

## **Weimar (Germany) 2009**

# **X International Jena Symposium on Tick-borne Diseases (formerly IPS)**

### **'Prevention'**

#### **Scientific Programme Committee**

Jochen Süß, Olaf Kahl,  
Peter Kimmig, Christine Klaus,  
Wolfram Dorn, Rainer Oehme, Ute Mackenstedt

#### **Congress Office**

Gabriele Restle

### **Scientific Programme**

#### **Thursday, March 19, 2009**

**11:00–**                      **Registration, mounting of posters**

**14:00–14:20**                **Opening**

#### **INVITED CONTRIBUTIONS I**

#### **Moderators: U. Wiedermann, W.R. Kaufman**

**14:20–14:50**    **V 1**    W.R. Kaufman (Edmonton, Alberta, Canada):  
Ixodid tick salivary glands: Their physiological importance and the implications  
for pathogen transmission

**14:50–15:15**    **V 2**    U. Wiedermann (Vienna, Austria):  
Vaccination – a success story of modern medicine: What more can we expect?

**15:15–15:25**                **Discussion**

**PREVENTION**

- 15:25–15:35    **V 3**    E.A. Ryzhikov, E.P. Goncharova, N.N. Karpyshev, A.B. Ryzhikov (Koltsovo, Russia):  
Protective effect of combined application in mice of antigenic peptides inducing humoral and CTL immune response against tick-borne encephalitis virus
- 15:35–15:45    **V 4**    S.E. Tkachev, V.A. Matveeva, V.N. Bakhvalova (Novosibirsk, Russia):  
Gene immunization against tick-borne encephalitis virus
- 15:45–15:55    **V 5**    M. Paulke-Korinek, P. Rendi-Wagner, M. Kundi, B. Laaber, A. Grac, R. Kronik, U. Wiedermann, H. Kollaritsch (Vienna, Austria):  
Recommendations for booster vaccinations against tick-borne encephalitis: 6 years follow-up indicates long-term protection

**15:55–16:05**

**Discussion**

- 16:05–16:15    **V 6**    A. Plentz, W. Jilg, T.F. Schwarz, H.B. Kuhr, O. Zent (Regensburg, Würzburg, Marburg, Germany):  
Long-term persistence of tick-borne encephalitis (TBE) antibodies in adults 5 years after booster vaccination with Encepur® Adults
- 16:15–16:25    **V 7**    E.M. Poellabauer, S. Fritsch, Th. Dvorak, A. Loew-Baselli, B.G. Pavlova, I. Cil, O. Amman, F. Maritsch, H.J. Ehrlich (Vienna, Austria):  
Seropersistence of tick-borne encephalitis (TBE) antibodies in children and adolescents
- 16:25–16:35    **V 8**    R. Schosser, U. Heininger, U. Mansmann, R. Kaiser (Heidelberg, Munich, Pforzheim, Germany; Basel, Switzerland):  
The effect of one booster vaccination with FSME-Immun Adults® in subjects with incomplete and/or irregular tick-borne encephalitis (TBE) vaccinations in the past

**16:35–16:45**

**Discussion**

**16:45–17:15**

**Coffee break**

**TICKS: ECOLOGICAL QUESTIONS**

**Moderators: L. Gern, H. Dautel**

- 17:15–17:30    **V 9**    O. Kahl, H. Dautel, J. Heger, J. Gray (Berlin, Giessen, Germany; Dublin, Ireland):  
Determining seasonal *Ixodes ricinus* questing activity by flagging versus long-term tick maintenance on field plots and observation – a paradigm change?
- 17:30–17:40    **V 10**    J. Materna, M. Daniel, L. Metelka, S. Kliegrová, J. Harčarik (Vrchlabí, Praha, Hradec Králové, Czech Republic):  
Development of *Ixodes ricinus* under different climatic conditions in a long-term field experiment: How climate participates in its altitudinal range expansion

- 17:40–17:50    **V 11**    S. Havlíková, L. Roller, J. Koči, M. Kazimírová, A.R. Trimnell, P.A. Nuttall, B. Klempa, M. Labuda (Bratislava, Slovakia; Seattle, USA; Berlin, Germany; Oxford, UK):  
Study of *64P* and *4D8* gene expression in the tick *Rhipicephalus appendiculatus*
- 17:50–18:00    **Discussion**
- SINNECKER-KUNZ AWARD: ORAL PRESENTATIONS**
- 18:00–18:10    **V 12**    C. Kiffner, T. Vor, F. Rühle (Göttingen, Germany):  
Numerical response of ticks in relation to small rodent densities
- 18:10–18:20    **V 13**    S. Grosskinsky, M. Schott, C. Brenner, S.J. Cutler, P. Kraiczy, P.F. Zipfel, M.M. Simon, R. Wallich (Heidelberg, Frankfurt/M., Jena, Freiburg, Germany; London, UK):  
*Borrelia recurrentis* interferes with human innate immune defenses through acquisition of complement regulators factor H, FHR-1, and plasminogen
- 18:20–18:30    **V 14**    A. Szubert-Kruszyńska, J. Michalik, J. Stańczak, S. Cieniuch, E. Podsiadły (Poznań, Gdańsk, Warsaw, Poland):  
Molecular survey of haematophagous spinturnicid mites (Acari: Spinturnicidae) and their bat host for rickettsial agents in Poland
- 18:30–18:40    **V 15**    S. Pluta, K. Hartelt, R. Oehme, P. Kimmig, Ute Mackenstedt (Hohenheim, Stuttgart, Germany):  
Prevalence of *Rickettsia* spp. and *Coxiella burnetii* in ticks and rodents in southern Germany
- 18:40–18:50    **V 16**    D. Ruzek, M. Vancova, J. Salat, M. Tesarova, H. Stastna, J. Kopecky, L. Grubhoffer (Ceske Budejovice, Czech Republic):  
A new insight into the neuropathogenesis of tick-borne encephalitis
- 18:50–19:05    **Discussion**
- approx. 19:30    **Welcome reception: Hotel Leonardo, Bistro**

## Friday, March 20, 2009

**08:00–**                      **Registration**

### INVITED CONTRIBUTIONS II

**Moderators: B. Stevenson, P. Kraiczy**

08:45–09:10      **V 17**      R. Wallich (Heidelberg, Germany):  
Immunomodulatory properties of tick salivary protein

09:10–09:35      **V 18**      B. Stevenson (Lexington, Kentucky, USA):  
Infection-associated surface proteins of the Lyme disease spirochete

**09:35–9:45**                      **Discussion**

### LYME BORRELIOSIS I: IMMUNOLOGY AND OTHERS

9:45–10:00      **V 19**      C. Siegel, T. Beckhaus, C. Skerka, M. Karas, V. Brade, B. Stevenson, R. Wallich, P.F. Zipfel, P. Kraiczy (Frankfurt/M., Jena, Heidelberg, Germany; Lexington, Kentucky, USA):  
Role of BbCRASP-3 (ErpP) and BbCRASP-5 (ErpA) for preventing *Borrelia burgdorferi* from complement-mediated lysis

