

## SCIENTIFIC PROGRAMME

### MONDAY – MAY 20<sup>th</sup> 2024

9.00 – 10.00	<b>Welcome coffee and Registration</b>
10.00 - 10.30	<b>Opening Ceremony and Welcome addresses</b> <i>Giovanni Verzellesi, Prorector of UNIMORE</i> <i>Alessandro Ulrici, Deputy Director of the Department of Life Sciences, UNIMORE</i> <i>Mariafrancesca Sidoli, Councillor for Productive Activities of the Municipality of Reggio Emilia</i> <i>Fabio Licciardello, Chair of the Conference</i>
	<b>SESSION: SHELF LIFE ASSESSMENT AND PREDICTION</b> <i>Chair: Elena Torrieri, Carlos A. Fuenmayor Bobadilla</i>
10.30 – 11.00	<b>KEYNOTE LECTURE</b> <b>Packaging design for reducing food waste</b> <i>Helén Williams, Karlstad University, Sweeden</i>
11.00 – 11.20	<b>Shelf life extension of protein-fortified gluten-free fresh pasta by modified atmosphere packaging</b> <i>(Kongkaew N., Jinakap P., Tongdeesoontorn W., Homthawornchoo W.)</i> <i>Wantida Homthawornchoo, Mae Fah Luang University, Thailand</i>
11.20 – 11.40	<b>Smell fish freshness by e-nose</b> <i>(Grassi S., Benedetti S., Pianezzola A., Ubaldi G., Buratti S.)</i> <i>Silvia Grassi, University of Milan, Italy</i>
11.40 – 12.00	<b>Assessing the impact of multilayer recyclable PE-based materials on ground coffee preservation through accelerated shelf-life testing</b> <i>(Bassi V., Gobbi S., Ponzelletti M., Buratti S., Benedetti S., Limbo S.)</i> <i>Vittorio Bassi, University of Milan, Italy</i>
12.00 – 12.20	<b>Foodomics for quality and safety and shelf life evaluation of high-pressure processed European sea bass fillets</b> <i>(Anjos L., Pinto P., Tsironi T., Sousa C., Loukissas A., Dimopolous G., Taoukis P., Canário A., Power D.)</i> <i>Liliana Anjos, Centre of Marine Sciences, Portugal</i>
12.20 – 12.40	<b>Rapid and chemical-free method for monitoring quality of dried shrimp using machine learning-assisted hyperspectral imaging</b> <i>(Siripatrawan U., Makino Y.)</i> <i>Ubonrat Siripatrawan, Chulalongkorn University, Thailand</i>
12.40 – 13.00	<b>Volatile organic compounds associated with spoilage bacteria isolated from blue mussels (<i>Mytilus edulis</i>) packed under modified atmospheres</b> <i>(Ratnawati S.E., Kuuliala L., Cnockaert M., Vandamme P., Walgraeve C., Demeestere K., Devlieghere F.)</i> <i>Susana Endah Ratnawati, Ghent University, Belgium</i>
13.00 – 14.30	<b>Lunch &amp; Poster Session</b>
	<b>SESSION: SHELF LIFE ASSESSMENT AND PREDICTION</b> <i>Chair: Nattinee Bumbudsanpharoke, Andrea Pulvirenti</i>
14.30 – 14.50	<b>A food requirement-driven approach for packaging design: starting from food needs and target shelf-life to develop tailor-made solutions</b> <i>(Pignères E., Coffigniez F., Gaucel S., Angellier-Coussy H., Guillard V.)</i> <i>Emma Pignères, University of Montpellier, France</i>
14.50 – 15.10	<b>Quantification of microbial spoilage in packaged foods based on in situ detection of quorum sensing autoinducers acyl-homoserine lactones and autoinducer-2 by whole cell bioreporters</b> <i>(Ionita C., Cooksey K.)</i> <i>Claudia Ionita, Clemson University, USA</i>
15.10 – 15.30	<b>Accelerated photostability testing using filtered xenon-arc chambers</b> <i>Oliver D. Rahaeuser, Atlas MTT GmbH, Germany</i>
15.30 – 15.50	<b>The shelf life dilemma: facing mismatching sensory indicators in food undergoing oxidation</b> <i>(Alongi M., Lopriore M., Calligaris S., Manzocco L., Nicoli M.C.)</i> <i>Marilisa Alongi, University of Udine, Italy</i>
15.50 – 16.45	<b>Coffee Break &amp; Poster Session</b>
16.45	<b>Visit at food companies (<i>Italpizza</i> or <i>Villani Salumi</i>)</b>

