

## BIOTECHNOLOGY

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### PP077

#### **Bioconversion of unrecyclable PET waste into biodegradable polyhydroxyalkanoates by a newly isolated *Delftia* sp. strain**

Maria Batista<sup>1,2</sup>, **Patrícia Concórdio-reis<sup>1,2</sup>**, Helena Koninckx<sup>3</sup>, Aleksana Bogdan<sup>3</sup>, Lutgart Stragier<sup>3</sup>, Olivia A. Attallah<sup>4</sup>, Margaret Brennan Fournet<sup>4</sup>, Cristiana A.V. Torres<sup>1,2</sup>, Maria A.M. Reis<sup>1,2</sup>, Filomena Freitas<sup>1,2</sup>

*1UCIBIO – Applied Molecular Biosciences Unit, Department of Chemistry, NOVA School of Science and Technology, NOVA University of Lisbon, , Caparica, Portugal, 21 Associate Laboratory i4HB - Institute for Health and Bioeconomy, NOVA School of Science and Technology, NOVA University of Lisbon, Caparica, Portugal, 3Avecom NV, Wondelgem, Belgium, 4Materials Research Institute, Technological University of the Shannon Midlands Midwest, Athlone, Ireland*

### PP078

#### **Antimicrobial and antioxidant activity of natural extracts of byproducts derived from the olive oil and winemaking processing**

**Panagiotis E. Athanasiou<sup>1</sup>**, Renia Fotiadou<sup>1</sup>, Ioanna Fragkaki<sup>1</sup>, Michaela Patila<sup>1</sup>, Stamatia Spyrou<sup>1</sup>, Angeliki C. Polydera<sup>1</sup>, Haralambos Stamatidis<sup>1</sup>

*1Laboratory of Biotechnology, Department of Biological Applications and Technologies, University of Ioannina, 45110, Ioannina, Greece*

### PP079

#### **Unchain the metabolic potential of plastics as carbon source for biotechnology**

**Henik Ballerstedt<sup>1</sup>**, Birger Wolter<sup>1</sup>, . Gina Welsing<sup>1</sup>, Till Tiso<sup>1</sup>, Lars M. Blank<sup>1</sup>

*1RWTH Aachen University, Aachen, Germany*

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#### **Recycling mushroom's cultivation by-products to produce *Pleurotus ostreatus* new crops**

**Marianna Dedousi<sup>1,2</sup>**, Eirini-Maria Melanouri<sup>1,2</sup>, Panagiota Diamantopoulou<sup>1</sup>, Seraphim Papanikolaou<sup>2</sup>

*1Hellenic Agricultural Organization – Dimitra , Lycovrysi, Greece, 2Agricultural University of Athens, Athens, Greece*

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#### **Exploring the fungal potential for natural and synthetic polymer degradation**

**Christina Ferousi<sup>1</sup>**, Evangelia Loukia Giouroukou<sup>2</sup>, Konstantinos Grigorakis<sup>1</sup>, Georgios Koutrotsios<sup>2</sup>, Georgios I Zervakis<sup>2</sup>, Evangelos Topakas<sup>1</sup>, Anthi Karnaouri<sup>2</sup>

*1National Technical University of Athens, School of Chemical Engineering, Biotechnology Laboratory, Athens, Greece, 2Agricultural University of Athens, Department of Crop Science, Laboratory of General and Agricultural Microbiology, Athens, Greece*

PP082

**ACCUMULATION OF HIGH-NUTRITIONAL-VALUE OMEGA-3 FATTY ACIDS BY THE HETEROTROPHIC MICROALGAE CRYPTHODINIUM COHNII ON ORGANOSOLV FRACTIONATED AGRICULTURAL RESIDUES FROM THE FLOUR MILLING INDUSTRY**

**Katerina Foka**<sup>1</sup>, Anthi Karnaouri<sup>1,2</sup>, Stylianos D. Stefanidis<sup>3</sup>, Konstantinos G. Kalogiannis<sup>3,4</sup>, Angelos A. Lappas<sup>3</sup>, Evangelos Topakas<sup>1</sup>

*1Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, , , 2Laboratory of General and Agricultural Microbiology, Department of Crop Science, Agricultural University of Athens, , , 3Environmental Fuels and Hydrocarbons, Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas, , , 4Department of Chemical Engineering, University of Western Macedonia, ,*