10:00–10:10      **V 20**      C.A. Brissette, T. Bykowski, A.A. Bownan, A.E. Cooley, B. Stevenson (Lexington, Kentucky, USA):  
The *Borrelia burgdorferi* RevA antigen binds host fibronectin

10:10–10:20      **V 21**      D. Barthel, K. Haupt, T. Hallström, P. Kraiczy, R. Wallich, B. Stevenson, C. Skerka, P.F. Zipfel (Jena, Frankfurt/M., Heidelberg, Germany; Lexington, Kentucky, USA):  
The human plasma protein plasminogen binds complement regulator-acquiring surface protein 1 of *Borrelia burgdorferi*

10:20–10:30      **V 22**      C.R. Whetstone, J.G. Slusser, W.R. Zückert (Kansas City, Kansas, USA):  
Tight and titratable single-plasmid-encoded protein expression in *Borrelia burgdorferi* using a hybrid *ospA*-tetO promoter

**10:30–10:40**                      **Discussion**

**10:40–11:10**                      **Coffee break**

**TICK-BORNE PATHOGENS: PHYLOGEOGRAPHY AND OTHER TOPICS**

**Moderators: K. Kurtenbach, E.I. Korenberg**

- 11:10–11:25    **V 23**    E.I. Korenberg, V.Yu. Litvin (Moscow, Russia):  
Natural focality of diseases: To the 70<sup>th</sup> anniversary of the theory
- 11:25–11:40    **V 24**    K. Kurtenbach, S.A. Vollmer, E. Loza Reyes, M. Donaghy, A. Bormane, M. Drancourt, L. Vitorino, M. Collares-Pereira, G. Margos (Bath, Oxford, UK; Riga, Latvia; Marseille, France; Lisbon, Portugal):  
Phylogeographic structuring and evolutionary relationships of Lyme borreliosis spirochaetes in Europe as revealed by multi-locus sequence analysis (MLSA)
- 11:40–11:50    **V 25**    G. Margos, S.A. Vollmer, M. Cornet, M. Garnier, V. Fingerle, A. Bormane, L. Vitorino, M. Collares-Pereira, M. Drancourt, K. Kurtenbach (Bath, UK; Paris, Marseille, France; Oberschleißheim, Germany; Riga, Latvia; Lisbon, Portugal):  
Raising OspA serotype 4 strains of *Borrelia garinii* to species status by multi-locus sequence analysis (MLSA)
- 11:50–12:00    **V 26**    J. Franke, F. Meier, A. Moldenhauer, E. Straube, W. Dorn, A. Hildebrandt (Jena, Germany):  
*Borrelia*, *Anaplasma*, *Rickettsia*, and *Babesia* species in *Ixodes ricinus* ticks collected from birds on a conservation island in the Baltic Sea

**12:00–12:10    Discussion**

**LYME BORRELIOSIS II: DIAGNOSTICS, CLINICS, THERAPY**

**Moderators: B. Wilske, V. Fingerle**

- 12:10–12:20    **V 27**    V. Fingerle, S. Mathes, C. Klier, U. Schulte-Spechtel, J. Gao, A. Sing, C. Hizo-Teufel (Munich, Germany):  
Detection of *Borrelia burgdorferi* s.l.-specific intrathecal IgM antibody production by a chemiluminescent Borrelia IgM assay
- 12:20–12:30    **V 28**    P. Wilhelmsson, L. Fryland, P. Lindblom, J. Nordgren, S. Börjesson, L. Lindvall, M.-A. Åkesson, C. Ekerfelt, J. Ernerud, P. Forsberg, P.-E. Lindgren (Linköping, Sweden):  
Detection, quantification, and genotyping of tick-borne *Borrelia* – development of a LUX<sup>TM</sup> (Light Upon eXtension) real-time PCR assay
- 12:30–12:40    **V 29**    C.U. Schulte-Spechtel, V. Fingerle, J. Gao, B. Wilske (Munich, Germany):  
Evaluation of recombinant antigens for serological diagnosis of Lyme borreliosis

**12:40–12:50    Discussion**

- 12:50–13:05    **V 30**    F. Strle, V. Maraspin, S. Lotrič-Furlan, E. Ružič-Sabljić, J. Cimperman, T. Jurca, K. Ogrinc, M. Logar, T. Rojko, A. Pikelj-Pečnik, D. Cerar (Ljubljana, Slovenia):  
Characteristics of erythema migrans in elderly population
- 13:05–13:15    **V 31**    K. Morgenstern, G. Baljer, D.E. Norris, P. Kraiczky, C. Hanssen-Hübner, K.-P. Hunfeld (Frankfurt/M., Giessen, Germany; Baltimore, MD, USA):  
Antimicrobial susceptibility of *Borrelia spielmanii* against common antibiotics used for the treatment of Lyme disease

- 13:15–13:20**                      **Discussion**
- 13:20–14:20**                      **Lunch and book-signing with Robert Voss, the symposium poster artist**
- 14:20–16:00**                      **POSTER DISCUSSION SESSION ‘ECOLOGY’**
- Moderators: J.I. Tsao, G. Stanek**
- 14:20–14:40**                      **Presentations 1–4:**
- Movila et al. (P41): Genetic polymorphism of *Ixodes ricinus* ticks, *Borrelia burgdorferi* sensu lato genospecies, and tick host diversity in Lyme disease foci in the Republic of Moldova
- Hildebrandt et al. (P103), presented by K. Pauliks: *Borrelia burgdorferi* sensu lato genospecies and coinfection with *Babesia* spp. in *Ixodes ricinus* ticks in a region of middle Germany (Thuringia)
- Wodecka and Michalik (P48): Relapsing fever-like borreliae in *Ixodes ricinus* ticks collected from vegetation and wild cervids in north-western Poland
- Tsao et al. (P47): Investigating the maintenance of *Borrelia miyamotoi* in nature: a modeling approach
- Discussion**
- 14:40–15:00**                      **Presentations 5–8:**
- Monazahian et al. (P94): Investigation of *Ixodes ricinus* ticks in relation to tick-borne encephalitis (TBE) virus, *Borrelia* and *Anaplasma phagocytophilum* in a region in Lower Saxony, Germany
- Hildebrandt et al. (P101), presented by A. Krämer: Detection of *Rickettsia* spp. and coinfection with *Anaplasma phagocytophilum* in *Ixodes ricinus* ticks in a region of middle Germany (Thuringia)
- Capligina et al. (P72): First detection of *Rickettsia helvetica* in Latvian *Ixodes* ticks
- Tonetti et al. (P96), **candidate for the Sinnecker-Kunz award**: Ticks and tick-borne pathogens from wildlife in the Free State province, South Africa
- Discussion**

**15:00–15:20**

**Presentations 9–12:**

Vichová et al. (P78), **candidate for the Sinnecker-Kunz award**: *Anaplasma phagocytophilum* occurrence in ticks and hosts in natural foci of Slovakia

Stuen et al. (P77): Red deer (*Cervus elaphus*) as a reservoir host for *Anaplasma phagocytophilum*

Dautel et al. (P09): Efficacy testing of *Ixodes ricinus* tick repellents: Comparison of two different test protocols using human volunteers and a standard laboratory method