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### TUESDAY – MAY 21<sup>st</sup> 2024

SESSION: INNOVATIVE TECHNOLOGIES FOR SHELF LIFE EXTENSION <i>Chair: Patrizia Fava, Kit Yam</i>	
09.00 – 09.30	<b>KEYNOTE LECTURE</b> <b>Active packaging and waste valorization: a real opportunity for food sustainability?</b> <i>Sara Limbo, University of Milan, Italy</i>
09.30 – 09.50	<b>Mathematical modeling for atmospheric dynamics in active package of roasted coffee beans</b> ( <i>Lee D.S., An D.S., Jung S.Y., Kim S.C., Yu H.k.</i> ) <i>Dong Sun Lee, Kyungnam University, South Korea</i>
09.50 – 10.10	<b>Control of microbial spoilage of fresh beef meat with a diacetyl-based active packaging</b> ( <i>Rupérez D., Nerín C., Silva F.</i> ) <i>David Rupérez, University of Zaragoza, Spain</i>
10.10 – 10.30	<b>Effect of the inclusion of hazelnut skin and extruded linseed in lamb diet on lipid oxidation during cooking and in vitro digestion of meat</b> ( <i>Cattivelli A., Zannini M., Tagliacucchi D., D’Ambra K., Trovato R., Minelli G., Musati M., Luciano G., Priolo A., Natalello A., Conte A., Lo Fiego D.P.</i> ) <i>Alice Cattivelli, University of Modena and Reggio Emilia, Italy</i>
10.30 – 10.50	<b>Efficacy of hyperbaric storage in preventing color changes in food: a kinetic study on enzymatic and non-enzymatic browning</b> ( <i>Basso F., Manzocco L., Saraiva J.A.M., Nicoli M.C.</i> ) <i>Federico Basso, University of Udine, Italy</i>
10.50 – 11.40	<b>Coffee Break &amp; Poster Session</b>
SESSION: INNOVATIVE TECHNOLOGIES FOR SHELF LIFE EXTENSION <i>Chair: Eva Almenar, Wirongrong Tongdeesoontorn</i>	
11.40 – 12.00	<b>Enhancing hass avocado preservation: comprehensive analysis of modified atmosphere packaging and cinnamaldehyde-based activesystems with special emphasis on fat profile</b> ( <i>Fuenmayor C.A., Ramírez S.L., Cortés C.E., González I.A., García J., González A., Zuluaga-Domínguez C.M., Castellanos D.A.</i> ) <i>Carlos Alberto Fuenmayor, National University of Colombia</i>
12.00 – 12.20	<b>Carbon dot enhanced active polyvinyl alcohol film for antifungi in biodegradable packaging for sweet bread</b> ( <i>Thanawutthiphong P., Bumbudsanpharok N.</i> ) <i>Pornchanok Thanawutthiphong, Kasetsart University, Thailand</i>
12.20 – 12.40	<b>From orange by-products to edible and active films using electrohydrodynamic atomization</b> ( <i>Mariño-Cortegoso S., Silva P., Martins V.D.F., Rodríguez Bernaldo de Quirós A., Sendón R., Barbosa-Pereira L., Pastrana L., Bourbon A.I.</i> ) <i>Sandra Mariño-Cortegoso, University of Santiago de Compostela, Spain</i>
12.40 – 13.00	<b>Temperature responsive dynamic O<sub>2</sub> control in fresh produce modified atmosphere transport container: parameter variability and sensitivity analysis</b> ( <i>Kalnar Y.B., Weltzien C., Mahajan P.V.</i> ) <i>Yogesh B. Kalnar, ATB- Leibniz Institute for Agricultural Engineering and Bioeconomy, Germany</i>
13.00 – 13.20	<b>Effect of plasma-activated water and active packaging on alteration kinetics of minimally processed fennel stored at different temperatures</b> ( <i>Shah M.H.S., Cavella S., Volpe S., Colonna F., Verardo V., Razola-Diaz M.d.C., Torrieri E.</i> ) <i>Syed Mudabbar Hussain Shah, University of Napoli Federico II, Italy</i>
13.20 – 14.40	<b>Lunch &amp; Poster Session</b>
SESSION: INNOVATIVE TECHNOLOGIES FOR SHELF LIFE EXTENSION <i>Chair: Dong Sun Lee, Maria Cristina Nicoli</i>	
14.40 – 15.00	<b>Engineering antibacterial plasma polymerized polyethylene glycol/ZnO nanocomposite coatings for extending pork sausage shelf life</b> ( <i>Zabihzadeh Khajavi M., Nikiforov A., Devlieghere F., Ragaert P., De Geyter N.</i> ) <i>Maryam Zabihzadeh Khajavi, University of Gent, Belgium</i>
15.00 – 15.20	<b>Pulsed electric field technology in food processing: insights into treatment protocol optimization</b> ( <i>Genovese J.</i> ) <i>Jessica Genovese, University of Milan, Italy</i>

