



BovReg Final conference
University Foundation - Room Felicien Cattier
Brussels
14-15 February 2024

Day 1 - 14 February 2024		
Time	Sessions	Chair
09:30 - 10:30	Overview of the BovReg Project	Christa Kühn (FBN)
10:30 - 11:15	Cattle Genome Annotation <ul style="list-style-type: none"> Gabriel Costa (University of Liege) - Building a cattle high-quality epigenome map: the BovReg contribution Lijing Tang (University of Liege) - GWAS reveals determinants of mobilization rate and dynamics of an active endogenous retrovirus of cattle 	Carole Charlier (University of Liege)
11:15 - 11:45	Coffee break	
11:45 - 12:30	In vitro Models <ul style="list-style-type: none"> Arpna Sharma (FBN) - Isolation and characterization of (primary) bovine luteal cells Doreen Becker (FBN) Structural and functional characterization of five bovine cell lines Marion Schmicke (TiHo) - Modelling of Animal cells for Research 	Jens Vanselow (FBN)
12:30 - 13:30	Lunch break	
13:30 - 14:30	Bioinformatic Tools and Databases <ul style="list-style-type: none"> Peter Harrison (EMBL-EBI) - EuroFAANG Data Infrastructure: standardizing and presenting BovReg and, global FAANG, data José Espinosa-Carrasco (CRG) - BovReg contribution to the adoption of nf-core as the EuroFAANG computational standard Bjorn Langer (CRG) - Functional data extrapolation across species 	Peter Harrison (EMBL-EBI)
14:30 - 15:00	Epigenome Sensitivity <ul style="list-style-type: none"> Jens Vanselow (FBN) Effects of summer heat on in vitro fertility performance and possible epigenetic mechanisms of intergenerational transmission to offspring bulls 	Christa Kühn (FBN)

	<ul style="list-style-type: none"> Gabriel Costa (University of Liege) - Monitoring of environmental effects on the (epi)genome of bovine embryos: a view on chromatin accessibility 	
15:00 - 15:30	Global non-livestock perspectives <ul style="list-style-type: none"> Fergal Martin (EMBL-EBI) - Moving towards Pangenomics: Lessons learned from the human pangenome 	Christa Kühn (FBN)
15:30 - 16:00	Coffee break	
16:00 - 16:30	US FAANG Perspective <ul style="list-style-type: none"> James Koltes (Iowa University) - Perspectives and Discoveries from the US Bovine FAANG project 	Graham Plastow (University of Alberta)
19:30	Networking dinner	

Day 2 - 15 February 2024			
Time	Sessions	Chair	
09:00 - 09:30	Industry Perspective of FAANG <ul style="list-style-type: none"> • Clotilde Patry (ELIANCE) - From improved knowledge on (epi)genome to improved genomic selection tools: benefits and expectation for the cattle breeding industry • Ruidong Xiang (Agricultural Victoria Research) - Identifying regulatory variants to enhance mapping and prediction of cattle traits 	Didier (INRAE)	Boichard
09:30 - 11:00	Molecular and Zootechnical Phenotype Variation <ul style="list-style-type: none"> • Marie Pierre Sanchez (INRAE) - Meta-GWAS for beef production traits • Goutham Sahana (Aarhus University) - Meta-GWAS reveals biologically relevant candidate genes for mastitis resistance in dairy cattle • Birgit Gredler (WUR) - GWAS for feed intake and methane emission across cattle populations • Praveen Chitneedi (FBN) - Comprehensive BovReg eQTL Nextflow workflow and application on BovReg data sets 	Marie Pierre Sanchez (INRAE)	
11:00 - 11:30	Coffee break		
11:30 - 12:00	Detection of regulatory genes and variants <ul style="list-style-type: none"> • Hiroaki Taniguchi (IGBZ PAN) - Functional Validation of SNPs in Specific Traits by Utilizing Molecular Tools • Siddarth Jayaraman (UEDIN) - Detecting phenotype-associated genes by combining gene expression and GWAS summary statistics 	James (UEDIN)	Prendergast
12:00 - 13:00	Application of Genomic Variant Information into Cattle Breeding <ul style="list-style-type: none"> • Emre Karaman (Aarhus University) - Biology informed genomic predictions for mastitis in Danish Jersey and Nordic Red cattle • Renzo Bonifazi (WUR) & Marzieh Heidarit (University of Alberta) - Biology-driven WGS genomic predictions for feed efficiency within and across-breeds • Didier Boichard (INRAE) - Genomic evaluation including genomic feature information in the Montbéliarde and Normande breeds • Arash Chegini (LUKE) - Multiple-trait single-step genomic prediction of udder health traits in Nordic Red and Jersey cattle applying alternative SNP weighting 	Birgit Gredler (WUR)	

13:00 - 13:45	Lunch break	
13:45 - 14:15	<p>The Ethical and Societal Dimensions of Genome Information Assisted Breeding: the Importance of Public Engagement</p> <ul style="list-style-type: none"> • Koen Kramer (University of Utrecht) - Ethical game changers and grains of sand: on how to do ethics of livestock breeding • Donald Bruce (EDINETHICS) and Ann Bruce (UEDIN) - Playing the BovReg Democs Game: What did people say about cattle breeding? 	Franck Meijboom (University of Utrecht)
14:15 - 15:15	<p>Invited talks from</p> <ul style="list-style-type: none"> • Sigbjørn Lien (NMBU) - AQUA-FAANG: Advancing European Aquaculture by Genome Functional Annotation • Elisabetta Giuffra (INRAE) - Aims, results and impacts of H2020 GENE-SWitCH (The regulatory GENomE of SWine and Chicken: functional annotation during development) • Amanda Chamberlain (Agricultural Victoria Research) - Which functional information is useful for prioritization of causal variants for complex traits? • Yuliaxis Ramayo (IRTA) - Decoding Ruminant Microbiomes: Ongoing Contributions of the HoloRuminant Project 	Christa Kühn (FBN)
15:15 - 15:30	<p>EuroFAANG RI Ambitions</p> <ul style="list-style-type: none"> • Klaus Wimmers (FBN) - EuroFAANG - an Infrastructure for Farmed Animal Genotype to Phenotype Research in Europe 	Emily Clark (The Roslin Institute)
15:30 - 16:00	Coffee break	
16:00 - 17:00	<p>Panel discussion</p> <p>Future of Functional Annotation beyond BovReg</p> <p>Carole Charlier (University of Liege), Elisabetta Giuffra (INRAE), Amanda Chamberlain (Agricultural Victoria Research), James Koltes (Iowa University), Christa Kühn (FBN)</p>	Brenda Murdoch (University of Idaho)
17:00 - 17:15	Closure of the Final Conference	
		Christa Kühn (FBN)