

# PROGRAMME

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## ESP 2009 - Programme

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**Saturday, September 5, Afternoon**

**Faculty of Law New Building**

**Ground floor**

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15:30  
18:30

**Registration**

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**Saturday, September 5, Evening**

**Old University**

**Aula Leopoldinum**

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19:00  
21:00

**Welcome Reception**

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**Sunday, September 6, Morning**
**Room 1.02**

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- 08:30      **Opening Ceremony – Welcome Address**
- 08:45      **Young Investigator Award Lecture**  
*Chair: Miguel A Miranda (Valencia, Spain)*
- IL101      Super-resolution fluorescence imaging of DNA topology**  
 Cristina Flors (Edinburgh, United Kingdom)
- 09:30      **Molecular and cellular aspects of PDT**  
*Chairs: Jacques G Piette (Liège, Belgium), Zvi N. Malik (Ramat Gan, Israel)*
- 09:30      **IL102      Role of autophagy pathways and their cross talk in PDT**  
 Michael Dewaele<sup>1</sup>, Tom Verfaillie<sup>1</sup>, Noemi<sup>1</sup> Rubio Romero<sup>1</sup>, Abhishek Garg<sup>1</sup>, Peter De Witte<sup>1</sup>, Jacques Piette<sup>2</sup>, Patrizia Agostinis<sup>1</sup> (<sup>1</sup>Leuven, <sup>2</sup>Liege, Belgium)
- 10:00      **IL103      Molecular events and tumor immunity induced by Vascular-targeted photodynamic therapy (VTP) with the Pd-Bacteriochlorophyll derivative, WST11**  
Yoram Salomon, Avigdor Scherz (Rehovot, Israel)
- 10:30      **Coffee break**
- 11:00      **IL104      Circulating Endothelial Progenitor Cells and PDT**  
 Charles Gomer (Los Angeles CA, United States)
- 11:30      **IL105      Multifunctional 5-ALA prodrugs display improved anticancer activity via independent mechanisms**  
Zvi N. Malik, Gili Berkovitch, Abraham Nudelman, Benjamin Ehrenberg (Ramat Gan, Israel)
- 12:00      **IL106      NF-κB in tumor eradication by photodynamic therapy : a friend or a foe**  
 Jacques G Piette (Liège, Belgium)
- 12:30      **OC107      Photodynamic Therapy targets the mTOR signaling network in vitro and in vivo**  
 Anette Weyergang, Kristian Berg, Olav Kaalhus, Qian Peng, Pål K Selbo (Oslo, Norway)
- 12:45      **OC108      Cellular antioxidant pathways protect mammalian sensory neurons in 3D culture from mTHPC-mediated PDT**  
Kathleen E Wright<sup>1</sup>, Alexander J MacRobert<sup>2</sup>, James B Phillips<sup>1</sup> (<sup>1</sup>Milton Keynes, <sup>2</sup>London, United Kingdom)

- 09:30 **UV-induced DNA damage, repair and mutagenesis**  
*Chair: Evelyne Sage (Orsay, France)*
- 09:30 **IL109 Induction of interstrand cross-links by photosensitization**  
J. Richard Wagner<sup>1</sup>, Francois Bergeron<sup>2</sup>, Vandana Kuttappan-Nair<sup>1</sup>, Francois Samson-Thibault<sup>1</sup>,  
Nourreddine Belmadoui<sup>1</sup> (<sup>1</sup>Sherbrooke QC, Canada; <sup>2</sup>Grenoble, France)
- 10:00 **IL110 Lesion- and cell type-dependent repair of pyrimidine dimers in human skin and cultured keratinocytes and fibroblasts**  
Thierry Douki (Grenoble, France)
- 10:30 **Coffee break**
- 11:00 **IL111 Influence of oxidative stress on the repair of DNA modifications induced by sunlight**  
Bernd Epe (Mainz, Germany)
- 11:30 **IL112 Role of post-replication repair in UVA-induced mutagenesis in yeast**  
Evelyne Sage, Anne Reynaud-Angelin, Maria-Elisabetta Serrentino, Stanislav Kozmin, Stefania Francesconi, Pierre-Marie Girard (Orsay, France)
- 12:00 **OC113 How fast is catalytic turnover of DNA photolyase?**  
Martin Byrdin<sup>1</sup>, Agathe Espagne<sup>1</sup>, Andre P. M. Eker<sup>2</sup>, Klaus Brettel<sup>1</sup> (<sup>1</sup>Gif sur Yvette, France;  
<sup>2</sup>Rotterdam, Netherlands)
- 12:20 **OC114 Epigenetic modifications in human epidermal cells after UV-irradiation**  
Ruediger Greinert, I-Peng Chen, Alexandra Faust, Stefan Henning, Beate Volkmer (Buxtehude, Germany)
- 12:40 **OC115 Inhibition of cellular oxidative stress in keratinocytes by a-tocopherol**  
George J Delinassios<sup>1</sup>, Marcus S Cooke<sup>2</sup>, Antony R Young<sup>1</sup> (<sup>1</sup>London, <sup>2</sup>Leicester, United Kingdom)

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**Sunday, September 6, Morning**
**Room 3.02**

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- 09:30     **Advanced techniques in fluorescence imaging**  
*Chair: Angelika Rueck (Ulm, Germany)*
- 09:30     **IL116    Perspectives of spectral unmixing in analysis of multi-wavelength time-resolved spectroscopy and FLIM data**  
Alzbeta Chorvatova, Anton Mateasik, Dusan Chorvat Jr (Bratislava, Slovakia)
- 09:55     **IL117    Probing Molecular Interactions by Fluorescence Lifetime Imaging**  
Wolfgang Becker (Berlin, Germany)
- 10:20     **OC118    Microfluorometry of Cell Membrane Dynamics as a Function of Cholesterol and Temperature**  
Petra Weber<sup>1</sup>, Michael Wagner<sup>1</sup>, Wolfgang S.L. Strauss<sup>2</sup>, Herbert Schneckenburger<sup>1</sup> (<sup>1</sup>Aalen, <sup>2</sup>Ulm, Germany)
- 10:30                   **Coffee break**
- 11:00     **OC119    Dose Limited Fluorescence Microscopy of Living Cells**  
Herbert Schneckenburger<sup>1</sup>, Petra Weber<sup>1</sup>, Michael Wagner<sup>1</sup>, Sarah Schickinger<sup>1</sup>, Thomas Bruns<sup>1</sup>, Rainer Wittig<sup>2</sup>, Wolfgang S.L. Strauss<sup>2</sup> (<sup>1</sup>Aalen, <sup>2</sup>Ulm, Germany)
- 11:20     **IL120    Multi-dimensional fluorescence lifetime measurements**  
Christoph U Biskup (Jena, Germany)
- 11:45     **IL121    New fluorescence techniques in PDT**  
Angelika Rueck, Frank Dolp, Carmen Hauser, Ingrid Kinzler, Christine v.Arnim (Ulm, Germany)
- 12:10     **IL122    Fluorescence light propagation in biological tissue**  
Alwin Kienle, Daniela Strat, Florian Voit, Jan Schäfer (Ulm, Germany)
- 12:35     **OC123    Multispectral autofluorescence diagnosis of non-melanoma skin tumors**  
Ekaterina G. Borisova, Elmira P. Pavlova, Petranka P. Troynova, Daniela Dogandjiiska, Latchezar A. Avramov (Sofia, Bulgaria)
- 12:50     **OC124    Development and validation of an image-processing method to quantify the vascular effects induced by anti-VEGF agents in the chick's chorioallantoic membrane model**  
Patrycja M Nowak-Sliwinska, Jean-Pierre Ballini, Hubert van den Bergh, Georges A Wagnieres (Lausanne, Switzerland)

- 14:15 **Young Investigator Award Lecture**  
*Chair: Paola Taroni (Milan, Italy)*
- IL125 Visualizing reactive oxygen species in the lipid membranes of live cells via fluorescence microscopy**  
 Armen Khatchadourian, Katerina Krumova, Dusica Maysinger, Gonzalo Cosa (Montreal QC, Canada)
- 15:00 **PDT oral communications**  
*Chair: Johan Moan (Oslo, Norway)*
- 15:00 **OC126 Evaluation of a new targeted photosensitizer in human primary ovarian cancer models for near-infrared imaging-guided PDT**  
Tracy WB Liu, Jocelyn Stewart, Juan Chen, Benjamin G Neel, Gang Zheng (Toronto ON, Canada)
- 15:15 **OC127 Improving delivery and targeting of 5-aminolaevulinic acid (ALA) in photodynamic therapy (PDT): synthesis and biological studies of novel peptide prodrugs**  
 Francesca Giuntini<sup>1</sup>, Ludovic Bourré<sup>2</sup>, Michael Wilson<sup>2</sup>, Alexander J MacRobert<sup>2</sup>, Ian M Eggleston<sup>1</sup> (<sup>1</sup>Bath, <sup>2</sup>London, United Kingdom)
- 15:30 **OC128 Cytoprotective Induction of Nitric Oxide Synthase in Tumor Cells Exposed to Photooxidative Stress After 5-Aminolevulinic Acid Treatment**  
Albert W Girotti, Reshma Bhowmick (Milwaukee WI, United States)
- 15:45 **OC129 Effects of photodynamic therapy on protein expression in cells**  
Yan Baglo, Mirta Mittelstedt Leal de Sousa, Sissel Håvåg, Linda Helander, Geir Slupphaug, Hans Krokan, Odrun Arna Gederaas (Trondheim, Norway)
- 16:00 **OC130 Hypericin-PDT: Temporal evolution of the cellular responses to ER-localized photodynamic stress**  
Noemí Rubio<sup>1</sup>, Michael Dewaele<sup>1</sup>, Tom Verfaillie<sup>1</sup>, Abhishek D. Garg<sup>1</sup>, Jacques Piette<sup>2</sup>, Patrizia Agostinis<sup>1</sup> (<sup>1</sup>Leuven, <sup>2</sup>Liège, Belgium)
- 16:15 **OC131 In vivo and in vitro detection of PpIX after treatment with hexyl 5-aminolevulinate and light**  
 Odrun Arna Gederaas, Harald Husebye, Astrid Hjelde, Eivind La Puebla Larsen, Lise Lyngsnes Randeberg, Linda Helander, Carl-Jørgen Arum, Anders Brunsvik, Anders Johnsson, Lars Ottar Svaasand, Hans Einar Krokan (Trondheim, Norway)
- 16:30 **Break**
- 16:45 **OC132 Electrochemical and morphological characterization of the surface of colored human iridal stroma melanosomes**  
Dana N. Peles, Lian Hong, John D. Simon (Durham NC, United States)
- 17:00 **OC133 Signaling pathways involved in NGF-mediated antiapoptotic effect in photosensitized crayfish glial cells**  
 Anatoly B. Uzdensky (Rostov-on-Don, Russian Federation)
- 17:15 **OC134 Evaluation of long-term efficacy of photodynamic therapy with Photolon (Fotolon)**  
 Yury P Istomin<sup>1</sup>, Siarhei V Shliakhtsin<sup>1</sup>, Michael A Kaplan<sup>2</sup>, Tatsiana V Trukhachova<sup>1</sup> (<sup>1</sup>Minsk, Belarus; <sup>2</sup>Obninsk, Russian Federation)

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**Sunday, September 6, Afternoon****Room 1.02**

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- 17:45    **OC135**    **MAPK signalling has impact on the therapeutic effect of PDT and PCI**  
Anette Weyergang, Kristian Berg (Oslo, Norway)
- 18:00    **OC136**    **Time-resolved gene expression profiling of human squamous cell carcinoma cells during apoptosis processing induced by photodynamic treatment with hypericin**  
Renata Sanovic, Barbara Krammer, Sandra Grumboeck, Thomas Verwanger (Salzburg, Austria)
- 18:15    **OC137**    **5-aminolevulinic acid (ALA) and 5-aminolevulinic acid methyl ester (MAL) delivery by microneedles for topical photodynamic therapy. Assessment of pain, erythema and pigmentation changes during and after treatments.**  
Patrycja M Mikolajewska<sup>1</sup>, Ryan F Donnelly<sup>2</sup>, Martin J Garland<sup>2</sup>, Vladimir Iani<sup>1</sup>, Asta Juzeniene<sup>1</sup>, Johan E Moan<sup>1</sup> (<sup>1</sup>Oslo, Norway; <sup>2</sup>Belfast, United Kingdom)
- 18:30    **OC138**    **Monitoring and enhancing dermatological photodynamic therapy**  
Alison Curnow, Jessica Tyrrell, Sandra Campbell (Truro, United Kingdom)

- 15:00     **New topics in photodermatology (ESP-ESPD Symposium)**  
*Chairs: Peter Wolf (Graz, Austria), Stefan Beissert (Muenster, Germany)*
- 15:00     **IL139     Advances in photomedicine: Better understanding of molecular mechanisms of photo(chemo)therapy and novel combination treatment strategies**  
*Peter Wolf, Tej P Singh (Graz, Austria)*
- 15:30     **IL140     What's new in topical photoallergy and photopatch testing**  
*Sally H Ibbotson (Dundee, United Kingdom)*
- 16:00     **IL141     Sun protection: SPF and solar spectrum**  
*Antony R Young<sup>1</sup>, Bernd Herzog<sup>2</sup>, Uli Osterwalder<sup>2</sup>, Werner Baschong<sup>2</sup> (<sup>1</sup>London, United Kingdom; <sup>2</sup>London, Switzerland)*
- 16:30             **Break**
- 16:45     **IL142     New mechanisms of photocarcinogenesis and Tregs.**  
*Stefan Beissert (Muenster, Germany)*



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**Sunday, September 6, Afternoon**

