



ASPA 22nd Congress Book of Abstracts

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ASPA 22nd CONGRESS

Perugia, June 13-16, 2017

Book of Abstracts

**Guest Editors: Massimo Trabalza-Marinucci (Coordinator),
Cesare Castellini, Emiliano Lasagna, Stefano Capomaccio,
Katia Cappelli, Simone Ceccobelli, Andrea Giontella**



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- Aquaculture, poultry, companion and wildlife
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ASPA 22nd Congress

Perugia, June 13th-16th, 2017

Italian Journal of Animal Science

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Agenda Invited Speakers

June 13th

Plenary Room - Dept. of Agricultural, Food and Environmental Sciences, University of Perugia

17.30-19.30 Matthias Gauly
Livestock welfare issues in Europe or what is needed to maintain livestock production in the future?..... IS001

June 14th

Room AU - Animal Breeding and Genetics - Adaptation strategies

Chairmen: Paolo Ajmone-Marsan, Stefano Capomaccio
08.45-09.45 Olivier Hanotte
Genetic adaptation of livestock to the challenges of climatic changes IS002

Room T1 - Nutrition and Feeding

Chairmen: Antonella Baldi, Luigi Gallo
09.45-10.30 Luigi Calamari
Precision Feeding IS003

Room AU - PLENARY SESSION WORKSHOP

Foods of animal origin and consumers attitudes

Chairman: Luca Buttazzoni
11.15-13.00 Cristina Papa
Politics of risk: questioning the naturalization of danger in meat production and consumption IS004
Luigi P. Scordamaglia
Food fact versus food fiction - The never-ending struggle between unbiased information and preconceived ideologies IS005
Judith L. Capper
Foods of animal origin – how do we help the consumer understand sustainability implications of diet choice?..... IS006

Room AU - Nutrition and Feeding

Chairmen: Paolo Bosi, Domenico P. Lo Fiego
14.00-15.00 Pietro Celi
Gastrointestinal tract functionality and its relationships with eubiotics IS007

Room T1 - Animal Welfare, Health and Behaviour - Cattle health and metabolism

Chairmen: Cinzia Marchitelli, Erminio Trevisi
16.00-16.45 Hugh Galbraith
Nutritional impact on lameness in dairy cattle IS008

June 15th

Room AU - Animal Breeding and Genetics

- Chairmen: Nicolò P. P. Macciotta, Alfredo Pauciullo
08.30-09.15 Daniel Gianola
A brief history of statistical developments in animal breeding IS009

Room T2 - Aquaculture, Poultry and Rabbit Production

- Chairmen: Federico Sirri, Alessandro Dal Bosco
09.30-10.30 Laura Gasco
Insects as sustainable feed ingredients IS010

Room AU - Animal Food Quality and Safety

- Chairmen: Andrea Serra, Paolo Polidori
11.00-12.00 Joris Michiels
Feeding strategies to reduce the use of antibiotics in pig production IS011

Room H - Aquaculture, Poultry and Rabbit Production - Husbandry and welfare

- Chairmen: Cecilia Mugnai, Massimiliano Petracci
12.15-13.00 Martina Gerken
Welfare in Poultry IS012

Room AU - Animal Welfare, Health and Behaviour

- Chairmen: Silvana Mattiello, Massimo Trabalza-Marinucci
14.00-15.00 Cathy M. Dwyer
The role of mother-offspring behaviour in lamb survival IS013
15.00-15.45 Franco Valfré
Animal welfare and food security: role and tasks of the Italian farmers IS014

Room AU - Animal Husbandry and Environmental Impact

- Chairmen: Luca M. Battaglini, Maurizio Silvestrelli
15.00-15.45 Andrea Rosati
Constraints and solutions to reduce environmental impact for developed livestock farming IS015

June 16th

Animal Husbandry and Environmental Impact

- Chairmen: Bruno Stefanon, Mariano Pauselli
09.00-10.00 Simone Bastianoni
How to solve the (un)sustainability dilemma IS016
Gian Matteo Crovetto
Environmental impact of animal production IS017

Animal Food Quality and Safety - Food safety

- Chairmen: Luisa A. Volpelli, Vincenzo Chiofalo
10.00-10.45 Lisa K. Williams
Foodborne pathogen: the case of Campylobacter in poultry IS018

ASPA 22nd Congress

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Agenda for oral presentations

Tuesday June 13th - room AU

Animal breeding and genetics - Horse genetics

Chairmen: Donata Marletta, Roberto Mantovani

15.00-15.15	Andrea Giontella, Francesca M. Sarti, Giovanni P. Biggio, Andrea Taras, Raffaele Cherchi, Maurizio Silvestrelli, Camillo Pieramati <i>Sardinian Anglo-Arab horses: genetic parameters of conformation and performances</i>	O001
15.15-15.30	Stefano Capomaccio, Andrea Giontella, Ted Kalbfleisch, Scotty DePriest, Andrea Verini-Supplizi, Silvia Sorbolini, Raffaele Cherchi, Maurizio Silvestrelli, Katia Cappelli <i>Transcriptome analysis of racehorses PBMCs: insights on transcribed introns and repeats</i>	O002
15.30-15.45	Andrea Verini-Supplizi, Stefano Capomaccio, Luisa Pascucci, Cinzia Bazzucchi, Marco Pepe, Mauro Coletti, Rodolfo Gialletti, Stefano Petrini, Fabrizio Passamonti, Franco Moriconi, Maurizio Silvestrelli, Katia Cappelli <i>RNA-cargo characterization of equine Ad-MSCs vesicles: first step towards cell-free therapeutic procedures</i>	O003
15.45-16.00	Katia Cappelli, Elisabetta Chiaradia, Andrea Viglino, Maurizio Silvestrelli, Francesca Beccati, Livia Moscati, Stefano Capomaccio <i>Circulating miRNAs as biomarkers of stress and training in endurance horses</i>	O004
16.00-16.15	Andrea Giontella, Hovirag Lancioni, Irene Cardinali, Marco R. Capodiferro, Stefano Capomaccio, Katia Cappelli, Camillo Pieramati, Alessandro Achilli, Maurizio Silvestrelli <i>Mitochondrial DNA haplotypes unveil mistakes in Maremmano horse pedigree records</i>	O005

Tuesday June 13th - room T1

Nutrition and feeding - Ruminant metabolism

Chairmen: Lucia Bailoni, Andrea Formigoni

15.00-15.15	Giuseppe Conte, Corrado Dimauro, Alice Cappucci, Eleonora Bulleri, Francesca Ciucci, Andrea Serra, Marcello Mele <i>Relationship between ruminal biohydrogenation products and milk fat depression</i>	O006
15.15-15.30	Alberto Palmonari, Giorgia Canestrari, Elena Bonfante, Ludovica Mammi, Andrea Formigoni <i>Effect of replacing soybean meal with rapeseed meal on productive performance and ruminal conditions of lactating dairy cows</i>	O007
15.30-15.45	Marica Simoni, Federico Righi, Francesca Martuzzi, Massimo Malacarne, Marco Renzi, Afro Quarantelli <i>Study of the in vivo and in vitro variations of the enzymatic activity of bovine rumen fluid inocula</i>	O008
15.45-16.00	Fabio Correddu, Alberto S. Atzori, Gianni Battacone, Giuseppe Pulina, Anna Nudda <i>Effect of exhausted berries of myrtle on ruminal metabolism in dairy sheep</i>	O009
16.00-16.15	Fiorentina Palazzo, Filippo Biscarini, Federica Castellani, Andrea Vitali, Giulia Masetti, Lisa Grotta, Giuseppe Martino <i>Characterization of the rumen microbiota in dairy calves receiving copper or grape-pomace feed supplementation</i>	O010
16.15-16.30	Federica Mannelli, Mariano Pauselli, Francesco Pini, Alice Cappucci, Andrea Serra, Giuseppe Conte, Marcello Mele, Sara Minieri, Stefano Rapaccini, Luciana Giovannetti, Carlo Viti, Arianna Buccioni <i>Effect of olive oil pomace dietary supplementation on rumen microbial community profile: a metagenomics approach</i>	O011

Tuesday June 13th - room T2

Animal food quality and safety - Meat quality

Chairmen:	Edi Piasentier, Luciano Morbidini	
15.00-15.15	Francesco Sirtori, Riccardo Bozzi, Alessandro Crovetto, Chiara Aquilani, Antonio Pezzati, Antonio Bonelli, Carolina Pugliese <i>Effects of salting time on seasoned meat in two pigs genotypes</i>	0012
15.15-15.30	Michela Contò, Maria Miarelli, Sabrina Di Giovanni, Paola Lavermicocca, Francesca Valerio, Sebastiana Failla <i>Effect of the broking down of cold chain on beef meat oxidation</i>	0013
15.30-15.45	Amalia Simonetti, Roberto Giudice, Annamaria Perna, Emilio Gambacorta <i>Comparison of oxidative status and antioxidant compounds of pig meat from Italian autochthonous pig Suino Nero Lucano and a modern crossbred pig before and after cooking</i>	0014
15.45-16.00	Alessandro Crovetto, Francesco Sirtori, Doria Benvenuti, Antonio Bonelli, Andrea Lombardo, Giovanni Brajon, Riccardo Bozzi <i>Wet aging effect on beef meat physical traits</i>	0015

