



25<sup>th</sup> Congress

# ASPAS 2023

**Animal Production Science:  
innovations and sustainability  
for future generations**

**JUNE  
13-16  
2023**

**Monopoli  
Bari | Italy**



# The 25<sup>th</sup> Congress of the Animal Science and Production Association “Animal Production Science: Innovations and Sustainability for Future Generation”

Under the auspices of



Università di Foggia



UNIVERSITÀ DEGLI STUDI DELLA BASILICATA



Dipartimento di Medicina Veterinaria



Dipartimento di Medicina di Precisione e Rigenerativa e Area Jonica - (DiMePRE-J)



REGIONE PUGLIA  
ASSESSORATO AGRICOLTURA



ACCADEMIA DEI GEORGOFILII



Associazione Nazionale tra i Produttori di Alimenti Zootecnici



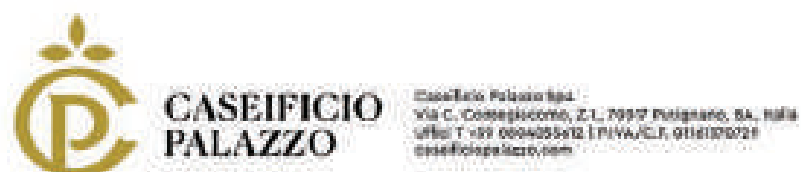
Ministero della Giustizia



## Thanks to our Session Sponsors



and also to



The 25<sup>th</sup> Congress of the Animal Science and Production Association (ASPA) is hosted in Monopoli (Bari-Puglia) by the University of Bari.

The Congress is entitled “Animal Production Science: Innovations and Sustainability for Future Generations” and returns to Puglia after its second edition which was held in Bari 47 years ago.

The Congress is hosted at the charming Torre Cintola Resort in Monopoli (Bari-Puglia) from the 13<sup>th</sup> to the 16<sup>th</sup> June 2023, a special location also for celebrating the 50<sup>th</sup> anniversary of our association.

This edition of the ASPA congress has received a total of 463 scientific contributions: 296 oral presentations and 167 posters have been selected. This is a very great result! The highest number of contributions ever, according to our best knowledge.

We have taken concrete actions to enhance the sustainability of our Congress, from choosing to use digital posters (available through a smartphone app and on touchscreen monitors) to utilizing public transportation, donating leftover food to charities and preferring zero-mile food.

Moreover, the Congress opens a focus also on the role of women in Science, dedicating the Congress rooms to neglected scientists poorly celebrated but fundamental for the progress of knowledge and societal development. Finally, a disseminated photo exhibition in the Congress rooms on marginal areas is a further opportunity for attendees to deepen the knowledge of Southern Italy landscapes and their relationships with livestock industry.

The scientific program is enriched by 24 main lectures, covering all the main topics. Many thanks for the job to the President of the Organizing Committee, Prof. Pasquale De Palo, and to all the components. I also wish to thank all the members of the Scientific Committee, starting from the President Prof. Angela Gabriella D’Alessandro.

I would like to congratulate and to thank all people that have contributed to the organization of the Congress and that have collaborated in reviewing the summaries. A special thanks to them for what they have done for ASPA and for the Italian Animal Science. A special thanks also to Prof. Marcello Mele, Editor-in-Chief of the Italian Journal of Animal Science, for having contributed to the edition of the proceedings.

**Nicolò Pietro Paolo Macciotta**

*ASPA President*





# Organizing Committee

**Pasquale De Palo** (President)

---

Andrea Bragaglio

---

Gerardo Centoducati

---

Salvatore Claps

---

Maria Giovanna Ciliberti

---

Mariantonietta Colonna

---

Davide De Marzo

---

Giuseppe De Rosa

---

Antonella della Malva

---

Antonio Di Francia

---

Giuseppe Maiorano

---

Nadia Musco

---

Fabio Napolitano

---

Gianluca Neglia

---

Anna Maria Perna

---

Fabio Pilla

---

Maria Selvaggi

---

Lucia Sepe

---

Vincenzo Tufarelli

# Scientific Committee

**Angela Gabriella D'Alessandro** (President)

---

Sara Albarella

---

Ada Braghieri

---

Serena Calabrò

---

Elena Ciani

---

Adriana Di Trana

---

Nicolaia Iaffaldano

---

Vincenzo Landi

---

Antonia Lestingi

---

Aristide Maggiolino

---

Rosaria Marino

---

Felicia Masucci

---

Marco Ragni

---

Angela Salzano

---

Antonella Santillo

---

Gabriele Senczuk

---

Francesco Serrapica

---

Simona Tarricone

---

Siria Tavaniello

# **Sustainability: also a gender issue**





Within the 25<sup>th</sup> ASPA Congress, it has been decided to name the conference room to eminent researchers-scientists women who, despite the significant contribution provided to knowledge development, had not received the right and dutiful recognition due to cultural gender prejudice. Women scientific underestimation is a problem of “social sustainability” that does not concern only the historical memory, but it is still an unresolved issue today.

**Below there are short notes on some of the women who have marked the history of science.**



## Rosalind Elsie Franklin

(London, 25<sup>th</sup> July 1920 – London, 16<sup>th</sup> April 1958)

Her research has been fundamental **to understand the structure of the DNA, the mechanisms of replication and the inheritance of genetic information.**

Graduated at Newnham College (Cambridge), one of the few women's colleges at the time, she earned a doctorate in physical chemistry in 1945 and specialized in X-ray diffraction technique. At King's College London, in 1952 she made a series of exceptionally clear photos of the DNA, including the famous Photograph 51, which demonstrated the spatial distribution of the molecules. Rosalind Franklin's findings were stolen and revealed without her knowledge by Crick and Watson who used them to make the double helix model of the DNA. Thanks to the articles published in Nature, which omitted the formal citation of Franklin's data, Watson, Crick and Wilkins received the 1962 Nobel Prize in Medicine.

Rosalind Franklin died of ovarian cancer at the age of 37, probably linked to the radiations she had been exposed to, during her research activities.



## Nettie Maria Stevens

(Cavendish, Vermont, 7<sup>th</sup> July 1861 – Baltimora, Maryland, 4<sup>th</sup> May 1912)

Biologist and geneticist, she discovered **the genetic basis of sex determination.**

She graduated in 1880 from Westfield Normal School. In 1899, she earned her Bachelor of Arts Degree in biology from Stanford University and obtained her master degree in 1900. She continued her studies at Bryn Mawr College, one of the few research institutes that allowed women to obtain doctorates. Thanks to her studies conducted on insects, Nettie M. Stevens discovered the sexual chromosomes X and Y, demonstrating the genetic determinism of sex. Stevens' research was taken over by Thomas Hunt Morgan, to whom the scientist had sent the findings of her studies. Morgan then wrote one of the first genetics textbooks in which he made the results achieved by Nettie Stevens his own. Despite the fact that they had already been published, they allowed him to win the Nobel Prize in Medicine in 1933.

The scientist died of cancer at the age of 51, in 1912. Her name and researches were ignored and quickly forgotten.



## Rachel Louise Carson

(Springdale, Pennsylvania, 1907 – Rockville, Maryland, 1964)

She is considered the mother of the **environmental movement**.

She graduated in Biology in 1929 from Pennsylvania College for Women and in Zoology in 1932 from Johns Hopkins University. Author of numerous books published by prestigious publishing houses, such as Simon & Schuster, Nature and Oxford University Press, in 1952 she won the National Book Award and received two honorary doctorates; she also won an Oscar for a documentary movie. Carson's activity focused on the connections between pesticides and environment with increasing effects along the food chain. She was violently threatened, denigrated, and attacked by the chemical industry and by multinationals with interests in agriculture. With her studies and books, including "Silent Spring", she has induced a strong awareness in public opinion about the dangers of environmental pollution and promoted legislative reforms that, in 1970, led to the creation of the Agency for the Environment Protection.

The scientist died prematurely on the 14<sup>th</sup> April 1964, aged 56.



## Marie-Anne Paulze-Lavoisier

(Montbrison, 20 January 1758 – Paris, 10 February 1836)

Chemist and **science writer**.

Daughter of a French parliamentarian and financier, she learnt the basis of mathematics from an early age. She married Antoine Lavoisier, a scientist and one of the fathers of modern chemistry. Marie-Anne initially helped her husband to build the laboratory and, working alongside him, played a key role in the great chemical discoveries of that time. She translated from English to French texts coming from England about the most important scientific issues. During the French Revolution, she published the book "Mémoires de Chimie", which was revived and distributed in Europe.

Despite having massively contributed to the advancement of chemistry as a new science, lot of Marie-Anne's history has been forgotten. Nowadays her husband Antoine Lavoisier is mostly known and quoted compared with her.

# Program at a glance

**Tuesday June 13<sup>th</sup>**








	Room Daunia	Room Peucetia	Room Messapia	Room Apulia
	<p><b>14:30-17:00</b> <b>Chicken biodiversity</b> <i>Session 01</i></p> <p>Invited: <b>Cerolini Silvia</b> Chairs: <b>Iaffaldano N., Schiavone A.</b></p>	<p><b>14:30-16:00</b> <b>Environmental footprint</b> <i>Session 02</i></p> <p>Chairs: <b>Sevi A., Zucali M.E.</b></p>	<p><b>14:30-16:30</b> <b>Advances in dietary feed supplementation</b> <i>Session 03</i></p> <p>Chairs: <b>Calabrò S., De Palo P.</b></p>	/
<b>17:00 – 17:30</b>	Coffee break			
	/	/	/	<b>Opening Ceremony</b>
<b>20:00</b>	Welcome cocktail			

## Opening Ceremony





Chairs: **Nicolò Pietro Paolo Macciotta, Giuseppe Pulina**

<b>17:30</b>	Institutional Addresses
<b>18:00</b>	<p>Book launch and presentation “Carni e salumi: le nuove frontiere della sostenibilità” by Bernardi E., Capri E., Pulina G., Franco Angeli Ed.</p> <p><b>Giuseppe Pulina</b> <i>President of “Carni sostenibili” Association and Full Professor of “Livestock farming ethics and sustainability” University of Sassari</i></p>
<b>18:15</b>	<p>Policies and perspectives of European livestock industry: which role is played by the Animal Science Community?</p> <p><b>Paolo De Castro</b> <i>Member of the EU Committee on Agriculture and Rural Development and Professor of Agricultural Economics</i></p>
<b>18:45</b>	<p>National Policies and future perspectives for livestock and animal food supply chain in Italy: is there a role for Animal Science Community?</p> <p><b>Giuseppe Blasi</b> <i>Head of Department of European and International Policies and Rural Development, Ministry of Agriculture, Food Sovereignty and Forestry</i></p>
<b>19:15</b>	<p>ASPAs and its first 50 years</p> <p><b>Nicolò Pietro Paolo Macciotta</b> <i>ASPAs President</i></p>
<b>20:00</b>	<b>Official Opening of the 25<sup>th</sup> ASPA Congress</b>

# Wednesday June 14<sup>th</sup>

	Room Daunia	Room Peucetia	Room Messapia	Room Apulia
	<p><b>08:15 - 11:00</b>  <b>Environmental footprint</b>  <i>Session 04</i></p>  <p>Invited:  <b>Kuipers Abele</b>            Chairs:  <b>Bernabucci U., Sepe L.</b></p>	<p><b>08:30 - 11:00</b>  <b>Advances in dietary feed supplementation</b>  <i>Session 05</i></p>  <p>Invited:  <b>Salem Abdelfattah Z.</b>            Chairs:  <b>D'Alessandro A.G., Formigoni A.</b></p>	<p><b>08:30 - 11:00</b>  <b>Precision livestock farming: production efficiency in dairy cows</b>  <i>Session 06</i></p>  <p>Invited:  <b>Giordano Julio O.</b>            Chairs:  <b>Abeni F., Pugliese C.</b></p>	<p><b>08:30 - 11:00</b>  <b>Development of genomics in biodiversity</b>  <i>Session 07</i></p> <p>Invited:  <b>Hanotte Olivier</b>            Chairs:  <b>Cecchinato A., Ciani E.</b></p>
<b>11:00 – 11:30</b>	<i>Coffee break</i>			
	<p><b>11:30 - 13:30</b>  <b>Environmental footprint</b>  <i>Session 08</i></p> <p>Chairs:  <b>Claps S., Sandrucci A.</b></p>	<p><b>11:30 - 13:30</b>  <b>Sustainable feeding strategies in livestock systems</b>  <i>Session 09</i></p>  <p>Chairs:  <b>Bonanno A., Tufarelli V.</b></p>	<p><b>11:30 - 13:30</b>  <b>Animal welfare and health</b>  <i>Session 10</i></p>  <p>Invited:  <b>Chebel Ricardo C.</b>            Chairs:  <b>Trevisi E., Gottardo F.</b></p>	<p><b>11:30 - 13:45</b>  <b>Advances in meat quality</b>  <i>Session 11</i></p>  <p>Invited:  <b>Gagaoua Mohammed</b>            Chairs:  <b>Marino R., Mele M.</b></p>
<b>13:30 – 14:30</b>	<i>Lunch</i>			
	<p><b>14:30 - 16:30</b>  <b>Advances in rabbit and poultry products</b>  <i>Session 12</i></p> <p>Chairs:  <b>Maiorano G., Trocino A.</b></p>	<p><b>14:30 - 16:15</b>  <b>Genomic tools for ruminant resiliency</b>  <i>Session 13</i></p> <p>Invited:  <b>Miglior Filippo</b>            Chairs:  <b>Pilla F., Crepaldi P.</b></p>	<p><b>14:30 - 16:30</b>  <b>Heat stress and climate resilience in livestock</b>  <i>Session 14</i></p> <p>Invited:  <b>Dahl Geoffrey E.</b>            Chairs:  <b>Braghieri A., Cozzi G.</b></p>	<p><b>14:30 - 16:30</b>  <b>Metagenomic approaches in animal science</b>  <i>Session 15</i></p> <p>Invited:  <b>Lourenco Jeferson Menezes</b>            Chairs:  <b>Trevisi P., Castiglioni B.</b></p>
<b>16:30 – 17:00</b>	<i>Coffee break</i>			
	<p><b>17:00 - 18:30</b>  <b>New perspective in bees' production</b>  <i>Session 16</i></p> <p>Chairs:  <b>Fontanesi L., Minozzi G.</b></p>	<p><b>17:00 - 18:05</b>  <b>Breeding for our future</b>  <i>Session 17</i></p>  <p>Invited:  <b>Cassandro Martino</b>            Chairs:  <b>Campanile G., Martelli G.</b></p>	<p><b>17:00 - 19:30</b>  <b>Advances in meat quality</b>  <i>Session 18</i></p> <p>Chairs:  <b>De Marchi M., Serra A.</b></p>	<p><b>17:00 - 18:30</b>  <b>Metagenomic approaches in animal science</b>  <i>Session 19</i></p> <p>Chairs:  <b>Buccioni A., Conte G.</b></p>
<b>20:30</b>	<i>Typical Dinner</i>			

# Thursday June 15<sup>th</sup>

	Room Daunia	Room Peucetia	Room Messapia	Room Apulia
	<p><b>08:30 - 10:30</b>  <b>Animal welfare and health</b>  <i>Session 20</i></p> <p>Chairs:  <b>Albenzio M., Tarantola M.</b></p>	<p><b>08:15 - 11:00</b>  <b>Sustainability and innovation in aquaculture</b>  <i>Session 21</i></p> <p>Chairs:  <b>Centoducati G., Parisi G.</b></p>	<p><b>08:15-11:15</b>  <b>Advances in milk and dairy products quality</b>  <i>Session 22</i></p>  <p>Chairs:  <b>Di Trana A.C., Martini M.</b></p>	<p><b>08:15 - 11:00</b>  <b>New paradigms in animal breeding</b>  <i>Session 23</i></p> <p>Invited:  <b>Lourenco Daniela</b>            Chairs:  <b>Ciampolini R., Landi V.</b></p>
<b>11:00 – 11:30</b>	<i>Coffee break</i>			
	<p><b>11:30 - 13:15</b>  <b>Advances in rabbit and poultry products</b>  <i>Session 24</i></p> <p>Invited:  <b>Stadnicka Katarzyna</b>            Chairs:  <b>Bovera F., Soglia F.</b></p>	<p><b>11:30 - 13:45</b>  <b>L.E.O. project: the Italian research commitment for the future livestock strategies</b>  <i>Session 25</i></p>  <p>Invited:  <b>Burke Martin</b>            Chairs:  <b>Donda M., Negrini R.</b></p>	<p><b>11:30 - 13:30</b>  <b>Advances in milk and dairy products quality</b>  <i>Session 26</i></p> <p>Chairs:  <b>Maggiolino A., Summer A.</b></p>	<p><b>11:30 - 13:15</b>  <b>Genomic tools for ruminant resiliency</b>  <i>Session 27</i></p>  <p>Invited:  <b>Di Croce Fernando</b>            Chairs:  <b>Lasagna E., Sacchi P.</b></p>
<b>13:30 – 14:30</b>	<i>Lunch</i>			
	<p><b>14:30 - 16:30</b>  <b>Recent advances in mammary gland biology and health</b>  <i>Session 28</i></p> <p>Chairs:  <b>Caroprese M., Lacetera N.</b></p>	<p><b>14:30 - 17:15</b>  <b>Sustainable feeding strategies in livestock systems</b>  <i>Session 29</i></p>  <p>Invited:  <b>Pulina Giuseppe</b>            Chairs:  <b>Pinotti L., Masucci F.</b></p>	<p><b>14:30 - 16:45</b>  <b>Precision Livestock Farming: production efficiency and environmental impacts</b>  <i>Session 30</i></p> <p>Invited:  <b>Rose Guilherme</b>  <b>O'Brien Bernardette</b>            Chairs:  <b>Mattiello S., Neglia G.</b></p>	<p><b>14:30 - 16:30</b>  <b>Genomic tools for ruminant resiliency</b>  <i>Session 31</i></p> <p>Invited:  <b>Lecchi Cristina</b>            Chairs:  <b>Bozzi R., Pasquini M.</b></p>
<b>16:30 – 17:00</b>	<i>Coffee break</i>			
<b>17:00</b>	/	/	/	<b>ASPA Assembly</b>
<b>20:30</b>	<i>Social Dinner</i>			

# Friday June 16<sup>th</sup>

	Room Daunia	Room Peucetia	Room Messapia	Room Apulia
	<p><b>08:30 - 10:30</b>  <b>Animal welfare and health</b>  <i>Session 32</i></p> <p>Chairs:  <b>Di Palo R., Santillo A.</b></p>	<p><b>08:30 - 11:00</b>  <b>Development of genomics in biodiversity</b>  <i>Session 33</i></p> <p>Invited:  <b>Laloë Denis</b>            Chairs:  <b>Biffani S., Cipolat-Gotet C.</b></p>	<p><b>08:15 - 11:00</b>  <b>Companion animals</b>  <i>Session 34</i></p> <p>Invited:  <b>Switonsky Marek</b>            Chairs:  <b>Cutrignelli M., Stefanon B.</b></p>	<p><b>08:00 - 11:00</b>  <b>Sustainable feeding strategies in livestock systems</b>  <i>Session 35</i></p> <p>Invited:  <b>Atzori Alberto Stanislao</b>            Chairs:  <b>Di Francia A., Bailoni L.</b></p>
<b>11:00 – 11:30</b>	<i>Coffee break</i>			
	<p><b>11:30 - 13:30</b>  <b>Research and sustainability in horse production</b>  <i>Session 36</i></p> <p>Invited:  <b>Vial Celine</b>            Chairs:  <b>Salimei E., Capomaccio S.</b></p>	<p><b>11:30 - 13:15</b>  <b>Insects' production for animal feeding</b>  <i>Session 37</i></p> <p>Chairs:  <b>Chiofalo B., Gasco L.</b></p>	<p><b>11:30 - 13:30</b>  <b>Advances in dietary feed supplementation</b>  <i>Session 38</i></p> <p>Chairs:  <b>Trabalza Marinucci M., Nudda A.</b></p>	<p><b>11:30 - 13:15</b>  <b>Genomic tools for animal resiliency and susceptibility</b>  <i>Session 39</i></p> <p>Invited:  <b>Vergani Andrea Mario</b>            Chairs:  <b>Bagnato A., Sartori C.</b></p>



# Oral Sessions

Tuesday, June 13<sup>th</sup> | Room Daunia

Session 01

## Chicken biodiversity

Chairs: Iaffaldano Nicolaia – Schiavone Achille

14:30	<b>INVITED LECTURE</b> <b>Cerolini Silvia</b> <i>Advancement in conservation programs of Italian poultry genetic resources for rural development</i>	
15:00	<b>Marelli Stefano Paolo, Zaniboni Luisa, Madeddu Manuela, Mangiagalli Maria Grazia, Tognoli Cristina, Cerolini Silvia</b> <i>Behavioural characterization of two local Italian chicken breeds</i>	369
15:15	<b>Cendron Filippo, Cassandro Martino, Penasa Mauro</b> <i>Copy number variants in 23 Italian local chicken breeds</i>	481
15:30	<b>Di Iorio Michele, Iaffaldano Nicolaia, Rusco Giusy, Antenucci Emanuele, Madeddu Manuela, Zaniboni Luisa, Marelli Stefano Paolo, Cerolini Silvia</b> <i>Phenotypic characterization of semen production and quality in Italian chicken and turkey breeds</i>	090
15:45	<b>Madeddu Manuela, Zaniboni Luisa, Marelli Stefano Paolo, Di Iorio Michele, Iaffaldano Nicolaia, Mangiagalli Maria Grazia, Cerolini Silvia</b> <i>Variability in semen freezability within an Italian chicken breed</i>	115
16:00	<b>Cappone Eleonora, Soglia Dominga, Sartore Stefano, Zambotto Valeria, Maione Sandra, Profiti Margherita, Bongiorno Valentina, Gariglio Marta, Cerolini Silvia, Schiavone Achille</b> <i>Millefiori Piemontese, genetic characterization of an endangered local chicken breed</i>	203
16:15	<b>Piscitelli Raffaella, Zampiga Marco, Cartoni Mancinelli Alice, Brugaletta Giorgio, Castellini Cesare, Petracci Massimiliano, Sirri Federico</b> <i>Comparison of productive traits and egg quality characteristics of two Italian chicken breeds and their crossbreeds reared in enriched-cage and free-range systems</i>	359
16:30	<b>Angelucci Elisa, Mattioli Simona, Cartoni Mancinelli Alice, Dal Bosco Alessandro, Ciarelli Claudia, Guarino Amato Monica, Failla Sebastiana, Castellini Cesare</b> <i>Assessment of muscle metabolism in differently kinetic chicken genotypes using the Activity Index</i>	500
16:45	<b>Perini Francesco, Wu Zhou, Cartoni Mancinelli Alice, Mattioli Simona, Soglia Dominga, Schiavone Achille, Mugnai Cecilia, Castellini Cesare, Smith Jacqueline, Lasagna Emiliano</b> <i>RNAseq reveals modulation of genes involved in fatty acid biosynthesis in chicken liver according to genetic background, sex and diet</i>	354
17:00	Coffee Break	