Schott et al. (P26): *ospC* heterogeneity in a clonal *Borrelia burgdorferi* isolate facilitates binding of the immunomodulatory tick salivary protein Salp15 and Ixri28 during natural transmission

**Discussion**

**15:20–15:40**

**Presentations 13–16:**

Leschnik et al. (P13): Prevention of tick infestation or of tick-borne disease? Comparison of two prevention strategies for tick infestation in dogs

Maioli et al. (P21), presented by D. Pistone: Ticks infesting hunted wild animals in the Emilia Romagna region (Italy): Preliminary results

Gao et al. (P22): Immunological control of the Chinese tick *Haemaphysalis qinghaiensis*

Holy et al. (P91): Risk modelling of a climate warming-induced malaria outbreak in Germany as part of the information system FISKA

**Discussion**

**15:40–16:00**

**Presentations 17–20:**

Winter et al. (P82), presented by F. v. Loewenich: Multi-locus sequence typing (MLST) of *Anaplasma phagocytophilum* strains

Tkachev et al. (P58): Genotyping of tick-borne encephalitis virus strains isolated by bioassay method from *Ixodes persulcatus* ticks in West Siberia, 1981–2001

Kjelland et al. (P44): Prevalence and genotypes of *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* in southern Norway

Pfeffer et al. (P60): Comparison of full genome sequences of tick-borne encephalitis viruses isolated from ticks and rodents in Slovakia

**Discussion**

**14:20–16:00**

**POSTER SESSION 'MEDICINE AND OTHER TOPICS'**

**16:00–16:20**

**Coffee break**



## Saturday, March 21, 2009

**08:30–**                      **Registration**

### INVITED CONTRIBUTIONS III AND RELAPSING FEVER BORRELIÆ

**Moderators: F.X. Heinz, T.G. Schwan**

09:00–09:25      **V 36**      T.G. Schwan (Hamilton, Montana, USA):  
Tick-borne relapsing fever spirochetes in North America

**09:25–09:30**                      **Discussion**

09:30–09:55      **V 37**      F.X. Heinz (Vienna, Austria):  
Tick-borne encephalitis virus and other flaviviruses

**09:55–10:00**                      **Discussion**

10:00–10:15      **V 38**      S.J. Cutler (London, UK):  
Uncovering the secrets of East African relapsing fever

10:15–10:25      **V 39**      N. Fomenko (Novosibirsk, Russia):  
Detection of *Borrelia miyamotoi* in West Siberia

**10:25–10:30**                      **Discussion**

### TICK-BORNE ENCEPHALITIS II: SURVEILLANCE A

**Moderators: T.G. Schwan, F.X. Heinz**

10:30–10:40      **V 40**      C. Burri, V. Bastic, G. Maeder, L. Gern (Neuchâtel, Switzerland):  
TBE virus in Switzerland: Microclimate and cofeeding transmission

10:40–10:50      **V 41**      P. Zeman, P. Pazdiora, B. Prochazka (Prague, Pilsen, Czech Republic):  
Spatio-temporal variation of tick-borne encephalitis (TBE) incidence in the  
Czech Republic: Is the current explanation of the disease rise satisfactory?

10:50–11:00      **V 42**      G. Dobler, A. Kupca, G. Zöller, R. Brey, S. Essbauer, M. Pfeffer, P. de  
Mendonca (Munich, Amberg, Germany):  
Temporal and spatial dynamics of a highly active tick-borne encephalitis (TBE)  
focus in south-eastern Germany: Isolation and molecular characterization of an  
unusual TBE virus strain

11:00–11:10      **V 43**      S. Frimmel, A. Krienke, D. Riebold, M. Littmann, K. Fiedler, C. Klaus, J. Süß,  
E.C. Reisinger (Rostock, Jena, Germany):  
Tick-borne encephalitis (TBE) virus in ticks in north-eastern Germany – first  
detection after 15 years

**11:10–11:20 Discussion**

**11:20–11:50 Coffee break**

**TICK-BORNE ENCEPHALITIS II: SURVEILLANCE B**

**Moderators: G. Dobler, C. Klaus**

11:50–12:00 **V 44** W. Hellenbrand, D. Altmann, J. Dreesmann, G. Krause (Berlin, Germany):  
Definition of risk areas for tick-borne encephalitis in Germany – strengths and  
limitations

12:00–12:10 **V 45** C. Klaus, K. Bauer, B. Hoffmann, M. Beer, W. Müller, B. Stark, W. Bader, F.X.  
Heinz, J. Süss (Greifswald-Insel Riems, Radolfzell, Salem, Aulendorf, Germany;  
Vienna, Austria):  
Seroprevalence of tick-borne encephalitis (TBE) in naturally exposed monkeys  
(*Macaca sylvanus*) and sheep and prevalence of TBE virus in ticks in a TBE  
endemic area in Germany

12:10–12:20 **V 46** K. Wohlfarth, O. Niederstraßer, G. Dobler, M. Mertens, R.G. Ulrich, O. Donoso-  
Mantke, M. Niedrig, S. Werdermann, E. Petri (Bad Saarow, Munich, Greifswald-  
Insel Riems, Berlin, Kyritz, Marburg, Germany):  
Seroprevalence for tick-borne encephalitis virus (TBEV) in forestry workers in  
the federal state of Brandenburg, Germany

**12:20–12:30 Discussion**

**12:30–13:30 Lunch**

**13:30–15:15 POSTER DISCUSSION SESSION ‘MEDICINE AND OTHER TOPICS’**

**Moderators: F. Strle, R. Wallich**

**13:30–13:55 Presentations 1–5:**

Grygorczuk et al. (P37), presented by M. Kondrusik: Expression of Fas receptor  
on CD4+ lymphocytes stimulated with *Borrelia burgdorferi* sensu lato

Gao et al. (P27): Characterization of fibronectin-binding capacities of BBK32  
proteins from *Borrelia burgdorferi* sensu lato strains B31 and PHei

Hallström et al. (P24): The surface protein CRASP-1 of *Borrelia burgdorferi* is  
an important virulence factor

Glinsek et al. (P31): Analysis of *Borrelia burgdorferi* sensu lato strains with  
unusual plasmid profile

D. Cerar et al. (P36): Comparison of erythema migrans in patients with positive  
and negative *Borrelia burgdorferi* sensu lato skin culture

**Saturday, March 21, 2009**

**Discussion**

**13:55–14:15**

**Presentations 6–9:**

Petri and Beran (P71): Gender is a risk factor for tick-borne encephalitis (TBE) in Germany and in the Czech Republic

Czupryna et al. (P50), presented by A. Moniuszko: Observation of long-term sequelae of patients with the history of tick-borne encephalitis (TBE)

Bogovic et al. (P51): Quantitative evaluation of the severity of acute illness in adult patients with tick-borne encephalitis

Hufert et al. (P52): presented by G. Dobler, Proinflammatory cytokines in acute and chronic tick-borne encephalitis

**Discussion**

**14:15–14:35**

**Presentations 10–13:**

T. Cerar et al. (P29): Immune response in patients with Lyme neuroborreliosis

Milotic et al. (P34): Central nervous system involvement during early dissemination of *Borrelia burgdorferi* in children