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**Room 1.03**

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- 15:00 **Involvement of ROS in UV effects (ESP-ASP symposium) -**  
*Chairs: Rex Tyrrell (Bath, United Kingdom), Irene E Kochevar (Boston, United States)*
- 15:00 **IL143 UVB generates platelet-activating factor agonists which induce systemic immunosuppression via its ability to act as a pro-oxidative stressor**  
Jeffrey B. Travers, Yongxue Yao, Raymond L. Konger (Indianapolis IN, United States)
- 15:30 **IL144 Light-activated Caged-iron chelators: A novel approach against UVA-mediated iron damage in skin cells**  
Charareh Pourzand, Anthie Yiakouvaki, Jelena Savovic, Abdullah Al-Qenaie, James Dowden (Bath, United Kingdom)
- 16:00 **IL145 Negative regulation of heme oxygenase 1 - the classical UVA/oxidant inducible gene**  
Rex Tyrrell, Chintan Raval, Julia Zhong (Bath, United Kingdom)
- 16:30 **Break**
- 16:45 **IL146 Influence of tissue-mimetic environment on skin cell responses to singlet oxygen**  
Min Yao, Robert W Redmond, Irene E Kochevar (Boston MA, United States)

- 08:30 **Plenary Lecture**  
*Chair: Francesco Lenci (Pisa, Italy)*
- IL201 Molecular Photovoltaic Cells Mimic Photosynthesis**  
Michael Grätzel (Lausanne, Switzerland)
- 09:30 **Photosensitization - Biophysical, photophysical and spectroscopic aspects**  
*Chair: Benjamin Ehrenberg (Ramat Gan, Israel)*
- 09:30 **IL202 Nanostructural Hybride Photosensitizers for Photodynamic Therapy**  
Maria Nowakowska<sup>1</sup>, Kinga Nawalany<sup>1</sup>, Mariusz Kępczyński<sup>1</sup>, Marta Kumorek<sup>1</sup>, Aleksandra Rusin<sup>2</sup>, Zdzisław Krawczyk<sup>2</sup> (<sup>1</sup>Kraków, <sup>2</sup>Gliwice, Poland)
- 10:00 **IL203 Design of Amphiphilic Cyclodextrin / Photosensitiser Nanoassemblies: Spectroscopy, Intracellular delivery and Photodamage**  
Antonino Mazzaglia (Messina, Italy)
- 10:30 **Coffee break**
- 11:00 **IL204 The Photosensitized Production of Singlet Oxygen in a Cell: Assessing the Effects of Intracellular Location and Viscosity on the Kinetics of Singlet Oxygen Formation and Decay**  
Peter R. Ogilby (Århus, Denmark)
- 11:30 **IL205 Direct detection of singlet oxygen by its luminescence using time- and spectral resolved techniques**  
Wolfgang Bäumlner (Regensburg, Germany)
- 12:00 **IL206 Photosensitized permeabilization of liposomal membranes to ionic leakage**  
Shany Ytzhak, Shoshana Bernstein, Benjamin Ehrenberg (Ramat Gan, Israel)
- 12:30 **OC207 Membrane permeabilization and shape transition: role of asymmetry and depth of modification**  
Stéphanie Bonneau, Julien Heuvingh, Halina Mojziso, Daniel Brault (Paris, France)
- 12:45 **OC208 Resonance light scattering (RLS) study of salt induced aggregation and photolysis of photosensitizer Merocyanine 540**  
Alexander Ya Potapenko, Tatyana A Shmigol, Elena A Kozhinova, Andrei M Tikhomirov, Alla A Kyagova, Mikhail V Malakhov (Moscow, Russian Federation)

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**Monday, September 7, Morning**

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**Room 1.03**

- 09:30 **Sunlight exposure and vitamin D - Towards a healthy balance**  
*Chair: Frank R. de Gruijl (Leiden, Netherlands)*
- 09:30 **IL209 Understanding Vitamin D: more than "Skin and Bones"**  
Jörg Reichrath (Homburg, Germany)
- 10:00 **IL210 Vitamin D3 – and metabolite – production in the skin**  
Bodo Lehmann (Dresden, Germany)
- 10:30 **Coffee break**
- 11:00 **IL211 Can casual summer sunlight exposure achieve adequate vitamin D status?**  
Lesley E Rhodes (Manchester, United Kingdom)
- 11:30 **IL212 Ultraviolet radiation, vitamin D and cancer**  
Johan Moan, Alina Carmen Porojnicu, Asta Juzeniene (Oslo, Norway)
- 12:00 **OC213 Is the action spectrum for the UV-induced production of previtamin D3 in human skin correct?**  
Lars Olof Björn<sup>1</sup>, Mary Norval<sup>2</sup>, Frank R. de Gruijl<sup>3</sup> (<sup>1</sup>Lund, Sweden; <sup>2</sup>Edinburgh, United Kingdom; <sup>3</sup>Leiden, Netherlands)
- 12:20 **OC214 Vitamin D3 synthesis considering UV skin protection**  
Helmut Franz Piazena, Hans Meffert, Ralf Uebelhack (Berlin, Germany)
- 12:40 **OC215 Effect of anatomic location on UV induced vitamin D syntheses in the epidermis**  
P Knuschke, A Bauer, B Lehmann, A Loos, M Meurer (Dresden, Germany)

- 09:30     **Photobiological techniques for the environment**  
*Chair: Francesco Ghetti (Pisa, Italy)*
- 09:30     **IL216     Design of a Photoelectrochemical Cell for Hydrogen Production**  
*Ana L. Moore, Thomas A. Moore, Devens Gust, Gary F. Moore, Michael Hamburger (Tempe AZ, United States)*
- 10:00     **IL217     In vivo fluorescence spectra of vegetation: eco-physiological significance and affecting factors**  
*G. Cecchi, G. Agati, D. Lognoli, L. Palombi, V. Raimondi, G. Toci (Sesto Fiorentino, Italy)*
- 10:30             **Coffee break**
- 11:00     **IL218     Photoinactivation of recombinant bioluminescent E. coli by cationic porphyrins under solar and artificial irradiation**  
*Maria A F Faustino, Eliana Alves, Carla M B Carvalho, João P C Tomé, Maria G P M S Neves, Augusto C Tomé, José A S Cavaleiro, Adelaide Almeida, Ângela Cunha (Aveiro, Portugal)*
- 11:30     **IL219     Environmentally friendly technologies for decontamination of microbially polluted waters**  
*Giulio Jori<sup>1</sup>, Michela Magaraggia<sup>1</sup>, David Russell<sup>2</sup> (<sup>1</sup>Padova, Italy; <sup>2</sup>Norwich, United Kingdom)*
- 12:00     **OC220     Changes of humic and fulvic soil fluorophores induced by UV irradiation**  
*Sarka Klementova, Dalibor Kriz, Jiri Kopacek, Frantisek Novak, Petr Porcal (Ceske Budejovice, Czech Republic)*

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**Monday, September 7, Afternoon****Room 3.02**

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- 15:45 **Photochemical and photobiological methods for solar energy conversion (ESP-EPA Symposium)**  
*Chairs: Dario M Bassani (Talence, France), Nicola Angelini (Montelibretti (Roma), Italy)*
- 15:45 **IL221 Phthalocyanine dyes for organic and hybrid solar cells**  
Tomas Torres, M. Victoria Martinez-Diaz, Ismael Lopez-Duarte (Madrid, Spain)
- 16:15 **IL222 Supramolecular effects in all-organic photovoltaic devices**  
Dario M Bassani (Talence, France)
- 16:45 **IL223 Towards self-assembling molecular devices for energy conversion**  
Franco Scandola<sup>1</sup>, Michele Orlandi<sup>1</sup>, Claudio Chiorboli<sup>1</sup>, Maria Teresa Indelli<sup>1</sup>, Elisabetta Iengo<sup>2,3</sup>, Enzo Alessio<sup>2</sup>, Frank Würthner<sup>4</sup>, Jeremy K. M. Sanders<sup>3</sup> (<sup>1</sup>Ferrara, <sup>2</sup>Trieste, Italy; <sup>3</sup>Cambridge, United Kingdom; <sup>4</sup>Würzburg, Germany)
- 17:15 **Break**
- 17:30 **IL224 Ruthenium-manganese complexes for modelling Photosystem II. An electrochemical approach**  
Alain Deronzier, Marie-Noëlle Collomb (Grenoble, France)
- 18:00 **IL225 Water photolysis by Photosystem II and model systems**  
Alfred William Rutherford (Gif-sur-Yvette, France)
- 18:30 **OC226 Natural Extracts for Dye Sensitized Solar Cells**  
Giuseppe Calogero<sup>1</sup>, Alessandro Sinopoli<sup>1</sup>, Stefano Caramori<sup>2</sup>, Gaetano Di Marco<sup>1</sup>, Carlo Alberto Bignozzi<sup>1</sup> (<sup>1</sup>Messina, <sup>2</sup>Ferrara, Italy)
- 18:45 **OC227 Substituted bridged iron phthalocyanines: new dyes for sensitized solar cells**  
G. Zanotti<sup>1</sup>, N. Angelini<sup>2</sup>, S. Notarantonio<sup>2</sup>, A.M. Paoletti<sup>2</sup>, G. Pennesi<sup>2</sup>, G. Rossi<sup>2</sup>, G. Calogero<sup>3</sup>, A. Di Carlo<sup>1</sup>, D. Colonna<sup>1</sup>, A. Lembo<sup>4</sup> (<sup>1</sup>Roma, <sup>2</sup>Montelibretti, Roma, <sup>3</sup>Messina, <sup>4</sup>Tecnopolo Tiburtino, Roma, Italy)

- 15:45     **Photofunctional proteins: from understanding to engineering**  
*Chairs: Cristiano Viappiani (Parma, Italy), Santi Nonell (Barcelona, Spain)*
- 15:45     **IL228     Photoswitchable fluorescent proteins for super-resolution fluorescence microscopy: the case of Dronpa**  
*Cristina Flors<sup>1</sup>, Atsushi Miyawaki<sup>2</sup>, Johan Hofkens<sup>3</sup> (<sup>1</sup>Edinburgh, United Kingdom; <sup>2</sup>Wako, Japan; <sup>3</sup>Leuven, Belgium)*
- 16:15     **IL229     Designing photo-switchable proteins**  
*Andrew Woolley (Toronto ON, Canada)*
- 16:45     **IL230     Novel reversibly photoswitchable fluorescent proteins from *Aequorea victoria***  
*Ranieri Bizzarri<sup>1</sup>, Michela Serresi<sup>1</sup>, Francesco Cardarelli<sup>1</sup>, Stefania Abbruzzetti<sup>2</sup>, Barbara Campanini<sup>2</sup>, Fabio Beltram<sup>1</sup> (<sup>1</sup>Pisa, <sup>2</sup>Parma, Italy)*
- 17:15             **Break**
- 17:30     **IL231     Assessing and understanding genetically-encoded singlet oxygen production**  
*Santi Nonell<sup>1</sup>, Xavier Ragàs<sup>1</sup>, Ana Jiménez-Banzo<sup>1</sup>, Cristiano Viappiani<sup>2</sup>, Cristina Flors<sup>3</sup> (<sup>1</sup>Barcelona, Spain; <sup>2</sup>Parma, Italy; <sup>3</sup>Edinburgh, United Kingdom)*
- 18:00     **OC232     Fluorescence in polynoid polychaetes, spectral characteristics**  
*Maria V. Plyuscheva<sup>1</sup>, Alejandro Goni<sup>2</sup>, Daniel Martín<sup>1</sup> (<sup>1</sup>Blanes, <sup>2</sup>Barcelona, Spain)*

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**Monday, September 7, Afternoon**

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**Room 1.03**

- 15:45     **Cellular and molecular effects of Infrared, Visible and UV radiations**  
*Chairs: Rex Tyrrell (Bath, United Kingdom), Patrizia Agostinis (Leuven, Belgium)*
- 15:45     **IL233     Role of UVB-induced Hif-1alpha in epidermal cells**  
*Kris Nys, An Van Laethem, Hannelore Maes, Joost van den Oord, Carine Michiels, Marjan Garmyn, Patrizia Agostinis (Leuven, Belgium)*
- 16:15     **IL234     UV-B-specific signalling in Arabidopsis**  
*Roman Ulm (Freiburg, Germany)*
- 16:45     **IL235     Infrared A radiation induced signaling**  
*Peter Schroeder, Christian Calles, Jean Krutmann (Duesseldorf, Germany)*
- 17:15             **Break**
- 17:30     **IL236     The unique cellular interaction of non-ionizing UVA radiations**  
*Rex Tyrrell (Bath, United Kingdom)*
- 18:00     **OC237     Arabidopsis radical-induced cell death1 is involved in UV-B signaling**  
*Lei Jiang<sup>1</sup>, Yan Wang<sup>1</sup>, Lars Olof Björn<sup>2</sup>, Shaoshan Li<sup>1</sup> (<sup>1</sup>Guangzhou, China; <sup>2</sup>Lund, Sweden)*
- 18:15     **OC238     Lipidomics of the narrow-band ultraviolet B damage of keratinocytes: Implications for apoptosis**  
*Adam Reich<sup>1</sup>, Dominik Schwudke<sup>2</sup>, Michael Meurer<sup>3</sup>, Bodo Lehmann<sup>3</sup>, Andrej Shevchenko<sup>3</sup> (<sup>1</sup>Wroclaw, Poland; <sup>2</sup>Bangalore, India; <sup>3</sup>Dresden, Germany)*
- 18:30             **UVA and IRA-radiation induced signalling**  
*Jean Krutmann (Düsseldorf, Germany)*