PP084

**Exposure to salinity stress conditions of an isolate from Kalloni solar saltworks on Lesbos island leads to biomass production with promising traits.**

Archontoula Koskeridi<sup>1</sup>, Aikaterini Koletti<sup>1</sup>, **Maria-Eleftheria Zografaki**<sup>2</sup>, Sofia Marka<sup>2</sup>, Rodica-Catalina Eftros<sup>3</sup>, Emmanouil Fliemetakis<sup>2</sup>, George Tsirtsis<sup>1</sup>, Chrysanthi Kalloniati<sup>1</sup>

*1Department of Marine Sciences, University of the Aegean, Mytilene, Greece, 2Department of Biotechnology, Agricultural University of Athens, Athens, Greece, 3Department for Experimental and Applied Biology, NIRDBS - Institute of Biological Research Iasi, Iasi, Roumania*

PP085

**Molecular classification of five microalgae strains isolated from Kalloni solar saltworks on Lesbos island**

Aikaterini Koletti<sup>1</sup>, Ioanna Fouskari<sup>1</sup>, Rodica-Catalina Eftros<sup>3</sup>, Emmanouil Fliemetakis<sup>2</sup>, **George Tsirtsis**<sup>1</sup>, Chrysanthi Kalloniati<sup>1</sup>

*1Department of Marine Sciences, University of the Aegean, Mytilene, Greece, 2Department of Biotechnology, Agricultural University of Athens, Athens, Greece, 3Department for Experimental and Applied Biology, NIRDBS - Institute of Biological Research Iasi, Iasi, Roumania*

PP086

**Changes on nodule sulfate metabolism triggered upon carbon starvation induced by prolonged darkness**

**Chrysanthi Kalloniati**<sup>1</sup>, Rodica-Catalina Eftros<sup>2</sup>, Dimitrios Skliros<sup>1</sup>, Fotios Komaitis<sup>1</sup>, Cornelia Herschbach<sup>3</sup>, Heinz Rennenberg<sup>3</sup>, Emmanouil Fliemetakis<sup>1</sup>

*1Department of Biotechnology, Agricultural University of Athens, Athens, Greece, 2Department of Experimental and Applied Biology, NIRDBS-Institute of Biological Research-Iasi, Iasi, Roumania, 3Institute of Forest Sciences, Chair of Tree Physiology, Faculty of Environment and Natural Resources, Albert-Ludwigs-University Freiburg, Freiburg, Germany*

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**Analysis of the bacterial and fungal microbiome of stone surfaces of monuments: towards the development of mitigation strategies for protection of cultural heritage**



Konstantina Rousidou<sup>1</sup>, Ioanna Gkoni<sup>1</sup>, Venetios Michelioudakis<sup>1</sup>, Panagiota Theodoropoulou<sup>3</sup>, Aristotelis Chatziioannou<sup>4,5</sup>, Savvas Genitsaris<sup>2</sup>, Ekaterini T. Delegou<sup>3</sup>, Eleftherios Pilalis<sup>5</sup>, Fragiskos Kolisis<sup>3</sup>, Dimitrios Karpouzas<sup>1</sup>, **Panagiotis Karas<sup>1</sup>**

*1Department of Biochemistry and Biotechnology, University of Thessaly, Larisa, Greece, 2School of Biology, National and Kapodistrian University of Athens, Athens, Greece, 3School of Chemical Engineering, National and Kapodistrian University of Athens, Athens, Greece, 4Center of System Biology, Biomedical Research Foundation Academy of Athens, , Greece, 5e-NIOS Applications P.C., Athens, Greece*

**PP088**

**Exploitation of novel fungal oxidative biocatalysts for the sustainable production of valuable monomers from biobased furans**

**Evangelia-Loukia Giouroukou<sup>1</sup>**, Maria-Konstantina Karonidi<sup>1</sup>, Koar Chorozi<sup>2</sup>, Grigorios Dedes<sup>2</sup>, Georgios I. Zervakis<sup>1</sup>, Evangelos Topakas<sup>2</sup>, Anthi Karnaouri<sup>1</sup>

*1Laboratory of General and Agricultural Microbiology, Faculty of Crop Science, Agricultural University of Athens, , Greece, 2Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Greece*

