

13:00
15:30**Posters**

- P001 Photodynamic therapy improvement with silica nanoparticles**
Wioleta Borzecka¹, Tito Trindade¹, Tomás Torres², João P.C. Tomé¹ (¹Aveiro, Portugal; ²Madrid, Spain)
- P002 New chlorin photosensitizers sterically-prevented from self-aggregation for cancer therapy**
Irwin Alexander Patiño Linares¹, Kleber Thiago de Oliveira², Janice Perussi Rodrigues² (¹São Paulo, SP, ²São Carlos, SP, Brazil)
- P003 Aptamer-Phthalocyanine Conjugates, A New Approach For Photodynamic Therapy**
Serkan Alpugan¹, Devrim Atilla¹, Vefa Ahsen¹, Javed Niazi², Fabienne Dumoulin¹ (¹Kocaeli, ²Istanbul, Turkey)
- P004 Octa sulfanyl non-peripheral phthalocyanines: design and synthetic challenges for NIR absorbing photosensitisers**
Fabienne Dumoulin (Gebze Kocaeli, Turkey)
- P005 Octaglycosylated Porphyrins: Photosensitizing Glycoclusters**
Serkan Alpugan¹, Sébastien Vidal², Fabienne Dumoulin¹ (¹Kocaeli, Turkey; ²Lyon, France)
- P006 Photostability of hydrophilic quantum dots in the presence of albumin and in the medium with algae cells**
Agnė Kalnaitytė, Saulius Bagdonas, Ricardas Rotomskis (Vilnius, Lithuania)
- P007 Pluronic®P123/F127 mixed micelles as nanocarriers for benzoporphyrin derivatives applied to photodynamic therapy in cancer cells**
Francesca Moret¹, Diogo Silva Pellosi², André Luiz Tessaro³, Elisa Gaio¹, Elena Reddi¹, Wilker Caetano², Fabiana Quaglia⁴, Noboru Hioka² (¹Padova, ⁴Napoli, Italy; ²Maringà, PR, ³Apucarana, PR, Brazil)
- P008 Beta-functionalised water soluble porphyrins: new entries to conjugatable photosensitisers**
Alessandro Pozzoli, Francesca Giuntini (Liverpool, United Kingdom)
- P009 Traversing the challenges of extended conjugation: Bacteriochlorins, a new era in theranostics**
Miffy Hok Yan Cheng, Ross W. Boyle (Hull, United Kingdom)
- P010 Metallophthalocyanines Substituted with Naturally Occurred Amino Acids for Improved Photodynamic Therapy**
Meliha Bahri Aliosman¹, Vanya N Mantareva¹, Mahmut Durmuş² (¹Sofia, Bulgaria; ²Gebze, Turkey)
- P011 Development and Biological Evaluation of Photosensitizer-Anti-HER2 Conjugates for Targeted Photodynamic Therapy of Gastric Cancer**
Barbara Korsak¹, Rudolf J. Schneider², Bruno Sarmiento³, Carla Oliveira³, João P.C. Tomé¹ (¹Aveiro, ³Porto, Portugal; ²Berlin, Germany)
- P012 EGFR targeted nanobody-photosensitizer conjugates for imaging and photodynamic therapy in head and neck cancer –first preclinical studies**
Pieter B.A.A. van Driel¹, Mark C. Boonstra¹, Maxime D. Slooter¹, Raimond Heukers², Henriëtte S. de Bruijn³, Paul J. van Diest², Alexander L. Vahrmeijer¹, Paul M.P. van Bergen en Henegouwen², Cornelis J.H. van de Velde¹, Clemens W.G.M. Löwik¹, Dominic J. Robinson³, Sabrina Oliveira² (¹Leiden, ²Utrecht, ³Rotterdam, Netherlands)
- P013 New aza-BODIPY-Porphyrin Conjugates**
Letícia D. Costa, M. Graça P.M.S. Neves, Augusto C. Tomé (Aveiro, Portugal)

- P014 Synthesis of low-molecular weight halogenated porphyrins for PDT applications**