- 15:45      **Immuno-PDT**  
*Chairs: Dario Neri (Zurich, Switzerland), Ross W Boyle (Kingston-upon-Hull, United Kingdom)*
- 15:45              **Introductory remarks**  
Chiara Falciani (Monteriggioni, Siena, Italy)
- 15:50      **IL239      Challenges in tumor targeting of photosensitizers by monoclonal antibodies**  
Guus AMS van Dongen (HV Amsterdam, Netherlands)
- 16:20      **OC240      Site specific and stoichiometric conjugation of cationic porphyrins to anti-angiogenic monoclonal antibodies: synthesis and in vitro biological results**  
Ross W Boyle, Cristina Alonso, Aaron Bullous, Alessandra Palumbo (Kingston-upon-Hull, United Kingdom)
- 16:45      **OC241      Targeted PDT using pyropheophorbide-a:antibody photo-immunoconjugates**  
Mahendra Deonarain (London, United Kingdom)
- 17:10              **Break**
- 17:30      **IL242      Targeted Photodynamic Therapy: the photoimmunoconjugate approach**  
Tayyaba Hasan (Boston MA, United States)
- 18:00      **OC243      Vascular-targeting antibody-photosensitizer conjugates for the therapy of cancer and other angiogenesis-related diseases**  
Dario Neri (Zurich, Switzerland)
- 18:25      **OC244      Use of Uteroglobin for the Engineering of Polyvalent, Polyspecific Fusion Proteins Useful for Photodynamic Therapy**  
Luciano Zardi (Genova, Italy)
- 18:50      **OC245      In vivo characterization of vascular targeting strategies using F8-SIP antibody against the ED A of fibronectin**  
Marcus Czabanka<sup>1</sup>, Güliz Parmaksiz<sup>1</sup>, Alessandro Palumbo<sup>2</sup>, Dario Neri<sup>2</sup>, Peter Vajkoczy<sup>1</sup> (<sup>1</sup>Berlin, Germany; <sup>2</sup>Zurich, Switzerland)



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**Tuesday, September 8, Morning**

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**Room 1.02**

- 08:30 **Plenary Lecture**  
*Chair: Kristian Berg (Oslo, Norway)*
- OC301 ALA-PDT efficacy: dependence on tissue specific variability of the PpIX synthesis pathway**  
Zvi N. Malik (Ramat Gan, Israel)
- 09:30 **PDT to treat microbial infections (ESP-EPPM Symposium)**  
*Chair: Giulio Jori (Padova, Italy)*
- 09:30 **IL302 Singlet oxygen - a predator of microorganisms**  
Tim Maisch (Regensburg, Germany)
- 10:00 **IL Singlet oxygen formation and decay in *E. coli*: role of the photosensitiser**  
Santi Nonell<sup>1</sup>, Xavier Ragas<sup>1</sup>, Xin He<sup>1</sup>, Montserrat Agut<sup>1</sup>, Aurelio C Serra<sup>2</sup>, Antonio M.d'A. Rocha Gonsalves<sup>2</sup> (<sup>1</sup>Barcelona, Spain; <sup>2</sup>Coimbra, Portugal)
- 10:30 **Coffee break**
- 11:00 **IL304 Photosensitizers for antimicrobial PDT: physical-chemical and photobiological properties**  
Giulio Jori (Padova, Italy)
- 11:30 **IL305 Molecular Targets in Antimicrobial PDT**  
Tayyaba Hasan (Boston MA, United States)
- 12:00 **IL306 Challenges of clinical antimicrobial PDT and how to overcome them**  
Stanley B Brown (Leeds, United Kingdom)
- 12:30 **OC307 Photodynamic therapy for the treatment of oral pathogen bacteria**  
Emina Besic, Rudolf Gmuer, Klaus Graetz, Heinrich Walt, Caroline Maake (Zurich, Switzerland)
- 12:45 **OC308 Potential of sub-lethal photodynamic antimicrobial chemotherapy (PACT) to affect antibiotic susceptibility of *Staphylococcus aureus* and *Pseudomonas aeruginosa***  
Corona M Cassidy, Michael M Tunney, Ryan F Donnelly (Belfast, United Kingdom)

- 09:30     **Photomovements of microorganisms**  
*Chair: Francesco Lenci (Pisa, Italy)*
- 09:30     **IL309     The responses of *Chlamydomonas* cilia to green or red light**  
Kenneth W Foster, Suphatra Adulrattananuwat, Jureepan Saranak (Syracuse NY, United States)
- 10:00     **IL310     Single molecule studies on fluorescence and 3-dimensional structure of photoactivated adenyl cyclase (PAC), the sensor for photoavoidance in *Euglena***  
Masakatsu Watanabe<sup>1</sup>, Mineo Iseki<sup>1</sup>, Satoru Fujiyoshi<sup>2</sup>, Mitsuharu Hirano<sup>2</sup>, Michio Matsushita<sup>2</sup>, Naoyuki Miyazaki<sup>3</sup>, Kenji Iwasaki<sup>3</sup> (<sup>1</sup>Hayama, <sup>2</sup>Tokyo, <sup>3</sup>Suita, Japan)
- 10:30             **Coffee break**
- 11:00     **IL311     Pigments in heterotrich ciliates as studied by multidimensional confocal fluorescence microscopy**  
Giuliano Colombetti<sup>1</sup>, Paolo Bianchini<sup>2</sup>, Ranieri Bizzarri<sup>1</sup>, Cesare Usai<sup>2</sup>, Paola Ramoino<sup>2</sup>, Giovanni Checucci<sup>1</sup>, Andrea Pardini<sup>1</sup>, Alberto Diaspro<sup>2</sup> (<sup>1</sup>Pisa, <sup>2</sup>Genova, Italy)

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**Tuesday, September 8, Morning****Room 1.03**

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- 09:30 **Photostability, photochemistry and phototoxicity of drugs (ESP-Photostability Group Symposium)**  
*Chairs: Hanne Hjorth Tønnesen (Oslo, Norway), Miguel A Miranda (Valencia, Spain)*
- 09:30 **IL312 Photosensitiser Delivery for PDT and PACT**  
Desmond IJ Morrow, Ryan F Donnelly (Belfast, United Kingdom)
- 10:00 **IL313 Photostabilization in Sunscreens and Personal Care Products**  
Bernd Herzog, Oliver Reich (Grenzach-Wyhlen, Germany)
- 10:30 **Coffee break**
- 10:45 **OC314 Effect of excipients on the photostability and drug release in formulation of a novel wound-dressing for PACT**  
Anne Bee Hegge, Therese Andersen, Solveig Kristensen, Hanne Hjorth Tønnesen (Oslo, Norway)
- 11:00 **IL315 Atorvastatin phototoxicity mediated by a phenanthrene-like photoproduct**  
Miguel A. Miranda, Sara Montanaro, Virginie Lhiaubet-Vallet (Valencia, Spain)
- 11:15 **IL316 Primary Photoprocesses of Fluoroquinolone antibiotics**  
Suppiah Navaratnam<sup>1</sup>, Fernando Lorenzo<sup>2</sup>, Ruth Edge<sup>2</sup>, Norman S Allen<sup>2</sup> (<sup>1</sup>Salford, <sup>2</sup>Manchester, United Kingdom)
- 11:45 **IL317 Photochemistry of Oxazolidinone Antibacterial Drugs**  
Elisa Fasani, Angelo Albini, Fedele Tilocca (Pavia, Italy)
- 12:15 **IL318 Photooxidation of sulfur-containing organic compounds. Mechanistic aspects**  
Bronislaw Marciniak (Poznan, Poland)
- 12:45 **OC319 Photoreactivity of the antimalarial drug primaquine evaluated by laser flash photolysis and pulse radiolysis**  
Solveig Kristensen<sup>1</sup>, Ruth Edge<sup>2</sup>, Hanne Hjorth Tønnesen<sup>1</sup>, Roger Hugh Bisby<sup>3</sup>, Suppiah Navaratnam<sup>3</sup> (<sup>1</sup>Oslo, Norway; <sup>2</sup>Manchester, <sup>3</sup>Salford, United Kingdom)
- 13:00 **IL320 Cyclodextrins as nanocarriers and “nanoreactors” for photoactive drugs**  
Sandra Monti, Giancarlo Marconi (Bologna, Italy)

- 14:15     **Mechanisms related to systemic photoprotection**  
*Chairs: Lesley E Rhodes (Manchester, United Kingdom), Homer S. Black (Houston, United States)*
- 14:15     **IL321     The Role of Carotenoids – Lessons from Photophysical Studies**  
George Truscott (Staffs, United Kingdom)
- 14:45     **IL322     Anti-and Pro-Carcinogenic Action of Potential Systemic Photoprotectants**  
Homer S. Black (Houston TX, United States)
- 15:15     **IL323     Carotenoids and Flavonoids in Photoprotection: *in vitro* and *in vivo* Studies**  
Wilhelm Stahl (Duesseldorf, Germany)
- 15:45             **Break**
- 16:00     **IL324     Insights from Clinical and Pre-Clinical Studies**  
Lesley E Rhodes (Manchester, United Kingdom)
- 16:30     **IL325     Insights from Epidemiological Studies**  
Adele C Green, Maricel Hughes, Jolieke van der Pols, Torukiri Ibiebele (Brisbane, Australia)
- 17:00     **OC326     Biomodulation of the solar urticarial response in human skin: targeting the melanogenic pathway with afamelanotide**  
Ann K Haylett, Zhuxiang Nie, Margaret Brownrigg, Lesley E Rhodes (Salford, United Kingdom)

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**Tuesday, September 8, Afternoon****Room 2.05**

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- 14:15     **Photomorphogenesis and photo-induced growth patterns**  
*Chair: Pill-Soon Song (Jeju, Republic of Korea)*
- 14:15     **IL327    Early events in phytochrome signalling**  
Eberhard Schaefer (Freiburg, Germany)
- 14:45     **IL328    Regulation of shade avoidance by a network of bHLH class transcription factors**  
Christian Fankhauser, Patricia Hornitschek, Séverine Lorrain (Lausanne, Switzerland)
- 15:15     **IL329    Regulatory networks for shade avoidance response**  
Ida Ruberti (Rome, Italy)
- 15:45             **Break**
- 16:00     **IL330    Mechanisms of activation of cryptochrome photoreceptors in plants and animals**  
Margaret Ahmad (Paris, France)
- 16:30     **IL331    Phenotypic Functions of a Mutant Phytochrome A in Genetically Modified Grasses**  
Pill-Soon Song<sup>1</sup>, Jeong-Il Kim<sup>2</sup>, Tae Woong Bae<sup>1</sup>, Thummala Chandrasekhar<sup>1</sup>, Markkandan Ganesan<sup>1</sup>,  
Cgang-Hyo Goh<sup>1</sup>, In-Ja Song<sup>1</sup>, Hyoyeon Lee<sup>1</sup> (<sup>1</sup>Jeju, <sup>2</sup>Gwangju, Republic of Korea)
- 17:00     **IL332    Precise analyses of chloroplast behavior during chloroplast photorelocation movement**  
Masamitsu Wada (Fukuoka, Japan)

- 14:15 **New drugs and drug delivery technologies for PDT (ESP-EPPM Symposium)**  
*Chairs: David A. Russell (Norwich, United Kingdom), Kristian Berg (Oslo, Norway)*
- 14:15 **IL333 Gold nanoparticle conjugates for the delivery of hydrophobic phthalocyanine photosensitisers for photodynamic cancer therapy**  
*David A. Russell<sup>1</sup>, Giulio Jori<sup>2</sup> (<sup>1</sup>Norwich, United Kingdom; <sup>2</sup>Padova, Italy)*
- 14:45 **IL334 Conjugated Porphyrin Dimers for One-Photon and Two-Photon PDT**  
*Harry L Anderson (Oxford, United Kingdom)*
- 15:15 **IL335 Photochemical Internalization (PCI). A technology for site-specific drug delivery**  
*Kristian Berg, Anette Weyergang, Ole-Jacob Norum, Quian Peng, Marie Vikdal, Anders Høgset, Pål Kristian Selbo (Oslo, Norway)*
- 15:45 **Break**
- 16:00 **OC336 Bioorthogonal porphyrin derivatives for solution-phase ligation to peptides: synthesis and applications.**  
*Francesca Giuntini<sup>1</sup>, Ludovic Bourré<sup>2</sup>, Tzu-Wen Wang<sup>2</sup>, Michael Wilson<sup>2</sup>, Alexander J. MacRobert<sup>2</sup>, Ian M. Eggleston<sup>1</sup> (<sup>1</sup>Bath, <sup>2</sup>London, United Kingdom)*
- 16:15 **OC337 Photophysical properties of mTHPC in conventional and pegylated unilamellar lipid vesicles**  
*Vadzim A. Reshetov<sup>1</sup>, Dmitry Kachatkou<sup>1,3</sup>, Dietrich Scheglmann<sup>2</sup>, Tatyana E. Zorina<sup>1</sup>, Susanne Grafe<sup>2</sup>, Francois Guillemin<sup>3</sup>, Lina Bolotine<sup>3</sup>, Vladimir P. Zorin<sup>1</sup> (<sup>1</sup>Minsk, Belarus; <sup>2</sup>Jena, Germany; <sup>3</sup>Vandoeuvre les Nancy, France)*
- 16:30 **OC338 Synthesis of Dual Modality Porphyrin-based Photosensitizers**  
*Mathias O. Senge (Dublin, Ireland)*
- 16:45 **OC339 Photodynamic therapy and Photochemical internalisation on a transplanted rat fibrosarcoma using TPCS2a**  
*Tzu-Wen Wang<sup>1</sup>, Alexander J MacRobert<sup>1</sup>, Kristian Berg<sup>2</sup>, Anders Høgset<sup>3</sup>, Stephen G Bown<sup>1</sup> (<sup>1</sup>London, United Kingdom; <sup>2</sup>Montebello, <sup>3</sup>Oslo, Norway)*
- 17:00 **OC340 Somatostatin target photodynamic therapy (PDT): *In vitro* targeting and PDT response in K562 cells.**  
*Slavka Kascakova<sup>1</sup>, Leo J Hofland<sup>1</sup>, Ye Yunpeng<sup>2</sup>, Sam Achilefu<sup>2</sup>, Katy van der Wansem<sup>1</sup>, Peter van Koetsveld<sup>1</sup>, Aart-Jan van der Lely<sup>1</sup>, Henricus J. C. M. Sterenborg<sup>1</sup>, Martin P. van Hagen<sup>1</sup>, Dominic J. Robinson<sup>1</sup> (<sup>1</sup>Rotterdam, Netherlands; <sup>2</sup>St. Louis MO, United States)*
- 17:15 **OC341 Zipper Molecular Beacons: a generalized methodology for activatable photodynamic molecular beacons**  
*Tracy WB Liu, Juan Chen, Pui-Chi Lo, Brian C Wilson, Gang Zheng (Toronto ON, Canada)*