**PP089**

**Assessing growth kinetics and accumulation of high-value metabolites in freshwater and marine microalgae using crude glycerol as a carbon source**

**s Evangelina Korozi<sup>1</sup>**, Io Kefalogianni<sup>1</sup>, Anthi Karnaouri<sup>1</sup>, George Markou<sup>3</sup>, Vasiliki Tsagou<sup>1</sup>, Evangelos Topakas<sup>2</sup>, Iordanis Chatzipavlidis<sup>1</sup>

*1Laboratory of General and Agricultural Microbiology, Department of Crop Science, Agricultural University of Athens, Athens, Greece, 2Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Athens, Greece, 3Institute of Technology of Agricultural Products, Hellenic Agricultural Organization-Demeter (ELGO), Athens, Greece*

**PP090**

**BIOTECHNOLOGICAL PRODUCTION OF BACTERIAL PIGMENT PRODIGIOSIN AND BIOACTIVE PROPERTIES OF ITS METAL COMPLEXES WITH Cu(II) AND Zn(II)**

**Jelena Lazic<sup>1</sup>**, Jelena Milovanovic<sup>1</sup>, Tina P. Anejević<sup>2</sup>, Darko P. Ašanin<sup>3</sup>, Tatjana Ilic-Tomic<sup>1</sup>, Biljana Đ. Glišić<sup>2</sup>, Jasmina Nikodinovic-Runic<sup>1</sup>

*1Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Belgrade, Serbia, 2University of Kragujevac, Faculty of Science, Department of Chemistry, Kragujevac, Serbia, 3University of Kragujevac, Institute for Information Technologies Kragujevac, Kragujevac, Serbia*

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**ENZYME-ASSISTED EXTRACTION OF BIOACTIVE COMPOUNDS FROM THE ROSEHIPS OF ROSA CANINA L. APPLYING A BOX-BEHNKEN EXPERIMENTAL DESIGN**

**s. Zafeiria Lemoni<sup>1</sup>**, Styliani Kalantzi<sup>1</sup>, Theopisti Lympelopoulou<sup>2</sup>, Anomachi Tzani<sup>3</sup>, Anastasia Detsi<sup>3</sup>, Diomi Mamma<sup>1</sup>

*1Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Athens, Greece, 2Processes and Products Quality Control Horizontal Laboratory, School of Chemical*

*Engineering, National Technical University of Athens, Athens, Greece, 3Laboratory of Organic Chemistry, School of Chemical Engineering, National Technical University of Athens, Athens, Greece*

**PP092**

**Assessment of the biofilm-forming ability of marine microalgae and cyanobacteria**

Maria Efstratiou, Panagiotis itsas, **Alexandra Lianou**

*1University of Patras, Department of Biology, Patras, Greece*

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**CHARACTERIZATION OF ISOLATED MICROALGAE STAINS FOR HYOPONIC WASTEWATER BIOREMEDIATION**

**Sofia Marka**<sup>1</sup>, Maria-Eleftheria Zografaki<sup>1</sup>, Alexanos Ntzouvaras<sup>1</sup>, Aikaterini Koletti<sup>1</sup>, Ioannis Karavidas<sup>2</sup>, Gabriel Vasilakis<sup>3</sup>, Chrysanthi Kalloniati<sup>4</sup>, George Tsirtsis<sup>4</sup>, Georgia Ntatsi<sup>2</sup>, Emmanouil Flemetakis<sup>1</sup>

*1Agricultural University of Athens, School of Applied Biology and Biotechnology, Department of Biotechnology, Greece, Athens, Greece, 2Agricultural University of Athens, School of Plant Sciences, Department of Crop Science, Greece, Athens, Greece, 3Agricultural University of Athens, School of Food and Nutritional Sciences, Department of Food Science and Human Nutrition, Athens, Greece, 4Department of Marine Sciences, University of the Aegean, Lesvos, Greece*

**PP094**

**EFFECTS OF CULTURE AND BIOPROCESS CONDITIONS ON THE MYCELIUM GROWTH AND PRODUCTION OF BIOACTIVE SUBSTANCES OF GANODERMA LUCIDUM AND MONASCUS PURPUREUS.**

**Chrysanthi Mitsagga**<sup>1</sup>, Ioannis Giavasis<sup>1</sup>

*1Department of Food Science and Nutrition, University Of Thessaly, Karditsa, Greece*