Tuesday, June 13<sup>th</sup> | Room Peucetia

Session 02

## Environmental Footprint

Chairs: Sevi Agostino – Zucali Maddalena Enrica

14:30	<b>Primi Riccardo, Ripert Stefano, Viola Paolo, Rossi Carlo Maria, Danieli Pier Paolo, Ronchi Bruno</b> <i>Trend in management scenarios of smallholder livestock farming systems affects ecosystem services: a landscape perspective from Campo di Segni (Lazio, Central Italy)</i>	126
14:45	<b>Marchesini Giorgio, Fossaluzza Davide, Andrighetto Igino</b> <i>Discriminating between limiting and reducing factors in dairy farms through yield gap analysis</i>	522
15:00	<b>Xavier Vergé, Robin Paul, Nadège Edouard, Becciolini Valentina, Cieslak Adam, Szumacher Malgorzata, Fehmer Lena, Galama Paul, Juškiene Violeta, Kadziene Gitana, Ruska Diana</b> <i>Development of a screening method for GHG and NH3 measurements – First results based on a European study</i>	460
15:15	<b>Vaiani Sergio</b> <i>An agronomic-food strategy to improve the environmental impact in terms of water saving and food efficiency</i>	505
15:30	<b>Fatica Antonella, Giovanditti Anna Concetta, Fantuz Francesco, Salimei Elisabetta</b> <i>Carbon footprint of intensive vs. extensive dairy farming in Gargano area</i>	243
15:45-16:00	<b>Finocchiaro Raffaella, Galluzzo Ferdinando, van Kaam Jan-Thijs, Cassandro Martino</b> <i>Predicted methane emission a new breeding value for the Italian Holstein</i>	477
17:00	Coffee Break	

## Tuesday, June 13<sup>th</sup> | Room Messapia

### Session 03

## Advances in dietary feed supplementation

Chairs: Calabrò Serena – De Palo Pasquale

14:30	<b>Frazzini Sara, Reggi Serena, Pavlovic Radmila, Canala Benedetta, Torresani Claudia Maria, Resca Rita, Rossi Luciana</b> <i>Characterization of major algal species and their prebiotic potential</i>	355
14:45	<b>Negrini Clara, Luise Diana, Correa Federico, Amatucci Laura, Viridis Sara, Roméo Agathe, Manzke Naiana, Trevisi Paolo</b> <i>Implication of authorized level of Zn provided from different sources on the performance and health of low and normal birth weight piglets post-weaning</i>	347
15:00	<b>Dell'Anno Matteo, Frazzini Sara, Ferri Irene, Scaglia Elena, Reggi Serena, Rossi Luciana</b> <i>Dietary supplementation of <i>Ascophyllum nodosum</i> and <i>Lithothamnium calcareum</i> as functional feed additives for weaned piglets</i>	339
15:15	<b>Correa Federico, Luise Diana, Negrini Clara, Viridis Sara, Amatucci Laura, Dalcanale Simone, Olia Alessandro, Del Zozzo Francesca, Trevisi Paolo</b> <i>Effect of the administration of two phytoextracts pre-mixes compared to the pharmacological dose of ZnO on the health, growth performance and faecal microbial profile of weaned pigs</i>	343
15:30	<b>Ferlisi Flavia, De Ciucis Chiara Grazia, Fruscione Floriana, Mecocci Samanta, Cappelli Katia, Razzuoli Elisabetta, Trabalza Marinucci Massimo</b> <i>Antimicrobial and immunomodulatory evaluation of Olive Mill Wastewater Polyphenols for dietary supplementation in an in vitro swine intestinal model</i>	132
15:45	<b>Lanzoni Davide, Rebucci Raffaella, Cheli Federica, Baldi Antonella, Giromini Carlotta</b> <i>Functional in vitro characterization of hemp seeds for nutritional applications</i>	537
16:00	<b>Sandrini Silvia, Perricone Vera, Cremonesi Paola, Castiglioni Bianca, Biscarini Filippo, Parra Titos Eva R., Vittorio Francesco, Verdile Nicole, Brevini Tiziana, Savoini Giovanni, Agazzi Alessandro</b> <i>Effect of a combination of three yeasts on growth performance and gut health of weaning piglet</i>	097
16:15-16:30	<b>Bee Giuseppe</b> <i>Effect of nutrient self-supply through choice feeding on growth performance, feeding behavior</i>	473
17:00	Coffee Break	

## Wednesday, June 14<sup>th</sup> | Room Daunia

### Session 04

## Environmental footprint

Sponsored by IGreen Innovation

Chairs: Bernabucci Umberto - Sepe Lucia

08:15	<b>INVITED LECTURE</b> <b>Kuipers Abele, Galama Paul</b> <i>Innovative practices and techniques dealing with the environmental impact of livestock farms</i>	
08:45	<b>Lunesu Mondina Francesca, Caratzu Maria Francesca, Nudda Anna, Battaccone Gianni, Pulina Giuseppe</b> <i>Net carbon footprint of Sardinia Beef Cow-Calf system</i>	496
09:00	<b>Gislon Giulia, Zucali Maddalena, Bava Luciana, Marusi Maurizio, Ferrari Valentina, Finocchiaro Raffaella, Cassandro Martino, Sandrucci Anna</b> <i>Modelling GWP of milk production using technical efficiency indicators</i>	479
09:15	<b>Finocchi Matteo, Moretti Michele, Mantino Alberto, Ripamonti Alice, Mele Marcello</b> <i>GIS model application for the assessment of nitrogen emissions from cattle</i>	141
09:30	<b>Grossi Giampiero, Vitali Andrea, Evangelista Chiara, Rossi Chiara, Cesarini Francesco, Basiricò Loredana, Turriziani Giovanni, Lacetera Nicola, Bernabucci Umberto</b> <i>Implementation of water footprint assessment methodology on buffalo mozzarella cheese</i>	209
09:45	<b>Vitali Andrea, Grossi Giampiero, Rossi Chiara, Cesarini Francesco, Evangelista Chiara, Basiricò Loredana, Turriziani Giovanni, Lacetera Nicola, Bernabucci Umberto</b> <i>Cradle-to-grave life cycle assessment of buffalo mozzarella cheese</i>	214
10:00	<b>Bragaglio Andrea, Romano Elio, Cutini Maurizio, Claps Salvatore, De Palo Pasquale</b> <i>Sustainability of Life Cycle Assessment (LCA) for the estimation of donkey milk environmental impact: a case study</i>	585
10:15	<b>Caratzu Maria Francesca, Lunesu Mondina Francesca, Nudda Anna, Battaccone Gianni, Correddu Fabio, Massidda Andrea, Gamberoni Alberto, Pulina Giuseppe</b> <i>Suckling lamb as net-zero product in Sardinian dairy sheep farms</i>	527
10:30	<b>Correddu Fabio, Cadau Giordana, Carta Silvia, Cesarani Alberto, Congiu Michele, Macciotta Nicolò Pietro Paolo</b> <i>Predicting enteric methane emission of dairy sheep using milk fatty acid profiles</i>	293
10:45	<b>Cavallini Damiano, Buonaiuto Giovanni, De Matos Vettori Julio, Fusaro Isa, Formigoni Andrea</b> <i>Methane emission pattern in dairy cows evaluated in automatic milking system</i>	307
11:00	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Peucetia

Session 05

### Advances in dietary feed supplementation

Sponsored by Prosol

Chairs: D'Alessandro Angela Gabriella - Formigoni Andrea

08:30	<b>INVITED LECTURE</b> <b>Salem Abdelfattah Zeidan, Vazquez Mendoza Oscar Vicente, Elghandour Mona M.M.Y., De Palo Pasquale, Maggiolino Aristide</b> <i>Feed additives in ruminants feeding: Update knowledge with focusing on natural additives</i>	
09:00	<b>Greco Roberta, De Palo Pasquale, Maggiolino Aristide, Mulè Giuseppina, Ferrara Massimo</b> <i>Effects of nucleotides and yeast supplementation on gut microbial population of calves</i>	587
09:15	<b>Sgarro Maria Federica, Vaiani Sergio, Palazzo Clemente, Di Marziantonio Pietro, Maggiolino Aristide, De Palo Pasquale</b> <i>Effect of a diatomaceous-based dietary additive on milk production, antioxidant status and immune response during peripartum in buffaloes</i>	591
09:30	<b>Foggi Giulia, Rocchetti Gabriele, Amarie Roxana Elena, Campidonico Luca, Agnolucci Monica, Gallo Antonio, Tognocchi Monica, Silvi Alina, Buccioni Arianna, Mele Marcello</b> <i>Can olive cake by-products be employed to produce silage with enhanced nutrition characteristics?</i>	148
09:45	<b>Salimei Elisabetta, Castoria Raffaello, Tremonte Patrizio, Lombardi Silvia Jane, Caturano Costantino, Ianiri Giuseppe, Palmieri Davide, Conte Thomas, Fatica Antonella</b> <i>Ensiled tobacco cv. Solaris biomass: chemical, microbiological, phytopathological and nutritional characteristics</i>	264
10:00	<b>Fumo Valentina, Meli Giovanna, Scicutella Federica, Invernizzi Guido</b> <i>Camelina sativa and Cynara cardunculus cakes supplementation on performance and milk composition in dairy goats during the transition period</i>	419
10:15	<b>Scaglia Elena, Reggi Serena, Ferri Irene, Frazzini Sara, Dell'Anno Matteo, Rossi Luciana</b> <i>Effect of milk replacer supplemented with Ascophyllum nodosum on gut health of Holstein calves</i>	536
10:30	<b>Sfulcini Marta, Cattaneo Luca, Lopreiato Vincenzo, Berelli Marco, Cagnassi Enrica, Castellani Elena, Piccioli Fiorenzo, Trevisi Erminio, Minuti Andrea</b> <i>Effect of yeast supplementation with Saccharomyces Cerevisiae fermentation products (SCFP) on performance and metabolic profile in suckling Holstein calves</i>	524
10:45	<b>Amato Annalisa, Oteri Marianna, Cavallo Carmelo, Bonacci Sonia, Chiofalo Vincenzo, Liotta Luigi</b> <i>Evaluation of fatty acids profile of milk produced by mid-lactating Holstein cows fed with enriched olive cake diet</i>	151
11:00	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Messapia

Session 06

### Precision Livestock Farming: production efficiency in dairy cows

Sponsored by MSD Animal Health

Chairs: Abeni Fabio – Pugliese Carolina

08:30	<b>INVITED LECTURE</b> <b>Giordano Julio O.</b> <i>Improving dairy herd monitoring and management using automated monitoring technologies</i>	
09:00	<b>Fiorelli Erica, Atzori Alberto Stanislao, Tedeschi Luis, Cattellani Alessandro, Gallo Antonio</b> <i>A dynamic mechanistic model to forecast the oscillatory feeding behaviour of lactating dairy cows</i>	407
09:15	<b>Zucali Maddalena, Bianchi Maria Cecilia, Gison Giulia, Bonizzi Serena, Sandrucci Anna</b> <i>How much is the environmental benefit of using Precision Livestock Farming in Italian dairy farms?</i>	241
09:30	<b>Confessore Andrea, Aquilani Chiara, Fuchs Patricia, Probo Massimiliano, Pauler Caren M., Schneider Manuel, Argenti Giovanni, Pugliese Carolina</b> <i>Does age affect learning capacity and grazing activities of Holstein cows managed with Virtual Fencing collars?</i>	313
09:45	<b>Abeni Fabio, Marino Rosanna, Petrera Francesca, Canevaro Greta, Richichi Mariantonietta, Carminati Domenico, Giraffa Giorgio, Barzagli Stefania, Benedino Dario, Tidona Flavio</b> <i>Effects of different automated feeding management on milk traits and rumination time of dairy cows during hot season</i>	418
10:00	<b>Giovinazzo Simone, Brambilla Massimo, Lazzari Andrea, Bisaglia Carlo</b> <i>NIR spectrophotometric investigation to highlight early signs of ketosis in dairy cows</i>	189
10:15	<b>Celozzi Stefania, Calcante Aldo, Pavesi Martina, Mattiello Silvana, Mazzocchi Chiara, Corsi Stefano, Zannotti Michele, Zucali Maddalena, Battini Monica</b> <i>From tie-stall to loose house with Automatic Milking Robot in dairy cow systems: economic, production and animal welfare implications</i>	530
10:30	<b>Ranzato Giovanna, Aernouts Ben, Lora Isabella, Ben Abdelkrim Ahmed, Adriaens Ines, Gote Martin Julius, Cozzi Giulio</b> <i>Comparison of different methods to estimate dairy cows' production potential</i>	451
10:45	<b>Costa Angela, Cavallini Damiano, Mammi Ludovica, Visentin Giulio, Formigoni Andrea</b> <i>Assessment and validation of individual water intake of dairy cows from reticular boluses</i>	274
11:00	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Apulia

### Session 07

## Development of genomics in biodiversity

Chairs: Cecchinato Alessio – Ciani Elena

08:30	<b>INVITED LECTURE</b> <b>Hanotte Olivier</b> <i>The known and unknown African cattle genomes</i>	
09:00	<b>Chessari Giorgio, Criscione Andrea, Crepaldi Paola, Marletta Donata, Portolano Baldassare, Biscarini Filippo, Mastrangelo Salvatore</b> <i>Mapping of Heterozygosity-Rich Regions in Italian and Worldwide goat populations</i>	064
09:15	<b>Moscarelli Angelo, Chessari Giorgio, Tolone Marco, Criscione Andrea, Zumbo Alessandro, Rizzuto Ilaria, Riggio Silvia, Macaluso Vito, Portolano Baldassare, Sardina Maria Teresa, Mastrangelo Salvatore</b> <i>Genomic tools for the characterization of the not officially recognized livestock populations: a case study in Mascaruna goat and Pecora Nera sheep from Sicily</i>	513
09:30	<b>Bionda Arianna, Cortellari Matteo, Lopreiato Vincenzo, Crepaldi Paola, Chiofalo Vincenzo, Liotta Luigi</b> <i>Genomic characterization of the Comune di Sicilia goat, a local Sicilian genetic resource</i>	285
09:45	<b>Gomez Proto Guido, Mancin Enrico, Tuliozi Beniamino, Sartori Cristina, Mantovani Roberto</b> <i>Genome-wide association analysis of productive traits in grey alpine cattle breed</i>	556
10:00	<b>Di Civita Marika, Senczuk Gabriele, Rillo Luigina, Macciocchi Alessandra, Occidente Mariaconsiglia, Saralli Giorgio, D'Onofrio Valentina, Galli Tiziana, Persichilli Christian, Di Giovannantonio Claudio, Pilla Fabio, Matassino Donato</b> <i>Genomic profiling of several Lazio Indigenous goat breeds in the Italian context</i>	371
10:15	<b>Barbato Mario, De Nardo Floro, Bigi Daniele, Vajana Elia, Eufemi Elisa, Crepaldi Paola, Ajmone Marsan Paolo, Colli Licia, Orozco-terWengel Pablo, Bruford Michael W., Russo Isa M.</b> <i>Assessing signatures of selection and climate adaptation in European and African livestock</i>	427
10:30	<b>Somenzi Elisa, Partel Erika, Barbato Mario, Chero Osorio Ana Maria, Colli Licia, Franceschi Niccolò, Pilla Fabio, Komjanc Matteo, Achilli Alessandro, Hauffe Heidi Christine, Ajmone Marsan Paolo</b> <i>Genetic diversity and runs of homozygosity in Rendena Cattle</i>	507
10:45	<b>Senczuk Gabriele, Di Civita Marika, Persichilli Christian, Destro Bisol Giovanni, Anagnostou Paolo, Pilla Fabio</b> <i>On the road to domestication: a preliminary comparative genomics approach to reconstruct human and livestock correlates</i>	568
11:00	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Daunia

### Session 08

## Environmental footprint

Chairs: Claps Salvatore – Sandrucci Anna

11:30	<b>Martinic Oliver, Magrin Luisa, Dante Simone, Cozzi Giulio, Gottardo Flaviana</b> <i>Product Environmental Footprint (PEF) as evaluation tool of environmental sustainability in beef cattle farms</i>	337
11:45	<b>Meo Zilio David, Steri Roberto, Iacurto Miriam, Cenci Francesco, La Mantia Maria Chiara, Chiariotti Antonella</b> <i>Study of Methane Emission in the Mediterranean Buffalo Through the Use of Laser Methane Detector and its Correlation with Microbial Population from Different Matrices within the Agridigit Project</i>	361
12:00	<b>Mantino Alberto, Ripamonti Alice, Tranchina Margherita, Villani Ricardo, Finocchi Matteo, Mele Marcello</b> <i>Agroforestry to support carbon-neutral dairy productions in Tuscany</i>	553
12:15	<b>Salimei Elisabetta, Colombo Claudio, Di Iorio Erika, Manzo Alessio, Miraglia Nicoletta, Fatica Antonella</b> <i>A holistic characterization of pasture area of Centre-South Italy</i>	267
12:30	<b>Berton Marco, Schiavon Stefano, Gallo Luigi</b> <i>Environmental footprint of heavy pig production system</i>	032
12:45	<b>Benedetti Del Rio Elena, Ramanzin Maurizio, Raniolo Salvatore, Sturaro Enrico</b> <i>The value of sheep transhumance for rural landscape: a GPS tracking approach</i>	062
13:00	<b>Biagini Davide</b> <i>Evaluate, drive and communicate the sustainability of complex systems: a proposal</i>	269
13:15	<b>Ghiaccio Francesca, Federiconi Alessia, Colleluori Riccardo, Canestrari Giorgia, Palmonari Alberto</b> <i>Assessment of individual dairy cows in vitro rumen methane emissions</i>	306
13:30	Lunch	



## Wednesday, June 14<sup>th</sup> | Room Peucetia

Session 09

### Sustainable feeding strategies in livestock systems

Sponsored by Plantamura

Chairs: **Bonanno Adriana - Tufarelli Vincenzo**

11:30	<b>Mazzoleni Sharon, Tretola Marco, Luciano Alice, Ottoboni Matteo, Manoni Michele, Bee Giuseppe, Pinotti Luciano</b> <i>The use of sugary and salty food industry leftovers as alternative to cereal grains does not affect the growth performance in growing and finishing pigs</i>	107
11:45	<b>Virdis Sara, Correa Federico, Luise Diana, Negrini Clara, Amatucci Laura, Trevisi Paolo</b> <i>Different formulations of benzoic acids as strategy to replace therapeutic dose of ZnO on health and performance of weaned pigs</i>	357
12:00	<b>Luise Diana, Correa Federico, Virdis Sara, Negrini Clara, Cestonaro Giulia, Nataloni Luigi, Tifton Greta, Sattin Eleonora, Costanzo Enrico, Trevisi Paolo</b> <i>Effect of different doses of camelina cake as soybean meal substitution of growth performance and gut health of weaned pigs</i>	353
12:15	<b>Evangelista Chiara, Basiricò Loredana, Galli Tiziana, Bruni Gianpaolo, Bernabucci Umberto</b> <i>Relationship between feeding management and milk characteristics in dairy buffalo</i>	112
12:30	<b>Silvi Alina, Conte Giuseppe, Turini Luca, Foggi Giulia, Tognocchi Monica, Castagna Antonella, Mantino Alberto, Mele Marcello</b> <i>Effect of increasing concentration of Salicornia on in vitro degradability of dietary dry matter and neutral detergent fibre</i>	060
12:45	<b>Kiatti Dieu donn�, Vastolo Alessandro, Koura Bossima Ivan, Cutrignelli Monica Isabella, Vitaglione Paola, Calabr� Serena</b> <i>Cashew (Anacardium occidentale L.) apple by-products: a promising feed in animal nutrition</i>	093
13:00	<b>Lambiase Claudia, Serrapica Francesco, Braghieri Ada, Riviezzi Amelia, Di Matteo Roberto, Masucci Felicia</b> <i>The inclusion of hemp (Cannabis sativa L.) cake in laying hen diets influences yolk fatty acid profile and sensory quality during the shelf life of eggs</i>	154
13:15	<b>Fatica Antonella, Fantuz Francesco, Sacchetto Carlo, Ferro Antonio, Zullo Tullio, Salimei Elisabetta</b> <i>Tobacco cv. Solaris seed cake in the diet of growing beef calves</i>	238
13:30	Lunch	