Wednesday June 14th - Room AU

Animal breeding and genetics - Adaptation strategies

Chairmen:	Paolo Ajmone-Marsan, Stefano Capomaccio	
09.45-10.00	Miranda Bryan, Christian Maltecca, Kent Gray, Clint Schwab, Yijian Huang, Francesco Tiezzi <i>Genetic variance for sow tolerance to heat stress</i>	0016
10.00-10.15	Elia Vajana, Mario Barbato, Licia Colli, Marco Milanese, Estelle Rochat, Enrico Fabrizi, Christopher Mukasa, Marcello Del Corvo, Charles Masebe, Vincent Muwanika, Fredrick Kabi, Riccardo Negrini, Stéphane Joost, Paolo Ajmone-Marsan, the NEXTGEN Consortium <i>Combining landscape genomics and ecological modelling to investigate local adaptation of indigenous Ugandan cattle to East Coast Fever</i>	0017
10.15-10.30	Tri Satya Mastuti Widi, Nuzul Widias <i>Variation of Madura Cattle in Madura Island, Indonesia</i>	0018
10.30-10.45	Salvatore Mastrangelo, Paolo Ajmone-Marsan, Alessandro Bagnato, Luca M. Battaglini, Riccardo Bozzi, Antonello Carta, Gennaro Catillo, Martino Cassandro, Sara Casu, Roberta Ciampolini, Elena Ciani, Paola Crepaldi, Mariasilvia D'Andrea, Rosalia Di Gerlando, Luca Fontanesi, Maria Longeri, Nicolò P. P. Macciotta, Roberto Mantovani, Donata Marletta, Donato Matassino, Marcello Mele, Giulio Pagnacco, Camillo Pieramati, Baldassare Portolano, Francesca M. Sarti, Fabio Pilla <i>BOVITA: a first overview on genome-wide genetic diversity of Italian autochthonous cattle breeds</i>	0019

Wednesday June 14th - Room T2

Animal breeding and genetics - Beef cattle genetics

Chairmen:	Liliana Di Stasio, Camillo Pieramati	
14.00-14.15	Francesca M. Sarti, Simone Ceccobelli, Andrea Giontella, Piera Di Lorenzo, Emiliano Lasagna, Andrea Quaglia, Fiorella Sbarra, Roberta Guarcini, Camillo Pieramati, Francesco Panella <i>Effects of Single Nucleotide Polymorphisms (SNPs) in candidate genes for growth traits in Italian beef cattle breeds</i>	0020
14.15-14.30	Fiorella Sbarra, Andrea Quaglia, Giovanni Bittante, Roberto Mantovani <i>Heritability of reproduction traits and type latent factors and their genetic correlations in Marchigiana, Chianina and Romagnola beef breeds</i>	0021
14.30-14.45	Domenico Aiello, Laura Salvadori, Sara Chiappalupi, Simone Ceccobelli, Emidio Albertini, Guglielmo Sorci, Emiliano Lasagna <i>Histological muscle characterization in hypertrophied Marchigiana cattle breed</i>	0022
14.45-15.00	Simone Savoia, Alberto Brugiapaglia, Liliana Di Stasio, Alessandro Ferragina, Alessio Cecchinato, Giovanni Bittante, Andrea Albera <i>"QualiPiem" - Innovative tools for selection of meat quality in Piemontese breed</i>	0023
15.00-15.15	Cinzia Marchitelli, Bianca Moioli, Roberto Steri, Gennaro Catillo <i>Twinning project: increasing of twin births in Maremmana breed</i>	0024
15.15-15.30	Mauro Fioretti, Stefano Biffani, Riccardo Negrini, Riccardo Bozzi <i>Genetic improvement and population structure of Italian Limousine</i>	0025

15.30-15.45	Hovirag Lancioni, Piera Di Lorenzo, Simone Ceccobelli, Licia Colli, Irene Cardinali, Taki Karsli, Marco R. Capodiferro, Luca Ferretti, Paolo Ajmone-Marsan, Francesca M. Sarti, Emiliano Lasagna, Alessandro Achilli <i>Ancient distinctive migration routes suggested by the current mitochondrial gene pool of Podolic cattle breeds in Italy</i>	0026
15.45-16.00	Filippo Biscarini, Salvatore Mastrangelo, Gennaro Catillo, Bianca Moioli, Roberta Ciampolini <i>Genome-wide homozygosity in Maremmana cattle</i>	0027
16.00-16.15	Rosalia Di Gerlando, Maria T. Sardina, Marco Tolone, Anna M. Sutura, Salvatore Mastrangelo, Baldassare Portolano <i>Genome wide Copy Number Variation (CNV) detection in Cinisara cattle breed</i>	0028

Wednesday June 14th - Room T2

Aquaculture, poultry and rabbit production - Poultry and rabbit nutrition

Chairmen: Antonella Dalle Zotte, Cesare Castellini		
08.45-09.00	Nieves Núñez-Sánchez, Gabriele Acuti, Domenico Brusco, Simona Mattioli, Oliviero Olivieri, Massimo Trabalza-Marinucci <i>Prediction of nutrient digestibility and chemical composition of rabbit diets using faecal near infrared spectroscopy (FNIRS)</i>	0029
09.00-09.15	Marco Birolo, Angela Trocino, Francesco Gratta, Gerolamo Xiccato <i>Performance and feeding behaviour of group-housed rabbits with free or time-limited access to feed</i>	0030
09.15-09.30	Paula A. Toalombo-Vargas, Nelson A. Duchi-Duchi, Luis R. Fiallos-Ortega, José V. Trujillo-Villacís, Luis E. Hidalgo-Almeida, Rafael Buenano-Nuñez <i>Effect of chamomile (Matricaria chamomilla) on health in chickens</i>	0031
09.30-09.45	Paula A. Toalombo-Vargas, Nelson A. Duchi-Duchi, Luis R. Fiallos-Ortega, Antonio J. Morales- delaNuez, Luis E. Hidalgo-Almeida, Matiza L. Vaca-Cárdenas, Noé F. Rodríguez-G <i>Effect of chamomile (Matricaria chamomilla) on productive performance in chickens</i>	0032
09.45-10.00	Angela Trocino, Francesco Gratta, Marco Birolo, Alessandra Piccirillo, Massimiliano Petracchi, Luc Maertens, Gerolamo Xiccato <i>Effects of the feeding system on performance and myopathy occurrence in two broiler chicken genotypes</i>	0033
10.00-10.15	Siria Tavaniello, Rossella Mucci, Acaye Ongwech, Marek Bednarczyk, Giuseppe Maiorano <i>Probiotic and prebiotic supplementation in broiler chickens: growth performance, carcass traits and meat quality</i>	0034

Wednesday June 14th - Room H

Animal welfare, health and behaviour - Husbandry, welfare and behaviour

Chairmen: Flaviana Gottardo, Andrea Verini-Supplizi		
08.45-09.00	Giulio Cozzi, Luisa Magrin, Isabella Lora, Thomas Beorchia, Barbara Contiero <i>Milk yield, culling rate and reasons of pure Holsteins and second generation crossbred cows from Montbéliard × (Swedish Red × Holstein)</i>	0035
09.00-09.15	Riccardo Moretti, Stefano Biffani, Stefania Chessa, Riccardo Bozzi <i>Predictive models for locomotion issues in Italian Holstein dairy cows</i>	0036
09.15-09.30	Vincenzo Lopreiato, Andrea Minuti, Elisabetta Fratto, Marcello Marotta, Giovanni Loprete, Domenico Britti, Erminio Trevisi, Valeria M. Morittu <i>Use of an electronic rumination-monitoring system in pre-weaned calves</i>	0037
09.30-09.45	Giorgio Marchesini, Davide Mottaran, Matteo Gazziero, Massimo Mirisola, Severino Segato, Iginio Andrighetto <i>Effect of different ventilation systems on beef cattle during the early fattening period</i>	0038
09.45-10.00	Veronica Redaelli, Marta De Santis, Silvia Gozzo, Laura Contalbrigo, Annalisa Stefani, Marta Toson, Luca Farina, Marta Borgi, Francesca Cirulli, Emanuela Valle, Fabio Luzi <i>Use of Infrared Thermography (IRT) in equine assisted interventions: physiological aspects</i>	0039
10.00-10.15	Aristide Maggiolino, Alessandra Tateo, Pasquale De Palo, Giovanna Calzaretto, Pasquale Centoducati <i>Evaluation of different habituation protocols for training dairy donkey jennies to the milking parlor: effect on milk yield, behavior and heart rate</i>	0040
10.15-10.30	Monica Battini, Sara Barbieri, Elisabetta Canali, Francesca Dai, Emanuela Dalla Costa, Valentina Ferrante, Lorenzo Ferrari, Silvana Mattiello, Michela Minero <i>Outcomes of a web-survey for collecting stakeholders' opinion on welfare requirements for sheep, goats, turkeys, donkeys, and horses</i>	0041