 Nuno P. F. Gonçalves, Gonçalo N. Costa, Carlos J. P. Monteiro, Fábio A. Schaberle, Mariette M. Pereira, Luís G. Arnaut (Coimbra, Portugal)
- P015 The Singlet Oxygen Strategy: sustainable oxidation procedures for applications in material science, synthesis, waste water treatment, diagnostics and therapeutics**
Emily Lumley, Annemieke Madder (Ghent, Belgium)
- P016 New phthalocyanines bearing sulfonamide units**
Raquel Sofia de Oliveira Nunes da Silva, Ângela Cunha, Adelaide Almeida, Augusto C. Tomé (Aveiro, Portugal)
- P017 Singlet molecular oxygen reaction with carnosine**
 Adauto Luis Lorenzini Pessoa, Fernanda Manso Prado, Paolo Di Mascio, Marisa Helena Gennari Medeiros (São Paulo, SP, Brazil)
- P018 Going NIR! - Porphycene-ITCs for photo-theranostic applications**
Oriol Planas, Cormac Hally, Òscar Gulias Borau, Thibault Gallavardin, Montserrat Agut, Santi Nonell (Barcelona, Spain)
- P019 Singlet oxygen and genetically-encoded flavin-binding fluorescent proteins: killing from the inside**
Joaquim Torra¹, Stephan Endres², Marcus Wingen², Thomas Drepper², Thomas Gensch², Rubén Ruiz-González¹, Santi Nonell¹ (¹Barcelona, Spain; ²Jülich, Germany)
- P020 Polyacrylamide nanoprobess: a new scaffold for assessing singlet oxygen production in biological environments**
Roger Bresolí Obach¹, Rubén Ruiz-González¹, Òscar Gulias Borau¹, Montserrat Agut¹, Huguette Savoie², Ross W. Boyle², Francesca Giuntini², Santi Nonell¹ (¹Barcelona, Spain; ²Hull, United Kingdom)
- P021 The use of β -LG protein as nanocarrier for the natural photosensitizer hypericin. Influence of DMSO as a co-solvent in the photophysical and photoinactivation properties**
 Pietro Delcanale¹, Jordi Juárez-Jiménez², Stefania Abbruzzetti¹, Andrea Summer¹, Montserrat Agut², F. Javier Luque², Santi Nonell², Cristiano Viappiani¹ (¹Parma, Italy; ²Barcelona, Spain)
- P022 A novel photoreactivity of 9-substituted phenalenones**
Òscar Gulias Borau¹, Roger Bresolí Obach¹, Rubén Ruiz-González¹, Montserrat Agut¹, Götz Bucher², Santi Nonell¹ (¹Barcelona, Spain; ²Glasgow, United Kingdom)
- P023 PLA targeted nanoparticles for photodynamic therapy**
Ester Boix¹, Norbert Lange², Santi Nonell¹, Maria Lluïsa Sagristà¹, Margarita Mora¹ (¹Barcelona, Spain; ²Geneva, Switzerland)
- P024 Novel activated glycodendrimer-based photosensitizers developed for photodynamic therapy**
Jose Antonio Gonzalez-Delgado¹, Barbara Korsak¹, João P.C. Tomé², Marta Ferreira¹, Bruno Sarmento¹ (¹Porto, ²Aveiro, Portugal)
- P025 Multifunctional polymer-ruthenium cyclopentadienyl complexes: application as anticancer agents for photodynamic therapy**
Fernanda Marques¹, Adhan Pilon², M. Amparo F. Faustino³, Hélia Jeremias², Maria Helena Garcia², Andreia Valente² (¹Loures, ²Lisboa, ³Aveiro, Portugal)
- P026 Phototoxic potential of silymarin and its components**
Alena Rajnochová Svobodová¹, Michaela Psoťová¹, Jitka Ulrichová¹, Bohumil Zálešák¹, David Biedermann², Jitka Vostálová¹ (¹Olomouc, ²Prague, Czech Republic)
- P027 Planar sources of radiation for induction and monitoring of photodynamic processes *in vitro***
