



LEIPZIGER
MESSE



MAIN PROGRAMME



ISRP 2019

LEIPZIG, GERMANY

International Symposium on Ruminant Physiology

3–6 SEPTEMBER 2019

KONGRESSHALLE AM ZOO LEIPZIG

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WELCOME ADDRESS

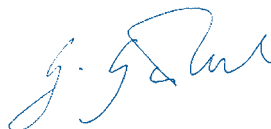
The XIII International Symposium on Ruminant Physiology (ISRP 2019) continues a series of conferences which started in 1960 when the first ISRP was held in Nottingham, UK. Since then, these symposia were organized worldwide and it has always been the major aim to present and to discuss state of the art knowledge and recent developments in ruminant physiology. Whereas the classical topics such as gastrointestinal digestion, absorption and secretion, regulation of feed intake, intermediary metabolism, reproduction, lactation and growth and comparative physiology are of major relevance as in previous symposia, several new and highly actual topics have also been integrated in the current program. These topics include the rumen as a mediator between diet and host metabolism, inflammation and immunology, lifespan and productivity, the ontogenesis of the newborn ruminant, biosensors and big data management and finally global change and ruminants.

We would like to express our thanks to all who have helped in the process. Many thanks are due to chairs and co-chairs of the sessions, to the local organizing committee and all the reviewers of the keynote contributions and the short communications. Special thanks are due to the Leipziger Messe GmbH who helped a lot in hosting and organizing a comfortable meeting. Also, this symposium would not have taken place without the support of many sponsors providing not only money but also ideas to improve the meeting.

All invited keynote contributions will be published as full article in "Animal". Abstracts of short communications and keynote lectures are published in "Advances in Animal Biosciences". We are convinced that these publications will have major relevance for research and teaching in ruminant physiology.



Gerhard Breves



Gotthold Gäbel



WELCOME ADDRESS

Dear Visitors, Dear Guests,

Welcome to International Symposium on Ruminant Physiology 2019. We welcome you to Leipziger Messe, one of the Top 10 event, convention and function organisers in Germany, and one of the Top 50 worldwide. With over 850 years of history, we are one of the oldest trade fair centres in the world and benefit from a wealth of experience that forms the basis for a successful future. Leipziger Messe also stands apart in terms of its customer orientation, innovative strength and the responsible manner in which it conducts business. In order to best serve our exhibitors and visitors, our modern exhibition centre combines comprehensive service with logistical know-how, housed within impressive architecture.

We understand brands, we network industries, and we offer our customers individual customised event formats from a single source. Our expertise ranges from devising, professionally organising and staging trade fairs, conventions and events through to stand construction and catering. As an all-round service provider the Leipziger Messe corporate group with its five subsidiaries and the Congress Center Leipzig (CCL) offers these services beyond the city of Leipzig, both nationally and internationally. Thanks to this portfolio, in 2018 customers and visitors voted Leipziger Messe the Service Champion of the trade fair industry in Germany's biggest service ranking for the third time in a row.

In Leipzig we offer the best conditions for events of every type and size as our physical structures are flexible – with five ground-level exhibition halls, the CCL, open-air exhibition space and our imposing glass hall. Important industry and trade fairs, successful consumer fairs and high-calibre trade conventions are as much at home here as are shows, corporate functions and large-scale events. Our flexible event space HALLE:EINS, which seats up to 15,000 people, offers a vast array of options while with the KONGRESSHALLE am Zoo Leipzig which we have been operating since 2016, we can offer a modern conference venue housed in a captivating historic building, right in the heart of Leipzig.



In keeping with the principle of “Growing in Balance”, the Leipziger Messe corporate group has taken sustainability as the central leitmotif of its corporate culture, the objective being to balance economic growth with responsibility for the environment and society. Leipziger Messe was the first German trade fair company to be certified with the internationally recognised Green Globe seal of approval.

Get a close-up look at Leipziger Messe’s centuries of history. The double-M is one of the oldest trade fair brands in the world and recalls the sample fairs that were developed in Leipzig and which continue to form the basis of the trade fair industry. In the city centre you can discover the trade fair buildings from the 19th century and the many arcades. Today Leipzig is one of Germany’s most dynamic cities. You will be enthralled by the diversity of its cultural life and the many leisure options it has to offer.

We wish you every success at International Symposium in Ruminant Physiology 2019 and an enjoyable stay in the trade fair city of Leipzig.
Best regards,

Martin Buhl-Wagner
Chief Executive Officer

ORGANISERS

INSTITUTIONEN



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University of Leipzig, Faculty of Veterinary Medicine, Institute of Veterinary Physiology

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PROGRAMME OVERVIEW

Tuesday, 3 September 2019


Wednesday, 4 September 2019

Großer Saal		Weißer Saal		Großer Saal		Händel-Saal	
09:00 – 09:45 Congress Opening (see page 8)				09:00 – 10:30 Poster session II and Coffee break (see page 13)		09:00 – 10:30 Poster session II and Coffee break (see page 13)	
		Coffee break					
10:30 – 12:15 Reproduction, lactation and growth I (see page 8)		10:30 – 12:00 Absorption and secretion I (see page 8)		10:30 – 12:00 Gastrointestinal Digestion: Mechanisms and Regulation I (see page 15)		10:30 – 12:15 Comparative and Integrative Physiology I (see page 16)	
		Lunch break				Lunch break	
13:00 – 14:30 Reproduction, lactation and growth II (see page 9)		13:00 – 14:30 Absorption and secretion II (see page 9)		13:00 – 14:30 Gastrointestinal Digestion: Mechanisms and Regulation II (see page 16)		13:15 – 15:00 Comparative and Integrative Physiology II (see page 16)	
14:30 – 16:00 Poster session I and Coffee break (see page 9)		14:30 – 15:45 Poster session I and Coffee break (see page 9)		14:30 – 16:00 Poster session III and Coffee break (see page 17)			
		15:45 – 17:45 Ruminant intermediary metabolism (see page 12)				15:00 – 16:00 Poster session III and Coffee break (see page 17)	
16:00 – 17:30 Reproduction, lactation and growth III (see page 12)				16:00 – 18:15 Biosensors and Big Data management (see page 19)			
17:30 – 21:00 Welcome Reception · KONGRESSHALLE (see page 38)							
				19:00 – 01:00 Congress Party · MORITZBASTEI (see page 38)			

Großer Saal	Weißer Saal	Großer Saal	Weißer Saal
08:45 – 10:15 Lifespan and productivity (see page 20)		08:30 – 10:00 Regulation of feed and water intake I (see page 25)	09:15 – 10:00 The rumen as mediator I (see page 25)
10:15 – 11:30 Poster session IV and Coffee break (see page 20)	10:15 – 11:15 Poster session IV and Coffee break (see page 20)	10:00 – 11:30 Poster session V and Coffee break (see page 25)	10:00 – 11:30 Poster session V and Coffee break (see page 25)
11:30 – 13:00 Inflammation and Immunology (see page 23)	11:15 – 12:45 Ontogenesis of the newborn ruminant I (see page 23)	11:30 – 13:00 Regulation of feed and water intake II (see page 28)	11:30 – 13:15 The rumen as mediator between diet and host metabolism II (see page 28)
Lunch break		Lunch break	13:15 – 13:25 Congress Closing (see page 28)
14:00 – 15:30 Global Change and ruminants (see page 23)	14:00 – 14:45 Ontogenesis of the newborn ruminant II (see page 24)		
15:30 – 19:30 Social Programme Choose from our various tour offers. Tickets are available at the registration onsite. (see page 38)			

SCIENTIFIC PROGRAMME

Tuesday, 3 September 2019

Time	ID	Venue Session Titel Lecture	supported by
09:00 – 09:45		Großer Saal CONGRESS OPENING	
09:00 – 09:25		Opening of the 13th ISRP Gerhard Breves, Hanover, DE	
09:25 – 09:35		Welcome address Walter Brehm, Leipzig, DE	
09:35 – 09:45		Welcome address Gerhard Greif, Hanover, DE	
09:45 – 10:30		Coffee break	
10:30 – 12:15		Großer Saal REPRODUCTION, LACTATION AND GROWTH I Christine Wrenzycki, Giessen, DE	
10:30 – 11:15	KEYNOTE	Fate of amino acids from absorption to milk protein: impact of protein and energy supply Helene Lapierre, Québec, CA	
11:15 – 11:30	O 07	Effect of the inclusion of coffee grounds in concentrate on productive performance, feeding behavior and ruminal fermentation of Latxa sheep Xabier Díaz de Otálora, Vitoria-Gasteiz, ES	
11:30 – 11:45	O 08	Composition of milk fatty acids as an indicator of negative energy balance of dairy cows in early lactation Mikhail Churakov, Uppsala, SE	
11:45 – 12:00	O 09	Maternal nutrition and stage of early pregnancy in beef heifers: Influence on glucose transporter GLUT3 in utero-placental tissues Matthew Crouse, Fargo, ND, US	
12:00 – 12:15	O 10	Effects of feeding systems on gonadal development, scrotal fat accumulation and semen quality of rams of different Merino breed types Amelia May du Preez, Pretoria, CA	
10:30 – 12:00		Weißer Saal ABSORPTION AND SECRETION I Jörg Aschenbach, Berlin, DE Paweł Górka, Krakow, PL	
10:30 – 10:45	O 01	BFH12 cell line: A promising tool for studies on drug-metabolizing enzymes and efflux transporters of bovine biotransformation Axel Schoeniger, Leipzig, DE	
10:45 – 11:00	O 02	Ruminal and intestinal calcium absorption in growing sheep: acute and long-term effects of a menthol-containing feed additive Sebastian Geiger, Berlin, DE	
11:00 – 11:15	O 03	Dietary phosphorus restriction induces bone mobilization, downregulates fibroblast growth factor 23 in bone and interferes with vitamin D metabolism Walter Grünberg, Hanover, DE	
11:15 – 12:00	KEYNOTE	Regulation of intestinal and renal transport of calcium and phosphorous in ruminants Mirja Wilkens, Hanover, DE	
12:00 – 13:00		Lunch break	



