



eDear colleagues,

It is my pleasure to welcome you to the IX International Jena Symposium on Tick-borne Diseases (IJSTD-IX).

The findings in the UN report on climate change and the following media hype in Germany in February 2007 did not surprise us too much: Observations on ticks during the last ten to fifteen years have shown that the climate change has had a severe impact on the environment and at last also on human beings. In particular during the last two years, we have experienced a significant increase in the incidence of tick-borne diseases with the number of cases escalating in several countries and regions. As a consequence, we will ask many new and old questions and look for the causes for this development during the upcoming Symposium. We have chosen 'climate change' as our main topic and we are all excitedly looking forward to absorbing the extensive number of presentations and posters submitted on this topic.

As you will see, the scientific programme reflects many more facets of interest to be discussed during the meeting.

The huge response to our invitation to the IX International Jena Symposium on Tick-borne Diseases has surprised us, and we take it with great pleasure. With more than 100 high-quality scientific contributions submitted, the standing of this Symposium will increase yet again, and I like to take this opportunity to thank you all for your efforts. The huge number of oral presentations submitted forced us to decline the request of some colleagues to present a paper and to ask them to present their findings as a poster instead. This decision was based purely on the lack of time during the meeting and not on the lack of quality. Otherwise, we would have had to change the scope and the character of the Symposium entirely what we do not want to do. I would therefore like to draw your attention to a number of excellent poster presentations important enough to be presented additionally as oral presentations. The meeting has been organized jointly by the Friedrich-Loeffler-Institute and the Friedrich-Schiller-University, Institute of Nutrition, Department of Food Hygiene, Jena, and the Institute for Virology and Antiviral Chemotherapy.

The Scientific and Organising Committee is delighted to note that besides numerous old friends and colleagues there are also a large number of young colleagues from countries who have not previously participated in the event. Especially to these colleagues I tender an especially warm welcome.

The Proceedings of the IJSTD IX Meeting, like those of IPS-VIII, will be published in the International Journal of Medical Microbiology (IJMM). Accordingly, all authors of oral papers are requested to submit their manuscripts in electronic form in WORD format by 30 March 2007 at the latest to: jochen.suess@fli.bund.de. Please send also four copies on paper to Friedrich-Loeffler-Institute, Dr. Jochen Süß, Naumburger Str. 96a, 07743 Jena. The manuscripts have to be submitted as described in the instructions to authors in the IJMM. For instructions to authors please refer to: www.elsevier.de.

On behalf of my colleagues in the Programme Committee, I wish you all an enjoyable and fruitful Symposium in an equally cordial and pleasant atmosphere.

Jochen Süß
Jena, February 2007

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Jena 2007

IX International Jena Symposium on Tick-borne Diseases (formerly IPS)

‘Climate change and tick-borne diseases’

Scientific Programme Committee
Jochen Süß, Olaf Kahl, Peter Kimmig, Christine Klaus,
Wolfram Dorn, Rainer Oehme, Peter Wutzler

Conference Secretariat
Gabriele Restle

Scientific Programme

Thursday, March 15, 2007

17:00 – 18:30 **Early Registration**
18:30 **Welcome Reception in the Pub ‘Zur Noll’**

Friday, March 16, 2007

08:30 – 10:30 **Registration, Mounting of Posters**
10:30 – 10:40 **Opening Ceremony**
Invited Contributions I
Moderators: L. Gern, M. Daniel
10:40 – 11:05 F.-W. Gerstengarbe, P.C. Werner (Potsdam, Germany):
Climate development in Germany with emphasis on regions of Baden-
Wuerttemberg strongly at risk of tick-borne diseases between 1951 and
2055
11:05 – 11:30 L. Eisen (Colorado, USA):
Climate change and tick-borne diseases: A research field in need of long-
term empirical field studies



