

National Symposium on Zoonoses Research 2018**Joint meeting of the National Research Platform for Zoonoses and the Research Network of Zoonotic Diseases****Wednesday, October 17, 2018****14:00 Registration Opens (Poster Mounting)**

**15:00 – 17:00 Plenary Session I: Keynotes
(Room Ballsaal)***Language: English / German*Chair: Stephan Ludwig

15:00 Opening Remarks: Joint meeting of the German Research Platform for Zoonoses and the Research Network of Zoonotic Diseases

Stephan Ludwig (University of Münster) & Christian Drosten (Charité Berlin)

Welcome Note of the Federal Government

Michael Engels (Federal Ministry of Defense)

**15:30 Keynote 1: Alexandra Mailles (French Public health Agency/ Santé publique France)
Zoonotic risk and unmet needs in the One Health era****16:15 Keynote 2: Rene S. Hendriksen (Technical University of Denmark, Denmark):
NGS, big data and molecular epidemiology**

17:00 Coffee Break

17:20 – 18:50 Session 1: Pathogenesis and Modelling of zoonotic diseases (Room Ballsaal)**17:20 Function of serine protease HtrA in the lifecycle of the foodborne pathogen *Campylobacter jejuni***D. Simson, **S. Backert**, M. Boehm**17:35 O156:H25/O182:H25 STEC of human and bovine origin share remarkable genomic similarity****C. Menge**, S.A. Barth, M. Fischer, A. Fruth, C. Berens, L. Geue**17:50 Establishment of a loss-of-function screening platform to identify MERS-Coronavirus host factor dependencies****F. Weege**, D. Muth, A. Karlas, C. Drosten, T. F. Meyer**18:05 Identification of intestinal luminal metabolites mediating colonization resistance against Campylobacteriosis in murine infection models****S. Bereswill**, U. Escher, K. Stingl, M. M. Heimesaat**18:20 Immunogenicity and protective capacity of recombinant Modified Vaccinia Ankara Virus against Zika Virus**J. H. Schwarz, D. Forster, **A. Volz****18:35 Analysis of proteolytic activation of the spike protein of MERS coronavirus****H. Kleine-Weber**, M. Tarek, M. Hoffmann, S. Pöhlmann

18:50 Poster Viewing Session

Thursday, October 18, 2018**08:30 Registration continued**

09:00 – 10:30 Session 2: Risk Assessment and Epidemiology (Room Ballsaal)

- 09:00 **Can we predict the spatial origin of hantavirus infections using sequences derived from a generic screening PCR?**
S. Weiss, B. Auste, D. H Kruger, J. Hofmann
- 09:15 **Molecular characterization and drug susceptibility of *Mycobacterium tuberculosis* from Eastern Sudan**
Y. A. Shuaib, M. Merker, E. A. G. Khalil, U. Schaible, L. Wieler, M. A. Bakheit, S. E.-T. Mohamed-Noor, M. A. Abdalla, E. Richter, K. Kranzer, S. Niemann
- 09:30 **Chikungunya in Germany: Where and when could it happen?**
N. Tjaden, F. Englmeier, K. Nagels, S. Thomas, **C. Beierkuhnlein**
- 09:45 **Evaluation of the zoonotic potential of H18N11 virus variant tested in the ferret model**
M. Gorka, D. Hoffmann, K. Ciminski, M. Schwemmler, M. Beer
- 10:00 **Multidrug-resistant zoonotic bacteria in companion animals from North-West Germany**
U. Kaspar, K. von Lützu, A. von Lützu, A. Schlattmann, G. Peters, U. Rösler, R. Köck, K. Becker
- 10:15 **Zoonoses in Exotic Pets - Epidemiologic Survey on the Variegated Squirrel Bornavirus 1 in Captive Squirrels (Family Sciuridae) in Germany**
V. Allendorf, K. Schlottau, V. Schulze, F. J. Conraths, R.G. Ulrich, M. Beer, T. Homeier-Bachmann
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09:00 – 10:30 Session 3: Innate and Adaptive Immune Response (Room Zehlendorf)