Time	ID	Venue Session Titel Lecture	supported by
13:00 – 14:30		Großer Saal REPRODUCTION, LACTATION AND GROWTH II Christine Wrenzycki, Giessen, DE Franziska Dengler, Leipzig, DE	
13:00 – 13:15	O 11	Fusarium mycotoxins deoxynivalenol and fumonisins affect milk production, nutrient digestibility and liver health in dairy cows Johannes Faas, Piacenza, IT	
13:15 – 13:30	O 12	Effects of low-fat corn distiller grains on carcass traits and muscle cell growth genes of crossbreed bulls Welder A. Baldassini, Botucatu, São Paulo, BR	
13:30 – 13:45	O 13	Effect of proteolytic enzymes on cytokine concentrations, uterine inflammation and fertility in postpartum water buffalo with cytological endometritis Harpreet Singh, Hisar, IN	
13:45 – 14:30	KEYNOTE	Environmental impact on early embryonic development Urban Besenfelder, Vienna, AT	
13:00 – 14:30		Weißer Saal ABSORPTION AND SECRETION II Jörg Aschenbach, Berlin, DE Jan Plaizier, Winnipeg, CA	
13:00 – 13:45	KEYNOTE	Short-term and long term adaptation of SCFA absorption from the rumen Gregory B. Penner, Saskatoon, CA	
13:45 – 14:00	O 04	Effects of GLP-1 on expression of functional genes in rumen epithelium and its association to concentrate intake Zanming Shen, Nanjing, CN	
14:00 – 14:15	O 05	Ex vivo application of SCROPHULARIA EXTRACT and MONENSIN to determine effects on ruminal BARRIER FUNCTION and nutrient uptake in sheep Renee Petri, Vienna, AT	
14:15 – 14:30	O 06	Role of fatty acid receptors in the regulation of transporters for short chain fatty acids and pH-homeostasis in sheep rumen Lisa Baaske, Leipzig, DE	
14:30 – 16:00		Großer Saal POSTER SESSION I: REPRODUCTION, LACTATION AND GROWTH	
	P 01	High-fiber by-product feedstuff as a substitute for corn in feedlot diets: dry matter intake, cattle growth and carcass traits Otávio Machado Neto, Botucatu, São Paulo, BR	
	P 02	Effects of rumen-protected folic acid supplementation on reproductive performance in ewes Hailing Luo, Beijing, CN	
	P 03	Ascorbic acid inhibits oxidative stress of mastitis induced by LPS in mice Akihiko Hagino, Sendai, JP	
	P 04	The impact of phantom training systems to habituate heifers to automatic milking systems Miriam Katinka von Kuhlberg, Leipzig, DE	
	P 05	A phytogetic feed additive altered the fatty acid profile of beef Martin Hünerberg, Göttingen, DE	
	P 06	Effects of centrifugation and cholesterol-loaded cyclodextrin in the soybean lecithin -based extender on quality of the post-thaw Ghezel ram sperm Hossein Daghigh Kia, Tabriz, IR	

SCIENTIFIC PROGRAMME

Tuesday, 3 September 2019

Time	ID	Venue Session Titel Lecture	supported by
	P 07	Circulating prolactin concentrations are decreased by reduced energy intake but not by reduced milking frequency in dairy cows around dry-off Lorenzo E. Hernández-Castellano, Tjele, DK	
	P 08	Involvement of Cyclin B1 and Cyclin B3 in testicular development promoted by Vitamin E in prepubertal sheep Yuefeng Gao, Beijing, CN	
	P 09	Application of principal component analysis and non-hierarchical clusters to study crossbreed Angus-Nellore bulls feedlot finished Luis Artur L. Chardulo, Jaboticabal, BR	
	P 10	Factors affecting birth weight and growth rate of lambs from the Icelandic sheep breed Jóhannes Sveinbjörnsson, Hvanneyri, IS	
	P 11	Effects of different dietary NFC, NDF and niacin addition for regulate hepatic gluconeogenesis of perinatal ewes Ting Ru, Huhhot, CN	
	P 12	Extended view on young stock losses in Holstein dairy cattle – First results from the EIP-project “Die Entwicklung des KUH-mehr-WERT Navigators” Benno Waurich, Groß Kreutz, DE	
	P 13	Effects of adding different levels of α-tocopherol on post – thaw sperm quality of ram semen Hossein Daghigh Kia, Tabriz, IR	
	P 14	Effect of curcumin on post-thaw variables and oxidative status of ram semen Hossein Daghigh Kia, Tabriz, IR	
	P 15	The dynamics of oxidative stress development at the final stage of pregnancy in cows Vladimir Safonov, Moscow, RU	
	P 16	Sex steroids increase skeletal growth rate in Bos indicus-crossbred steers but do not affect histological changes in the growth plate Risa Antari, Pasuruan, ID	
	P 17	Insulin and magnesium increase the activity of GPDH in bovine adipocytes Sandra Jurek, Berlin, DE	
	P 18	Protein fraction distribution and amino acid content in milk of midlactating dairy cows fed hybrid rye grain Piotr Micek, Krakow, PL	
	P 19	Can infrared ocular thermography monitor growth in dairy calves? Miguel Velazquez, Newcastle Upon Tyne, GB	
	P 20	Can high immune response sires reduce disease in a small UK dairy herd? Miguel Velazquez, Newcastle Upon Tyne, GB	
	P 21	Investigations on the influence of different energy concentrations in rations of fattening bulls on different carcass characteristics Dirk von Soosten, Braunschweig, DE	
	P 22	Comparison of prepartum diets varying in dietary cation anion difference, potassium and calcium content for prevention of hypocalcemia Mirja R. Wilkens, Hanover, DE	
	P 23	The effect of prepartum treatment with vitamin D3 on mineral homeostasis and energy metabolism in dairy cows Mirja R. Wilkens, Hanover, DE	



Time	ID	Venue Session Titel Lecture	supported by
	P 24	Dietary amino acid regulation of murine lactation is mediated by mTORC1 Virginia L Pszczolkowski, Madison, WI, US	
	P 25	The propylene glycol usage in the prevention protocol of subclinical, clinical forms of ketosis in dairy cows Ciprian-Valentin Mihali, Arad, RO	
	P 26	Effects of apelin stimulation on cell proliferation and differentiation of myoblast cells from Japanese Shorthorn cattle Katsuyoshi Sato, Akita, JP	
	P 27	The antilipogenic effect of t10c12-CLA does not explain marine lipid-induced milk fat depression in dairy ewes: Insights from a meta-analysis Pablo G. Toral, León, ES	
	P 28	Effects of dietary energy concentration on feed intake and growth performance of fattening Fleckvieh and Braunvieh bulls Thomas Ettle, Poing, Grub, DE	
	P 29	Effects of rumen-protected choline, propylene glycol and monensin sodium on blood parameters of ghezel ewes during late gestational food Ali Hosseinkhani, Tabriz, IR	
	P 30	Effect of prepartum administration of propylene glycol, monensin sodium and choline during food restriction period on lamb growth and development Ali Hosseinkhani, Tabriz, IR	
	P 31	Comparison of milk yield and somatic cell count of German and New Zealand dairy cows Helen Schweizer, Munich, DE	
	P 32	The effects of in-feed resin acid inclusion on milk production responses of dairy cows Piia Kairenius, Jokioinen, FI	
	P 33	Relationship between milk yield and body and udder characteristics in Bedouin goat reared under the Sahara desert conditions Salima Charallah, Algiers, DZ	
	P 34	Effect of season on scrotal temperature, semen characteristics and testosterone in zebu bulls Marcelo George Mungai Chacur, Presidente Prudente, São Paulo, BR	
	P 35	Towards the identification of milk fat globule size as a beneficial milk production trait: small and large phenotype characterisation Leonie Walter, Parkville, AU	
	P 36	Energy partitioning and body weight change in early lactation dairy cows fed canola meal- or soybean meal-based diets Kenneth F. Kalscheur, Madison, WI, US	
	P 37	Supplemental Bovine Lactoferrin and probiotic in Ghezel lambs during the Pre-weaning Phase Ali Hosseinkhani, Tabriz, IR	
	P 38	Effect of feeding cold-pressed sunflower cake in the concentrate on ruminal fermentation and rumen bacterial community composition Aser García-Rodríguez, Vitoria-Gasteiz, ES	
	P 39	Potential use of milk Fourier transform mid-infrared spectra on predicting heat production of dairy cows Sadjad Danesh Mesgaran, Dummerstorf, DE	