## Wednesday, June 14<sup>th</sup> | Room Messapia

Session 10

### Animal Welfare and Health

Sponsored by A.R.A. Puglia

Chairs: **Trevisi Erminio – Gottardo Flaviana**

11:30	<b>INVITED LECTURE</b> <b>Chebel Ricardo C., Schuenemann Gustavo M., Shearer Jan</b> <i>US Welfare Standards: Investing in Animal Welfare Pays Off</i>	
12:00	<b>Cecchinato Alessio, Toledo-Alvarado Hugo, Macedo Mota Lucio Flavio, Giannuzzi Diana, Trevisi Erminio, Ajmone Marsan Paolo, Pegolo Sara, Bittante Giovanni</b> <i>Milk infrared-derived predictions of blood metabolites as a tool to assess fertility in dairy cattle</i>	494
12:15	<b>Cattaneo Luca, Piccioli-Cappelli Fiorenzo, Lovotti Giorgia, Lopreiato Vincenzo, Trevisi Erminio, Minuti Andrea</b> <i>Impact of decreased nutrient density at dry-off on inflammatory conditions in dairy cows</i>	452
12:30	<b>Catellani Alessandro, Minuti Andrea, Trevisi Erminio, Gallo Antonio</b> <i>Transition period for Brown Swiss and Holstein dairy cows: feeding behavior and metabolic status</i>	521
12:45	<b>Fossaluzza Davide, Marchesini Giorgio</b> <i>Management of dairy heifers: can operant conditioning decrease stress and ease animals' monitoring and manipulation?</i>	523
13:00	<b>Pulido-Rodriguez Lina Fernanda, Secci Giulia, Tignani Maria Vittoria, Medeiros Adja, Faccenda Filippo, Parisi Giuliana</b> <i>Cold shock by immersion in ice salty water is a suitable method to stun Campione del Garda (Salmo carpio) both considering animal welfare and flesh quality during storage</i>	543
13:15	<b>Florit Eleonora, Romanzin Alberto, Spanghero Mauro</b> <i>Could eating time be a useful indicator in dairy farm management?</i>	215
13:30	Lunch	

## Wednesday, June 14<sup>th</sup> | Room Apulia

### Session 11 Advances in meat quality

Sponsored by Siciliani

Chairs: Marino Rosaria – Mele Marcello

11:30	<b>INVITED LECTURE</b> <b>Gagaoua Mohammed</b> <i>Building better knowledge on meat quality determination through integrated data mining and curation of proteomics studies</i>	
12:00	<b>Karatosidi Despoina, Michailidis Georgios, Avgeris Efthimios, Symeon Georgios, Tarricone Simona</b> <i>Meat quality assessment of raw meat from two Mediterranean autochthonous pig breeds reared in sustainable conditions</i>	559
12:15	<b>Forte Lucrezia, Calzaretti Giovanna, Landi Vincenzo, Aloia Alessandra, De Palo Pasquale, Maggiolino Aristide</b> <i>Dry vs wet aging in the enhancement of culled goat meat quality</i>	586
12:30	<b>Aquilani Chiara, Confessore Andrea, Sirtori Francesco, Pugliese Carolina</b> <i>Effect of immunocastration on quality traits of fresh and dry-cured loin in Italian heavy pigs production</i>	139
12:45	<b>Valenti Bernardo, Roscini Valentina, Bolletta Viviana, Fodaroni Chiara, Mercati Valentino, Morbidini Luciano, Pauselli Mariano</b> <i>Monitoring the meat quality of grass-fed Angus beef during different seasons</i>	265
13:00	<b>Mattioli Simona, Cartoni Mancinelli Alice, Castellini Cesare, Angelucci Elisa, Dal Bosco Alessandro</b> <i>Application of the Healthy Fatty Index to discriminate the meat nutritional quality of different slow-growing chickens</i>	026
13:15	<b>Castro Ndong Ncogo Nchama, Saccà Elena, Brunner Ilario, Sepulcri Angela, Corazzin Mirco, Piasentier Edi</b> <i>Pork characteristics of Mangalitza pigs reared outdoors</i>	538
13:30	<b>Piscopo Nadia, Di Paolo Marika, Casalino Lorian, Matera Roberta, Balestrieri Anna, Marrone Raffaele, Esposito Luigi</b> <i>Physico-chemical and rheological differences of wild boar muscle in post-mortem time in Campania region: Preliminary study</i>	550
13:45	Lunch	

## Wednesday, June 14<sup>th</sup> | Room Daunia

### Session 12 Advances in rabbit and poultry products

Chairs: Maiorano Giuseppe - Trocino Angela

14:30	<b>Serra Valentina, Castrica Marta, Agradi Stella, Curone Giulio, De Bellis Roberta, Pastorelli Grazia</b> <i>Antioxidant enzyme activity of rabbits fed dietary bovine colostrum supplementation</i>	312
14:45	<b>Pitino Rosario, Simoni Marica, Danese Tommaso, Mantovani Giorgia, Kyriakaki Panajota, Tsiplakou Eleni, Righi Federico</b> <i>Use of natural antioxidants in poultry diet balanced for antioxidant capacity</i>	441
15:00	<b>Birolo Marco, Trocina Angela, Gratta Francesco, Zuffellato Andrea, Xiccato Gerolamo</b> <i>Feed restriction strategies in growing rabbits fed post-weaning diets with different protein levels</i>	578
15:15	<b>Mannelli Federica, Daghio Matteo, Scicutella Federica, Nannucci Lapo, Falce Michele, Brajon Giovanni, Galigani Ilaria, Buccioni Arianna</b> <i>Cardoon meal as an alternative sustainable ingredient in broiler feeding</i>	028
15:30	<b>Perricone Vera, Sandrini Silvia, Irshad Nida, Comi Marcello, Lecchi Cristina, Stella Simone, Tirloni Erica, Savoini Giovanni, Agazzi Alessandro</b> <i>Effects of hydrolyzed yeast on growth performance, meat quality, and intestinal immune status of broiler chickens</i>	051
15:45	<b>Guerrini Alessandro, Zago Massimo, Tedesco Dorian E.A.</b> <i>Effects of Citrus aurantium dulcis essential oil and Yucca schidigera saponins on broiler performance and health</i>	070
16:00	<b>Srikanthithasan Karthika, Gariglio Marta, Fiorilla Edoardo, Giorgino Andrea, Dellepiane Lucrezia, Diaz Vicuna Elena, Sola Dario, Bongiorno Valentina, Bergagna Stefania, Schiavone Achille, Raspa Federica, Profiti Margherita, Stoppani Nadia, Soglià Dominga, Forte Claudio</b> <i>Effects of bakery by-products inclusion in the broiler's diet on growth performance, carcass yield and gene expression profiling</i>	029
16:15-16:30	<b>Raspa Federica, Stoppani Nadia, Soglià Dominga, Perini Francesco, Fiorilla Edoardo, Profiti Margherita, Maione Sandra, Schiavone Achille, Sacchi Paola, Lasagna Emiliano, Mugnai Cecilia</b> <i>Evaluation of the effect of the breeding system on the expression of liver genes in local slow-growing chicken breeds</i>	204
16:30	Coffee break	



## Wednesday, June 14<sup>th</sup> | Room Peucetia

### Session 13 Genomic tools for ruminant resiliency

Chairs: Pilla Fabio – Crepaldi Paola

14:30	<b>INVITED LECTURE</b> <b>Miglior Filippo, Baes Christine</b> <i>Leveraging genomics to achieve dairy net zero</i>	
15:00	<b>Cesarani Alberto, Lourenco Daniela, Degano Lorenzo, Vicario Daniele, Macciotta Nicolò Pietro Paolo</b> <i>Different strategies for selecting core animals in the APY for single-step GBLUP</i>	076
15:15	<b>Giovannini Samira, Negro Alessio, Lasagna Emiliano, Giontella Andrea, Grande Silverio, Sarti Francesca Maria</b> <i>The ability of udder linear morphological evaluation to predict milk production in Massese and Comisana sheep</i>	181
15:30	<b>Tiezzi Francesco, Biffani Stefano, Fabbri Maria Chiara, Crovetti Alessandro, Bozzi Riccardo</b> <i>Genomic selection for stay-ability in Italian Limousine and Charolais</i>	185
15:45	<b>Pugliano Mariagiulia, Nowacka-Wozzuk Joanna, Longobardi Valentina, Stachowiak Monika, Peretti Vincenzo, Szczerbal Izabela, Ciotola Francesca, Switonski Marek, Albarella Sara</b> <i>MBL2 gene polymorphisms in Mediterranean Italian River Buffalo (<i>Bubalus bubalis</i>) in relation to milk production traits</i>	436
16:00-16:15	<b>Colli Licia, Correddu Fabio, Palazzo Mariantonietta, Somenzi Elisa, Eufemi Elisa, Cesarani Alberto, Zedda Marco, Macciotta Nicolò Pietro Paolo</b> <i>An ancient DNA perspective on the genomic variation of present day Sardinian Cattle</i>	374
16:30	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Messapia

### Session 14 Heat stress and climate resilience in livestock

Chairs: Braghieri Ada – Cozzi Giulio

14:30	<b>INVITED LECTURE</b> <b>Dahl Geoffrey E.</b> <i>Late gestation heat stress programs reduced performance and survival phenotype in dairy cattle</i>	
15:00	<b>Sirtori Francesco, Fabbri Maria Chiara, Parrini Silvia, Crovetti Alessandro, Messeri Alessandro, Mancini Marco, Bozzi Riccardo</b> <i>Precision livestock farming to control changes in behavior and production in dairy cows based on variations in environmental THI</i>	528
15:15	<b>Laloë Denis, Biscarini Filippo, Mastrangelo Salvatore, Senczuk Gabriele, Persichilli Christian, Conte Giuseppe, Finocchiaro Raffaella, van Kaam Jan Thijs, Benzoni Lorenzo, Ciampolini Roberta, Cassandro Martino</b> <i>Integrative factorial methods to explore the relationships between genotypes, phenotypes and climate in Holstein cows</i>	470
15:30	<b>Cresci Roberta, Atamer Balkan BÜsra, Tedeschi Luis Orindo, Atzori Alberto Stanislao</b> <i>Modeling heat flows in heat-stressed dairy cows using System Dynamics techniques</i>	394
15:45	<b>Magrin Luisa, Fabbri Giorgia, Prevedello Paola, Concheri Gianmaria, Gottardo Flaviana</b> <i>Testing of a pilot system for the automatic monitoring of activity and body temperature of beef cattle</i>	335
16:00	<b>Martinez-Marin Gustavo, Bittante Giovanni, Toledo-Alvarado Hugo</b> <i>Modelation of the effect of heat stress on milk yield and milk composition in purebred and crossbred cows</i>	542
16:15	<b>Carta Silvia, Correddu Fabio, Peana Ilaria, Fois Giuliano, Cesarani Alberto, Macciotta Nicolò Pietro Paolo</b> <i>Effect of THI on milk composition and fatty acid profile of Sarda dairy sheep</i>	234
16:30	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Apulia

### Session 15

## Metagenomic approaches in animal science

Chairs: Trevisi Paolo – Castiglioni Bianca

14:30	<b>INVITED LECTURE</b> <b>Lourenco Jeferson Menezes</b> <i>Unravelling the Complexity of Animal-Microbe Interactions</i>	
15:00	<b>Maltecca Christian, Tiezzi Francesco</b> <i>Microbial and genomic information synergistically contribute to predicting swine performance across production systems</i>	487
15:15	<b>Florida Viviana, Giuffrè Letterio, D'Alessandro Enrico</b> <i>Influence of genetic background and the effect of liquid whey supplementation on the faecal microbiota composition in Nero siciliano and commercial crossbreed pigs</i>	146
15:30	<b>Amarie Roxana Elena, Campidonico Luca, Tognocchi Monica, Tinagli Sara, Casarosa Laura, Correa Federico, Serra Andrea</b> <i>A comparison of waxy versus regular maize in diets for post-weaning piglets: effect on growth performance, colon volatile fatty acids concentration, and gut microbiota</i>	506
15:45	<b>Toscano Alessandro, Giannuzzi Diana, Malgwi Isaac H., Deb Saptarathi, Squartini Andrea, Stevanato Piergiorgio, Schiavon Stefano</b> <i>Characterization of dry-cured ham microbiome by 16S rRNA profiling during seasoning</i>	124
16:00	<b>Raspa Federica, Chessa Stefania, Moretti Riccardo, Ferrocino Ilario, Corvaglia Maria Rita, Cocolin Luca Simone, Bordin Clara, Bergero Domenico, Valle Emanuela</b> <i>Effect of two feeding managements on the microbiota of different intestinal compartments of the horse digestive tract</i>	297
16:15	<b>Tiezzi Francesco, Maltecca Christian</b> <i>Use of gut microbiota as a selection tool in swine</i>	579
16:30	Coffee break	

## Wednesday, June 14<sup>th</sup> | Room Daunia

### Session 16

## New perspective in bees' production

Chairs: Fontanesi Luca – Minozzi Giulietta

17:00	<b>Lazzari Filippo, Cresta Eleonora, Carbonari Fausto, Kasiotis Konstantinos M., Shairra Souad A., Dipasquale Daniele, Manganello Federico, Danieli Pier Paolo</b> <i>Honey quality and traceability: a preliminary investigation on Citrus honeys physio-chemical traits from three Mediterranean Countries</i>	205
17:15	<b>Danieli Pier Paolo, Lazzari Filippo, Cresta Eleonora, Carbonari Fausto, Petrocchi Jasinski Francesca, Manganello Federico</b> <i>Pollen quality: a study on the elemental profile of pollen sampled in a suburban environment</i>	200
17:30	<b>Coppola Francesca, Sagona Simona, Tafi Elena, Casini Lucia, Piana Lucia, Dall'Olio Raffaele, Felicioli Antonio</b> <i>Glucose oxidase and carboxypeptidase A-like activity as new potential freshness markers for Royal Jelly</i>	166
17:45	<b>Manganello Federico, Cresta Eleonora, Carbonari Fausto, Danieli Pier Paolo, Lazzari Filippo</b> <i>Ex-hive trials on the efficacy of hop beta acids on the control of the honey bee parasite Varroa destructor</i>	134
18:00	<b>Coppola Francesca, Sagona Simona, Nanetti Antonio, Tafi Elena, Felicioli Antonio</b> <i>Substitution of pollen source with commercial protein diet in honey bees nutrition: effects on survival rate and health</i>	165
18:15-18:30	<b>Taurisano Valeria, Ribani Anisa, Utzeri Valerio Joe, Sami Dalal, Johnson Kate, Fontanesi Luca</b> <i>An over-time distribution map of Apis mellifera mitotypes in Italy constructed using an environmental DNA approach</i>	225

## Wednesday, June 14<sup>th</sup> | Room Peucetia

### Session 17 Breeding for our future

Sponsored by FEDANA

Chairs: **Campanile Giuseppe – Martelli Giovanna**

17:00	<b>INVITED LECTURE</b> <b>Cassandro Martino</b> <i>Rethinking Breeding Strategies in Livestock species</i>	
17:10	<b>Benzoni Lorenzo, Tiezzi Francesco, Finocchiaro Raffaella, Galluzzo Ferdinando, Cassandro Martino</b> <i>Genetic parameters of growth, feed efficiency and greenhouse gases emissions in Italian Holstein young bulls</i>	457
17:15	<b>Benzoni Lorenzo, Finocchiaro Raffaella, Niero Giovanni, Invernizzi Guido, Savoini Giovanni, Galluzzo Ferdinando, Cassandro Martino</b> <i>Animal breeding sustainability: the Italian Holstein experience</i>	458
17:20	<b>Biffani Stefano, Gómez Mayra, Cimmino Roberta, Rossi Dario, Zullo Gianluigi, Negrini Riccardo, Cesarani Alberto</b> <i>Experiences with a single-step genome evaluation in Italian Mediterranean Buffalo</i>	236
17:25	<b>Bertolini Francesca, Bovo Samuele, Schiavo Giuseppina, Ballan Mohamad, Cappelloni Manolo, Tinarelli Silvia, Gallo Maurizio, Fontanesi Luca</b> <i>Signatures of selection in Italian heavy pigs: how genetic programs for PDO ham productions are shaping the genomes of cosmopolitan breeds</i>	255
17:30	<b>Schiavo Giuseppina, Bovo Samuele, Bertolini Francesca, Bolner Matteo, Ribani Anisa, Taurisano Valeria, Dall'Olio Stefania, Bonacini Massimo, Fontanesi Luca</b> <i>Reconstructing pedigree information in the Reggiana cattle breed based on high density SNP data</i>	244
17:40	<b>Degano Lorenzo, Vicario Daniele, Romanzin Alberto, Cesarani Alberto</b> <i>Selection for feed efficiency in Italian Simmental breed</i>	580
17:45	<b>Ablondi Michela, Asti Vittoria, Capomaccio Stefano, Sartori Cristina, Giontella Andrea, Cappelli Katia, Mantovani Roberto, Silvestrelli Maurizio, Sabbioni Alberto</b> <i>Inbreeding and genetic diversity in Italian horse heritage</i>	379
17:50	<b>Ablondi Michela, Cipolat-Gotet Claudio, Stocco Giorgia, Crepaldi Paola, Cortellari Matteo, Negro Alessio, Summer Andrea, Biffani Stefano</b> <i>How to combine microsatellite and SNP for parentage verification in sheep?</i>	377
17:55	<b>Callegaro Simone, Biffani Stefano, Tiezzi Francesco, Fabbri Maria Chiara, Bozzi Riccardo</b> <i>Impact of heat stress on growth of Italian Limousine and Charolais</i>	195
18:00-18:05	<b>Sbarra Fiorella, Quaglia Andrea, Bittante Giovanni, Mantovani Roberto</b> <i>Genetics of udder volume and maternal ability in Italian beef cattle</i>	019

## Wednesday, June 14<sup>th</sup> | Room Messapia

### Session 18 Advances in meat quality

Chairs: **De Marchi Massimo – Serra Andrea**

17:00	<b>Tavaniello Siria, Zejnelhoxha Sanije, Viegas Olgas, Pinto Edgar, Ferreira Isabel M.L.P.V.O, Maiorano Giuseppe</b> <i>Effect of different doses of Vitamin E added to beef patties on the formation of Polycyclic aromatic hydrocarbons</i>	569
17:15	<b>Berardi Giovanna, Di Taranto Aurelia, Vita Valeria, Iammarino Marco</b> <i>Study of nitrite and nitrate residual levels in meat products after different types of cooking treatment</i>	082
17:30	<b>della Malva Antonella, Gagaoua Mohammed, Santillo Antonella, Priolo Alessandro, di Corcia Martina, Marino Rosaria, Ciliberti Maria Giovanna, Caroprese Mariangela, Sevi Agostino, Albenzio Marzia</b> <i>Plasma proteome, a non-invasive biofluid to monitor lamb meat quality</i>	116
17:45	<b>Soglia Francesca, Babini Elena, Mazzoni Maurizio, Petracci Massimiliano</b> <i>Collagen and extracellular matrix composition of chicken breast meat affected by growth-related abnormalities</i>	229
18:00	<b>Baldi Giulia, Zampiga Marco, Soglia Francesca, Gagliano Mara Antonia, Petracci Massimiliano, Sirri Federico</b> <i>Microalgae as alternative protein source to soybean: effects on the main quality traits of broiler breast meat</i>	109
18:15	<b>Huerta Almudena, Trocino Angela, Pirrone Fabrizio, Bordignon Francesco, Xiccato Gerolamo, Birolo Marco</b> <i>Technological and sensorial meat quality of broiler chickens: effect of genotype and heat stress</i>	454
18:30	<b>Polidori Paolo, Cammertoni Natalina, Vincenzetti Silvia</b> <i>Mule carcass characteristics and meat quality</i>	577
18:45	<b>Frongia Andrea, Acciaro Marco, Manca Carla, Pintone Andrea, Picconi Stefano, Sitzia Maria</b> <i>Heavy lamb production as a way to differentiate dairy sheep livestock system</i>	583

19:00	<b>Nardelli Valeria, Ingegno Mariateresa, Della Rovere Ines, Chiappinelli Andrea, Casamassima Francesco, Tomaiuolo Michele, Iammarino Marco</b> <i>Development of a highly sensitivity analytical method for the determination of PAHs in baby food (meat puree) by optimized QuEChERS extraction and determination by GC/MS-MS</i>	272
19:15-19:30	<b>Iammarino Marco, Berardi Giovanna, Ferrara Alfredo, Di Taranto Aurelia</b> <i>High levels of nitrate in fresh meats: does nutrition play a role?</i>	081

## Wednesday, June 14<sup>th</sup> | Room Apulia

### Session 19

## Metagenomic approaches in animal science

Chairs: **Buccioni Arianna – Conte Giuseppe**

17:00	<b>Palmonari Alberto, Federiconi Alessia, Ghiaccio Francesca, Buonaiuto Giovanni, Cavallini Damiano</b> <i>Impact of dietary lipid source on fecal microbiota composition in dairy cows</i>	263
17:15	<b>Giagnoni Lucia, Salza Sara, Melillo Rita, Piras Gabriella, Tondello Alessandra, Stevanato Piergiorgio, Cecchinato Alessio, Squartini Andrea, Tedde Tiziana, Mudadu Alessandro Graziano, Spanu Carlo</b> <i>Study of microbial communities, pathogenic and emerging microorganisms in sheep's milk cheese processing facilities of Sardinia using a DNA metabarcoding approach</i>	085
17:30	<b>Ferrari Carolina, Evangelista Chiara, Basiricò Loredana, Luziatelli Francesca, Ruzzi Maurizio, Bernabucci Umberto</b> <i>Effects of environmental factors on milk microbiome</i>	099
17:45	<b>Congiu Michele, Lourenco Jeferson, Cesarani Alberto, Macciotta Nicolò Pietro Paolo, Dimauro Corrado</b> <i>Can we predict cattle future feed efficiency from faecal microbiome data collected at weaning?</i>	065
18:00	<b>Federiconi Alessia, Ghiaccio Francesca, Cavallini Damiano, Palmonari Alberto</b> <i>Changes of rumen microbiota composition in dairy cows fed with different lipid source</i>	202
18:15-18:30	<b>Rimoldi Simona, Di Rosa Ambra Rita, Terova Genciana, Oteri Marianna, Saroglia Marco, Hasan Imam, Chiofalo Biagina</b> <i>Effects of insect meal-based diets on growth, intestinal well-being and microbiota in Gilthead seabream (<i>Sparus aurata</i>)</i>	010

