
Monday, 31 August, afternoon

Rectory (Building 25) Ground Floor

15:00
18.00 **Registration**

Monday, 31 August, evening

Rectory (Building 25) Ground Floor

19:30
21.00 **Welcome Reception**

Opening Ceremony – Welcome Address

08:30

09:20

Tribute to Giulio Jori

- 09:30 **Photophysics and photochemistry of PDT**
 Chair: Benjamin Ehrenberg (Ramat Gan, Israel), Norbert Lange (Geneva, Switzerland)
- 09:30 **IL101 Why use multifunctional nanoparticles for photodynamic therapy of brain tumors?**
 Muriel Barberi-Heyob¹, Thierry Bastogne¹, Magalie Thomassin¹, Régis Vanderesse², Olivier Tillement³, François Lux³, Céline Frochot² (¹Vandœuvre-lès-Nancy, ²Nancy, ³Villeurbanne, France)
- 10:00 **IL102 Nanoparticles for targeted photodynamic therapy**
 David A. Russell (Norwich, United Kingdom)
- 10:30 **Coffee break**
- 11:00 **OC103 Singlet Oxygen Feedback Delayed Fluorescence as a Method for ¹O₂ Monitoring in Biological Systems**
 Marek Scholz, Roman Dëdic (Prague, Czech Republic)
- 11:15 **IL104 New scaffolds for the delivery of quenched photosensitizers**
 Norbert Lange (Geneva, Switzerland)
- 11:45 **OC105 PDT: a scintillating drug assisted radiotherapy**
 Guy Monroe Entract, Ross W. Boyle (Hull, United Kingdom)
- 12:00 **OC106 Photophysics and cellular studies of novel light sensitive chromophores with potential application in photodynamic therapy**
 Odrun Arna Gederaas¹, Monica Siksjø¹, Bastien Mettra², Cyrille Monnereau², Kjartan W. Egeberg¹, Chantal Andraud², Mikael Lindgren¹ (¹Trondheim, Norway; ²Lyon, France)
- 12:15 **OC107 Real-time imaging of photodynamic action in bacteria**
 Anita Gollmer¹, Ariane Felgentraeger¹, Tim Maisch¹, Cristina Flors² (¹Regensburg, Germany; ²Madrid, Spain)
- 12:30 **OC108 New trends in FLIM, PLIM and SLIM for fluorescence guided diagnosis and PDT**
 Angelika Rueck, Jasmin Breymayer, Dominik Bisinger, Sviatlana Kalinina (Ulm, Germany)
- 12:45 **OC109 Nanostructured Chlorin e6 for PDT Application**
13:00 Leandro Raniero¹, Laís S. Vieira¹, Isabelle Ferreira¹, Maiara L. Castilho¹, Kevin C. Hewitt², Juliana F. Strixino¹ (¹São José dos Campos, SP, Brazil; ²Halifax, NS, Canada)

- 09:30 **Photobiology in industry**
Chair: Douglas B. Learn (Horsham, PA, United States)
- 09:30 **Introductory remarks**
Lesley E. Rhodes (Manchester, United Kingdom)
Douglas B. Learn (Horsham, PA, United States)
- 09:50 **IL110 The role of photosafety assessment in pharmaceutical companies**
Daniel Bauer (Basel, Switzerland)
- 10:20 **Coffee break**
- 11:00 **IL111 Applied sciences in the regulatory approval process of pharmaceuticals**
Peter Kasper (Bonn, Germany)
- 11:30 **IL112 Recent Advances in Photobiology in the Skin Care Industry**
Prithwiraj Maitra (Skillman, NJ, United States)
- 12:00 **IL113 Photobiology in the Contract Research Organization World**
Douglas B Learn (Horsham, PA, United States)
- 12:30 **Roundtable discussion**
- 13:00

- 09:30 **Global change and quantitative modelling of photobiological responses**
 Chair: Frank R. de Gruijl (Leiden, Netherlands), Ann R. Webb (Manchester, United Kingdom)
- 09:30 **IL114 Biological systems, global change and ozone recovery**
 Susana Beatriz Diaz¹, Alejandro Alberto Paladini¹, Maria Carmen Dieguez², Luis Buitrago³, Guillermo Alejandro Deferrari⁴, Jazmin Vrsalovic⁴, Maria Vernet⁵ (¹Buenos Aires, ²San Carlos de Bariloche, NQ, ³San Salvador de Jujuy, JY, ⁴Ushuaia, TF, Argentina; ⁵San Diego, CA, United States)
- 10:00 **IL115 Challenges and benefits of environmental change and UV radiation**
 Janet F. Bornman (Perth, WA, Australia)
- 10:30 **Coffee break**
- 11:00 **IL116 Future health risks of exposure to UV radiation in a changing climate**
 Robyn Marjorie Lucas (Canberra, ACT, Australia)
- 11:30 **OC117 A database of solar UV availability across Europe**
 Andreas Kazantzidis^{1,2}, Andrew Smedley², Richard Kift², John Rimmer², Jacqueline Berry², Ilias Fountoulakis³, Tapani Koskela⁴, Lesley E. Rhodes², Ann R. Webb² (¹Patras, ³Thessaloniki, Greece; ²Manchester, United Kingdom; ⁴Helsinki, Finland)
- 11:50 **IL118 Meeting vitamin D targets: opportunities provided by the UV climatology of Europe**
 Ann R. Webb (Manchester, United Kingdom)
- 12:20 **OC119 Solar UV-Monitoring Network in Germany**
12:40 Monika Asmuss, Henner Sandmann (Oberschleissheim, Germany)

- 09:30 **New technologies to diagnose and treat blindness**
 Chair: Rosalie Crouch (Charleston, SC, United States), Joan E. Roberts (New York, NY, United States)
- 09:30 **IL120 New technologies to improve the health and viability of human photoreceptors**
 Yiannis Koutalos, Leopold Adler IV, Chunhe Chen (Charleston, SC, United States)
- 10:00 **IL121 Lipofuscin and the Aging Eye**
 Rosalie Crouch¹, Kevin Schey², Yiannis Koutalos¹, Masahiro Kono¹, Zsolt Ablonczy¹ (¹Charleston, SC, ²Nashville, TN, United States)
- 10:30 **Coffee break**
- 11:00 **OC122 Zeaxanthin and α -tocopherol reduce the inhibitory effects of photodynamic stress on phagocytosis by ARPE-19 cells**
 Magdalena Maria Olchawa¹, Anja M. Herrnreiter², Anna K. Pilat¹, Christine M. B. Skumatz², Magdalena Niziolek-Kierecka¹, Janice M. Burke², Tadeusz J. Sarna¹ (¹Krakow, Poland; ²Milwaukee, WI, United States)
- 11:15 **IL123 Adaptive optics technologies for better vision**
 Pablo Artal (Murcia, Spain)
- 11:45 **IL124 Non-Invasive Techniques to Measure Ocular Disease**
 Joan E. Roberts (New York, NY, United States)
- 12:15 **IL125 Measuring macular pigment *in vivo***
 Jessica Dennison¹, John Nolan¹, Stephen Beatty¹, Joan E. Roberts² (¹Waterford, Ireland; ²New York, NY, United States)
- 12:45 **OC126 Evaluation of eye protection in occupational use of non-coherent optical sources**
13:00 Ellen M. Bruzell¹, Terje Christensen², Bjørn Johnsen² (¹Oslo, ²Østerås, Norway)

14:30 **Young Investigator Award Lecture**
Chair: Santi Nonell (Barcelona, Spain)

KL127 The Emerging Field of B12 Photobiology
Alex R. Jones (Manchester, United Kingdom)

15:00 **Keynote Lecture 1**
Chair: Rex M. Tyrrell (Bath, United Kingdom)

KL128 Sunlight-induced immunosuppression - How much is attributable to vitamin D?
Prue H. Hart (Perth, WA, Australia)