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15.20 – 15.40	<b>Valorization of spent coffee ground through the development of active alginate-chitosan films: physical properties and release kinetics</b> ( <i>Borriello A., Basile G., Miele N.A., Volpe S., Cavella S., Romano R., Torrieri E.</i> ) <i>Nicoletta Antonella Miele, University of Naples Federico II, Italy</i>
15.40 – 16.00	<b>Shelf-life extension of packaged strawberries using a bio-based antimicrobial foam</b> ( <i>Riederer A., Beaudry R., Almenar E.</i> ) <i>Eva Almenar, Michigan State University, USA</i>
16.00 – 16.20	<b>Active coating formulation utilizing carboxymethyl cellulose, zinc oxide, and silver nanoparticles to extend the shelf life of mango</b> ( <i>Saekow M., Hamazu Y, Tongdeesootorn W.</i> ) <i>Wirongrong Tongdeesootorn, Mae Fah Luang University, Thailand</i>
16.20 – 16.40	<b>Exploring the science behind releasing active food biopackaging with by-products and plant-derived extracts</b> ( <i>Sanches Silva A.</i> ) <i>Ana Sanches Silva, University of Coimbra, Portugal</i>
16.40 – 17.40	<b>Coffee Break &amp; Poster Session</b>
From h. 18.00	<b>Cultural visit of the historical center of Reggio Emilia</b>
	<b>Social Dinner at Chiostrì di San Pietro (Reggio Emilia city center)</b>

### WEDNESDAY – MAY 22<sup>nd</sup> 2024

	<b>SESSION: TRENDS IN PACKAGING MATERIALS DEVELOPMENT</b> <i>Chair: Mariamelia Stanzione, Lorenzo Favaro</i>
09.00 – 09.30	<b>KEYNOTE LECTURE</b> <b>Chemical safety and risk assessment on bioplastics for food contact</b> <i>Ana Rodríguez Bernaldo de Quirós, University of Santiago de Compostela, Spain</i>
09.30 – 09.50	<b>Evaluation of salami, packaged in recyclable and eco-sustainable material</b> ( <i>Giombelli A., Principato L., Galli R., Gumus-Bonacina C.E., Bassani A., Spigno G.</i> ) <i>Cansu Ekin Gumus-Bonacina, Università Cattolica del Sacro Cuore, Italy</i>
09.50 – 10.10	<b>Tailoring PBAT/TPS blend films for sustainable bread packaging: investigation of TPS grade and its implications</b> ( <i>Pertiwi Nurhadi R., Thanawutthiphong P., Bumbudsanpharok N.</i> ) <i>Nattinee Bumbudsanpharok, Kasetsart University, Thailand</i>
10.10 – 10.30	<b>Tannins as multifunctional additives for polyhydroxyalkanoates to develop smart food packaging</b> ( <i>Ferri M., Papchenko K., Degli Esposti M., Tondi G., De Angelis M.G., Morselli D., Fabbri P.</i> ) <i>Martina Ferri, University of Bologna, Italy</i>
10.30 – 10.50	<b>Valorization of olive leaf by-products for the development of sustainable food packaging materials</b> ( <i>Aloui H., M'Rabet Y., Khwaldia K.</i> ) <i>Hajer Aloui, Institut National de Recherche et d'Analyse Physico-chimique, Tunisia</i>
10.50 – 11.40	<b>Coffee Break &amp; Poster Session</b>
	<b>SESSION: TRENDS IN PACKAGING MATERIALS DEVELOPMENT</b> <i>Chair: Carol López-de-Dicastillo, Fabio Licciardello</i>
11.40 – 12.00	<b>Poly(butylene adipate-co-terephthalate)/thermoplastic starch/zinc oxide bio-nanocomposite: sustainable alternative to replace commodity perforated plastic for absorbent &amp; CO<sub>2</sub> emitting sachet</b> ( <i>Pertiwi Nurhadi R., Bumbudsanpharok N.</i> ) <i>Rineta Pertiwi Nurhadi, Kasetsart University, Thailand</i>
12.00 – 12.20	<b>Production and characterization of bacterial cellulose from pineapple juice</b> ( <i>Peengern N., Sasanatayart R.</i> ) <i>Rungarun Sasanatayart, Mae Fah Luang University, Thailand</i>
12.20 – 12.40	<b>Evaluation of PLA and PBAT based biocomposites plasticized with different citric acid esters of mono and diglycerides (CITREMS)</b> ( <i>Mena-Prado I., Navas-Ortiz E., Fernández-García M., Limbo S., Rollini M., del Campo A., Muñoz-Bonilla A.</i> ) <i>Ignacio Mena-Prado, Centro de Investigación y Tecnología Agroalimentaria de Aragón, Spain</i>