Further contributions to the main topic

- 11:30 – 11:45 J.S. Gray (Dublin, Ireland):
Mechanisms that regulate the life-cycle of *Ixodes ricinus* can be revealed by extreme weather conditions
- 11:45 – 11:55 J. Materna, M. Daniel, L. Metelka, J. Harčarik (Vrchlabi, Prague, Hradec Králové, Czech Republic):
Distribution, density, and development of the tick *Ixodes ricinus* in mountainous areas influenced by climate changes (Krkonoše Mts., Czech Republic)
- 11:55 – 12:05 H. Dautel^a, C. Dippel^a, D. Kämmer^a, A. Werkhaus^a, O. Kahl^b (Berlin, Germany):
Winter activity of *Ixodes ricinus* in a Berlin forest area
- 12:05 – 12:15 G. Schmidt, W. Schröder (Vechta, Germany):
Mapping the potential temperature dependent *Plasmodium vivax* malaria transmission in Lower Saxony (Germany)
- 12:15 – 12:25 **Discussion**
- 12:25 – 13:45 **Lunch Break and Poster Session**
- Epidemiology and Ecology of Tick-borne Diseases I – Tick-borne Encephalitis (TBE)**
- Moderators: E. Sinski, J. Süss**
- 13:45 – 13:55 D. Sumilo, A. Bormane, L. Asokliene, V. Vasilenko, M. Zygutiene, I. Lucenko, S. Randolph (Oxford, UK, Riga, Latvia, Vilnius, Lithuania, Tallinn, Estonia):
Increased TBE incidence in the Baltic States in response to human-induced environmental change
- 13:55 – 14:05 M. Daniel, B. Kříž, J. Valter, I. Kott, V. Danielová (Prague, Czech Republic):
Influence of meteorological conditions of the preceding winter on tick-borne encephalitis and Lyme borreliosis incidences
- 14:05 – 14:15 B. Kříž, M. Daniel, V. Danielová, C. Benes (Prague, Czech Republic):
Sudden increase in tick-borne encephalitis (TBE) cases in the Czech Republic in the year 2006
- 14:15 – 14:25 G. Walder, B. Falkensammer, F.X. Heinz, H. Holzmann, M.P. Dietrich, R. Wuerzner (Innsbruck, Vienna, Austria):
TBE in Tyrol: Changes in incidence and endemicity 2000–2006
- 14:25 – 14:35 **Discussion**



- 14:35 – 14:45 G. Dobler, S. Essbauer, M. Pfeffer, T. Poponnikova, D. Gniel, M. Komorek (Munich, Marburg, Heidelberg, Germany, Kemerovo, Russia):
Tick-borne encephalitis virus in a high endemic area in Kemerovo, (Siberia, Russia)
- 14:45 – 14:55 R. Kaiser, P. Kimmig, J. Süss (Pforzheim, Stuttgart, Jena, Germany):
How to define *areas of risk* for tick-borne encephalitis in Germany
- 14:55 – 15:05 P. Stefanoff, J. Siennicka, W. Gut (Warsaw, Poland):
Identification of new endemic TBE foci in Poland – a pilot seroprevalence study in selected regions
- 15:05 – 15:15 I. Golovljova, V. Vasilenko, S. Vene, A. Plyusnin, Á. Lundkvist (Tallinn, Estonia, Stockholm, Sweden, Helsinki, Finland):
Unique signature amino acid substitutions in Baltic TBE virus strains within Siberian TBE virus subtype
- 15:15 – 15:25 **Discussion**
- 15:25 – 16:35 **Poster Session and Coffee Break**
- Epidemiology and Ecology of Tick-borne Diseases II - Lyme Borreliosis**
- Moderators: L. Eisen, M. Cinco**
- 16:35 – 16:45 J. Michalik, B. Wodecka, M. Skoracki, B. Sikora, J. Stańczak (Poznań, Szczecin, Gdańsk, Gdynia, Poland):
Prevalence of avian-associated *Borrelia burgdorferi* s.l. genospecies in *Ixodes ricinus* ticks collected from blackbirds (*Turdus merula*) and song thrushes (*T. philomelos*)
- 16:45 – 16:55 V. Fingerle, U.C. Schulte-Spechtel, C. Hizo-Teufel, A. König, B. Wilske (Munich, Weihenstephan, Germany):
Game animals in the natural cycle of *Borrelia burgdorferi* sensu lato
- 16:55 – 17:05 U.C. Schulte-Spechtel, V. Fingerle, E. Ružić-Sabljić, B. Wilske (Munich, Germany, Ljubljana, Slovenia):
Molecular characterization of *Borrelia spielmanii* from Germany and Slovenia
- 17:05 – 17:15 C. Burri, F. Morán Cadenas, V. Douet, J. Moret, L. Gern (Neuchâtel, Switzerland):
Phenology of *Ixodes ricinus* and *Borrelia burgdorferi* infection prevalence along an altitudinal gradient in the Swiss Alps
- 17:15 – 17:25 N.V. Fomenko, N.N. Livanova, N.Y. Chernousova (Novosibirsk, Russia):
Investigation of *Borrelia burgdorferi* sensu lato diversity in natural foci of Novosibirsk region
- 17:25 – 17:35 J. Franke, S. Kipp, C. Flügel, W. Dorn (Jena, Germany):
Prevalence of *Borrelia burgdorferi* s.l. in ticks feeding on humans in Thuringia (Germany)
- 17:35 -17:45 **Discussion**