## Thursday June 15<sup>th</sup> | Room Daunia

### Session 20

## Animal welfare and health

Chairs: **Albenzio Marzia – Tarantola Martina**

08:30	<b>Di Vuolo Gabriele, Scali Federico, Romeo Claudia Rosa, Capelli Giovanna, Serrapica Maria, Ambra Chiara Denise, De Carlo Esterina, Alborali Giovanni Loris, Bertocchi Luigi, Vecchio Domenico</b> <i>Linking Animal Welfare and Antibiotic Use in buffalo farms</i>	259
08:45	<b>Bianco Emanuele, Trabacchin Veronica, Arango Sheyla, Guzzo Nadia, Simonetti Emilio, Zerbinati Elena, Rainis Simona</b> <i>Evaluation of fecal and urinary excretion and behavior of Italian Simmental dairy cows during the access to exercise pasture for 2 and 4 hours per day</i>	403
09:00	<b>Salzano Angela, Bifulco Giovanna, Piscopo Federica, Fioriniello Salvatore, Kosior Michael, Fiorino Ferdinando, Campanile Giuseppe</b> <i>Influence of kisspeptin on buffalo superovulation</i>	484
09:15	<b>Ciliberti Maria Giovanna, Valasi Irene, Bouroutzika Eferpi, Makri Sotiria, Kouretas Demetrios, Albenzio Marzia, della Malva Antonella, di Corcia Martina, Santillo Antonella, Marino Rosaria, Sevi Agostino, Caroprese Mariangela</b> <i>Melatonin administration in heat stressed ewes: redox and immunity status of their offspring</i>	576
09:30	<b>Mezzetti Matteo, Bencetti Fabio, Vercesi Alessandro, Minuti Andrea, Cattaneo Luca, Piccioli-Cappelli Fiorenzo</b> <i>Effect of omitting dry period in Saanen and Alpine goats on metabolic profile and performance in the subsequent lactation</i>	540
09:45	<b>Ripamonti Alice, Mantino Alberto, Casarosa Laura, del Tongo Alessio, Silvi Alina, Goracci Jacopo, Turini Luca, Mele Marcello</b> <i>Growth rate and hair cortisol variation of beef cattle in pastoral and silvopastoral systems</i>	074
10:00	<b>Ambra Chiara Denise, Lorenzi Valentina, Serrapica Maria, Di Vuolo Gabriele, Cappelli Giovanna, Fusi Francesca, Bertocchi Luigi, De Carlo Esterina, Romeo Claudia, Scali Federico, Vecchio Domenico</b> <i>Linking Animal Welfare and Biosecurity, a case study in buffalo farms</i>	247
10:15-10:30	<b>Chiattelli Diletta, Birolo Marco, Cartoni Mancinelli Alice, Menchetti Laura, Castellini Cesare</b> <i>Assessing the motivation of Leghorn hens to access outdoor space and pasture resources</i>	501
11:00	Coffee break	

## Thursday June 15<sup>th</sup> | Room Peucetia

### Session 21

## Sustainability and innovation in aquaculture

Chairs: Centoducati Gerardo – Parisi Giuliana

08:15	<b>Sicuro Benedetto, Bakiu Rigers, Hala Edmond, Pesic Ana, Mandic Milica</b> <i>The evolution of aquaculture in the Balkan region in the last 70 years</i>	597
08:30	<b>Prete Andrea, Sist Paola, Tramer Federica, Centoducati Gerardo, Maggiolino Aristide, Deflorio Michele, Passamonti Sabina</b> <i>Stress assessment in juvenile seabass (<i>Dicentrarchus labrax</i>) during transport density simulation</i>	590
08:45	<b>Roncarati Alessandra, Galosi Livio, Arcangeli Giuseppe, Vetri Alessia, Tosi Federica, Gennari Lorenzo, Magi Gian Enrico</b> <i>Growth performances in Cupped oysters (<i>Crassostrea gigas</i>) during prefattening stages in the Middle Adriatic Sea</i>	208
09:00	<b>Foglio Luciano, Proietti Lorenzo, Galli Andrea, Aidos Lucia, Di Giancamillo Alessia, Mirra Giorgio, Paolacci Simona, Maguire Julie, Markou Giorgos, Alarcón Francisco Javier, Parati Katia</b> <i>A promising mix of protein sources coming from biorefinery as partial replacement of dietary ingredients in aquafeed for Gilthead Sea Bream (<i>Sparus aurata</i>) broodstock</i>	593
09:15	<b>Bordignon Francesco, Fanizza Cecilia, Nicoletto Carlo, Maucieri Carmelo, Trocino Angela, Birolo Marco, Xiccato Gerolamo</b> <i>Growth and quality of fish reared in halaponics</i>	404
09:30	<b>Fanizza Cecilia, Bordignon Francesco, Jover-Cerdá Miguel, Martínez-Llorens Silvia, Sánchez-Peñaranda David, Trocino Angela, Tomás-Vidal Ana</b> <i>Digestibility of raw materials candidate for sustainable feed formulation in Mediterranean yellowtail (<i>Seriola dumerili</i>)</i>	405
09:45	<b>Lira de Medeiros Adja Cristina, Faccenda Filippo, Pulido Rodriguez Lina Fernanda, Bruni Leonardo, Tignani Maria Vittoria, Secci Giulia, Parisi Giuliana</b> <i>Quality of fillet from trout (<i>Oncorhynchus mykiss</i>) fed diets supplemented with olive pomace at two different levels</i>	414
10:00	<b>Centoducati Gerardo, Deflorio Michele, Specchiulli Antonietta, Fanelli Giovanni, Fortunato Nicola, Mossa Michele, Ungaro Nicola, Carlucci Roberto, Albenzio Marzia, Grassi Giuseppe, Goffredo Elisa, Roma Rocco, Seccia Antonio, Petrosillo Irene</b> <i>Towards sustainable marine spatial planning of aquaculture in Apulia Region</i>	493
10:15	<b>Daniso Enrico, Uboni Costanza, Cardinaletti Gloriana, Garlatti Nicolas, Tibaldi Emilio, Luzzana Umberto, Tulli Francesca</b> <i>Finishing diets to modulate flesh fatty acid composition and skin colour in gilthead seabream (<i>Sparus aurata</i>)</i>	514
10:30	<b>Di Rosa Ambra Rita, Accetta Francesca, Armone Rosangela, Aliquò Doriana, Chiofalo Biagina</b> <i>Effect of <i>Hermetia illucens</i> meal on gilthead seabream (<i>Sparus aurata</i>) flesh sensory profile. An innovative approach using electronic senses and data fusion</i>	071
10:45	<b>Rusco Giusy, Di Iorio Michele, Esposito Stefano, Antenucci Emanuele, Lerza Letizia, Roncarati Alessandra, Iaffaldano Nicolaia</b> <i>The supportive breeding of native Mediterranean brown trout (LIFE Nat.Sal.Mo project, Molise region): the effect of ovarian fluid on frozen sperm motility parameters during artificial fertilization</i>	048
11:00	Coffee break	



## Thursday June 15<sup>th</sup> | Room Messapia

Session 22

### Advances in milk and dairy products quality

Sponsored by Consorzio per la Tutela del Formaggio Mozzarella di Bufala Campana D.O.P.

Chairs: **Di Trana Adriana Carmen - Martini Mina**

08:15	<b>Sepe Lucia, Lovallo Carmela, De Martino Laura, De Feo Vincenzo</b> <i>Cosmetics based on goat milk whey enriched by essential oils from Mediterranean bushes</i>	509
08:30	<b>Salari Federica, Altomonte Iolanda, Sodi Irene, Martini Mina</b> <i>Fatty acids and sterols composition of three commercial cow's milks</i>	021
08:45	<b>Amalfitano Nicolò, Secchi Giorgia, Tagliapietra Franco, Lante Anna, Dettori Maria Luisa, Pazzola Michele, Vacca Giuseppe Massimo, Bittante Giovanni</b> <i>Influence of single protein fractions on goat milk coagulation ability</i>	260
09:00	<b>Franceschi Piero, Malacarne Massimo, Cipolat-Gotet Claudio, Evangelista Chiara, Basiricò Loredana, Bernabucci Umberto, Summer Andrea</b> <i>Distribution of Zn, Fe and Cu and their relationships with milk quality in individual cow milk samples</i>	310
09:15	<b>Malacarne Massimo, Franceschi Piero, Cipolat-Gotet Claudio, Evangelista Chiara, Basiricò Loredana, Bernabucci Umberto, Summer Andrea</b> <i>Influence of content and distribution of Ca, P and Mg on rennet coagulation properties in individual cow milk samples</i>	315
09:30	<b>Tognocchi Monica, Giannerini Fabiola, Villani Fabio, Silvi Alina, Macchi Mirco, Guidi Ilaria, Durani Cinzia, Serra Andrea, Mele Marcello, Conte Giuseppe</b> <i>Effect of bactofugation on milk and Pecorino cheese quality</i>	057
09:45	<b>Ponte Marialetizia, Maniaci Giuseppe, Pipi Marianna, Gannuscio Riccardo, Busetta Gabriele, Gaglio Raimondo, Settanni Luca, Alabiso Marco, Todaro Massimo, Bonanno Adriana, Di Grigoli Antonino</b> <i>Dehydration preserves the ability of tanniferous sulla forage (Sulla coronaria (L.) Medik.) to improve nutritional, microbial and sensory traits of sheep cheese</i>	551
10:00	<b>Nudda Anna, Guiso Maria Francesca, Sanna Gavino, Deroma Mario, Tsiplakou Eleni</b> <i>Essential and Toxic Mineral Content of Colostrum and Milk in Dairy Sheep</i>	548
10:15	<b>Di Paolo Marika, Casalino Loriana, Mazzocca Roberta, Bettua Giuseppe, D'Anza Emanuele, Peretti Vincenzo, Ciotola Francesca, Marrone Raffaele</b> <i>Effect of ripening time on chemical-nutritional quality of the traditional Pecorino Bagnolese cheese</i>	552
10:30	<b>Niero Giovanni, Penasa Mauro, De Marchi Massimo</b> <i>Quantification and variation of lactoferrin in cow milk assessed through radial immunodiffusion technique</i>	033
10:45	<b>Varricchio Marialuisa, Barone Carmela Maria Assunta, Scalera Grazia, Grasso Fernando, Sarubbi Fiorella, Pacelli Corrado, Di Francia Antonio</b> <i>Does the use of ensiled forage affect the sensory properties of fresh cheese?</i>	159
11:00	<b>Cappelli Giovanna, Di Vuolo Gabriele, Vecchio Domenico, Grassi Carlo, Bufano Francesca, Noschese Rosario, Capacchione Roberta, De Carlo Esterina</b> <i>Buffalo milk in Italy and the traceability system</i>	212
11:15	Coffee break	

## Thursday June 15<sup>th</sup> | Room Apulia

Session 23

### New paradigms in animal breeding

Chairs: **Ciampolini Roberta - Landi Vincenzo**

08:15	<b>INVITED LECTURE</b> <b>Lourenco Daniela</b> <i>Are there benefits in using sequence data for genomic predictions?</i>	
08:45	<b>Cimmino Roberta, Gómez Carpio Mayra, Rossi Dario, Gombia Yuri, Zullo Gianluigi, Biffani Stefano</b> <i>Genetic aspects of longevity in Italian Mediterranean Buffalo</i>	252
09:00	<b>Carta Antonello, Usai Mario Graziano, Casu Sara, Salaris Sotero</b> <i>Implications on Heritability Estimates of Blending the G Matrix with Different Levels of the Pedigree Matrix in a Nucleus Flock of Dairy Sheep</i>	217
09:15	<b>Punturiero Chiara, Bernini Francesca, Milanese Raffaella, Strillacci Maria Giuseppina, Bagnato Alessandro</b> <i>The Use of Genomics in Dairy Cow Farming – results from the GENORIP project</i>	411



09:30	<b>Negro Alessio, Biffani Stefano, Cortellari Matteo, Bionda Arianna, Cesarani Alberto, Fresi Pancrazio, Macciotta Nicolò Pietro Paolo, Grande Silverio, Crepaldi Paola</b> <i>Estimation of Breeding Values in Italian dairy goats: from BLUP to ssGBLUP</i>	334
09:45	<b>Altieri Damiano, Biffani Stefano, Gómez Carpio Mayra, Carnovale Francesca, Rossi Dario, Gombia Yuri, Di Palo Rossella</b> <i>Preliminary investigation on stayability in Italian Mediterranean Buffalo</i>	571
10:00	<b>Callegaro Simone, Tiezzi Francesco, Fabbri Maria Chiara, Bozzi Riccardo</b> <i>Different methods to handle preferential treatment in slaughter age in Italian Limousine</i>	180
10:15	<b>Macciotta Nicolò Pietro Paolo, Degano Lorenzo, Vicario Daniele, Cesarani Alberto</b> <i>A transgenerational study on the effect of birth month of female ancestor on lactation curves of Italian Simmental cattle</i>	584
10:30	<b>Persichilli Christian, Karaman Emre, Finocchiaro Raffaella, Pilla Fabio, Fabris Anna, Visentin Giulio, Cassandro Martino</b> <i>Study of fertility traits in Italian Jersey Cattle</i>	563
10:45	<b>Sartori Cristina, Tuliozi Beniamino, Mancin Enrico, Gomez-Proto Guido, Mantovani Roberto</b> <i>How mum and pen mates affect my growth: maternal effects and indirect genetic components on growth traits in young bulls at performance testing station</i>	399
11:00	Coffee break	

## Thursday June 15<sup>th</sup> | Room Daunia

Session 24

### Advances in rabbit and poultry products

Chairs: Bovera Fulvia - Soglia Francesca

11:30	<b>INVITED LECTURE</b> <b>Stadnika Katarzyna</b> <i>Technologies applied in embryonated eggs</i>	
12:00	<b>Peng Meng, Açar Samil, Biesek Jakub, Banaszak Miroslaw, Tavaniello Siria, Maiorano Giuseppe</b> <i>Influence of rearing system and hen age on fatty acid composition of egg yolk</i>	574
12:15	<b>Trabalza-Marinucci Massimo, Ranucci David, Galarini Roberta, Branciaro Raffaella, Acuti Gabriele</b> <i>Egg production and egg quality in free-range laying hens as affected by dietary polyphenols from olive mill wastewaters</i>	397
12:30	<b>Biasato Ilaria, Bellezza Oddon Sara, Cerutti Gian Luca, Renna Manuela, Xiccato Gerolamo, Trocino Angela, Perano Danilo, Caimi Christian, Brugiapaglia Alberto, Gasco Laura</b> <i>Mulberry leaf meal as alternative feed ingredient in rabbit nutrition: preliminary results about productive performance and meat quality</i>	121
12:45	<b>D'Amico Francesco, Casalino Gaia, Schiavitto Michele, Dimuccio Michele Maria, Camarda Antonio, Romito Diana, Circella Elena</b> <i>In vitro efficacy of Phyto-L against Entero-Pathogenic Escherichia coli strains of rabbits from industrial farms</i>	581
13:00-13:15	<b>Bordini Martina, Soglia Francesca, Zappaterra Martina, Davoli Roberta, Sirri Federico, Meluzzi Adele, Petracci Massimiliano</b> <i>Evaluation of the expression level of genes coding for Collagen type 4 in Pectoralis major muscles belonging to meat-type chickens selected for different growth-rates</i>	345
13:30	Lunch	

## Thursday June 15<sup>th</sup> | Room Peucetia

Session 25

### L.E.O. project: the Italian research commitment for the future wild stock strategies

Sponsored by A.I.A.

Chairs: Donda Mauro - Negrini Riccardo

11:30	<b>INVITED LECTURE</b> <b>Burke Martin, Roalkvam Tone, van der Linde Rene</b> <i>ICAR Harmonisation of Sustainability related Milk Traits</i>	
12:00	<b>Milanesi Marco, Pietrucci Daniele, Vignali Giovanni, Chandramouli Balasubramanian, Mancini Marco, Renzi Francesco, Valentini Riccardo, Santini Monia, Negrini Riccardo, Chillemi Giovanni</b> <i>Contrasting climate change effects on dairy cattle through Machine Learning approach</i>	300

12:15	<b>Pascarella Lorenzo, Fioretti Mauro, Melilli Caterina, Biffani Stefano, Negrini Riccardo</b> <i>Results from Italian National Breeders Association (AIA) nationwide collection of setting and efficiency parameters in milking systems of Italian dairy farms</i>	113
12:30	<b>Luisi Federica, Fioretti Mario, Moliso Mesfin Mekonnen, Tondo Alessia, Negrini Riccardo</b> <i>Estimating enteric methane emission in dairy cows exploiting longitudinal data measured on single animal and at farm level to refine IPCC equations</i>	143
12:45	<b>Tolone Marco, Mastrangelo Salvatore, Sadina Maria Teresa, Scatassa Maria Luisa, Rizzuto Ilaria, Riggio Silvia, Moscarelli Angelo, Portolano Baldassare</b> <i>Differential somatic cell count as indicator of intramammary infection in dairy sheep</i>	072
13:00	<b>Riggio Silvia, Di Gerlando Rosalia, Tolone Marco, Rizzuto Ilaria, Moscarelli Angelo, Portolano Baldassare, Mastrangelo Salvatore, Sardina Maria Teresa</b> <i>Maedi Visna virus infection and TMEM154 genotypes in Valle del Belice sheep breed</i>	510
13:15	<b>Morelli Daniela, Di Domenico Marco, Marcacci Maurilia, Cammà Cesare, Averaimo Daniela, Vincifori Giacomo, Iannetti Simona, Ricchiuti Luciano, Radomsky Nicolas, Costarelli Silva, Pezzotti Giovanni</b> <i>Illumina Ampliseq approach for multi-pathogen detection</i>	588
13:30	<b>Pascarella Lorenzo, De Renzis Maurizio, Melilli Caterina, Fioretti Mauro, Luisi Federica, Negrini Riccardo</b> <i>LEO livestock national bio-repository: a tool for the conservation of Italian livestock genetic diversity</i>	589
13:45	Lunch	

## Thursday June 15<sup>th</sup> | Room Messapia

### Session 26

## Advances in milk and dairy products quality

Chairs: **Maggiolino Aristide – Summer Andrea**

11:30	<b>Lopez Annalaura, Moretti Vittorio Maria, Ratti Sabrina, Rossi Raffaella, Bellagamba Federica</b> <i>A comparison of the nutritional quality and sensory properties of commercial milk with different labeled production systems</i>	191
11:45	<b>Cipolat-Gotet Claudio, Summer Andrea, Ceresa Paolo, Molle Arnaud Paul J., Mariani Elena, Stocco Giorgia</b> <i>Fourier transform infrared spectroscopy of milk as a tool for monitoring efficiency in the Parmigiano Reggiano PDO production</i>	273
12:00	<b>Stocco Giorgia, Mariani Elena, Ablondi Michela, Biffani Stefano, Grande Silverio, Summer Andrea, Biagini Domenico, Cipolat-Gotet Claudio</b> <i>The role of Comisana and Massese breeds on cheese-making efficiency and daily cheese production</i>	299
12:15	<b>Rocchetti Gabriele, Ghilardelli Francesca, Carboni Eliana, Atzori Alberto Stanislao, Masoero Francesco, Gallo Antonio</b> <i>Milk metabolome reveals pyrimidine and its degradation products as the discriminant markers of different corn silage-based nutritional strategies</i>	009
12:30	<b>Natrella Giuseppe, Maggiolino Aristide, De Palo Pasquale, Pedota Giuseppina, Faccia Michele</b> <i>Survey on milk quality at late lactation and presence of ancient Zebu whey protein marker in Podolic cattle of Basilicata region</i>	483
12:45	<b>Natrella Giuseppe, Gambacorta Giuseppe, Faccia Michele</b> <i>Effect of <math>\alpha</math>SI casein level on stretchability of goat curd</i>	485
13:00	<b>Giannuzzi Diana, Vanzin Alice, Toscano Alessandro, Bisutti Vittoria, Pegolo Sara, Cecchinato Alessio</b> <i>Associations between the detailed milk mineral profile and total and differential cell count in Holstein Friesian dairy cows</i>	488
13:15	<b>Capitanio Fabian, Cascone Ilaria, Pugliano Mariagiulia, Luongo Flavio, D'Anza Emanuele, Rossetti Alberto, Albarella Sara, Ciotola Francesca, Peretti Vincenzo</b> <i>Livestock biodiversity and endogenous area development: The POD "Provolone del Monaco" model</i>	447
13:30	Lunch	

## Thursday June 15<sup>th</sup> | Room Apulia

### Session 27 Genomic tools for ruminant resiliency

Sponsored by Zoetis

Chairs: Lasagna Emiliano – Sacchi Paola

11:30	<b>INVITED LECTURE</b> <b>Di Croce Fernando, Fessenden Brenda, Layfield Michael, Weigel Daniel, Pisoni Giuliano, Wijma Robert</b> <i>Precision Ag comes to dairy: Genomics tools to improve profit, environmental footprint, and cow wellbeing</i>	
12:00	<b>Mancin Enrico, Sartori Cristina, Gomez Guido, Mantovani Roberto</b> <i>Environmental variation of milk production: an effective indicator of genetic and genomic animal resilience</i>	409
12:15	<b>Ferrari Valentina, Visentin Giulio, van Kaam Jan-Thijs, Penasa Mauro, Marusi Maurizio, Finocchiaro Raffaella, Cassandro Martino</b> <i>Genetic aspects of heifer fertility in Italian Holstein population</i>	036
12:30	<b>Fabris Anna, Tiezzi Francesco, Finocchiaro Raffaella, Marusi Maurizio, Cassandro Martino</b> <i>Preliminary genetic analysis for survival in Italian Jersey</i>	037
12:45	<b>Buonaiuto Giovanni, Lopez-Villalobos Nicolas, Costa Angela, Formigoni Andrea, Visentin Giulio</b> <i>Effect of morphological characteristics and productive traits on the survival of dual-purpose Simmental cows</i>	041
13:00-13:15	<b>Pegolo Sara, Giannuzzi Diana, Bisutti Vittoria, Ramirez Mauricio Marco Aurelio, Macedo Mota Lucio Flavio, Ajmone Marsan Paolo, Trevisi Erminio, Cecchinato Alessio</b> <i>Genetic parameters for blood indicators of metabolic distress and milk traits in dairy cattle</i>	066
13:30	Lunch	