Robert Bajgar, Hana Kolarova, Petr Kolar, Klara Pizova, Adela Hanakova (Olomouc, Czech Republic)
- P028 Synthetic Exendin-4 Analogues for Imaging Pancreatic Beta Cells**
Karolina Janikowska, Vineetha Chellakudam, Andrej Babic, Laurent Vinet, Smaragda Lamprianou, Eric Allémann, Paolo Meda, Norbert Lange (Geneva, Switzerland)

- P029 New prodrugs for the systemic delivery of 5-aminolevulinic acid (5-ALA)**
 Andrej Babic, Viktorija Herceg, Norbert Lange (Geneva, Switzerland)
- P030 *In vitro* characterization of near-infrared dyes for non-invasive optical diagnosis**
Ana Catarina S. Lobo, Alexandre Silva, Mário J. F. Calvete, Mariette M. Pereira, Luís G. Arnaut (Coimbra, Portugal)
- P031 Role of Diclofenac Metabolites in Increasing its Photogenotoxic Potential**
Inmaculada Andreu, Maria Dolores Coloma, Daniel Limones-Herreros, María Consuelo Jiménez, Miguel Angel Miranda (Valencia, Spain)
- P032 Biosynthesis of Metal Nanoparticles from Plant Extract**
Shimaa Moustafa Ibrahim Alexeree, Mahmoud A. Sliem, Rehab M. Amin (Giza, Egypt)
- P033 CFM and FLIM analysis on A β peptide: observation of viscosity changes in cell membrane and estimation of the effect of potential aggregation inhibitors on the formation of amyloid fibrils**
 Antonella Battisti¹, Antonella Sgarbossa², Francesco Ghetti², Silvia Vilasi¹, Pier Luigi San Biagio¹, Antonio Palumbo Piccionello¹, Maria Grazia Ortore³, Ranieri Bizzarri² (¹Palermo, ²Pisa, ³Ancona, Italy)
- P034 Photodynamic inactivation of bacteria by carboranyl-chlorin e6**
 Pavel A. Nazarov, Elena O. Omarova, Alexander M. Firsov, Marina G. Strakhovskaya, Valentina A. Ol'shevskaya, Valery N. Kalinin, Elena A. Kotova, Yuri. N. Antonenko (Moscow, Russian Federation)
- P035 Subdiffraction localization of a nanostructured photosensitizer in bacterial cells**
Pietro Delcanale¹, Francesca Pennacchietti², Giulio Maestrini¹, Beatriz Rodríguez Amigo³, Paolo Bianchini², Alberto Diaspro², Alessandro Iagatti⁴, Barbara Patrizi⁴, Paolo Foggi⁴, Montserrat Agut³, Santi Nonell³, Stefania Abbruzzetti¹, Cristiano Viappiani¹ (¹Parma, ²Genova, ⁴Sesto Fiorentino, Florence, Italy; ³Barcelona, Spain)
- P036 Action spectrum determination for the phototherapy of *H. pylori* infection in stomach tissue models**
Giovanni Romano, Silvia Calusi, Barbara Orsini, Alessandro Filomena, Patrizia Pecile, Alessio Gnerucci, Franco Fusi (Florence, Italy)
- P037 Study of inactivation of *Listeria monocytogenes* with porphyrins and porphyrin-chitosan materials**
Kelly A. D. F. Castro¹, Nuno M. M. Moura¹, Ana Fernandes¹, M. Amparo F. Faustino¹, Mário M. Q. Simões¹, José A.S. Cavaleiro¹, Shirley Nakagaki², Adelaide Almeida¹, Ângela Cunha¹, Armando J. D. Silvestre¹, Carmem S. R. Freire¹, Ricardo J. B. Pinto¹, M. Graça P.M.S. Neves¹ (¹Aveiro, Portugal; ²Curitiba, PR, Brazil)
- P038 Photoinactivation of *Staphylococcus aureus* using Rose Bengal or Methylene Blue alone or in combination with gentamicin, mupirocin or linezolid**