Epidemiology and Ecology of Tick-borne Diseases III - Babesiosis, Anaplasmosis, Rickettsiosis and Others

Moderators: P. Kimmig, G. Dobler

- 17:45 – 17:55 P. Zeman, M. Pecha (Prague, Krivoklat, Czech Republik): Segregation of genetic variants of *Anaplasma phagocytophilum* circulating among wild ruminants in a forest in Bohemia (Czech Republic)
- 17:55 – 18:05 M. Cinco, R. Floris, G. Menardi, B. Boemo, K. Mignozzi, A. Altobelli (Trieste, Italy): Spatial risk assessment and prediction to tick (*Ixodes ricinus*)-transmitted infections in north-eastern Italy and transborder Italia/Slovenia territory
- 18:05 – 18:15 V.A. Rar, N.N. Livanova, V.V. Panov, I.V. Kozlova, N.M. Pukhovskaya, L.I. Ivanov (Novosibirsk, Irkutsk, Khabarovsk, Russia): Prevalence of *Anaplasma* and *Ehrlichia* in *Ixodes persulcatus* ticks and small mammals from different regions of Russia
- 18:15 – 18:25 M. Blaschitz, M. Gföller, M. Kanzler, J. Walochnik, G. Stanek (Vienna, Austria): Molecular detection of tick-borne pathogens in Austria
- 18:25 – 18:35 **Discussion**
- 20:00 **Symposium Dinner at the SCALA tower restaurant**



Saturday, March 17, 2007

Invited Contributions II

Moderators: J. Gray, R. Oehme

9:00 – 9:25 T. Kröber, P. Guerin (Neuchâtel, Switzerland):
Understanding tick host finding and feeding

9:25 – 9:50 G.A. Schaub (Bochum, Germany):
Haematophagous arthropods

9:50 – 10:00 **Discussion**

Epidemiology and Ecology of Tick-borne Diseases III - Babesiosis, Anaplasmosis, Rickettsiosis and Others

(continued)

10:00 – 10:10 R. Wölfel, S. Essbauer, G. Dobler (Munich, Germany):
Tick-borne rickettsioses in Germany: A modern diagnostic concept for a neglected disease

10:10 -10:20 R. Welc-Falęciak, A. Bajer, J.M. Behnke, E. Siński (Warsaw, Poland, Nottingham, UK):
Effects of host diversity and the community composition of hard ticks (Ixodidae) on *Babesia microti* infection

10:20 – 10:30 K. Häselbarth, A. Tenter, G. Krieger, K.-P. Hunfeld (Singen, Hannover, Frankfurt/M., Germany):
First case of human babesiosis in Germany: Clinical presentation and molecular characterisation of the pathogen

10:30 – 10:40 A. Hildebrandt, K.-P. Hunfeld, M. Baier, S. Sachse, T. Lorenzen, M. Kiehntopf, H.-J. Fricke, E. Straube (Jena, Frankfurt/M., Germany):
First confirmed autochthonous case of human *Babesia microti* infection in Europe

10:40 – 10:50 **Discussion**

10:50 – 11:20 **Coffee Break**

Pathogenesis, Prophylaxis, and Vaccination I

Moderators: R. Wallich, B. Stevenson

11:20 – 11:35 A.E. Cooley, C.A. Brisette, L.H. Burns, S.P. Rilex, M.E. Woodman, T. Bykowski, H. Choy, D. Haake, B. Stevenson (Lexington, KY, Los Angeles, CA, USA):
Functional characterization of Lyme borreliosis spirochete Erp proteins