## Thursday June 15<sup>th</sup> | Room Daunia

### Session 28 Recent advances in mammary gland biology and health

Chairs: Caroprese Mariangela - Lacetera Nicola

14:30	<b>Zappaterra Martina, Zanna Martina, Nanni Costa Leonardo, Padalino Barbara</b> <i>Application of infrared thermography for detection of udder health disorders in dairy cattle</i>	015
14:45	<b>Bobbo Tania, Matera Roberta, Neglia Gianluca, Gomez Mayra, Cimmino Roberta, Manunza Arianna, Biffani Stefano</b> <i>What do we know about differential somatic cell count in buffaloes?</i>	329
15:00	<b>Turini Luca, Bonelli Francesca, Senatore Elena, Roncoroni Cristina, Sgorbini Micaela, Silvi Alina, Conte Giuseppe, Mele Marcello</b> <i>Relationships between on-farm animal welfare assessment, milk yield and quality in dairy cows</i>	069
15:15	<b>Vanzin Alice, Battisti Ilaria, Franchin Cinzia, Bisutti Vittoria, Toscano Alessandro, Giannuzzi Diana, Masi Antonio, Arrigoni Giorgio, Gallo Luigi, Cecchinato Alessio, Pegolo Sara</b> <i>Mass spectrometry-based characterization of the bovine milk peptidome upon Streptococcus agalactiae and Prototheca spp. infection</i>	123
15:30	<b>Bisutti Vittoria, Mach Nuria, Giannuzzi Diana, Vanzin Alice, Capra Emanuele, Cecchinato Alessio, Pegolo Sara</b> <i>Transcriptomic and phenomic data integration to identify markers of subclinical mastitis in Holstein cattle</i>	125
15:45	<b>Mondini Sara, Tamburini Alberto, Palladini Nicola Maria, Bava Luciana</b> <i>Differential somatic cell count during lactation in dairy cattle herds from northern Italy</i>	482
16:00	<b>Matera Roberta, Conte Giuseppe, Cotticelli Alessio, Pascarella Lorenzo, Tondo Alessia, De Luise Luca, Campanile Giuseppe</b> <i>Milking parameters related to mammary gland health and milk characteristics in Italian Mediterranean buffalo</i>	431
16:15-16:30	<b>Mecocci Samanta, Pietrucci Daniele, Milanese Marco, Capomaccio Stefano, Evangelista Chiara, Basiricò Loredana, Bernabucci Umberto, Chillemi Giovanni, Cappelli Katia</b> <i>Transcriptomic characterization of water buffalo's Extracellular Vesicles from colostrum and milk for their Immunomodulatory Potential</i>	130
17:00	Coffee break	

## Thursday June 15<sup>th</sup> | Room Peucetia

Session 29

### Sustainable feeding strategies in livestock systems

Sponsored by Mignini & Petrini

Chairs: Pinotti Luciano – Masucci Felicia

14:30	<b>INVITED LECTURE</b> <b>Pulina Giuseppe, Correddu Fabio, Caratzu Maria Francesca, Lunesu Mondina Francesca</b> <i>Livestock sustainability, the four slices of the same pie</i>	
15:00	<b>Oteri Marianna, Scordia Danilo, Armone Rosangela, Costale Annalisa, Meineri Giorgia, Gresta Fabio, Chiofalo Biagina</b> <i>A sustainable alternative grain legume for livestock: agronomic and nutritional traits of three lupin (<i>Lupinus spp.</i>) species</i>	030
15:15	<b>Braidot Matteo, Sarnataro Chiara, Fabro Carla, Spanghero Mauro</b> <i>In vitro evaluation of sodium nitrate as a rumen methane reducer</i>	358
15:30	<b>Battelli Marco, Colombini Stefania, Crovetto Gianni Matteo, Galassi Gianluca, Manfredi Maria Teresa, Rapetti Luca</b> <i>Quebracho condensed tannins fed to lactating goats: effect on methane production</i>	325
15:45	<b>Vastolo Alessandro, Formato Marialuisa, Piccolella Simona, Calabrò Serena, Pacifico Severina, Cutrignelli Monica Isabella</b> <i>Evaluation of the effect of leaf extracts from deciduous trees (<i>Castanea sativa</i>, <i>Fagus sylvatica</i> and <i>Quercus robur</i>) on ruminal fermentation</i>	178
16:00	<b>Scicutella Federica, Mannelli Federica, Daglio Matteo, Azim Khalid, Toni Elisabetta, Viti Carlo, Buccioni Arianna</b> <i>Mediterranean agro-industrial by-products as ingredients in a sustainable feeding strategy for dairy sheep: an in vitro trial to evaluate rumen ecosystem</i>	489
16:15	<b>Piccioli-Cappelli Fiorenzo, Moschini Maurizio, Froidi Federico, Bani Paolo, Müller Isabel, Tamassia Luis, Bulgarelli Paolo, Trevisi Erminio</b> <i>Effects of 3-nitrooxypropanol (3-NOP, Bovaer®10) on methane emission and productive performance of mid-lactating dairy cows fed a typical diet for Grana Padano cheese-making</i>	491
16:30	<b>Massaro Selene, Andersen Jonas Bylov Hedegaard, Franciosi Elena, Tagliapietra Franco</b> <i>Alpine herbs affect rumen in vitro degradability and methane emissions</i>	079
16:45	<b>Caturano Costantino, Tremonte Patrizio, Lombardi Silvia Jane, Fatica Antonella, Sorrentino Elena, Coppola Raffaele, Salimei Elisabetta</b> <i>Use of lactic acid bacteria in forage production of Alto Sannio area</i>	245
17:00	<b>Romanzin Alberto, Braidot Matteo, Sarnataro Chiara, Fabro Carla, Spanghero Mauro</b> <i>In vitro rumen methane production is not affected by the feeding efficiency of donor bulls</i>	160
17:15	Coffee break	

## Thursday June 15<sup>th</sup> | Room Messapia

Session 30

### Precision livestock farming: production efficiency and environmental impacts

Chairs: Mattiello Silvana - Neglia Gianluca

14:30	<b>INVITED LECTURE</b> <b>Rosa Guilherme, Hernandez Laura, Dorea Joao R. R.</b> <i>Digital technologies and Machine learning: A new way to look at novel traits at spatial and temporal dimensions</i>	
15:00	<b>Casu Sara, Usai M. Graziano, Salaris Sotero, Caredda Marco, Addis Margherita, Carta Antonello</b> <i>Phenotypic Analysis of Ovine Milk Infrared Spectra</i>	193
15:15	<b>Cartoni Mancinelli Alice, Chiattelli Diletta, Menchetti Laura, Bernacchia Gianmaria, Castellini Cesare</b> <i>Preliminary validation of Ultra-Wide Band device as an innovative tool to assess chicken behaviour</i>	499
15:30	<b>Pietrucci Daniele, Milanesi Marco, Chandramouli Balasubramanian, Vignali Giovanni, Negrini Riccardo, Macini Marco, Santini Monia, Chillemi Giovanni</b> <i>Identification of the most impacting environmental variables on dairy cows milk yield using Machine Learning methods</i>	324
15:45	<b>Lazzari Andrea, Brambilla Massimo, Giovinazzo Simone, Calcante Aldo, Giannini Alessandro Antonio, Bisaglia Carlo</b> <i>Automation to support rationing of dairy and beef cattle: comparisons and practical examples of application</i>	133
16:00	<b>Caré Sara, Migliorati Luciano, Abeni Fabio, Pirlo Giacomo</b> <i>Expectation from precision livestock farming (PLF) in reducing environmental impact of dairy farms</i>	424
16:15-16:45	<b>INVITED LECTURE</b> <b>O'Brien Bernadette</b> <i>Precision technologies and smart dairy farming in extensive pasture based systems</i>	
17:00	Coffee break	

## Thursday June 15<sup>th</sup> | Room Apulia

### Session 31 Genomic tools for ruminant resiliency

Chairs: **Bozzi Riccardo – Pasquini Marina**

14:30	<b>INVITED LECTURE</b> <b>Lecchi Cristina</b> <i>Bovine extracellular vesicles: a new challenge for animal science</i>	
15:00	<b>Gómez Mayra, Cimmino Roberta, Rossi Dario, Zullo Gianluigi, Biffani Stefano</b> <i>Genomic regions associated with Somatic Cell Score in Italian Mediterranean Buffalo</i>	220
15:15	<b>Salaris Sotero, Usai Mario Graziano, Casu Sara, Carta Antonello</b> <i>Genetic Relationships between Milk Production and Impacting Diseases in breeding Sheep</i>	221
15:30	<b>Ramirez Diaz Johanna, Manunza Arianna, Rincon Florez Juan Carlos, Alvarez Luz Angela, Ciappesoni Gabriel, Peraza Pablo, Barreto Mourao Gerson, Arranz Jose, Freire Fernando, Cozzi Paolo, Stella Alessandra</b> <i>Looking for the genes involved in local adaptation in sheep</i>	342
15:45	<b>Capomaccio Stefano, Milanesi Marco, Vajana Elia, Bomba Lorenzo, Chillemi Giovanni, Ajmone Marsan Paolo, Colli Licia</b> <i>BITE v.2: a user friendly R package for genomic analysis</i>	372
16:00	<b>Ben Jemaa Slim, Tolone Marco, Sardina Maria Teresa, Chessari Giorgio, Di Gerlando Rosalia, Portolano Baldassare, Mastrangelo Salvatore</b> <i>A genome-wide comparison between unselected and selected Valle del Belice sheep reveals selection signatures related to production traits</i>	415
16:15-16:30	<b>Rossoni Attilio, Nicoletti Chiara, Vevey Mario, Santus Enrico</b> <i>Integration between genomic and microsatellite analysis for the parentage verification</i>	442
17:00	Coffee break	

## Friday June 16<sup>th</sup> | Room Daunia

### Session 32 Animal welfare and health

Chairs: **Di Palo Rossella - Santillo Antonella**

08:30	<b>Ciarelli Claudia, Pillan Giulio, Bordignon Francesco, Xiccato Gerolamo, Pirrone Fabrizio, Ghio Franco, Trocino Angela</b> <i>Space use by laying hens in a cage-free system: effect of genotype and enrichment with perches</i>	453
08:45	<b>Poulopoulou Ioanna, Zanon Thomas, Alrhoun Mousaab, Katzenberger Katja, Holighaus Louis, Gaulty Matthias</b> <i>Assessment of dairy farm welfare using a benchmarking tool</i>	464
09:00	<b>Crosetto Riccardo, Sartore Stefano, Ponzio Patrizia, Macchi Elisabetta, Mioletti Silvia, Miniscalco Barbara, Sicuro Benedetto, Tarantola Martina, Mugnai Cecilia</b> <i>Grey Piedmont's rabbit welfare evaluation in three housing systems</i>	526
09:15	<b>Benitez Mora Maria Paz, Longobardi Valentina, Piscopo Federica, Esposito Riccardo, Bifulco Giovanna, Salzano Angela</b> <i>Effect of pomegranate extract on post-thawed sperm quality</i>	433
09:30	<b>Torsiello Benedetta, Giammarino Mauro, Battaglini Luca, Battini Monica, Mattiello Silvana, Quatto Piero, Renna Manuela</b> <i>Evaluation of inter-observer reliability of animal-based welfare indicators in the case of trichotomous variables with two or more observers</i>	008
09:45	<b>Lanzoni Lydia, Waxenberg Kaia, Ramsey Rachael, Rees Robert Martin, Bell Julian, Vignola Giorgio, Atzori Alberto Stanislao</b> <i>The environmental cost of impaired welfare in dairy sheep farming</i>	043
10:00	<b>Zanon Thomas, Gaulty Matthias</b> <i>Walking distance and maintenance energy requirements of sheep during mountain pasturing (transhumance)</i>	054
10:15-10:30	<b>Colombini Stefania, Menni Giorgio, Pavesi Martina, Battelli Marco, Xiaoxia Dai, Galassi Gianluca, Crovetto Gianni Matteo, Rapetti Luca</b> <i>Effect of a blend of essential oil on in vitro rumen fermentation for SARA prevention</i>	295
11:00	Coffee break	



## Friday June 16th | Room Peucetia

### Session 33

## Development of genomics in biodiversity

Chairs: **Biffani Stefano – Cipolat-Gotet Claudio**

08:30	<b>INVITED LECTURE</b> <b>Laloë Denis, Jaffrézic Florence, Zerjal Tatiana, Rau Andrea</b> <i>Old wine in new bottles: Factorial analyses in the age of multi-omics</i>	
09:00	<b>Strillacci Maria Giuseppina, Bernini Francesca, Punturiero Chiara, Vevey Mario, Blanchet Veruska, Bagnato Alessandro</b> <i>Structural Variation in the Aosta cattle breed</i>	410
09:15	<b>Bernini Francesca, Punturiero Chiara, Bagnato Alessandro, Milanesi Raffaella, Vevey Mario, Blanchet Veruska, Strillacci Maria Giuseppina</b> <i>A Genome Wide Association Study in the Aosta Cattle population</i>	413
09:30	<b>Pauciuolo Alfredo, Versace Carmine, Gaspa Giustino, Cosenza Gianfranco</b> <i>A functional polymorphism influencing the promoter activity of alpaca <math>\alpha</math>-lactalbumin gene (LALBA)</i>	188
09:45	<b>Cortellari Matteo, Negro Alessio, Bionda Arianna, Fresi Pancrazio, Grande Silverio, Crepaldi Paola</b> <i>Effect of artificial insemination on genomic population structure in Camosciata delle Alpi dairy goat breed</i>	240
10:00	<b>Dadousis Christos, Ablondi Michela, Cipolat-Gotet Claudio, van Kaam Jan-Thijs, Finocchiaro Raffaella, Marusi Maurizio, Cassandro Martino, Sabbioni Alberto, Summer Andrea</b> <i>The effect of ancestral and SNP panel genotyping on genomic inbreeding coefficients from imputed SNP in Holstein-Friesian dairy cows</i>	283
10:15	<b>Manunza Arianna, Ramirez Diaz Johanna, Zamora Bustillo Roberto, Ciappesoni Gabriel, Peraza Pablo, Lenstra Johannes A., Estrada Reyes Zaira, Arranz Santos Juan José, Revelo Cuaspud Herman Alberto, Rincon Flórez Juan Carlos, Stella Alessandra</b> <i>About the origin of traditional sheep breeds from South America: a comprehensive investigation</i>	346
10:30	<b>Biscarini Filippo, Cozzi Paolo, Ramirez Díaz Johanna, Stella Alessandra, Manunza Arianna</b> <i>Detection of heterozygosity-rich regions (HRRs) in the genome of domestic ruminants: which parameters for which breed</i>	031
10:45	<b>Ribani Anisa, Taurisano Valeria, Rakaj Arnold, Fianchini Alessandra, Grosso Luca, Pensa Davide, Buttazzoni Luca, Capoccioni Fabrizio, Pulcini Domitilla, Utzeri Valerio Joe, Fontanesi Luca</b> <i>Mitochondrial DNA based diversity over several Mediterranean regions in holothurian species</i>	251
11:00	Coffee break	

## Friday June 16th | Room Messapia

### Session 34

## Companion animals

Chairs: **Cutrignelli Monica – Stefanon Bruno**

08:15	<b>INVITED LECTURE</b> <b>Switonsky Marek, Szczerbal Izabela, Nowacka-Wozuk Joanna, Stachowiak Monika</b> <i>Cytogenetic and molecular background of canine and feline disorders of sex development</i>	
08:45	<b>Delsante Costanza, Vecchiato Carla Giuditta, Sportelli Federica, Cabri Giulia, Pinna Carlo, Cavazzoni Marco, Biagi Giacomo</b> <i>Blood and clinical parameters of obese and lean cats, and the effects of a caloric restriction</i>	011
09:00	<b>Pinna Carlo, Vecchiato Carla Giuditta, Delsante Costanza, Sportelli Federica, Parazza Paola, Dall'Olio Massimo, Biagi Giacomo</b> <i>Effects of oral supplementation with coconut oil on fecal microbiota of healthy dogs</i>	012
09:15	<b>Moretti Riccardo, Chessa Stefania, Profiti Margherita, Uva Anna Maria, Tarducci Alberto, Zatelli Andrea, Sacchi Paola</b> <i>Resistance versus susceptibility to Leishmania: genetic differences in a population of English Setter dogs</i>	150
09:30	<b>Balouei Fatemeh, Sandri Misa, Scarsella Elisa, Sgorlon Sandy, Stefanon Bruno</b> <i>Reconstruction of functional features of fecal microbiome in dogs fed different diets</i>	197
09:45	<b>Crepaldi Paola, Bionda Arianna, Cortellari Matteo, Lopreiato Vincenzo, Liotta Luigi</b> <i>Selection signatures in Italian hunting dogs</i>	286
10:00	<b>D'Anza Emanuele, Bionda Arianna, Liotta Luigi, Ronchese Mauro, Cortellari Matteo, Albarella Sara, Ciotola Francesca, Crepaldi Paola</b> <i>English and American Golden retrievers differentiation: from sperm morphometry to genomic data</i>	301



10:15	<b>Atuahene David, Costale Annalisa, Martello Elisa, Chiofalo Biagina, Sandri Misa, Stefanon Bruno, Meineri Giorgia</b> <i>Nutraceuticals: a promising alternative to the use of drugs for intestinal wellness in dogs</i>	052
10:30	<b>Vastolo Alessandro, Ruggiero Alessio, Calabrò Serena, Kiatti Dieu donné, Cutrignelli Monica Isabella</b> <i>Influence of grain-free and cereal-based diets on postprandial glycaemic response</i>	490
10:45	<b>Biscarini Filippo, Mastrangelo Salvatore, Ciampolini Roberta</b> <i>A genome wide-association study for morphological and hunting performance traits in Braque Français Type Pyrénées dogs</i>	024
11:00	Coffee break	

## Friday June 16th | Room Apulia

### Session 35

## Sustainable feeding strategies in livestock systems

Chairs: **Di Francia Antonio – Bailoni Lucia**

08:00	<b>INVITED LECTURE</b> <b>Atzori Alberto Stanislao, Atamer Balkan Busra, Tedeschi Luis Orlando, Cannas Antonello, Gallo Antonio</b> <i>Dynamic modelling in ruminant nutrition: background, applications and perspectives for the sustainability of livestock productions</i>	
08:30	<b>Serrapica Francesco, Di Francia Antonio, Barone Carmela Maria Assunta, Genovese Alessandro, Balivo Andrea, Masucci Felicia</b> <i>Can sprouted barley grains replace maize silage in dairy buffaloes' diets? Effects on production efficiency, milk traits, and mozzarella cheese quality</i>	149
08:45	<b>Gannuscio Riccardo, Vastolo Alessandro, Maniaci Giuseppe, Lucia Caterina, Todaro Massimo, Cutrignelli Monica Isabella</b> <i>Novel feedstuffs obtained mixing different by-products: nutritional evaluation</i>	554
09:00	<b>Bolletta Viviana, Menci Ruggero, Pauselli Mariano, Servili Maurizio, Taticchi Agnese, Morbidini Luciano, Valenti Bernardo</b> <i>Dietary hazelnut skin and addition of phenolic extract from olive mill wastewaters: Effects on pork salami quality</i>	512
09:15	<b>Tinagli Sara, Silvi Alina, Casarosa Laura, Turini Luca, Tognocchi Monica, Serra Andrea</b> <i>Effect of a Sulla-based diet on Massese sheeps' milk and cheese</i>	292
09:30	<b>Maniaci Giuseppe, Ponte Marialetizia, Gannuscio Riccardo, Giosué Cristina, Di Grigoli Antonino, Bonanno Adriana, Alabiso Marco, Pipi Marianna</b> <i>Effect of the inclusion of Opuntia ficus-indica cladodes in the feeding of Cinisara cows on Caciocavallo Palermitano cheese produced in summer</i>	406
09:45	<b>Iommelli Piera, Sarubbi Fiorella, Musco Nadia, Lombardi Pietro, Morittu Valeria Maria, Moniello Giuseppe, Totakul Pajaree, Infascelli Federico, Tudisco Raffaella</b> <i>Effect of fennel seeds as a dietary supplement in grazing goats: preliminary results</i>	462
10:00	<b>Piccioli-Cappelli Fiorenzo, de la Maza-Escolà Victor Sainz, Grilli Ester, Berelli Marco, Benedetti Lorenzo, Lovotti Giorgia, Trevisi Erminio</b> <i>Effects on feed efficiency and resilience in the transition period of Holstein dairy cows fed with different sources of rumen-protected choline</i>	463
10:15	<b>Reggi Serena, Guagliano Marianna, Pedrazzi Simone, Allesina Giulio, Spalletta Ambra, Scoranelli Simona, Cristiani Cinzia, Rossi Luciana</b> <i>In vitro evaluation of biochar from chestnut and vine residues gassification as possible feed additive: antioxidant and antimicrobial activities</i>	279
10:30	<b>Trevisi Paolo, Correa Federico, Viridis Sara, Negrini Clara, Dalcanale Simone</b> <i>Efficacy of low protein diets with different amylose/amylopectin ratio on growth performance and health of weaned pigs</i>	356
10:45	<b>Danieli Pier Paolo, Manganello Federico, Fiore Leonardo, Natoli Vincenzo, Ronchi Bruno, Primi Riccardo</b> <i>Nutritional profile of hay from tef (Eragrostis teff) genotypes grown in South Italy</i>	128
11:00	Coffee break	