Wednesday June 14th - Room T1

Animal welfare, health and behaviour - Cattle health and metabolism

Chairmen: Cinzia Marchitelli, Erminio Trevisi

- 14.00-14.15 Andrea Minuti, Nusrat Jahan, Matteo Mezzetti, Fiorenzo Piccioli-Cappelli, Lorenzo Bomba, Stefano Capomaccio, Juan J. Loor, Paolo Ajmone-Marsan, Erminio Trevisi
Relationship between blood energetic markers and circulating leukocytes transcriptome in transition dairy cows 0042
- 14.15-14.30 Erminio Trevisi, Andrea Minuti, Matteo Mezzetti, Annarita Ferrari, Fiorenzo Piccioli-Cappelli
Supplements of Aloe arborescens improve health and inflammo-metabolic status of transition dairy cows 0043
- 14.30-14.45 Paola Cremonesi, Federica Riva, Maria F. Addis, Camilla Ceccarani, Marco Severgnini, Erminio Trevisi, Massimo Amadori, Claudia Pollera, Joel Filipe, Giulio Curone, Lauretta Turin, Vittorio Tedde, Alessandra Pagnoni, Daniele Vigo, Paolo Moroni, Andrea Minuti, Valerio Bronzo, Bianca Castiglioni
A multidisciplinary study investigating the bovine milk microbiome and its association with mastitis resistance traits in Holstein Friesian and Rendena dairy cows 0044
- 14.45-15.00 Daniele Dipasquale, Loredana Basiricò, Patrizia Morera, Umberto Bernabucci
Anti-inflammatory effects of conjugated linoleic acid isomers and essential fatty acids in bovine mammary epithelial cells 0045
- 15.00-15.15 Sandy Sgorlon, Danilo Licastro, Bruno Stefanon, Monica Colitti
Cows relocation affects exosomes and their cargos in bovine milk 0046
- 15.15-15.30 Luisa Magrin, Marta Brscic, Leonardo Armato, Giulio Cozzi, Flaviana Gottardo
Lameness in finishing beef cattle: distribution of claw disorders in 2716 hind feet 0047
- 15.30-15.45 Edyta Bauer, Justyna Żychlińska-Buczek
Using mineral-vitamin boluses to improve somatic cell count prevention value in Polish dairy farms 0048
- 15.45-16.00 Juan J. García Bustos
Treatment of bovine diseases with agroforestry resources in farms of the Colombian Amazon piedmont 0049

Wednesday June 14th - Room T1

Nutrition and feeding - Monogastric nutrition

Chairmen: Antonella Baldi, Luigi Gallo

- 08.45-09.00 Elena Mariani, Nicoletta Rizzi, Guido Invernizzi, Alessandro Agazzi, Adriana Maggi, Giovanni Savoini
Spatio-temporal analysis of the Nrf 2 activation in transgenic reporter mouse fed with high dosage of saturated or unsaturated fatty acids using in vivo bioluminescent imaging 0050
- 09.00-09.15 Maria G. Cappai, Maurizio Picciau, Maria G. A. Lunesu, Corrado Dimauro, Raffaele Cherchi, Walter Pinna
Circulating levels of nutrient-related metabolites in healthy Anglo-Arabian foals from weaning to 18 months of age 0051
- 09.15-09.30 Mirco Dalla Bona, Giuseppe Carcò, Enrico Fiore, Stefano Schiavon, Luca Carraro, Massimo Morgante, Luigi Gallo
Effects of dietary protein and lysine content on growth performances, carcass traits and estimated nitrogen input-output flow of growing pigs 0052
- 09.30-09.45 Micol Bertocchi, Paolo Trevisi, Diana Luise, Vincenzo Motta, Chiara Salvarani, Anisa Ribani, Aude Simongiovanni, Etienne Corrent, Luca Fontanesi, Paolo Bosi
Dose-response for different levels of leucine to lysine ratio on the growth performance of weaning pigs with different genotypes at the α -amino adipate d-semialdehyde synthase gene 0053

Wednesday June 14th - Room AU

Nutrition and feeding - Monogastric nutrition

Chairmen: Paolo Bosi, Domenico P. Lo Fiego

- 15.00-15.15 Vincenzo Motta, Michele Pesciaroli, Paolo Trevisi, Diana Luise, Ludovica Curcio, Lucilla Cucco, Francesca R. Massacci, Chiara F. Magistrali
Dietary calcium-butyrate promotes a shift of gut microbiota of weaned pigs 0054
- 15.15-15.30 Chiara Aquilani, Francesco Sirtori, Oreste Franci, Alessandro Crovetti, Carolina Pugliese
Effects of protein restricted diet on in vivo performances and slaughtering traits of Cinta Senese pigs 0055

15.30-15.45	Matteo Ottoboni, Carlotta Giromini, Marco Tretola, Davide Gottardo, Daniela Marchis, Valentina Caprarulo, Federica Cheli, Antonella Baldi, Luciano Pinotti <i>Nutrients content and in vitro digestibility of ex-food as feed ingredient for pig diets</i>	O056
15.45-16.00	Eleonora Seoni, Gianni Battacone, Paolo Silacci, Frigga Dohme-Meier, Giuseppe Bee <i>Impact of increasing levels of condensed tannins from sainfoin in grower-finisher diets of entire male pigs on growth performance and carcass characteristics</i>	O057

Thursday June 15th - Room AU

Animal breeding and genetics - Genome-wide studies

Chairmen:	Nicolò P. P. Macciotta, Alfredo Pauciuolo	
09.15-09.30	Mariasilvia D'Andrea, Valentino Palombo, Marco Milanese, Sandy Sgorlon, Stefano Capomaccio, Giuseppe Conte, Paolo Ajmone-Marsan <i>Genome-wide association study of milk fatty acid composition in Italian Simmental and Italian Holstein cows</i>	O058
09.30-09.45	Alessio Cecchinato, Sara Pegolo, Christos Dadousis, Núria Mach, Yulixais Ramayo-Caldas, Marcello Mele, Stefano Schiavon, Giovanni Bittante <i>Genome-wide association and pathway-based analysis for milk fatty acids profile in dairy cattle</i>	O059
09.45-10.00	Alberto Cesarani, Antonio Puledda, Maria G. Manca, Fabio Correddu, Jessica Serdino, Silvia Sorbolini, Nicolò P. P. Macciotta <i>Genome-wide association study of cheese-making properties in sheep milk</i>	O060
10.00-10.15	Anna M. Sutura, Salvatore Mastrangelo, Maria T. Sardina, Rosalia Di Gerlando, Marco Tolone, Baldassare Portolano <i>Genome-wide association study for milk production traits in Valle del Belice sheep</i>	O061
10.15-10.30	Salvatore Mastrangelo, Marco Tolone, Maria T. Sardina, Anna M. Sutura, Rosalia Di Gerlando, Baldassare Portolano <i>Genome-wide scan for runs of homozygosity in Valle del Belice sheep</i>	O062

Thursday June 15th - Room T2

Animal breeding and genetics - Dairy cattle genetics

Chairmen:	Giulio Pagnacco, Mauro Penasa	
11.00-11.15	Marco R. Capodiferro, Shaoqiang Wang, Ningbo Chen, Tao Zhang, Hovirag Lancioni, Irene Cardinali, Hucai Zhang, Yongwang Miao, Vongpasith Chanthakhoun, Metha Wanapat, Marnoch Yindee, Yi Zhang, Hongzhao Lu, Ruihua Dang, Yongzhen Huang, Xianyong Lan, Martin Plath, Hong Chen, Johannes A. Lenstra, Chuzhao Lei, Alessandro Achilli <i>Looking into the Swamp Buffalo genetic history through the whole mitogenome analysis</i>	O063
11.15-11.30	Chiara Roveglia, Giulio Visentin, Mauro Penasa, Raffaella Finocchiaro, Maurizio Marusi, Martino Cassandro <i>Genetics of alternative somatic cell count traits in Italian Holsteins</i>	O064
11.30-11.45	Hugo Toledo-Alvarado, Gustavo de los Campos, Ana Vazquez, Rob Tempelman, Giovanni Bittante, Alessio Cecchinato <i>Predictive ability of Fourier transform infrared spectroscopy and milk components to assess the pregnancy status of dairy cows</i>	O065
11.45-12.00	Cristina Sartori, Francesco Tiezzi, Nadia Guzzo, Roberto Mantovani <i>Causal relationships between milk yield, somatic cells, fertility, longevity and fighting ability in Aosta Chestnut-Black Pied Cattle</i>	O066
12.00-12.15	Corrado Dimauro, Elisabetta Manca, Alberto S. Atzori, Massimo Cellesi, Giustino Gaspa, Nicolò P. P. Macciotta <i>Use of discriminant analysis to early detect lactation persistency in dairy cows</i>	O067
12.15-12.30	Marco Milanese, Mario Di Guardo, Stefano Capomaccio, Katia Cappelli, Valentino Palombo, Mariasilvia D'Andrea, Marcello Del Corvo, Sandy Sgorlon, Andrea Minuti, Yuri Tani Utsunomiya, José Fernando Garcia, Erminio Trevisi, Riccardo Negrini, Bruno Stefanon, Paolo Ajmone-Marsan <i>Identification of genomic variants associated with metabolic stress in Italian Simmental and Holstein cows</i>	O069
12.30-12.45	Elisabetta Viale, Francesco Tiezzi, Fabio Maretto, Massimo De Marchi, Mauro Penasa, Martino Cassandro <i>Candidate gene association analysis for milk yield and composition traits, coagulation properties and somatic cell count in Italian Holstein Friesian bulls</i>	O078