SCIENTIFIC PROGRAMME

Tuesday, 3 September 2019

Time	ID	Venue Session Titel Lecture	supported by
14:30 – 16:00		Coffee break	
16:00 – 17:30		Großer Saal REPRODUCTION, LACTATION AND GROWTH III Helene Lapierre, Québec, CA David Harmon, Lexington, KY, US	
16:00 – 16:15	O 14	The role of unfolded protein response in mammary gland development and milk production Shinichi Yonekura, Kami-Ina, JP	
16:15 – 16:30	O 15	Energy balance during the transition period of purebred Holstein and Simmental cows and their crosses – preliminary results Helen Schweizer, Munich, DE	
16:30 – 16:45	O 16	The relationship between blood metabolites and milk fatty acids in early lactating dairy cows Anna Edvardsson Rasmussen, Uppsala, SE	
16:45 – 17:00	O 17	Insulin mediates mTORC1 regulation of milk protein translation by essential amino acids in bovine mammary epithelial cells Sebastian I Arriola Apelo, Madison, WI, US	
17:00 – 17:15	O 18	Lipidomic profiles of milk from cows with consistently small or large milk fat globule size distributions suggest underlying metabolic differences Leonie Walter, Parkville, AU	
17:15 – 17:30	O 19	Essential amino acid profile of metabolizable protein affects mammary gland amino acid metabolism in dairy cattle Kelly Nichols, Wageningen, NL	
15:45 – 17:45		Weißer Saal RUMINANT INTERMEDIARY METABOLISM Klaus Eder, Giessen, DE Robert Van Saun, University Park, PA, US	
15:45 – 16:30	KEYNOTE	Metabolic inflammation and the relationships among energy and calcium metabolism and innate immune function in dairy cows in the peripartum period Stephen Leblanc, Guelph, CA	
16:30 – 16:45	O 20	Effects of a metaphylactic butaphosphan and cyanocobalamin treatment on liver, blood and urine metabolome of transition dairy cows Melanie Schären, Leipzig, DE	
16:45 – 17:00	O 21	Clay mineral-based mix reduces liver damage in early lactation dairy cows switched to a high-concentrate diet Nicole Reisinger, Tulln, AT	
17:00 – 17:15	O 22	Abomasal infusion of ground corn and anions in early lactating Holstein-Friesian cows to induce hindgut and metabolic acidosis Sanne van Gastelen, Wageningen, NL	
17:15 – 17:30	O 23	Dietary protein influences the hepatic signalling pathway of the somatotrophic axis in young goats Alexandra Muscher-Banse, Hanover, DE	
17:30 – 17:45	O 24	Impact of ethanol administration on insulin sensitivity in wethers Mabrouk Elsabagh, Hiroshima, JP	
17:30 – 21:00		KONGRESSHALLE WELCOME RECEPTION (see page 38)	



Time	ID	Venue Session Titel Lecture	supported by
09:00 – 10:30		Großer Saal POSTER SESSION II: GASTROINTESTINAL DIGESTION: MECHANISMS AND REGULATION	
	P 40	Effects of wet distillers grains on dry matter intake, digestibility and ruminal fermentation in beef cattle Otávio Machado Neto, Botucatu, São Paulo, BR	
	P 41	Effect of clay minerals on the bioavailability of dietary zinc in rumen fluid and duodenal chyme in vitro Maria Schlattl, Freising, DE	
	P 42	Glyphosate does not affect rumen fermentation, nutrient digestion or mineral metabolism of non-lactating dairy cows under practical feeding conditions Wilhelm Windisch, Freising, DE	
	P 43	Effect of mild dietary Cu excess from different Cu sources on Cu metabolism and rumen fermentation characteristics in cannulated cows Wilhelm Windisch, Freising, DE	
	P 44	Effects of supplementing amylase and protease to ruminant diet on rumen fermentation characteristics and the rumen microbiota Wilhelm Windisch, Freising, DE	
	P 45	Development of salivary IgA secretory ability in weaned calves Hiroe Takahashi, Sapporo, JP	
	P 46	Effect of phytogenic feed additives with Performizer® application on milk performance of lactating dairy cows Poulad Pourazad, Steyregg, AT	
	P 47	Ruminal fermentation and enteric methane production of legumes containing condensed tannins fed in continuous culture Kathy Soder, University Park, PA, US	
	P 48	Effects of different levels of rapeseed cake in the ration of beef cattle on nutrient digestion and nitrogen utilization Jian Gao, Beijing, CN	
	P 49	Evaluation of supplemental autolyzed yeast on nitrogen excretion and apparent digestibility of Holstein cows fed a high starch diet Isabel Müller, Urbana, IL, US	
	P 50	Effects of maternal supplementation on intestinal gene expression in progenies fed diets with or without high inclusion of rumen-protected fat Otávio Machado Neto, Botucatu, São Paulo, BR	
	P 51	Effect of <i>Pseudoramibacter boviskoreani</i> sp. nov. supplementation on sub-acute ruminal acidosis induced by feeding high level of concentrate diet Eun Joong Kim, Sangju, KR	
	P 52	The rate of disappearance of Hydrocyanic Acid, HCN from cassava plant parts under drying or silage processing methods Karen Harper, Gatton, AU	
	P 53	Precision and additivity of organic matter digestibility obtained with an in vitro multi enzymatic method Clementina Álvarez, Ås, NO	
	P 54	A menthol-containing feed additive induces transcriptomic changes in sheep ruminal epithelium Jasper N. Schulte, Berlin, DE	

SCIENTIFIC PROGRAMME

Wednesday, 4 September 2019


Time	ID	Venue Session Titel Lecture	supported by
	P 55	Do methane emissions per unit of digested fibre vary with fibre digestibility? Marcus Clauss, Zurich, CH	
	P 56	Exploration of undifferentiated cells in bovine rumen epithelial tissue Yutaka Suzuki, Sapporo, JP	
	P 57	Changes in the nitrogen fraction of three tropical forage legumes as affected by ensiling length and temperature Temitope Alex Aloba, Stuttgart, DE	
	P 58	Effect of abomasal infusion of exogenous starch-digesting enzymes on small intestinal starch digestibility of lactating dairy cows Milani Bhagya Samarasinghe, Tjele, DK	
	P 59	Effects of including increasing amounts of cauliflower in the concentrate of a dairy sheep diet on in vitro ruminal fermentation María Dolores Carro, Madrid, ES	
	P 61	Effect of supplemental sodium butyrate on p53 expression in the gastrointestinal epithelium of sheep Jadwiga Flaga, Warsaw, PL	
	P 62	Response of growing bulls to increasing levels of cassava meal in a concentrate maize stover diet Kusmartono Kusmartono, Malang, ID	
	P 63	The effects of varying zinc dosages from different feed-grade sources on ruminal gas production ex vivo Daniel Brugger, Freising, DE	
	P 64	High-concentrate diet-induced change of cellular metabolism leads to decreases of immunity and imbalance of cellular activities in rumen epithelium Zhongyan Lu, Nanjing, CN	
	P 65	Effect of dietary-SCFA on microbial protein synthesis and urinal urea-N excretion is related to microbiota diversity in rumen Zanming Shen, Nanjing, CN	
	P 66	Ruminal in vitro protein degradation, anti-nutrient reduction, and in vivo digestibility of energy and nutrients in ensiled + toasted pea grains Martin Bachmann, Halle (Saale), DE	
	P 67	Effect of ensiling and toasting of field pea grains on formation of Maillard polymers from lysine and arginine Martin Bachmann, Halle (Saale), DE	
	P 68	Use of combinations of commercial extracts from quebracho, oak and grape tannins to modulate in vitro ruminal fermentation Pablo G. Toral, León, ES	
	P 69	Pre-ensiling treatments affect the in vitro rumen fermentation profile, microbiota composition and fibre degradability of lucerne silages Thomas Hartinger, Bonn, DE	
	P 70	Effect of rye and wheat grain processing on in situ degradability and intestinal digestibility of protein and starch in ruminants Patrycja Rajtar, Kraków, PL	
	P 71	Effect of different types of fibre substituting barley straw on in vitro rumen fermentation of high-concentrate diets for beef calves Manuel Fondevila, Zaragoza, ES	
	P 72	In vitro study of the effect of the particle size of fibrous substrates on microbial rumen fermentation Manuel Fondevila, Zaragoza, ES	