**PP095**

**Symbiotic interactions in the model legume *Lotus japonicus*: Mutation analysis of the SHAGGY-like LjLSK1 kinase gene and phenotypic analysis of nodulation**

**Ioannis Pantelidis**<sup>1</sup>, Jenny Koukara<sup>1</sup>, Panagiotis Vletsos<sup>1</sup>, Nikolaos Ntelkis<sup>1</sup>, Kalliope K. Papadopoulou<sup>1</sup>

*1Department Of Biochemistry And Biotechnology, University Of Thessaly, Larissa, Greece*

**PP096**

**Spent mushroom substrates from *Pleurotus ostreatus* and *Pleurotus eryngii*: a potential source of exopolysaccharides and enzymes**

**Eirini Maria Melanouri**<sup>1,2</sup>, Marianna Dedousi<sup>1,2</sup>, Panagiota Diamantopoulou<sup>2</sup>, Seraphim Papanikolaou<sup>1</sup>

*1Agricultural University of Athens, Athens, Greece, 2Hellenic Agricultural Organization – Dimitra, Lycovrysi, Greece*

**PP097**

**INVESTIGATING THE ROLE OF TRITERPENE BIOSYNTHETIC GENES IN *L. JAPONICUS* DURING COLONIZATION BY AN ENDOPHYTIC FUNGUS**

**Theodore Papanikolas**<sup>1</sup>, Jenny Koukara<sup>1</sup>, Panagiotis Vletsos<sup>1</sup>, Kalliope Papadopoulou

*1University Of Thessaly, Department of Biochemistry and Biotechnology, Larisa, Greece*

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**A novel CE16 exo-deacetylase from *Thermothelomyces thermophilus* with biotechnological potential**

Christina Pentari<sup>1</sup>, **Anastasia Zerva**<sup>1,2</sup>, Christos Kosinas<sup>3</sup>, Panagiota Karampa<sup>3</sup>, Maria Dimarogona<sup>3</sup>, Vladimir Puchart<sup>4</sup>, Evangelos Topakas<sup>1</sup>

*1National Technical University Of Athens, Athens, Greece, 2Agricultural University of Athens, Athens, Greece, 3University of Patras, Patras, Greece, 4Slovak Academy of Sciences, Bratislava, Slovakia*

**PP099**

**Conversion of mixed plastic waste containing PET into biopolymer bacterial nanocellulose**

**Marijana Ponjavic**<sup>1</sup>, Sanja Jeremic<sup>1</sup>, Ivana Malagurski<sup>1</sup>, Ramesh P. Babu<sup>2,3</sup>, Divya Rajasekaran<sup>2,3</sup>, Evangelos Topakas<sup>4</sup>, Jasmina Nikodinovic-Runic<sup>1</sup>

*1Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Serbia, Vojvode Stepe 444a, 11000 Belgrade, Serbia*

*2 School of Chemistry, Trinity College Dublin, University of Dublin, Dublin 2, Ireland*

*3AMBER Centre, Trinity College Dublin, Dublin 2, Ireland*

*4Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Athens, Greece*

**PP100**

**Characterization of a novel cyclofructan transferase from *Janthinobacterium* BJB-304**

Inne Verswijvel<sup>1</sup>, **Jaime Ricardo Porras Dominguez**<sup>1</sup>, Jiao Jiao<sup>1</sup>, Wim Van den Ende<sup>1</sup>

*1KU Leuven, Leuven, Belgium*

**PP101**

**Parameters optimization of glycerol's bioconversion into gamma-linolenic acid by fungus *Cunninghamella elegans* cultivated in shake-flask and batch-bioreactor experiments**

**Christina Stavroula Roidouli**<sup>1</sup>, Gabriel Vasilakis<sup>1</sup>, Dimitris Karayannis<sup>1</sup>, Emmanuel Rondags<sup>2</sup>, Seraphim Papanikolaou<sup>1</sup>

*1Laboratory of Food Microbiology and Biotechnology, Department of Food Science and Technology, Agricultural University of Athens, Athens, Greece, 2Reaction and Chemical Engineering Laboratory, E.N.S.A.I.A., University of Lorraine, Nancy, France*

**PP102**

**Isolation and characterization of the multi-component carbazole dioxygenase driving the transformation of thiabendazole by a soil bacterial consortium**