- 15:30 **Molecular and cellular aspects of PDT**
 Chair: Patrizia Agostinis (Leuven, Belgium), Jacques Piette (Liège, Belgium)
- 15:30 **IL129 Cellular responses to targeted variants of KillerRed, a genetically-encoded photosensitizer**
 Bo Wang, Paul P. Van Veldhoven, Marc Fransen (Leuven, Belgium)
- 16:00 **OC130 Induction of an apoptotic response after irradiation of colon carcinoma cells loaded with a lipophilic Zn(II) phthalocyanine incorporated into poloxamine micelles**
 Nicolás Agustín Chiarante, Veronica Julieta Marino, María Cecilia García Vior, Josefina Awruch, Leonor Roguin (Buenos Aires, Argentina)
- 16:15 **OC131 Pharmacological activation of p53 family members by porphyrins to kill tumors harboring mutant p53**
 Pilar Acedo, Rainer Heuchel, Joanna Zawacka-Pankau (Stockholm, Sweden)
- 16:30 **Coffee break**
- 17:00 **IL132 The Critical Role of Nitric Oxide in Photodynamic Therapy:DRPDT2 as a New Photosensitizer-NO Conjugate**
 Valentina Rapozzi¹, Emilia Della Pietra¹, Greta Varchi², Daniela Cesselli¹, Gabriella Castoria³, Benjamin Bonavida⁴, Luigi Emilio Xodo¹ (¹Udine, ²Bologna, ³Napoli, Italy; ⁴Los Angeles, CA, United States)
- 17:30 **IL133 Mechanisms of glioblastoma cell death by ALA-mediated photodynamic therapy**
 Gregory Fettweis, Isabelle Coupienne, Jacques G. Piette (Liège, Belgium)
- 18:00 **OC134 Use of cyclodextrins to improve antitumor activity of mTHPC in human colon carcinoma HT-29 cells**
 Igor Yankovsky^{1,2}, Vladimir Zorin¹, Lina Bezdetsnaya² (¹Minsk, Belarus; ²Nancy, France)
- 18:15 **OC135 Protoporphyrin IX-polyamine derivatives : new active photosensitizers for Photodynamic Therapy of prostate cancer**
 Chloë Dugas-Fidanzi, Lamia Ghezali, Youness Limami, Vincent Sol, Bertrand Liagre, David Y. Léger (Limoges, France)
- 18:30 **IL136 Impact of genotypic and phenotypic differences in sarcoma models on the outcome of Photochemical Internalization (PCI) of bleomycin**
 Cathrine Elisabeth Olsen, Simen Sellevoid, Pål Kristian Selbo, Anette Weyergang, Kristian Berg (Oslo, Norway)
- 19:00 **OC137 Involvement of Transcription Factors NF-kappaB, AP-1, p53 and STAT-3 in PDT-induced Death of Neurons and Glial Cells**
19:15 Elena Berezhnaya, Vera Kovaleva, Marya Neginskaya, Mikhail Rudkovskii, Svetlana Sharifulina, Anatoly Uzdensky (Rostov-on-Don, Russian Federation)

- 15:30 **The application and limitations of broad versus narrow wave-band /action spectra studies in photobiology**
Chair: Thierry Douki (Grenoble, France), Antony R. Young (London, United Kingdom)
- 15:30 **IL138 Photosensitized protein oxidation, DNA repair inhibition and skin cancer risk**
Peter Karran (London, United Kingdom)
- 16:00 **IL139 Dewar valence isomer, a biologically relevant DNA photoproduct produced by combined exposure to UVB and UVA**
Thierry Douki (Grenoble, France)
- 16:30 **Coffee break**
- 17:00 **OC140 Cutaneous vitamin D production is effective during a shorter period than thought**
Arjan van Dijk, Harry Slaper, Henk van Kranen, Peter den Outer (Bilthoven, Netherlands)
- 17:20 **OC141 The CIE action spectrum for pre-vitamin D requires adjustment to be valid in human skin *in vivo***
Peter Alshede Philipsen¹, Kylie A. Morgan², Graham Harrison², Bibi Petersen¹, Hans Christian Wulf¹, Antony Richard Young² (¹Copenhagen, Denmark; ²London, United Kingdom)
- 17:40 **IL142 UV action spectrum studies: use of a high intensity xenon arc to produce a large field of irradiance with narrow or broadband output**
Ed Charles De Fabo, Frances Patricia Noonan (Bethesda, MD, United States)
- 18:10 **IL143 Effects of UVR spectrum on DNA photodamage and gene expression in human skin *in vivo***
18:40 Antony Richard Young, Robert Sarkany, Angela Tewari (London, United Kingdom)

- 15:30 **Emerging drug photosensitivity –from chemist to clinic**
Chair: Sally H. Ibbotson (Dundee, United Kingdom), Miguel A. Miranda (Valencia, Spain)
- 15:30 **IL144 Ocular Phototoxicity**
Joan E. Roberts (New York, NY, United States)
- 16:00 **IL145 Time-resolved spectroscopy studies of the reactive intermediates and mechanisms of the photochemistry of selected drugs and phototrigger compounds**
David Lee Phillips (Hong Kong, Hong Kong)
- 16:30 **Coffee break**
- 17:00 **IL146 Clinical aspects of drug photosensitivity**
Sally H. Ibbotson (Dundee, United Kingdom)
- 17:30 **IL147 Photoactive Drug Metabolites**
Miguel Angel Miranda (Valencia, Spain)
- 18:00 **IL148 Photosafety between sciences, regulations & business: Managing the phototoxicity risk during drug development**
Daniel Bauer (Basel, Switzerland)
- 18:30 **OC149 Galactodendritic photosensitizers for photodynamic therapy of non-muscle invasive bladder carcinomas**
Patrícia M.R. Pereira^{1,3}, Sandrina Silva¹, José Ramalho², Célia Gomes³, Henrique Girão³, José A.S. Cavaleiro¹, Carlos A.F. Ribeiro³, Rosa Fernandes³, João P.C. Tomé^{1,4} (¹Aveiro, ²Lisboa, ³Coimbra, Portugal; ⁴Ghent, Belgium)
- 18:45 **OC150 Phototoxicity of folic acid, 6-formylpterin and pterin-6-carboxylic acid in skin cells**
Asta Juzeniene, Mantas Grigalavicius, Li Wei Ma, Marina Juraleviciute (Oslo, Norway)
- 19:00 **OC151 Photoreactivity of Fenofibric Acid in Serum Albumins and in Covalent Amino Acid Linked Systems**
19:15 Ignacio Vayá¹, Vicente T. Monje², María Consuelo Jiménez², Miguel Angel Miranda² (¹Norwich, United Kingdom; ²Valencia, Spain)

- 15:30 **Environmental photochemistry (ESP-EPA* Joint Symposium)**
 Chair: Davide Vione (Torino, Italy)
- 15:30 **IL152 Indoor photochemistry: A source of hydroxyl radicals (OH) in the ambient air**
 Sasho Gligorovski (Marseille, France)
- 16:00 **IL153 Photochemical processes in sunlit surface waters: Implications for pollutant fate, and modelling**
 Davide Vione, Marco Minella, Valter Maurino, Claudio Minero (Torino, Italy)
- 16:30 **Coffee break**
- 17:00 **IL154 Iron Photochemistry: Implication in the environment**
 Gilles Mailhot (Clermont-Ferrand, France)
- 17:30 **IL155 Photolytic-photocatalytic degradation of selected organic micropollutants in aqueous media: kinetics, mechanistic and toxicity aspects**
 Maria Antonopoulou, Ioannis Konstantinou (Agrinio, Greece)
- 18:00 **OC156 Homogeneous and heterogeneous photocatalysis in pharmacopollutants degradation**
 Sarka Klementova, Lucie Doubkova (Ceske Budejovice, Czech Republic)
- 18:20 **OC157 Insights on the optical properties of estuarine DOM –hydrological and biological influences**
18:40 Luísa Pires Santos¹, António Pinto¹, Olga Filipe², Ângela Cunha¹, Eduarda B. H. Santos¹, Adelaide Almeida¹ (¹Aveiro, ²Coimbra, Portugal)

*EPA: European Photochemistry Association (<http://www.photochemistry.eu/>)

08:30

Keynote Lecture 2

Chair: Lesley E. Rhodes (Manchester, United Kingdom)

KL201 Population studies in topical photoprotection

Adele C. Green (Brisbane, AU; Manchester, United Kingdom)

09:00

Keynote Lecture 3

Chair: David Russell (Norwich, United Kingdom)

KL202 New design of textile light diffusers for photodynamic therapy

Serge R. Mordon (Lille, France)