Time	ID	Venue Session Titel Lecture	supported by
	P 73	Effect of supplemental rumen-protected Methionine on zootechnical performance of bulls for fattening Vivienne Inhuber, Freising, DE	
	P 74	Effect of decortication of oat on chemical composition and in situ rumen and total tract disappearance of protein Saman Lashkari, Tjele, DK	
	P 75	Effect of oat decortication, toasting and in combination on protein metabolism of dairy cows Saman Lashkari, Tjele, DK	
	P 76	The effect of a sudden dietary starch inclusion increase on metabolic status and milk production in dairy cows Lorenzo E. Hernández-Castellano, Tjele, DK	
	P 77	Effects of garlic and cinnamon on in vitro and in vivo rumen adaptation Marije van Tol, Werkendam, NL	
	P 78	Effects of garlic and cinnamon supplementation on ruminal methanogenesis and rumen fermentation kinetics determined with the gas production technique Marije van Tol, Werkendam, NL	
	P 79	Fatty acid profile in EU 'HealthyHay' sainfoin, Onobrychis viciifolia germplasm and the effect of their tannins on in vitro biohydrogenation Wilbert Pellikaan, Wageningen, NL	
	P 80	Rumen pH and redox regulation in cattle grazing forages by learned intake behaviours Jim Gibbs, Lincoln, NZ	
	P 81	Effect of harvest time and shredding of grass-clover on feed intake and chewing time in dairy cows Nikolaj Peder Hansen, Tjele, DK	
09:00 – 10:30		Coffee break	
10:30 – 12:00		Großer Saal GASTROINTESTINAL DIGESTION: MECHANISMS AND REGULATION I Gerhard Breves, Hanover, DE Kazuo Katoh, Sendai, JP	 <small>a Nutreco company</small>
10:30 – 11:15	KEYNOTE	Fifty years of research on the inhibition of rumen methanogenesis: What have we learned and where we are headed Karen Beauchemin, Lethbridge, CA	
11:15 – 11:30	O 36	Relationship between rumen microbiota and enteric methane emissions of dairy cows Jan Plaizier, Winnipeg, CA	
11:30 – 11:45	O 37	Roles of Toll-like receptor 5 ligand in the innate immune system in primary bovine rumen epithelial cells Koki Nishihara, Sendai, JP	
11:45 – 12:00	O 38	Effect of rumen nitrogen balance and dietary protein source on intake, milk yield, and milk fatty-acid composition of dairy cows Deepashree Kand, Stuttgart, DE	

SCIENTIFIC PROGRAMME

Wednesday, 4 September 2019


Time	ID	Venue Session Titel Lecture	supported by
10:30 – 12:15		Händel-Saal COMPARATIVE AND INTEGRATIVE PHYSIOLOGY I Reiko Rackwitz, Leipzig, DE Maya Zachut, Rishon Lezion, IL	
10:30 – 10:45	O 28	Lipogenic genes expression and chemical composition of Longissimus muscle in cattle fed wet distillers grains Otávio Machado Neto, Botucatu, BR	
10:45 – 11:00	O 29	MitoCow – Short-term adaption of metabolite profiles after parturition in L-carnitine supplemented Holstein dairy cows Sandra Grindler, Stuttgart-Hohenheim, DE	
11:00 – 11:15	O 30	Contrasted status in B vitamins between dairy cows and goats fed various lipid supplements Benoit Graulet, Saint-Genès-Champagnelle, FR	
11:15 – 11:30	O 31	Comparing the protective effects of butyrate on ovine rumen and porcine colon epithelium under hypoxia Franziska Dengler, Leipzig, DE	
11:30 – 12:15	KEYNOTE	Comparative methane production in terrestrial vertebrates Marcus Clauss, Zurich, CH	
12:00 – 13:15		Lunch break	 We create chemistry
13:00 – 14:30		Großer Saal GASTROINTESTINAL DIGESTION: MECHANISMS AND REGULATION II Gerhard Breves, Hanover, DE Jan Dijkstra, Wageningen, NL	 © Nutreco company
13:00 – 13:45	KEYNOTE	Nutritional regulation of intestinal starch and protein assimilation David Harmon, Lexington, KY, US	
13:45 – 14:00	O 39	Duodenal infusions of starch with casein or glutamic acid increase post-ruminal a-glycohydrolase activities in cattle Ronald Trotta, Fargo, ND, US	
14:00 – 14:15	O 40	Fermentation of diets for milking cows including clay minerals (zeolite, bentonite and sepiolite) measured in a semicontinuous in vitro system Zahia Amanzougarene, Zaragoza, ES	
14:15 – 14:30	O 41	Rumen protein kinetics of novel grazing systems – why is microbial protein production so high when grazing low protein fodder beet? Jim Gibbs, Lincoln, NZ	
13:15 – 15:00		Händel-Saal COMPARATIVE AND INTEGRATIVE PHYSIOLOGY II Reiko Rackwitz, Leipzig, DE Alexandra Muscher-Banse, Hanover, DE	
13:15 – 13:30	O 32	MitoCow – Effect of dietary L-carnitine on performance and selected blood parameters indicative for energy metabolism in dairy cows Jennifer Meyer, Braunschweig, DE	
13:30 – 13:45	O 33	Cattle and sheep – a hypothesis for a basic difference in digestive physiology Jürgen Hummel, Goettingen, DE	
13:45 – 14:00	O 34	Evaluating the accuracy and precision of conceptual models for predicting the nitrogen excretion of cattle in tropical environments Khaterine Salazar-Cubillas, Stuttgart, DE	
14:00 – 14:15	O 35	The effect of dietary sugars on ruminal fermentation, stomach measurements and blood parameters in Reeves's muntjac (Muntiacus reevesi) Marcin Przybyto, Kraków, PL	
14:15 – 15:00	KEYNOTE	Seasonal differences in the physiology of wild life ruminants Walter Arnold, Vienna, AT	



Time	ID	Venue Session Titel Lecture	supported by
14:30 – 16:00		Großer Saal POSTER SESSION III: COMPARATIVE AND INTEGRATIVE PHYSIOLOGY	
	P 82	Dietary and faecal Ca, P ratios in hindgut and foregut fermenters Linda Böswald, Munich, DE	
	P 83	Diets supplemented with various lipid sources differently affect selected milk metabolites concentrations in cows and goats Laurence Bernard, St Genès-Champanelle, FR	
	P 84	Milk molecular species of triacylglycerols characterization by lipidomic approach in cows and goats fed diets supplemented in various lipid sources Hélène Fougere, St Genès-Champanelle, FR	
	P 85	Effects of dietary supplementation of rumen-protected L-tryptophan on growth performance and physiological responses in steers during cold environment Jae-Sung Lee, Seoul, KR	
	P 86	Clustering based on liver and blood metabolite concentrations suggests cows are susceptible or resistant to early postpartum metabolic disorders Ryan Pralle, Madison, WI, US	
	P 87	MitoCow-Effect of dietary L-carnitine on haematological profiles in dairy cows with special emphasis on parturition Susanne Ursula Daniels, Braunschweig, DE	
	P 88	Hormones and bone turnover in nutritionally restricted growing cattle Tiago Alves Correa Carvalho da Silva, Toowoomba, AU	
	P 89	Impact of starch and sugar addition into the diet on feed intake, body weight and digestibility in addax, Addax nasomaculatus Paweł Górka, Krakow, PL	
	P 90	Rapid field-test for the quantification of vitamin E, β -carotene, and vitamin A in whole blood of dairy cattle Morteza Hosseini Ghaffari, Bonn, DE	
	P 91	Diet supplemented with various lipid sources similarly modulate methane emissions in dairy goat and cow Cécile Martin, St Genès-Champanelle, FR	
	P 92	Development of the erythrocyte phenotype and blood biochemistry in dairy calves during the first ten weeks of life Lennart Golbeck, Hanover, DE	
	P 93	A study on relationship of blood metabolites and carcass traits in Hanwoo steers Min Ji Kim, Chuncheon, KR	
	P 94	Study on the relationship between metabolic profile test and performance of Holstein cows according to lactation stage and parity Gi-Hwal Son, Chuncheon, KR	
	P 95	Oleic acid and PPAR γ agonist ciglitazone alter expression of adipogenic genes and convert bovine satellite cells to myoblasts and adipogenic cells Xiang-Zi Li, Yanji, CN	
	P 96	Impact of fructose supplementation on feed intake, nutrient digestibility and retention time of digesta in Reeves's muntjac, Muntiacus reevesi Marcin Przybyto, Krakow, PL	

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Wednesday, 4 September 2019

Time	ID	Venue Session Titel Lecture	supported by
	P 97	Hepatic gene expression of fatty acid oxidation and carnitine metabolism in lipopolysaccharide challenged dairy cows receiving a L-Carnitine supplement Mohamadtaher Alaedin, Bonn, DE	
	P 98	Long-term differential implications of pre- and early postnatal malnutrition on developmental and functional traits of adipose tissues in adult sheep Sharmila Ahmad, Copenhagen, DK	
	P 99	A meta-analysis of the impact of the <i>Aspergillus oryzae</i> fermentation product on dairy cow performance Ignacio Rodolfo Ipharraguerre, Buenos Aires, AR	
POSTER SESSION III: RUMINANT INTERMEDIARY METABOLISM			
	P 100	Impact of induced negative energy balance on the feed sorting behavior of dairy cows Trevor DeVries, Guelph, CA	
	P 101	The cell line BFH12 as an in-vitro model for bovine hepatosteatosi Kristin Reichelt, Leipzig, DE	
	P 102	A reduced protein diet modulates enzymes of vitamin D and cholesterol metabolism in young ruminants Alexandra Muscher-Banse, Hanover, DE	
	P 103	Influence of glucose and macrophages on growth hormone receptor expression in primary bovine hepatocytes Marion Schmicke, Hanover, DE	
	P 104	Exposure of primary bovine hepatocytes to physiologically relevant fatty acid profiles have altered gene expression Sophia Erb, Madison, WI, US	
	P 105	The effect of fatty acid profiles mimicking timepoints across the transition period on lipolytic protein abundance in primary bovine hepatocytes Sophia Erb, Madison, WI, US	
	P 106	The influence of short chain fatty acids and β -hydroxybutyrate on gluconeogenic processes in the bovine liver cell line BFH12 Anna-Maria Sittel, Leipzig, DE	
	P 107	Nutri-proteomic effects of conjugated linoleic acid on the phospho-proteome of abdominal and subcutaneous adipose tissues from transition dairy cows Maya Zachut, Rishon Lezion, IL	
	P 108	Effect of milk replacer feeding intensity on energy metabolism in dairy calves Lisa-Maria Tümmeler, Dummerstorf, DE	
	P 109	Effect of zearalenone treatment on lipid metabolism in primary culture of ketotic bovine hepatocytes in vitro Justyna Barć, Krakow, PL	
	P 110	Early lactating primiparous cows have stronger acidosis index and liver damage as multiparous cows fed the same high concentrate diet Nicole Reisinger, Tulln, AT	
	P 111	The relationship between hair fatty acid profile and energy balance in early lactating multiparous cows Ramona Möller, Berlin, DE	
	P 112	Reducing milking frequency from three to twice daily during the first month postpartum improves the metabolic status and reduces stress Uzi Moallem, Rishon Lezion, IL	