- 11:35 – 11:50 T. Bykowski, M.E. Woodman, A.E. Cooley, L.H. Burns, M.J. Troese, R. Wallich, P. Kraiczy, B. Stevenson (Lexington, KY, USA, Heidelberg, Frankfurt, Germany):
Borrelia burgdorferi complement regulator-acquiring surface proteins: Expression during the Lyme disease spirochete's mammal-tick infection cycle
- 11:50 – 12:05 P. Kraiczy, J. Schreiber, Ch. Skerka, V. Brade, R. Wallich, P.F. Zipfel (Frankfurt, Jena, Heidelberg, Germany):
Assessment of the regions within complement regulator-acquiring surface protein (CRASP)-2 of *Borrelia burgdorferi* required for interaction with host immune regulators FHL-1 and factor H
- 12:05 – 12:15 **Discussion**
- Pathogenesis, Prophylaxis, and Vaccination II**
- Moderators: W. Dorn, W.R. Zückert**
- 12:15 – 12:30 E. Rossmann, P. Herzberger, M. Kirschfink, M.M. Simon, Ch. Skerka, P. Zipfel, P. Kraiczy, R. Wallich (Heidelberg, Frankfurt, M., Freiburg, Jena, Germany):
Dual roles of BhCRASP-1, an outer membrane protein of the relapsing fever spirochete *Borrelia hermsii*, in binding factor H and plasminogen
- 12:30 – 12:45 E. Rossmann, V. Kitiratschky, H. Hofmann, M.M. Simon, P. Kraiczy, R. Wallich (Heidelberg, Munich, Freiburg, Frankfurt, Germany):
BbCRASP-1 of the Lyme disease spirochetes is expressed in humans and induces antibodies to non-denatured structural determinants
- 12:45 – 12:55 C. Siegel, P. Herzberger, Ch. Skerka, V. Brade, V. Fingerle, U. Schulte-Spechtel, P.F. Zipfel, R. Wallich, B. Wilske, P. Kraiczy (Frankfurt, Jena, Munich, Heidelberg, Germany):
Borrelia spielmanii resist complement-mediated killing by binding of immune regulators factor H and FHL-1
- 12:55 – 13:10 R.J. Schulze, O. Kumru, Ch. R. Whetsine, Kristina M. Ollison, W.R. Zückert (Kansas City, USA):
Surface localization determinants of *Borrelia burgdorferi* tick midgut adhesin OspA
- 13:10 – 13:20 **Discussion**
- 13:20 – 14:30 **Lunch Break and Poster Session**
- Pathogenesis, Prophylaxis, and Vaccination III**
- Moderators: B. Wilske, F. Strle**
- 14:30 – 14:40 E.A. Ryzhikov, E.P. Goncharova, N.N. Karpyshev, L.E. Bulychev, A.B. Ryzhikov (Koltsovo, Russia):
Immunodominant CTL epitopes of NS3 protein of TBE virus, and Th1 immune response in mice immunized with antigenic peptides, TBE virus and recombinant vaccinia virus