- 09:00 **Interferon response is essential in containing human pathogenic Bourbon virus, a tick-borne Orthomyxovirus**
J. Fuchs, T. Straub, M. Seidl, G. Kochs
- 09:15 **GlycoViroLectinTools: novel mosquito and sheep C-type lectin receptor (CLR)-Fc fusion protein libraries to screen for CLR/pathogen interactions**
D. Lindenwald, J. Monteiro, K. Schoen, J. Glanz, A. Sternberg, S. Rautenschlein, M. Buettner, G. Alber, K. Jung, S. Becker, B. Lepenies
- 09:30 **Functional characterization of the interferon-induced antiviral factor tetherin of fruit bats**
M. Hoffmann, I. Nehlmeier, C. Brinkmann, V. Krähling, L. Behner, A.-S. Moldenhauer, N. Krüger, J. Nehls, M. Schindler, A. Maisner, S. Becker, S. Pöhlmann
- 09:45 **MERS-Coronavirus strain with a fusion of two accessory genes isolated from a human patient**
D. Niemeyer, K. Mösbauer, E. M. Klein, D. Muth, V. Corman, M. A. Müller, Z. A. Memish, C. Drosten
- 10:00 **Regions-specific regulation of type I interferon in the central nervous system protects from tick-borne encephalitis virus infection**
S. Schreier, L. Zegenhagen, C. Kurhade, A. K. Överby, **A. Kröger**
- 10:15 **Murine fecal microbiota transplantation lowers intestinal *Campylobacter jejuni* loads and pro-inflammatory immune responses in secondary abiotic mice**
M. M. Heimesaat, U. Escher, S. Bereswill
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09:00 – 10:30 Session 4: Antimicrobial use and resistance (Room Steglitz)

- 09:00 **Wastewater from a pig slaughterhouse as a reservoir for clinically relevant antibiotic-resistant pathogens and their dissemination into surface water**
M. Savin, C. Heinemann, S. Dohlen, G. Bierbaum, M. Parcina, J. Kreyenschmidt

- 09:15 **Development of antibiotic resistance in fattening poultry**
C. Kollas, M. Grobbel, A. Käsbohrer, B. A. Tenhagen, A. A. Weiser
- 09:30 **Characterization of a genetically encoded Tetracycline resistance determinant in *Chlamydia suis***
M. Peisker, C. Schnee, C. Berens
- 09:45 **Identification of new mcr-3 colistin resistance gene variants in *Aeromonas* spp. of animal origin from Germany**
I. Eichhorn, C. Feudi, A.T. Feßler, G. Brenner-Michael, Y. Wang, H. Kaspar, A. Lübke-Becker, J. Shen, S. Schwarz
- 10:00 **Analysis of blaCTX-M-1-carrying plasmids from *Escherichia coli* isolates of diseased food-producing animals collected in the GERM-VET resistance monitoring program 2008-2015**
G. B. Michael, **A.-K. Schink**, K. Kadlec, H. Kaspar, S. Schwarz
- 10:15 **High zinc oxide diets: effects on porcine intestinal *Escherichia coli* populations**
V.C. Johanns, T. Semmler, L. Epping, B. Walther, L.H. Wieler

10:30 *Coffee Break and Poster Viewing*

11:00 – 12:30 Session 5: Selected Plenary Talks of the Research Network of Zoonotic Infectious Diseases (Room Ballsaal)

- 11:00 **Promising options to combat campylobacteriosis -lessons learned from peroral gut microbiota transplantation and application of defined molecules in murine infection models**
Markus M. Heimesaat
- 11:30 **Antibiotic Stewardship in Veterinary and Human Medicine**
Robin Köck
- 12:00 **An unexpected development – classical bornavirus BoDV-1 as lethal zoonotic pathogenes**
Martin Beer

12:30 *Lunch & Poster Viewing*

14:30 – 16:00 Session 6: New and Re-Emerging Zoonotic Diseases (Room Ballsaal)