Time	ID	Venue Session Titel Lecture	supported by
	P 113	Dietary fatty acids effects on the fatty acid composition of erythrocytes in dairy cows fed a corn based ration Manfred Mielenz, Dummerstorf, DE	
	P 114	Days on feed and dietary starch may impact pancreatic islet morphology and plasma insulin concentrations in feedlot steers Katie M. Wood, Guelph, CA	
	P 115	Gene expression in the skeletal muscle of Bos taurus and Bos indicus steers undergoing compensatory gain Simon Quigley, Gatton, AU	
	P 116	Metabolic variables and DNA polymorphism of leptin and IGFBP-3 gene in relation to residual feed intake in buffalo calves Jyotsana Madan, Hisar, IN	
	P 117	Deduction of reference values for parameters in blood and urine of dairy cows Sina Kiel, Grub, Poing, DE	
	P 118	Effects of excess and limited dietary nutrition during whole period of gestation on organs development in Wagyu cattle Takafumi Gotoh, Kagoshima, JP	
14:30 – 16:00		Coffee break	
16:00 – 18:15		Großer Saal BIOSENSORS AND BIG DATA MANAGEMENT Gotthold Gäbel, Leipzig, DE Mette Olaf Nielsen, Copenhagen, DK	
16:00 – 16:45	KEYNOTE	Sensor techniques in ruminants: More than fitness trackers!? Christopher Harold Knight, Copenhagen, DK	
16:45 – 17:30	KEYNOTE	Rumen sensors: data and interpretation for key rumen metabolic processes Jan Dijkstra, Wageningen, NL	
17:30 – 17:45	O 25	Instability versus Acidosis: Is ruminal pH associated with milk production? Joachim L. Kleen, Coldinne, DE	
17:45 – 18:00	O 26	Validation of a monitoring system of individual drinking behavior for dairy cows housed in loose housing barn Anne Boudon, Rennes, FR	
18:00 – 18:15	O 27	SmartCow: an integrated infrastructure for increased research capability and innovation in the European cattle sector René Baumont, Saint-Genès-Champanelle, FR	
19:00 – 01:00		Moritzbastei CONGRESS PARTY	MOOTRAL

SCIENTIFIC PROGRAMME

Thursday, 5 September 2019

Time	ID	Venue Session Titel Lecture	supported by
08:45 – 10:15		Großer Saal LIFESPAN AND PRODUCTIVITY Helga Sauerwein, Bonn, DE Karen Beauchemin, Lethbridge, CA	
08:45 – 09:30	KEYNOTE	Overview of factors affecting productive lifespan of dairy cows Albert De Vries, Gainesville, FL, US	
09:30 – 10:15	KEYNOTE	Nutrient partitioning and the sphingolipid ceramide in dairy cattle: Considerations for optimum health and performance Joseph Mc Fadden, Ithaca, NY, US	
10:15 – 11:30		Großer Saal POSTER SESSION IV: GLOBAL CHANGE AND RUMINANTS	
	P 119	Identification of heat shock protein gene expression in hair follicles as a novel indicator of heat stress in beef calves WonSeob Kim, Seoul, KR	
	P 120	Impacts of humidity during heat stress on physiological indicators, blood hematocrit, feed and water intake in dry Holstein cows Jang Hoon Jo, Seoul, KR	
	P 121	Dose-dependent effects of Mootral™ on methane production and fermentation parameters of rumen microbial metabolism Johanna Brede, Hanover, DE	
	P 122	Does water limitation following feeding during thermal-humidity exposure alter mineral excretions via various body matrices in ewes? Jalil Ghassemi Nejad, Seoul, KR	
	P 123	Comparison of feed intake, feeding behavior and ruminal fermentation characteristics of grazing cows categorized as low and high methane emitters Frigga Dohme-Meier, Zurich, CH	
	P 124	Effects of a low concentrate, forage and by-product-based diet on production and metabolism in full lactation dairy cows Johanna Karlsson, Uppsala, SE	
	P 125	3-nitrooxypropanol blocked postprandial enteric methane emissions from lactating dairy cows Cécile Martin, Saint-Genès-Champagnelle, FR	
	P 126	Impact of Mootral Ruminant® on methane emissions and performance on Dairy Cows in real farm conditions Maria Sünkel, Lancaster, GB	
	P 127	Effects of high ambient temperatures in lactating dairy cows – a field study Hanna Rieger, Hanover, DE	
	P 128	Estimating methane production from dairy cows using information on milk, ruminal fluid, and blood components Takahiro Iwata, Sendai, JP	
	P 129	Heat stress effects in primiparous and multiparous lactating cows under a warm environment Joaquin Castro-Montoya, Stuttgart, DE	
	P 130	Can Nordic hemisphere macroalgae reduce emission of methane from ruminant livestock? Gizaw D Satessa, Copenhagen, DK	
	P 131	Genetic parameters for multiple definitions of residual methane production in Australian dairy cattle Caeli M. Richardson, Bundoora, Victoria, AU	



Time	ID	Venue Session Titel Lecture	supported by
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POSTER SESSION IV: INFLAMMATION, IMMUNOLOGY

- P 132 High-resolution Immunophenotyping in bovine blood and milk**
Sabine Farschtschi, Freising, DE
- P 133 Effect of Phyto Ax'Cell plant based additive on the metabolic status of peri-partum dairy cows**
Thibaut Chabrilat, Mozac, FR
- P 134 A postbiotic from *Aspergillus oryzae* improves productive and inflammatory responses to heat stress in lactating Holstein cows**
César Ocasio-Vega, St. Joseph, MO, US
- P 135 Dynamic of circulating leukocyte subsets in lactating dairy cows in response to an acute systemic endotoxin challenge**
Jana Frahm, Braunschweig, DE
- P 136 *Cryptosporidium parvum* infection alters glucose transport in infected enterocytes**
Franziska Dengler, Leipzig, DE
- P 137 Oral administration of lipopolysaccharide from *Escherichia coli* does not induce an effective systemic immune response in milk-fed Holstein calves**
Milani Bhagya Samarasinghe, Tjele, DK
- P 138 Changes in metabolic and immune parameters of young veal calves following different pre-transport diets, transport durations and transport conditions**
Francesca Marcato, Wageningen, NL
- P 139 Effects of *spartina alterniflora* extract on serum biochemical indices and immune function of lactating dairy cows**
Xiangsheng Liu, Yangzhou, CN
- P 140 Effect of soluble carbohydrate diets on reticuloruminal pH, motility, hematological and biochemical health indicator in cattle**
Andrea Francesio, Glasgow, GB
- P 141 Peripartal changes in immunoglobulin concentrations in comparison between cattle and goats**
Gerhard Breves, Hanover, DE
- P 142 The effects of in-feed resin acid composition on the colostrum composition and immunity of dairy cows**
Nanbing Qin, Helsinki, FI
- P 143 The effects of administration of aqueous extracts of *Rhizopus oryzae* on the postpartum hepatic injury and dysfunction in dairy cows**
Satoshi Haga, Nasushiobara, JP
- P 144 Evaluation of d-ROMs test for oxidative stress among periparturient cows**
Paul Dobbelaar, Utrecht, NL
- P 145 Effects of raspberry feeding on peripheral blood immune cells populations in calves**
Katsuyoshi Sato, Akita, JP
- P 146 Tolerance and rapid recovery following exposure to lipopolysaccharide in isolated ruminal epithelial cells**
Coral Kent-Dennis, Saskatoon, CA
- P 147 The Effect of Bovine Lactoferrin and probiotic on blood parameters and health status in Ghezel lambs during the Pre-weaning Phase**
Ali Hosseinkhani, Tabriz, IR