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12.40 – 13.00	<b>Shelf life study of biobased lacquer from tomato by-products for food metal packaging</b> (Chierici S., Zurlini C., Cigognini I.M., Gelati S.) <i>Serena Chierici, Stazione Sperimentale per l'Industria delle Conserve Alimentari (SSICA), Italy</i>
13.00 – 13.00	<b>Montmorillonite/graphene oxide and chitosan-based nanocoatings with improved oxygen barrier properties</b> (Cabrini A., Fisher S.G., Iverson E.T., Lavorgna M., Cerruti P., De Nardo L., Gentile G., Grunlan J.C.) <i>Alessia Cabrini, National Research Council (CNR), Italy</i>
13.20 – 14.30	<b>Lunch &amp; Poster Session</b>

SESSION: TECHNICAL AND SAFETY ISSUES OF RECYCLED AND SUSTAINABLE PACKAGING <i>Chair: Ana Sanches Silva, Luciano Piergiovanni</i>	
14.30 – 15.00	<b>KEYNOTE LECTURE</b> <b>Safety assessment of mechanical recycling processes of PET to be used for materials and articles in contact with food</b> <i>Remigio Marano (EFSA)</i>
15.00 – 15.20	<b>Effect of mechanical recycling and reprocessing of water bottles on the physical properties of poly(lactic acid) biopolymer</b> (Martinez-Arjona P., Velásquez E., Hernández-Muñoz P., Gavara R., López-de-Dicastillo C.) <i>Carol López-de-Dicastillo, Institute of Agrochemistry and Food Technology (IATA), Spain</i>
15.20 – 15.40	<b>Development of an enzymatic hydrolysis and microbial conversion process for the valorisation of single-use bioplastics</b> (Myburgh M.W., Rocher D.F., Viljoen-Bloom M., Favaro L.) <i>Lorenzo Favaro, University of Padua, Italy</i>
15.40 – 16.00	<b>Biodegradation behavior of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) containing phenolic compounds in seawater in laboratory testing conditions</b> (La Fuente Arias C.I., González-Martínez C., Chiralat A.) <i>Carla I. La Fuente Arias, Universitat Politècnica de València, Spain</i>
16.00 – 16.20	<b>A study on the main parameters affecting the migration of mineral oil hydrocarbons from recycled paperboard</b> (Barp L., Conchione C., Suman M., Lambertini F., Moret S.) <i>Laura Barp, University of Udine, Italy</i>
16.20 – 16.40	<b>Recyclable flexible films with enhanced gas barrier for sustainable packaging</b> (Olivieri F., Castaldo R., Avolio R., Cocca M., Errico M.E., Senatore V., Carfagna C., Gentile G.) <i>Federico Olivieri, National Research Council (CNR), Italy</i>
16.40 – 17.00	<b>Identification of NIAS migrating from inner coatings of metallic cans – Toward provisional risk assessment of oligoesters</b> (Cariou R., Godéré M., Covès P., Rivière M., Mathé-Allainmat M., Lebreton J., Tessier A., Tatol C., Pieters G., Bemrah N., Teste B., Rodríguez-Bernaldo A., Barbosa-Pereira L., Séverin I., Chagnon M.C., Person E., Cabaton N., Le Bizec B., Dervilly G.) <i>Ronan Cariou, Oniris, INRAE, LABERCA, France</i>
17.00 – 17.15	<b>Concluding remarks</b> <i>Luciano Piergiovanni, GSICA</i>
17.15 – 18.00	<b>Farewell coffee</b> <b>Parmigiano Reggiano Experience</b>
18.30	<b>Guided sightseeing</b> (optional, in collaboration with Comune di Reggio Emilia)

### THURSDAY – MAY 23<sup>rd</sup> 2024

8.30-15.00	<b>Guided visits at food companies</b> (Barilla and Acetaia Giusti) Lunch at Acetaia Giusti (not included in the registration fee)
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