- 09:30 **Tissular and cellular resistance to PDT**
Chair: Abhishek D. Garg (Leuven, Belgium), Pål Kristian Selbo (Oslo, Norway)
- 09:30 **IL203 Photodynamic therapy-based Combinations to Target Physical and Stromal Determinants of Treatment Resistance**
Imran Rizvi¹, Umut A. Gurkan², Emma Briars³, Jonathan P. Celli³, Sriram Anbil⁴, William R. Hanna³, Utkan Demirci⁵, Tayyaba Hasan³ (¹Cambridge, MA, ²Cleveland, OH, ³Boston, MA, ⁴San Antonio, TX, ⁵Palo Alto, CA, United States)
- 10:00 **IL204 Resistance to photodynamic therapy in non-melanoma skin cancer**
Ángeles Juaranz (Madrid, Spain)
- 10:30 **Coffee break**
- 11:00 **OC205 Role of Nitric Oxide in Enhanced Aggressiveness of Prostate Cancer Cells Surviving a PDT-like Challenge**
Jonathan M. Fahey, Albert W. Girotti (Milwaukee, WI, United States)
- 11:15 **OC206 p38-mediated death signaling is abrogated in acquired PDT-resistant breast cancer cells, while PCI of an EGFR-targeting toxin overcomes the resistance to PDT**
Cathrine Elisabeth Olsen, Anette Weyergang, Victoria Tudor Edwards, Andreas Brech, Kristian Berg, Anders Høgset, Pål Kristian Selbo (Oslo, Norway)
- 11:30 **IL207 Photochemical internalisation, a minimal-invasive strategy for light-controlled endosomal escape of cancer stem cell-targeting therapeutics**
Pål Kristian Selbo¹, Monica Bostad¹, Cathrine Elisabeth Olsen¹, Anette Weyergang¹, Anders Høgset², Kristian Berg¹ (¹Oslo, ²Lysaker, Norway)
- 12:00 **IL208 Cancer Cell-based Resistance to Immunogenic Cell Death and Anticancer immunity induced by PDT**
Abhishek D. Garg¹, Sanne Elsen¹, Dmitri V. Krysko², Peter Vandenabeele², Peter de Witte¹, Patrizia Agostinis¹ (¹Leuven, ²Ghent, Belgium)
- 12:30 **Round table: Q&A session for all presenters**
- 13:00

- 09:30 **Obstacles and advances in the systemic photoprotection of skin cancer
(ESP-ASP* Joint Symposium)**
Chair: Santosh K. Katiyar (Birmingham, AL, United States), Lesley E. Rhodes (Manchester, United Kingdom)
- 09:30 **IL209 Chemoprevention of UV-induced non-melanoma skin cancer**
 Craig A. Elmets (Birmingham, AL, United States)
- 10:00 **IL210 Bioactive plant polyphenols-based strategies for prevention of skin cancer**
 Santosh Kumar Katiyar (Birmingham, AL, United States)
- 10:30 **Coffee break**
- 11:00 **IL211 Dietary Protection Against Skin Cancer by Carotenoids in Humans and Experimental Models**
 Homer S. Black (Houston, TX, United States)
- 11:30 **IL212 Dietary lipids in photoprotection - from experimental models to humans**
 Lesley E. Rhodes (Manchester, United Kingdom)
- 12:00 **IL213 Translating chemoprevention with oral nicotinamide from the laboratory to the clinic**
 Gary Mark Halliday, Devita Surjana, Eleni Yiasemides, Geetha Sivapirabu, Joohong Park, Andrew C. Chen, Andrew J. Martin, Bonita Choy, Pablo Fernández-Peñas, Robyn Dalziel, Catriona McKenzie, Richard A. Scolyer, Diona L. Damian (Sydney, NSW, Australia)
- 12:30 **OC214 Impact of oral green tea catechins on UVR-induced inflammation in humans: a randomized controlled trial**
 Mark D. Farrar¹, Anna Nicolaou¹, Kayleigh Clarke², Sarah Mason¹, Karen Massey³, Tristan Dew³, Rachel Watson¹, Gary Williamson², Lesley E. Rhodes¹ (¹Manchester, ²Leeds, ³Bradford, United Kingdom)
- 12:50 **Faculty discussion**
- 13:00

*ASP: American Society for Photobiology (<http://photobiology.org/>)

- 09:30 **The blue light syndrome (ESP-KSP* Joint Symposium)**
 Chair: Margaret Ahmad (Paris, France), Francesco Lenci (Pisa, Italy), Pill Soon Song (Jeju, Republic of Korea)
- 09:30 **IL215 Photoreactivity of Flavins As Blue Light Receptor Chromophores**
 Pill Soon Song (Jeju, Republic of Korea)
- 09:50 **IL216 Cryptochromes –photoreceptors for biotechnology and medicine**
 Margaret Ahmad (Paris, France)
- 10:15 **IL217 Phototropin, a blue light-regulated protein kinase in plants**
 Satoru Tokutomi (Osaka, Japan)
- 10:40 **Coffee break**
- 11:10 **IL218 On the role of the BLUF photoreceptors in *Acinetobacter baylyi* ADP1**
 Alejandra Elliff¹, Clara B. Nudel¹, Klaas J. Hellingwerf² (¹Buenos Aires, Argentina; ²Amsterdam, Netherlands)
- 11:35 **IL219 Sensing magnetic directions by Cryptochrome**
 Roswitha Wiltschko, Wolfgang Wiltschko (Frankfurt am Main, Germany)
- 12:00 **IL220 Development and application of an optogenetic tool for synthetic regulation of protein stability**
 Christof Taxis (Marburg, Germany)
- 12:25 **OC221 Femtoseconds to Seconds Transient IR Study of BLUF Domain Function Utilizing Unnatural Amino Acid Substitution**
 Stephen Roy Meech (Norwich, United Kingdom)
- 12:45 **OC222 At4g25290 encodes a novel protein with photolyase activity**
13:00 Justyna Łabuz¹, Chhavi Aggarwal², Olga Sztatelman¹, Agnieszka Katarzyna Banaś¹ (¹Krakow, ²Poznan, Poland)

*KSP: Korean Society of Photoscience

13:00
15.30

Poster session

During the poster session a free lunch-bag sponsored by Charles River (<http://www.criver.com/>) will be distributed to each registered participant.

Building 23 - Room 23.1.5

15:30
16.00

**Presentation of the ESP Education and Training
Committee activities**

- 16:00 **Molecular engineering and delivery of photosensitisers**
Chair: Fabienne Dumoulin (Gebze KOCAELI, Turkey), Francesca Giuntini (Liverpool, United Kingdom)
- 16:00 **IL223 Antibody-Porphyrin Conjugates: Targeted Drugs for Photodynamic Therapy**
 Ross W. Boyle (Hull, United Kingdom)
- 16:25 **OC224 Cyclopeptidic scaffolds as proteolytically triggered drug delivery systems for photodynamic therapy**
Jordan Bouilloux, Andrej Babic, Gianluca Boso, Bogdan Dereka, Oleksandr Yushchenko, Imene Ateb, Viktorija Herceg, Hans Acha-Orbea, Hugo Zbinden, Eric Vauthey, Norbert Lange (Geneva, Switzerland)
- 16:35 **OC225 Combining Amphiphilicity and Heavy Atom Effect: Design of Novel Porphyrins for Photodynamic Therapy**
Derya Topkaya Taskiran¹, Fabienne Dumoulin² (¹Izmir, ²Kocaeli, Turkey)
- 16:45 **OC226 A library of polarity-tunable bacteriochlorins for photodynamic therapy: synthesis, characterization, delivery and photodynamic efficacy**
Janusz M. Dabrowski¹, Barbara Pucelik¹, Grażyna Stochel¹, Mariette M. Pereira², Luís G. Arnaut² (¹Krakow, Poland; ²Coimbra, Portugal)
- 16:55 **OC227 BODIPY- Estradiol Conjugates for Fluorescence Imaging of Breast Cancer**
 Samira Osati, Hasrat Ali, Michel Paquette, Brigitte Guerin, Johan E. van Lier (Sherbrooke, QC, Canada)
- 17:05 **Coffee break**
- 17:30 **IL228 Singlet oxygen generation and detection in the nanoworld**
 Santi Nonell (Barcelona, Spain)
- 17:55 **OC229 “Bridge and Click” Conjugation Strategies: A new paradigm in the synthesis of porphyrin antibody-drug conjugates**
Francesca Bryden¹, Antoine Maruani², Huguette Savoie¹, Mark E.B. Smith², Stephen Caddick², Vijay Chudasama², Ross W. Boyle¹ (¹Hull, ²London, United Kingdom)
- 18:05 **IL230 Autonomous Switching Between Therapeutic and Diagnostic Modes: Theranostics via Molecular Logic**
 Engin Umut Akkaya (Ankara, Turkey)
- 18:30 **OC231 New prodrug strategies for targeted delivery of 5-ALA**
Andrej Babic, Viktorija Herceg, Imene Ateb, Norbert Lange (Geneva, Switzerland)
- 18:40 **IL232 Clickable photosensitisers and peptides - efficient routes to targeted agents for PDT and photobiology**
 Ruggero Dondi¹, Elnaz Yaghini², Ligu Wang¹, Alejandra Martinez de Pinillos², Kunal Mahesh Tewari¹, Alexander J. MacRobert², Ian Michael Eggleston¹ (¹Bath, ²London, United Kingdom)
- 19:05 **IL233 Structural Modifications of Porphyrin Analogs and the Impact of Delivery Vehicles in Tumor-Specificity of Multifunctional Agents for Cancer-Imaging and Photodynamic Therapy**
 Aimee Marko, Mykhaylo Dukh, Farukh Durrani, Joseph Missert, Heinz Baumann, Ravindra K. Pandey (Buffalo, NY, United States)