Maraspin et al. (P35): Pregnant women with erythema migrans and isolation of borreliae from blood: Course and outcome after treatment with ceftriaxone

Nováková et al. (P79), **candidate for the Sinnecker-Kunz award**: Human granulocytic anaplasmosis in four different localities of Slovakia

**Discussion**

**14:35–14:55**

**Presentations 14–17:**

Zutz et al. (P74): Seroprevalence of *Rickettsia* spp. in risk groups and set-up of species-specific antibody detection systems

Bernard et al. (P55): Validation of routine laboratory diagnosis in notified cases of tick-borne encephalitis, Bavaria (Germany), 2007

Goettner et al. (P28): A multiplex fluorescent  $\beta$  article immunoassay for serodiagnosis of infections with *Borrelia burgdorferi*

Ranka et al. (P30): Analysis of *Borrelia burgdorferi* cloned proteins in *Escherichia coli*

**Discussion**

**14:55–15:15**

**Presentation 18–21:**

Jäger et al. (P05), presented by M. Faulde: Seroprevalence of tick-borne encephalitis (TBE) in German blood donors and their knowledge on personal vaccination status

Achazi et al. (P69): Surrogate marker for tick-borne encephalitis virus in Germany

Klaus et al. (P70): Virus prevalence in ticks and seroprevalence in animals – could it be helpful for tick-borne encephalitis (TBE) risk definition?

Paziewska et al. (P84): Molecular epidemiology of *Bartonella* in rodents

**Discussion**

**13:30–15:15**

**POSTER SESSION ‘ECOLOGY’**

**15:15–15:30**

**Coffee break**

***RICKETTSIA, ANAPLASMA, BARTONELLA***

**Moderators: J. Gray, S. Stuenkel**

15:30–15:40

**V 47**

J. Stańczak, M. Racewicz, S. Cieniuch, J. Michalik, B. Sikora (Gdynia, Poznań, Poland):  
Prevalence of *Rickettsia helvetica* in *Ixodes ricinus* ticks (Acari, Ixodidae) parasitizing small rodents

15:40–15:50

**V 48**

B. Silva Milagres, D.C.H. Pena, A.F. Padilha, C.E. Montandon, C.L. Mafra, R.C. Pacheco, M.B. Labruna, D.H. Walker, M.A.M. Galvão (Ouro Preto, Viçosa, São Paulo, Brazil; Galveston, Texas, USA):  
Serologic survey to *Rickettsia* among a *Didelphis* population in Brazil

15:50–16:00

**V 49**

A. Müller, J. Walochnik, G. Stanek (Vienna, Austria):  
Ticks and their relevance as vectors for *Bartonella* species pathogenic for humans

**16:00–16:10**

**Discussion**

16:10–16:20

**V 50**

K. Bown, N. Ogden, X. Lambin, G. Telford, M. Begon, Z. Woldehiwet, R. Birtles (Liverpool, Aberdeen, UK; Montreal, Canada):  
Distinct *Anaplasma phagocytophilum* genotypes circulate in coexisting yet discrete natural transmission cycles: a consequence of host specificity?

16:20–16:30

**V 51**

V.A. Rar, N.N. Livanova, H.K. Doroschenko, V.V. Panov, N.M. Pukhovskaya, N.P. Vysochina, L.I. Ivanov (Novosibirsk, Irkutsk, Khabarovsk, Russia):  
Genetic variability of *Anaplasma* and *Ehrlichia* in the Asian part of Russia

**Saturday, March 21, 2009**

16:30–16:40      **V 52**      C. Silaghi, C. Thiel, K. Pfister, L.M.F. Passos (Munich, Germany; Brazil):  
Genetic diversity of European strains of *Anaplasma phagocytophilum*

**16:40–17:00**                      **Discussion**

**SINNECKER-KUNZ AWARD CEREMONY**

**FINAL REMARKS**

**approx. 17:30–**                      **Farewell Reception: Hotel Leonardo, Lobby**

## Posters

**(M: Medicine and other topics; E: Ecology)**

### **PREVENTION: VACCINATION, REPELLENTS, STRATEGIES**

- P 1 M** G.N. Leonova, E.V. Pavlenko, N.V. Krylova, O.S. Maistrovskaya (Vladivostok, Russia): Specific tick-borne encephalitis (TBE) prevention with the vaccine Encepur in a territory with various genotypes of TBE virus circulation
- P 2 M** G.N. Leonova, E.V. Pavlenko, N.V. Krylova, O.S. Maistrovskaya (Vladivostok, Russia): Active tick-borne encephalitis (TBE) prevention with four different vaccines under the presence of various genotypes of TBE virus circulation
- P 3 M** V.V. Romanenko, A.V. Ankudinova, A.S. Kilyachina, M.S. Esyunina (Ekaterinburg, Russia): Efficacy of large-scale tick-borne encephalitis (TBE) vaccination in Sverdlovsk region, Russia
- P 4 M** R. Schosser, R. Kaiser, U. Mansmann, U. Heininger (Heidelberg, Pforzheim, Munich, Germany; Basel, Switzerland): Seropositivity before and seroprotection after a booster vaccination with FSME-Immun Adults<sup>®</sup> in subjects with a time interval of  $\geq 4.5$  years since the last tick-borne encephalitis (TBE) vaccination
- P 5 M** A. Jäger, G. Dobler, M. Faulde (Koblenz, Munich, Germany): Seroprevalence of tick-borne encephalitis (TBE) in German blood donors and their knowledge on personal vaccination status
- P 6 M** M.P. Kostinov, E.M. Ibragimova, E.V. Markelova (Moscow, Vladivostok, Russia): Efficacy and safety of concurrent tick-borne encephalitis (Encepur Adult) and measles–mumps–rubella (Priorix) vaccination of adults
- P 7 M** E. Jílková, P. Vejvalková, I. Stiborová, J. Skorkovský, V. Král (Ústí nad Labem, Czech Republic): Evaluation of serological response to tick-borne encephalitis (TBE) vaccination in elderly people – an example from clinical practice
- P 8 M** Y.V. Ananyina, E.I. Korenberg (Moscow, Russia): Vaccination of humans against tick-borne borrelioses and leptospiroses: Pros and cons
- P 9 E** H. Dautel, C. Dippel, A. Werkhausen (Berlin, Germany): Efficacy testing of *Ixodes ricinus* tick repellents: Comparison of two different test protocols using human volunteers and a standard laboratory method
- P 10 E** O.A. Belova, L.I. Kozlovskaya, A.S. Shevtsova, G.G. Karganova, L.A. Burenkova (Moscow, Russia): Dependence between susceptibility of *Ixodes ricinus* to DETA and physiological age
- P 11 E** A. Bohlmann, R. Graf (Germany): Prolonged efficacy of Ethyl Butylacetylaminopropionate (IR3535<sup>®</sup>) against ticks
- P 12 E** I. Uspensky (Jerusalem, Israel): Tick vectors (Acari: Ixodoidea) in urban areas: The problem of prevention of their attacks to and infection of humans