Vanesa Pérez-Laguna¹, Verónica Lampaya¹, Luna Pérez-Artiaga¹, Sofía Samper¹, Lorena Fernández-Lacasta¹, Yolanda Gilaberte², Santi Nonell³, María Carmen Alejandre¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, ³Barcelona, Spain)
- P039 Photoinactivation of *Pseudomonas aeruginosa* using Methylene Blue alone or in combination with Colistin**
 Luna Pérez-Artiaga¹, Vanesa Pérez-Laguna¹, Verónica Lampaya¹, Sofía Samper¹, Alba Gimeno¹, Yolanda Gilaberte², Santi Nonell³, María Carmen Alejandre¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, ³Barcelona, Spain)
- P040 Effect of photodynamic therapy on the virulence factors of *Staphylococcus aureus***
Maria Manuel Bartolomeu, Sónia Rocha, Ângela Cunha, M. Graça P.M.S. Neves, M. Amparo F. Faustino, Adelaide Almeida (Aveiro, Portugal)
- P041 *In vitro* photodynamic inactivation of *Pseudomonas aeruginosa* using Methylene Blue in combination with gentamicin and different irradiation conditions**
Vanesa Pérez-Laguna¹, Verónica Lampaya¹, Luna Pérez-Artiaga¹, Yolanda Gilaberte², Santi Nonell³, María Carmen Alejandre¹, Pilar Soria¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, ³Barcelona, Spain)

- P042 Photodynamic Inactivation of *Escherichia coli* with quaternized amphiphilic water-soluble Zn(II)phthalocyanines**
Deisy Rocha, Nutalapati Venkatramaiah, Maria Clara Gomes, M. Amparo F. Faustino, Adelaide Almeida, Filipe Paz, Ângela Cunha, João P.C. Tomé (Aveiro, Portugal)
- P043 Photodynamic impact of quaternized mono- Lu(III) phthalocyanines towards representative pathogenic microorganisms**
Vanya N Mantareva¹, Meliha Bahri Aliosman¹, Mahmut Durmuş², Ivan Angelov¹, Vesselin Kussovski¹ (¹Sofia, Bulgaria; ²Gebze, Turkey)
- P044 Control of fish parasite *Anisakis* by photodynamic reactions**
Paula Ramos¹, Pedro Silva¹, Ana Grade¹, M. Graça P.M.S. Neves², M. Amparo F. Faustino², Adelaide Almeida² (¹Lisboa, ²Aveiro, Portugal)
- P045 Photodynamic inactivation of microorganisms in wastewaters**
Sílvia Reis, Ângela Cunha, M. Graça P.M.S. Neves, Milton Fontes, M. Amparo F. Faustino, Adelaide Almeida (Aveiro, Portugal)
- P046 Cytometric approach for evaluation of *Candida albicans* susceptibility to photodynamic antimicrobial chemotherapy with phenothiazinium photosensitizers**
Gabriela Braga Rodrigues¹, Mariana de S. L. Rambaldi¹, Emerson de S. Santos¹, Sérgio Akira Uyemura¹, Mark Wainwright², Gilberto Úbida Leite Braga¹ (¹Ribeirão Preto, SP, Brazil; ²Liverpool, United Kingdom)
- P047 Interactive effect of visible light and an extract of *Curcuma longa* on *Listeria* biofilms**
Daniel Bonifácio, Joana Couceiro, Ana Aires Fernandes, M. Amparo F. Faustino, Adelaide Almeida, Ângela Cunha (Aveiro, Portugal)
- P048 *In Vitro* Photodynamic effect on *Staphylococcus aureus*: Protoporphyrin IX vs. PpIX-PLGA-PEG nanoparticles**
Vanesa Pérez-Laguna¹, Luna Pérez-Artiaga¹, Verónica Lampaya¹, Yolanda Gilaberte², Ester Boix³, Oriol Planas³, Santi Nonell³, Sofia Samper¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, ³Barcelona, Spain)