**Konstantina Rousidou**<sup>1</sup>, Sotirios Vasileiadis<sup>1</sup>, Chiara Perruchon<sup>1</sup>, Chrisitna akou<sup>2</sup>, Anastasia Kantsadi<sup>2</sup>, George Stravodimos<sup>2</sup>, Dimitrios Karpouzas<sup>1</sup>

*1Laboratory of Plant and Environmental Biotechnology, Department of Biochemistry and Biotechnology, University of Thessaly, Larisa, Greece, 2Laboratory of Structural and Functional Biochemistry, Department of Biochemistry and Biotechnology, University of Thessaly, Larisa, Greece*

## PP103

### Secretome analysis of *Pleurotus citrinopileatus* grown on different lignocellulosic substrates

**Romanos Siaperas<sup>1</sup>**, Anastasia Zerva<sup>2</sup>, Evangelos Topakas<sup>1</sup>

*1Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Athens, Greece, 2Laboratory of Enzyme Technology, Department of Biotechnology, School of Applied Biology and Biotechnology, Agricultural University of Athens, Athens, Greece*

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### Enzymatic treatment of extracts derived from natural sources for the enhancement of their biological activities

**Stamatia Spyrou<sup>1</sup>**, Myrto G. Bellou<sup>1</sup>, Alexandra V. Chatzikonstantinou<sup>1</sup>, Renia Fotiadou<sup>1</sup>, Konstantina Nakou<sup>1</sup>, Vasiliki G. Kontogianni<sup>2</sup>, Haralambos Stamatidis<sup>1</sup>

*1University of Ioannina, Ioannina, Greece, 2Dairy Research Department, Hellenic Agricultural Organization-DEMETER, Ioannina, Greece*

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### The enzymatic machinery of the white-rot basidiomycete *Abortiporus biennis* can cause significant modifications to polystyrene structure

**Georgios Taxeidis<sup>1</sup>**, Katerina Foka<sup>1</sup>, Georgios Zervakis<sup>2</sup>, Anastasia Zerva<sup>1,3</sup>, Evangelos Topakas<sup>1</sup>

*1Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Athens, Greece, 2Agricultural University of Athens, Laboratory of General and Agricultural Microbiology, Athens, Greece, 3Laboratory of Enzyme Technology, Department of Biotechnology, School of Applied Biology and Biotechnology, Agricultural University of Athens, Athens, Greece*

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### Sustainable Exploitation of Bio-Based Compounds Revealed and Engineered from Natural Sources

**Nikola Milic<sup>1</sup>**, Nikolaos Tsafantakis<sup>1</sup>, Gerardo Della Sala<sup>2</sup>, Donatella De Pascale<sup>2</sup>, Eva Nordberg Karlsson<sup>3</sup>, Roya Sardari<sup>3</sup>, Montserrat Argandoña Bertran<sup>4</sup>, Joaquín Nieto-Gutiérrez<sup>4</sup>, Guðmundur Óli Hreggviðsson<sup>5</sup>, Ferando De la Calle Verdu<sup>6</sup>, Geoff Baldwin<sup>7</sup>, Nadine Ziemert<sup>8</sup>, German Caverio<sup>9</sup>, Francesca Zanoni<sup>10</sup>, Sofie Lodens<sup>11</sup>, Tamara Martinez<sup>12</sup>, Kieran Walshe<sup>13</sup>, Nikolas Fokialakis<sup>1</sup>

*1Section of Pharmacognosy & Chemistry of Natural Products, Department of Pharmacy, National and Kapodistrian University of Athens, Panepistimiopolis Zografou 15771, Athens, Greece, 2Dipartimento di Biotechnologie Marine, Stazione Zoologica Anton Dohrn Napoli - Italy, Villa Comunale, 80121, Napoli, Italy, 3Biotechnology, Department of Chemistry, Lund University, Lund S-22100, Lund, Sweden, 4Department of Microbiology and Parasitology, Faculty of Pharmacy, University of Sevilla, 41012, Seville, Spain, 5Matis, Vinlandsleið 12, 113, Reykjavík, Iceland, 6PharmaMar, Avda. de los Reyes, Poligono Industrial La Mina 1, 28770, Maid, Spain, 7Faculty of Natural Sciences, Department of Life Sciences, 508 Sir Alexander Fleming Building, South Kensington Campus, SW7 2AZ, UK, 8Translational Genome Mining for Natural Products, University of Tübingen Microbiology/Biotechnology Interfaculty*

