



Tagung der DVG-Fachgruppe

# Physiologie & Biochemie

07. - 09. Juni 2024 – Hannover

## Freitag, 07.06.2024

15:00 - 18:00 Registrierung

15:00 - 17:00 Hochschullehrerversammlung & Hardenberg-Symposium (optionales Bewerbungstraining)

17:15 - 17:45 Begrüßung

17:45 - 18:45 Musik & Keynote lecture „New discoveries in the physiology of avian migration“  
*Prof. Dr. Leonida Fusani, MPhil PhD*

19:00 - 21:00 Get together mit Imbiss

## Samstag, 08.06.2024

08:30 - 08:45 Begrüßung

### Vorträge „Organoids“

*jeweils 10 Min. Vortrag & 5 Min. Diskussion*

*Chairs: P. Benz, Hannover / J. Ballout, Gießen*

08:45 - 09:00 IPEC-J2 vs. Porcine Intestinal Organoids: An Improved In Vitro Model for Analysis of Porcine Intestinal Barrier Function? *L. Drößler, Berlin*

09:00 - 09:15 TNF $\alpha$  modulation of secretion and Ca $^{2+}$  signaling in small intestinal murine organoids  
*S. Pauer, Gießen*

09:15 - 09:30 Activation of hypoxia-inducible factor in equine jejunum enteroid-derived monolayers  
*C. Windhaber, Wien (A)*

09:30 - 09:45 Unravelling Gastrointestinal Infections: Insights from an In Vitro Model Using Porcine Organoids *M. Plenge, Hannover*

09:45 - 10:15 Kaffeepause



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### Samstag, 08.06.2024 – Fortsetzung

#### Vorträge „Ernährung & Stoffwechsel“

jeweils 10 Min. Vortrag & 5 Min. Diskussion

Chairs: R. Groote, München / L. Drößler, Berlin

- 10:15 - 10:30 Recruitment of mechanosensitive enteric neurons in the guinea pig gastric fundus is dependent on the ganglionic stretch level *K. Elfers, Hannover*
- 10:30 - 10:45 Modulation of GCN2/eIF2 $\alpha$ /ATF4 pathway in the liver of young goats fed a nitrogen- and/or phosphorus-reduced diet *A. Muscher-Banse, Hannover*
- 10:45 - 11:00 Manipulating the microbiome with vancomycin and high-fibre diet affects SCFA/FFA receptor signalling in rat caecum *J. Ballout, Gießen*
- 11:00 - 11:15 Distribution of intestinal functions along the porcine and chicken intestinal axis – homology or heterogeneity? *G. Breves, Hannover*
- 11:15 - 11:30 Vitamin D metabolites and bone markers in healthy alpacas *M. Wilkens, Leipzig*

11:30 - 12:30 Mittagessen im Institut

#### Postersection 1

Evaluation: P. Benz, Hannover / J. Ballout, Gießen / L. Drößler, Berlin

- 12:30 - 14:00 **P1:** Equine asthma severity correlates with cell cholesterol content and NET formation of blood-derived neutrophils *L. Meiseberg, Hannover*
- P2:** Regulator potential of small RNA molecules in (human) cell culture  
*N. B. Wäber, Gießen*
- P3:** Nociceptor sensitization upon lipopolysaccharide-challenges in vitro and ex vivo  
*S. Leisengang, Gießen*
- P4:** Lipid composition of the equine sebum at various body sites *H. Pfannkuche, Leipzig*
- P5:** BCM-7 did not alter the motility of porcine small intestine in vitro *F. Gard, München*
- P6:** Greater Mitochondrial Metabolic Flexibility of CD4-positive T cells in Equine Recurrent Uveitis. *R. Söth, München*
- P7:** Effect of mesenchymal stromal cells on the interferon-g-induced impairment of transport and barrier function in an epithelial cell line *L. Reissmann, Leipzig*



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**P8:** Fecal cortisol metabolite concentrations as indicator for heat stress and disease in horses *A. Nowak, Wien (A)*

**P9:** Measuring the amount of sebum on the skin of healthy horses  
*H. Pfannkuche, Leipzig*

**P10:** Neutrophil extracellular traps-related host factors associated with acute respiratory distress syndrome (ARDS)-like disease in a ferret model of H7N7-influenza virus infection *C. Schulz, Wien (A)*

**P11:** Enhancing Colon Organoid Cultures with Short-Chain Fatty Acids: Insights into Epithelial Function and Barrier Integrity *M. Plenge, Hannover*

**P12:** Proteomic analyses on the effect of milk from A1 and A2  $\beta$ -casein variant on human peripheral blood mononuclear cells *K. Kleinwort, München*

**P13:** Persistent infection with *Staphylococcus aureus* in intestinal organoids alters sterol metabolism and induces hypoxia *M. Meurer, Hannover*

### Vorträge „Infection and Immunity, Teil 1“

*jeweils 10 Min. Vortrag & 5 Min. Diskussion*

*Chairs: A.-K. Ludwig, München / N. de Buhr, Hannover*

14:15 - 14:30 *Toxoplasma gondii* tachyzoites induce extracellular trap formation in monocytes and macrophages *D. Hanke, Gießen*

14:30 - 14:45 Impact of different inflammatory environments on functional properties of granulocytes in equine recurrent uveitis *R. Degroote, München*

14:45 - 15:00 *Sterol alterations in SARS-CoV-2-infected young and aged hamsters*  
*A. E. Mergani, Hannover*