- P049 *In planta* photodynamic inactivation of the plant-pathogenic fungi *Colletotrichum acutatum* with methylene blue and solar radiation**
Júlia Cunha Gonzales¹, Gabriela Braga Rodrigues¹, Luciano Bachmann¹, Mark Wainwright², Gilberto Úbida Leite Braga¹ (¹Ribeirão Preto, SP, Brazil; ²Liverpool, United Kingdom)
- P050 Photoinactivation of plant-pathogenic fungi *Colletotrichum acutatum* with coumarins and furocoumarins under solar radiation**
Letícia Facarolli¹, Gabriela Braga Rodrigues¹, Júlia Cunha Gonzales¹, Ana Carolina Pereira¹, Luciano Bachmann¹, Mark Wainwright², Jairo Kenupp Bastos¹, Gilberto Úbida Leite Braga¹ (¹Ribeirão Preto, SP, Brazil; ²Liverpool, United Kingdom)
- P051 *In Vitro* Photodynamic effect of methylene blue, protoporphyrin IX and curcumin on *Escherichia coli***
Verónica Lampaya¹, Vanesa Pérez-Laguna¹, Luna Pérez-Artiaga¹, Yolanda Gilaberte², Sofia Samper¹, Lorena Fernández¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, Spain)
- P052 *In Vitro* Photodynamic effect of Methylene Blue and Rose Bengal on *Streptococcus sanguis***
Luna Pérez-Artiaga¹, Vanesa Pérez-Laguna¹, Verónica Lampaya¹, Yolanda Gilaberte², Sofia Samper¹, María José Revillo¹, Antonio Rezusta¹ (¹Zaragoza, ²Huesca, Spain)
- P053 Photodynamic Inactivation based on natural substances and derivatives thereof against *Candida albicans* and *Aspergillus niger***
Barbara Schamberger¹, Tim Maisch², Andreas Spaeth², Kristjan Plaetzer¹ (¹Salzburg, Austria; ²Regensburg, Germany)
- P054 Efficient removal of 17 β -estradiol from aqueous media by visible-light assisted photosensitization and biodegradation**
Lucía Fernández¹, Adelaide Almeida¹, Valdemar I. Esteves¹, Ângela Cunha¹, Rudolf J. Schneider², João P.C. Tomé¹ (¹Aveiro, Portugal; ²Berlin, Germany)

- P055 Application of phthalocyanines and porphyrins in blood sterilization**
Luís Carlos Teles, Leandro Lourenço, Ângela Cunha, M. Amparo F. Faustino, M. Graça P.M.S. Neves, José A.S. Cavaleiro, João P.C. Tomé, Adelaide Almeida (Aveiro, Portugal)
- P056 Singlet Oxygen Induced Furan Oxidation for Peptide Derivatisation**
Eirini Antonatou¹, Kurt Hoogewijs¹, Dimitris Kalaitzakis², Georgios Vassilikogiannakis², Annemieke Madder¹ (¹Ghent, Belgium; ²Iraklion, Crete, Greece)
- P057 Reduced immune induction in imiquimod model of psoriasis by PUVA pretreatment**
Nitesh Shirsath, Gerlinde Mayer, Jennifer Ober, Nina Schweintzger, Peter Wolf (Graz, Austria)
- P058 Vitamin D and ultraviolet phototherapy in Caucasians**
Mantas Grigalavicius, Johan Moan, Arne Dahlback, Asta Juzeniene (Oslo, Norway)
- P059 PUVA-bath treatment experience in Graft Versus Host Disease from 2007 to the present time**
Carolina Vila-Sava, Ana Maria Carrizosa-Esquivel, Agueda Pulpillo-Ruiz, Francisco Camacho (Seville, Spain)
- P060 A study on removal of non-pigmented hair using photodynamic therapy**
Hyoseung Shin¹, Ji-Seon Yoon², Semchin Munkhbayer², Ohsang Kwon² (¹Goyang, ²Seoul, Republic of Korea)
- P061 Excimer laser treatment for hypopigmentation after lichen striatus: A retrospective case series of 12 patients**
