GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN IN PUBLICA COMMODA SEIT 1737

CiBreed Center for Integrated Breeding Research

4th CiBreed Fall Workshop

October 13-14, 2022

Alfred-Hessel-Saal
Papendiek 14, 37073 Göttingen

Scientific Program

Thursday, October 13, 2022

Registration from 11:00

	Welcome and Opening	
12:00-12:15	*Stefan Scholten* (Local organizer), *Tim Beissinger* (Managing director of CiBreed), *Dieter Stelling* (Deutsche Saatveredelung AG)	

SESSION 1	**Hybrid Breeding / Heterosis** (**Chair:** *Mila Tost, Georg-August-Universität Göttingen*)	
12:15-12:45	*Jianbing Yan* Huazhong Agricultural University Wuhan	**Key note:** Big data driven maize quantitative genetic studies
12:45-13:15	*Georg Thaller* Christian-Albrechts-Universität zu Kiel	**Key note:** Crossbreeding schemes in cattle
13:15-13:35	*Leke V. Ayesa* Georg-August-Universität Göttingen	Maize breeding & genetics: using individual plants from segregating populations for GWAS and genomic prediction
13:35-13:55	*Ivan Pocrnic* The University of Edinburgh	Framework for stochastic simulations of additive and dominance genetic variation: Case study in layer chickens
13:55-14:15	*Johan Zicola* Georg-August-Universität Göttingen	Small RNAs as potential regulators of heterosis in maize
14:15-14:35	*Clemens Falker-Gieske* Georg-August-Universität Göttingen	Blood transcriptome analysis in a buck-ewe hybrid (geep) and its parents

14:35-15:45 Coffee Break and Poster Session

SESSION 2	**Farewell Henner Simianer** (**Chair:** *Torsten Pook, Wageningen University and Research*)	
15:45-15:55	Introduction: *Tim Beissinger,* Managing Director of CiBreed	
15:55-16:25	*Malena Erbe* Bayerische Landesanstalt für Landwirtschaft (LfL), Grub	Assessing genomic prediction results – theoretical and practical aspects of validation
16:25-16:55	*Steffen Weigend* Federal Research Institute for Animal Health, Neustadt	Phylogenetic studies in the chicken in the course of time
16:55-17:25	*Pieter Knap* Genus, PIC, Schleswig	Pig breeding for improved sustainability
17:25-17:55	*Daniel Gianola* University of Wisconsin, Madison	Machine learning in genomic prediction: where are we?
17:55-18:10	Closing words: *Henner Simianer*	

19:00 Dinner at the Restaurant Bullerjahn, Ratskeller
(admission only with an invitation card)

SESSION 3	**Innovative Species** (**Chair:** *Johan Zicola, Georg-August Universität Göttingen*)	
09:00-09:30	*Arend van Peer* Wageningen University and Research, Wageningen	**Key Note**: Breeding for mushrooms and alternative fungal applications
09:30-10:00	*Murukarthick Jayakodi* Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben	**Key Note**: Recent Developments and Future Perspectives in faba bean Research
10:00-10:20	*Shanta Subba* Georg-August-Universität Göttingen	Fruiting body development of Coprinopsis cinerea
10:20-10:40	*Yuanxu Xue* Wageningen University and Research, Wageningen	Unravelling predictive features from images for slaughter traits and swimming performance in fish using an analytical framework
10:40-11:00	*Monica Shree Chandramohan* University of Tuscia, Viterbo, Italy	The NUCS: our new rising stars – their potential role to tackle food security challenges of the future