- 14:40 – 14:50 R. Schosser, U. Heininger, U. Mansmann, R. Kaiser (Heidelberg, Germany, Basel, Switzerland, Munich, Pforzheim, Germany):
Seroprotection after delayed booster vaccination with *FSME-Immun Erwachsene*[®] – preliminary results
- 14:50 – 15:00 A. Loew-Baselli, S. Fritsch, E.M. Poellabauer, B.G. Pavlova, F. Maritsch, P. Harmacek, M. Koska, R. Konior and H.J. Ehrlich for the FSME-IMMUN Adult Study Group (Vienna, Austria, Krakow, Poland):
Antibody persistence of and booster response to a tick-borne encephalitis vaccine in adults
- 15:00 – 15:10 E.M. Poellabauer, S. Fritsch, T. Dvorak, A. Loew-Baselli, B.G. Pavlova, I. Cil, F. Maritsch, H.J. Ehrlich (Vienna, Austria):
Seropersistence of tick-borne encephalitis (TBE) antibodies and booster response to a TBE vaccine in children and adolescents
- 15:10 – 15:20 C. Wittermann, I. Schoendorf, U. Nicolay (Weinheim, Marburg, Germany):
Comparison of two paediatric tick-borne encephalitis (TBE) vaccines applying different primary immunization schedules
- 15:20 – 15:30 S. Lotrič-Furlan, T. Avšič-Županc, F. Strle (Ljubljana, Slovenia):
Tick-borne meningoencephalitis after active immunization
- 15:30 – 15:40 **Discussion**
- 15:40 – 15:50 K. Hartelt, E. Wurst, J. Collatz, G. Zimmermann, R.G. Kleespies, P. Kimmig, J. Steidle, U. Mackenstedt (Stuttgart, Hohenheim, Darmstadt, Germany):
Biological control of the tick *Ixodes ricinus* with entomopathogenic fungi and nematodes
- 15:50 – 16:00 M. Faulde, M. Tisch (Koblenz, Ulm, Germany):
Preventive effect of permethrin-impregnated clothing in humans exposed to *Ixodes ricinus* ticks and associated *Borrelia burgdorferi* s.l. in Germany
- 16:00 – 16:10 **Discussion**



Diagnosis, Clinics, and Therapy

Moderators: G. Stanek, Christine Klaus

- 16:10 – 16:20 H. Hofmann (Munich, Germany):
The importance of laboratory parameters for diagnosis and treatment of Lyme borreliosis
- 16:20 – 16:30 J. Süss, E. Gelpi, Ch. Klaus, A. Bagon, E.M. Liebler-Tenorio, H. Budka, B. Stark, H. Hotzel (Jena, Salem, Germany, Vienna, Austria):
Tick-borne encephalitis in a naturally exposed monkey (*Macaca sylvanus*)
- 16:30 – 16:40 T.V. Poponnikova (Kemerovo, Russia):
Chronic tick-borne encephalitis in children
- 16:40 – 16:50 **Discussion**
- 16:50 – 17:00 **Final Remarks**
Closing Ceremony
- followed by **Farewell Reception at the ‘Senatssaal’, Friedrich-Schiller-University**

Poster sessions

EPIDEMIOLOGY AND ECOLOGY OF TICK-BORNE DISEASES

- 1 A. Kaiser (Mainz, Germany):
Increased tick load in migratory birds
- 2 M. Nowaka, K. Siuda, J. Stańczak (Kraków, Gdańsk, Poland):
International transfer of ticks (Ixodida) – vectors of pathogens of arthropod-borne diseases
- 3 C. Burri, V. Bastic, L. Gern (Neuchâtel, Switzerland):
Seasonal evolution of questing *Ixodes ricinus* density and tick infestation of small mammals in relation to climatic factors in TBE endemic areas in Switzerland
- 4 V. Danielová, L. Schwarzová, J. Materna, M. Daniel, L. Metelka, B. Kříž (Prague, Vrchlabí, Hradec Králové, Czech Republic):
Tick-borne encephalitis expansion to higher altitudes and the influence of climatic changes
- 5 M. Kondrusik, J. Zajkowska, S.A. Pancewicz, S. Grygorczuk (Białystok, Poland):
The influence of temperature changes on tick-borne encephalitis (TBE) incidence in a Polish highly endemic region
- 6 C. Brinkley, P. Nolskog, M. Lindh, T. Bergström (Göteborg, Sweden):
Prevalence of TBE virus in field-collected ticks in low endemic regions of western Sweden
- 7 G. Dobler, S. Essbauer, S. Friedewald, R. Wölfel, W. Brey, M. Pfeffer (Munich, Amberg, Germany):
Isolation and sequencing of a tick-borne encephalitis (TBE) virus strain in southern Germany from a region with severe human TBE cases
- 8 R. Floris, G. Menardi, M. Bandi, K. Mignozzi, B. Boemo, A. Altobelli, M. Cinco (Trieste, Italy):
Detection of TBE virus in the Friuli Venezia Giulia region (Italy) and evaluation of co-infection with *Borrelia burgdorferi* and *Anaplasma phagocytophilum* in ticks
- 9 M. Daniel, B. Kříž, V. Danielová (Prague, Czech Republic):
Tick-borne diseases within the scope of the project *Climate Change and Adaptation Strategies for Human Health in Europe*
- 10 L.I. Kozlovskaya, A.N. Alekseev, L.A. Burenkova, H.V. Dubinina, G.G. Karganova, Y.S. Korotkov, G.P. Pivanova (Moscow, St. Petersburg, Russia):
Increase of the risk of tick-borne infections transmitted by *Ixodes ricinus* on a territory under heavy anthropogenic pressure