- 16:00 **New players in DNA repair and carcinogenesis in response to UVR**
Chair: Evelyne Sage (Orsay, France), Regen Drouin (Quebec City, QC, Canada)
- 16:00 **IL234 Quiescent primary human keratinocyte stem cells exhibit high XPC expression and DNA repair activity of UVB damage**
Mélanie Marie¹, Walid Rachidi², Solène Mine³, Michèle T. Martin¹ (¹Evry, ²Grenoble, ³Essey-les-Nancy, France)
- 16:30 **IL235 Protection mechanisms of the human cornea against ultraviolet genotoxicity**
Patrick J. Rochette, Justin D. Mallet, Marie-Catherine Drigeard Desgarnier, Marie Dorr (Québec, QC, Canada)
- 17:00 **Coffee break**
- 17:30 **OC236 Melanin protection against skin cancer in black-skinned xeroderma pigmentosum group C patients**
Alain R. Sarasin¹, François Cartault² (¹Villejuif, ²La Réunion, France)
- 18:00 **IL237 UV exposure and skin cancer in the Estrie region of Quebec province: a population study of more than 8700 people**
Régen Drouin¹, Gabrielle Lapointe², Mélissa Généreux², Chantal Bouffard² (¹Quebec City, QC, ²Sherbrooke, QC, Canada)
- 18:20 **IL238 Impairment in DNA replication and S-phase upon UVA exposure relies on oxidation process: a new route to UVA-induced carcinogenesis?**
Evelyne Sage¹, Dany Graindorge¹, Sylvain Martineau¹, Jérôme Guitton², Pierre-Marie Girard¹ (¹Orsay, ²Lyon, France)
- 18:40 **OC239 Activation of DNA damage response pathways by long-wavelength UVA-irradiation of primary human melanocytes and XPV cells**
Sarah Conmy, Michael P. Carty (Galway, Ireland)
- 18:55 **OC240 The (6-4) photoproduct as an intrinsic DNA photosensitizer**
Virginie Lhiaubet-Vallet, Victoria Vendrell-Criado, Maria Gemma Rodríguez-Muñiz, Maria Consuelo Cuquerella, Miguel Angel Miranda (Valencia, Spain)
- 19:10 **OC241 Non-Canonical Stacking Geometries of Nucleobases as Potential Hot Spots for Sunlight-Induced DNA Lesions**
19:25 Dmitry A. Maksimov, Ruslan R. Ramazanov, Alexei I. Kononov (Saint Petersburg, Russian Federation)

- 16:00 **Research insights and new treatment developments in the photodermatoses (ESP-ESPD* Joint Symposium)**
Chair: Gillian M. Murphy (Dublin, Ireland), Peter Wolf (Graz, Austria)
- 16:00 **IL242 Afamelanotide and the photodermatoses - where are we now?**
 Elisabeth Irène Minder (Zurich, Switzerland)
- 16:30 **IL243 Polymorphic light eruption - New insights regarding pathogenesis**
 Peter Wolf (Graz, Austria)
- 17:00 **Coffee break**
- 17:30 **IL244 Vitamin D and UVR exposure: more complex than expected**
 Antony Richard Young (London, United Kingdom)
- 18:00 **IL245 Oral Antioxidants and Similar**
 Salvador González (Madrid, Spain)
- 18:30 **IL246 Photosensitising drugs and photocarcinogenesis**
 Gillian Mary Murphy (Dublin, Ireland)
- 19:00 **OC247 UVA1 and the skin: insights from molecular biology and clinical implications**
19:20 Angela Tewari, Robert Sarkany, Antony Richard Young (London, United Kingdom)

*ESPD: European Society for Photodermatology (<http://www.espd.eu.com/>)

- 16:00 **Oral communications**
Chair: Patricia Vicendo (Toulouse, France)
- 16:00 **OC248 The role of phytochromes in storage material mobilization during light-induced tomato seed germination**
Aleksandra Eckstein¹, Dominika Jagiełło-Flasińska¹, Aleksandra Lewandowska¹, Paweł Hermanowicz¹, Klaus J. Appenroth², Halina Gabryś¹ (¹Kraków, Poland; ²Jena, Germany)
- 16:15 **OC249 Steric shielding vs sigma-pi orbital interactions in triplet-triplet energy transfer**
Francisco Bosca, Miguel Angel Miranda, Inmaculada Andreu, Fabrizio Palumbo, German Sastre (Valencia, Spain)
- 16:30 **OC250 Digital holographic microscopy of photoinduced intracellular thermal gradients**
Irina Semenova, Andrey Belashov, Nickolay Petrov, Oleg Vasyutinskii (St.Petersburg, Russian Federation)
- 16:45 **OC251 Molecular basis of blue light (453 nm)-induced inhibition of fibroblast differentiation to myofibroblasts**
Julia Krassovka¹, Jörg Liebmann², Matthias Born², Joachim Windolf¹, Christoph V. Suschek¹ (¹Düsseldorf, ²Aachen, Germany)
- 17:00 **Coffee break**
- 17:30 **OC252 UV Exposure Effects During Zebrafish Early Life Stages**
Selma Hurem¹, Julia Ortman², Ian Mayer¹, Terje Christensen³, Jan L. Lyche¹, Peter Aleström¹ (¹Oslo, ³Østerås, Norway; ²Leipzig, Germany)
- 17:45 **OC253 Insect light-dependent magnetoreception is not lost in red**
Martin Vácha¹, Marketa Kvicalova¹, Pavel Slaby¹, Premysl Bartos¹, Radek Netusil¹, How Jing-Lee², Olga Bazalova³, Ivo Sauman³, David David Dolezel³ (¹Brno, ³Ceske Budejovice, Czech Republic; ²Taipei, Taiwan, Republic of China)
- 18:00 **OC254 Hydroxycoumarins: a photophysics overview**
Catherine Suenne De Castro, João Sérgio Seixas de Melo (Coimbra, Portugal)
- 18:15 **OC255 Modelling Primary Reactions of Reduced Pterins under UV**
Andrey A. Buglak, Taisiya A. Telegina, Mikhail S. Kritsky (Moscow, Russian Federation)
- 18:30

08:30

Keynote Lecture 4

Chair: Evelyne Sage (Orsay, France)

KL301 Wavelength dependence of UV photolesion formation and mutagenesis in skin

Hironobu Ikehata (Sendai, Japan)

09:00

Keynote Lecture 5

Chair: Francesco Lenci (Pisa, Italy)

KL302 The Quantum Robin: Light-dependent Magnetoreception in Migratory Birds

Henrik Mouritsen (Oldenburg, Germany)