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Thursday, 5 September 2019

Time	ID	Venue Session Titel Lecture	supported by
		POSTER SESSION IV: LIFESPAN AND PRODUCTIVITY	 DSM BRIGHT SCIENCE. BRIGHTER LIVING.
	P 148	Blood profiles in fattening bulls of different horn status under consideration of feed intake and growth Anna-Maria Reiche, Posieux, CH	
	P 149	Effect of ergovaline exposure on serotonin receptor 5HT2A in bovine lateral saphenous vein James Klotz, Lexington, KY, US	
	P 150	Influence of body weight at slaughter and dietary energy concentration on carcass tissue composition of Fleckvieh bulls Aniela Honig, Poing, Grub, DE	
	P 151	Effects of cow genotype on production, viability of calves and reproductive related traits Radu-Ionel Neamt, Arad, RO	
	P 152	Effect of milk replacer including innovatively treated zinc oxide on calf performance Achim Hoffmann, Pinneberg, DE	
	P 153	Productive and physiological responses of lactating dairy cows supplemented with phytogetic feed ingredients Davi B. Araujo, Botucatu, São Paulo, BR	
	P 154	Milk fatty acids as possible predictors of energy balance in dairy cows Tiia Ariko, Tartu, EE	
		POSTER SESSION IV: ONTOGENESIS OF THE NEWBORN RUMINANT	 DSM BRIGHT SCIENCE. BRIGHTER LIVING.
	P 155	Maternal-fetal hepatic mineral interactions: mineral association relationships Robert Van Saun, University Park, PA, US	
	P 156	Effect of maternal supplementation with essential fatty acids and conjugated linoleic acid on the endocrine growth regulation in neonatal calves Katrin Uken, Dummerstorf, DE	
	P 157	Growth and health of lambs artificially reared with casein- or whey-based milk replacer Susan McCoard, Palmerston North, NZ	
	P 158	Influence of maternal conjugated linoleic acid and essential fatty acid supply on the intestinal immune system of neonatal calves Wendy Liermann, Dummerstorf, DE	
	P 159	Effect of abrupt or step-down weaning at different starter intakes on growth performance of Holstein female calves Sabrina Curial, Melle, BE	
	P 160	Effects of graded amounts of supplemental leucine to milk-fed neonatal Holstein bull calves on pancreatic and intestinal enzyme activity Jessica Reiners, Fargo, ND, US	
	P 161	Effects of collection time and colostrum quality on calf rumen and faecal bacterial communities Muhammad Ajmal Khan, Palmerston North, NZ	
14:30 – 16:00		Coffee break	



Time	ID	Venue Session Titel Lecture	supported by
11:30 – 13:00		Großer Saal INFLAMMATION AND IMMUNOLOGY Klaus Eder, Giessen, DE Melanie Eger, Hanover, DE	
11:30 – 11:45	O 45	Transition dairy cows less-resilient to metabolic stress have increased markers of subacute inflammation and oxidative stress during climatic heat stress Maya Zachut, Rishon LeZion, IL	
11:45 – 12:00	O 46	Serum biochemical parameters, neutrophil phagocytic activity, and monocyte subsets during the transition period in ewes Mona Ahmed, Hanover, DE	
12:00 – 12:15	O 47	Correlation of gene expression of FGF21 in the liver of cows with genes of stress signaling pathways and lipid metabolism Denise Gessner, Giessen, DE	
12:15 – 13:00	KEYNOTE	The role of inflammation during the transition to lactation in dairy cows Barry B. Bradford, Manhattan, KS, US	
11:15 – 12:45		Weißer Saal ONTOGENESIS OF THE NEWBORN RUMINANT I Alexander Starke, Leipzig, DE Urban Besenfelder, Wien, AT	
11:15 – 12:00	KEYNOTE	Carbohydrate digestion and metabolism in the growing calf Walter Gerrits, Wageningen, NL	
12:00 – 12:15	O 48	Effect of weaning strategy on calf milk replacer and starter feed intake and on growth of ad libitum fed calves Bart Tas, Lochem, NL	
12:15 – 12:30	O 49	Oral vitamin A supplementation during late-pregnancy and birth stage enhance growth, pre-adipocyte and muscle development in Korean native calves Dong Qiao Peng, Seoul, KR	
12:30 – 12:45	O 50	Maternal-Fetal Hepatic Mineral Interactions: Liver Mineral Ratios Robert Van Saun, University Park, PA, US	
12:45 – 14:00		Lunch break	
14:00 – 15:30		Großer Saal GLOBAL CHANGE AND RUMINANTS Karl-Heinz Südekum, Bonn, DE Sylvie Giger-Reverdin, Paris, FR	
14:00 – 14:15	O 42	Methane intensity and residual feed intake of lactating dairy cows Caeli M. Richardson, Bundoora, Victoria, AU	
14:15 – 14:30	O 43	Feeding behaviour and methane emissions while eating from a feed bin in growing cattle fed lucerne silage in respiration chambers Ashraf Biswas, Palmerston North, NZ	
14:30 – 14:45	O 44	Quantitative joint evaluation of sheep methane emissions and nitrogen excretion based on dietary variables and animal characteristics Henk J. van Lingen, Davis, CA, US	
14:45 – 15:30	KEYNOTE	Challenges for dairy cow production systems arising from climate changes in Europe Matthias Gauly, Bozen, IT	MOOTRAL

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Thursday, 5 September 2019



Time	ID	Venue Session Titel Lecture	supported by
14:00 – 14:45		Weißer Saal ONTOGENESIS OF THE NEWBORN RUMINANT II Alexander Starke, Leipzig, DE Otávio Machado Neto, São Paulo, BR	
14:00 – 14:45	KEYNOTE	Importance of colostrum supply and milk feeding intensity on gastrointestinal and systemic development in calves Harald Hammon, Dummerstorf, DE	
15:30 – 19:30		Tours and Excurions SOCIAL PROGRAMME Visitors are offered numerous excursions to get to know the cosy metropolis and to recharge their batteries away from the scientific congress of the ISRP	




Time	ID	Venue Session Titel Lecture	supported by
08:30 – 10:00		Großer Saal	
		REGULATION OF FEED AND WATER INTAKE I Wilhelm Windisch, Munich, DE Mirja Wilkens, Hanover, DE	
08:30 – 09:15	KEYNOTE	Control of feed intake by hepatic oxidation: Integration of homeostasis and homeorhesis Michael Allen, East Lansing, MI, US	
09:15 – 09:30	O 51	Dietary cation and anion difference: Effects on feed intake, ruminal function and plasma leptin in dairy goats under tropical condition Sumpun Thammacharoen, Bangkok, TH	
09:30 – 09:45	O 52	Modelling Forage Intake in New World Camelids Robert Van Saun, University Park, PA, US	
09:45 – 10:00	O 53	Feed intake pattern did not explain individual variation of feed efficiency in dairy goats fed a Total Mixed Ration Sylvie Giger-Reverdin, Paris, FR	
09:15 – 10:00		Weißer Saal	
		THE RUMEN AS MEDIATOR BETWEEN DIET AND HOST METABOLISM I Sven Dänicke, Braunschweig, DE Benoit Graulet, St.-Genès-Champagnelle, FR	
09:15 – 09:30	O 57	Is there any evidence of glyphosate effects on rumen metaproteome and rumen microbial metabolism in vitro? Gerhard Breves, Hanover, DE	
09:30 – 09:45	O 58	Daily shifts in composition and function of the rumen metaproteome in liquid and solid rumen fractions Simon Deusch, Stuttgart, DE	
09:45 – 10:00	O 59	MitoCow – Longitudinal characterization of ruminal and duodenal microbiota and metabolites in LPS stimulated transition dairy cows Johanna Tröscher-Mußotter, Stuttgart, DE	
10:00 – 11:30		Großer Saal	
		POSTER SESSION V: ABSORPTION AND SECRETION	
	P 162	Evaluation of digestibility discrepancy of different parts of corn stover by in vitro fermentation Yuqi Li, Nanjing, CN	
	P 163	Influence of protein intake on ammonia emissions and nitrogen secretions of Belgian Blue heifers Karen Goossens, Melle, BE	
	P 164	Effects of concentrate feeding on expressions of RhBG and RhCG in omasum epithelium and their association to pH and ammonia Zhongyan Lu, Nanjing, CN	
	P 165	Assessing the bioavailability of rumen-protected lysine using the plasma lysine response method Toshihisa Sugino, Hiroshima, JP	
	P 166	Effect of kraft pulp inclusion in calf starter on plasma concentration of glucagon-like peptide 2 in calves Yudai Inabu, Hiroshima, JP	
	P 167	The TRPV3 channel: a pathway for the uptake of Ca²⁺ from the rumen Friederike Stumpff, Berlin, DE	
	P 168	The effect of industrial processing and abomasal methionine infusion on utilisation of faba bean protein in dairy cows Anni Halmemies-Beauchet-Filleau, Helsinki, FI	