- 11 A. Altobelli, B. Boemo, K. Mignozzi, M. Bandi, R. Floris, G. Menardi, M. Cinco (Trieste, Italy):
Spatial risk assessment for Lyme borreliosis in Friuli Venezia Giulia (Italy)
- 12 G. Menardi, R. Floris, M. Bandi, K. Mignozzi, B. Boemo, A. Altobelli, M. Cinco (Trieste, Italy):
Detection and genotyping of *Borrelia burgdorferi* in the trans-border area between Italy and Slovenia and evaluation of co-infection with *Anaplasma phagocytophilum* in ticks
- 13 J. Radzijeuskaja, A. Paulauskas, O. Rosef (Kaunas, Lithuania, Bø i Telemark, Norway):
Prevalence of *Anaplasma phagocytophilum* and *Babesia divergens* in *Ixodes ricinus* ticks in Lithuania and Norway
- 14 F. Morán Cadenas, O. Rais, J. Moret, L. Gern (Neuchâtel, Switzerland):
Host blood meal source identification and *Borrelia burgdorferi* sensu lato infection in *Ixodes ricinus* ticks collected on the south- and north-facing slopes of Chaumont (Neuchâtel, Switzerland)
- 15 P.-F. Humair, V. Douet, F. Morán Cadenas, L.M. Schouls, I. Van De Pol, L. Gern (Neuchâtel, Switzerland, Bilthoven, The Netherlands):
Molecular identification of blood meal source in *Ixodes ricinus* ticks using 12S rDNA as a genetic marker
- 16 F. Morán Cadenas, O. Rais, F. Jouda, J. Moret, L. Gern (Neuchâtel, Switzerland):
Follow-up of a study on the phenology of *Ixodes ricinus* ticks and on *Borrelia burgdorferi* sensu lato infection along an altitudinal gradient (Chaumont, Switzerland) (1999–2001 and 2003–2005)
- 17 E.I. Fedorov, A.P. Podavalenko, B. Biletska (Kharkiv, Lviv, Ukraine):
Ecological and epidemiological analysis of sickness rate due to tick-borne borreliosis in the Ukraine
- 18 P. Stefanoff, V. Prikazsky, M. Rosinska, C. Benes (Warsaw, Poland, Prague, Czech Republic):
Trends in tick-borne diseases' surveillance in bordering regions of Poland and Czech Republic, 1999–2005
- 19 N.N. Livanova, S.G. Livanov, S.E. Tkachev (Novosibirsk, Russia):
Numbers, distribution, and tick-borne pathogens of *Ixodes persulcatus* near the northern boundary of its spreading in the Ural, Russia
- 20 J. Kiessling, S. Hartnack, W. Bäuml, K. Misztela, V. Fingerle, M. Pfeffer, S. Essbauer (Munich, Freising, Germany, Bern, Switzerland):
Unequal distribution of *Borrelia burgdorferi* sensu lato in rodent populations from Bavaria (southern Germany)
- 21 A. Paulauskas, D. Ambrasiene, J. Radzijeuskaja, O. Rosef, J. Turcinaviciene (Kaunas, Vilnius, Lithuania, Bø i Telemark, Norway):
Diversity in prevalence and genospecies of *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* ticks and rodents
- 22 S.J. Cutler, J.C. Scott, D.J.M. Wright (Stratford, London, UK):
Are *Borrelia recurrentis* and *Borrelia duttoni* the same spirochaete?