Thursday June 15th - Room T2

Animal breeding and genetics - Small ruminants genetics

- Chairmen: Elena Ciani, Emiliano Lasagna
- 14.00-14.15 Beatriz López, Vincenzo Landi, Mayra M. Gómez Carpio, Beatriz Agudo, Amparo Martínez Martínez
Preliminary results on the genetic variation and the population structure within a Spanish Merino breed commercial population 0070
- 14.15-14.30 Mokhethi M. Selepe, Simone Ceccobelli, Emiliano Lasagna, Nokuthula W. Kunene
An overview on the genetic diversity in South African Nguni (Zulu) sheep 0071
- 14.30-14.45 Silvia Sorbolini, Giustino Gaspa, Donata Marletta, Paola Crepaldi, Bianca Moioli, Antonello Carta, Baldassare Portolano, Emiliano Lasagna, Elena Ciani, Mariasilvia D'Andrea, Fabio Pilla, Nicolò P. P. Macciotta, Italian Sheep Consortium (BIOVITA)
Detection of signatures of selection in Italian sheep breeds 0072
- 14.45-15.00 Sara Casu, Tiziana Sechi, Mario G. Usai, Stefania Sechi, Mario Barbato, Paolo Ajmone-Marsan, Antonello Carta
Toward the identification of causal mutations and LD markers associated to disease resistance in sheep 0073
- 15.00-15.15 Licia Colli, Marco Milanese, Marcello Del Corvo, Andrea Talenti, Francesca Bertolini, Minhui Chen, Alessandra Crisà, Kevin Daly, Bernt Gulbrandsen, Stéphane Joost, Johannes A. Lenstra, Ezequiel L. Nicolazzi, Estelle Rochat, Benjamin D. Rosen, Max F. Rothschild, Bertrand Servin, Tad S. Sonstegard, Roberto Steri, Elia Vajana, Curtis P. Van Tassell, Paolo Ajmone-Marsan, Paola Crepaldi, Alessandra Stella, the ADAPTmap Consortium
Drawing up worldwide goat diversity and post-domestication history: update from ADAPTmap project 0074
- 15.15-15.30 Andrea Talenti, Stefano Frattini, Salvatore Mastrangelo, Baldassarre Portolano, Emiliano Lasagna, Francesca M. Sarti, Simone Ceccobelli, Marco Milanese, Licia Colli, Elena Ciani, Dominga Soglia, Stefano Sartore, Roberta Ciampolini, Alessandra Crisà, Roberto Steri, Gennaro Catillo, Donata Marletta, Salvatore Bordonaro, Mariasilvia D'Andrea, Stefania Chessa, Bianca Castiglioni, Pasqualino Loi, Tiziana Sechi, Antonello Carta, Riccardo Negrini, Alessandra Stella, Alessio Valentini, Francesco Panella, Giulio Pagnacco, Fabio Pilla, Paolo Ajmone-Marsan, Paola Crepaldi, the Italian Goat Consortium
Italian Goat Consortium: a collaborative project to study the Italian caprine biodiversity 0075

Thursday June 15th - Room T2

Animal breeding and genetics - Dairy cattle genetics

- Chairmen: Paola Crepaldi, Giovanni Bittante
- 15.45-16.00 Nadia Guzzo, Cristina Sartori, Alessandro Ferragina, Giovanni Bittante, Roberto Mantovani
Genetic parameters of new FTIR milk phenotypes in Rendena breed 0076
- 16.00-16.15 Valentino Palombo, Marco Milanese, Stefano Capomaccio, Sandy Sgorlon, Mariasilvia D'Andrea
Pathways interaction analysis for identification of novel candidate genes 0077
- 16.15-16.30 Marco Iannaccone, Marina Papaiani, Flora Ianniello, Andrea Fulgione, Daniela Gallo, Gianfranco Cosenza, Rosanna Capparelli
Identification of a novel polymorphism in the 3' untranslated region of the interferon gamma gene as potential marker associate with bovine tuberculosis in water buffalo (Bubalus bubalis). 0079
- 16.30-16.45 Sara Pegolo, Christos Dadousis, Núria Mach, Yulixaxis Ramayo-Caldas, Marcello Mele, Stefano Schiavon, Giovanni Bittante, Alessio Cecchinato
SNP co-association and network analyses for bovine milk fatty acid profile 0080

Thursday June 15th - Room T2

Aquaculture, poultry and rabbit production - Husbandry, health and welfare

- Chairmen: Federico Sirri, Alessandro Dal Bosco
- 08.30-08.45 Cristina Zomeño, Marco Birolo, Francesco Gratta, Andrea Zuffellato, Gerolamo Xiccato, Angela Trocino
Influence of group housing, lactation system and floor type on performance and injuries in rabbit does 0081
- 08.45-09.00 Marta Brscic, Michele Gazzo, Barbara Contiero, Flaviana Gottardo
Main welfare problems in intensive broiler chicken production systems: is there any way to differentiate farms? 0082
- 09.00-09.15 Kunlayaphat Wuthijaree, Christian Lambertz, Matthias Gauly
Prevalence and burden of helminths in free-range laying hens in Northern Italy 0083
- 09.15-09.30 Sabine Mueller, Lorena Taddei, Ruth E. Messikommer, Michael Kreuzer, Isabelle D. M. Gangnat
Growth and slaughter performance of two dual-purpose poultry types compared with extensive broiler and layer types fattened for 67 and 84 days 0084

Thursday June 15th - Room H

Aquaculture, poultry and rabbit production - Husbandry and welfare

- Chairmen: Cecilia Mugnai, Massimiliano Petracci
- 11.00-11.15 Massimiliano Petracci, Giulia Baldi, Francesca Soglia, Maurizio Mazzoni, Federico Sirri, Luca Canonico, Elena Babini, Claudio Cavani
Effect of spaghetti-meat abnormality on quality and histological traits of broiler breast fillets O085
- 11.15-11.30 Francesca Soglia, Massimiliano Petracci, Claudio Cavani, Per Ertbjerg
Changes in structural properties and desmin degradation of broiler wooden breast fillets during refrigerated storage O086
- 11.30-11.45 Achille Schiavone, Alberto Brugiapaglia, Michele De Marco, Stefano Sartore, Dominga Soglia, Sandra Maione, Roberto Rasero, Paola Sacchi, Alessandra Dalmasso, Maria T. Bottero, Daniele Pattono, Martina Tarantola, Mario Giacobini, Luigi Bertolotti, Ivo Zoccarato, Laura Gasco, Cecilia Mugnai
Market chain of "Consortium for safeguard of Bianca e Bionda breeds" in Piedmont: 1. demography, housing and slaughtering conditions O087
- 11.45-12.00 Cecilia Mugnai, Achille Schiavone, Michele De Marco, Stefano Sartore, Dominga Soglia, Sandra Maione, Roberto Rasero, Paola Sacchi, Alessandra Dalmasso, Maria T. Bottero, Daniele Pattono, Martina Tarantola, Mario Giacobini, Luigi Bertolotti, Ivo Zoccarato, Laura Gasco, Alberto Brugiapaglia
Market chain of "Consortium for safeguard of Bianca e Bionda breeds" in Piedmont: 2. Meat quality O088
- 12.00-12.15 Andrea Amici, Riccardo Primi, Pier Paolo Danieli, Paolo Viola
Captive morphological changes and growth parameters in Apennine rock partridges (Alectoris graeca graeca) O089

Thursday June 15th - Room H

Aquaculture, poultry and rabbit production - Genetics

- Chairmen: Silvia Cerolini, Claudio Cavani
- 15.45-16.00 Marco Zampiga, Micol Bertocchi, Paolo Bosi, Paolo Trevisi, Adele Meluzzi, Federico Sirri
Comparison of productive performance and intestinal transcriptomic profile of two fast-growing chicken hybrids O090
- 16.00-16.15 Raffaella Rebucci, Carlotta Giromini, Davide Gottardo, Marcello Comi, Xian-Ren Jiang, Federica Cheli, Antonella Baldi, Valentino Bontempo
Influence of a synthetic emulsifier supplementation on lipid metabolism and apolipoprotein gene expression in liver of broiler chicks O091
- 16.15-16.30 Katia Parati, Silvia Cenadelli, Graziella Bongioni, Andrea Galli, Hervé Chavanne
Parentage assignment for genetic improvement of farmed sea bream by new single nucleotide polymorphisms and single tandem repeats panels O092
- 16.30-16.45 Genciana Terova, Simona Rimoldi, Chiara Ascione, Emi Gliozheni, Fabio Brambilla
Intestinal microbiota characterization by next generation sequencing in rainbow trout (Oncorhynchus mykiss) fed animal by-product meals as an alternative to fishmeal protein sources O093