## Friday June 16th | Room Daunia

### Session 36

## Research and sustainability in horse production

Chairs: **Salimei Elisabetta – Capomaccio Stefano**

11:30	<b>INVITED LECTURE</b> <b>Vial Céline</b> <i>Equine production and activities in France: what contributions to the sustainability of local areas?</i>	
12:00	<b>Asti Vittoria, Sabbioni Alberto, Stocco Giorgia, Summer Andrea, Ablondi Michela</b> <i>The background of novel phenotypes in a native horse breed</i>	314
12:15	<b>Bordin Clara, Raspa Federica, Roggero Angela, Palestrini Claudia, Harris Patricia, Ellis Andrea Dorothea, Bergero Domenico, Defilippi Silvia, Valle Emanuela</b> <i>A new-designed feeding device for sustainable hay feeding management in ponies</i>	302
12:30	<b>Zappaterra Martina, Felici Martina, Nanni Costa Leonardo, Padalino Barbara</b> <i>Welfare on arrival at the slaughterhouse: handled versus unhandled horses</i>	014
12:45	<b>Chessa Stefania, Raspa Federica, Moretti Riccardo, Profiti Margherita, Bergero Domenico, Sacchi Paola, Valle Emanuela</b> <i>miRNA expression in the gut of horses fed with a high starch versus a high forage diet</i>	242
13:00	<b>Zoratti Aloma, Pividori Isabella, Comin Antonella, Piasentier Edi, Prandi Alberto, Peric Tanja</b> <i>Assessment of the allostatic load in horses at the slaughterhouse</i>	294
13:15-13:30	<b>Muca Edlira, Molino Monica, Ghislieri Chiara, Raspa Federica, Cavallino Damiano, Maccone Erica, Valle Emanuela, Bergero Domenico</b> <i>Development and evaluation of new teaching strategies to enhance students' knowledge in animal handling: the case of the horse</i>	504

## Friday June 16th | Room Peucetia

### Session 37

## Insects' production for feed and food

Chairs: **Chiofalo Biagina - Gasco Laura**

11:30	<b>Ferri Irene, Dell'Anno Matteo, Reggi Serena, Canala Benedetta, Petrali Beatrice, Rossi Luciana</b> <i>Innovative growing substrates for the production of functional <i>Tenebrio molitor</i> meals</i>	547
11:45	<b>Renna Manuela, Coppa Mauro, Lussiana Carola, Le Morvan Aline, Rastello Lara, Gasco Laura, Maxin Gaele</b> <i>Rumen lipid biohydrogenation of insect meals: results of an in vitro study</i>	039
12:00	<b>Mancini Simone, Mattioli Simona, Fratini Filippo, Cacchiarelli Chiara, Tuccinardi Tiziano, Dal Bosco Alessandro, Paci Gisella</b> <i>Comparison between lesser mealworm, mealworm and superworm larvae reared on the same substrate for their use as feed/food</i>	100
12:15	<b>Bellezza Oddon Sara, Biasato Ilaria, Resconi Andrea, Loiotine Zaira, Caimi Christian, Zaniboni Luisa, Gasco Laura</b> <i>Effect of different iso-waste-based diets on black soldier fly larvae growth and chemical composition</i>	520
12:30	<b>Sogari Giovanni, Tzompa-Sosa Daylan Amelia, Moruzzo Roberta, Riccioli Francesco, Menozzi Davide, Liu Aijun, Li Jie, Mancini Simone</b> <i>Consumers' acceptance toward edible insects: A cross-country study in Belgium, China, Italy, Mexico, and the US</i>	163
12:45	<b>Addeo Nicola Francesco, Vozzo Simone, Alleva Rosanna, Tancredi Federica, Piccolo Giovanni, Bovera Fulvia</b> <i>Growth performance and morphometric characteristics of <i>Hermetia illucens</i> larvae reared on four different substrates</i>	213
13:00-13:15	<b>Pascon Giulia, Cardinaletti Gloriana, Messina Maria, Daniso Enrico, Tibaldi Emilio, Randazzo Basilio, Tulli Francesca</b> <i>Effect of dietary chitin on growth performance, nutrient utilization and metabolic response in rainbow trout (<i>Oncorhynchus mykiss</i>)</i>	516

## Friday June 16<sup>th</sup> | Room Messapia

### Session 38

## Advances in dietary feed supplementation

Chairs: **Trabalza Marinucci Massimo – Nudda Anna**

11:30	<b>Mammi Ludovica Maria Eugenia, Ghiaccio Francesca, Bonfante Elena, Vezzani Claudio, Colleluori Riccardo, Cortese Martina, Formigoni Andrea</b> <i>Precision feeding: amino acid balance in dairy cows fed two different levels of total crude protein</i>	278
11:45	<b>Lopreiato Vincenzo, Chiofalo Vincenzo, Cavallo Carmelo, Amato Annalisa, Trevisi Erminio, Liotta Luigi</b> <i>Effect of feeding enriched-olive cake on metabolic and milk performance response of mid-lactating Holstein cows</i>	281
12:00	<b>Lora Isabella, Tolasi Cecilia, Ranzato Giovanna, Zanolì Yadav, Cozzi Giulio</b> <i>Field study on the effects of pasteurization on colostrum quality of Holstein dairy cows</i>	308
12:15	<b>Mastroeni Carmelo, Ghilardelli Francesca, Sigolo Samantha, Mosconi Martina, Gallo Antonio</b> <i>Oxygen barrier plastic films: an opportunity to improve silage quality and reduce the use of plastic</i>	386
12:30	<b>Arango Sheyla, Massaro Selene, Guzzo Nadia, Tagliapietra Franco, Bailoni Lucia</b> <i>Effect of hemp leaves on milk yield and quality in dairy cows: preliminary results</i>	402
12:45	<b>Meli Giovanna, Fumo Valentina, Scicutella Federica, Invernizzi Guido</b> <i>Impact of maternal milk from goats fed with Camelina sativa and Cynara cardunculus cake on goat kids' growth performance and health status</i>	420
13:00	<b>Marchetti Luca, Rebucci Raffaella, Giromini Carlotta, Lanzoni Davide, Cremonesi Paola, Castiglioni Bianca, Biscarini Filippo, Perricone Vera, Sandrini Silvia, Bontempo Valentino</b> <i>Evaluation of essential oils from natural extracts and medium chain fatty acids on piglets growth performance, salivary stress markers and gut health</i>	087
13:15-13:30	<b>Righi Federico, Pitino Rosario, Pozza Marta, Goi Arianna, De Marchi Massimo, Simoni Marica</b> <i>Relationship between diets characteristics and milk composition in lactating dairy cows fed silage- or hay-based diets</i>	440

## Friday June 16<sup>th</sup> | Room Apulia

### Session 39

## Genomic tools for animal resiliency and susceptibility

Chairs: **Bagnato Alessandro - Sartori Cristina**

11:30	<b>INVITED LECTURE</b> <b>Vergani Andrea Mario, Bagnato Alessandro, Masseroli Marco</b> <i>The use of Machine Learning in the Genomic Era of Livestock Farming</i>	
12:00	<b>Fabrizi Maria Chiara, Tiezzi Francesco, Lozada-Soto Emmanuel, Crovetto Alessandro, Consortium TREASURE, Bozzi Riccardo</b> <i>Loss of autozygosity in QTL regions in crossbred pigs</i>	168
12:15	<b>Ballan Mohamad, Bovo Samuele, Schiavo Giuseppina, Bolner Matteo, Bertolini Francesca, Cappelloni Manolo, Tinarelli Silvia, Gallo Maurizio, Fontanesi Luca</b> <i>Mining high density SNP chip data and whole genome sequencing information to identify putative unfavorable alleles in pig breeds</i>	223
12:30	<b>Bovo Samuele, Schiavo Giuseppina, Fanelli Flaminia, Ribani Anisa, Bertolini Francesca, Gallo Maurizio, Galimberti Giuliano, Dall'Olio Stefania, Martelli Pier Luigi, Casadio Rita, Pagatto Uberto, Fontanesi Luca</b> <i>Whole metabolome and genome analyses provide information on the genetic variability affecting the metabolism in pigs</i>	248
12:45	<b>Albarella Sara, Zappaterra Martina, D'Anza Emanuele, Piegari Giuseppe, Costanza Dario, Meomartino Leonardo, Peretti Vincenzo, Davoli Roberta, Ciotola Francesca</b> <i>Perosomus Elumbis in a family of Casertana pigs: case description and identification of candidate genes</i>	173
13:00-13:15	<b>Anzalone Antonietta, Gallo Daniela, Fulgione Andrea, Capuano Federico, Pauciullo Alfredo, Cosenza Gianfranco</b> <i>An association analysis between CSN3 genotype and milk yield in Italian Mediterranean river buffalo</i>	472

# Poster

## AQUACULTURE

<b>Bertolini Francesca, Ribani Anisa, Taurisano Valeria, Rakaj Arnold, Fianchini Alessandra, Capoccioni Fabrizio, Pulcini Domitilla, Bovo Samuele, Fontanesi Luca</b> <i>Whole genome sequencing data provide a landscape picture of genetic variability in sea cucumber species</i>	258
<b>Tarricone Simona, Di Martino Massimo, Anferri Sante, De Vito Nicolò, Caputi Jambrenghi Anna, Colonna Maria Antonietta, Ragni Marco</b> <i>Use of biopromotor to improving depleted coastal and semi-closed marine areas</i>	429
<b>Daniso Enrico, Susmel Sabina, Melpignano Patrizia, Tulli Francesca</b> <i>Tetrodotoxin presence in mussels: rapid toxin detection based on a Point of Care immunoassay</i>	515
<b>Pulido-Rodríguez Lina Fernanda, Moutinho Sara, Secci Giulia, Peres Helena, Tibaldi Emilio, Parisi Giuliana</b> <i>Effects of diets containing <i>Hermetia illucens</i> and poultry by-products meals on <i>Dicentrarchus labrax</i> intestinal enzymatic activities. Results of a commercial production trial</i>	549
<b>Sicuro Benedetto</b> <i>A 33 years retrospective analysis of economic value of Mediterranean aquaculture as a suitable base for future management of aquatic resources in the region</i>	598

## ANIMAL BREEDING AND GENETICS

<b>Pallotti Stefano, Napolioni Valerio, Pediconi Dario, Picciolini Matteo, Antonini Marco, Renieri Carlo</b> <i>Identification of candidate gene variants for the Alpaca Suri phenotype by Whole Genome Sequencing analysis</i>	022
<b>Laloë Denis, Allais-Bonnet Aurélie, Mandon-Pépin Beatrice, Jouneau Luc, Frambourg Anne, Schibler Laurent, Pailhoux Eric, Duranthon Véronique</b> <i>Integration of multi-tissues multi-omics data. An example from bovine embryos</i>	049
<b>Cosenza Gianfranco, Anzalone Antonietta, Ramunno Luigi, Gallo Daniela, Pauciullo Alfredo</b> <i>Analysis of mRNAs transcribed from the Ragusana Donkey CSN1S2 I and II genes and variability detection</i>	108
<b>Moretti Riccardo, Ponzo Enrico, Sartore Stefano, Chessa Stefania, Sacchi Paola</b> <i>Heritability of milk conductivity measured by automatic milking system in Italian Holstein cows</i>	144
<b>Crovetti Alessandro, Fabbri Maria Chiara, Tiezzi Mazzoni Della Stella Maestri Francesco, Bozzi Riccardo</b> <i>Different Optimal Contribution Selection strategies to manage inbreeding in limited size cattle breeds</i>	171
<b>Pauciullo Alfredo</b> <i>Genes expressed in the udder of Sudanese camels belonging to different ecotypes (GENEROUS)</i>	184
<b>Versace Carmine, Seidavi Alireza, Asroosh Fariborz, Cosenza Gianfranco, Gaspa Giustino, Pauciullo Alfredo</b> <i>Characterization of an Iranian buffalo population at CSN1S1 and CSN3 loci</i>	186
<b>Tiezzi Francesco, Biffani Stefano, Fabbri Maria Chiara, Bozzi Riccardo</b> <i>Genomic regions in association with stay-ability in Italian Limousine cattle</i>	187
<b>Versace Carmine, Brugiapaglia Alberto, Gaspa Giustino, Pauciullo Alfredo</b> <i>Effect of CAST and DGAT1 genetic variants on the qualitative and quantitative characteristics of Italian Mediterranean buffalo meat</i>	190
<b>Mecocci Samanta, Cesauri Mattia, Giontella Andrea, Cappelli Katia, Silvestrelli Maurizio, Verini Supplizi Andrea, Capomaccio Stefano</b> <i>Allelic frequencies of Warmblood Fragile Foal Syndrome (WFFS) gene mutation in the Italian horse population</i>	192
<b>Gaspa Giustino, Cesarani Alberto, Degano Lorenzo, Vicario Daniele, Pauciullo Alfredo, Piasentier Edi</b> <i>Genomewide association study for carcass and meat quality traits in Italian Simmental</i>	199
<b>Raspa Federica, Stoppani Nadia, Perini Francesco, Fiorilla Edoardo, Profiti Margherita, Maione Sandra, Schiavone Achille, Sacchi Paola, Lasagna Emiliano, Mugnai Cecilia, Soglia Dominga</b> <i>Multiplex Digital Expression Gene Analysis (MuDEGA) of 11 liver poultry genes with NGS approach</i>	206
<b>Bolner Matteo, Bovo Samuele, Schiavo Giuseppina, Bertolini Francesca, Ballan Mohamad, Fontanesi Luca</b> <i>Dissecting the genetic variability of major genes for pig production traits using whole genome sequencing data</i>	222
<b>Bovo Samuele, Ribani Anisa, Schiavo Giuseppina, Fornasini Daniela, Frabetti Andrea, Fontanesi Luca</b> <i>A genome wide association study for diarrhea resistance in pre-weaned rabbits identified markers useful to breed for increased animal welfare</i>	249
<b>Cortellari Matteo, Negro Alessio, Bionda Arianna, Fresi Pancrazio, Grande Silverio, Crepaldi Paola</b> <i>Genomic inbreeding distribution in Italian dairy goat farms</i>	282
<b>Vignali Giovanni, Milanese Marco, Pietrucci Daniele, Cosenza Gianfranco, Gómez Mayra, Chillemi Giovanni</b> <i>Toward a new version of medium-density Buffalo SNPchip array for Mediterranean breed</i>	303
<b>Ramirez Diaz Johanna, Bobbo Tania, Neglia Gianluca, Altieri Damiano, Gomez Mayra, Stella Alessandra, Biffani Stefano</b> <i>Using udder traits in a selection index for udder health in Italian Mediterranean Buffaloes</i>	349



<b>Piplica Aneta, Asti Vittoria, Ablondi Michela, Vlahek Ivan, Sabolek Ivana, Ostovic Mario, Mencik Sven</b> <i>Analysis of longevity performance in the different bull lines of Busha cattle in Croatia</i>	352
<b>Perini Francesco, Santomassimo Chiara, Sbarra Fiorella, Quaglia Andrea, Sarti Francesca Maria, Lasagna Emiliano</b> <i>The muzzle measurement: a new phenotype in three Italian beef cattle breeds</i>	360
<b>Claps Salvatore, Grandoni Francesco, Gallo Francesca, Sbarra Fiorella, De Matteis Giovanna, Morrison Ivan, Martucciello Alessandra</b> <i>Frequencies of CD4 and CD5 flow cytometric phenotypes in Podolica and Maremmana breeds</i>	373
<b>Dall'Olio Stefania, Schiavo Giuseppina, Bovo Samuele, Ribani Anisa, Taurisano Valeria, Berolini Francesca, Bonacini Massimo, Fontanesi Luca</b> <i>Sustainable animal breeding in a local cattle breed: a genomic strategy to redefine Reggiana Herd Book standards and breeding goals</i>	378
<b>Ablondi Michela, Cipolat-Gotet Claudio, Zanotti Andrea, Asti Vittoria, Cassandro Martino, Finocchiaro Raffaella, van Kaam Jan-Thijs, Summer Andrea, Sabbioni Alberto</b> <i>The genetic background of lactation persistency in the Italian Holstein breed</i>	385
<b>Vegni Jacopo, Sun Ying, Seemann Stefan, Zappaterra Martina, Davoli Roberta, Dall'Olio Stefania, Gorodkin Jan, Zambonelli Paolo</b> <i>RNA-seq study on Longissimus thoracis muscle of Italian Large White pigs fed extruded linseed with or without antioxidants and polyphenol</i>	388
<b>Nicolae Ioana</b> <i>Chromosomal instability in bovine induced by environmental pollution</i>	396
<b>Sartori Cristina, Mancin Enrico, Tuliozi Beniamino, Gomez-Proto Guido, Mantovani Roberto</b> <i>Breeding for fitness and health in mountains and plains: functional traits in local dual purpose Alpine cattle</i>	398
<b>Vegni Jacopo, Zappaterra Martina, Davoli Roberta, Virgili Roberta, Simoncini Nicoletta, Schivazappa Cristina, Cilloni Alessio, Zambonelli Paolo</b> <i>Genome-wide association study between single nucleotide polymorphisms of swine genome with carcass and processed ham quality traits: a preliminary study</i>	408
<b>Bagnato Alessandro, Punturiero Chiara, Bernini Francesca, Strillacci Maria Giuseppina, Milanese Raffaella, Masseroli Marco, Vergani Andrea Mario</b> <i>Use of Longitudinal Data in Genomic Management of Dairy Cattle Herds</i>	412
<b>Rossoni Attilio, Brunacci Gianluca, Coletta Angelo, Santus Enrico</b> <i>Genetic evaluation for profitability in Italian Mediterranean Buffalo</i>	443
<b>Silva Neubern de Oliveira Priscila, Gabriel Andrade Bruno, Ferreira Cardoso Tainã, Jorge Paschoal Juliana, Antonio Josahkian Luiz, Fraga Almeida Lauro, Marcondes Cintia, Barreto Mourão Gerson, Lehman Coutinho Luiz, M Reecy James, Correia de Almeida Regitano Luciana</b> <i>Differentially expressed miRNAs in the stool of Bos indicus divergent for feed efficiency</i>	518
<b>Silva Neubern de Oliveira Priscila, Gabriel Andrade Bruno, Costa Conteville Liliane, Ferreira Cardoso Tainã, Jorge Paschoal Juliana, Antonio Josahkian Luiz, Fraga Almeida Lauro, Marcondes Cintia, Barreto Mourão Gerson, Lehman Coutinho Luiz, M Reecy James, Correia de Almeida Regitano Luciana</b> <i>Microbial diversity in the stool of Bos indicus divergent for feed efficiency</i>	519
<b>Milanese Marco, Marchitelli Cinzia, Chillemi Giovanni, Crisà Alessandra</b> <i>RNA-seq profiling of milk somatic cells in four cattle breeds reared in different management systems</i>	534
<b>Bednarczyk Marek, Stadnicka Katarzyna, Grochowska Ewa</b> <i>Study on the intergenerational and transgenerational epigenetic effect of in ovo chicken embryo stimulation</i>	573
<b>Macri Martina, López Beatriz, Delgado Juan Vicente, Sanchez Antonio, López Carlos, Carmona Juan Andrés, Huertano Inés, Canales Amado, Martinez Amparo</b> <i>Genome-wide association studies for serological response to three infectious diseases in Merino of EA GROUP and Fleischschaf</i>	592
<b>Ablondi Michela, Asti Vittoria, Bigi Daniele, Bordonaro Salvatore, Cesarani Alberto, Ciampolini Roberta, Ciani Elena, Congiu Michele, Criscione Andrea, Landi Vincenzo, Macciotta Nicolò Pietro Paolo, Matassino Donato, Pilla Fabio, Portolano Baldassarre, Rillo Luigina, Sabbioni Alberto, Sardina Maria Teresa, Tumino Serena, Vasin Matteo, Mastrangelo Salvatore</b> <i>A first overview on genome-wide diversity of Italian donkey populations</i>	594
<b>Landi Vincenzo, Ciani Elena, Molina Maria Gabriella De Los Angeles, Topputi Rossana, D'Onghia Antonietta, Mangini Giuseppe, Pilla Fabio, Grande Silverio, Maggiolino Aristide, Bruno Silvia, Aloia Alessandra, Forte Lucrezia, Carrino Cristoforo, Bramante Grazia, De Palo Pasquale</b> <i>Preliminary assessment of the wool quality parameters in the Gentile di Puglia merino sheep breed</i>	595

## ANIMAL NUTRITION AND FEEDING – Monogastrics

<b>Pastorelli Grazia, Faustini Massimo, Turin Lairetta, Bianchessi Laura, Serra Valentina</b> <i>Replacement effect of dietary Vitamin E with different source of polyphenols on growth performance and Vitamin E status in post-weaning piglets</i>	138
<b>Luise Diana, Trevisi Paolo, Chalvon-Demersay Tristan, Colitti Barbara, Bertolotti Luigi</b> <i>Top-dressed arginine supplementation to lactating sows influences piglet's performance and gut bacterial and viral profile</i>	364
<b>Martello Elisa, Perondi Francesca, Bisanzio Donal, Lippi Ilaria, Meineri Giorgia, Gabriele Valeria, Bruni Natascia</b> <i>A new formulation with fermentative S-Acetyl-Glutathione and Sylibin for dogs with liver disease</i>	468
<b>Fusaro Isa, Giammarco Melania, Manetta Anna Chiara, Lanzoni Lydia, De Matos Vettori Julio, Vignone Oreste, Vignola Giorgio</b> <i>Effect of oral administration of Bacillus Subtilis C-3102 and Pichia guilliermondii to nursery piglets on some inflammatory biomarkers and growth performance at weaning</i>	564