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**Tuesday, September 8, Afternoon**

**Room 1.03**

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17:45     **ESP General Assembly**

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**Tuesday, September 8, Evening**

**Hotel Mercure Panorama**

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20:00     **Conference Banquet and Medal Award Ceremony**

- 08:30     **Plenary Lecture**  
*Chair: Rex Tyrrell (Bath, United Kingdom)*
- IL401     Endogenous regulators of cellular signal transduction and their interplay with radiation**  
                  Peter Herrlich (Jena, Germany)
- 09:30     **Activation of the immune system by PDT**  
*Chair: Jakub Golab (Warsaw, Poland)*
- 09:30     **IL402     Modulation of the antitumor immune response with photodynamic therapy and anticancer agents**  
                  Jakub Golab (Warsaw, Poland)
- 10:00     **IL403     Anti-tumor immune response after photodynamic therapy: role of regulatory T-cells and tumor antigens**  
                  Michael R Hamblin, Pawel Mroz (Boston MA, United States)
- 10:30             **Coffee break**
- 11:00     **IL404     Photodynamic Therapy Elicited Adaptive Immunity is Critically Dependent on IL-17 Bioactivity**  
                  Sandra O Gollnick, Craig M Brackett (Buffalo NY, United States)
- 11:30     **IL405     The role of glucocorticoid hormones in tumor PDT-associated host response**  
                  Mladen Korbelik (Vancouver BC, Canada)



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**Wednesday, September 9, Morning**

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**Room 1.03****09:30MM UV repair deficiency and human diseases***Chair: Alain Sarasin (Villejuif, France)*

- 09:30     **IL406**     **Defective recruitment of the transcription/repair factor TFIIH to specific UV-induced DNA lesions in the TTD/XPD syndrome**  
Alain Sarasin<sup>1</sup>, Keronninn M. Lima-Bessa<sup>2</sup>, Anne Stary<sup>1</sup>, Carlos F. M. Menck<sup>2</sup>, Vanessa Chiganças<sup>1</sup>  
(<sup>1</sup>Villejuif, France; <sup>2</sup>Sao Paulo, Brazil)
- 10:00     **IL407**     **Basis of the puzzling variety of the clinical features of NER defective disorders**  
Miria Stefanini (Pavia, Italy)
- 10:30                     **Coffee break**
- 11:00     **IL408**     **Immediate and late responses in UV irradiated human cells: impact of nucleotide excision repair**  
Mischa G Vrouwe, Alex Pines, Rene Overmeer, Leon HF Mullenders (Leiden, Netherlands)
- 11:30     **IL409**     **Oxidative Stress induces the mono-ubiquitination of PCNA and the recruitment of pol eta at sites of DNA damage in a MSH2-MSH6 dependent manner: Novel pathway in human cells to remove oxidative DNA damage?**  
Anastasia Zlatanou<sup>1</sup>, Tirzah Braz Petta<sup>1</sup>, Akira Yasui<sup>2</sup>, Patricia Kannouche<sup>1</sup> (<sup>1</sup>Villejuif, France; <sup>2</sup>Sendai, Japan)

- 09:30 **Classical and novel photoreceptors in circadian vision - Non-visual photoreceptors**  
*Chair: Carlo Musio (Pozzuoli (NA), Italy)*
- 09:30 **IL410 Evolution of opsins and photoreceptor cell types: the "division of labour" model of eye evolution**  
Detlev Arendt<sup>1</sup>, Keren Guy<sup>1</sup>, Raju Tomer<sup>1</sup>, Harald Hausen<sup>2</sup>, Günter Purschke<sup>3</sup> (<sup>1</sup>Heidelberg, <sup>2</sup>Berlin, <sup>3</sup>Osnabrück, Germany)
- 10:00 **IL411 Diverged members of rhodopsin family - molecular properties and functions. I – Introduction**  
Akihisa Terakita (Osaka, Japan)
- 10:30 **Coffee break**
- 11:00 **IL412 Diverged members of rhodopsin family - molecular properties and functions. II - A new member from jellyfish.**  
Mitsumasa Koyanagi, Akihisa Terakita (Osaka, Japan)
- 11:20 **IL413 Non-Visual Light Detection by VA and Melanopsin Photopigments.**  
Jose M. Garcia-Fernandez<sup>1</sup>, Stephanie Halford<sup>2</sup>, Susana S. Pires<sup>2</sup>, Michael Turton<sup>2</sup>, Lei Zheng<sup>2</sup>, Irene Gonzalez-Menendez<sup>1</sup>, Wayne Davies<sup>2</sup>, Stuart N. Peirson<sup>2</sup>, Mark W. Hankins<sup>2</sup>, Russell G. Foster<sup>2</sup> (<sup>1</sup>Oviedo, Spain; <sup>2</sup>Oxford, United Kingdom)
- 11:50 **IL414 Photic regulation of gene expression of classical and novel visual pigments**  
Carlo Musio, Silvia Santillo (Pozzuoli (NA), Italy)
- 12:20 **OC415 Short-wavelength sensitive nonvisual photoreceptors and vasomotor innervation of the pineal organ in various vertebrates**  
Maria Joao Manzano e Silva<sup>1</sup>, Bela Vigh<sup>2</sup>, Attila Magyar<sup>2</sup>, Agoston Szel<sup>2</sup> (<sup>1</sup>Lisbon, Portugal; <sup>2</sup>Budapest, Hungary)
- 12:40 **OC416 Light-controlled melatonin suppression considering person's age**  
Helmut Franz Piazena, Leonora Franke, Ralf Uebelhack (Berlin, Germany)

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**Wednesday, September 9, Morning**
**Room 3.02**

- 09:30 **Photobiology oral communications**  
*Chair: George Truscott (Staffs, United Kingdom)*
- 09:30 **OC417 Reactive oxygen species and cytotoxicity in rat bladder cancer cells (AY-27) after hexyl 5-aminolevulinate-induced photodynamic therapy.**  
Linda Helander<sup>1</sup>, Kristjan Plätzer<sup>2</sup>, Barbara Krammer<sup>2</sup>, Hans Einar Krokan<sup>1</sup>, Odrun Arna Gederaas<sup>1</sup> (<sup>1</sup>Trondheim, Norway; <sup>2</sup>Salzburg, Austria)
- 09:45 **OC418 Optical properties of human skin and the photobiological basics of dosage with infrared (IR) radiation in vitro and in vivo - requirements and frequent errors**  
Helmut Franz Piazena, Hans Meffert (Berlin, Germany)
- 10:00 **OC419 Microbial Toxicity of Metallic Nanoparticles**  
Rehab Mohamed Amin<sup>1</sup>, Mona B. Mohamed<sup>1</sup>, Marwa A. Ramadan<sup>1</sup>, Thomas Verwanger<sup>2</sup>, Barbara Krammer<sup>2</sup> (<sup>1</sup>Giza, Egypt; <sup>2</sup>Salzburg, Austria)
- 10:15 **OC420 New nanostructural near-IR photosensitizers for PDT of malignancies**  
Gennady A. Meerovich, Igor G. Meerovich, Vitaly I. Pozdeyev, Vladimir M. Negrimovsky, Alexander G. Tsiprovskij, Mikhail A. Grin, Svetlana V. Barkanova, Larisa M. Borisova, Zoya S. Smirnova, Lubov V. Oumnova, Natalia A. Oborotova, Evgeny A. Lukyanets, Victor B. Loschenov, Andrey F. Mironov, Georgy N. Vorozhtsov, Anatoly Yu. Baryshnikov (Moscow, Russian Federation)
- 10:30 **Coffee break**
- 11:00 **OC421 Photosensitized titanium dioxide colloids for visible light inactivation of selected microorganisms**  
Przemysław Łabuz, Wojciech Macyk, Grażyna Stochel (Kraków, Poland)
- 11:15 **OC422 In vivo photodynamic activity of PEGylated liposomal carriers of Meta-tetrahydroxyphenyl chlorin (m-THPC). A comparison of Foscan, FosPEG 2% and FosPEG 8%.**  
Josephine H Woodhams, Melissa Bovis, Marilena Loizidou, Stephen G Bown, Alexander J MacRobert (London, United Kingdom)
- 11:30 **OC423 Unusual spectral luminescent properties of methylpheophorbide A in nanoparticle form**  
Victor B Loshchenov (Moscow, Russian Federation)
- 11:45 **OC424 Spectroscopy of quantum dots transformations mediated by environment and light**  
Saulius Bagdonas, Ricardas Rotomskis (Vilnius, Lithuania)
- 12:00 **OC425 Pegylated ORMOSIL nanoparticles as potential nanocarriers of photodynamic agents for tumours**  
Chiara Compagnin, Francesca Moret, Fabrizio Mancin, Emanuele Papini, Iria Rio Echevarria, Daniela Segat, Francesco Selvestrel, Regina Tavano, Elena Reddi (Padova, Italy)
- 12:15 **OC426 Pharmacokinetics of Novel Pegylated Liposomal Nano-Carriers for Improved m-THPC Delivery**  
Melissa J Bovis, Josephine H Woodhams, Marilena Loizidou, Stephen G Bown, Alexander J MacRobert (London, United Kingdom)
- 12:30 **OC427 Heme: a new prodrug for the photodynamic inactivation of microbacteria**  
Gesine Heuck<sup>1</sup>, Sylvie Létoffé<sup>2</sup>, Philippe Delepelaire<sup>2</sup>, Norbert Lange<sup>1</sup>, Cécile Wandersman<sup>2</sup> (<sup>1</sup>Genève, Switzerland; <sup>2</sup>Paris, France)

- 14:15     **Photoimmunology and photocarcinogenesis**  
*Chair: Vivienne E Reeve (Sydney NSW, Australia)*
- 14:15     **IL428     Proteomic analysis of UV-Induced Oxidative Stress in the Mouse Epidermis**  
Zoulika Kherrouche<sup>1</sup>, Ngari Teakle<sup>2</sup>, Rafael Erlich<sup>2</sup>, Philip E. Morgan<sup>3</sup>, Michael J. Davies<sup>3</sup>, Alun Jones<sup>4</sup>,  
 Vivienne E. Reeve<sup>3</sup>, Nicholas A. Saunders<sup>2</sup> (<sup>1</sup>Lille, France; <sup>2</sup>Brisbane, QLD, <sup>3</sup>Sydney, NSW, <sup>4</sup>St. Lucia,  
 QLD, Australia)
- 14:35     **IL429     AKT signaling, UV, and squamous cell carcinoma progression**  
 Carolyn R Byrne<sup>1</sup>, Stuart J Brown<sup>1</sup>, Ariel A Avilion<sup>2</sup>, Ryan FL O'Shaughnessy<sup>1</sup> (<sup>1</sup>London, United  
 Kingdom; <sup>2</sup>Menlo Park CA, United States)
- 14:55     **OC430     Early and late stage effects of the immunosuppressant rapamycin on UV carcinogenesis**  
 Pieter Voskamp<sup>1</sup>, Gudrun E. Koehl<sup>2</sup>, Heggert G. Rebel<sup>1</sup>, Jan-Nico Bouwes Bavinck<sup>1</sup>, Edward K.  
 Geissler<sup>2</sup>, Frank R. de Gruij<sup>1</sup> (<sup>1</sup>Leiden, Netherlands; <sup>2</sup>Regensburg, Germany)
- 15:25     **OC431     Immunospecific suppression of contact hypersensitivity by psoralen photolysis products**  
 Alla A Kyagova, Lyudmila A Kozir, Ilya A Pyantnitskii, Nataliya V Gorshkova, Svetlana I Pavlova,  
 Ivan G Kozlov, Mikhail V Malakhov, Alexander Ya Potapenko (Moscow, Russian Federation)
- 15:45             **Break**
- 16:00     **IL432     The immunoregulatory effects of cis-urocanic acid on human skin cells**  
 Kazuyo Kaneko (London, United Kingdom)
- 16:30     **OC433     Neonatal exposure to ssUVR does not cause inflammation but induces a transient arrest in  
 Langerhans cell development**  
 Heather M McGee, H Konrad Muller, Gregory M Woods (Hobart TAS, Australia)
- 16:50     **IL434     The gender bias in immune responsiveness to UV radiation in mice**  
Vivienne E Reeve, Nicole L Painter, Munif Allanson (Sydney NSW, Australia)

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**Wednesday, September 9, Afternoon**

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**Room 1.02**

- 14:15     **Pre-clinical PDT for cancer**  
*Chairs: Henricus J.C.M. Sterenborg (Rotterdam, Netherlands), Tayyaba Hasan (Boston, United States)*
- 14:15     **IL435     Molecular response-based PDT combinations: the importance of models**  
*Tayyaba Hasan, Imran Rizvi, Jon Celli, Conor L. Evans (Boston MA, United States)*
- 14:45     **IL436     Treatment planning for interstitial PDT**  
*Henricus J.C.M. Sterenborg<sup>1</sup>, R.L.P. van Veen<sup>1</sup>, I.B. Tan<sup>2</sup>, M. Witjes<sup>3</sup>, D.J. Robinson<sup>1</sup> (<sup>1</sup>Rotterdam, <sup>2</sup>Amsterdam, <sup>3</sup>Groningen, Netherlands)*
- 15:15     **OC437     Low fluence rate light fractionated 5-ALA photodynamic therapy in hairless mouse skin**  
*Tom A Middelburg, Floor van Zaane, Riette de Druijn, Angelique van der Ploeg van den Heuvel, Ellen de Haas, Martino Neumann, Dominic Robinson (Rotterdam, Netherlands)*
- 15:30     **OC438     Measurements of tissular oxygen depletion during photo dynamic therapy based on the delayed fluorescence of the photosensitizer**  
*Filippo Piffaretti, Hubert van den Bergh, Jean-Pierre Ballini, Georges Wagnieres (Lausanne, Switzerland)*
- 15:45             **Break**
- 16:00     **OC439     Compartmental targeting for Foscan based photodynamic treatment *in vivo*: correlation between efficiency, pharmacokinetics and regional distribution of apoptosis**  
*Julie Garrier<sup>1</sup>, Aude Bressenot<sup>1</sup>, Susanna Gräfe<sup>2</sup>, Sophie Marchal<sup>1</sup>, François Guillemin<sup>1</sup>, Lina Bezdetnaya-Bolotina<sup>1</sup> (<sup>1</sup>Vandoeuvre-lès-Nancy, France; <sup>2</sup>Jena, Germany)*
- 16:15     **IL440     Implicit dosimetry during interstitial PDT using mTHPC: Can pre-clinical models guide clinical practice?**  
*Dominic J Robinson, B. Kruijt, Henricus JCM Sterenborg (Rotterdam, Netherlands)*