Thursday June 15th - Room H

Animal husbandry and environmental impact - Husbandry systems and socio-economic analysis

- Chairmen: Maurizio Ramanzin, Giuseppe Pulina
- 14.00-14.15 Christian Lambertz, Matthias Gauly
Potential of pure- and crossbred Les Bleues broiler for meat production for small-scale farmers O094
- 14.15-14.30 Georgia Faccioni, Alberto Bernués Jal, Maurizio Ramanzin, Enrico Sturaro
Ecosystem services and mountain livestock farming: a socio economic valuation O095
- 14.30-14.45 Ioanna Pouloupoulou, Martin C. Nock, Silvia Steinmayer, Christian Lambertz, Matthias Gauly
How can working time analysis contribute to the production efficiency of mountain dairy farms? O096
- 14.45-15.00 Luisa A. Volpelli, Nicola Battistella, Francesco Gradari
Rural development and dialogue between the communities in Kosovo: an example of international cooperation O097
- 15.00-15.15 Francesca Petrera, Giovanni Tagliaferri, Andrea Galli, Fabio Abeni
Survey on dairy farmer use and interest for precision livestock farming tools O098
- 15.15-15.30 Maddalena Zucali, Alberto Tamburini, Giulia Gislon, Anna Sandrucci, Luciana Bava
Milk quality and milking practices in dairy goat farms in Lombardy O099

Thursday June 15th - Room T1

Animal welfare, health and behaviour - Pig health and behaviour

Chairmen:	Carolina Pugliese, Giovanna Martelli	
15.45-16.00	Silvia Parrini, Anna Acciaioli, Valentina Becciolini, Gustavo Campodoni, Oreste Franci <i>Study on the behaviour of Cinta Senese and Large White x Cinta Senese pigs reared at pasture</i>	O100
16.00-16.15	Giuseppe Carcò, Mirco Dalla Bona, Luca Carraro, Luigi Gallo, Maria A. Latorre, Manuel Fondevila, Stefano Schiavon <i>The daily feeding behaviour of growing pigs subjected to a feed restriction and to a reduction of dietary indispensable amino acid contents</i>	O101
16.15-16.30	Eleonora Nannoni, Luca Sardi, Marika Vitali, Giovanna Martelli <i>Growth traits, carcass and meat quality of heavy pigs receiving different enrichment tools</i>	O102
16.30-16.45	Luciana Rossi, Serena Reggi, Giovanni L. Alborali, Paolo Trevisi, Diana Luise, Angela Lombardi, Eugenio De Martini, Antonella Baldi <i>Seed-based vaccine immunogens administered in feed for the control of verocytotoxic E.coli infection in pig livestock</i>	O103

Thursday June 15th - Room T1

Nutrition and feeding - Feed evaluation

Chairmen:	Paolo Bani, Pier Paolo Danieli	
08.30-08.45	Afro Quarantelli, Marco Renzi, Marica Simoni, Alessandro M. Rosato, Federico Righi <i>Use of a new instrument for the in vitro evaluation of ruminants feeds through gas production: preliminary study</i>	O104
08.45-09.00	Martina Novacco, Matteo Ottoboni, Eleonora Fusi, Silvia Gastaldello, Valentina Furlan, Claudio Maran, Vittorio Dell'Orto, Federica Cheli <i>Electronic nose for the detection of mycotoxin contaminations in maize kernels</i>	O105
09.00-09.15	Monika Hejna, Antonella Baldi, Elisabetta Onelli, Davide Gottardo, Salvatore R. Pilu, Vittorio Dell'Orto, Mauro Zaninelli, Luciana Rossi <i>Evaluation of heavy metals in intensive animal production systems</i>	O106
09.15-09.30	Silvia Parrini, Anna Acciaioli, Antonio Pezzati, Doria Benvenuti, Riccardo Bozzi <i>Application of FT- NIRS to estimate chemical components of freeze-dry herbage of Tuscany natural pasture</i>	O107
09.30-09.45	Marco Isidori, Fabrizio Rueca, Gabriele Mannucci, Massimo Tralbalza-Marinucci <i>Palatability of extruded dog diets supplemented with <i>Ascophyllum nodosum</i></i>	O108
09.45-10.00	Pier Paolo Danieli, Roberto Ruggeri, Riccardo Primi, Francesco Rossini, Emiliano Chiaretti, Catia Stamigna, Domenico Chiaretti, Vincenzo Natoli, Bruno Ronchi <i>A preliminary nutritional assessment of six genotypes of tef (<i>Eragrostis tef</i>) as potential forage sources</i>	O109
10.00-10.15	Marta Castrica, Carlotta Giromini, Raffaella Rebucci, Davide Gottardo, Valentino Bontempo, Antonella Baldi <i>Evaluation of polyphenolic content and antioxidant activity in agri-food wastes and by-products using chemical and physiological extraction</i>	O110
10.15-10.30	Andriyani Astuti, Cuk Tri Noviandi, Ali Agus, Subur Priyono Sasmito Budhi, Ristianito Utomo, Evi Septiani <i>The effect of duration of storage and storage method on chemical composition and in vitro digestibility of complete calf pellet</i>	O183

Thursday June 15th - Room H

Animal food quality and safety - Milk and cheese quality

Chairmen:	Andrea Summer, Umberto Bernabucci	
08.30-08.45	Sudeb Saha, Giovanni Bittante, Stefano Schiavon, Giacomo Cesaro, Matteo Gianesella, Leonardo Armato, Enrico Fiore, Luigi Gallo <i>Effects of rumen fluid pH on rumen activity and quality and technological properties of milk</i>	O111
08.45-09.00	Massimo Todaro, Raimondo Gaglio, Maria L. Scatassa, Giovanna Sala, Francesca Mazza, Isabella Mancuso, Luca Settanni <i>Effect of the wooden vats on traditional cheese characteristics</i>	O112
09.00-09.15	Federica Salari, Iolanda Altomonte, Rosario Licitra, Mina Martini <i>Vitamin D content in donkey milk: preliminary results</i>	O113
09.15-09.30	Giorgia Stocco, Andrea Summer, Massimo Malacarne, Alessio Cecchinato, Giovanni Bittante <i>Factors affecting the detailed mineral profile of bovine milk from multi-breed herds</i>	O114

09.30-09.45	Claudio Cipolat-Gotet, Alessio Cecchinato, MaryAnne Drake, Bruno Martin, Giovanni Bittante <i>Influence of dairy farming system and animal factors on sensory descriptors of model cheeses from individual cows</i>	O115
09.45-10.00	Matteo Bergamaschi, Alessio Cecchinato, Flavia Gasperi, Franco Biasioli, Giovanni Bittante <i>Discrimination of dairy systems using the volatile fingerprinting of ripened cheese detected by a fast and non-invasive spectrometric technique (PTR-ToF-MS)</i>	O116
10.00-10.15	Alessandro Dalla Riva, Jasmina Burek, Daesoo Kim, Greg Thoma, Martino Cassandro, Massimo De Marchi <i>Life cycle assessment of Italian mozzarella cheese manufacturing</i>	O117

Thursday June 15th - Room AU

Animal food quality and safety - Meat quality

Chairmen: Andrea Serra, Paolo Polidori

12.00-12.15	Andrea Serra, Giuseppe Conte, Elisabetta Giannessi, Laura Casarosa, Carla Lenzi, Alessandro Baglini, Francesca Ciucci, Alice Cappucci, Marcello Mele <i>Cholesterol content and fatty acid composition of phospholipids and triglycerides are affected by the histological characteristics of semimembranosus and triceps brachii muscle fibre of Maremmana and Limousine bovine breeds</i>	O118
12.15-12.30	Roberto Tocci, Eleonora Pippi, Matteo Campostrini, Andrea Martini, Clara Sargentini <i>Consumer acceptance of ewe meat deriving from traditional and halal Tuscan market</i>	O119
12.30-12.45	Alice Cartoni Mancinelli, Simona Mattioli, Alessandro Dal Bosco, David Ranucci, Raffaella Branciarri, Cesare Castellini <i>Geese reared in organic vineyard: qualitative traits of breast meat</i>	O120
12.45-13.00	Simone Mancini, Giovanna Preziuso, Sara Minieri, Alessandro Dal Bosco, Valentina Roscini, Gisella Paci <i>Enhanced antioxidant capacity and reduced lipid oxidation in cooked rabbit burgers added with Zingiber officinale</i>	O121