- P 13 E M. Leschnik, A. Feiler, G. Duscher, A. Joachim (Vienna, Austria):  
Prevention of tick infestation or of tick-borne disease? Comparison of two prevention strategies for tick infestation in dogs
- P 14 E G. Walder, H. Strasser, V. Vanas, S. Lang, R. Zelger (Innsbruck, Austria; Pfatten, Italy):  
Efficacy of the fungus *Metarhizium anisopliae* var. *anisopliae* against *Ixodes ricinus*

#### TICKS (AND RODENTS)

- P 15 E L. Chitimia, I. Cosoroaba, I. Hutu, T. Banu (Timisoara, Romania):  
Seasonal dynamics of ixodid tick populations on sheep from Ciacova, Covaci, and Balint (Timis County, Romania)
- P 16 E M. Kondrusik, J. Zajkowska, S. Panciewicz, S. Grygorczuk, A. Moniuszko (Bialystok, Poland):  
Seasonal dynamics of *Ixodes ricinus* ticks in north-eastern Poland
- P 17 E Y.S. Korotkov (Moscow, Russia):  
Chronological structure of *Ixodes persulcatus* (Acari: Ixodidae) population in Karelia (north-western Russia)
- P 18 E M. Daniel, T. Vráblík, J. Valter, B. Kříž, V. Danielová (Prague, Czech Republic):  
Prediction of *Ixodes ricinus* host-seeking activity using the TICKPRO computer program and warning system published on websites: Two years of practical experience in the Czech Republic
- P 19 E T. Vor, C. Kiffner, F. Rühle (Göttingen, Germany):  
Tick burden on roe deer (*Capreolus capreolus* L.)
- P 20 E D. Tserennorov, J. Battsetseg, D. Otgonbaatar (Mongolia):  
Epizootiological significance of ticks in Mongolia
- P 21 E G. Maioli, P. Bonilauri, D. Pistone, F. Defilippo, M. Calzolari, C. Bandi, M. Dottori (Reggio Emilia Romagna, Pavia, Milano, Italy):  
Ticks infesting hunted wild animals in the Emilia Romagna region (Italy): Preliminary results
- P 22 E J. Gao, J. Luo, V. Fingerle, H. Yin (Lanzhou, China; Munich, Germany):  
Immunological control of the Chinese tick *Haemaphysalis qinghaiensis*
- P 23 E R.G. Ulrich, J. Jacob, G. Heckel, S.S. Essbauer (Greifswald-Insel Riems, Munich, Germany):  
Network 'Rodent-borne pathogens' in Germany: A platform for interdisciplinary collaborations on rodents and zoonotic pathogens

#### LYME BORRELIOSIS: PATHOGENESIS, DIAGNOSTICS, CLINICS, AND OTHERS

- P 24 M T. Hallström, C. Siegel, C. Skerka, V. Brade, B. Stevenson, R. Wallich, P. Kraiczy, P.F. Zipfel (Jena, Frankfurt/M., Heidelberg, Germany; Lexington, Kentucky, USA):  
The surface protein CRASP-1 of *Borrelia burgdorferi* is an important virulence factor
- P 25 E C. Siegel, C. Hanssen-Hübner, C. Skerka, V. Brade, B. Stevenson, R. Wallich, P.F. Zipfel, P. Kraiczy (Jena, Frankfurt/M., Heidelberg, Germany; Lexington, Kentucky, USA):  
Role of BbCRASP-1 and BbCRASP-2 for preventing *Borrelia burgdorferi* from complement-mediated lysis

- P 26 E** M. Schott, S. Großkinsky, C. Brenner, A. Siebers, L. Gern, M.M. Simon, R. Wallich (Heidelberg, Germany; Neuchâtel, Switzerland):  
*ospC* heterogeneity in a clonal *Borrelia burgdorferi* isolate facilitates binding of the immunomodulatory tick salivary protein Salp15 and Ixri28 during natural transmission
- P 27 M** J. Gao, L. Li, U. Schulte-Spechtel, V. Fingerle, B. Wilske, H. Yin, J. Luo, J. Heesemann (Lanzhou, Erdos City, China; Munich, Germany):  
Characterization of fibronectin-binding capacities of BBK32 proteins from *Borrelia burgdorferi* sensu lato strains B31 and PHei
- P 28 M** G. Goettner, R. Hofweber, S. Evers, A. Wunder, E. Soutschek (Neuried, Germany):  
A multiplex fluorescent particle immunoassay for serodiagnosis of infections with *Borrelia burgdorferi*
- P 29 M** T. Cerar, K. Ogrinc, F. Strle, E. Ružič-Sabljić (Ljubljana, Slovenia):  
Immune response in patients with Lyme neuroborreliosis
- P 30 M** R. Ranka, K. Brangulis, V. Sondore, V. Baumanis (Latvia):  
Analysis of *Borrelia burgdorferi* cloned proteins in *Escherichia coli*
- P 31 M** U. Glinsek, K. Hrovat-Arnez, F. Strle, E. Ružič-Sabljić (Ljubljana, Slovenia):  
Analysis of *Borrelia burgdorferi* sensu lato strains with unusual plasmid profile
- P 32 M** U. Everth (Holzgerlingen, Germany):  
Criteria of analytical efficiency using the example of commercially available searching-assays for *Borrelia burgdorferi* antibodies
- P 33 M** K. Ogrinc, S. Lotrič-Furlan, V. Maraspin, T. Cerar, E. Ružič-Sabljić, F. Strle (Ljubljana, Slovenia):  
Patients with erythema migrans and suspected early Lyme neuroborreliosis
- P 34 M** I. Milotic, J. Blatnik, B. Sibanc, G. Lesnicar (Celje, Slovenia):  
Central nervous system involvement during early dissemination of *Borrelia burgdorferi* in children
- P 35 M** V. Maraspin, E. Ružič-Sabljić, D. Pleterski Rigler, F. Strle (Ljubljana, Slovenia):  
Pregnant women with erythema migrans and isolation of borreliae from blood: Course and outcome after treatment with ceftriaxone
- P 36 M** D. Cerar, T. Cerar, E. Ružič-Sabljić, F. Strle (Ljubljana, Slovenia):  
Comparison of erythema migrans in patients with positive and negative *Borrelia burgdorferi* sensu lato skin culture
- P 37 M** S. Grygorczuk, J. Osada, R. Swierzbinska, T. Chmielewski, J. Zajkowska, M. Kondrusik, S. Pancewicz, M. Dabrowska, S. Tylewska-Wierzbanowska (Bialystok, Warsaw, Poland):  
Expression of Fas receptor on CD4+ lymphocytes stimulated with *Borrelia burgdorferi* sensu lato

#### LYME BORRELIOSIS: ECOEPIDEMIOLOGY

- P 38 E** V. Tarageľová, M. Derdákóvá, I. Cíglerová (Bratislava, Košice, Slovakia):  
Variability of *Borrelia garinii* in ticks feeding on different hosts and in questing ticks in Slovakia