- 14:15 **Damaging effects of photooxidative stress at the cellular and molecular level**  
*Chair: Albert W Girotti (Milwaukee WI, United States)*
- 14:15 **IL441** **<sup>18</sup>O-Labeled singlet oxygen and mass spectrometry as valuable tools for studying the role of singlet oxygen in biological system**  
Paolo Di Mascio (São Paulo, Brazil)
- 14:45 **IL442** **Generation and Possible Fates of 5a-OOH, the Major Singlet Oxygen Adduct of Cholesterol**  
Albert W Girotti<sup>1</sup>, Witold Korytowski<sup>2</sup> (<sup>1</sup>Milwaukee WI, United States; <sup>2</sup>Krakow, Poland)
- 15:15 **IL443** **The DNA damaging properties of 4-hydroxy-2-nonenal, a major product of lipid peroxidation, in human cells**  
Thierry Douki (Grenoble, France)
- 15:45 **Break**
- 16:00 **IL444** **Mechanisms and consequences of photo-oxidative damage to protein thiols and GSH in macrophage cells**  
Michael J. Davies, Aldwin Suryo Rahmanto, Philip E. Morgan, Clare L. Hawkins (Sydney NSW, Australia)
- 16:30 **IL445** **Singlet oxygen and hydrogen peroxide as mediators in UV-induced cellular signaling processes**  
Lars-Oliver Klotz (Düsseldorf, Germany)
- 17:00 **OC446** **Photooxidation of the mitochondrial permeability transition pore by dicarboxylic porphyrins is regulated by the peripheral benzodiazepine receptor**  
Justina Šileikytė<sup>1</sup>, Valeria Petronilli<sup>2</sup>, Alessandra Zulian<sup>2</sup>, Peter Nikolov<sup>3</sup>, Paolo Bernardi<sup>2</sup>, Fernanda Ricchelli<sup>2</sup> (<sup>1</sup>Vilnius, Lithuania; <sup>2</sup>Padova, Italy; <sup>3</sup>Sofia, Bulgaria)
- 17:15 **OC447** **Mechanisms of (Photo)toxicity of Oxidized Docosahexaenoate to the Retinal Pigment Epithelium and Protective Effects of Phosphatidylethanolamine**  
Malgorzata B Rozanowska<sup>1</sup>, Linda M Bakker<sup>1</sup>, Michael E Boulton<sup>2</sup>, Anna M Pawlak<sup>3</sup>, Bartosz K Rozanowski<sup>3</sup> (<sup>1</sup>Cardiff, United Kingdom; <sup>2</sup>Gainesville FL, United States; <sup>3</sup>Krakow, Poland)

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**Wednesday, September 9, Afternoon**

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**Room 2.05**

- 14:15     **Plant photobiology and climate change**  
*Chair: Janet F. Bornman (Hamilton, New Zealand)*
- 14:15     **IL448     Risks and Benefits of UV Radiation**  
Richard L McKenzie (Central Otago, New Zealand)
- 14:45     **IL449     Solving the methane mystery. Does UV radiation cause methane emissions from plants?**  
Andy R McLeod, Wesley Fraser, Stephen C Fry, Gary J Loake, David J Messenger, David S Reay, Keith A Smith, Byung-Wook Yun (Edinburgh, United Kingdom)
- 15:15     **IL450     The role of UV radiation in New Zealand for grape quality**  
Rainer W Hofmann<sup>1</sup>, James R Shinkle<sup>2</sup>, Chris S Winefield<sup>1</sup>, Brian R Jordan<sup>1</sup> (<sup>1</sup>Lincoln, New Zealand; <sup>2</sup>San Antonio TX, United States)
- 15:45             **Break**
- 16:15     **IL451     UV-B resistance in green macroalgae: avoidance or tolerance?**  
Wolfgang Bilger, Frauke Pescheck (Kiel, Germany)
- 16:45     **OC452     UVR8 in *Arabidopsis* regulates UV-B specific leaf photomorphogenesis and other aspects of whole-plant development**  
Jason J Wargent<sup>1</sup>, Vasilis C Gegas<sup>2</sup>, Gareth I Jenkins<sup>3</sup>, John H Doonan<sup>2</sup>, Nigel D Paul<sup>1</sup> (<sup>1</sup>Lancaster, <sup>2</sup>Norwich, <sup>3</sup>Glasgow, United Kingdom)

- 08:30 **Plenary Lecture**  
*Chair: Janet F. Bornman (Hamilton, New Zealand)*
- IL501 Plant UV perception, signaling and response**  
 Gareth I Jenkins (Glasgow, United Kingdom)
- 09:30 **Nanotechnology in photobiology and photomedicine**  
*Chairs: Gang Zheng (Toronto ON, Canada), Paola Taroni (Milan, Italy)*
- 09:30 **IL502 Multifunctional nanoparticles for molecular imaging and traceable drug delivery**  
 Xiaohu Gao (Seattle WA, United States)
- 10:00 **IL503 Structural and functional control of ultra small lipid nanoparticles for optical imaging and photodynamic therapy**  
 Gang Zheng (Toronto ON, Canada)
- 10:30 **Coffee break**
- 11:00 **IL504 Brightly Emissive Soft Matter Nanoscale Agents for Ultra Sensitive Diagnostics and Imaging**  
 Wei Qi<sup>1</sup>, P. Peter Ghoroghchian<sup>2</sup>, Paul R. Frail<sup>2</sup>, Kimihiro Susumu<sup>2</sup>, Guizhi Li<sup>2</sup>, Timothy V. Duncan<sup>2</sup>, Dahlia H. Levine<sup>2</sup>, Daniel A. Hammer<sup>2</sup>, Michael J. Therien<sup>1</sup> (<sup>1</sup>Durham NC, <sup>2</sup>Philadelphia PA, United States)
- 11:30 **IL505 Metal nanoparticle for optical, sub-wavelength manipulation of biological material**  
Wolfgang Fritzsche, Andrea Csaki, Frank Garwe, Andrea Steinbrueck (Jena, Germany)
- 12:00 **OC506 Optically trappable nano-probes for surface enhanced Raman scattering: detection of trace quantities of drugs in cells**  
 Stefan Balint<sup>1</sup>, Mark Kreuzer<sup>2</sup>, Satish Rao<sup>2</sup>, Gonçal Badenes<sup>2</sup>, Dmitri Petrov<sup>2</sup>, Pavol Miskovsky<sup>1</sup> (<sup>1</sup>Kosice, Slovakia; <sup>2</sup>Castelldefels, Spain)
- 12:15 **OC507 Fullerol in human lens and retinal pigment epithelial cells: Time resolved-fluorescence spectroscopy and imaging**  
Paola Taroni<sup>1</sup>, Cosimo D'Andrea<sup>1</sup>, Gianluca Valentini<sup>1</sup>, Rinaldo Cubeddu<sup>1</sup>, Dan-Ning Hu<sup>2</sup>, Joan E Roberts<sup>2</sup> (<sup>1</sup>Milan, Italy; <sup>2</sup>New York NY, United States)
- 12:30 **OC508 Nanophotosensitizers for diagnostics and therapy of tumors. Experimental study.**  
 Victor B Loshchenov (Moscow, Russian Federation)
- 12:45 **OC509 DNA Programmed Nanoparticle Destabilization using a Photodynamic Molecular Beacon**  
Jonathan F Lovell, Honglin Jin, Gang Zheng (Toronto ON, Canada)



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**Thursday, September 10, Morning**

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**Room 2.05**

- 09:30 **New structures and new mechanisms for light sensing**  
*Chair: Aba Losi (Parma, Italy)*
- 09:30 **IL510 Prokaryotic Blue-light sensing via the versatile phototropin-like LOV domain**  
Aba Losi<sup>1</sup>, Elsa Livoti<sup>1</sup>, Yifen Tang<sup>2</sup>, Zhen Cao<sup>2</sup>, Wolfgang Gaertner<sup>2</sup>, Ulrich Krauss<sup>2</sup>, Karl-Erich Jaeger<sup>2</sup> (<sup>1</sup>Parma, Italy; <sup>2</sup>Mülheim an der Ruhr, Germany)
- 10:00 **IL511 Comparison of the Signaling Mechanisms of LOV and BLUF domains**  
Kevin H Gardner, Fernando Correa, Wen-huang Ko, Abigail I Nash, Qiong Wu (Dallas TX, United States)
- 10:30 **Coffee break**
- 11:00 **IL512 First LOV, then BLUF, and finally CRY: Reaction mechanisms of blue-light photoreceptors**  
Joachim Heberle, Tilman Kottke (Bielefeld, Germany)
- 11:30 **IL513 A novel light sensor: The Orange Carotenoid Protein**  
Adjélé Wilson, Clémence Boulay, Claire Punginelli, Diana Kirilovsky (Gif sur Yvette, France)
- 12:00 **OC514 Photosensitivity in sponge larva**  
Lars Olof Björn, Allan G Rasmusson (Lund, Sweden)
- 12:15 **OC515 Mutual Exchange of Kinetic Properties by Extended Mutagenesis in Two Short Bacterial LOV Domain Proteins**  
Ulrich Krauss<sup>1</sup>, Katrin Jentsch<sup>1</sup>, Astrid Wirtz<sup>1</sup>, Aba Losi<sup>2</sup>, Wolfgang Gaertner<sup>3</sup>, Karl-Erich Jaeger<sup>1</sup> (<sup>1</sup>Juelich, <sup>3</sup> Mülheim an der Ruhr, Germany; <sup>2</sup>Parma, Italy)
- 12:30 **OC516 Novel LOV domain proteins from microarray-screened metagenome**  
Wolfgang Gaertner<sup>1</sup>, Gopal Pathak<sup>1</sup>, Aba Losi<sup>2</sup>, Armin Ehrenreich<sup>3</sup>, Wolfgang Streit<sup>4</sup> (<sup>1</sup>Muelheim, <sup>3</sup>Freising, <sup>4</sup>Hamburg, Germany; <sup>2</sup>Parma, Italy)

- 09:30 **Sun, Sunscreens and Skin Cancer**  
*Chair: Antony R Young (London, United Kingdom)*
- 09:30 **IL517 Monitoring personal UVR exposure and its possible impact for public health**  
Elisabeth Thieden, Peter Philipsen, Jakob Heydenreich, Hans Christian Wulf (Copenhagen NV, Denmark)
- 10:00 **IL518 Photoeducation: The Use of Pictograms for Sun Damage and Skin**  
Fernando M Stengel (Buenos Aires, Argentina)
- 10:30 **Coffee break**
- 11:00 **OC519 Proposal of a reference to assess individual UV exposure levels in the population and at outdoor workplace**  
P Knuschke<sup>1</sup>, M Janßen<sup>2</sup>, G Ott<sup>2</sup> (<sup>1</sup>Dresden, <sup>2</sup>Dortmund, Germany)
- 11:15 **OC520 Assessment of the Photo-degradation of UV-Filters and Radical-induced Peroxidation in Cosmetic Sunscreen Formulations**  
Elisabetta Damiani<sup>1</sup>, Paola Astolfi<sup>1</sup>, Jochen Giesinger<sup>2</sup>, Thomas Ehlis<sup>2</sup>, Bernd Herzog<sup>2</sup>, Lucedio Greci<sup>1</sup>, Werner Baschong<sup>3</sup> (<sup>1</sup>Ancona, Italy; <sup>2</sup>Grenzach, Germany; <sup>3</sup>Basel, Switzerland)
- 11:30 **IL521 Sunscreens and biomarkers for skin cancer**  
Antony R Young (London, United Kingdom)
- 12:00 **OC522 Sunscreen protection of the cutaneous neurosensory system from chronic UV light exposure**  
Goran Sepic<sup>1</sup>, Franz Quehenberger<sup>1</sup>, Minsheng Wang<sup>2</sup>, Jonathan D Glass<sup>2</sup>, Cheryl A Armstrong<sup>3</sup>, John C Ansel<sup>3</sup>, Peter Wolf<sup>1</sup>, Franz J Legat<sup>1</sup> (<sup>1</sup>Graz, Austria; <sup>2</sup>Atlanta GA, <sup>3</sup>Little Rock AR, United States)
- 12:15 **IL523 Sunscreens in the prevention of skin cancer**  
Adele C Green, Gail M Williams (Brisbane QLD, Australia)