- 09:30 **PDT Oral Communications**
Chair: Kristian Berg (Oslo, Norway)
- 09:30 **OC303 Expression of neuronal and signaling proteins and morphological changes in penumbra after local photothrombotic infarct in the rat cerebral cortex**
Svetlana Demyanenko, Grigory Fedorenko, Anatoly Uzdensky (Rostov-on-Don, Russian Federation)
- 09:45 **OC304 A potential treatment for trastuzumab resistant breast cancer: nanobody-targeted photodynamic therapy**
M.M. Kijanka¹, Maxime D. Slooter², M. Krawczyk-Durka¹, Henriëtte S. de Bruijn¹, E.G. van Donselaar¹, J.A. Post¹, Clemens W.G.M. Löwik¹, Paul M.P. van Bergen en Henegouwen¹, Dominic J. Robinson³, Sabrina Oliveira¹ (¹Utrecht, ²Leiden, ³Rotterdam, Netherlands)
- 10:00 **OC305 Peptide Targeted Dendrimeric Prodrugs for Aminolaevulinic Acid Photodynamic Therapy**
Kunal Mahesh Tewari¹, Elnaz Yaghini², Zehra Mazhari², Charareh Pourzand¹, Alexander J. MacRobert², Ian Michael Eggleston¹ (¹Bath, ²London, United Kingdom)
- 10:15 **OC306 The dual effect of vitamin C on the light-induced transformations of photosensitizers hematoporphyrin derivative and chlorin e6**
Saulius Bagdonas, Tomas Biekša (Vilnius, Lithuania)
- 10:30 **Coffee break**
- 11:00 **OC307 The importance of the nature of ROS generated by PDT to cellular survival**
Hélder Tão Soares¹, Ligia C. Gomes da Silva¹, Fábio A. Schaberle¹, Janusz M. Dabrowski², Luís G. Arnaut¹ (¹Coimbra, Portugal; ²Krakow, Poland)
- 11:15 **OC308 Photochemical internalization of bleomycine and temozolomide – *in vitro* studies on glioma cell line F98**
Odrun Arna Gederaas¹, Anette Hauge¹, Pål Ellingsen², Kristian Berg³, Dag Altin¹, Tora Bardal¹, Anders Høgset³, Mikael Lindgren¹ (¹Trondheim, ²Longyearbyen, ³Oslo, Norway)
- 11:30 **OC309 Targeting p53 family members by porphyrins and PDT to kill tumors where p53 is lost or mutated**
Pilar Acedo¹, Kristian Berg², Elsa Flores³, Joanna Zawacka-Pankau¹ (¹Stockholm, Sweden; ²Oslo, Norway; ³Houston, TX, United States)
- 11:45 **OC310 Polynuclear Lanthanide-based Dendrimer Complexes for Photodynamic Therapy and Biological Optical Imaging**
Iuliia Nazarenko, Svetlana Eliseeva, Stéphane Petoud (Orléans, France)
- 12:00 **OC311 Could clinical Photochemical Internalisation be optimised to avoid neuronal toxicity?**
Caitriona M. O'Rourke, Alexander J MacRobert, James B. Phillips, Josephine Helen Woodhams (London, United Kingdom)
- 12:15 **OC312 Light-controlled delivery of Photo-Immunoconjugates for molecular targeted PDT**
- 12:30 Sijia Wang¹, Gereon Hüttmann², Tayyaba Hasan³, Ramtin Rahmanzadeh² (¹Xi'an, China; ²Lübeck, Germany; ³Boston, MA, United States)

- 09:30 **Femtobiology: ultrafast primary aspects in photobiological processes**
Chair: Pascal Plaza (Paris, France), Cristiano Viappiani (Parma, Italy)
- 09:30 **IL313 Photophysics of the GFP Chromophore in Solution and in Fluorescent Proteins**
 Stephen Roy Meech (Norwich, United Kingdom)
- 10:00 **IL314 Proton-coupled electron transfer constitutes the photoactivation mechanism of the plant photoreceptor UVR8**
 John T.M. Kennis (Amsterdam, Netherlands)
- 10:30 **Coffee break**
- 11:00 **IL315 Inner cavities and solvent molecules modulate ligand migration and uptake in hemeproteins**
 Giancarlo Soavi¹, Giulio Cerullo¹, Paolo Foggi², Axel Bidon-Chanal³, F. Javier Luque³, Juan Pablo Bustamante⁴, Dario Estrin⁴, Stefania Abbruzzetti⁵, Cristiano Viappiani⁵ (¹Milano, ²Sesto Fiorentino, Florence, ⁵Parma, Italy; ³Barcelona, Spain; ⁴Buenos Aires, Argentina)
- 11:22 **OC316 Ultrafast spectroscopy evidence for picosecond ligand exchange within the globin heme-based sensor YddV**
 Jean-Christophe Lambry¹, Martin Stranava², Laura Lobato¹, Marketa Martinkova², Toru Shimizu², Ursula Liebl¹, Marten H. Vos¹ (¹Palaiseau, France; ²Prague, Czech Republic)
- 11:37 **OC317 Excitonic Mechanism for Long-Range Energy Transfer in Ag Cluster-DNA Complexes**
 Alexei I. Kononov (Saint Petersburg, Russian Federation)
- 11:52 **IL318 Ultrafast studies on the photoinduced reactivity of two photoactive proteins: DNA repair (6-4) photolyase and photochromic fluorescent Dronpa**
 Ryan Martin¹, Fabien Lacomat¹, Agathe Espagne¹, Nadia Dozova¹, Dheerendra Yadav¹, Pascal Plaza¹, Junpei Yamamoto², Klaus Brettel³, Fabrice Rappaport¹ (¹Paris, ³Gif-sur-Yvette, France; ²Osaka, Japan)
- 12:14 **OC319 Different roles of the opsin proteins in tuning the photoisomerisation of retinal protonated Schiff bases**
Giovanni Bassolino, Alex Soares Duarte, Jong Min Lim, Christoph Schnedermann, Philipp Kukura (Oxford, United Kingdom)
- 12:29 **OC320 Shining light on bacterial carbon monoxide sensing and signaling**
 Marten H. Vos, Latifa Bouzahir-Sima, Laura Lobato, Jean-Christophe Lambry, Ursula Liebl (Palaiseau, France)
- 12:44 **OC321 Exploration of ultrafast dynamics of boron porphyrin and boron porphyrinoid complexes**
 12:49 Nina I. Novikova, Penelope J. Brothers, M. Cather Simpson (Auckland, New Zealand)

- 09:30 **Photobiological responses in different skin types**
Chair: Françoise Bernerd (Aulnay sous Bois, France), Henry W. Lim (Detroit, MI, United States)
- 09:30 **IL322 UV response and skin color diversity: from ITA measure towards melanin chemical phenotype**
Sandra Del Bino-Nokin¹, Shosuke Ito², Kazumasa Wakamatsu², Françoise Bernerd¹ (¹Aulnay-sous-Bois, France; ²Toyoake, Japan)
- 10:00 **IL323 Vitamin D synthesis in different skin types**
Antony Richard Young, Kylie A. Morgan, Tak-Wai Ho, J. Kennedy Cruickshank (London, United Kingdom)
- 10:30 **Coffee break**
- 11:00 **IL324 Differences in visible light induced-pigmentation according to wavelengths: a clinical and histological study in comparison with UVB exposure**
Luc Duteil, Nathalie Cardot-Leccia, Catherine Queille-Roussel, Yves Maubert, Yona Harmelin, Fériel Boukari, Ambrosetti Damien, Jean-Philippe Lacour, Thierry Passeron (Nice, France)
- 11:30 **IL325 Is there a need for photoprotection for people of color?**
Henry W. Lim (Detroit, MI, United States)
- 12:00 **OC326 Defining minimal sunburn thresholds in different skin types using near infrared (785nm) laser speckle contrast imaging of blood flux**
Barbara Shih¹, Mark D. Farrar¹, Donald Allan¹, Frank R. de Gruijl², Lesley E. Rhodes¹ (¹Manchester, United Kingdom; ²Leiden, Netherlands)
- 12:15 **OC327 Three subgroups in UV-erythema response – caused by the overlapping of the time course in skin thickening ability and pigmentation ability**
Peter Manfred Knuschke (Dresden, Germany)
- 12:30 **OC328 Impact of skin pigmentation on rate of rise of serum 25OHD following simulated sunlight exposures to habitually exposed skin sites**
Mark D. Farrar, Ann R. Webb, Richard Kift, Jacqueline L. Berry, Andy Vail, Lesley E. Rhodes (Manchester, United Kingdom)
- 12:45 **OC329 Expression of photo-receptors in human skin: implications for light-based therapies for hair and skin health**
13:00
Irene Castellano¹, Serena Buscone¹, Charles Antoine Mignon², Natallia Uzunbajakava², Margaret Julie Thornton¹, Desmond Tobin¹, Natalia Botchkareva¹ (¹Bradford, United Kingdom; ²Eindhoven, Netherlands)