Jung Min Bae, Han Mi Jung, Ji Yoon Choo, Ji Hae Lee, Gyong Moon Kim (Suwon, Republic of Korea)
- P062 Treatment of Nevus Depigmentosus using the 308-nm Excimer Laser: A Retrospective Study of 14 Patients**
Jung Min Bae, Han Mi Jung, Ji Hae Lee, Gyong Moon Kim (Suwon, Republic of Korea)
- P063 Efficacy of extracorporeal photopheresis in the treatment of acute rejection after heart transplantation**
Ulrike Just, Stephanie Wallner, Johannes Goekler, Robert Ullrich, Andreas Zuckermann, Robert Knobler (Vienna, Austria)
- P064 The expression patterns of antimicrobial peptides psoriasin, RNase7, HBD-2,-3 and LL37 in polymorphic light eruption**
VijayKumar Patra, Gerlinde Mayer, Ulrike Schmidbauer, Alexandra Gruber-Wackernagel, Michael Horn, Peter Wolf (Graz, Austria)
- P065 An *in vivo* platform to study angiogenic sprouting and vessel formation following vascular photo-occlusion**
Andrea B Weiss¹, Hubert van den Bergh¹, Arjan W. Griffioen², Patrycja Nowak-Sliwinska² (¹Lausanne, Switzerland; ²Amsterdam, Netherlands)
- P066 Effect of Actinica®Lotion Sunscreen on Metvix Absorption in *Ex Vivo* Human Skin**
Guy Bouvier¹, Hanan Osman-Ponchet¹, Karine Sevin¹, Alexandre Gaborit¹, Johanna Hanaizi¹, Orla Duffy-Roger¹, Pierre Comby¹, Bernard Ruty¹, Delphine Kerob² (¹Sophia Antipolis, ²Paris, France)
- P067 Role of Photostress-Induced NO in Bystander Cell Responses in a Prostate Cancer PDT Model**
Jerzy Józef Bazak¹, Witold Korytowski¹, Albert W Girotti² (¹Cracow, Poland; ²Milwaukee, WI, United States)
- P068 New combined treatments to improve photodynamic and chemotherapeutic therapies**
Ana Lázaro-Carrillo¹, Andrea Tabero¹, Beatriz Rodríguez Amigo², Santi Nonell², Margarita Mora², Maria Lluïsa Sagristà², Juan Carlos Stockert¹, Magdalena Cañete¹, Ángeles Villanueva¹ (¹Madrid, ²Barcelona, Spain)

- P069 Anticancer activity of 1,4-bis[2-(morpholin-4)ethoxy]phthalocyaninato zinc(II)- an *in vitro* evaluation of cancer cell death**
Malgorzata Kucinska¹, Wojciech Szczolko¹, Marcin Wierzchowski¹, Theresia Thalhammer², Tomasz Goslinski¹, Marek Murias¹ (¹Poznan, Poland; ²Vienna, Austria)
- P070 Controlling the anti-tumour activity of novel Pt(IV) complexes with green light**
Julie A Woods¹, Evyenia Shaili², Jitka Prachařová³, Peter J Sadler² (¹Dundee, ²Coventry, United Kingdom; ³Olomouc, Czech Republic)
- P071 Phthalocyanine gold nanoparticle conjugates for photodynamic cancer therapy**
Paula Garcia Calavia, María J. Marín, Isabelle Chambrier, Michael J. Cook, David A. Russell (Norwich, United Kingdom)
- P072 Photodynamic therapy by using Ruthenium porphyrin on the AY27 rat bladder cancer cell line**
Vanya Petkova Bogoeva¹, Mikael Lindgren², Monica Siksjø², Kristin G. Sæterbø², Thor Bernt Melø², Astrid Bjørkøy², Odrun Arna Gederaas² (¹Sofia, Bulgaria; ²Trondheim, Norway)
- P073 Analysis of vascular damages after photodynamic therapy using M-mode-like speckle variability approach**