Sunday, September 6, Morning

Old Building Room 2.01

- 09:30 **EPPM: Welcome & Introduction**  
*Chair: Keyvan Moghissi (Goole, United Kingdom)*
- 09:35 **IL601 State of the art: PD and PDT in Poland**  
Aleksander Sieroń (Bytom, Poland)
- 10:00 **EPPM: PDT in Neurosurgery**  
*Chairs: Keyvan Moghissi (Goole, United Kingdom), Herwig Kostron (Innsbruck, Austria)*
- 10:00 **Photodynamic applications in neurological surgery; current and future directions**  
S. Eljamel (Dundee, United Kingdom)
- 10:30 **OC602 Photodynamic therapy of newly diagnosed and recurrent malignant brain tumors**  
Fred Hetzel, Timothy Fullagar, Paul Elliott, Mike Hitchcock, Ken Dole, Zheng Huang (Denver CO, United States)
- 10:40 **OC603 Keratocyte changes after Photosens-ultraviolet-induced cross-linking**  
Vardan R Mamikonian, Maria V Budzinskaya, Natalia V Borodina, Irina A Bubnova, Anatoliy A Fedorov, Alexey V Kuznetsov, Sergey G Kuzmin, Georgiy N Vorozhtsov, Tatiana V Voevodina (Moscow, Russian Federation)
- 10:50 **OC604 Photosens photodynamic therapy in combination with Bevacizumab for experimental corneal neovascularization**  
Vardan R Mamikonian, Maria V Budzinskaya, Marina V Balayan, Anatoliy A Fedorov, Tatiana A Voevodina, Alexey R Kuznetsov, Georgiy N Vorozhtsov, Sergey G Kuzmin (Moscow, Russian Federation)
- 11:00 **EPPM: PDT in Urology/Gyneacology**  
*Chairs: Yoram Salomon (Rehovot, Israel), Xiuli Wang (Shanghai, China)*
- 11:00 **Photodynamic Therapy on the Prostate**  
M Emberton (London, United Kingdom)
- 11:30 **OC605 Tookad Soluble (WST-11) Second Generation Vascular Targeted Photodynamic Therapy (VTP) for Prostate Cancer**  
Nimalan Arumainayagam (London, United Kingdom)
- 11:50 **IL606 Photodynamic Diagnosis und Therapy in Gynaecology**  
Peter Hillemanns, Philipp Soergel (Hannover, Germany)
- 12:20 **OC607 Fluorescence imaging of hypericin incorporated in normal and tumoral fixed cells**  
Thi Kim Thanh Vuong, Geneviève Bourg-Heckly, Christine Vever-Bizet (Paris, France)
- 12:35 **OC608 Aminolevulinic acid (ALA)-assisted photodiagnosis and photodynamic therapy of bowenoid papulosis (BP)**  
Xiuli Wang<sup>1</sup>, Hongwei Wang<sup>1</sup>, Linglin Zhang<sup>1</sup>, Mingxia Guo<sup>1</sup>, Zheng Huang<sup>2</sup> (<sup>1</sup>Shanghai, China; <sup>2</sup>Denver CO, United States)
- 12:50 **OC609 Preclinical evaluation of verteporfin-mediated photodynamic effect on the prostate gland and its adjacent tissues in a canine model**  
Zheng Huang<sup>1</sup>, Fred Hetzel<sup>1</sup>, Ken Dole<sup>1</sup>, Jill Beckers<sup>1</sup>, David Luck<sup>1</sup>, Don Maul<sup>2</sup> (<sup>1</sup>Denver CO, <sup>2</sup>Fort Collins CO, United States)

- 14:00     **EPPM: PDPDT Respiratory/air way**  
*Chairs: Andrew J.C. Thorpe (Leeds, United Kingdom), Harubumi Kato (Tokyo, Japan)*
- 14:00     **IL610     PDPDT of Lung Cancer-For Optimal PDT**  
Harubumi Kato (Tokyo, Japan)
- 14:30     **IL611     Expansion of Indications of Bronchoscopic PDT for Lung cancer and, the contribution of Auto-Fluorescence Bronchoscopy (AFB); Personal observations based on 20 years experience**  
Keyvan Moghissi (Goole, United Kingdom)
- 15:00     **OC612     Clinical Studies on Photofrin Photodynamic Therapy Treating Late Obstructive Bronchus Lung Carcinoma**  
Libo Li, Rongcheng Luo, Jin Zhou, Yuing Luo (Guangzhou, China)
- 15:15             Discussion
- 15:30     **EPPM: PDT - Head and neck**  
*Chairs: Colin Hopper (London, United Kingdom), Heinrich Walt (Zurich, Switzerland)*
- 15:30     **IL613     PDD/PDT - Recent advances in the head and neck**  
Colin Hopper (London, United Kingdom)
- 16:00     **IL614     Preclinical synergy in photodynamic treatment of oral cancers**  
Heinrich Walt (Zurich, Switzerland)
- 16:30     **OC615     Photolon-mediated photodynamic therapy in the treatment of squamous cell carcinoma of the oral cavity**  
M.A. Kaplan, V.S. Medvedev, V.V. Polkin, V.N. Kapinus, I.S. Spichenkova, A.M. Shubina (Obninsk, Russian Federation)
- 18:00     **EPPM Council Meeting**

Monday, September 7, Morning

Old Building Room 2.01

- 09:30 **EPPM: PDT in Gastroenterology/Hepatology**  
*Chairs: Zheng Huang (Lakewood CO, United States), Herbert C. Wolfsen (Jacksonville FL, United States)*
- 09:30 **IL616 PDT for Barrett's oesophagus**  
Herbert Wolfsen (Jacksonville FL, United States)
- 10:00 **IL617 Photodynamic therapy (PDT) for high grade dysplasia in Barrett's oesophagus-10year experience**  
Peter A. Tchervenikov<sup>1</sup>, Keyvan Moghissi<sup>2</sup>, James A.C. Thorpe<sup>1</sup> (<sup>1</sup>Leeds, <sup>2</sup>Goole, United Kingdom)
- 10:15 **OC618 Photofrin PDT for Early Stage Oesophageal Cancer; Long term results in 40 patients**  
K. Moghissi, K. Dixon, M. R. Stringer, J. A. C. Thorpe (Goole, United Kingdom)
- 10:45 **OC619 Image processing and spectroscopy in autofluorescence gastrointestinal endoscopy**  
Wojciech Latos, Sebastian Kwiatek, Aleksandra Kawczyk-Krupka, Ewa Synakiewicz, Aleksander Sieron (Bytom, Poland)
- 11:30 **EPPM: PDT in Dermatology**  
*Chairs: Alexis Sidoroff (Innsbruck, Austria), Sally H Ibbotson (Dundee, United Kingdom)*
- 11:30 **IL620 PDT in Dermatology**  
Sally H Ibbotson (Dundee, United Kingdom)
- 12:00 **OC621 Dermal ultrasound scans. Their place in the management of basal cell carcinomas and premalignant lesions of the skin treated by photodynamic therapy**  
Ernest Allan (Manchester, United Kingdom)
- 12:15 **OC622 Topical application of ALA-PDT for the treatment of acne vulgaris –pharmacokinetics study and clinical report**  
Xiuli Wang<sup>1</sup>, Hongwei Wang<sup>1</sup>, Lina Su<sup>1</sup>, Herbert Stepp<sup>2</sup>, Zheng Huang<sup>3</sup> (<sup>1</sup>Shanghai, China; <sup>2</sup>Munich, Germany; <sup>3</sup>Denver CO, United States)
- 12:30 **OC623 Photodynamic Therapy for Psoriasis**  
Evgeniy A Batkaev, Olga V Baranova, Sergey G Kuzmin, Georgiy N Vorozhtsov (Moscow, Russian Federation)

- 16:00 **EPPM: PDT in Dermatology**  
*Chairs: Sally H Ibbotson (Dundee, United Kingdom), Alexis Sidoroff (Innsbruck, Austria)*
- 16:00 **IL624 Specific aspects of PDT in dermatology**  
Alexis Sidoroff (Innsbruck, Austria)
- 16:30 **OC625 Evolving role of vascular-targeted PDT in treatment of Port Wine Stain (PWS) birthmarks**  
Kaihua Yuan, Zheng Huang (Guangzhou, China)
- 16:45 **OC626 Photodynamic therapy in combined treatment modalities of disseminated melanoma**  
M.A. Kaplan, O.V. Borgul, I.G. Zakurdyeva, I.S. Spichenkova (Obninsk, Russian Federation)
- 17:00 **OC627 Modification of local Photodynamic Therapy (PDT) using Imiquimod (Aldara) in case of recurrent malignant skin lesions after failure of other treatment methods.**  
Beata Osiecka, Kamil Jurczyszyn, Piotr Ziółkowski (Wroclaw, Poland)
- 17:15 **OC628 Image processing and fluorescence spectroscopy in planning and monitoring of photodynamic therapy in basal cell carcinoma**  
S. Kwiatek, A. Kawczyk-Krupka, W. Latos, E. Synakiewicz, J. Pasek, A. Sieroń (Bytom, Poland)
- 17:30 **EPPM: New frontiers in photodynamic medicine (EPPM-ESP Symposium)**  
*Chairs: Piotr Ziolkowski (Wroclaw, Poland), Ron Allison (Greenville NC, United States)*
- 17:30 **IL629 PDT Frontiers**  
Ron R. Allison (Greenville NC, United States)
- 18:00 **IL630 Matrix metalloproteinases expression in tumor and non-tumor tissues after photodynamic therapy with liposomal formulation of aminolevulinic acid and its methyl ester.**  
Piotr Ziolkowski, Kamil Jurczyszyn, Beata Osiecka, Andrzej Bronowicz, Krzysztof Symonowicz, Piotr Dziegiel, Elzbieta Gebarowska, Ilona Izykowska, Grzegorz Terlecki, Elzbieta Czapinska, Katarzyna Hotowy (Wroclaw, Poland)
- 18:30 **OC631 Systemic photodynamic therapy as a new modality of PDT**  
A. M. Makela<sup>1</sup>, M.A. Kaplan<sup>2</sup> (<sup>1</sup>Helsinki, Finland; <sup>2</sup>Obninsk, Russian Federation)
- 18:45 **OC632 Systemic photodynamic therapy in the combined therapy of patients with malignant neoplasms with metastases**  
M.A. Kaplan, V.N. Kapinus, A.M. Shubina (Obninsk, Russian Federation)

Tuesday, September 8, Morning

Old Building Room 2.01

- 09:30 **EPPM: Light in PDT: sources, delivery and dosimetry**  
*Chairs: Hrvoje Zorc (Dubrovnik, Croatia), Harry Moseley (Dundee, United Kingdom)*
- 09:30 **IL633 Light Sources and Delivery Devices for Photodynamic Therapy**  
Thomas S. Mang (Buffalo NY, United States)
- 10:00 **IL634 PDT Dosimetry: From the Sophisticated to the Pragmatic**  
Harry Moseley (Dundee, United Kingdom)
- 10:30 **OC635 In vivo study of the interaction effects between PDT and CO<sub>2</sub> laser in Wistar rats liver tissue**  
Raquel Ferreira Rego, Vanderlei S. Bagnato, Fernando M. Araújo-Moreira (São Carlos, Brazil)
- 10:42 **OC636 Prolonged photodynamic therapy with laser induced thermotherapy of patients with skin cancer**  
E.V. Filonenko, D.G. Sukhin, G.P. Krylova, V. I. Chissov, G.N. Vorozhtsov, E.A. Lukyanets (Moscow, Russian Federation)
- 10:54 **P637 Fiber-optic systems for target laser irradiation delivery to tumor tissue: Experimental and clinical trials.**  
Victor B Loshchenov (Moscow, Russian Federation)
- 11:06 **OC638 Interstitial photodynamic therapy sarcoma M-1**  
O.A. Skugareva, M.A. Kaplan, A.I. Malygina, A.A. Mikhailovskaya (Obninsk, Russian Federation)
- 11:18 **OC639 Investigating PpIX Fluorescence with a view to optimise Photodynamic Therapy**  
Ronan M Valentine<sup>1</sup>, Kenny Wood<sup>1</sup>, Tom Brown<sup>1</sup>, Harry Moseley<sup>2</sup> (<sup>1</sup>St. Andrews, <sup>2</sup>Dundee, United Kingdom)
- 11:30 **EPPM: Photodetection and techniques for medical diagnosis, guided therapy and monitoring (EPPM-ESP Symposium)**  
*Chairs: Georges A. Wagnieres (Lausanne, Switzerland), Aleksander Sieroń (Bytom, Poland)*
- 11:30 **IL640 Development of high magnification endoscopy for the rejection of false positives observed in the bladder and the tracheo-bronchial tree during the detection of early cancers by endoscopic fluorescence imaging.**  
Blaise Lovisa<sup>1</sup>, Patrice Jichlinski<sup>1</sup>, Philippe Monnier<sup>1</sup>, Bernd C. Weber<sup>2</sup>, Hubert van den Bergh<sup>1</sup>, Georges A. Wagnieres<sup>1</sup> (<sup>1</sup>Lausanne, Switzerland; <sup>2</sup>Knittlingen, Germany)
- 12:00 **OC641 Measurement of PpIX fluorescence intensity during PDT in patients with oral leukoplakia and basal cell carcinoma using spectral camera**  
Aleksandra Kawczyk-Krupka, Sebastian Kwiatek, Ewa Synakiewicz, Wojciech Latos, Aleksander Sieron (Bytom, Poland)
- 12:10 **OC642 The comparison of AutoFluorescent Dermoscopy (AFD) diagnostic efficiency. Possible uses of AFD in dermatocosmetology**  
A.V. Krylov, E.V. Krylova (St. Petersburg, Russian Federation)
- 18:00 **EPPM General Assembly**

