyamotoi* infection studied by plane protein microarray**  
Olga Stukolova, Moscow
- P12 **Structure of CRISPR / Cas-systems in the genome of the strain *Borrelia miyamotoi* LB -2001, revealed by bioinformatics methods**  
Yuri Dzhioev, Irkutsk



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### Poster Sessions 12.45 to 15.00

Monday, 25 September 2017

Chair for posters P13-P24: Olaf Kahl, Berlin

- P13 **Distribution and tick-borne pathogens of Ixodidae ticks in the Northeastern and Northern Altai (Republic of Altai, Russia)**  
Natalia Livanova, Novosibirsk
- P14 **The unique combined natural foci of tick-borne infections in the territory of Ekhirit-Bulagatsky district in Irkutsk region, Russia**  
Olga Sunstsova, Irkutsk
- P15 **Tick-borne infections in natural foci of the Baikal region of Russia - research in 2015-2016**  
Dimitrii Kiselev, Irkutsk
- P16 **Detection of Anaplasma phagocytophilum and other pathogens in wild animals and their ectoparasites from Czech Republic**  
Balátová Pavla, Prague
- P17 **Prevalence of tick-borne pathogens in questing ticks Ixodes ricinus in urban area of Prague (Czech Republic)**  
Katrina Kybicová, Prague
- P18 **Europe-wide meta-analysis of Borrelia burgdorferi sensu lato prevalence in questing Ixodes ricinus ticks**  
Martin Strnad, České Budějovice
- P19 **Species and subspecies diversity of Borrelia burgdorferi sensu lato strains from Serbia**  
Sanja Cakic, Belgrade
- P20 **Cohabitation of Borrelia spp. and Rickettsia spp. in ticks on the South Coast of New South Wales, Australia**  
Oliver Creagh, Sydney, Australia
- P21 **Ixodes ricinus infestation in cattle and goats: host preference in a grazing herd in a mountain pasture (northern Italy)**  
Sergio Zanzani, Milano
- P22 **TekenNet: an online citizen-based platform for the reporting of tick bites in Belgium**  
Tinne Lernout, Brussels
- P23 **Translating TekenNet results into tick bite prevention policy advice in Belgium: first steps and future perspectives**  
Katrien Tersago, Brussels
- P24 **Germany, 2012: how an extreme weather spell in the winter can influence subsequent vector tick abundance and tick-borne disease incidence**  
Olaf Kahl, Berlin



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### Poster Sessions 12.45 to 15.00

Monday, 25 September 2017

Chair for posters P25-P37: Brian Stevenson, Lexington, USA

- P25 **Altered gene expression upon infection with *Borrelia afzelii* in nymphal *Ixodes ricinus* salivary glands during feeding**  
Jos Trentelman, Amsterdam
- P26 **DNA-binding proteins SpoVG and PlzA are important regulators for *Borrelia burgdorferi* to adapt to stress**  
Christina Savage, Lexington, USA
- P27 **The role of glutathione metabolism in host defence against *Borrelia burgdorferi***  
Mariska Kerstholt, Nijmegen
- P28 **Genomics of two sister species to understand host association in Lyme borreliosis: *Borrelia bavariensis* and *B. garinii***  
Noémie S. Becker, Planegg-Martinsried
- P29 **Genotyping of *Borrelia garinii* strains isolated from CSF, skin and blood of human patients and from ticks**  
Tjaša Cerar, Ljubljana
- P30 **Published data do not support the notion that *Borrelia valaisiana* is human pathogenic**  
Gabriele Margos, Oberschleißheim
- P31 **In vitro susceptibility testing of antibiotics against nineteen *Borrelia burgdorferi sensu lato* strains from Republic of Serbia**  
Gorana Veinović, Belgrade
- P32 **Epidemiology of *Ixodes* tick-borne borreliosis in Russia**  
Anton Titkov, Moscow
- P33 **Prevalence of *Borrelia* infections in the United Kingdom and the development of an enhanced testing regime**  
Daniel Carter, Porton Down
- P34 **How much Lyme borreliosis is actually seen in primary health care in Scotland?**  
Evans Roger, Inverness
- P35 **The temporal and spatial dynamics of tick-borne disease in Cumbria**  
Jessica Hall, Salford
- P36 **Structural insights into tick attachment cement**  
Johannes Suppan, Vienna
- P37 ***Amblyomma hebraeum*: Analysis of tick attachment cement**  
Benedikt Engel, Vienna



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**Poster Sessions 12.45 to 15.00**