Marina Sirotkina¹, Natalya Buyanova¹, Vadim Elagin¹, Tatyana Kalganova¹, Lev Matveev¹, Vladimir Zaitsev¹, Grigory Geliconov¹, Ludmila Snopova¹, Sergey Kuznetsov¹, Marina Shirmanova¹, Alex Vitkin², Elena Zagaynova¹, Natalya Gladkova¹ (¹Nizhny Novgorod, Russian Federation; ²Toronto, ON, Canada)
- P074 Tumor selective PDT with an activatable photosensitizer targeted to gamma-glutamyl transpeptidase**
Mayumi Chiba¹, Yuki Ichikawa¹, Mako Kamiya¹, Norbert Lange², Yasuteru Urano¹ (¹Tokyo, Japan; ²Geneva, Switzerland)
- P075 PDT in combination with the antitumoral drug doxorubicin: a potential therapeutic advantage**
Andrea Tabero¹, Ana Lázaro-Carrillo¹, Ester Boix², Santi Nonell², Margarita Mora², Maria Lluïsa Sagristà², Juan Carlos Stockert¹, Magdalena Cañete¹, Ángeles Villanueva¹ (¹Madrid, ²Barcelona, Spain)
- P076 New spectral approach for monitoring of mTHPC redistribution in biological systems**
Ilya Yakovets¹, Igor Yankovsky¹, Lina Bezdetnaya², Vladimir Zorin¹ (¹Minsk, Belarus; ²Nancy, France)
- P077 *In vitro* assays of new proteolytically triggered drug delivery systems for selective photodynamic therapy**
Jordan Bouilloux, Andrej Babic, Imene Ateb, Viktorija Herceg, Norbert Lange (Geneva, Switzerland)
- P078 Hyaluronic acid-ceramide nanoparticles for targeted photodynamic therapy in lung cancer**
 Ji-Eun Chang (Seoul, Republic of Korea)
- P079 Protein damage caused by photodynamic treatment with new methylene blue as evaluated by two-dimensional electrophoresis and tandem mass spectrometry**
 Guilherme Thomaz Pereira Brancini, Gabriela Braga Rodrigues, Clarice Izumi, Ana Patrícia Yatsuda, José César Rosa, Gilberto Úbida Leite Braga (Ribeirão Preto, São Paulo, Brazil)
- P080 Effect of Sunscreen on Protoporphyrin IX Photobleaching in *Ex Vivo* Human Skin**
Bouvier Guy, Sevin Karine, Gaborit Alexandre, Comby Pierre, Ruty Bernard, Osman-Ponchet Hanan (Sophia Antipolis, France)
- P081 Biocompatible polymer brushes nanoparticles doped with tetra(4-fluorophenyl)tetracyanoporphyrazine as potential photosensitizer for fluorescence diagnostics and photodynamic therapy**
Natalia Shilyagina¹, Nina Peskova¹, Svetlana Lermontova¹, Alexander Yakimansky², Sergey Gamayunov¹, Larisa Klapshina¹, Irina Balalaeva¹ (¹Nizhny Novgorod, ²St.Petersburg, Russian Federation)
- P082 Photodynamic killing of B16 melanoma cells by functionalized fullerenes**
Anna Magdalena Kozińska, Andrzej Zadło, Wojciech Gawlik, Tadeusz J. Sarna (Krakow, Poland)

- P083 Riboflavin-Silica nanoparticles phototoxicity on human tumoral cells**
 Marcelo Muñoz¹, Natalia Lopez¹, Emilio Alarcon², Liane Rossi³, Ana Maria Edwards¹ (¹Santiago, Chile; ²Ottawa, ON, Canada; ³São Paulo, SP, Brazil)
- P084 Targeting Energy Metabolism of Tumor to Enhance PDT**
Joana Rua da Silva Campos, Hélder Tão Soares, Luís G. Arnaut (Coimbra, Portugal)
- P085 Immobilized chlorin derivatives and its reusability on Photodynamic inactivation of bioluminescent *E. coli***
 Mariana Mesquita, Jose C. J. M. D. S. Menezes, M. Graça P.M.S. Neves, José A.S. Cavaleiro, Ângela Cunha, Adelaide Almeida, M. Amparo F. Faustino (Aveiro, Portugal)