## ANIMAL NUTRITION AND FEEDING – Ruminants

<b>Lopreiato Vincenzo, Litrenta Federica, Di Bella Giuseppa, Amato Annalisa, Cavallo Carmelo, Liotta Luigi, Chiofalo Vincenzo</b> <i>Circular bioeconomy for olive oil waste and by-product valorization: Effect of dietary enriched olive cake inclusion in Modicana cows feeding management on cheese quality</i>	152
<b>Vastolo Alessandro, Kiatti Dieu Donn�, Calabr� Serena, Bosco Antonio, Nocerino Martina, Cutrignelli Monica Isabella, Rinaldi Laura</b> <i>Mapping the spatial distribution of agro-industrial co-products and sheep livestock farming in Italy</i>	177
<b>Satta Francesca, Porcu Maria Angela, Ledda Antonello, Carta Silvia, Deiana Lisa, Cannas Antonello</b> <i>The concentration of water-soluble carbohydrates of the pasture grazed by lactating ewes might be a main cause of milk fat depression</i>	237
<b>Floridia Viviana, D'Alessandro Enrico, Lopreiato Vincenzo, Cavallo Carmelo, Chiofalo Vincenzo, Randazzo Cinzia, Russo Nunziatina, Liotta Luigi</b> <i>Influence of olive cake supplementation on the gut microbial communities in dairy cows</i>	275
<b>Liotta Luigi, Beghelli Daniela, Lupidi Giulio, Antognoni Fabiana, Lopreiato Vincenzo, Lianza Mariacaterina, Dipasquale Gianni, Tuv� Biagio, Chiofalo Vincenzo</b> <i>Characterization of polyphenols and antioxidant activity of olive by-products using for animal feed</i>	284
<b>Calabr� Serena, Primi Riccardo, Kiatti Dieu Donn�, Manganello Federico, Tiberi Cristiano, Sestili Francesco, Palombieri Samuela, Ronchi Bruno, Danieli Pier Paolo</b> <i>Nutritional characteristics of innovative feed containing by-products from high-amylose wheat</i>	333
<b>Sini Matteo, Fulghesu Fabio, Ledda Antonello, Porcu Maria Angela, Atzori Alberto Stanislao, Cannas Antonello</b> <i>Effect of two different forage sources (oat hay vs. alfalfa hay) fed during pregnancy on the performances of Sarda ewes during early lactation</i>	382
<b>Sini Matteo, Fulghesu Fabio, Ledda Antonello, Atzori Alberto Stanislao, Cannas Antonello</b> <i>Effects of three forages of different quality on voluntary intake and milk production of Sarda ewes during mid lactation</i>	384
<b>Battaglini Luca Maria, Miretti Ilaria, Giammarino Mauro, Rastello Lara, Audisio Andrea, Renna Manuela</b> <i>Effect of the feeding system on the growth performance of Holstein-Friesian calves in the pre-weaning period</i>	445
<b>Reiche Anna-Maria, Tretola Marco, Eichinger Julia, Munger Andreas, Eggerschwiler Lukas, Hutten Anna-Lena, Fumagalli Francesca, Pinotti Luciano, Dohme-Meier Frigga</b> <i>Influence of supplementing bakery by-products and cocoa bean shells to a grass-based diet on feed intake, milk production and ruminal fermentation of early-lactating dairy cows</i>	456
<b>Glorio Patrucco Sara, Rivoira Luca, Bruzzoniti Maria Concetta, Fortina Riccardo, Tassone Sonia</b> <i>Microplastics contamination in dairy cows' total mixed ration</i>	492
<b>Evangelista Chiara, Ferrari Carolina, Basiric� Loredana, Garcia Rodrigo, Bernabucci Umberto</b> <i>Effects of an electrolyte, antioxidant and osmolyte blend supplement on milk yield and cheesemaking properties in Holstein lactating cows during warm season</i>	498
<b>Edache David, Frau Adele, Fiorbelli Erica, Ghilardelli Francesca, Mossa Francesca, Gallo Antonio, Atzori Alberto Stanislao</b> <i>Effects of early gestation maternal energy restriction in dairy heifers on the growth performance, starter intake, apparent total tract digestibility and gastrointestinal weight of dairy calves</i>	503
<b>Ressa Arianna, Calasso Maria, De Angelis Maria, Martemucci Giovanni, D'Alessandro Maria Gabriella</b> <i>Ensiling of agro-industrial by-products mixtures with Lactiplantibacillus plantarum: chemical and microbiological characteristics</i>	596

## ANIMAL PRODUCTION SYSTEMS

<b>Di Grigoli Antonino, Maniaci Giuseppe, Pipi Marianna, Ponte Marialetizia, Gannuscio Riccardo, Marceddu Roberto, Dinolfo Lucia, Grimaldi Vincenzo Maria, Bonanno Adriana, Di Miceli Giuseppe</b> <i>Effects of grazing two mixtures of forage species on ewes milk production under climate change condition</i>	084
<b>Varricchio Marialuisa, Barone Carmela Maria Assunta, Fagnano Massimo, Scalera Grazia, Pacelli Corrado, Di Francia Antonio</b> <i>Can forage legumes play a role in sustainable dairy farming? Preliminary evidence on buffalo and cow herds in Campania, Southern Italy</i>	156
<b>Castiglioni Bianca, Cremonesi Paola, Silveti Tiziana, Morandi Stefano, Biscarini Filippo, Brasca Milena</b> <i>Influence of pre-milking teat preparation procedures and bedding type on the bovine milk microbiome: results of a pilot study</i>	232
<b>Trevisi Paolo, Palladino Giorgia, Luise Diana, Turrone Silvia, Correa Federico, Brigidi Patrizia, Bosi Paolo, Scicchitano Daniel, Babbi Giulia, Rampelli Simone, Candela Marco, Martelli Pier Luigi</b> <i>EU-CIRCLES project: microbial and health evolution of pigs reared in high and low sanitary condition</i>	363
<b>Marchesini Giorgio, Fossaluzza Davide, Accatino Francesco</b> <i>Perceived resilience of beef farmers importing young bulls and heifers from France</i>	525
<b>Ledda Antonello, Sechi Gian Simone, Cesarani Alberto, Atzori Alberto Stanislao, Cannas Antonello</b> <i>Estimation of the rearing cost for female replacement lambs from birth to first lactation</i>	555

## ANIMAL WELFARE, HEALTH AND BEHAVIOUR

<b>Felici Martina, Zappaterra Martina, Nanni Costa Leonardo, Padalino Barbara</b> <i>Horse transportation by air: routes, practices and welfare implications</i>	013
<b>Basiricò Loredana, Castellani Simona, Lecchi Cristina, De Palo Pasquale, Bernabucci Umberto</b> <i>Effects of milk exosomes from heat-stressed dairy cows on BME-UV1 cells</i>	105
<b>Braghieri Ada, Lambiase Claudia, Serrapica Francesco, Di Matteo Roberto, Riviezzi Amelia Maria, Napolitano Fabio, De Rosa Giuseppe</b> <i>Effect of hemp cake-based diet on laying hen behaviour</i>	158
<b>Pesenti Rossi Gaia, Barbieri Sara, Motta Ambra, Gastaldo Alessandro, Pecile Alessandro, Canali Elisabetta, Minero Michela, Martinelli Laura, Cavallaro Giacomo, Dalla Costa Emanuela</b> <i>Surgical castration: does a non-pharmacological approach improve piglet welfare?</i>	224
<b>Dalla Costa Emanuela, Tremolada Carlo, Borciani Marzia, Motta Ambra, Gastaldo Alessandro, Canali Elisabetta, Pesenti Rossi Gaia, Barbieri Sara</b> <i>Identification of potential welfare indicators for high sustainability standard in heavy pig production</i>	226
<b>Marzano Alessandra, Mellino Maria Rita, Corredù Fabio, Nudda Anna, Pulina Giuseppe</b> <i>Monitoring the behavior of purebred and crossbreed beef calves in a confined management system to improve their welfare</i>	262
<b>Raspa Federica, Valle Emanuela, Necci Alessandro, Panicià Marta, Bertocchi Lorenzo, D'Avino Nicoletta, De Palo Pasquale, Tarantola Martina, Bergero Domenico, Bordin Clara, Forte Claudio</b> <i>Welfare assessment of horses on pasture: Catria breed as case study</i>	305
<b>Steri Roberto, Barile Vittoria Lucia, Meo Zilio David, Rossi Emanuela, La Mantia Maria Chiara, De Matteis Giovanna</b> <i>Effect of the season on oxidative response in the Mediterranean Buffalo</i>	320
<b>Correa Federico, Luise Diana, Palladino Giorgia, Bosi Paolo, Scicchitano Daniel, Brigidi Patrizia, Martelli Pier Luigi, Babbi Giulia, Turrone Silvia, Candela Marco, Rampelli Simone, Trevisi Paolo</b> <i>Influence of body lesion score on oxidative status and gut microbiota of weaned pigs</i>	366
<b>Ippolito Dorotea, Tarantola Martina, Tomassone Laura, Bergagna Stefania, Miniscalco Barbara, Maisano Antonio Marco, Colombino Elena, Caruso Claudio, Sona Bruno, Gula Massimo, Biolatti Cristina, Parena Stefano, Alborali Giovanni Loris, Capucchio Maria Teresa</b> <i>Pig welfare in intensive and organic farms: an assessment by the Classyfarm system and stress biomarkers</i>	459
<b>Musco Nadia, Mastellone Vincenzo, Pacifico Eleonora, Scandurra Anna, Pinelli Claudia, Di Lucrezia Alfredo, Iommelli Piera, Tudisco Raffaella, Infascelli Federico, Lombardi Pietro</b> <i>Serum Oxytocin and social behaviour: a comparison between cows and calves in the Impossible Task Paradigm</i>	465
<b>De Matteis Giovanna, Scatà Maria Carmela, Fraulo Pasquale, Grandoni Francesco, Signorelli Federica, Reina Marianna, Di Vuolo Gabriele, Cappelli Giovanna, Vecchio Domenico</b> <i>Evaluation of differential somatic cell count by conventional flow cytometry and Fossomatic technology</i>	497
<b>Scatà Maria Carmela, De Matteis Giovanna, Grandoni Francesco, Di Vuolo Gabriele, Cappelli Giovanna, Vecchio Domenico</b> <i>Cellular immune system variations at different ages from two water buffalo farms</i>	533
<b>Lorenzi Valentina, Bertocchi Luigi, Tempini Michele, Montagnin Clara, Archetti Ivonne, Bergagna Stefania, Barberio Antonio, Vecchio Domenico, Scali Federico, Bolzoni Luca, Fusi Francesca</b> <i>An overview of calf rearing conditions in Italian dairy farms</i>	546
<b>Giammarco Melania, Fusaro Isa, Lanzoni Lydia, Manetta Anna Chiara, Chincarini Matteo, Vignone Oreste, Vignola Giorgio</b> <i>Maternal inflammatory indicators during transition period and their relationship with growth performance of newborn buffalo calves</i>	561

## BIODIVERSITY AND CONSERVATION OF GENETIC RESOURCES

<b>Chessari Giorgio, Bordonaro Salvatore, Tolone Marco, Rizzuto Ilaria, Riggio Silvia, Moscarelli Angelo, Criscione Andrea, Macaluso Vito, Portolano Baldassare, Sardina Maria Teresa, Mastrangelo Salvatore</b> <i>Genome-wide analyses elucidate the population structure of Noticiana sheep breed in the Mediterranean context</i>	063
<b>Iaffaldano Nicolaia, Rusco Giusy, Esposito Stefano, Roncarati Alessandra, Antenucci Emanuele, Lerza Letizia, Di Iorio Michele</b> <i>The first semen cryobank in Europe for the protection of Mediterranean brown trout wild populations: the results over four years within the LIFE Nat.Sal.Mo project (Molise region - South Italy)</i>	088
<b>Di Iorio Michele, Rusco Giusy, Antenucci Emanuele, Lerza Letizia, Zaniboni Luisa, Madeddu Manuela, Iaffaldano Nicolaia</b> <i>Italian semen cryobank of autochthonous chicken breeds: the case study of Siciliana breed</i>	089
<b>Pallaoro Margherita, Di Giancamillo Alessia, Modena Silvia, Di Giancamillo Mauro, Aidos Lucia, Mazzola Silvia, Costa Annamaria, Buio Eleonora, Beretta Ernesto, Rossi Raffaella</b> <i>Growth performances and carcass characteristics of Nero di Lomellina and commercial hybrid pigs: preliminary data</i>	114
<b>Madeddu Manuela, Zaniboni Luisa, Marelli Stefano Paolo, Tognoli Cristina, Di Iorio Michele, Iaffaldano Nicolaia, Mangiagalli Maria Grazia, Cerolini Silvia</b> <i>Egg production traits during ageing in the chicken Italian breed Mericanel della Brianza</i>	120
<b>Tolone Marco, Sardina Maria Teresa, Lasagna Emiliano, Criscione Andrea, Rizzuto Ilaria, Riggio Silvia, Moscarelli Angelo, Macaluso Vito, Di Gerlando Rosalia, Portolano Baldassare, Cassandro Martino, Mastrangelo Salvatore</b> <i>High-resolution genomic analysis of Sicilian chicken populations</i>	131

<b>Cresta Eleonora, Carbonari Fausto, Dipasquale Daniele, Lazzari Filippo, Manganello Federico, Danieli Pier Paolo</b> <i>The artificial insemination for the conservation of the Sicilian honey bee (<i>Apis mellifera siciliana</i>)</i>	136
<b>Liotta Luigi, Lopreiato Vincenzo, Amato Annalisa, Cavallo Carmelo, Tomasella Cristina, Bionda Arianna, Scalisi Marco, Chiofalo Vincenzo</b> <i>Phenotypic characterization of an endangered indigenous goat: Comune di Sicilia ecotype</i>	140
<b>Di Rosa Ambra Rita, Accetta Francesca, Liotta Luigi, Aliquò Doriana, Chiofalo Vincenzo</b> <i>External egg quality from Siciliana, a native chicken breed of the Sicilian Region (Italy) reared under free range conditions</i>	142
<b>Chiofalo Vincenzo, Lopreiato Vincenzo, Amato Annalisa, Cavallo Carmelo, Scalisi Marco, Florida Viviana, Liotta Luigi</b> <i>Morphological description of Montanina cattle, an old Sicilian (Italy) indigenous ecotype</i>	162
<b>Calabrò Serena, Kiatti Dieu Donné, Vastolo Alessandro, Peretti Vincenzo, Di Paolo Marika, Ciotola Francesca</b> <i>Management of Bagnolese sheep in Campania Region: animal and pasture characteristics</i>	176
<b>Ressaissi Yosra, Eufemi Elisa, Palazzo Mariantonietta, Carta Antonello, Lazzari Barbara, Tixier-Boichard Michèle, Stella Alessandra, Ajmone Marsan Paolo, Colli Licia</b> <i>Mitochondrial control-region variation in European local sheep</i>	179
<b>Taurisano Valeria, Bovo Samuele, Utzeri Valerio Joe, Ribani Anisa, Schiavo Giuseppina, Fontanesi Luca</b> <i>Genotyping-by-sequencing of honey derived environmental DNA can retrieve information on the <i>Apis mellifera</i> subspecies</i>	233
<b>Schiavo Giuseppina, Bovo Samuele, Bertolini Francesca, Ribani Anisa, Taurisano Valeria, Dall'Olio Stefania, Bonacini Massimo, Fontanesi Luca</b> <i>Comparative analysis of heterozygosity-enriched regions in Reggiana and Modenese genomes provides information on local cattle breed specific variability</i>	246
<b>Ribani Anisa, Bovo Samuele, Schiavo Giuseppina, Taurisano Valeria, Bertolini Francesca, Fontanesi Luca</b> <i>The Agouti locus and coat colour in cattle: evaluating ASIP gene variability in local and cosmopolitan cattle breeds</i>	253
<b>Marelli Stefano Paolo, Zaniboni Luisa, Madeddu Manuela, Strillacci Maria Giuseppina, Cerolini Silvia</b> <i>Giant Grey rabbit breed: a preliminary study on reproductive traits</i>	291
<b>Bionda Arianna, Negro Alessio, Cortellari Matteo, Fresi Pancrazio, Grande Silverio, Crepaldi Paola</b> <i>Different exposure to heat waves in Italian small ruminant populations</i>	309
<b>Viola Paolo, Primi Riccardo, Danieli Pier Paolo, Ronchi Bruno, Bozzi Riccardo, Lucentini Livia</b> <i>The Apennine Rock partridge (<i>Alectoris graeca graeca</i>) a taxon to conserve. But what genes and how to keep them ex situ?</i>	340
<b>Ajmone Marsan Paolo, Ressaissi Yosra, Williams John, Stella Alessandra, Chillemi Giovanni, Milanese Marco, Carta Antonello, Valentini Riccardo, Tabet Aoul Nacera, Gaouar Semir Bechir Suheil, Zitouni Ghania, Tixier-Boichard Michèle, Loywyck Valérie, Benjelloun Badr, Jerrari Chaouki, Jannoune Abderrahmane, Ben Larbi Manel, M'Hamdi Naceur, Khemiri Hichem, El-Hentati Haifa</b> <i>SCALA-MEDI: investigation of genetic and epigenetic adaptation mechanisms in North African livestock</i>	449
<b>Morales Veronica, Tejerina Emilse, Cappello Villada Juan, De la Rosa Sebastian, Revidatti Maria</b> <i>Influence of age on testicular size and libido in creole rams from West of Formosa (Argentina)</i>	475
<b>Cappello Villada Juan, Feldmann Abel, Echazarreta Laura, Morales Veronica, Tejerina Emilse, Revidatti Maria</b> <i>Morphological description of Angora Chaqueño goats</i>	476
<b>Somenzi Elisa, RamirezDiaz Johanna, Barbato Mario, Armstrong Eileen, Villalobos-Cortès Axel, Gutierrez Arnulfo, Aguiere Edgar Lenin, Echavarria Luisa, Utsonomia Yuri, Garcia Fernando, Poli Mario, Sonstegard Tad, Colli Licia, Negrini Riccardo, Ajmone Marsan Paolo</b> <i>Genetic diversity and population structure in creole cattle</i>	508
<b>Zambotto Valeria, Soglia Dominga, Dabbou Sihem, Gariglio Marta, Cappone Eleonora, Sartore Stefano, Bongiorno Valentina, Gai Francesco, Schiavone Achille</b> <i>COVARAP project, valorization and conservation of Piedmont local chicken breeds. Egg production performance in different farms</i>	544

## COMPANION ANIMALS

<b>Tateo Alessandra, Zappaterra Martina, Nanni Costa Leonardo, Felici Martina, Ricci-Bonot Claire, Houpt Katherine, Padalino Barbara</b> <i>House soiling: is it a common problem in Italian cats?</i>	040
<b>Armone Rosangela, Oteri Marianna, Chiofalo Vincenzo, Lo Presti Vittorio, Chiofalo Biagina</b> <i>Effects of extrusion processing on pomegranate peel polyphenols in dry pet food</i>	077
<b>Di Rosa Ambra Rita, Oteri Marianna, Cucinotta Salvatore, Lo Presti Vittorio, Chiofalo Biagina</b> <i>Artificial senses for evaluation of feces protein catabolites in guide dogs fed different diets during training</i>	153
<b>Florida Viviana, D'Alessandro Enrico, Lopreiato Vincenzo, Pino Alessandra, Chiofalo Biagina, Randazzo Cinzia, Liotta Luigi</b> <i>The gut microbiota differs between working shepherd dogs bred in pastoral condition and companion dogs</i>	157
<b>Scarsella Elisa, Jospin Guillaume, Stefanon Bruno, Ganz Holly</b> <i>Comparison of second and third generation sequence technologies for microbiome studies in dogs</i>	196
<b>Marelli Stefano Paolo, Strillacci Maria Giuseppina</b> <i>Siberian Husky canine breed: a preliminary study on breed's morphology evolution</i>	298

## ENVIRONMENTAL FOOTPRINT OF LIVESTOCK SYSTEMS

<b>Lunesu Mondina Francesca, Sau Paola, Guiso Maria Francesca, Edache David, Khater Stephanie, Manca Elisabetta, Nudda Anna</b> <i>Effect of short-term cooling on animal performance and physiological response of lactating Saanen goats during the summer season</i>	017
<b>Rossi Chiara, Grossi Giampiero, Lacetera Nicola, Vitali Andrea</b> <i>Cradle-to-grave Carbon Footprint of dairy products of local supply chain</i>	219
<b>Correddu Fabio, Caratzu Maria Francesca, Lunesu Mondina Francesca, Pulina Giuseppe</b> <i>Use of brewery spent grain in ruminant nutrition to reduce environmental impact of feed: a metanalysis</i>	287
<b>Negrini Riccardo, Morelli Lorenzo</b> <i>Applying the Functional Unit Approach to estimate the environment footprint of Italian fresh milk</i>	511
<b>Fulghesu Fabio, Sini Matteo, Ledda Antonello, Porcu Maria Angela, Nieddu Lidia, Cannas Antonello, Atzori Alberto Stanislao</b> <i>Effects of an essential oil and polyphenol blend for ruminants diets on enteric methane emissions</i>	560

## EQUIDS PRODUCTION

<b>Cavallini Damiano, Canestrari Giorgia, Mariella Jole, Lanci Ailai, Freccero Francesca, Ellero Nicola, Castagnetti Carolina, Raspa Federica, Valle Emanuela</b> <i>Evaluation of fiber digestibility in mares during the peripartum</i>	311
<b>Sabbioni Alberto, Ablondi Michela, Mariani Elena, Asti Vittoria</b> <i>Evaluation of objective measurement of coat colors in horses</i>	319
<b>Cosentino Carlo, Ragni Marco, Tarricone Simona, Freschi Pierangelo, Paolino Rosanna</b> <i>Evolution of colostrum characteristics in Murgesse mares during the first 48 hours after foaling</i>	567

## FREE COMMUNICATIONS

<b>Tarricone Simona, Colonna Maria Antonietta, La Gioia Giuseppe, Lacitignola Massimo, Sorrenti Michele, Nardelli Grazia, Cardone Giuseppe, Campanile Domenico, Ragni Marco</b> <i>Preliminary result of Argos-based satellite telemetry on migration of 4 song thrushes (<i>Turdus philomelos</i>) captured in Apulia Region</i>	428
<b>Coticelli Alessio, di Vuolo Gabriele, Longobardi Valentina, de Nicola Donato, Chirone Roberto, Capitano Fabian, Neglia Gianluca</b> <i>Life Cycle Assessment (LCA) of an Italian Mediterranean Buffalo Farm: comparison between three feeding strategies</i>	430
<b>Minozzi Giulietta, De Iorio Maria Grazia, Abbruscato Pamela, Stella Alessandra, Pagnacco Giulio, Biffani Stefano, Tiezzi Francesco</b> <i>Preliminary investigation of microbiome in Italian Honeybees (<i>Apis mellifera</i>)</i>	437
<b>Gabbianelli Federica, Pietrucci Daniele, Brancazi Luca, Stasolla Francesca Romana, Romagnoli Giuseppe, Pastura Giancarlo, Milanese Marco, Chillemi Giovanni</b> <i>Understanding Medieval livestock diversity in Viterbo's Tuscia using aDNA data</i>	495
<b>Rassu Salvatore Pier Giacomo, Congiu Michele, Mazza Antonio, Fenu Antonio, Rubattu Roberto, Lai Roberto, Tedde Tiziana, Salza Sara, Saba Sara</b> <i>Vermicompost production by slaughterhouse waste</i>	582