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Posters

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- P701**     **PEGylated liposomes as nanovehicles of meta-tetra(hydroxyphenyl)chlorin**  
Chiara Compagnin<sup>1</sup>, Francesca Moret<sup>1</sup>, Lucia Celotti<sup>1</sup>, Dietrich Scheglmann<sup>2</sup>, Selma Iratni<sup>2</sup>, Elena Reddi<sup>1</sup> (<sup>1</sup>Padova, Italy; <sup>2</sup>Jena, Germany)
- P702**     **Visualisation of oral mucosa and cutaneous premalignant and malignant lesions using photodynamic detection (PDD) - 2 clinical cases.**  
Piotr Ziolkowski<sup>1</sup>, Kamil Jurczynszyn<sup>1</sup>, Beata Osiecka<sup>1</sup>, Magdalena Dziedzic<sup>2</sup>, Hanna Gerber<sup>1</sup> (<sup>1</sup>Wroclaw, <sup>2</sup>Bydgoszcz, Poland)
- P703**     **Influence of photodynamic effect with use diaminoacid photoporphyrin derivatives PP(AA)2Arg2 on selected enzyme activity**  
Anna Romiszewska, Agata Wioleta NowakStepniowska, Alfreda Graczyk (Warszawa, Poland)
- P704**     **ROS production by endogenously generated Protoporphyrin IX in murine leukemia cells**  
Berenice Diez, R Cordo Russo, María J. Teijo, Silvia Hajos, Alcira M. del C. Batlle, Haydée Fukuda (Buenos Aires, Argentina)
- P705**     **Hypericin-PDT of U937 combined with different kinds of chemotherapeutic drugs**  
Nobue Nakajima, Tetsuji Okuno, Norimichi Kawashima (Yokohama, Japan)
- P706**     **Photodynamic therapy and thioredoxin – thioredoxin reductase system**  
Magdalena Winiarska (Warsaw, Poland, Poland)
- P707**     **Hydrophobic character of Hypericin appears as a driving force of its redistributive process in the U87 cells.**  
Veronika Huntosova<sup>1</sup>, Lenka Bryndzova<sup>1</sup>, Zuzana Nadova<sup>1</sup>, Pavol Miskovsky<sup>1</sup>, Franck Sureau<sup>2</sup> (<sup>1</sup>Kosice, Slovakia; <sup>2</sup>Paris, France)
- P708**     **Time resolved luminescence and singlet oxygen formation after illumination of hypericin in complex with mitochondria**  
Dana Petrovajova<sup>1</sup>, Zuzana Nadova<sup>1</sup>, Xavier Ragas<sup>2</sup>, Maria Garcia<sup>2</sup>, Daniel Jancura<sup>1</sup>, Santi Nonell<sup>2</sup>, Pavol Miskovsky<sup>1</sup> (<sup>1</sup>Kosice, Slovakia; <sup>2</sup>Barcelona, Spain)
- P709**     **PP(Arg)2 cytotoxic effect induced by PDT on human breast and prostate cell lines**  
Agata Wioleta Nowak-Stepniowska, Anna Romiszewska, Maciej Malecki, Alfreda Graczyk (Warszawa, Poland)
- P710**     **Photodynamic effects of hypericin and Foslipos in head and neck squamous cell carcinoma in-vitro**  
Emina Besic, Patrick Forny, Daniel Luescher, Klaus Graetz, Heinrich Walt, Caroline Maake (Zurich, Switzerland)
- P711**     **Hypericin-based photodynamic therapy: comparative phototoxicity in tumor cell lines**  
Claudi Bernal, Hidetake Imasato, Janice R Perussi (Sao Carlos, Brazil)
- P712**     **Synthesis of novel photosensitisers suitable for antibody conjugation**  
Aaron John Bullous (Hull, United Kingdom)
- P713**     **Tumoral lesions induced in mice by UVB light can be prevented by photodynamic treatment with methyl-aminolevulinic acid**  
Angeles Juarranz<sup>1</sup>, Alicia Zamarron<sup>1</sup>, Lorena Rodriguez<sup>2</sup>, Elisa Carrasco<sup>3</sup>, María I. Calvo<sup>3</sup>, Alfonso Blazquez<sup>1</sup>, Francisco Sanz-Rodríguez<sup>1</sup> (<sup>1</sup>Madrid, <sup>3</sup>Buenos Aires, Spain; <sup>2</sup>Buenos Aires, Argentina)



- P714 Photodynamic therapy in the sterilization of tumour cells transplanted in laboratory rats.**  
Piotr Ziolkowski, Kamil Jurczyszyn, Beata J Osiecka, Krzysztof Symonowicz, Magdalena Klyta (Wroclaw, Poland)
- P715 Photokilling of bacteria by curcumin in selected polyethyleneglycol (PEG) preparations**  
Tone Haukvik<sup>1</sup>, Ellen Bruzell<sup>2</sup>, Inger Sofie Dragland<sup>2</sup>, Solveig Kristensen<sup>1</sup>, Hanne Hjort Tønnesen<sup>1</sup> (1Oslo, 2Haslum, Norway)
- P716 Development of Porphyrin-based Photoimmunotherapy agents**  
Cristina M. A. Alonso<sup>1</sup>, Alessandro Palumbo<sup>2</sup>, Aaron J. Bullous<sup>1</sup>, Dario Neri<sup>2</sup>, Ross W. Boyle<sup>1</sup> (1Hull, United Kingdom; 2Zurich, Switzerland)
- P717 Localization of photodynamic active compound hypericin (HYP) in chosen cells organelles**  
Lenka Bryndzova<sup>1</sup>, Veronika Huntosova<sup>1</sup>, Jaromir Mikes<sup>1</sup>, Zuzana Nadova<sup>1</sup>, Franck Sureau<sup>2</sup>, Pavol Miskovsky<sup>1</sup> (1Kosice, Slovakia; 2Paris, France)
- P718 Proteasome inhibition potentiates antitumor effects of photodynamic therapy in mice through induction of ER stress and unfolded protein response**  
 Angelika Szokalska<sup>1</sup>, Marcin Makowski<sup>1</sup>, Dominika Nowis<sup>1</sup>, Grzegorz M Wilczynski<sup>1</sup>, Marek Kujawa<sup>1</sup>, Cezary Wojcik<sup>2</sup>, Izabela Mlynarczuk<sup>1</sup>, Pawel Salwa<sup>1</sup>, Jacek Bil<sup>1</sup>, Sylwia Janowska<sup>1</sup>, Patrizia Agostinis<sup>3</sup>, Tom Verfaillie<sup>3</sup>, Marek Bugajski<sup>1</sup>, Jan Gietka<sup>1</sup>, Tadeusz Issat<sup>1</sup>, Eliza Glodkowska<sup>1</sup>, Piotr Mrowka<sup>1</sup>, Tomasz Stoklosa<sup>1</sup>, Michael R Hamblin<sup>4</sup>, Pawel Mroz<sup>4</sup>, Marek Jakobisiak<sup>1</sup>, Jakub Golab<sup>1</sup> (1Warsaw, Poland; 2Evansville IN, 3Boston MA, United States; 4Leuven, Belgium)
- P719 Experimental evaluation of Radachlorin® sensitizer for photodynamic therapy**  
Thierry Patrice, Samuel Douillard, Isabelle Lhommeau, David Olivier (Nantes, France)
- P720 New corrole-cyclodextrin conjugates and their potential activity in PDT**  
Joana F B Barata<sup>1</sup>, Maria G P M S Neves<sup>1</sup>, Maria A F Faustino<sup>1</sup>, Augusto C Tomé<sup>1</sup>, José A S Cavaleiro<sup>1</sup>, Maria I Calvo<sup>2</sup>, Elisa Carrasco<sup>2</sup>, Francisco Sanz-Rodríguez<sup>2</sup>, Angeles Juarranz<sup>2</sup> (1Aveiro, Portugal; 2Madrid, Spain)
- P721 Interaction of cationic phthalocyanines with *E. coli* lipopolysaccharides**  
Elena A. Kotova, Yuri N. Antonenko, Alina A. Pashkovskaya, Marina G. Strakhovskaya, Nina A. Kuznetsova, Olga A. Yuzhakova (Moscow, Russian Federation)
- P722 Antibacterial Photodynamic Therapy with hypericin bound to polyvinylpyrrolidone is effective in killing of *Staphylococcus aureus***  
Victoria Engelhardt, Kristjan Plaetzer (Salzburg, Austria)
- P723 Uptake of photosensitizer-containing liposomes by clathrin-mediated endocytosis**  
Jorge Soriano, Juan C Stockert, Angeles Villanueva, Magdalena Cañete (Madrid, Spain)
- P724 Synthesis of novel bacteriochlorin-e6 photosensitizer capable of stable incorporation into tumor-targeted lipoprotein nanoparticles**  
 Weiguo Cao, Kenneth K Ng, Zhihong Zhang, Ian Corbin, Gang Zheng (Toronto ON, Canada)
- P725 Photoinactivation mechanisms of Gram-negative recombinant bioluminescent bacteria by cationic porphyrins**  
 Anabela Tavares, Sandra RS Dias, Carla MB Carvalho, João PC Tomé, Maria AF Faustino, Maria GPMS Neves, Augusto C Tomé, José AS Cavaleiro, Ângela Cunha, Newton CM Gomes, Eliana Alves, Adelaide Almeida (Aveiro, Portugal)
- P726 Effects of main group metal phthalocyanines on photodynamic inactivation of pathogenic microorganisms**  
Vanya N Mantareva<sup>1</sup>, Veselin Kussovski<sup>1</sup>, Ivan Angelov<sup>1</sup>, Dieter Woehrl<sup>2</sup>, Hristo Kissov<sup>1</sup>, Slavcho Dimitrov<sup>1</sup> (1Sofia, Bulgaria; 2Bremen, Germany)

## Posters

- P727 Dynamics of ultrastructural changes in the isolated crayfish mechanoreceptor neuron under photodynamic impact**  
Grigory Fedorenko, Anatoly Uzdensky (Rostov-on-Don, Russian Federation)
- P728 The proteomic analysis of sub-lethal effect of ALA-PDT using Panorama Ab Microarray Cell Signaling kit**  
Anatoly Uzdensky<sup>1</sup>, Maxim Kan<sup>1</sup>, Asta Juzeniene<sup>2</sup>, Johan Moan<sup>2</sup> (<sup>1</sup>Rostov-on-Don, Russian Federation; <sup>2</sup>Oslo, Norway)
- P729 Enhanced Photodynamic Effect Combining Two Different Photosensitizers**  
Pilar Acedo<sup>1</sup>, Santiago Rello-Varona<sup>2</sup>, Juan Carlos Stockert<sup>1</sup>, Magdalena Cañete<sup>1</sup>, Angeles Villanueva<sup>1</sup> (<sup>1</sup>Madrid, Spain; <sup>2</sup>Villejuif, France)
- P730 Solid Phase Synthesis of a Linear Superquenched Photodynamic Molecular Beacon**  
Jonathan F Lovell, Juan Chen, Gang Zheng (Toronto ON, Canada)
- P731 Apidaecin-photosensitizer conjugates as new antimicrobial agents**  
Ryan Dosselli<sup>1</sup>, Marina Gobbo<sup>1</sup>, Sandro Campestrini<sup>1</sup>, Monica Benincasa<sup>2</sup>, Renato Gennaro<sup>2</sup>, Elena Reddi<sup>1</sup> (<sup>1</sup>Padova, <sup>2</sup>Trieste, Italy)
- P732 Quantitative FRET and Singlet Oxygen Quenching Correlation as a Guideline for Rational Design of Photodynamic Molecular Beacons**  
Jonathan F Lovell, Juan Chen, Mark T Jarvi, Brian C Wilson, Gang Zheng (Toronto ON, Canada)
- P733 Design & photophysical characterization of a photodynamic molecular beacon for PDT**  
Marc Verhille, Regis Vanderesse, Pierre Couleaud, Muriel Barberi-Heyob, Marie-Laure Viriot, Céline Frochot (Nancy, France)
- P734 Difluoroboryl complexes of substituted 3,3'-diphenylazadiisoindolylmethenes as new photosensitizers for photodynamic therapy**  
Veronika I. Ivanova-Radkevich, Evgeny A. Lukyanets, Lubov V. Umnova, Svetlana V. Barkanova, Valentina F. Donyagina (Moscow, Russian Federation)
- P735 Neupilin-1 targeting photosensitization-induced thrombogenic effects via tissue factor release**  
Denise Bechet<sup>1</sup>, Loraine Tirand<sup>1</sup>, Béatrice Faivre<sup>1</sup>, François Plénat<sup>1</sup>, Thierry Bastogne<sup>1</sup>, Céline Frochot<sup>2</sup>, Régis Vanderesse<sup>2</sup>, François Guillemin<sup>1</sup>, Muriel Barberi-Heyob<sup>1</sup> (<sup>1</sup>Vandoeuvres-Lès-Nancy, <sup>2</sup>Nancy, France)
- P736 Porphyrin synthesis from aminolevulinic acid esters in endothelial cells and its role in photodynamic therapy**  
Lorena Rodriguez<sup>1</sup>, Henriette de Bruijn<sup>2</sup>, María Inmaculada Calvo<sup>3</sup>, Gabriela Di Venosa<sup>1</sup>, Leandro Mamone<sup>1</sup>, Dominic Robinson<sup>2</sup>, Angeles Juarranz<sup>3</sup>, Alcira Batlle<sup>1</sup>, Adriana Casas<sup>1</sup> (<sup>1</sup>Buenos Aires, Argentina; <sup>2</sup>Rotterdam, Netherlands; <sup>3</sup>Madrid, Spain)
- P737 Metallochlorophyllides as photosensitizers for PDT - in vitro and in vivo studies**  
Monika Jakubowska, Malgorzata Szczygiel, Martyna Elas, Zenon Matuszak, Agnieszka Kania, Grazyna Stochel, Leszek Fiedor, Krystna Urbanska (Krakow, Poland)
- P738 Changes in actin and E-cadherin expression induced by Aminolevulinic acid Photodynamic Therapy in normal and tumour cell lines**  
Gabriela G. Di Venosa, Lorena Rodriguez, Leandro Mamone, Sarah Schickinger, Alcira M. del C. Batlle, Adriana G. Casas (Buenos Aires, Argentina)
- P739 Physicochemical characterization of the photosensitizers TPCS2a and TPPS2a. Spectroscopic evaluation of drug-vehicle interactions.**  
Marianne Lilletvedt, Hanne H Tønnesen, Anders Høgset, Solveig Kristensen (Oslo, Norway)