- P086 Development of Prophylactic Antitumour Vaccines Generated by PDT**
Ana Mata, Lúgia Gomes-da-Silva, Hélder Tão Soares, Luís G. Arnaut (Coimbra, Portugal)
- P087 The role of lymphatic vessels in photodynamic therapy-elicited induction of antitumor immune response**
Angelika Muchowicz¹, Małgorzata Wachowska¹, Joanna Stachura¹, Witold Waldemar Kilarski², Jakub Golab¹ (¹Warsaw, Poland; ²Chicago, IL, United States)
- P088 Comparative study of photodynamic activity of hypericin using Primary Dermal Fibroblasts (PCS-201-012) and Human epidermal keratinocyte (HEK001)**
Gislaine Patricia de Andrade, Giselle Cerchiaro, Anderson Orzari Ribeiro (Santo André, SP, Brazil)
- P089 Investigation of cell death mechanism in human lymphatic endothelial cells subjected to PDT**
Małgorzata Wachowska¹, Agata Osiak¹, Magdalena Gabrysiak², Angelika Muchowicz¹, Jakub Golab¹ (¹Warsaw, Poland; ²London, United Kingdom)
- P090 Interactive effects of UV radiation and ammonium on the bio-optics, photosynthesis, antioxidants and the accumulation of UV screen photoprotectors in red macroalgae**
Félix Alvarez, Nathalie Korbee, Felix L. Figueroa (Malaga, Spain)
- P091 Effect of UVB radiation on metabolic profile of *Moringa oleifera* Lam. leaves**
Ana Filipa Fradinho¹, Maria Costa², Diana Pinto¹, Artur Silva¹, Conceição Santos³, Maria Celeste Pereira Dias¹ (¹Aveiro, ³Porto, Portugal; ²Dili, Timor-Leste)
- P092 The photoreceptor of ultraviolet-B radiation (UVR8) in the liverwort *Marchantia polymorpha***
Gonzalo Soriano Sancha¹, Javier Martínez-Abaigar¹, Encarnación Núñez-Olivera¹, Gareth I Jenkins² (¹Logroño, Spain; ²Glasgow, United Kingdom)
- P093 How UVB radiation can affect light-dependent reactions of photosynthesis on *Olea europaea*?**
Maria Celeste Pereira Dias¹, Márcia Araujo¹, Carlos Correia², José Moutinho-Pereira², Artur M.S. Silva¹, Conceição Santos³ (¹Aveiro, ²Vila Real, ³Porto, Portugal)
- P094 Both UV photoreceptors UVR8 and CRY regulate transcript accumulation in *Arabidopsis thaliana* in sunlight**
Neha Rai, Luis O. Morales, Pedro José Aphalo (Helsinki, Finland)
- P095 Roles of CRYs and UVR8 in sunlight-induced accumulation of phenolics in *Arabidopsis***
Sari Marjatta Siipola, Neha Rai, Nina Sipari, Luis O. Morales, Pedro José Aphalo (Helsinki, Finland)
- P096 R packages for photobiology**
 Pedro José Aphalo (Helsinki, Finland)
- P097 Effect of UV-B exposure on the growth and gene expression in basil**
Minjie Qian, Irina Kalbina, Åke Strid (Örebro, Sweden)
- P098 Variation potential induced changes in photosynthesis, respiration and ATP content in pea**
Lyubov Mikhailovna Surova, Oksana Sherstneva, Vladimir Vodeneev, Mariya Kudryavtseva, Vladimir Sukhov (Nizhny Novgorod, Russian Federation)

- P099 Detecting hydrogen-peroxide in tobacco leaves responding to light stress**
Anikó Mátai, Gyula Czégény, Éva Hideg (Pécs, Hungary)
- P100 Investigating an unusual colour development in grape berry skins of 'Gohér'vine**
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