## INSECTS

<b>Dimatteo Salvatore, Errico Simona, Sangiorgio Paola, Spagnoletta Anna, Moliterni Stefania, Verardi Alessandra, Baldacchino Ferdinando, Balducci Roberto</b> <i>Tenebrio molitor as a valuable tool for valorisation of agro-industrial by-products in the circular bioeconomy perspective</i>	068
<b>Vozzo Simone, Addeo Nicola Francesco, Lotito Daria, Mastellone Vincenzo, Lombardi Pietro, Piccolo Giovanni, Bovera Fulvia</b> <i>Hemolymph oxidative stress profile of black soldier fly larvae reared on four different substrates</i>	216
<b>Danieli Pier Paolo, Romagnoli Lorenzo, Gelli Alessio, Primi Riccardo, Ronchi Bruno, Sezzi Erminia</b> <i>Growth performances of Black Soldier Fly larvae fed on food chain by-products</i>	326
<b>Pavesi Martina, Cesari Valentina, Colombini Stefania, Adani Fabrizio, D'Imporzano Giuliana, Jucker Costanza, Papa Gabriella, Savoldelli Sara, Scaglia Barbara, Toschi Ivan</b> <i>Chemical composition and nutritive value of black soldier fly larvae reared on municipal bio-waste</i>	375
<b>Tignani Maria Vittoria, Lira de Medeiros Adja Cristina, Secci Giulia, Perioli Riccardo, Cacchiarelli Chiara, Parisi Giuliana</b> <i>Is under-vacuum packaging a suitable method for <i>Hermetia illucens</i> and <i>Tenebrio molitor</i> larvae storage?</i>	517
<b>Belperio Simona, Cattaneo Arianna, Nannoni Eleonora, Martelli Giovanna, Sardi Luca, Dabbou Sihem, Meneguz Marco</b> <i>Effect of diet composition on temperature development in black soldier fly (<i>Hermetia illucens</i>) larvae rearing</i>	531



## MEAT PRODUCTION

<b>Marino Rosaria Maria, della Malva Antonella, De Palo Pasquale, Caroprese Mariangela, Ciliberti Maria Giovanna, di Corcia Martina, Maggiolino Aristide, Santillo Antonella, Sevi Agostino, Albenzio Marzia</b> <i>Nutritional Profile of Donkey meat as affected by muscle and aging Time</i>	210
<b>D'Ambra Katia, Minelli Giovanna, Macchioni Paolo, Lo Fiego Domenico Pietro</b> <i>Effects of pig dietary omega6/omega3 ratio on fatty acid profiles and nutritional indices of lipid depots</i>	330
<b>De Marzo Davide, Tufarelli Vincenzo, Xiong Youling</b> <i>Use of microalgae oil in lamb nutrition and its implications for meat quality</i>	502

## MILK PRODUCTION

<b>Martini Mina, Sodi Irene, Salari Federica, Degl'Innocenti Andrea, Fanelli Diana, Camillo Francesco</b> <i>Qualitative characteristics of mule's milk during lactation</i>	038
<b>Tumino Serena, Di Trana Adriana, Valenti Bernardo, Bordonaro Salvatore, Avondo Marcella, Di Gregorio Paola</b> <i>Capillary electrophoresis milk protein profile as effect of CSN1S1 polymorphism and diet energy level in Derivata di Siria goats</i>	098
<b>Franceschi Piero, Malacarne Massimo, Cipolat-Gotet Claudio, Evangelista Chiara, Basiricò Loredana, Bernabucci Umberto, Summer Andrea</b> <i>Effect of environmental factors on content and distribution of Ca, P and Mg in bovine milk</i>	322
<b>Florio Marco, Ianni Andrea, Bennato Francesca, Grotta Lisa, Martino Giuseppe</b> <i>Quality comparison of Teramana goat milk with the Saanen breed</i>	376
<b>Fulghesu Fabio, Sini Matteo, Ledda Antonello, Porcu Maria Angela, Cannas Antonello, Atzori Alberto Stanislao</b> <i>Effects of heat stress on Sarda dairy sheep performances in mid lactation</i>	390
<b>Santori Davide, De Grossi Luigi, Sezzi Erminia</b> <i>Biomolecular investigation for Mycobacterium avium subspecies paratuberculosis in raw and pasteurized milk</i>	539

## POULTRY AND RABBIT PRODUCTION

<b>Mattioli Simona, Castellini Cesare, Collodel Giulia, Sebastiani Bartolomeo, Brecchia Gabriele, Angelucci Elisa, Dal Bosco Alessandro</b> <i>The Prima Omega Rabbit project: preliminary results on the impact of dietary linseed on phytoestrogens metabolism in rabbit bucks</i>	025
<b>Tufarelli Vincenzo, Colonna Maria Antonietta, Tedone Luigi, Selvaggi Maria, Tarricone Simona, Ragni Marco, Laudadio Vito</b> <i>Dietary hemp seed cake in slow-growing broilers: effects on productive traits, antioxidant status and intestinal histomorphology</i>	290
<b>Sezzi Erminia, Barbaresi Silvia, Santori Davide, Battisti Sabrina, Di Donato Francesca, Vitali Andrea, De Smet Stefaan, Mancini Simone</b> <i>Does an insect-based feed formulation in laying hens affect the antioxidant potential and fatty acid profile of the eggs?</i>	545

## PRECISION LIVESTOCK FARMING

<b>Manganelli Giorgia, Intini Massimiliano, Bernabucci Umberto</b> <i>Integration of a health monitoring system using wearable sensors in the management protocol of female calves</i>	094
<b>Evangelista Chiara, Basiricò Loredana, Colantoni Andrea, Bernabucci Umberto</b> <i>Use of NIRS to predict diet characteristics and digestibility in dairy cows</i>	111
<b>Aquilani Chiara, Confessore Andrea, Fabbri Maria Chiara, Staglianò Nicolina, Padovan Gloria, Moriondo Marco, Dibari Camilla, Pugliese Carolina</b> <i>Virtual Fencing for the management of Limousine cattle at pasture: effects on animals' activity budgets as compared to traditional grazing management</i>	182
<b>Danieli Pier Paolo, Cresta Eleonora, Carbonari Fausto, Lazzari Filippo, Manganello Federico</b> <i>Precision beekeeping systems as swarm control tools: a case study</i>	207
<b>Meo Zilio David, Steri Roberto, Cenci Francesco, Bianconi Giovanna, Negretti Paolo</b> <i>Validation of the Body Condition Score measured by a Specific App for Image Analysis in Lactating Mediterranean Buffalo</i>	341
<b>Barbato Mario, Somenzi Elisa, Nassisi Paola, Rullo Alessandro, Dellacasa Chiara, Chillemi Giovanni, Milanesi Marco, Valentini Riccardo, Donda Mauro, Ajmone Marsan Paolo</b> <i>SEBASTIEN: a Decision Support System for the livestock sector built on environmental, sectoral and geospatial data</i>	450



<b>Pinto-Pinho Patrícia, Fardilha Margarida, Pinto-Leite Rosário, Colaço Bruno</b> <i>An overview of the rabbit spermatozoa proteome</i>	565
<b>Pinto-Pinho Patrícia, Fardilha Margarida, Pinto-Leite Rosário, Colaço Bruno</b> <i>An assessment of the deamidation and glycosylation sites of rabbit spermatozoa proteins</i>	566

## QUALITY OF ANIMAL PRODUCTS AND FOOD PROCESSING

<b>Russo Claudia, Cecchi Francesca, Marzoni Fecia di Cossato Margherita, Coppola Francesca, Minieri Sara</b> <i>Meat quality of roe deer hunted in Tuscany: preliminary results</i>	056
<b>Contò Michela, Ferrari Carolina, Renzi Gianluca, Evangelista Chiara, Basiricò Loredana, Bernabucci Umberto, Failla Sebastiana</b> <i>Comparison of sialic acids content in cow and buffalo milk in different season</i>	102
<b>Tamburini Alberto, Bonizzi Serena, Palladini Nicola, Mondini Sara, Brasca Milena</b> <i>CHEESEMINE: "from forage to consumer" valorization project of cheese ripening in mines</i>	104
<b>Vetturini Tiziana, Basiricò Loredana, Evangelista Chiara, Contò Michela, Renzi Gianluca, Bernabucci Umberto</b> <i>Effect of different feeding management on the fatty acid profile of buffalo milk</i>	106
<b>Lambiase Claudia, Braghieri Ada, Barone Carmela Maria Assunta, Pacelli Corrado, Riviezzi Amelia Maria, Napolitano Fabio, De Rosa Giuseppe</b> <i>Effects of the use of spirulina (Arthrospira platensis) in buffalo feeding on sensory quality of mozzarella cheese</i>	155
<b>Iammarino Marco, Summa Simona, Lo Magro Sonia, D'Antini Pasqualino, La Salandra Giovanna, Labela Gianfranco, Nobili Gaia, Basanisi Maria Grazia, Muscarella Marilena</b> <i>The effect of nitrite treatment of tuna on the biogenic amines level and total microbial count during storage: a preliminary study</i>	161
<b>Gagliano Mara Antonia, Soglia Francesca, Zampiga Marco, Sirri Federico, Petracci Massimiliano</b> <i>Comparison of meat quality traits among chickens'genotypes with different growth-rates</i>	230
<b>Gagliano Mara Antonia, Baldi Giulia, Soglia Francesca, Cartoni Mancinelli Alice, Petracci Massimiliano</b> <i>Qualitative characterization of chicken meat according to the main Italian commercial categories</i>	235
<b>Santillo Antonella, Ciliberti Maria Giovanna, Ciampi Francesco, Luciano Giuseppe, Natalello Antonio, Menci Ruggero, Caccamo Margherita, Marino Rosaria, della Malva Antonella, Caroprese Mariangela, Sevi Agostino, Albenzio Marzia</b> <i>Antioxidant activity of cheese obtained from dairy cow fed tannins</i>	256
<b>Barbera Salvatore, Glorio Patrucco Sara, Brugiapaglia Alberto, Tassone Sonia, Mabrouki Sabah</b> <i>Instrumental measurements of juiciness of meat and plant-based burgers</i>	486
<b>Tavaniello Siria, Ongwech Acaye, Kaaya Archileo N., Wu Mengjun, Palazzo Marisa, Maiorano Giuseppe</b> <i>Effect of intramuscular vitamin E injection on Polycyclic aromatic hydrocarbons formation in cooked meat of broiler chickens reared under tropical climatic conditions</i>	575

## SUSTAINABLE LIVESTOCK FARMING

<b>Lazzari Andrea, Brambilla Massimo, Giovinazzo Simone, Bisaglia Carlo</b> <i>Rationing automation in cattle farming: a further path towards sustainability</i>	135
<b>Cremonesi Paola, Gazzola Alessandra, Castiglioni Bianca, Biscarini Filippo, Morandi Stefano, Piccinini Renata, Brasca Milena</b> <i>Influence of the use of a product based on bacteriocins from Lactococcus lactis subsp. cremoris in pre- and post- milking teat treatment on bovine milk microbiota</i>	218
<b>Fierro Angelo, Forte Annachiara, Di Vuolo Gabriele, Cappelli Giovanna, De Carlo Esterina, Giampietro Mario, Lorenzi Valentina, Lecchi Cristina, Ambra Chiara Denise, Serrapica Maria, Vecchio Domenico</b> <i>Multi-scale integrated accounting of buffalo farms' metabolism</i>	231
<b>Visentin Giulio, Buonaiuto Giovanni, Cavallini Damiano, Finocchiaro Raffaella, Cassandro Martino, Costa Angela, Formigoni Andrea</b> <i>Validation of genomic breeding values for feed efficiency using field data: experience from UNIBO experimental herd</i>	277
<b>Severini Simone, Biagini Luigi, Dipasquale Daniele, Danieli Pier Paolo</b> <i>First evaluation of economic performances on farms adopting environmentally friendly practices. The case of PLANT-B protocol in Italy</i>	304
<b>Caré Sara, Maluccio Saverio, Marchesin Giuliano, Mellano Simone, Pirlo Giacomo, Negrini Riccardo, Migliorati Luciano, Montanari Claudio, Menghi Alberto</b> <i>Development and implementation of a result-based funding mechanism for carbon farming in EU mixed crop livestock systems</i>	425
<b>Negrini Riccardo, Trevisi Erminio, Minuti Andrea, Piccioli-Cappelli Fiorenzo, Bani Paolo, Cattaneo Luca, Barbato Mario, Passamonti Matilde, Williams John Lewis, Ajmone Marsan Paolo, Consortium LEO</b> <i>LEO: big data zootechnici per la consulenza aziendale e la ricerca</i>	448
<b>Ferronato Giulia, Caprarulo Valentina, Simonetto Anna, Gilioli Gianni, Bani Paolo</b> <i>Carbon Footprint of dairy milk and milk protein production: case study from Po Valley (Italy)</i>	558

# General Information

## Congress dates

13<sup>th</sup> June (Tuesday) – 16<sup>th</sup> June (Friday) 2023

## Venue

Torre Cintola Resort, Monopoli (BA)

## Parking

Congress participants will have the opportunity to park free of charge inside Torre Cintola Resort.

## Secretariat and Registration desk times during the Congress

<b>Tuesday 13<sup>th</sup> June</b>	<b>14.00 – 19.00</b>
<b>Wednesday 14<sup>th</sup> June</b>	<b>08.00 – 19.00</b>
<b>Thursday 15<sup>th</sup> June</b>	<b>08.00 – 19.00</b>
<b>Friday 16<sup>th</sup> June</b>	<b>08.00 – 12.00</b>

## Registration

The registration fee includes:

- Admission to the Scientific Sessions and the Exhibition Area
- Conference kit
- Abstract collection, available online as a supplement of the “Italian Journal of Animal Science”
- Opening Ceremony and Welcome Cocktail on Tuesday 13<sup>th</sup> June
- Apulian typical dinner on Wednesday 14<sup>th</sup> June at Torre Cintola Resort
- Coffee breaks and lunches as shown in the programme
- Certificate of attendance

## Badge

All participants will receive a badge, which they are requested to wear during all Congress activities to be admitted to the scientific sessions and to the social programme.

## Tyvek bracelets

All participants and all the registered accompanying persons will dress the bracelet for getting access to coffee breaks, welcome cocktail, lunches and Apulian dinner.

## Language

The official languages of the Congress are English and Italian.  
Slides for oral presentations and posters are in English only.  
Simultaneous translation will not be provided.

## WiFi

Free WiFi connection at the Congress venues: Torre Cintola  
Password: torrecintola

## Mobile phones, photo and video

Participants are requested to keep their mobile phones switched off (or set to silent mode) in the session rooms. Photography and video recordings are strictly prohibited during all scientific sessions.

## Opening Ceremony

The Opening Ceremony will take place on Tuesday 13<sup>th</sup> June 2023 at Torre Cintola Resort and will be followed by a Welcome Cocktail.

### Working lunches

On Wednesday 14<sup>th</sup> and Thursday 15<sup>th</sup> June working lunches will be served from 13.30 to 14.30 at Torre Cintola Resort.

### Social dinner

The Social Dinner will be held on the evening of Thursday 15<sup>th</sup> June at Tenuta Monacelle, Fasano (BR). A transfer service by private bus will be organized, with departure at 20.00 from Torre Cintola Resort.

### Provided services

A biberon-feeding service is guaranteed during the Congress half an hour before lunch.

### 3<sup>rd</sup> edition of the “ASPA Young Researchers Competition – Oral Presentations”

To promote and stimulate young researchers, the Animal Science and Production Association (ASPA), in collaboration with the Italian Journal of Animal Science (IJAS) and with the economic support of the Organizing Committee of the 25<sup>th</sup> ASPA Congress (2023), organizes the third edition of the “ASPA Young Researchers Competition - Oral Presentations” with the aim to select the best 5 papers as oral communications at the 25<sup>th</sup> ASPA Congress. The awarding of the best communications is scheduled for the 15<sup>th</sup> June at 18.00.

### 3<sup>rd</sup> edition of the “ASPA Young Researchers Competition – Posters”

To promote and stimulate young researchers, the Animal Science and Production Association (ASPA), in collaboration with the Italian Journal of Animal Science (IJAS) and with the economic support of the Organizing Committee of the 25<sup>th</sup> ASPA Congress (2023), organizes the third edition of the “ASPA Young Researchers Competition - Poster Presentations” with the aim to select the best 5 papers as Poster communications at the 25<sup>th</sup> ASPA Congress. The awarding of the best communications is scheduled for the 15<sup>th</sup> June at 18.00.

### Photo Exhibition

Photos of marginal areas, rural environments, native breeds of Southern Italy (Apulia and Molise) will be displayed in the conference rooms.

Authors: **Pilla Fabio, Colarocchio Nunzio, Rocco Giorgio, Geraci Luigi**

### Monopoli

Monopoli (from the Greek “monos” and “polis”) means unique city and certainly it is still faithful to its name.

Indeed, the city retains intact the charm that comes from its history and traditions.

A city of nearly 50,000 inhabitants, 43 km southeast of Bari on the Adriatic coast. It borders with the towns of Polignano a Mare, Conversano, Castellana-Grotte, Alberobello and Fasano.

Monopoli stretches along 15 km of low, indented coastline, with numerous coves with evocative names and long sandy shores that are a safe landing place for tourists for their vacations.

The medieval center, characterized by churches and convents, rises again today thanks to major restoration works, such as the complex of fortifications (walls and castle), the Romanesque Church of Santa Maria Amalfitana and the sumptuous Baroque Cathedral. The rural territory, consisting of as many as 99 districts, covers an area of more than 150 square kilometers of great natural, scenic and cultural interests.

There are in fact numerous fortified “Masserie” (centers for agricultural activities) also dating back to Roman times, rock churches, “trulli”, beautiful neoclassical villas and farmhouses.

Monopoli’s major tourist attractions include Roman (Egnatia), Byzantine (rock frescos), Longobard, Norman (farmhouses, masserie, fortresses) and Hispanic (Castle of Charles V) monuments.

## Shuttle bus to and from airport

### From Airport to Monopoli:

Monday 12<sup>th</sup> at 19:00

Tuesday 13<sup>th</sup> June at 12:00 and 18:00

Wednesday 14<sup>th</sup> June at 12:00

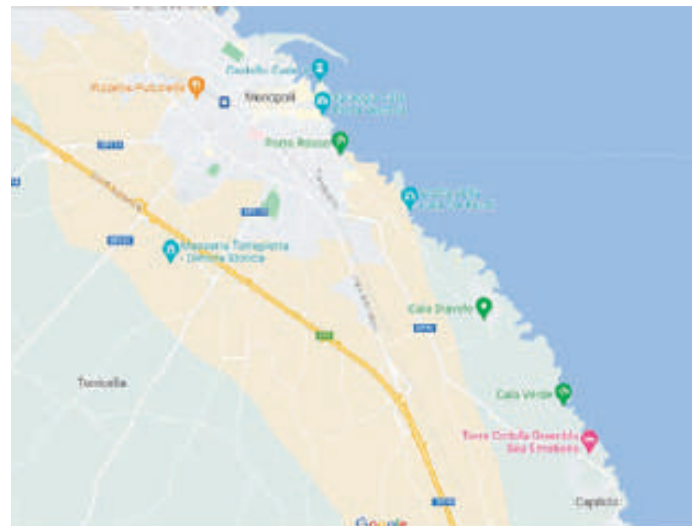
### From Monopoli to Airport:

Thursday 15<sup>th</sup> June at 16:00

Friday 16<sup>th</sup> June at 14:00

Please reserve until the 10th June

## Where to have dinner



It is possible to reserve the dinner for Tuesday and Thursday night, directly in Torre Cintola Resort. The resort is located in “Capitolo”, a locality in the municipality of Monopoli, in the metropolitan city of Bari. It is known to be one of the main tourist areas of Monopoli, as well as its seaside resort per excellence.

During the summer period, it is a place full of clubs and beach lidos, active even in the evening, which can offer tourists the opportunity to have lunch and dinner directly on the beach.

It is located 3 km far away from Monopoli City center which is also full of restaurants and clubs that can offer lunches and dinners of all kinds, types and tastes.

For participants interested to dinner on Monday night or for the lunch of Friday, it is possible to reserve directly in Torre Cintola Resort.

## Bus Service

To reach Monopoli during the ASPA Congress it will be possible to get on the city bus just at the entrance of Torre Cintola Resort from 8.00 to 23.00 every 45 minutes. On the registration desk it is possible to have the exact city bus timetable.

## Other Services

Details on other services provided by Torre Cintola Resort (swimming pool, beach, etc.) can be obtained from the reception.







25<sup>th</sup> Congress

# ASPA2023

**Animal Production Science:  
innovations and sustainability  
for future generations**

## ORGANIZING SECRETARIAT



MEETING PLANNER

Provider ECM Nazionale Accreditato n. 2516

Via Divisione Paracadutisti Folgore, 5 - 70125 BARI

TEL. 080.9905360 - FAX 080.9905359 - 080.2140203

E-mail: [info@meeting-planner.it](mailto:info@meeting-planner.it) - [www.meeting-planner.it](http://www.meeting-planner.it)

SISTEMA DI GESTIONE  
QUALITÀ CERTIFICATO

CQY  
CERTIQUALITY

UNI EN ISO 9001:2015