- 14:30 **Experimental risk assessment for chikungunya virus transmission in Europe**
A.Heitmann, S. Jansen, **R. Lühken**, M. Helms, B. Pluskota, N. Becker, C. Kuhn, J. Schmidt-Chanasit, E. Tannich
- 14:45 **Novel sandfly-associated phlebovirus with evidence of neutralizing antibodies in humans, Kenya**
D. Tchouassi, **M. Marklewitz**, E. Chepkorir, F. Zirkel, S. Agha, C. Tigoi, E. Koskei, C. Drosten, C. Borgemeister, B. Torto, S. Junglen, R. Sang
- 15:00 **CRISPR-Forward screening approach to identify host cell factors required for bat influenza A-like virus (bat IAV) cell entry**
T. Thamamongood, U.Karakus, K. Ciminski, W. Ran, G. Zimmer, M. Beer, A. Garcia-Sastre, S. Stertz, M. Schwemmler
- 15:15 **Cowpox Virus - Host Interactions: Identification and Confirmation of Virulence Factors**
S. Weber, A. Franke, D. Hoffmann, A. Tamošiūnaitė, T. Schippers, K. Osterrieder, M. Beer
- 15:30 **Human pathogenic *Leptospira* in small mammals**
S. Fischer, K. Jeske, A. Mayer-Schöll, F. Ruiz-Fons, C. Imholt, E. Heuser, J.P. Teifke, D. Reil, J. Jacob, K. Nöckler, L. Bluhm, A. Breitenstein, W. Fritzsche, R.G. Ulrich

- 15:45 **Neutralizing monoclonal antibodies and alpaca derived single domain antibody fragments against Rift Valley fever virus**
B. Gutjahr, M. Eiden, S. Jäckel, S. Reiche, M. H. Groschup

14:30 – 16:00 Session 7: Public Health (Room Steglitz)

- 14:30 **Activity and prevalence of pathogens in *Ixodes inopinatus* and *Ixodes ricinus* in Southeastern Germany**
L. Chitimia-Dobler, S. Wölfel, G. Lemhöfer, Bestehorn, G. Dobler
- 14:45 **Areas with high hazard potential for autochthonous transmission of *Aedes albopictus* associated arboviruses in Germany**
S. Thomas, N. Tjaden, C. Frank, A. Jaeschke, L. Zipfel, C. Wagner-Wiening, M. Faber, C. Beierkuhnlein, K. Stark
- 15:00 **Reduction of *Escherichia coli* cell numbers by colicins**
A. Rößner, J. Andrack, G. Gölz, T. Seidler, T. Forbrig, T. Alter, S. Orquera
- 15:15 **One Health Interventions of *Vétérinaires sans Frontières* Germany in the current anthrax outbreak in South Omo Zone, Ethiopia**
A. Braus, A. R. Schug, M. V. Larrateguy, A. Asrat, A. Adamu, G. Regassa
- 15:30 **Genotypic and phenotypic characterization of *Listeria monocytogenes* originating from food production environments**
A. Roedel, **S. Vincze**, M. Noll, S. Kleta, S. Al Dahouk, R. Dieckmann
- 15:45 **Health economic assessment of a possible chikungunya transmission in Germany**
F. Englmeier, N. B. Tjaden, S. M. Thomas, C. Beierkuhnlein, K. H. Nagels

16:00 *Coffee break and Poster Viewing*

Impulse Session "Science communication"

(Room Ballsaal)

Language: German

Chair: *Stephan Ludwig*

- 16:30 **Talk 1: Andrea Maisner (Philipps Universität Marburg)**
- 16:50 **Talk 2: Kai Kupferschmidt**
- 17:10 **Talk 3: Volker Stollorz (Science Media Center Germany)**

17:30 – 19:00 General Assembly National Research Platform for Zoonoses with the Election of Internal Advisory Board (Room Ballsaal)

Language: German

Chairs: *Stephan Ludwig, Martin H. Groschup, Sebastian C. Semler*

Wahl des Internen Beirats

Bericht über das vergangene Jahr

19:00 – 20:00 *Poster Viewing Session + Casual Reception*

20:00 *Welcome Reception/Social Dinner (Room Ballsaal)*

Friday, October 19, 2018**07:30 – 09:30 Young Scientist Breakfast**

09:30 – 10:30 Session 8: Pathogen-Cell Interaction (Room Zehlendorf)