- P 39 E** A. Antušaitė-Chatkevičienė, A. Paulauskas, J. Radzijeuskaja, O. Rosef (Kaunas, Lithuania; Bø i Telemark, Norway):  
Incidence of *Ixodes ricinus* ticks as vectors of tick-borne diseases in urban parks
- P 40 E** A. Gargili, K. Midilli, G. Sengoz, Z. Vatansver, A. Estrada-Peña (Istanbul, Cerrahpasa, Kafkas, Turkey; Zaragoza, Spain):  
Strategies towards public information and prevention of tick-borne diseases in the city of Istanbul (Turkey)
- P 41 E** A. Movila, V. Douet, I. Toderas, I. Uspenskaia, J. Conovalov, V. Burlacu, L. Gern (Chisinau, Republic of Moldova; Neuchâtel, Switzerland):  
Genetic polymorphism of *Ixodes ricinus* ticks, *Borrelia burgdorferi* sensu lato genospecies, and tick host diversity in Lyme disease foci in the Republic of Moldova
- P 42 E** O. Rosef, A. Paulauskas, J. Radzijeuskaja, J. Sageie, C. Haslekås, L. Kløcker (Bø i Telemark, Norway; Kaunas, Lithuania):  
The role of big game in the epidemiology of *Borrelia burgdorferi* s.l. and *Anaplasma phagocytophilum*
- P 43 E** J. Radzijeuskaja, A. Paulauskas, J. Turcinaviciene, D. Ambrasiene, O. Rosef (Kaunas, Vilnius, Lithuania; Bø i Telemark, Norway):  
The role of small rodents in the transmission of *Borrelia burgdorferi* s.l. pathogens
- P 44 E** V. Kjelland, S. Stuen, T. Skarpaas, A. Slettan (Kristiansand, Sandnes, Norway):  
Prevalence and genotypes of *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* in southern Norway
- P 45 E** L. Gern, V. Douet, Z. Lopez, D. Hügli, F. Morán-Cadenas, O. Rais (Neuchâtel, Switzerland):  
Diversity of *Borrelia burgdorferi* sensu lato genospecies in *Ixodes ricinus* ticks in a Lyme borreliosis endemic area in Switzerland
- P 46 E** C.E. Brunnemann, G. Schröder, K. Zimmermann, S. Klammt, S. Frimmel, B. Panzig (Rostock, Greifswald, Germany):  
Prevalence of *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* ticks in eastern West Pomerania (Germany)
- P 47 E** J.I. Tsao, A.G. Barbour, G.J. Hickling (East Lansing, Michigan, Irvine, California, Knoxville, Tennessee, USA):  
Investigating the maintenance of *Borrelia miyamotoi* in nature: A modeling approach
- P 48 E** B. Wodecka, J. Michalik (Szczecin, Poznań, Poland):  
Relapsing fever-like borreliae in *Ixodes ricinus* ticks collected from vegetation and wild cervids in north-western Poland

**TICK-BORNE ENCEPHALITIS: CLINICS AND DIAGNOSTICS**

- P 49 M** J. Zajkowska, M. Kondrusik, A. Targoński, M. Choraży, A. Muszyńska, S. Pancewicz, A. Moniuszko, S. Grygorczuk, W. Drozdowski (Białystok, Poland):  
CT scan evaluation of brain atrophic processes of patients with previous history (8–10 years) of TBE (tick-borne encephalitis)
- P 50 M** P. Czupryna, A. Moniuszko, J. Zajkowska, S. Grygorczuk, S.A. Pancewicz, M. Kondrusik (Białystok, Poland):  
Observation of long-term sequelae of patients with the history of tick-borne encephalitis (TBE)

- P 51 M** P. Bogovic, M. Logar, F. Strle, S. Lotric-Furlan (Ljubljana, Slovenia):  
Quantitative evaluation of the severity of acute illness in adult patients with tick-borne encephalitis
- P 52 M** F.T. Hufert, T. Poponnikova, G. Dobler (Göttingen, Munich, Germany; Kemerovo, Russia):  
Proinflammatory cytokines in acute and chronic tick-borne encephalitis
- P 53 M** A. Moniuszko, P. Czupryna, S. Grygorczuk, J. Zajkowska, S.A. Pancewicz, M. Kondrusik, J. Kusmierczyk (Białystok, Poland):  
Clinical features of tick-borne encephalitis in north-eastern Poland in 1997–2007 – a retrospective study
- P 54 M** P. Pazdiora (Pilsen, Czech Republic):  
Tick-borne encephalitis in children in the West Bohemian Region (Czech Republic) between 1960 and 2007
- P 55 M** H. Bernard, H. Campe, M.-S. Ludwig, W. Hellenbrand, M. Niedrig, A. Sing, M. Wildner (Berlin, Oberschleißheim, Germany):  
Validation of routine laboratory diagnosis in notified cases of tick-borne encephalitis, Bavaria (Germany), 2007
- P 56 E** Yu.S. Bukin, Yu.P. Dzhioev (Irkutsk, Russia):  
Analysis of the results of multi-locus hybridization tests to estimate the population structure of tick-borne virus
- P 57 M** R. Schosser, J. Bartel, O. Enzersberger, P. Chiba, R. Kaiser, U. Mansmann, U. Heininger (Heidelberg, Pforzheim, Munich, Germany; Orth, Vienna, Austria; Basel, Switzerland):  
Comparison of two tick-borne encephalitis (TBE) IgG antibody ELISA tests (Enzygnost<sup>®</sup>, Immunozytm<sup>®</sup>) versus a neutralization assay with respect to seropositivity threshold

**TICK-BORNE ENCEPHALITIS VIRUS: GENOME, ECOEPIDEMIOLOGY**

- P 58 E** S.E. Tkachev, V.N. Bakhvalova (Novosibirsk, Russia):  
Genotyping of tick-borne encephalitis virus strains isolated by bioassay method from *Ixodes persulcatus* ticks in West Siberia, 1981–2001
- P 59 E** M. Pfeffer, G. Zöller, K. Krivanec, H. Meyer, M. Weidmann, S. Essbauer, G. Dobler (Munich, Göttingen, Germany; Ceske Budejovice, Czech Republic):  
Phylogenetic analyses of tick-borne encephalitis (TBE) viruses from ticks and rodents reveal a geographic pattern of five genetic clusters in the Czech Republic
- P 60 E** M. Pfeffer, G. Zöller, S. Essbauer, G. Dobler (Munich, Germany):  
Comparison of full genome sequences of tick-borne encephalitis viruses isolated from ticks and rodents in Slovakia
- P 61 E** T.V. Demina, Yu.P. Dzhioev, M.M. Verkhovzina, I.V. Kozlova, V.I. Zlobin (Irkutsk, Moscow, Russia):  
Analysis of the tick-borne encephalitis virus genome
- P 62 E** E. Lommano, C. Burri, M. Thiévent, G. Maeder, V. Bastic, L. Gern (Neuchâtel, Switzerland):  
Detection of tick-borne encephalitis virus in *Ixodes ricinus* ticks in new endemic areas in Switzerland