*Institute of Microbiology and Infection Medicine, Auf der Morgenstelle 28, 72076, Tübingen, Germany, 9Blue Synergy SL, Calle Doctor Castelo, 44, 28009, Maid, Spain, 10Sphera Encapsulation Via Alessano Volta 15A, 37062, Dossobuono, Italy, 11Bio Base Europe Pilot Plant VZW, Rodenhuizeakaai 1, 9042, Gent, Belgium, 12Sylentis S.A., C. de Santiago Grisolia 2, Tres Cantos, 28760, Maid, Spain, 13Accuplex Diagnostics Ltd. The Callan Building, Maynooth University, Co., Kildare, Ireland*

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### **Novel *Yarrowia lipolytica* strains obtained through adaptive laboratory evolution and targeted genetic modifications for single-cell-oil production**

**Christina Tsiligkaki<sup>1,2</sup>**, Asimina Tsirigka<sup>3,4</sup>, Sotirios Patsios<sup>3</sup>, Anastasios Karabelas<sup>3</sup>, Eleni Theodosiou<sup>1</sup>, Antonios M. Makris<sup>1</sup>

*1Institute of Applied Biosciences, Centre for Research and Technology - Hellas, Themi - Thessaloniki, Greece, 2School of Biology, Faculty of Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece, 3Laboratory of Natural Resources and Renewable Energies, Chemical Process and Energy Resources Institute, Centre for Research and Technology - Hellas, Themi - Thessaloniki, Greece, 4Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece*

#### PP108

### **Enhancing Heterologous Protein Secretion in Yeasts: Combining Secretory Peptides and Genetic Modifications**

**Anastasia Vamvali<sup>1,2</sup>**, Maria Brastianou<sup>1,3</sup>, Argiro Papagrigoriou<sup>1,3</sup>, Aggeliki Aneadelli<sup>1</sup>, Antonios M. Makris<sup>1</sup>

*1Institute of Applied Biosciences (INAB) - Centre for Research and Technology Hellas (CERTH), Thessaloniki, Greece, 2Department of Biological Applications & Technology, University of Ioannina (UOI), Ioannina, Greece, 3School of Biology, Aristotle University of Thessaloniki (AUTH), Thessaloniki, Greece*

#### PP109

### **Lignocellulosic biomass to biogas: A biotechnological approach for Spent Mushroom Substrate valorization**

**Gabriel - Gavriil VASILAKIS<sup>1</sup>**, Evangelos-Markos Rigos<sup>1</sup>, Nikos Giannakis<sup>1</sup>, Panagiota Diamantopoulou<sup>2</sup>, **Seraphim Papanikolaou<sup>1</sup>**

*1Laboratory of Food Microbiology & Biotechnology, Agricultural University Of Athens, Athens, Greece, 2Institute of Technology of Agricultural Products, Hellenic Agricultural Organization "Dimitra", Lykovryssi, Greece*

#### PP110

### **Extraction, characterization and potential applications of microalgal bioactive polysaccharides of strains isolated from Greek coastal lagoons.**

**Gabriel - Gavriil VASILAKIS<sup>1</sup>**, Sofia Marka<sup>1</sup>, Alexanos Ntzouvaras<sup>2</sup>, Aikaterini Koletti<sup>1</sup>, Maria - Eleftheria Zografaki<sup>1</sup>, Niki Papageorgiou<sup>1</sup>, Xanthi Chantzistroutsiou<sup>2</sup>, Ioannis-Dimosthenis Adamakis<sup>2</sup>, Amerssa Tsirigoti<sup>2</sup>, Ioannis Tzovenis<sup>2</sup>, Emmanouil Fliemetakis<sup>1</sup>, Athena Economou-Amilli<sup>2</sup>, Seraphim Papanikolaou<sup>1</sup>

*1School of Food, Biotechnology and Development, Agricultural University Of Athens, Athens, Greece, 2Biological Department, National & Kapodistrian University of Athens, Athens, Greece*