Thursday June 15th - Room T1

Joint session (NF + FQ + APR) - Insects in animal nutrition

Chairmen: Marina Pasquini, Achille Schiavone

11.00-11.15	Maria F. Iulietto, Paola Sechi, Margherita Ceccarelli, Luca Grispoli, Beniamino T. Cenci-Goga <i>Exploring consumer perception of entomophagy: data from an online survey</i>	O122
11.15-11.30	Andrea Dama, Marco Meneguz, Manuela Renna, Carola Lussiana, Achille Schiavone, Francesco Gai, Enrico Bressan, Laura Gasco <i>Innovative protein sources in animal diets: bioconversion of vegetable waste with black soldier fly (Hermetia illucens)</i>	O123
11.30-11.45	Simona Mattioli, Valentina Roscini, Giacomo Rossi, Gabriele Rondoni, Maurizio Servili, Alessandro Dal Bosco, Mariano Pauselli, Cesare Castellini, Eric Conti <i>Fatty acids profile of Tenebrio molitor larvae grown in different oil-enriched substrates</i>	O124
11.45-12.00	Andrea Osimani, Federica Cardinali, Lucia Aquilanti, Nino Loreto, Sara Ruschioni, Paola Riolo, Maria F. Trombetta, Marina Pasquini <i>The microbiota of fresh mealworms as revealed by PCR-DGGE</i>	O125
12.00-12.15	Sihem Dabbou, Marco Cullere, Michele De Marco, Ilaria Biasato, Elena Biasibetti, Maria T. Capucchio, Stefania Bergagna, Daniela Dezzutto, Francesco Gai, Laura Gasco, Achille Schiavone, Antonella Dalle Zotte <i>Effects of black soldier fly (Hermetia illucens L.) larvae fat inclusion on growth performance, blood traits, carcass characteristics morphometric and histological parameters of finisher broiler chickens</i>	O126
12.15-12.30	Marco Cullere, Michael Woods, Giulia Tasoniero, Stefaan De Smet, Eric Claeys, Simone Vincenzi, Elsje Pieterse, Louwrens C. Hoffman, Antonella Dalle Zotte <i>Apparent nutrient digestibility of broiler quail diets supplemented with black soldier fly larvae reared on two different substrates</i>	O127
12.30-12.45	Enrico Bressan, Francesco Gai, Sihem Dabbou, Achille Schiavone, Manuela Renna, Andrea Dama, Marco Meneguz, Giovanni Perona, Ivo Zoccarato, Laura Gasco <i>Hermetia illucens partially defatted meal in piglets nutrition: preliminary results</i>	O128

Thursday June 15th - Room T1

Joint session (NF + FQ) - Dietary strategies and quality of food

Chairmen:	Maria F. Trombetta, Giuseppe Luciano	
14.00-14.15	Giulia Rossi, Stefano Schiavon, Giovanni Bittante, Giovanna Lomolino, Alberto Simonetto, Claudio Cipolat-Gotet, Marta Cattin, Franco Tagliapietra <i>Garlic as supplement for lactating cows: consequences on milk and cheese products</i>	O129
14.15-14.30	Federica Castellani, Nadia Bignardi, Andrea Vitali, Elettra Marone, Fiorentina Palazzo, Lisa Grotta, Giuseppe Martino <i>Effect of cow feeding supplementation with olive pomace on the development of aromatic compounds in milk and dairy products</i>	O130
14.30-14.45	Mirco Corazzin, Alberto Romanzin, Edi Piasentier, Stefano Bovolenta <i>Milk fatty acid profile of Italian Simmental cows as affected by pasture type and supplement level</i>	O131
14.45-15.00	Lucia Bailoni, Nadia Guzzo, Gianfranco Gabai, Roberto Mantovani <i>Fatty acids profile in early and commercial milk of dairy cows supplemented with flaxseed during the dry period</i>	O132
15.00-15.15	Miriam Iacurto, Germana Capitani, Federico Vincenti, Umberto Bernabucci <i>Effects of glycerol esters (Butyrflex®) on productive performances and meat quality of Limousine young bulls</i>	O134
15.15-15.30	Bernardo Valenti, Valentina Roscini, Giuseppe Luciano, Umberto Rossetti, Alessandro Priolo, Marcella Avondo, Mariano Pauselli <i>Dietary pomegranate pomace to improve milk fatty acid composition in grazing ewes</i>	O135

Friday June 16th - Room T2

Animal breeding and genetics - Other species

Chairmen:	Roberta Ciampolini, Fabio Pilla	
11.30-11.45	Katarzyna Stadnicka, Janusz Debski, Rita Gil, Michalina Debowska, Marek Bednarczyk <i>Revealing avian oviduct cell proteome and secretome in vitro and its susceptibility to modification</i>	O136
11.45-12.00	Simone Ceccobelli, Luigi Orrù, Simone Tralbalza, Piera Di Lorenzo, Antonella Lamontanara, Francesca M. Sarti, Alessandro Dal Bosco, Emiliano Lasagna <i>RNA-Seq analysis reveals different mechanisms in fatty acids biosynthesis in two chicken strains</i>	O137
12.00-12.15	Agata Szczerba, Takashi Kuwana, Aleksandra Dunislawska, Luiza Chojnacka-Puchta, Dorota Sawicka, Grazyna Plucienniczak, Marek Bednarczyk <i>Efficiency of in vitro and in vivo chicken primordial germ cells modification</i>	O138
12.15-12.30	Martina Zappaterra, Roger Ros-Freixedes, Martina Bordini, Joan Estany, Roberta Davoli <i>ELOVL6 gene and SNP effects on fatty acid composition of backfat in Italian Large White pigs</i>	O139
12.30-12.45	Samuele Bovo, Gianluca Mazzoni, Giuseppina Schiavo, Francesca Bertolini, Giuliano Galimberti, Antonia B. Samorè, Stefania Dall'Olio, Luca Fontanesi <i>Genome wide association studies for haematological and clinical-biochemical parameters in Italian Large White pigs</i>	O140
12.45-13.00	Elena Facchini, Rita Rizzi, Giulio Pagnacco, Giulietta Minozzi <i>Estimation of genetic parameters for honey production in the honeybee – Preliminary results</i>	O141
13.00-13.15	Andrea Talenti, Dayna L. Dreger, Stefano Frattini, Beatrice Coizet, Federica Danelli, Stefano P. Marelli, Amedeo Picchi, Jacopo Riva, Enrico Moretti, Raffaella Cocco, Daniele Bigi, Luigi Liotta, Michele Polli, Gustavo Gandini, Giulio Pagnacco, Elaine A. Ostrander, Paola Crepaldi <i>Genomic landscape and biodiversity of Italian dogs</i>	O142

Friday June 16th - Room H

Aquaculture, poultry and rabbit production - Aquaculture

Chairmen:	Alessandra Roncarati, Emilio Tibaldi	
09.00-09.15	Chiara Ceccotti, Simona Rimoldi, Chiara Ascione, Genciana Terova <i>Effects of butyrate and taurine supplementation in European sea bass diet based on soybean meal</i>	O143
09.15-09.30	Gloriana Cardinaletti, Paola Beraldo, Bianca M. Poli, Maria Messina, Emilio Tibaldi <i>Including marine microalgae in European seabass (Dicentrarchus labrax) diets: effects on digestive-absorptive functions</i>	O144

09.30-09.45	Luca Parma, Erika Bonvini, Luciana Mandrioli, Rubina Sirri, Cinzia Viroli, Ramon Fontanillas, Pier Paolo Gatta, Alessio Bonaldo <i>Feeding European sea bass (<i>Dicentrarchus labrax</i>) with increasing dietary fibre levels: impact on growth, blood biochemistry, gut histology and gut evacuation</i>	O145
09.45-10.00	Chiara Ascione, Emi Gliozheni, Chiara Ceccotti, Simona Rimoldi, Genciana Terova <i>Effects of dietary butyrate supplementation on histone modifications and the expression of inflammatory-related genes in European Sea bass (<i>Dicentrarchus labrax</i>)</i>	O146
10.00-10.15	Marina C.T. Meligrana, Gian Enrico Magi, Giuseppe Catone, Paolo Melotti, Alessandra Roncarati <i>Effects of different feeds on performances of rainbow trout (<i>Oncorhynchus mykiss</i>) broodstocks</i>	O147
10.15-10.30	Maria Messina, Francesca Tulli, Tiziana Bongiorno, Gloriana Cardinaletti <i>Effects of feed restriction and re-feeding on body condition, plasma metabolites and intestinal brush border enzymes activity in rainbow trout <i>Oncorhynchus mykiss</i></i>	O148
10.30-10.45	Francesca Tulli, Alberto Niccolai, Graziella Chini-Zittelli, Mario Tredici, Emilio Tibaldi <i>Apparent digestibility of different microalgae dried biomass in rainbow trout (<i>Oncorhynchus mykiss</i>)</i>	O149
10.45-11.00	Fausto Scopetta, Roberta Galarini, Danilo Giusepponi, Marinella Capuccella <i>Antibiotic use in a rainbow trout fattening farm in Umbria: sustainability, residues and farm environmental impact</i>	O150

