PROGRAMME

Programme.....................................................Page 2
PDT Posters ...................................................Page 35
Photobiology Posters .................................Page 40
Thursday, September 1, Afternoon

15:30  Registration
18:30

Thursday, September 1, Evening

19:00  Welcome Reception
21:00
08:30  Opening Ceremony – Welcome Address

08:45  Young Investigator Award Lecture  
*Chair: Evelyne Sage (Orsay, France)* 
**PL101** Targeting UV-Activated Regulatory B Cells for Immunotherapy  
Scott N Byrne (Sydney, Australia)

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09:30  Photosensitization - Biophysical, photophysical and spectroscopic aspects  
*Chair: Benjamin Ehrenberg (Ramat Gan, Israel), Santi Nonell (Barcelona, Spain)*

09:30  **IL102** New approaches to singlet oxygen production and detection  
Santi Nonell (Barcelona, Spain)

09:55  **IL103** Two-photon photosensitized singlet oxygen production: advantages and disadvantages, particularly in probing mechanisms of photoinduced cell death.  
Peter R. Ogilby (Århus, Denmark)

10:20  **IL104** Singlet oxygen kinetics as measure for photoinduced processes: in vitro and ex vivo studies  
Beate Roeder, Jan Schlothauer, Steffen Hackbarth (Berlin, Germany)

10:45  Coffee break

11:15  **IL105** Singlet oxygen production by nanoparticle-bound photosensitisers  
Mauricio S Baptista (São Paulo, Brazil)

11:40  **IL106** Porphyrin photosensitization in nanostructures: from photodynamic to photothermal  
Gang Zheng (Toronto ON, Canada)

12:05  **IL107** The relevance of cross-membrane and surface electric potentials in membrane-localized photosensitization  
Benjamin Ehrenberg, Shany Ytzhak, Danor Aharon (Ramat Gan, Israel)

12:30  **OC108** Photodynamic induction of lipid membrane permeability: a selectivity paradox  
Elena A. Kotova, Alexey V. Kuzevanov, Yuri N. Antonenko (Moscow, Russian Federation)

12:42  **OC109** Photosensitizer Drug Delivery via an Optical Fiber  
Matibur Zamadar, Goutam Ghosh, Adaickapillai Mahendran, Mihaela Minnis, Bonnie I. Kruft, Ashwini Ghogare, David Aebisher, Alexander Greer (Brooklyn NY, United States)
09:30  UV-induced DNA damage, repair, mutagenesis and carcinogenesis  
Chair: Thierry Douki (Grenoble, France), Frank R. de Gruijl (Leiden, Netherlands)

09:30  IL110  UV-Sensitivity of Telomeres  
Douglas E Brash¹, Patrick J Rochette² (¹New Haven CT, United States; ²Quebec QC, Canada)

10:00  IL111  Melanin effect on DNA damage induction by UVA and UVB  
Moon-shong Tang (Tuxedo Park NY, United States)

10:30  Coffee break

11:00  IL112  Studies on the wavelength- and age-dependence of UV-induced melanoma using a Xiphophorus hybrid fish model  
David Mitchell, Andre Fernandez (Smithville TX, United States)

11:30  IL113  UV-induced selective ablation of the epidermal basal layer resets UV carcinogenesis and shows squamous cell carcinomas to be of interfollicular origin.  
Heggert Rebel, Carolien A Bodmann, Frank R de Gruijl (Leiden, Netherlands)

12:00  OC114  A proposal for the action spectrum of melanoma skin cancer from epidemiological data of Austria  
Alois W. Schmalwieser, Günther Schauberger, Stana Simic, Michael Fitzka, Hanns Moshammer (Vienna, Austria)

12:15  OC115  Comparative Analysis of the Mitochondrial Common Deletion with a Mitochondrial CC to TT transition  
Daniel Gebhard, Mahler Bettina, Katja Matt, Katharina Burger, Jörg Bergemann (Sigmaringen, Germany)

12:30  OC116  Molecular responses to simulated solar UV of human keratinocytes in 2D versus 3D models: application to sunscreen assessment  
Emilie Planel, Jean-Philippe Belaidi, Christophe Jones, Laurent Marrot, Jean-Roch Meunier (Aulnaysous-bois, France)

12:45  OC117  Photoactivation of DNA thiobases: a potential novel phototherapy  
Olivier Reelfs¹, Peter MacPherson², Yao-Zhong Xu³, Xiaolin Ren³, Peter Karran², Antony Young¹  
(¹London, ²South Mimms, ³Milton Keynes, United Kingdom)
09:30 **Topical sunscreens: assessment of efficacy and impact**  
*Chair: Nikiforos Kollias (Skillman NJ, United States), J. Frank Nash (Cincinnati OH, USA)*