- 09:30 **Plant UVB photoreceptors – orchestration of plant photoprotection**
Chair: Roman Ulm (Geneva, Switzerland), Gareth I. Jenkins (Glasgow, United Kingdom)
- 09:30 **IL330 Responses to UV-B mediated by the photoreceptor UVR8**
Gareth I. Jenkins (Glasgow, United Kingdom)
- 10:00 **IL331 Direct observations of light-induced structural changes in photoreceptor UVR8**
Xiaojing Yang (Chicago, IL, United States)
- 10:30 **Coffee break**
- 11:00 **IL332 UV-B photoreceptor signalling**
Roman Ulm (Geneva, Switzerland)
- 11:30 **IL333 Role of optical feedback in the perception of UVB radiation**
Pedro José Aphalo, Luis O. Morales, Neha Rai, Sari Marjatta Siipola, Fang Wang (Helsinki, Finland)
- 12:00 **OC334 Functional characterisation of tissue specifically expressed UVR8**
Ferenc Nagy¹, Roman Ulm², Andras Viczian¹ (¹Szeged, Hungary; ²Geneva, Switzerland)
- 12:15 **OC335 The accumulation of UV screen photoprotectors (mycosporine-like amino acids) in red macroalgae is influenced by nitrogen availability**
Felix L. Figueroa¹, Félix Alvarez¹, Paula Celis-Plá¹, Zenilda Bouzon², Daniela Fernandes³, José Bonomi², Francisca de la Coba¹, Nathalie Korbee¹ (¹Malaga, Spain; ²Florianópolis, SC, ³Rio de Janeiro, RJ, Brazil)
- 12:30 **OC336 Quantifying photoprotection in plants**
12:45 Alexander V. Ruban (London, United Kingdom)

- 14:30 **Biomolecular aspects of topical PDT**
 Chair: Tayyaba Hasan (Boston, MA, United States), Dominic Robinson (Rotterdam, Netherlands)
- 14:30 **IL337 Light fractionated PDT using porphyrin precursors**
 Dominic J. Robinson (Rotterdam, Netherlands)
- 15:00 **IL338 Small Molecule Modulation to Enhance Topical Photodynamic Therapy**
 Tayyaba Hasan (Boston, MA, United States)
- 15:30 **IL339 The frontiers in ALA-PDT**
 Zvi Malik (Ramat Gan, Israel)
- 16:00 **Coffee break**
- 16:30 **IL340 Daylight-PDT**
 Stine Regin Wiegell (Copenhagen, Denmark)
- 17:00 **OC341 A new family of low-molecular weight halogenated porphyrins for Photodynamic Therapy of acne**
17:20 Luis Borges Rocha, Gonçalo Costa, Nuno P. F. Gonçalves, Carlos J. Monteiro, Hélder Tão Soares,
 Fábio A. Schaberle, Mariette M. Pereira, Luís G. Arnaut (Coimbra, Portugal)

- 14:30 **Cellular and molecular aspects of photoprotection**
 Chair: Rex M. Tyrrell (Bath, United Kingdom), Luis O. Morales (Helsinki, Finland)
- 14:30 **IL342 Micronutrients: Mechanisms of Photoprotection**
 Wilhelm Stahl (Duesseldorf, Germany)
- 15:00 **IL343 Plant acclimation to sunlight: solar UV, phenolics and UV photoreceptors**
 Luis O. Morales, Mikael Brosché, Pedro José Aphalo (Helsinki, Finland)
- 15:30 **IL344 Plant responses to UV –hydrogen peroxide in new light**
 Éva Hideg¹, Gyula Czégény¹, Petra Majer², Anikó Máta¹, András Dér³, Györgyi Sándor³, Philip J. Dix⁴,
 Åke Strid⁵ (¹Pécs, ²Budapest, ³Szeged, Hungary; ⁴Maynooth, Co. Kildare, Ireland; ⁵Örebro, Sweden)
- 16:00 **Coffee break**
- 16:30 **OC345 Photoprotection by mycosporine-like amino acids *in vitro***
 Karl Lawrence, Paul Long, Antony Richard Young (London, United Kingdom)
- 16:50 **OC346 Evaluation of sunscreen genoprotection in a new human epidermal model derived from hair
 follicle**
 Daniel Bacqueville¹, Thierry Douki², Laure Duprat¹, S. Rebelo-Moreira², Béatrice Guiraud¹, Hélène
 Dromigny¹, Valérie Perier¹, Sandrine Bessou-Touya¹, Hélène Duplan¹ (¹Toulouse, ²Grenoble, France)
- 17:10 **IL347 Endogenous and exogenous paths to UVA protection in human skin cells**
17:40 Rex Tyrrell (Bath, United Kingdom)

- 14:30 **Photofunctional proteins**
 Chair: Santi Nonell (Barcelona, Spain), Andreas Möglich (Bayreuth, Germany)
- 14:30 **IL348 Engineering and Mechanism of Sensory Photoreceptors**
 Andreas Möglich (Bayreuth, Germany)
- 15:00 **IL349 The Photochemical Mechanism of a B12-Dependent Photoreceptor Protein**
 Alex Richard Jones (Manchester, United Kingdom)
- 15:30 **IL350 Photochemical activity of fluorescent proteins: to use or to reduce?**
 Konstantin A. Lukyanov (Moscow, Russian Federation)
- 16:00 **Coffee break**
- 16:30 **IL351 Novel flavin binding proteins as singlet oxygen photosensitisers**
 Rubén Ruiz-González (Barcelona, Spain)
- 17:00 **IL352 Microbial Rhodopsins: Diverse Functions from a Single Protein Scaffold**
 John L. Spudich (Houston, TX, United States)
- 17:30 **OC353 Screening genetically-encoded photosensitizers for correlative microscopy: a fast and efficient method for detecting their ROS generation**
 Alberto Rodríguez-Pulido, Aitziber L. Cortajarena, Cristina Flors (Madrid, Spain)
- 17:45 **OC354 Light-controlled cell factories - Employing optogenetic plug-and-play expression modules based on photocaged carbohydrates for synthetic bio(techno)logy and single cell applications**
18:00 Dennis Binder, Claus Bier, Alexander Grünberger, Anita Loeschke, Dietrich Kohlheyer, Jörg Pietruszka, Karl-Erich Jaeger, Thomas Drepper (Jülich, Germany)

- 14:30 **Solar energy –biofuels**
 Chair: Massimo Trotta (Bari, Italy)
- 14:30 **IL355 Using Microalgae for Converting Solar Energy into Biofuels and other Bio-products**
 Teresa M. Mata, Nidia S. Caetano, Adélio M. Mendes, António A. Martins (Porto, Portugal)
- 15:00 **OC356 Biorefinery of seaweed *Gracilaria gracilis*: from pharmaceuticals to fuels through biomaterials**
 Matteo Francavilla¹, Simona Intini², Massimo Franchi², Massimo Monteleone² (¹Foggia, ²Lesina, Italy)
- 15:30 **IL357 Light-driven catalysis for artificial photosynthesis**
 Andrea Sartorel, Marcella Bonchio (Padova, Italy)
- 16:00 **Coffee break**
- 16:30 **IL358 Recent advances in constructing the artificial leaf**
 Joanna Kargul¹, Julian David Janna Olmos¹, Anita Jarzębińska¹, Philippe Becquet^{1,2} (¹Warsaw, Poland; ²Villach, Austria,)
- 17:00 **IL359 Artificial photoconverters assembled with natural components**
 Rocco Roberto Tangorra, Francesco Milano, Omar Hassan Omar, Danilo Belviso, Rocco Caliandro, Francesca Italiano, Roberta Ragni, Alessandra Operamolla, Angela Agostiano, Gianluca M. Farinola, Massimo Trotta (Bari, Italy)
- 17:30 **OC360 Exploration of New Porphyrinoids for Solar Cells Conception**
18:00 Ana M. V. M. Pereira, Ana F. R. Cerqueira, Tiago A. G. Duarte, Nuno M. M. Moura, M. Amparo F. Faustino, M. Graça P.M.S. Neves, António F. da Cunha, José A.S. Cavaleiro (Aveiro, Portugal)