Friday June 16th - Room C

Animal husbandry and environmental impact - Husbandry systems and environmental impact

Chairmen:	Marcello Mele, David Meo Zilio	
11.30-11.45	Giacomo Pirlo, Susanna Lolli <i>Environmental impact of milk production in two samples of organic and conventional farms in Lombardy</i>	O151
11.45-12.00	Elisabetta Vida, Dorian E. A. Tedesco <i>Carbon footprint of integrated milk production and bioenergy systems</i>	O152
12.00-12.15	Luciana Bava, Giulia Gislon, Jacopo Bacenetti, Anna Sandrucci, Alberto Tamburini, Maddalena Zucali <i>Carbon footprint of PDO cheeses: Grana Padano and Gorgonzola</i>	O153
12.15-12.30	Alice Cappucci, Eleonora Bulleri, Giuseppe Conte, Francesca Ciucci, Arianna Buccioni, Andrea Serra, Laura Casarosa, Marcello Mele <i>In vitro study of the effects of different tannin extracts on rumen ammonia and methane production</i>	O154
12.30-12.45	Octavio A. Castelán Ortega, Luisa T. Molina, Gloria S. Hernández Pineda, Paulina E. Pedraza Beltrán, Mohammed Benaouda, Manuel González Ronquillo <i>Sustainable reduction of methane emissions from cattle's enteric fermentation</i>	O155
12.45-13.00	Gloria S. Hernández Pineda, Paulina E. Pedraza Beltrán, Mohammed Benaouda, José M. Palma García, Francisca Avilés Nova, Luisa T. Molina, Octavio A. Castelán Ortega <i>Effect of three tanniferous plants on methane emission by dairy cows</i>	O156
13.00-13.15	Monika Hejna, Nadia Stroppa, Alessandra Moscatelli, Diego De Nisi, Vittorio Dell'Orto, Salvatore R. Pilu, Antonella Baldi, Luciana Rossi <i>Phytoremediation as an innovative approach to control heavy metals output from livestock</i>	O157
13.15-13.30	Enrico Fabrizio, Andrea Costantino, Lorenzo Comba, Paolo Cornale, Luca M. Battaglini <i>EPAnHaus project: assessment of the energy use for climate control into animal houses</i>	O158

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Animal welfare, health and behaviour - Small ruminant health and behaviour

Chairmen:	Gianni Battaccone, Gabriele Acuti	
11.30-11.45	Valentina Becciolini, Oreste Franci, Silvia Parrini, Anna Acciaioli <i>Feeding behaviour of Massese lamb reared indoors</i>	O159
11.45-12.00	Valeria Giovanetti, Mauro Decandia, Marco Acciaro, Mauro Mameli, Giovanni Molle, Andrea Cabiddu, Carla Manca, Rossella Cossu, Maria G. Serra, Salvatore P. G. Rassu, Corrado Dimauro <i>The effect of different time epoch settings on the classification of sheep behaviour using tri-axial accelerometry</i>	O160
12.00-12.15	Carla Manca, Cristian Porcu, Valeria Giovanetti, Gianpaolo Epifani, Marco Acciaro, Mauro Decandia, Marilia Gallus, Maria Dattena, Fiammetta Berlinguer, Giovanni Molle <i>Effect of a flushing treatment based on a glucogenic mixture on sheep body temperature as measured by thermal imaging</i>	O161

12.15-12.30	Silvia Crotti, Deborah Cruciani, Alberto Fazzari, Chiara F. Magistrali, Ludovica Curcio, Laura Madeo, Paola Papa, Pietro Antenucci, Cristina Pesca <i>Ovine foot-rot: a welfare and economic concern</i>	O162
12.30-12.45	Christian Lambertz, Ioanna Pouloupoulou, Matthias Gauly <i>Endoparasites in sheep and goats: prevalence and control strategies of mountain farms in Northern Italy?</i>	O163
12.45-13.00	Valentina Becciolini, Riccardo Bozzi, Maria P. Ponzetta <i>Growth and morphometry of farmed fallow deer (<i>Dama dama</i> L., 1758) from birth to six months of age</i>	O164

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Nutrition and feeding - Ruminant nutrition

Chairmen: Antonello Cannas, Luigi Calamari		
09.00-09.15	Elena Bonfante, Alberto Palmonari, Damiano Cavallini, Ludovica Mammi, Giorgia Canestrari, Mattia Fustini, Andrea Formigoni <i>Fecal sample time-points to estimate uNDF240 excretion in dairy cows</i>	O165
09.15-09.30	Marcella Sabino, Victor Adriano Okstoft Carmelo, Gianluca Mazzoni, Katia Cappelli, Stefano Capomaccio, Paolo Ajmone-Marsan, Andrea Verini-Supplizi, Massimo Trabalza-Marinucci, Haja N. Kadarmideen <i>Transcriptome analysis reveal sex-specific gene expression in lambs supplemented with essential oils</i>	O166
09.30-09.45	Marco Acciaro, Mauro Decandia, Valeria Giovanetti, Carla Manca, Gianni Battacone, Salvatore P. G. Rassu, Giovanni Molle <i>Herbage intake of Sarda suckler cows characterized by two different calving periods in a mountain pasture</i>	O167
09.45-10.00	Ika Sumantri, Ali Agus, Tridjoko Wisnu Murti, Nuryono, Josef Boehm <i>Effects of bentonite inclusion in naturally aflatoxin contaminated diet on aflatoxin excretion and milk production of Indonesian Friesian Holstein</i>	O168
10.00-10.15	Mondina F. Lunesu, Mauro Decandia, Giovanni Molle, Marco Acciaro, Giampaolo Epifani, Ana H. D. Francesconi, Alberto S. Atzori, Giovanni C. Bomboi, Paola S. Nicolussi, Alberto Prandi, Antonello Cannas <i>Effects of partially replacing cereal grains with soyhulls on energy partitioning in ewes and goats in mid lactation</i>	O169
10.15-10.30	Damiano Cavallini, Mattia Fustini, Alberto Palmonari, Andrea Formigoni <i>Effect of the presence/absence of long hay and the administration of ad libitum or restricted TMR</i>	O170
10.30-10.45	Ramy Elgendy, Federica Castellani, Fiorentina Palazzo, Mery Giantin, Lisa Grotta, Mauro Dacasto, Giuseppe Martino <i>RNA sequencing-based transcriptome profiling of dairy cows fed with a polyphenol-rich grape pomace-supplemented diet</i>	O171

Friday June 16th - Room T2

Animal food quality and safety - Food safety

Chairmen: Luisa A. Volpelli, Vincenzo Chiofalo		
09.00-09.15	Margherita Ceccarelli, Luca Grispoldi, Paola Sechi, Maria F. Iulietto, Filippo Bertero, Serena Franceschini, Marco Revoltella, Beniamino T. Cenci-Goga <i>Prevalence of Escherichia coli from lymph nodes of bovine carcasses and detection of stx1, stx2 and eaeA genes with multiplex polymerase chain reaction</i>	O172
09.15-09.30	Karama Musafiri, Luca Grispoldi, Isidro García-Meniño, Jesús Blanco, Margherita Ceccarelli, Paola Sechi, Maria F. Iulietto, Rosalia Materazzi, Jorge Blanco, Beniamino T. Cenci-Goga <i>Characterization of verotoxin-producing Escherichia coli (STEC) in dairy cattle's faeces from Pretoria, South Africa</i>	O173
09.30-09.45	Paola Sechi, Maria F. Iulietto, Salvatore Barbera, Luca Grispoldi, Margherita Ceccarelli, Filippo Bertero, Serena Franceschini, Beniamino T. Cenci-Goga <i>Effect of lactic acid bacteria on the quality of beef hamburger under different storage conditions</i>	O174
09.45-10.00	Marco Tretola, Ambra Di Rosa, Matteo Ottoboni, Valentina Caprarulo, Carlotta Giromini, Francesco Leone, Vittorio Dell'Orto, Vincenzo Chiofalo, Luciano Pinotti <i>Former food products safety: stereomicroscopy and computer vision for evaluation of packaging remnants contamination</i>	O175