**Monday, 25 September 2017**

Chair for posters P38-P49: Mateusz Markowicz, Vienna

- P38 **LymeProspect: ongoing prospective study into long-term effects of Lyme borreliosis and determinants for persisting symptoms in the Netherlands**  
Jeanine Ursinus, Amsterdam
- P39 **LymeMAP: A European collaborative project to investigate the feasibility of producing a real-time, interactive app containing tick maps and current information on Lyme borreliosis**  
Evans Roger, Inverness
- P40 **Course and outcome of erythema migrans in pregnant women**  
Vera Maraspin, Ljubljana
- P41 **Erythema migrans: course and outcome in patients treated with rituximab**  
Vera Maraspin, Ljubljana
- P42 **Comparison of antibody response to immunodominant borrelial antigens in pediatric Lyme arthritis**  
Lenka Krbková, Brno
- P43 **Asymptomatic Lyme borreliosis is common in Sweden and may be distinguished from Lyme neuroborreliosis by sex, age and specific immune marker patterns**  
Hanna Carlsson, Kalmar
- P44 **Neuroborreliosis - 23 years of experience**  
Johanna Zajkowska, Białystok
- P45 **Clinical and imaging findings in patients with Lyme neuroborreliosis**  
Johanna Zajkowska, Białystok
- P46 **Occurrence of erythema migrans in children with Lyme neuroborreliosis and association to outcome**  
Babro H Skogman, Falun
- P47 **Characteristics of patients with peripheral facial palsy due to *Borrelia burgdorferi sensu lato* infection**  
Tereza Rojko, Ljubljana
- P48 **Depressive symptoms in patients referred to a tertiary Lyme center: high prevalence in those without evidence of Lyme borreliosis**  
Tizza Zomer, Apeldoorn
- P49 **Children suspected of Lyme borreliosis referred to a tertiary Lyme center: prevalence of severe fatigue and depressive symptoms**  
Tizza Zomer, Apeldoorn



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Monday, 25 September 2017

Chairs: Hannes Stockinger & Gerold Stanek, Vienna

15:15

Key note

#### **Immune responses in the pathogenesis of Lyme disease and its post-Lyme complications**

Klemen Strle, Boston, USA

#### **The complement binding and inhibitory protein CbiA of *Borrelia miyamotoi* degrades extracellular matrix components by interacting with plasmin(ogen)**

Peter Kraiczy, Frankfurt

#### **Novel approaches shed light on transcriptome architecture and gene regulation in *Borrelia burgdorferi*: A new look at an old picture**

Will Arnold, Lexington

#### **Experimental infection of voles from nature with *Borrelia miyamotoi***

Nadezhda Kolyasnikova, Moscow

#### **REV-A-lutions: Contributions of fibronectin-binding adhesins to distinct aspects of *Borrelia burgdorferi* pathogenesis**

Catherine Brissette, Grand Forks, USA

#### **In vitro cultivation of *Candidatus Neoehrlichia mikurensis* from clinical isolates**

Christine Wennerås, Göteborg

Key note

#### ***Borrelia* - are there benefits from dividing the genus *Borrelia*?**

Gabriele Margos, Oberschleißheim

19.30

Symposium Dinner



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### Programme

Tuesday, 26 September 2017

- Chair: Wolfgang Kristoferitsch, Vienna
- 08.30 Key note  
**Management approaches for suspected and established Lyme borreliosis used at the diagnostic center of the medical campus, University of Strasbourg**  
Benoit Jaulhac, Strasbourg
- Probabilistic diagnostics of neuroborreliosis (NB) without “Possible NB”**  
Dag Nyman, Åland Island
- Antibiotic treatment and long-term outcomes of patients with disseminated early Lyme borreliosis**  
Daša Stupica, Ljubljana
- Lyme neuroborreliosis in cases of non-specific neurological symptoms**  
Erlend Roaldsnes, Oslo
- Acrodermatitis chronica atrophicans – clinical and laboratory characteristics of 609 Slovenian patients**  
Katarina Ogrinc, Ljubljana
- Chair: Volker Fingerle, Oberschleißheim
- 10.15 Key note  
**When to order laboratory testing for the diagnosis of Lyme borreliosis and which test to use?**  
Ram Dessau, Denmark
- Borrelia miyamotoi infection in vitro, in mice and men: understanding its pathogenesis and implications for diagnosis and treatment**  
Joppe Hovius, Amsterdam
- Clinical overview of acute Borrelia miyamotoi disease: 239 new cases**  
Alexander Platonov, Moscow
- Relapsing fever borreliae**  
Sven Bergström, Umeå
- Development of a multivalent OspA based vaccine candidate for prevention of Lyme borreliosis**  
Urban Lundberg, Vienna





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Poster Sessions 12.45 to 15.00