SCIENTIFIC PROGRAMME

Friday, 6 September 2019

Time	ID	Venue Session Titel Lecture	supported by
		POSTER SESSION V: BIOSENSOR AND BIG DATA MANAGEMENT	 DSM BRIGHT SCIENCE. BRIGHTER LIVING.
	P 169	Post-partum energy balance of Estonian Holstein cows – practical experiences from on-farm estimations based on body weights and BCSs Priit Karis, Tartu, EE	
		POSTER SESSION V: REGULATION OF FEED AND WATER INTAKE	 DSM BRIGHT SCIENCE. BRIGHTER LIVING.
	P 171	Influence of 150 vs 250g concentrate, kg ECM on milk performance, energy balance in a long-term experiment with Simmental cows Thomas Jilg, Aulendorf, DE	
	P 172	Feed intake and liveweight gain of Bali Bulls fed low quality forage supplemented with increasing levels of cassava and gliricidia Marsetyo Marsetyo, Palu, ID	
	P 173	Effects of rumen-protected folic acid supplementation on amino acid compositions of longissimus dorsi muscles in lambs Heqiong Li, Beijing, CN	
	P 174	Effect of wood kraft pulp feed on growth performance, feed digestibility, and rumen fermentation in Japanese black fattening steers Yuka Maeda, Takaharu-cho, JP	
	P 175	Calcium-magnesium ratio in the serum of newborn calves correlates with the level of their vitality Anton Chernitskiy, Voronezh, RU	
	P 176	Effect of wood kraft pulp feed on digestibility, ruminal characteristics, and milk production performance in lactating dairy cows Keiko Nishimura, Miyazaki, JP	
	P 177	Acceptance of phytogenic prototypes fed to rearing calves from d 12 to d 23 of age Poulad Pourazad, Steyregg, AT	
	P 178	The effects of the preservation method of grass forages on feed intake, chewing behaviour, and milk yield of dairy cows Andreas Haselmann, Vienna, AT	
	P 179	The effect of energy and protein supplementation on feed Intake, digestibility and liveweight gain of Donggala bulls fed corn stover Marsetyo Marsetyo, Palu, ID	
	P 180	External marker administration through an automated head-chamber system provides analogous estimates of fecal output compared to traditional hand feeding Stacey Gunter, Woodward, OK, US	
	P 181	Differential gene expression in three regions of the hypothalamus of steers with different protein and energy intake David Innes, Gatton, AU	
	P 182	Estimation of nitrogen and phosphorus flows in dairy production with by-product feeding in Eastern China Lin Wang, Yangzhou, CN	
	P 183	Effects of tannins in banana stalks on in situ digestion in dairy cows Qianqian Huang, Yangzhou, CN	



Time	ID	Venue Session Titel Lecture	supported by
		POSTER SESSION V: RUMEN MICROBIOME AND METABOLOME	
	P 184	Effectiveness of rumen community DNA extraction methodologies and the analysis of differing sampling points as indicators of the rumen microbiome Alexander Mott, Göttingen, DE	
	P 185	Resin acid composition increases propionate and butyrate production in a Rumen Simulation Technique, RUSITEC model Hannele Kettunen, Hyvinkää, FI	
	P 186	Supply of methionine during late-pregnancy alters fecal microbiome and metabolome in neonatal dairy calves without changes in daily feed intake Ahmed Elolimy, Urbana, IL, US	
	P 187	Effects of CoCO₃ on rumen fermentation and hematopoietic function in lactating dairy cows Miao Lin, Yangzhou, CN	
	P 188	Using high throughput sequencing to describe protozoal communities in rusitec fermenters fed two different diets María José Ranilla García, León, ES	
	P 189	VFA proportions but not concentrations and pH were valid in rumen fluid samples obtained with the oro-ruminal FLORA® sampling device Nikolaj Peder Hansen, Tjele, DK	
	P 190	Influence of different sources of copper and zinc on in vitro rumen fermentation characteristics, at optimal and suboptimal pH level Lien Vande Maele, Wageningen, NL	
	P 191	Residual feed intake and rumen bacterial diversity in lactating sheep: A preliminary study of their potential link Pablo G. Toral, León, ES	
	P 192	Changes in the ruminal fermentative activity by including urea as a protein replacement in fattening lamb diets María José Ranilla García, León, ES	
	P 193	Effects of replacing barley maize by citrus pulp in a dairy sheep diet on microbial populations in rusitec fermenters María José Ranilla García, León, ES	
	P 194	Effects of replacing barley straw and corn silage by olive cake in the diet on microbial populations in rusitec fermenters María José Ranilla García, León, ES	
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	P 199	Rumen fermentation characteristics, microbial population and meat fatty acids profile of West African dwarf rams fed water-washed neem fruit diets Akaninyene Jack, Ibadan, NG	

SCIENTIFIC PROGRAMME

Friday, 6 September 2019

Time	ID	Venue Session Titel Lecture	supported by
10:00 – 11:30		Coffee break	
11:30 – 13:00		Großer Saal REGULATION OF FEED AND WATER INTAKE II Wilhelm Windisch, Munich, DE Gregory B. Penner, Saskatoon, CA	
11:30 – 11:45	O 54	Feeding behaviour of Nellore cattle fed increasing levels of dry corn gluten feed Otávio Machado Neto, Botucatu, São Paulo, BR	
11:45 – 12:00	O 55	Renal control of feed intake during adaptation in ruminants grazing low dry matter forages Nadeesha Jayasinghe, Lincoln, NZ	
12:00 – 12:15	O 56	Prediction of dry matter intake using milk fatty acid composition for dairy cows during early lactation Fuminori Terada, Sendai, JP	
12:15 – 13:00	KEYNOTE	Hypothalamic integration of metabolic, inflammatory and endocrine signals for controlling feed intake of ruminants Björn Kuhla, Dummerstorf, DE	
11:30 – 13:15		Weißer Saal THE RUMEN AS MEDIATOR BETWEEN DIET AND HOST METABOLISM II Sven Dänicke, Braunschweig, DE Veerle Fievez, Ghent, BE	
11:30 – 12:15	KEYNOTE	Ruminal microbiome and microbial metabolome: Effects of diet and host Jamie Newbold, Edinburgh, GB	MOOTRAL
12:15 – 12:30	O 60	Metabolism of linolenic, linoleic and vaccenic acid by pure cultures of rumen bacteria Lore Dewanckele, Ghent, BE	
12:30 – 12:45	O 61	Effect of a fodder beet versus ryegrass-dominant diet on placental and fetal arginine metabolism in sheep Susan McCoard, Palmerston North, NZ	
12:45 – 13:00	O 62	The bacterial community dynamics in a subacute ruminal acidosis evaluated by Rumen Simulation Technique, RUSITEC Melanie Eger, Hanover, DE	
13:00 – 13:15	O 63	The effects of concentrate feeding during the close-up period on the rumen function and metabolic adaptation of dairy cows Tuomo Kokkonen, Helsinki, FI	
13:15 – 13:25		Weißer Saal CONGRESS CLOSING	
13:15 – 13:25		Concluding remarks Gotthold Gäbel, Leipzig, DE	
13:25 – 14:00		Lunch break	



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LEIPZIG, GERMANY

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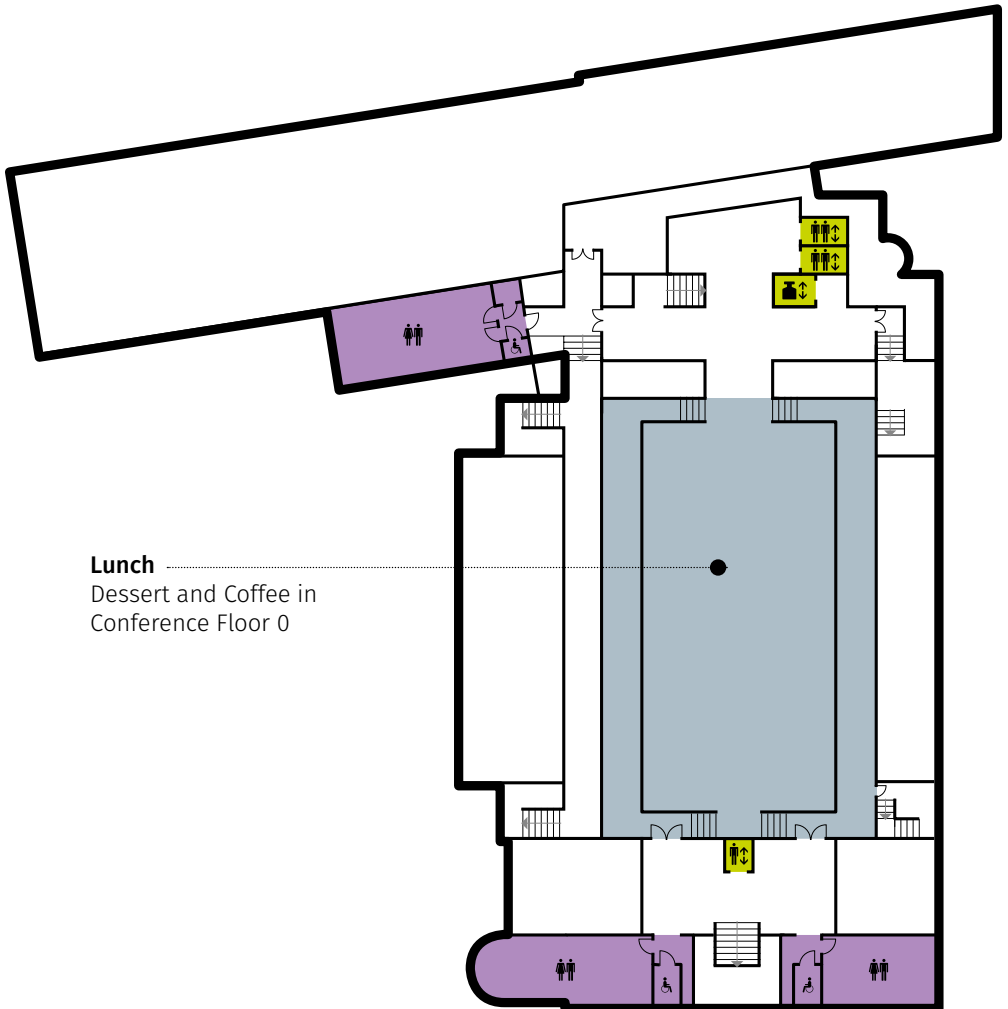
Congress Programme

4 Sept. 2019





CONFERENCE FLOOR -1 | EXPO



SATELLITE SYMPOSIUM

Wednesday, 4 September 2019

Lectures
held in
German.