Friday June 16th - Room T1

Joint session (NF + FQ) - Dietary strategies and quality of food

Chairmen:	Miriam Iacurto, Giovanni Savoini	
11.30-11.45	Greta Farina, Elena Mariani, Mauro Vasconi, Raffaella Rebucci, Vittorio M. Moretti, Alessandro Agazzi, Giovanni Savoini, Guido Invernizzi <i>Camelina cake in laying hens diet to enrich eggs with omega-3 fatty acids</i>	O176
11.45-12.00	Claudio Forte, Raffaella Branciani, Massimo Trabalza-Marinucci, Gabriele Acuti, Dino Miraglia, David Ranucci, Rossana Roila, Roberta Ortenzi, Michela Codini, Andrea Valiani <i>Dietary administration of olive mill wastewater extract to improve broiler performance and oxidative status in chicken meat</i>	O177
12.00-12.15	Francesca Ciucci, Alice Cappucci, Giuseppe Conte, Laura Casarosa, Eleonora Bulleri, Marcello Mele, Andrea Serra <i>Olive pomace diet supplementation of Cinta Senese swine: effect on fatty acid composition and on lipid peroxidation of sausages.</i>	O178
12.15-12.30	Sara Chiapparini, Raffaella Rossi, Federica Maghin, Siria Tavaniello, Giuseppe Maiorano, Carlo Corino <i>Effect of long term supplementation with Lippia spp. extract on meat quality parameters in heavy pigs</i>	O179
12.30-12.45	Valentina Roscini, Giuseppe Luciano, Mariano Pauselli, Miriam Iacurto, Nastaran Samadirad, Silvia Ruggeri, Luciano Morbidini <i>Fatty acids and oxidative stability of meat from lambs fed with linseed and brewers spent grains</i>	O180
12.45-13.00	Luciano Morbidini, Valentina Roscini, Giuseppe Luciano, Mariano Pauselli <i>Consumer testing of meat from Apennine lambs fed diets containing linseed and brewers spent grain</i>	O181

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Michela Ablondi, Attilio Rossoni, Chiara Nicoletti, Alberto Sabbioni <i>A methodology for the parentage diagnosis of the Italian Brown breed</i>	P003
Liliana Di Stasio, Antonino Duchi, Alfredo Pauciullo <i>Biodiversity in tench populations of Sicily</i>	P004
Luiza Chojnacka-Puchta, Dorota Sawicka, Grazyna Plucienniczak, Marek Bednarczyk <i>Lipofection conditions of CHO-K1 cells with the use of two transposon systems</i>	P005
Gianfranco Cosenza, Barbara Auzino, Roberta Ciampolini, Daniela Gallo, Marco Iannaccone, Rosanna Capparelli, Alfredo Pauciullo <i>Genetic variability detected at the (c-type) milk lysozyme encoding gene in donkey</i>	P006
Gianfranco Cosenza, Luigi Ramunno, Daniela Gallo, Marco Iannaccone, Rosanna Capparelli, Meichao Gu, Alfredo Pauciullo <i>First marker discovery in ACACA gene and association study with milk yield in Mediterranean river buffalo</i>	P007
Marco Iannaccone, Marina Papaiani, Andrea Fulgione, Flora Ianniello, Daniela Gallo, Gianfranco Cosenza, Rosanna Capparelli <i>The interleukin-10 polymorphism g.3936 G>A is uncoupled with bovine tuberculosis susceptibility in water buffalo (Bubalus bubalis)</i>	P008
Sara Albarella, Nadia Musco, Emanuele D'Anza, Deborah Frate, Vincenzo Peretti, Francesca Ciotola <i>Effects of diets rich in β-glucans on chromosome stability of peripheral blood lymphocytes of pigs</i>	P009
Meichao Gu, Gianfranco Cosenza, Yong Guo, Liliana Di Stasio, Alfredo Pauciullo <i>Complex transcriptomic pattern identified at river buffalo DGAT1</i>	P010
Alessandra Crisà, David Meo Zilio, Roberto Steri, Gennaro Catillo, Luca Buttazzoni <i>Establishment of a crossbreed Simmental x Holstein experimental herd and first assessment of heterosis effects on technical and biological parameters</i>	P011
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Marco Tolone, Maria T. Sardina, Rosalia Di Gerlando, Salvatore Mastrangelo, Anna M. Sutura, Baldassare Portolano <i>A pipeline for variants discovery using next-generation DNA sequencing data</i>	P013
Daniela Finizio, Antonino Di Grigoli, Carmelisa Valluzzi, Paola Di Gregorio, Adriana Di Trana, Andrea Rando, Giuseppe Maniaci, Marco Alabiso, Adriana Bonanno <i>Effect of CSN1S1 G allele on some characteristics of milk produced by Cinisara cows</i>	P014
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from the ancient Turkish cattle, which might have reached the Italian peninsula by another route (possibly by sea). This study increases the knowledge on the diversity of Podolic breeds, and sets the basis for the development of appropriate strategies for the conservation of these ancient and popular cattle.

O027

Genome-wide homozygosity in Maremmana cattle

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The current availability of large numbers of single nucleotide polymorphisms (SNPs) throughout the genome makes these markers particularly suitable for the detection of patterns of genetic diversity and of genome-wide homozygosity in animal populations. The aim of this work was to estimate genetic diversity and homozygosity in the Maremmana cattle breed. We used a sample of 149 animals (males and females) genotyped with the BovineSNP50 v2 (54K) Illumina BeadChip. After editing for call-rate >0.9 and removing SNP unassigned or on the sex chromosomes, 128 animals and 50,814 SNPs were left. We estimated the following genetic parameters: observed and expected heterozygosity (H_o and H_e), minor allele frequency (MAF), and the F_{IS} statistic. We also scanned the genome for runs of homozygosity (ROH). In the present study, ROH were detected based on 20-SNP-long sliding-windows, and allowing for a maximum of 1 missing and 1 heterozygote genotype, and a maximum gap between consecutive SNP of 10^5 bp. ROH contained minimum 10 SNPs, and had a minimum length of 1 Mb and a minimum density of 1 SNP every 50 kbps.

The average H_o and H_e were 0.374 ± 0.132 and 0.365 ± 0.120 , respectively, and the average MAF was 0.274 ± 0.130 . These values are consistent with the range observed in other cattle breeds. We obtained some negative values for F_{IS} (-0.162 to 0.180) which corresponded to animals with lower than average homozygosity. In total, 10,465 ROH were detected (81.75

per animal), with an average length of 2.69 Mb. Most ROH (74%) had length ≤ 2 Mb. ROH are contiguous lengths of homozygous genomic segments where the two inherited haplotypes are identical. ROH indicate genomic regions where a reduction in heterozygosity occurred, and offer new opportunities to estimate inbreeding (F). The inbreeding coefficient based on ROH (F_{ROH}) was estimated by the ratio between the total ROH length and the size of the genome in each animal. Average F_{ROH} was 0.0869 ± 0.032 . Unlike inbreeding estimated based on H_o , F_{ROH} is not influenced by allele frequencies (sampling) and can distinguish recent from ancient inbreeding. However, F_{ROH} requires SNP positions to be known (unlike H_o). Two genomic regions with ROH in over 60% of the animals were found: one on BTA6 (38.6-39.7 Mbps), one on BTA13 (54.3-54.8 Mbps). These may highlight regions where selective pressures have shaped the genome of the Maremmana breed.

O028

Genome wide Copy Number Variation (CNV) detection in Cinisara cattle breed

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Copy Number Variations (CNVs) are classes of polymorphic genomic regions including deletions, duplications and insertions of DNA fragments from at least 0.5 kb up to several Mb. CNV represents an important source of genetic variability that provides genomics structural information complementary to the single nucleotide polymorphism (SNP) data. Some CNVs have been shown to be important in both normal phenotypic variability and disease susceptibility in livestock. Several approaches to identify CNVs including FISH, aCGH, SNP array or NGS, were proposed and among these SNP genotyping is relatively low cost, high-throughput and high coverage method. The aim of this study was to identify the CNVs in 71 animals of Cinisara breed using Illumina BovineSNP50 BeadChip v2. PennCNV software, which incorporates Log R ratio and B allele frequency at each SNP marker, was used to identify CNVs. Seven animals showed not shared CNVs, as well as autosomes 19, 21, 22. Chromosome 25 presented no CNVs at all. A final number of 322 CNVs were detected. The average number of CNVs was 4.5 per individual, with an average length and median size of 143.04 kb and 122.14 kb, respectively. All CNVs were grouped in CNV regions (CNVRs) and a total of 107 CNVRs, ranged from 50 to ~ 500 kb, were detected, which covered 4.90 Mb of polymorphic sequence and corresponded to

0.18% of the total genome length. In particular, we found 81 CNVRs with only gain (duplication), 22 with only loss (deletion), and four CNVRs with both. Furthermore, 8 CNVRs with >1%, 77 with >2.5%, and 22 with >5% frequency, were found. CNVRs having the highest frequency were located on Chr3:120501439-120647330 and Chr23:34673581-35007295, whereas the greatest number of genes was mapped in only one CNVR located on Chr 17:74123863-74393620. A total of 241 genes were included in the identified CNVRs. According to KEGG and DAVID database, most of the genes were involved

in multiple signaling and signal transduction pathways in a wide variety of cellular and biochemical processes, such as immune response, adaptability, and olfactory receptors pathway. Further studies, using different algorithms and validating the CNVs discovered, will be conducted to corroborate these preliminary results on the CNVRs detected. These results will be used for the investigation of genomic changes and features of interest in the Cinisara breed, such as for association with functional or production traits and for biodiversity studies.

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