**PP111**

**A FUNGAL TRANSFORMATION VALIDATION WORKFLOW FOR CRISPR/CAS9 MEDIATED RNAI MUTANTS**

**Pericles Vasileiou<sup>1</sup>**, Nikolaos Delkis<sup>1</sup>, Loukia-Maria Kellari<sup>1,2</sup>, Efthymia Zisopoulou<sup>1</sup>, Antonia Argyriou<sup>1</sup>, Kalliope K Papadopoulou<sup>1,2</sup>

*1University Of Thessaly, Larissa, Greece, 2Averofeio Agri-food Technological Park of Thessaly, Larissa, Greece*

**PP112**

**EVALUATION OF IN VITRO PROTECTIVE EFFECT AGAINST OXIDATIVE STRESS ON HUMAN COLON CELLS OF MICROALGAE EXTRACTS DERIVED FROM HYOPONIC EFFLUENTS**

**s Maria Eleftheria Zografaki<sup>1</sup>**, Sofia Marka<sup>1</sup>, Alexanos Ntzouvaras<sup>1</sup>, Emmanouil Flemetakis<sup>1</sup>

*1Agricultural University of Athens, School of Applied Biology and Biotechnology, Department of Biotechnology, Greece, Athens, Greece*

**PP113**

**Enhancement of Desulfurization via Targeted Genetic Engineering in the Model Biocatalyst Rhodococcus qingshengii IGTS8**

**Olga Martzoukou<sup>1</sup>**, Sotiris Amillis<sup>1</sup>, Panayiotis D. Glekas<sup>1</sup>, Diomi Mamma<sup>2</sup>, Dimitris G. Hatzinikolaou<sup>1</sup>

*1Enzyme and Microbial Biotechnology Unit, Department of Biology, National and Kapodistrian University of Athens, Athens, Greece, 2Biotechnology Laboratory, Sector of Synthesis and Development of Industrial Processes (IV), School of Chemical Engineering, National Technical University of Athens, Athens, Greece*

**PP113-A**

**Advancing Sustainable Bioplastics through Microbial Upcycling for Novel Biopolymer Production**

**Maciej Guzik**, Justyna Prajsnar, Ewelina Cichoń, Robert Karcz, Joanna Kryściak-Czerwenka

Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, ul. Niezapominajek 8, 30-239 Krakow, Poland

**PP113-B**

**Insights into a bifunctional catalase-phenol oxidase from a marine-derived Cladosporium species**

Christina Ferousi<sup>1</sup>, **Pantelakis Odyssefs-Ioannis<sup>1</sup>**, Efstratios Nikolaivits<sup>1</sup>, Evangelos Topakas<sup>1\*</sup>

*1 Industrial Biotechnology & Biocatalysis Group, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens*



**PP113-C**

**Exploiting the Greek microbial diversity for the discovery and development of novel antiaging molecules.**

**Konstantinos Gaitanis**<sup>1</sup>, Nikolaos Tsafantakis<sup>1</sup>, Eirini Gkogkou<sup>2</sup>, Despoina D. Gianniou<sup>2</sup>, Stavroula Kaili<sup>3</sup>, Paris Laskaris<sup>3</sup>, Georgia Ntroumpogianni<sup>3</sup>, Evangelia Tsiokanos<sup>1</sup>, Dimitris Hatzinikolaou<sup>3</sup>, Ioannis P. Trougkos<sup>2</sup>, Amalia Karagouni-Kyrtsou<sup>3</sup>, Nikolas Fokialakis<sup>1</sup>

*1 Section of Pharmacognosy & Chemistry of Natural Products, Department of Pharmacy, National and Kapodistrian University of Athens, Panepistimiopolis Zografou 15771, Athens, Greece; 2 Section of Cell Biology and Biophysics, Department of Biology, Panepistimiopolis Zografou 15784, Athens, Greece; 3 Section of Botany, Department of Biology, Panepistimiopolis Zografou 15784, Athens, Greece.*

**PP113-D**

**Catabolic Sphe3 genes: gears in an E.coli cis, cis-muconic acid producing apparatus**

**Stamatia Asimakoula**<sup>1</sup>, Styliani Timotheatou<sup>1</sup>, Ioanna Kosma<sup>2</sup>, Anastasia Badeka<sup>2</sup>, Anna-Irini Koukkou<sup>1</sup>

*1Laboratory of Biochemistry, Department of Chemistry, University of Ioannina, Ioannina, Greece, 2Laboratory of Food Chemistry, Department of Chemistry, University of Ioannina, Ioannina, Greece*