11:00-12:10 Lunch Break and Poster Session

SESSION 4	**Innovative Technologies** (**Chair:** *Felix Heinrich, Georg-August Universität Göttingen*)	
12:10-12:40	*Jochen Kumlehn* Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben	**Key Note**: Site-directed genetic engineering in cereals - principles and applications
12:40-13:10	*Niels Müller* Thünen Institute of Forest Genetics, Großhansdorf	**Key Note**: Natural variation in forest trees - from single-gene sex determination to polygenic adaptation
13:10-13:30	*Avon Augustin Nalpadan* Norwegian University of Life Sciences, Ås, Norway	Developing Cas9 expressing MDBK cell lines for GeCKO screening against bovine diseases
13:30-13:50	*Tobias Niehoff* Wageningen University and Research, Wageningen	Importance of restrictions in optimum contribution selection
13:50-14:10	*Johannes Geibel* Friedrich-Loeffler-Institut, Neustadt	Assessing workflows to call structural variants in chickens from PacBio and Nanopore data

14:10-14:20 Farewell and end of the meeting

POSTER SESSION		
1	*Renata Callegari Ferrari* Georg-August-Universität Göttingen	The key is in the details: identifying differentially expressed genes of Fraxinus excelsior in response to ash dieback
2	*Matias F. Schrauf* Wageningen University and Research	Some statistical properties of non- and semi-parametric estimators for the cross-validated performance of breeding models
3	*Abirami Rajavel* Georg-August-Universität Göttingen	Unravelling the molecular mechanism underlying the African Animal trypanosomiasis disease progression
4	*Jasmin Vettel* Georg-August-Universität Göttingen	Sinapic acid ester reduction by loss-of-function mutation of the SGT key enzyme in oilseed rape (Brassica napus L.) and metabolomic effects on individual kaempferol derivatives
5	*Desanka Lazic* Georg-August-Universität Göttingen	Detecting genomic signatures of ecological speciation and parallel evolution in oaks
6	*Emanuelle O. Odah* Federal University Wukari, Nigeria	Evaluation of egg quality traits in five tropically adapted chicken genotypes reared in an intensive system
7	*Cathy Westhues* Computomics GmbH, Tübingen	Application of a Machine Learning method with genomic and environmental data for predicting phenotypes in two commercial breeding programs
8	*Azadeh Hassanpour* Georg-August-Universität Göttingen	Evolving Beyond Scenarios - Speeding up Optimization of Resource Allocation in Breeding Programs (MoBPSopti)
9	*Mila Tost* Georg-August-Universität Göttingen	Identification of genes under selection in the maize diversity panel
10	*Johannes Geibel* Friedrich-Loeffler-Institut, Neustadt	IndexWizard – an R-package to work with selection indices based on estimated breeding values
11	*Thomas Martin Lange* Georg-August-Universität Göttingen	Non-linear transformation of enzyme-linked immunosorbent assay (ELISA) measurements allows usage of linear models for data analysis
12	*Alex Windhorst* Georg-August-Universität Göttingen	A GWAS based comparison of frost tolerance and late-frost tolerance in winter faba bean (Vici faba L.)
13	*Bright Enogieru Osatohanmwen* Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben	Multi-omic analysis of barley HEB-25 population - Linking genotype with phenotype using genomic networking

POSTER SESSION *continued*		
14	*Abdusaheed Olabisi Yusuf* Georg-August-Universität Göttingen	QTL for palmitic acid content collocate with 2 FATB orthologues in 2 doubled haploid populations of winter oilseed rape
15	*Christiana O. Obari* University of Guelph, Canada	Longitudinal modelling of feed intake and feed efficiency in Norwegian Red cattle
16	*Yang Wang* Georg-August-Universität Göttingen	Small RNA-based regulatory interactions increase with the heterotic response for total root growth rate in Brassica napus L.
17	*Baris Alaca* Georg-August-Universität Göttingen	Identification of marker by environment and epistasis by environment interaction in maize
18	*Shobhashree Nagireddy* Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben	Genetic mapping of a yellow-stripe variegation leaf phenotype identified in an EMS-induced mutant of the winter barley variety Igri
19	*Bartosz Łabiszak* Adam Mickiewicz University Poznań, Poland	SNP- array offers new perspectives on population genomics studies in forest trees: a case study in Scots pine
20	*Lucy Chipondoro* Georg-August-Universität Göttingen	Effect of breed and environment on semen production and quality traits of beef bulls in Zimbabwe

Workshop Organizer

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