- P 63 E** S. Del Fabbro, F. Nazzi, I. Bernardinelli, P. D'Agaro, P. Burgnich, C. Campello, E. Martinelli, A. Iob, P. Pischiutti, M. Ruscio (Udine, Trieste, Brescia, Gemona del Friuli, San Daniele, Italy):  
Factors affecting tick-borne encephalitis (TBE) occurrence in an Alpine area
- P 64 E** V. Danielová, M. Daniel, S. Kliegrová, B. Kříž (Prague, Hradec Králové, Czech Republic):  
Changes in the altitudinal distribution of human cases of tick-borne encephalitis correlated with climate warming in the Highland Region (Czech Republic)
- P 65 E** J.F. Barandika, A. Hurtado, R.A. Juste, A.L. García-Pérez (Derio, Bizkaia, Spain):  
Kinetics of *Ixodes ricinus* in northern Spain in a three-year period (2006–2008): Can tick-borne encephalitis virus be present?
- P 66 E** U. Unursaikhan, D. Tserenrorov, B. Uyanga, A. Dolgorkhand, D. Otgonbaatar (Ulaanbaatar, Mongolia):  
Epidemiology and prevention of tick-borne encephalitis in Mongolia
- P 67 E** N. Knap, A. Saksida, M. Korva, E. Durmisi, D. Duh, T. Avšič-Županc, G. Capelli, F. Montarsi, E. Mazzolini, P. De Benedictis, S. Marangon, P. D'Agaro, F. Nazzi, S. Del Fabbro, M. Ruscio, A. Iob, P. Pischiutti, C. Campello (Ljubljana, Slovenia; Legnaro [Pd], Trieste, Udine, Gemona del Friuli, Italy):  
The need for a stable laboratory-based network for surveillance of tick-borne encephalitis virus (TBEV) in endemic bordering areas of Italy and Slovenia
- P 68 M** Z. Shapiyeva (Almaty, Kazakhstan):  
Epidemiology and prevention of tick-borne encephalitis (TBE) in Kazakhstan
- P 69 M** K. Achazi, O. Donoso Mantke, A. Nitsche, P. Patel, R. Paliwal, M. Niedrig (Berlin, Germany):  
Surrogate marker for tick-borne encephalitis virus in Germany
- P 70 M** C. Klaus, K. Bauer, B. Hoffmann, M. Beer, W. Müller, B. Stark, W. Bader, T. Miller, U. Moog, U. Schau, R. Saier, F.X. Heinz, J. Süß (Jena and Greifswald-Insel Riems, Radolfzell, Salem, Bodensee, Aulendorf, Germany):  
Virus prevalence in ticks and seroprevalence in animals – could it be helpful for tick-borne encephalitis (TBE) risk definition?
- P 71 M** E. Petri, J. Beran (Marburg, Germany; Hradec Králové, Czech Republic):  
Gender is a risk factor for getting tick-borne encephalitis (TBE) in Germany and in the Czech Republic
- OTHER TICK-BORNE AND NONTICK-BORNE PATHOGENS: *RICKETTSIA*, *ANAPLASMA*, *BARTONELLA*, *BABESIA***
- P 72 E** V. Capligina, A. Bormane, R. Ranka, V. Baumanis (Riga, Latvia):  
First detection of *Rickettsia helvetica* in Latvian *Ixodes* ticks
- P 73 M** G. Biletska, O. Semenyshyn, I. Lozynskyj (L'viv, Ukraine):  
Lyme borreliosis in Ukraine
- P 74 M** C. Zutz, A. Müller, J. Walochnik, G. Stanek (Vienna, Austria):  
Seroprevalence of *Rickettsia* spp. in risk groups and set-up of species-specific antibody detection systems
- P 75 M** M.T. Gafarova, A.L. Pavlenko, T.N. Odinets, S.I. Doan (Ukraine):  
Determination of infection risk with Mediterranean spotted fever in administrative districts of

Crimea (Ukraine)

- P 76 E** I. Astobiza, M. Barral, J.F. Barandika, R.A. Juste, A. Hurtado, A.L. García-Pérez (Derio, Spain):  
*Coxiella burnetii* detection in tissues of and ticks from wildlife from northern Spain
- P 77 E** S. Stuenkel, K.S. Pettersen, E.G. Granquist, K. Bergström, K.J. Bown, R. Birtles (Sandnes, Norway; Uppsala, Sweden; Leahurst, UK):  
Red deer (*Cervus elaphus*) as a reservoir host for *Anaplasma phagocytophilum*
- P 78 E** B. Víchová, V. Majláthová, M. Nováková, E. Bullová, M. Miterpáková, B. Peťko (Košice, Slovakia), **(candidate for the Sinnecker-Kunz award)**:  
*Anaplasma phagocytophilum* occurrence in ticks and hosts in natural foci of Slovakia
- P 79 M** M. Nováková, B. Víchová, V. Majláthová, J. Timko, K. Orlovská, A. Lesňáková, I. Stankovič, B. Magyar, B. Peťko (Košice, Ružomberok, Trenčín, Bratislava, Slovakia), **(candidate for the Sinnecker-Kunz award)**:  
Human granulocytic anaplasmosis in four different localities of Slovakia
- P 80 E** C. Silaghi, M. Scheuerle, L.M.F. Passos, K. Pfister (Munich, Germany; Brazil):  
Identification of genetic variants of *Anaplasma phagocytophilum* in goat flocks in Central Switzerland
- P 81 E** K. Strašek Smrdel, M. Serdt, D. Duh, T. Avšič-Županc (Ljubljana, Slovenia):  
*Anaplasma phagocytophilum* in ticks in Slovenia
- P 82 E** C. Winter, W. Scharf, S. Schauer, F. Freyburger, F. von Loewenich (Freiburg, Germany):  
Multi-locus sequence typing (MLST) of *Anaplasma phagocytophilum* strains
- P 83 E** M. Aktas, K. Altay, M.F. Aydin, N. Dumanli (Elazig, Turkey):  
Molecular evidence for *Anaplasma phagocytophilum* in *Ixodes ricinus* from Turkey
- P 84 E** A. Paziewska, P.D. Harris, R. Welc-Faleciak, E. Sinski (Warsaw, Poland; Nottingham, UK):  
Molecular epidemiology of *Bartonella* in rodents
- P 85 M** V.V. Nefedova, E.I. Korenberg, N.N. Vorobyova, V.Y. Teterin (Perm, Moscow, Russia):  
Genotypical diagnosis of infections transmitted by ixodid ticks in the Cisural region, Russia
- P 86 M** J. Gray, A. Hildebrandt, K.-P. Hunfeld, L. Weiss, A. Zintl (Dublin, Ireland; Jena, Frankfurt/M., Germany; New York, USA):  
The global emergence of zoonotic babesiosis
- P 87 M** T. Rojko, D. Duh, T. Avšič-Županc, F. Strle, S. Lotric-Furlan (Ljubljana, Slovenia):  
The incidence of infection with *Babesia* in immunocompetent adult patients with febrile illness after tick bite in Slovenia
- P 88 M** M. Dilcher, L. Hasib, U. Meyer-König, F. Hufert, M. Weidmann (Göttingen, Freiburg, Germany):  
Development of up-to-date diagnostics for emerging European arboviruses
- P 89 E** U. Ziegler, D. Seidowski, M. Keller, R.G. Ulrich, M.H. Groschup (Greifswald-Insel Riems, Germany):  
Serological and virological studies for monitoring the West Nile status of Germany
- P 90 M** E.P. Goncharova, M.P. Kovpak, E.I. Ryabchikova, M.A. Zenkova, V.V. Vlassov (Novosibirsk, Russia):  
A new method for inactivation of RNA viruses