Thursday, 3 September, afternoon

Building 25, Rectory Auditorium

18:00
19:00

ESP General assembly

Building M, Crasto Canteen

20:30

Gala dinner

Medal award ceremony

08:30

Keynote Lecture 6

Chair: Ranieri Bizzarri (Pisa, Italy)

KL401 2015: a light odyssey - From GFP to smart highlighters

Virgile Adam (Grenoble, France)

09:00

Keynote Lecture 7

Chair: Norbert Lange (Geneva, Switzerland)

KL402 From nano to micro, and back: porphyrin-based cancer theranostics for personalized photomedicine

Gang Zheng (Toronto, ON, Canada)

- 09:30 **Environmental antimicrobial PDT**
In dedication to Giulio Jori
Chair: Adelaide Almeida (Aveiro, Portugal), M. Amparo F. Faustino (Aveiro, Portugal), Tim Maisch (Regensburg, Germany)
- 09:30 **IL403 New photosensitizers at the end of the dismal tunnel in the development of new antibacterial approaches**
Tim Maisch (Regensburg, Germany)
- 09:55 **OC404 Light-induced inactivation of bacterial endospores: high-pressure enhances photosensitizer binding and improves inactivation efficiency**
Joana Couceiro, Carla Martins, M. Graça P.M.S. Neves, M. Amparo F. Faustino, Jorge M. Saraiva, Adelaide Almeida, Ângela Cunha (Aveiro, Portugal)
- 10:10 **OC405 Photoactive antimicrobial coating to preserve strawberries**
Zivile Luksiene (Vilnius, Lithuania)
- 10:25 **Coffee break**
- 10:55 **IL406 Development of photoactive materials for environmental applications**
M. Graça P.M.S. Neves, Eliana Alves, Mariana Mesquita, João M. M. Rodrigues, Adelaide Almeida, Ângela Cunha, M. Amparo F. Faustino (Aveiro, Portugal)
- 11:20 **IL407 Photodynamic inactivation based on natural photosensitizers for food decontamination**
Nicole Tortik¹, Michael Glueck¹, Barbara Schamberger¹, Andreas Spaeth², Kristjan Plaetzer¹ (¹Salzburg, Austria; ²Regensburg, Germany)
- 11:45 **IL408 Photodynamic inactivation of plant-pathogenic fungi: mechanistic studies and applications**
Gilberto Úbida Leite Braga (Ribeirão Preto, SP, Brazil)
- 12:10 **OC409 Defeating the Superbugs: Self sterilising polymers to combat healthcare associated infections**
Lauren Clare Turner, Ross W. Boyle (Hull, United Kingdom)
- 12:25 **OC410 Fighting mosquito larvae and fish parasites with chlorophyll derivates in photodynamic reactions**
Gilmar Sidnei Erzinger¹, Donat Peter Häder² (¹Joinville, SC, Brazil; ²Möhrendorf, Germany)
- 12:40 **OC411 Effective photodynamic treatment of *ex vivo* onychomycosis using a multifunctional porphyrin photosensitizer and green light**
Chelsea den Hollander¹, Jasper Visser¹, Amu Hosseinzoi¹, Federica Galli², Threes Smijs¹ (¹Rotterdam, ²Leiden, Netherlands)
- 12:55 **OC412 Mechanistic model for bacteria photo-inactivation in water using solar radiation: new understanding of solar disinfection**
María Castro-Alfárez¹, M. Inmaculada Polo-López¹, Javier Marugán², Pilar Fernández-Ibáñez¹ (¹Almería, ²Madrid, Spain)

- 09:30 **Melanin, melanoma and UV radiation (ESP-ESPCR* Joint Symposium)**
Chair: Lionel Larue (Orsay, France), Markus Böhm (Münster, Germany)
- 09:30 **IL413 Molecular mechanisms of MC1R-mediated protection against UV light and the link to melanoma**
Markus Böhm (Münster, Germany)
- 10:00 **IL414 Activation of the Wnt – β -catenin signaling pathway after UV induction**
Juliette Bertrand, Valerie Petit, Lionel Larue (Orsay, France)
- 10:30 **Coffee break**
- 11:00 **OC415 Opposite effects of UVA radiation and temperature on Per1 expression in murine B16-F10 melanoma cells**
Leonardo Vinícius Monteiro de Assis, Maria Nathália de Carvalho Magalhães Moraes, Bruno César Ramos, Ana Maria de Lauro Castrucci (São Paulo City, Brazil)
- 11:15 **IL416 Ultraviolet radiation cooperates with individual oncogenes to drive melanomagenesis through distinct molecular mechanisms**
Amaya Viros¹, Malin Pedersen², Maria Romina Girotti¹, Simon J. Furney¹, Amit Mandal¹, Grazia Saturno¹, Elena Galvani¹, Berta Sánchez-Laorden¹, Paul Lorigan¹, Martin Cook³, Richard Marais¹
(¹Manchester, ²London, ³Guildford, United Kingdom)
- 11:45 **IL417 Longwaves UVA1 : contribution to skin damage and pigmentation**
12:15 Françoise Bernerd¹, Claire Marionnet¹, Christelle Golebiewski¹, Stephanie Nouveau¹, Virginie Hourblin¹, Kumar Pillai², Megan Manco², Christian Tran¹, Caroline Tricaud³ (¹Aulnay sous Bois, ³Chevilly-Larue, France; ²Clark, NJ, United States)

*ESPCR: European Society for Pigment Cell Research (<http://www.espcr.org/>)

- 09:30 **Photosensors as indicators of biochemical processes *in vivo***
 Chair: Ranieri Bizzarri (Pisa, Italy)
- 09:30 **IL418 NIR femtosecond laser pulses –A versatile tool for DNA damage induction and photomanipulation**
 Martin Stöckl, Eva Gwosch, Philipp Blumhardt, Franziska Teusel, Alfred Leitenstorfer, Elisa Ferrando-May (Konstanz, Germany)
- 10:00 **IL419 RESOLFT super resolution microscopy in brain tissues**
 Ilaria Testa (Stockholm, Sweden)
- 10:30 **Coffee break**
- 11:00 **OC420 A Fluorescent Nanobiosensor and a Two-Photon Fluorescent Probe for the Intracellular Detection of Nitric Oxide**
 Maria Jose Marin Altaba¹, Richard Leggett¹, Paul Thomas¹, Francisco Galindo², David A. Russell¹
 (¹Norwich, United Kingdom; ²Castellon de la Plana, Spain)
- 11:20 **OC421 Unveiling TRPV1 Spatio-Temporal Organization in Live Cell Membranes**
 Barbara Storti, Carmine Di Rienzo, Francesco Cardarelli, Ranieri Bizzarri, Fabio Beltram (Pisa, Italy)
- 11:40 **OC422 Imaging a nanostructured photosensitizer in tumor cells with subdiffraction resolution**
 Stefania Abbruzzetti¹, Pietro Delcanale¹, Cristiano Viappiani¹, Francesca Pennacchietti², Paolo Bianchini², Alberto Diaspro², Massimiliano Tognolini² (¹Parma, ²Genova, Italy)
- 12:00 **OC423 Flavin-binding fluorescent proteins –Applications and photophysical properties**
 Marcus Wingen, Christian Rupprecht, Stephan Endres, Janko Potzkei, Achim Heck, Thomas Gensch, Karl-Erich Jaeger, Thomas Drepper (Juelich, Germany)
- 12:20 **OC424 FLIM-FRET imaging of a caspase-3 activity in cancer cells using a new genetically encoded FRET-based sensor**
 Tatiana Sergeeva¹, Marina Shirmanova¹, Varvara Dudenkova¹, Olga Zlobovskaya², Elena Zagaynova¹, Konstantin A. Lukyanov² (¹Nizhny Novgorod, ²Moscow, Russian Federation)
- 12:40 **IL425 Imaging intracellular viscosity by new molecular rotors suitable for phasor analysis of fluorescence lifetime**
13:00 Ranieri Bizzarri (Pisa, Italy)