09:00 Eröffnung und Begrüßung

Dr. Wolf-Dietmar Wackwitz, Dresden, DE

Grußwort

Prof. Dr. Walther Brehm, Leipzig, DE

09:20 Wie muss eine gesellschaftlich akzeptierte Milchviehhaltung aussehen?

Prof. Dr. Matthias Gauly, Bozen, IT

BLOCK I: Stabilität und Leistungsfähigkeit der Milchkuh

Moderation: Prof. Dr. Alexander Starke, Leipzig, DE

10:00 Neues aus der Wissenschaft für die Praxis: Stabilität und Leistungsfähigkeit der Milchkuh

Prof. Dr. Gerhard Breves, Hanover, DE

10:30 Stabilität des Immunsystems

Prof. Dr. Klaus Eder, Giessen, DE

10:50 Stabilität der Fruchtbarkeit

Prof. Dr. Urban Besenfelder, Wien, AT

11:10 Diskussion und Kaffeepause

Block II: Was leistet der Pansen?

Moderation: Dr. Frank Augsten, Jena, DE

11:40 Neues aus der Wissenschaft für die Praxis: Der Pansen im Grenzbereich der physiologischen Leistbarkeit

Prof. Dr. Gotthold Gäbel, Leipzig, DE

12:10 Der Pansen als Entgiftungsorgan für unerwünschte Stoffe in Futtermitteln?

Prof. Dr. Dr. Sven Dänicke, Braunschweig, DE

12:30 Das richtige Futter für die erforderliche Pansenleistung

Prof. Dr. Olaf Steinhöfel, Dresden, DE

12:50 Diskussion und Mittagspause

BLOCK III: Indikatoren der Stabilität der Milchkuh

Moderation: Dr. Uwe Bergfeld, Dresden, DE

14:15 Neues aus der Wissenschaft für die Praxis: Indikatoren der metabolischen Stabilität der Milchkuh

Prof. Dr. Alexander Starke, Leipzig, DE

14:45 Futteraufnahme der Kuh in der Transitphase

Dr. Björn Kuhla, Dummerstorf, DE

15:05 Bewertung des Fütterungserfolges

Dr. Wolfram Richardt, Lichtenwalde, DE



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SOCIAL EVENTS



WELCOME RECEPTION

Meet your colleagues, friends and industrial partners in a relaxed atmosphere and join us for some finger food and beverages directly after the last session of the scientific programme.

Date: Tuesday, 3 September 2019

Time: 17:30 hrs

Venue: KONGRESSHALLE am Zoo Leipzig,
Richard-Wagner-Saal, 04105 Leipzig

Fee: free for participants of the congress

CONGRESS PARTY

supported by **MOOTRAL**

Our Congress Party is taking place at one of Leipzig's most popular cultural venues, the Moritzbastei. Located right in the heart of Leipzig, it is the perfect spot for you to get together and socialize with colleagues after a successful congress day. The ticket price includes dinner and drinks as well as a diverse cultural programme.

Date: Wednesday, 4 September 2019

Time: 19:00 hrs

Venue: Moritzbastei, Kurt-Masur-Platz,
04109 Leipzig

Fee: 49.00 EUR (including dinner & drinks)

TOURS AND EXCURSIONS

Thursday, 5 September 2019

GUIDED TOUR OF THE MUSEUM OF CONTEMPORARY HISTORY ON DICTATORSHIP AND DEMOCRACY AFTER 1945

Our english speaking guide will take you on an escape into the years after World War II and into the process of German reunification.

Start: 15:40 hrs at the entrance of the
KONGRESSHALLE am Zoo Leipzig





SIGHTSEEING TOUR THROUGH LEIPZIG WITH STUNNING VIEW OVER THE CITY FROM THE PANORAMA TOWER

Get to know our beautiful city of Leipzig on this exciting sight-seeing tour by bus, including a stunning view over the entire city from the Panorama tower while enjoying a cold beverage!

Start: 15:50 hrs at the bus parking lot, opposite entrance KONGRESSHALLE am Zoo Leipzig

BOAT TOUR ALONG THE RIVERS AND CANALS OF LEIPZIG

A guided sight seeing tour of another kind awaits you! Taking you along the beautiful rivers and canals of Leipzig, this guided boat tour will give you a beautiful view of our stunning city which is very unique and will be sure to stay on your mind forever.

Start: 15:40 hrs at the bus parking lot, opposite entrance KONGRESSHALLE am Zoo Leipzig



SAFARI THROUGH THE POPULAR ZOO OF LEIPZIG

The Zoo of Leipzig with its 26 hectares of authentically arranged living spaces for more than 850 species will be sure to impress you and give you lifelong memories on this exciting Safari.

Start: 15:50 hrs at the entrance KONGRESSHALLE am Zoo Leipzig



EXCURSION TO THE KÖLLITSCH TEACHING AND EXPERIMENTAL FACILITY

See into the housing of the animals, gain insight into state-of-the-art agricultural technology and scientific findings in feeding as well as reproduction.

Start: 15:40 hrs at the bus parking lot, opposite entrance KONGRESSHALLE am Zoo Leipzig

GENERAL INFORMATION



VENUE

KONGRESSHALLE am Zoo Leipzig
Pfaffendorfer Str. 31, 04105 Leipzig, DE

CONGRESS LANGUAGE

The ISRP congress language is English.
The Satellite Symposium will be held in German.

OPENING TIMES	Tuesday	Wednesday	Thursday	Friday
Check-In	08:00 – 18:30	08:00 – 18:00	07:45 – 16:00	07:30 – 14:00
Speaker ready room	08:00 – 18:00	08:00 – 17:30	07:45 – 15:00	07:30 – 12:00

POSTER SESSIONS

POSTER SESSION I

Tuesday, 3 September 14:30 – 16:00

Reproduction, lactation and growth

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POSTER SESSION II

Wednesday, 4 September 09:00 – 10:30

Gastrointestinal digestion:

Mechanisms and regulation

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POSTER SESSION III

Wednesday, 4 September 14:30 – 16:00

Comparative and Integrative Physiology

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Ruminant intermediary metabolism

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POSTER SESSION IV

Thursday, 5 September 10:15 – 11:30

Global change and ruminants

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Inflammation, immunology

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Lifespan and productivity

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Ontogenesis of the newborn ruminant

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POSTER SESSION V

Friday, 6 September 10:00 – 11:30

Absorption and secretion

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Biosensor and big data management

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Regulation of feed and water intake

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Rumen microbiome and metabolome

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The presenters are asked to be present at their poster during their poster session.

DISPLAY AND REMOVAL OF POSTERS

The posters for session I, II and III can be displayed from Tuesday to Wednesday. You may hang up your poster on Tuesday from approx. 08:30 at the assigned poster wall and remove it on Wednesday by 18:00 at the latest. The posters for session IV and V can be displayed from Thursday to Friday. You may hang up your poster on Thursday from approx. 08:30 at the assigned poster wall and remove it on Friday by 13:30 at the latest.



Please have a
look at the floor
plans on pages
30-31 for a better
orientation.

TIME ALLOTMENT

Keynote speaker presentations 45 min
(including 5-10 min discussion)

Short presentation 15 min
(including 5 min discussion)

To ensure the smooth progress of the programme, all speakers are requested to adhere to their speaking time.

SPEAKER READY ROOM AND SUBMITTING YOUR PRESENTATION

Speakers are asked to upload their presentations at the speaker ready room on floor 0. A submission should be done well in advance of the session in which you are speaking, but not later than 30 min before the start of this session. Presentations given in the first session in the morning should be uploaded the evening before, at best.

ABSTRACTS

Abstracts of short communications and keynote lectures are published in the Journal 'Advances in Animal Biosciences'. Please note that they are only accessible for participants of the congress via access code.

CERTIFICATE OF ATTENDANCE

Your certificate of attendance will be sent to you for download via personal link after the congress.

CATERING

A various catering offer will be provided for our participants:

Coffee breaks | drinks, snacks and desserts

Richard-Wagner-Saal, Telemann-Saal
Foyer, Händel-Saal

Lunch breaks | selection of warm dishes

Expo, Floor -1

Please note that the dessert is served in the coffee break areas.

EDUCATION CREDITS

The ATF (Academy for veterinary improvement) has certified the Satellite Symposium "Milchproduktion der Zukunft – vom Labor zum Stall" within the International Symposium on Ruminant Physiology with 5 hours.

INTERNET

Wireless internet is available throughout the congress venue.

SSID KONGRESSHALLE

User name ISRP2019

Password Leipzig

LATEST INFORMATION

Please visit www.isrp2019.com for possible updates.



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