Tuesday, 26 September 2017

Chair for posters P50-P62: Ram BC Dessau, Slagelse

- P50 **Borrelia burgdorferi sensu lato in cerebrospinal fluid – can the sensitivity of molecular diagnostics in neuroborreliosis be improved?**  
Malin Lager, Jönköping
- P51 **Immunological biomarkers in the cerebrospinal fluid and the association to clinical presentation and recovery in children with Lyme neuroborreliosis**  
Barbro H Skogman, Falun
- P52 **The recomBead Borrelia antibody index, CXCL13 and total IgM index for laboratory diagnosis of Lyme neuroborreliosis in children**  
Anna J Henningsson, Jönköping
- P53 **CXCL13 detected in CSF of patients suffering from tick-borne encephalitis, aseptic meningitis, neuroborreliosis and etiologically not identified neurologic disorder**  
Mateusz Markowicz, Vienna
- P54 **Retrospective evaluation of various serological assays for the detection of neuroborreliosis**  
Tamara van Gorkom, Utrecht
- P55 **Borrelia bacteriophages for diagnosis and treatment of Lyme disease and Relapsing Fever**  
Jinyu Shan, Leicester
- P56 **Comparison of Borrelia antibody levels in serum, cerebrospinal and synovial fluid samples using various diagnostic kits and methods with different antigenic composition**  
Michal Štefl, Brno
- P57 **Diagnosis of borreliosis (Lyme disease and relapsing fever) in US and Europe by immuneblots**  
Jyotsna Shah, Palo Alto, USA
- P58 **Comparison of relative sensitivities of two commercially available tests for detection of Borrelia burgdorferi-specific antibodies**  
Tina Danielzik, Abingdon
- P59 **Multiplex Lyme IgG and IgM Assays for Improved Detection of Early Lyme Disease in a European Endemic Population**  
Chisanga Lwatula, Hercules, USA
- P60 **Evaluation of a new microarray for detection of Borrelia burgdorferi specific antibodies in human serum samples**  
Volker Fingerle, Oberschleißheim
- P61 **Comparison of LIAISON and Luminex tests for IgM and IgG detection in patients with Lyme borreliosis**  
Eva Ruzic-Sabljić, Ljubljana
- P62 **Improving diagnosis of Borrelia infection through identification of Borrelia-specific T-cells**  
Liselotte Brix, Copenhagen



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### Poster Sessions 12.45 to 15.00

Tuesday, 26 September 2017

Chairs for posters P63-P75: Michael Reiter & Michiel Wijnveld, Vienna

- P63 **The cost of Lyme borreliosis**  
Cees C. van den Wijngaard, Bilthoven
- P64 **Lyme borreliosis as “the overlap syndrome”**  
Barbara Oczko-Grzesik, Bytom
- P65 **Dissecting the human immune response toward Borrelia**  
Verena Mündler, Vienna
- P66 **Attachment of Borrelia burgdorferi to Vero cells**  
Katarina Schwarzova, Bratislava
- P67 **Design of a prospective study on Lyme borreliosis and other tick-borne (co-)infections in patients with erythema migrans or fever after a recent tick-bite in Belgium**  
Laurence Geebelen, Brussels
- P68 **Human infection with Rickettsia raoultii in Slovakia**  
Eva Spitalska, Bratislava
- P69 **Diversity of Rickettsiae and rickettsial endosymbionts in ectoparasites from small mammals**  
Eva Spitalska, Bratislava
- P70 **The inhibitory effect of mint essential oils on growth of Rickettsia slovaca**  
Katarína Štefanidesova, Bratislava
- P71 **First cases of molecular detection of Rickettsia raoultii and Rickettsia aeschlimannii in patients in Russia**  
Nina Tikunova, Novosibirsk
- P72 **Detection of CRISPR / Cas structures in the genome of the Rickettsia bellii strain by bioinformatics methods**  
Yuri Dzhioev, Irkutsk
- P73 **Prevalence of infection with Rickettsia helvetica in Ixodes ricinus ticks feeding on non-rickettsiemic hedgehogs (Erinaceus europaeus) in sylvatic habitats of west-central Poland**  
Joanna Stanczak, Gdansk
- P74 **Transmission of Rickettsia raoultii and Rickettsia massiliae by in vitro feeding Dermacentor reticulatus and Rhipicephalus sanguineus ticks**  
Emanuela Olivieri, Perugia
- P75 **Molecular detection of tick-borne microbes within ticks collected from hosts in Zimbabwe**  
Michiel Wijnveld, Vienna



## International Symposium on Tick-Borne Pathogens and Disease ITPD 2017 Vienna, Austria, 24 to 26 September 2017

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Organised by ÖGHMP and ESGBOR/ESCMID Study Group for Lyme Borreliosis