- 14:30 **The Legacy of Giulio Jori**
Chair: Francesca Giuntini (Liverpool, United Kingdom), Rex M. Tyrrell (Bath, United Kingdom)
- 14:30 **OC426 Seven years of research in environmental antimicrobial PDI at the University of Aveiro: contributions and challenges**
Eliana Alves, M. Amparo F. Faustino, João P.C. Tomé, Augusto C. Tomé, M. Graça P.M.S. Neves, José A.S. Cavaleiro, Ângela Cunha, M. Rosário M. Domingues, Adelaide Almeida (Aveiro, Portugal)
- 14:50 **OC427 Singlet Oxygen Photosensitizers Based on C60 Derivatives**
David García-Fresnadillo, Antonio José Sánchez-Arroyo, Antonio Muñoz, Beatriz María Illescas, Adrian Gerald McNicholl, Javier P. Gisbert, María Dolores Guerrero-Torres, Teresa Alarcón, Nazario Martín (Madrid, Spain)
- 15:05 **IL428 Synthesis and evaluation of novel photoactive molecules**
João P.C. Tomé (Aveiro, Portugal)
- 15:25 **IL429 Porphyrin-conjugated low molecular weight gelators: building blocks for light-responsive supramolecular nanofibers and hydrogels**
Francesca Giuntini¹, Sandra Valeria Vassiliades², Emerson Rodrigo Da Silva², Wendel Andrade Alves² (¹Liverpool, United Kingdom; ²Santo André, São Paulo, Brazil)
- 15:45 **OC430 Antimicrobial blue light inactivation of *Pseudomonas aeruginosa* by photo-excitation of endogenous porphyrins: *in vitro* and *in vivo* studies**
Rehab M. Amin¹, Brijesh Bhayana², Michael Hamblin², Tianhong Dai² (¹Cairo, Egypt; ²Boston, MA, United States)
- 16:00 **Coffee break**
- 16:30 **IL431 Porphyrins and the long journey around PDT: Aveiro-Padova-Aveiro**
M. Amparo F. Faustino, M. Graça P.M.S. Neves, José A.S. Cavaleiro (Aveiro, Portugal)
- 16:50 **IL432 Nanotechnology for PDT. Which improvements can we really expect?**
Francesca Moret, Elisa Gaio, Elena Reddi (Padova, Italy)
- 17:10 **IL433 Autonomous University of Madrid and University of Padova: A strong bond that has remained**
17:30 **stable for the last 20 years**
Pilar Acedo¹, Santi Rello-Varona², Ángeles Villanueva³ (¹Stockholm, Sweden; ²Barcelona, ³Madrid, Spain)

- 14:30 **Vascular and immunological aspects of PDT**
Chair: Patrycja Nowak-Sliwinska (Lausanne, Switzerland)
- 14:30 **IL434 Vascular Effects as Reporters of Therapeutic Efficacy**
Tayyaba Hasan (Boston, MA, United States)
- 15:00 **IL435 Extracellular vimentin, an attractive target for cancer therapy**
Arjan W. Griffioen, Elisabeth J. Huijbers, Patrycja Nowak-Sliwinska, Judy R. van Beijnum
(Amsterdam, Netherlands)
- 15:00 **IL436 Enhanced photodynamic and chemotherapeutic anti-cancer activity caused by a transient
angiostasis-induced increase of intratumoral oxygenation**
Patrycja Nowak-Sliwinska (Lausanne, Switzerland)
- 16:00 **Coffee break**
- 16:30 **IL437 Lymphatic vessels and photodynamic therapy of cancer**
Jakub Golab¹, Angelika Muchowicz¹, Małgorzata Wachowska¹, Witold Waldemar Kilarski² (¹Warsaw,
Poland; ²Lausanne, Switzerland)
- 17:00 **OC438 Tumor-vascular targeting by photochemical activation of VEGF121/rGel; Mechanisms of target
specific efficacy**
Anette Weyergang¹, Ane Sofie Fremstedal¹, Michael Rosenblum², Kristian Berg¹ (¹Oslo, Norway;
²Houston, TX, United States)
- 17:20 **OC439 Light activation of sunitinib following angiostatic therapy enhances vascular occlusion and tumor
growth inhibition**
Andrea B Weiss¹, Patrycja Nowak-Sliwinska², Grzegorz Szewczyk³, Tadeusz J. Sarna³, Hubert van den
Bergh¹, Arjan W. Griffioen² (¹Lausanne, Switzerland; ²Amsterdam, Netherlands; ³Krakow, Poland)
- 17:40 **OC440 A crosstalk between modulatory effects of local acute inflammation and antitumor immunity as
18:00 determinants of tumor response to bacteriochlorin-mediated photodynamic therapy**
Barbara Pucelik¹, Janusz M. Dabrowski¹, Luís G. Arnaut², Mariette M. Pereira², Grażyna Stochel¹
(¹Krakow, Poland; ²Coimbra, Portugal)

- 14:30 **UV and immunomodulation in cancer**
 Chair: Vivienne E. Reeve (Sydney, NSW, Australia), Scott N. Byrne (Sydney, NSW, Australia)
- 14:30 **IL441 UV irradiation, immunity and inflammation in melanoma pathogenesis**
 Thomas Tüting (Bonn, Germany)
- 15:00 **IL442 Mast cells: insights into the regulation of the tumour microenvironment**
 Michele Grimbaldston (Adelaide, SA, Australia)
- 15:30 **IL443 Identification and characterisation of regulatory immune cells in UV-exposed hosts**
 Scott Byrne, Caitlin Gillis, Gary Mark Halliday (Sydney, NSW, Australia)
- 16:00 **Coffee break**
- 16:30 **IL444 Chronic inflammation and immunosuppression in melanoma microenvironment**
 Viktor Umansky (Heidelberg, Germany)
- 17:00 **OC445 UV-induced immune suppression: A potential role for IL-4-treated mast cells activating immunoregulatory B cells**
 Felix Marsh-Wakefield, Clare O'Sullivan, Sarah Leighton, Caitlin Gillis, Gary Mark Halliday, Scott Byrne (Sydney, NSW, Australia)
- 17:15 **OC446 Exposure to chronic, carcinogenic doses of UVB expands mast cell progenitors in the bone marrow and peripheral blood**
 Lai Fong Kok, Gary Mark Halliday, Scott Byrne (Sydney, NSW, Australia)
- 17:30 **IL447 A gender bias for photoprotection by 1,25-dihydroxyvitamin D3 in mice**
17:45 Wannit Tongkao-on, Katie M. Dixon, Rebecca S. Mason, Vivienne E. Reeve (Sydney, NSW, Australia)

- 14:30 **New light technologies in cutaneous photodiagnostics and phototreatment**
Chair: Franz Trautinger (St. Poelten, Austria), Alex Anstey (Bangor, United Kingdom)
- 14:30 **IL448 Development of light sources for phototherapy - historical overview**
Franz Trautinger (St. Poelten, Austria)
- 15:00 **IL449 Safety Aspects of Light Sources used in Phototherapy**
Harry Moseley (Dundee, United Kingdom)
- 15:30 **IL450 Mathematical modelling and its application to planning phototherapy services**
Alex Anstey (Bangor, United Kingdom)
- 16:00 **Coffee break**
- 16:30 **IL451 Digital Phototherapy**
Peter Wolf (Graz, Austria)
- 17:00 **IL452 Erythema Action Spectrum of Topical Psoralen-Sensitised Skin to Evaluate Current and Novel Lamps for PUVA Photochemotherapy**
Chris Edwards, Deana Al-Ismael, Alexander Anstey (Newport, United Kingdom)
- 17:30 **OC453 Low level LED therapy enhances fibroblast proliferation by stimulating metabolic activity**
Sidrah Chaudary, Carina Wagner, Denise Mandt, Heinz Redl, Peter Dungal (Vienna, Austria)
- 17:40 **OC454 Blue LED light as a new tool for treatment of inflammatory skin conditions**
Matthias Born¹, Jörg Liebmann¹, Christoph V. Suschek², Verena von Felbert¹ (¹Aachen, ²Düsseldorf, Germany)
- 17:50 **OC455 Standardization of a new photodiagnosis method based on LEDs for patients with solar urticaria**
18:00 **sensitive to visible light**
Jose Aguilera Arjona¹, Maria Victoria De Gálvez Aranda¹, Diego De Argila², Amparo Perez-Ferriols³, Teresa Rodríguez-Granados⁴, Jesus Gardeazabal⁵, Jose Manel Carrascosa⁶, Enrique Herrera-Ceballos¹ (¹Málaga, ²Madrid, ³Valencia, ⁴Santiago de Compostela, ⁵Bizkaia, ⁶Barcelona, Spain)