09:30 **IL118 Practice makes perfect: Compliance is the key to photoprotection**  
J F Nash¹, Becky Finley¹, Paul Tanner¹, Paul Matts² (¹Cincinnati OH, United States; ²Egham, United Kingdom)

10:00 **IL119 The benefits and challenges of broad spectrum protection**  
Antony R Young (London, United Kingdom)

10:30 **Coffee break**

11:00 **Non-invasive assessment of sunscreen efficacy on human skin in vivo**  
Eduardo Ruvolo Jr. (Skillman NJ, United States)

11:30 **IL121 Non-invasive or minimally invasive methods to assess UVA protection**  
Nikiforos Kollias (Skillman NJ, United States)

12:00 **OC122 The proliferative response of skin cells to sunlight and the impact of sunscreen**  
Elke Hacker, Zachary Boyce, Michael Kimlin, Sam Vaartjes, Nicholas Hayward, David Whiteman (Brisbane, Australia)

12:15 **OC123 Simulation of Sun Protection Factors and Indices Characterizing the UVA Protection of Sunscreens**  
Bernd Herzog¹, Uli Osterwalder² (¹Grenzach-Wyhlen, ²Ludwigshafen, Germany)
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<th>Time</th>
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<tr>
<td>14:15</td>
<td><strong>PDT Poster session</strong></td>
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<td>14:30</td>
<td><strong>Molecular imaging in translational research</strong></td>
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<td><em>Chair: Gang Zheng (Toronto ON, Canada), Norbert Lange (Geneva, Switzerland)</em></td>
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<td>15:00</td>
<td><strong>Clinical Translation of Near-Infrared Optical Imaging Technology Employing Endogenous or Exogenous Contrast</strong></td>
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<td>John V. Frangioni (Boston, MA, United States)</td>
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<td>15:30</td>
<td><strong>IL125</strong></td>
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<td>Lipid-based nanomedicine for photonic applications</td>
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<td>Gang Zheng (Toronto ON, Canada)</td>
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<td>16:00</td>
<td><strong>Coffee break</strong></td>
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<td>17:00</td>
<td><strong>OC126</strong></td>
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<td>FLIM and SLIM for molecular imaging in fluorescence guided diagnosis</td>
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<td>Angelika Rueck, Sviatlana Kalinina, Frank Dolp, Swetlana Lorenz, Carmen Hauser (Ulm, Germany)</td>
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<td>17:00</td>
<td><strong>OC127</strong></td>
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<td>Photomedicine Treatment Planning with Positron Emission Tomography.</td>
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<td>Thomas Daniel MacDonald, Tracy W.B. Liu, Cheng Jin, Jon Lovell, Gang Zheng (Toronto ON, Canada)</td>
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<td>17:00</td>
<td><strong>OC128</strong></td>
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<td>Fluorescence imaging studies of anti-HER2/neu immunotoxin antineoplastic activity</td>
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<td>Irina V. Balalaeva, Evgeniya A. Malekhanova, Natalia Yu. Lekanova, Irina V. Krutova, Anna A. Brilkina, Oleg A. Stremovskiy, Sergey M. Deyev (Nizhny Novgorod, Moscow, Russian Federation)</td>
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<td>17:15</td>
<td><strong>OC129</strong></td>
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<td>Fluorescence diagnosis of bladder cancer: a novel in vivo approach with ALA dendrimers</td>
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<td>Aurélie François, Sinan Battah, Alexander MacRobert, Lina Bolotine, François Guillemin, Marie-Ange D'Hallewin (Vandoeuvre les Nancy, France; London, United Kingdom)</td>
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<td>17:45</td>
<td><strong>OC130</strong></td>
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<td>Rhenium/Technetium-porphyrin conjugates: combining molecular imaging with cytotoxicity</td>
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<td>Cinzia Spagnuol, Roger Alberto, Teresa Gianferrara, Enzo Alessio (Trieste, Italy; Zurich, Switzerland)</td>
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Friday, September 2, Afternoon  

15:30  **Photoimmunology**  
*Chair: Jakub Golab (Warsaw, Poland), Vivienne E Reeve (Sydney, Australia)*

15:30  **IL131**  
Photodynamic Therapy induction of Systemic, Antigen-Specific and Tumor Directed Immune Response  
Pawel Mroz (Boston MA, United States)