- P 91** E M. Holy, G. Schmidt, W. Schröder (Vechta, Germany):  
Risk modelling of a climate warming-induced malaria outbreak in Germany as part of the information system FISKA

**STUDIES WITH VARIOUS TICK-BORNE PATHOGENS: MAINLY ECOEPIDEMIOLOGY**

- P 92** E A.S. Shevtsova, L.Y. Romanova, Y.S. Korotkov, O.A. Belova, L.A. Burenkova, L.V. Gmyl, L.I. Kozlovskaya, O.V. Motuzova, G.P. Pivanova, Y.V. Rogova, G.G. Karganova (Moscow, Russia):  
Correlation between the pathogen contamination of ticks and the various landscape of Moscow region
- P 93** E N. Livanova, S. Livanov, V. Rar (Novosibirsk, Russia):  
Habitat type patterns of tick-borne infections on the northern range of the taiga tick areal
- P 94** E M. Monazahian, C. Timmerberg, A. Baillot, B. Marchwald, H. Eiffert, M. Pulz (Hannover, Göttingen, Germany):  
Investigation of *Ixodes ricinus* ticks in relation to tick-borne encephalitis (TBE) virus, *Borrelia* and *Anaplasma phagocytophilum* in a region in Lower Saxony, Germany
- P 95** E J. Koči, V. Tarageľová, M. Derdákóvá, D. Selyemová, I. Cíglerová, D. Lenčáková, V. Majláthová, B. Vichová, M. Stanko, M. Kazimírová, M. Labuda (Bratislava, Košice, Slovakia):  
Seasonal dynamics of *Ixodes ricinus* and prevalence of tick-borne pathogens in Slovakia
- P 96** E N. Tonetti, M. Berggoetz, C. Rühle, A.-M. Pretorius, L. Gern (Neuchâtel, Switzerland; Bloemfontein, South Africa):  
Ticks and tick-borne pathogens from wildlife in the Free State province, South Africa
- P 97** E O.V. Motuzova, A.S. Shevtsova, O.A. Belova, L.A. Burenkova, L.V. Gmyl, A.N. Kaira, G.G. Karganova, L.I. Kozlovskaya, Y.S. Korotkov, G.P. Pivanova, Y.V. Rogova, L.I. Romanova (Moscow, Russia):  
Description of tick-borne infections local focus in Moscow region
- P 98** E L.I. Kozlovskaya, A.N. Alekseev, H.V. Dubinina, G.P. Pivanova, L.A. Burenkova, L.I. Romanova, G.G. Karganova (Moscow, St. Petersburg, Russia):  
The risk of infections transmitted by *Ixodes ricinus* in the territories under heavy anthropogenic pressure
- P 99** E D. Golubic, K. Strasek Smrdel (Čakovec, Croatia; Ljubljana, Slovenia):  
Molecular identification of tick-borne agents in *Ixodes ricinus* and *Dermacentor reticulatus* ticks in north-western Croatia
- P 100** E J. Michalik, J. Stańczak, S. Cieniuch, M. Racewicz, B. Sikora, M. Dabert (Poznań, Gdynia, Poland):  
Surveillance of wild boar (*Sus scrofa*) and feeding *Ixodes ricinus* ticks for *Anaplasma phagocytophilum* and *Borrelia burgdorferi* s.l. using molecular methods
- P 101** E A. Hildebrandt, A. Krämer, S. Sachse, E. Straube (Jena, Germany):  
Detection of *Rickettsia* spp. and coinfection with *Anaplasma phagocytophilum* in *Ixodes ricinus* ticks in a region of middle Germany (Thuringia)
- P 102** E A.L. Reye, J.M. Hübschen, C.P. Muller (Luxembourg):  
Prevalence of *Borrelia burgdorferi* s.l. and other tick-borne pathogens in Luxembourg

- P 103 E** A. Hildebrandt, K. Pauliks, S. Sachse, E. Straube (Jena, Germany):  
*Borrelia burgdorferi* sensu lato genospecies and coinfection with *Babesia* spp. in *Ixodes ricinus* ticks in a region of middle Germany (Thuringia)
- P 104 M** P. Czupryna, A. Moniuszko, J. Zajkowska, S.A. Pancewicz, M. Kondrusik, J. Kusmierczyk, S. Grygorczuk, E. Radiukiewicz (Bialystok, Poland):  
Epidemiological data of tick-borne encephalitis (1991–2004) and human Lyme borreliosis (1996–2004) in Bialystok province, Poland – a retrospective study
- P 105 M** R. Egemberdieva, Z. Shapiyeva, L. Antonova (Almaty, Kazakhstan):  
Clinical features of some tick-borne diseases in Kazakhstan
- P 106 E** M. Pechtold, S. Sachse, R. Zell, A. Hildebrandt, E. Straube, A. Krumbholz (Jena, Germany):  
RNA-based detection of various tick-borne pathogens
- P 107 E** A. Jääskeläinen, G.B. Muryeva, N. Subbotina, B.S. Pokhodiev, A.N. Alekseev, T. Sironen, I. Alitalo, A. Vaheri, O. Vapalahti (Helsinki, Finland; St. Petersburg, Russia):  
Molecular epidemiology studies on tick-borne encephalitis virus in Finland, Russian-Karelia, and Buryatia
- P 108 E** B. Atkinson, B.J. Briggs, P.A. Larsen, A.T. Junushov, O.N. GavriloVA, I. Breininger, C.J. Phillips, R.J. Baker, J. Hay, R. Hewson (UK; Buffalo, New York, Lubbock TX, USA; Bishkek, Kyrgyz Republic):  
Evidence of tick-borne encephalitis virus circulation within small mammal populations in Kyrgyzstan
- P 109 E** S. Bosnić, R. Rajković-Janje, B. Habrun, T. Nemeth-Blažić, M. Benić (Zagreb, Croatia):  
A preliminary entomologic survey of ticks in Zagreb, Croatia
- P 110 E** O. Katargina, A. Alekseev, E. Dubinina, G. Efremova, N. Misaeva, S. Vene, A. Lundkvist, V. Vasilenko, I. Golovljova (Tallinn, Estonia; St. Petersburg, Russia; Minsk, Belarus, Stockholm, Sweden):  
Detection of tick-borne pathogens in tick populations in Estonia, Belarus and European part of Russia
- P 111 E** J. Rogalska, A. Makowka, A. Baumann, J. Michalik, B. Wodecka, A. Rymaszewska, A. Pawelczyk, P. Stefanoff (Warsaw, Poznan, Szczecin, Poland):  
Confirmation of tick-borne encephalitis foci by standardized assessment of TBEV prevalence in questing *Ixodes ricinus* ticks collected in four Polish districts
- P 112 E** M. Krieg, M. Mooz, C. Rauch, F. Meister (Rudolstadt, Germany):  
Optimization of a new cellulosic fibre with a depot-function for insecticide substances.