15:00 - 15:15 Investigating the Relationship between MSC-EVs and Galectins for Potential Immunomodulatory Properties *M.-A. Kakavoulia, München*

15:15 - 15:30 Kaffeepause



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#### Postersection 2

Evaluation: P. Benz, Hannover / J. Ballout, Gießen / L. Drößler, Berlin

- 15:45 - 17:00 **P14:** Assessing the potential role for Group B Streptococcus induced neutrophil extracellular traps in the pathogenesis of neonatal invasive GBS disease in rats and mice in vitro *J. Stoll, Gießen*
- P15:** Retinal Mueller Glial cells differentially express Arginase 1 in Equine Recurrent Uveitis *A. Fleischer, München*
- P16:** Omega-3 polyunsaturated fatty acids modulate the lung-brain axis of communication during LPS-induced ARDS *J. Schäffer, Gießen*
- P17:** Retinal inflammation mediated by Müller cells following gene therapy approaches with Adeno-associated viruses *S. Trapp, München*
- P18:** Modulation of the FGF23 expression in the bone of young goats fed a nitrogen- and/or phosphorus-reduced diet *A. Muscher-Banse, Hannover*
- P19:** The role of neutrophil granulocytes in psychological or inflammatory stress reactions in mice: heart rate variability as a readout parameter *L. Bähr, Gießen*
- P20:** Characterization of bovine milk leukocytes in healthy and infected udder quarters with regard to their immune effector functions *H. Duda, München*
- P21:** Enhancement of ultrafiltration-based depletion of extracellular vesicles from equine platelet lysate *A. Ramesova, Wien (A)*
- P22:** Effects of platelet lysate cytokines on immunomodulation by multipotent mesenchymal stromal cells *J. Möllerberndt, Gießen*
- P23:** Innovative teaching and learning concepts to teach occupational safety in veterinary medicine *A. Richter / L. Sadewater, Hannover*
- P24:** Adipokine, cytokine, and oxylipin production in retroperitoneal white adipose tissue of mice are altered by n-3 fatty acids enrichment or deficiency *T. Wenderoth, Gießen*
- P25:** The effects of excluding calcium and phosphorus supplementation on the expression of jejunal and renal genes involved in the Ca/P homeostasis in growing goats and sheep – Preliminary data *J. Schulz, Zürich (CH)*
- P26:** Using Brain Microglial Autofluorescence as an Index of Inflammaging *M. Slayo*



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### Vorträge „Neuroscience & Inflammation“

*jeweils 10 Min. Vortrag & 5 Min. Diskussion*

*Chairs: A. Schmalen, München / K. Elfers, Hannover*

- 17:00 - 17:15 An animal model for placebo analgesia? Taste-associative learning to induce behaviorally conditioned analgesia in a rat model of inflammatory pain  
*S. Leisengang, Gießen*
- 17:15 - 17:30 Deciphering neuroprotective effects of n-3 polyunsaturated fatty acids: impacts of adipokines and amyloid-beta oligomers in the context of Alzheimer's disease  
*M. Feldotto, Gießen*
- 17:30 - 17:45 Influence of Gentamicin on neutrophil extracellular trap formation from equine neutrophils  
*M. Bonilla, Hannover*
- 17:45 - 18:00 Cellular subsets of granulocytes can be identified through glycosylation of their cell surface  
*C. Sprengel, München*
- 19:00 **Gesellschaftsabend**



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## Sonntag, 09.06.2024

**Vorträge „Cell culture & alternative methods“** jeweils 10 Min. Vortrag & 5 Min. Diskussion  
Chairs: A. Muscher-Banse, Hannover / N. Waeber, Gießen

- 09:00 - 09:15 Recurrent subacute acidosis induces alterations in selected bacterial taxa in vitro and leads to a partial adaption to acidotic conditions *L. Johannigmann, Hannover*
- 09:15 - 09:30 DigiPig: An Interactive Application for Studying Nutrition Physiology in Pigs  
*H. Pfannkuche, Leipzig*
- 09:30 - 09:45 Preconditioning of multipotent mesenchymal stromal cells for treatment of chronic tendon lesions *C. Losacker, Gießen*
- 09:45 - 10:00 Fitness-function-relationships in individual and pooled mesenchymal stromal cell cultures *D. Kukay, Wien (A)*

10:00 - 10:30 Kaffeepause

**Vorträge „Infection and Immunity, Teil 2“** jeweils 10 Min. Vortrag & 5 Min. Diskussion  
Chairs: C. Schulz, Wien (A) / S. Leisengang, Gießen

- 10:30 - 10:45 Role of Galectin-3 Levels in Modulating Immune Response to Viral Infection: Insights from Yellow Fever Vaccination *S. Lee, München*
- 10:45 - 11:00 BAX directly activates caspase-9 *F. Edlich, Leipzig*
- 11:00 - 11:15 Flow Induced Dispersion Analysis (FIDA) for detection and characterization of protein-extracellular vesicles interactions *A.-K. Ludwig, München*
- 11:15 - 11:30 Effects of A1 milk, A2 milk and related opioid-like peptide  $\beta$ -casomorphine-7 on the proliferation of human peripheral blood mononuclear cells *L. Flad, München*
- 11:30 - 12:00 Schlussworte & Posterpreisvergabe
- ab 12:30 Mittagessen (Lunch Bags)
- 12:30 - 13:30 Mitgliederversammlung der DVG-Fachgruppe Physiologie und Biochemie