- 23 V. Majláthová, I. Majláth, B. Víchová, M. Hromada, P. Tryjanowski, A. Mihalca, B. Peťko (Košice, Slovakia, České Budějovice, Czech Republic, Poznań, Poland, Cluj-Napoca, Romania):
The role of the sand lizard (*Lacerta agilis*) in the transmission cycle of *Borrelia burgdorferi* sensu lato
- 24 A. Movila, A. Gatewood, I. Toderas, M. Papero, J. Conovalov, I. Uspenskaia, D. Fish (New Haven, USA, Chisinau, Moldova):
Prevalence of *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* L. and *I. lividus* Koch ticks collected from wild birds in the Republic of Moldova
- 25 H. Horká, K. Kýčková., L. Fišerová, J. Kopecký (České Budějovice, Czech Republic):
Experimental infection of *Ixodes ricinus* ticks with *Borrelia burgdorferi* spirochetes
- 26 J. Zajkowska, M. Kondrusik, S. Pancewicz, S. Grygorczuk, R. Świerzbńska (Białystok, Poland):
Demographic analysis of patients with tick-borne encephalitis (TBE) – the influence of unemployment on morbidity in north-eastern Poland
- 27 M. Leschnik, G. Kirtz, E. Leidinger (Vienna, Austria):
Seasonal occurrence of canine babesiosis is influenced by local climate conditions
- 28 T. Rojko, D. Duh, T. Avšič-Županc, F. Strle, S. Lotrič-Furlan (Ljubljana, Slovenia):
Seroprevalence of *Babesia divergens* infection among forestry workers in Slovenia
- 29 G. Walder, R. Edlinger, G. Morosetti, J. Simeoni, M.P. Dierich, H. Schennach, M. Mitterer, P. Kreidl (Innsbruck, Vienna, Austria, Bozen, Meran, Italy):
Is the main ridge of the Alps a divide for tick-borne diseases?
- 30 T. Prück, E. Makkoi, E. Laja (Tartu, Estonia):
Seroprevalence of ehrlichiosis, Lyme borreliosis, and tick-borne encephalitis in South Estonia
- 31 R. Wölfel, S. Essbauer, M. Pfeffer, G. Dobler (Munich, Germany):
Circulation of multiple *Rickettsia* species in ticks within one natural focus
- 32 R. Wölfel, S. Essbauer, M. Pfeffer, G. Bretzel, T. Löscher, G. Dobler (Munich, Germany):
Molecular detection and isolation of *Rickettsia africae* in a tick and an African tick bite fever patient from Zimbabwe
- 33 J. Stanczak, J. Michalik (Gdynia, Poznań, Poland):
Distribution of *Rickettsia helvetica* in *Ixodes ricinus* tick populations in Poland

PATHOGENESIS, PROPHYLAXIS, AND VACCINATION

- 34 K. Haupt, R. Wallich, P. Kraiczky, V. Brade, C. Skerka, P.F. Zipfel (Jena, Heidelberg, Frankfurt/M.):
Complement regulator-acquiring surface proteins of *Borrelia burgdorferi* bind two additional plasma proteins, FHR-1 and plasminogen
- 35 P. Koník, V. Slavíková, J. Salát, J. Řezníčková, E. Dvorožňáková, J. Kopecký (České Budějovice, Czech Republic, Košice, Slovak Republic):
Anti-TNF- α activity in tick saliva
- 36 K. Kýčková, H. Horká, A. Skallová, J. Kopecký (České Budějovice, Czech Republic):
The effect of tick saliva on distribution and proliferation of *Borrelia* spirochetes in murine tissues.
- 37 I. Uspensky (Jerusalem, Israel):
Effective prevention of human tick-borne diseases in the beginning of the 21st century: What chance of success do we have?
- 38 P. Rendi-Wagner, M. Paulke-Korinek, M. Kundi, B. Laaber, H. Kollaritsch (Vienna, Austria):
Long-term immunity after immunization against TBE using Encepur® in a population with three years and longer vaccination intervals
- 39 S. Vene, C. Rydgård-Andersson, Á. Lundkvist, M. Haglund (Solna, Stockholm, Kalmar, Sweden):
Tick-borne encephalitis (TBE) despite complete vaccination – a summary of five Swedish cases

DIAGNOSIS, CLINICS, AND THERAPY

- 40 K. Achazi, O.D. Mantke, A. Nitsche, M. Niedrig (Berlin, Germany):
A new quantitative RT-PCR assay able to detect all tick-borne encephalitis virus subtypes
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