**Poster Sessions 12.45 to 15.00**

**Tuesday, 26 September 2017**

Chair for posters P76-P86: Per-Eric Lindgren, Linköping

- P76 **Detection of Ehrlichia, Candidatus Neoehrlichia and Rickettsia spp. in Estonian ticks**  
Kairi Värvi, Tallinn
- P77 **Molecular detection of Babesia and Theileria species in Australian ticks**  
Storey-Lewis Brooke, Sydney, Australia
- P78 **Molecular screening for Midichloria in hard and soft ticks reveals different prevalences and horizontal transmission**  
Alessandra Cafiso, Pavia
- P79 **Reverse Line Blot-based detection approaches of microbial pathogens in Ixodes ricinus ticks collected in Austria and impact of the chosen method**  
Anna-Margarita Schötta, Vienna
- P80 **Prevention of tick-borne diseases in northwestern Italy: diagnostic approach on ticks collected from humans**  
Alessandra Pautasso, Turin
- P81 **Tick-borne diseases in Russia**  
Anton Titkov, Moscow
- P82 **Identification of novel Ixodes vaccine candidates using Yeast Surface Display technology**  
Jos Trentelman, Amsterdam
- P83 **Screening for novel I. ricinus vaccine candidates by probing a novel I. ricinus salivary gland Yeast Surface Display with sera from Forestry workers**  
Jos Trentelman, Amsterdam
- P84 **Tick-tattoo: DNA vaccination against tick proteins**  
Michelle Klouwens, Amsterdam
- P85 **Tick-borne encephalitis virus strains of Western subtype isolated in Western and Eastern Siberia of Russia: the genetic and biological properties**  
Oksana Lisak, Irkutsk
- P86 **Bioinformatical detection of the structures of recombination sites in genomes of strains of the Siberian subtype of tick-borne encephalitis virus**  
Yuri Dzhioev, Irkutsk



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### Poster Sessions 12.45 to 15.00

Tuesday, 26 September 2017

Chair for posters P87-P96: Wolfgang Kristoferitsch, Vienna

- P87 **Early detection of TBE infection using Reagent vs Virion/Serion TBEV ELISA tests**  
Justyna Dunaj, Bialystok
- P88 **Long-term persistence of antibody response to tick-borne encephalitis vaccine: 10-year follow-up after first booster dose following different primary vaccination schedules**  
Ilaria Galgani, Siena
- P89 **Comparative analysis of the antigenic properties of the tick-borne encephalitis virus strain used for vaccination**  
Irina Kozlova, Irkutsk
- P90 **Specific IgM and IgG antibodies against tick-borne encephalitis virus in blood and cerebrospinal fluid**  
Oktavija Đaković Rode, Zagreb
- P91 **Sequelae of tick-borne encephalitis in retrospective analysis of 1072 patients**  
Anna Moniuszko-Malinowska, Bialystok
- P92 **Assessment of one dose mannitol influence on hydration and electrolytes concentration in patients with tick-borne encephalitis**  
Anna Moniuszko-Malinowska, Bialystok
- P93 **Tick transmission and dissemination of *Borrelia crocidurae*, relapsing fever agent: analysis on a murine model**  
Emilie Talagrand-Reboul, Strasbourg
- P94 **Hard ticks (Acari: Ixodidae, Amblyomidae) - potential vectors of *Toxoplasma gondii*?**  
Beata Biernat, Gdansk
- P95 **IgE reactivity to  $\alpha$ -Gal in relation to Lyme borreliosis**  
Ivar Tjernberg, Kalmar
- P96 **Co-infection of patients with acute babesiosis with Lyme disease**  
Wolfgang Pieken, Norwood, USA



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### Programme

Tuesday, 26 September 2017

Chair: Gerold Stanek, Vienna

15.15

Key note

#### **The long-term outcome of tick-borne encephalitis**

Franc Strle, Ljubljana

#### **Identification of human genes predetermining susceptibility/resistance to tick-borne encephalitis virus**

Andrey Barkhash, Novosibirsk

#### **Occurrence and genetic diversity of tick-borne encephalitis and Kemerovo viruses in ixodid tick of Western Siberia, Russia and Kazakhstan**

Sergey Tkachev, Novosibirsk

#### **An unusual case of tick-borne encephalitis in a chamois (*Rupicapra rupicapra*), Austria, 2017**

Norbert Nowotny, Dubai

17.30

Closing of the Symposium

## Exhibitors

Ärztzentrale, Vienna, Austria

Biovendor, Vienna, Austria

Euroimmun, Lübeck, Germany

Oxford Immunotec Ltd., Oxford, UK

R-Biopharm, Darmstadt, Germany

Reagena, Toivala, Finland

Virotech Diagnostics, Rüsselsheim, Germany

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