- 09:30 **Bacterial nucleases as growth factor during bacterial co-infections**
N. de Buhr, B. J. Pfeiffer, S. Akhdar, C. Schwennen, K.-H. Waldmann, P. Valentin-Weigand, I. Hennig-Pauka, M. von Köckritz-Blickwede
- 09:45 **Hypoxia-induced citrate limitation results in upregulation of *C. burnetii* persistence genes**
I. Hayek, F. Fischer, J. Schulze-Luehrmann, K. Dettmer-Wilde, R. Lang, P. Oefner, S. Wirtz, J. Jantsch, A. Lührmann
- 10:00 **Generation and characterization of synthetically-derived bat mumps virus**
N. Krüger, C. Sauder, S. Hüttl, K. Voigt, G. Herrler, K. Hards, T. Steinmetzer, C. Örvell, J. F. Drexler, M. Müller, C. Drosten, S. Rubin, M. Hoffmann
- 10:15 **A cell model to investigate ENaC-dependent sodium absorption and tight junction alterations in campylobacteriosis**
P. Natramilarasu, F. Lobo de Sá, H. Tröger, J.D. Schulzke, R. Bücker
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09:30 – 10:45 Session 9: Novel Methods, Diagnostics and NGS (Room Steglitz)

- 09:30 **Monitoring wildlife and their pathogens using flies**
S. Calvignac-Spencer, F. H. Leendertz
- 09:45 **Successful oral vaccination against HPAIV H5N1 with novel bat influenza A virus chimeras**
J. Schön, W. Ran, D. Hoffmann, M. Gorka, M. Juozapaitis, M. Schwemmler, M. Beer
- 10:00 **Exploring "big sequence data": De-novo detection of viral pathogens by a dynamic database approach**
L. Forth, D. Höper, A. Hülsewig, R. Lembcke, C. Peißert, P. Holenya, M. Eckey, U. Reimer, K. Noack, M. Beer, **A. Pohlmann**
- 10:15 **Persistent virus infection in mosquito derived cells**
E. Schnettler, K. Franzke, M. Leggewie, S. Vatipally, E. Tannich, S.C. Becker
- 10:30 **Gene expression and signaling pathways in the human colon mucosa during *Campylobacter jejuni* enteritis**
R. Bücker, F. Lobo de Sá, M. Kerick, M.R. Schweiger, J.-D. Schulzke
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09:30 – 11:00 Session 10: Epidemiology and Ecology of zoonotic infections (Room Ballsaal)

- 09:30 **Epidemiology of tick-borne encephalitis in Germany in 2017**
G. Dobler
- 09:45 **Tick-borne encephalitis virus goes into the mountains**
L. Lemhöfer, M. Bestehorn, L. Chitimia-Dobler, G. Dobler
- 10:00 **Field work of the AECO project - Vector biology of *Aedes albopictus* and eco-bio-social drivers for effective vector prevention & control in cooler ecoregions**
R. Müller, I. Kramer, P. Phuyal, U. Kuch, D. A. Groneberg, M. Dhimal
- 10:15 **Environmental occurrence of *Campylobacter* spp. in broiler farms and surroundings**
B. Reichelt, V. Szott, K. Daehre, U. Roesler
- 10:30 **Clustering of hantavirus disease cases in a company in Lower Saxony, Germany, in December 2017, caused by intense bank vole infestation**
KM Schlinkmann, C. Princk, S. Drewes, R.G. Ulrich, M. Saathoff, J. Freise, J. Dreesman
- 10:45 **Ticks and tick-borne pathogens in Sudan**

Y.A.Shuaib, MA.Abdalla, SE-T. Mohmed-Noor, AMA. Wd Elhag, YAB Ismael, G. Lemhöfer, S. Poppert, S. Schaper, G. Dobler, DK. Bakkes, **L. Chitimia-Dobler**

11:00 *Coffee Break & Poster Viewing*

**11:30 – 12:15 Plenary Session II: Keynote
(Room Ballsaal)**
Language: English
Chair: *Martin H. Groschup*

**11:30 Keynote 3: Leonard Hamschmidt (Gesundheitsamt Oldenburg, Germany):
*Leptospirose aus der Sicht des Öffentlichen Gesundheitsdienstes***

12:15 *Lunch & Poster Viewing*

**13:15 – 14:30 Plenary Session II (continued): Keynote
(Room Ballsaal)**
Language: English
Chair: *Martin H. Groschup*

13:15 **Keynote 4: Terry Jones (University of Cambridge, United Kingdom)**
What ancient viral sequences can and will teach us about viral evolution

14:30 **Poster Awards and Farewell**

15:00 **End of Meeting**