- P740 New Halogenated Bacteriochlorins as Stable PDT Sensitizers: Spectroscopy, Photophysics and Anticancer Activity.**  
Janusz M. Dabrowski<sup>1</sup>, Luis G. Arnaut<sup>2</sup>, Mariette M. Pereira<sup>2</sup>, Krystyna Urbanska<sup>1</sup>, Grazyna Stochel<sup>1</sup>, Sérgio Simões Simões<sup>2</sup> (<sup>1</sup>Krakow, Poland; <sup>2</sup>Coimbra, Portugal)
- P741 Mammalian sensory neurons in 3D culture retain their regenerative functionality after surviving mTHPC-mediated PDT**  
Kathleen E Wright<sup>1</sup>, Alexander J MacRobert<sup>2</sup>, James B Phillips<sup>1</sup> (<sup>1</sup>Milton Keynes, <sup>2</sup>London, United Kingdom)
- P742 Dynamics of ultrastructural changes in the isolated crayfish mechanoreceptor neuron under photodynamic impact**  
 Grigory M. Fedorenko, Anatoly B Uzdensky (Rostov-on-Don, Russian Federation)
- P743 New photosensitizers for PDT**  
Evgeny A. Lukyanets, Raisa I. Yakubovskaya, Georgy N. Vorozhtsov, Valery I. Chissov, Anatoly Yu. Baryshnikov (Moscow, Russian Federation)
- P744 An expeditious synthesis of tetra-aryl porphycenes for photodynamic therapy**  
David Sanchez-Garcia, Marta Camarasa, Ignasi Burgués, Miquel Duran, Santi Nonell (Barcelona, Spain)
- P745 Non-invasive reflectance spectroscopy for monitoring photodynamic responses**  
Asta Juzeniene<sup>1</sup>, Kristian Pagh Nielsen<sup>2</sup>, Lu Zhao<sup>2</sup>, Gennady A Ryzhikov<sup>2</sup>, Marina S Biryulina<sup>2</sup>, Jakob J Stamnes<sup>2</sup>, Knut Stamnes<sup>3</sup>, Johan Moan<sup>1</sup> (<sup>1</sup>Oslo, <sup>2</sup>Bergen, Norway; <sup>3</sup>Hoboken NJ, United States)
- P746 Impact of ultraviolet B radiation on stratum corneum**  
Adam Reich, Joanna Kopyra, Katarzyna Postrzech, Kalina Welz (Wroclaw, Poland)
- P747 Photoreaction for total antioxidant status measurement in humans**  
Thierry Patrice, Samuel Douillard, David Olivier, Isabelle Lhommeau, Edith Bigot (Nantes, France)
- P748 Therapeutic effect of Intravitreal Lucentis in combination with Photosens photodynamic therapy in the treatment of choroidal neovascularization**  
Maria V Budzinskaya, Irina V Gurova, Elina E Kazarian, Elena A Privivkova, Sergey G Kuzmin, Georgiy N Vorozhtsov (Moscow, Russian Federation)
- P749 The role of fractionated irradiation in the low level laser therapy of rat skin lesions**  
Mihaela Antonina Calin<sup>1</sup>, D. Savastru<sup>1</sup>, S. Botea<sup>2</sup>, Marina Tautan<sup>1</sup> (<sup>1</sup>Magurele, <sup>2</sup>Bucharest, Romania)
- P750 Serum resistance to singlet oxygen after photoreactions in patients with diabetes mellitus**  
Thierry Patrice, Samuel Douillard, David Olivier, Isabelle Benoit, Isabelle Lhommeau, Edith Bigot, Michel Krempf (Nantes, France)
- P751 Photosensitizers and light sources for photodynamic therapy of the Bowen's disease**  
Mihaela Antonina Calin<sup>1</sup>, D. Savastru<sup>1</sup>, D. Boda<sup>2</sup>, Marina Tautan<sup>1</sup> (<sup>1</sup>Magurele, <sup>2</sup>Bucharest, Romania)
- P752 Potentiation of ALPcS2 mediated Photodynamic therapy (PDT) by energy metabolism inhibitors in human tumour cell lines**  
Stanley Kimani<sup>1</sup>, James Phillips<sup>1</sup>, James Bruce<sup>1</sup>, A. J. MacRobert<sup>2</sup>, Jonathan Golding<sup>1</sup> (<sup>1</sup>Milton Keynes, <sup>2</sup>London, United Kingdom)
- P753 The results of the first experience of intraoperative Fluorescent Diagnostics and Photodynamic Therapy of brain metastasis**  
V.I. Chissov, E.V. Filonenko, I.V. Reshetov, M.I. Kurzhpov, A.M. Zaytsev, A.A. Shelesko (Moscow, Russian Federation)

## Posters

- P754 Fluorescence diagnostics of breast cancer metastases in regional lymph nodes**  
V.I. Chissov, E.V. Filonenko, D.D. Pak, G.S. Barsamyan, G.A. Frank, G.D. Efremov, N.N. Volchenko, E.A. Lukyanets, G.N. Vorozhtsov (Moscow, Russian Federation)
- P755 Influence of photoactivated coproporphyrin III on the aggregation of blood platelets**  
L.V. Gasparyan<sup>1</sup>, I.N. Dementjeva<sup>2</sup>, M.A. Malkov<sup>2</sup>, N.N. Petrishchev<sup>2</sup>, A.M. Makela<sup>1</sup> (<sup>1</sup>Helsinki, Finland; <sup>2</sup>St. Petersburg, Russian Federation)
- P756 Application of boronated chlorin as a photosensitizer for PDT**  
M.A. Kaplan, R.G. Nikitina, V.A. Ol'shevskaya, V.V. Drozhzhina, V.P. Mardynskaja, T.G. Morozova, A.N. Savchenko, M.M. Moisenovich, V.N. Kalinin, A.A. Shtil (Obninsk, Russian Federation)
- P757 Peptide conjugated nano-photomedicines for molecular imaging enabled targeted PDT**  
Manzoor Koyakutty<sup>1,2</sup>, Slávka Kaščáková<sup>2</sup>, Peter Koetveld<sup>2</sup>, Dick Sterenberg<sup>2</sup>, Shanti Nair<sup>1</sup>, Leo Hofland<sup>2</sup>, Dominic Robinson<sup>1,2</sup> (<sup>1</sup>Cochin, India; <sup>2</sup>Rotterdam, Netherlands)
- P758 Squaraines as photodynamic sensitizers: ad hoc functionalization for biological targeting**  
P. Salice, E. Ronchi, L. Beverina, G. A. Pagani (Milano, Italy)
- P759 Photodynamic therapy of precancer and early cancer of vulvar**  
O. Trushina, E. Novikova, V. Sokolov, E. Filonenko, V. Chissov, G. Vorozhtsov (Moscow, Russian Federation)
- P760 Photodynamic therapy of oncological pathology of uterine cervix**  
O.I. Trushina, E.G. Novikova, V.V. Sokolov, E.V. Filonenko, V. I. Chissov, G.N. Vorozhtsov (Moscow, Russian Federation)
- P761 Immunoadjuvant PDT mode**  
Olga N. Sergeeva<sup>1</sup>, Andrei V. Kukushkin<sup>1</sup>, Vadim O. Panov<sup>1</sup>, Andrei V. Reshetnikov<sup>2</sup> (<sup>1</sup>Moscow, Russian Federation; <sup>2</sup>Noordwijkerhout, Netherlands)
- P762 The first clinical results of application of a new method of photodynamic therapy**  
N.E. Vasiliev, A.V. Reshetnikov, I.D. Zalevsky, S.E. Goncharov, E.D. Danilenko (Noordwijkerhout, Netherlands; St.Petersburg, Novosibirsk, Berdsk, Russian Federation)
- P763 Chlorin e<sub>6</sub> based photosensitizer Radachlorin<sup>®</sup> for PDT of skin cancer**  
Valery A. Privalov<sup>1</sup>, Viktor V. Sokolov<sup>2</sup>, Elena G. Vakulovskaya<sup>2</sup>, Alexander V. Geinits<sup>2</sup>, Andrei V. Reshetnikov<sup>3</sup> (<sup>1</sup>Chelyabinsk, <sup>2</sup>Moscow, Russian Federation; <sup>3</sup>Noordwijkerhout, Netherlands)
- P764 The comparison of two methods, the phase-solubility method and UV-Vis titration, used to characterize photosensitizer-cyclodextrin formulations.**  
Ravinder Singh<sup>1</sup>, Mår Måsson<sup>2</sup>, Stine B Vogensen<sup>2</sup>, Thorsteinn Loftsson<sup>2</sup>, Hanne H Tønnesen<sup>1</sup> (<sup>1</sup>Oslo, Norway; <sup>2</sup>Reykjavik, Iceland)
- P765 Novel effects of nitroxide radicals on UVA-induced expression of Matrix Metalloproteinase-1**  
Elisabetta Venditti<sup>1</sup>, Elisabetta Damiani<sup>1</sup>, Irene Kochevar<sup>2</sup> (<sup>1</sup>Ancona, Italy; <sup>2</sup>Boston MA, United States)
- P766 The effect of ultraviolet radiation on the accumulation of medicinal compounds in plants**  
Wen Jing Zhang, Lars Olof Björn (Lund, Sweden)
- P767 Effects of UV and visible light on oral mucosa characterised by reflection spectroscopy**  
Lise L Randeberg<sup>1</sup>, Jon E Dahl<sup>2</sup>, Ellen M Bruzell<sup>2</sup> (<sup>1</sup>Trondheim, <sup>2</sup>Haslum, Norway)
- P768 Impact of UV Light on the Plant cell wall, Methane emissions and ROS production**  
David J Messenger, Andy McLeod, Stephen Fry (Edinburgh, United Kingdom)

- P769** **A comparative study of the antiproliferative activity of iron chelator PIH and its photolabile caged-derivatives in skin cells**  
Asma Aroun, Olivier Reelfs, Charareh Pourzand (Bath, United Kingdom)
- P770** **The action spectrum of folic acid photodegradation**  
Thu Tam Thi Tran, Asta Juzeniene, Johan Moan (Oslo, Norway)
- P771** **Involvement of Reactive Oxygen Species in UVR-Induced Damage of Estuarine Bacterioneuston Isolates**  
 Ana L. Santos, Sílvia Lopes, Eliana Alves, Newton C. M. Gomes, António Correia, Adelaide Almeida, Ângela Cunha (Aveiro, Portugal)
- P772** **Variations of UV radiation for Previtamin D3 synthesis over Poland from the period 1985-2008**  
Julita Biszczuk-Jakubowska, Aleksander Curylo (Legionowo, Poland)
- P773** **Health-risks associated with ozone layer thinning: a global analysis**  
Arjan van Dijk, Harry Slaper (Bilthoven, Netherlands)
- P774** **Mechanistic insight into phototoxic effects of visual pigment photobleaching.**  
Kinga E Handzel<sup>1</sup>, Michael E Boulton<sup>2</sup>, Małgorzata B Rózanowska<sup>1</sup> (<sup>1</sup>Cardiff, United Kingdom; <sup>2</sup>Gainesville FL, United States)
- P775** **Involvement of type I and type II mechanisms on MS2 sewage bacteriophage photoinactivation**  
Liliana AS Costa, Ângela Cunha, Newton Gomes, Carla MB Carvalho, Maria AF Faustino, Maria GPMS Neves, João PC Tomé, Augusto C Tomé, José AS Cavaleiro, Adelaide Almeida (Aveiro, Portugal)
- P776** **Effect of different sources and light intensities on T4-like sewage bacteriophage photoinactivation**  
Liliana AS Costa, Ângela Cunha, Newton C.M. Gomes, Carla M.B. Carvalho, Maria A.F. Faustino, Maria G.P.M.S. Neves, João P.C. Tomé, Augusto C. Tomé, José A.S. Cavaleiro, Adelaide Almeida (Aveiro, Portugal)
- P777** **Clinical study of photochemical tissue bonding for closure of excision wounds**  
 Sandy Tsao, Min Yao, Frank Henry, Robert W Redmond, Irene E Kochevar (Boston MA, United States)
- P778** **Photoreactivity of Triflusal metabolite. Interaction with human serum albumin and photoadduct formation with lysine residues**  
Virginie Lhiaubet-Vallet<sup>1</sup>, Sara Montanaro<sup>1</sup>, Maria Consuelo Jimenez<sup>1</sup>, Miguel Blanca<sup>2</sup>, Miguel Angel Miranda<sup>1</sup> (<sup>1</sup>Valencia, <sup>2</sup>Malaga, Spain)
- P779** **Study of the chemical modifications in lens proteins and proteasome by glycation and photochemical reactions. Role of ascorbate oxidation products as photosensitizers**  
Felipe G Avila<sup>1</sup>, Bertrand Friguet<sup>2</sup>, Silva Eduardo<sup>1</sup> (<sup>1</sup>Santiago, Chile; <sup>2</sup>Paris, France)
- P780** **Photochemistry of Fleroxacin, an example of tunable chemoselectivity**  
 Luca Pretali, Fedele Tilocca, Angelo Albini, Elisa Fasani (Pavia, Italy)
- P781** **Drug photosensitized damage on tryptophan in biomodels of increasing complexity**  
Giuseppina Bracchitta, Alfio Catalfo, Guido De Guidi (Catania, Italy)
- P782** **Photosensitized properties of new functionalized fullerenes: their efficiency to generate singlet oxygen and free radicals.**  
 Anna M Głogowska (Kraków, Poland)
- P783** **Study on mycosporine-like amino acids (MAAs) in cyanobacteria**  
Shailendra Pratap Singh<sup>1</sup>, Donat-Peter Häder<sup>1</sup>, Rajeshwar Prasad Sinha<sup>2</sup> (<sup>1</sup>Erlangen, Germany; <sup>2</sup>Varanasi, India)

## Posters

- P784**    **Development of a chlorophyll-based anion sensor in a solution**  
Shin-ichi Sasaki<sup>1</sup>, Hitoshi Tamiaki<sup>2</sup> (<sup>1</sup>Nagahama, <sup>2</sup>Kusatsu, Japan)
- P785**    **Molecular basis and evolution of jumping spider vision with retina containing four-layered photoreceptors.**  
Takashi Nagata<sup>1</sup>, Mitsumasa Koyanagi<sup>1</sup>, Hisao Tsukamoto<sup>1</sup>, Kunio Isono<sup>2</sup>, Kentaro Arikawa<sup>3</sup>, Akihisa Terakita<sup>1</sup> (<sup>1</sup>Osaka, <sup>2</sup>Sendai, <sup>3</sup>Hayama, Japan)