16:00  **IL132**  
Involvement of DAMPs in tumor response to photodynamic therapy  
Mladen Korbelik (Vancouver BC, Canada)

16:30  Coffee break

17:00  **IL133**  
How does sunlight protect from autoimmunity?  
Scott N Byrne, Gary M Halliday, Sarah Leighton (The University of Sydney, NSW, Australia)

17:30  **IL134**  
The role of HIF-1alpha in immune suppression by UV radiation in mice  
Vivienne E Reeve, Jun-Lae Cho, Munif Allanson (Sydney, Australia)

18:00  **OC135**  
UVB-induced CD1a+ Langerhans’cell trafficking occurs in histidinaemic human skin lacking urocanic acid.  
Joanne Tye, John H Walter, Christopher EM Griffiths, Neil K Gibbs (Manchester, M13 9T, United Kingdom)

18:15  **OC136**  
Cis-urocanic acid modulates claudin-1 expression and tight junction function in human keratinocytes  
Cath A O’Neill, Neil K Gibbs (Manchester, M13 9T, United Kingdom)

18:30  **OC137**  
Of mice and men: photoprotection by vitamin D compounds  
Katie M Dixon¹, Vivienne E Reeve¹, Diona L Damian¹, Young Jin Kim¹, Gary M Halliday¹, Anthony W Norman², Rebecca S Mason¹ (¹Sydney, Australia; ²Riverside CA, United States)

18:45  **OC138**  
UV irradiation of skin and inflammation of the airways and peritoneum reduce the priming ability of bone marrow-derived dendritic cells  
Prue H Hart¹, Royce LX Ng¹, Naomi M Scott¹, Jacqueline L Bisley¹, Mary Norval² (¹West Perth, Perth, Australia; ²Edinburgh, United Kingdom)
15:30 **Blue-light photoreceptors: structure, function, applications, new trends**  
*Chair: Aba Losi (Parma, Italy)*

**IL139**  
*Engineered Photoreceptors As Novel Optogenetic Tools*  
Andreas Möglich (Berlin, Germany)

16:00 **IL140**  
*Ultrafast hydrogen bond switching in BLUF domains: insights from chemical modification and isotope labeling*  
John Kennis¹, Tilo Mathes¹, Peter Hegemann² (¹Amsterdam, Netherlands; ²Berlin, Germany)

16:30  
**Coffee break**

17:00 **IL141**  
*Application of FT-IR Spectroscopy to the Structural Study of Channelrhodopsin-2*  
Ionela Radu¹, Melanie Nack¹, Christian Bamann², Ernst Bamberg², Joachim Heberle¹ (¹Bielefeld, ²Frankfurt, Germany)

17:30 **IL142**  
*Bacterial LOV proteins: tuning the photocycle and propagating signals*  
Aba Losi¹, Sarah Raffelberg², Madina Mansurova², Wolfgang Gärtner² (¹Parma, Italy; ²Muelheim a.d. Ruhr, Germany)

18:00 **OC143**  
*Photochromism in a flavin binding photoreceptor*  
Aba Losi¹, Wolfgang Gärtner², Carmen Mandalari³, Stefania Abbruzzetti¹, Cristiano Viappiani³ (¹Parma, Italy; ³Mülheim a.d. Ruhr, Germany)

18:15 **OC144**  
*Study of excitation energy transport and degradation in aqueous solution of FMN*  
Józef Kuśba¹, Hanna Grajek² (¹Gdańsk, ²Olsztyn, Poland)
08:30 **Plenary lecture**  
*Chair: Kristian Berg (Oslo, Norway)*

**PL201** Photosensitiser-nanoparticle conjugates for targeted photodynamic therapy  
David A. Russell (Norwich, United Kingdom)

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**Saturday, September 3, Morning**  
**Uni Mail R170**

09:30 **Systemic photoprotection**  
*Chair: Lesley E Rhodes (Manchester, United Kingdom), Albena T Dinkova-Kostova (Dundee, United Kingdom)*

09:30 **IL202** Control of ROS detoxification in normal and UV-irradiated skin  
Matthias Schäfer, Sabine Werner (Zurich, Switzerland)

10:00 **IL203** The role of the Keap1/Nrf2/ARE pathway in protection against UV radiation  
Albena T Dinkova-Kostova, Sukirti Kalra, Elena Knatko, Ying Zhang (Dundee, United Kingdom)

10:30 Coffee break

11:00 **IL204** Systemic photoprotection of the human immune system by restoring cellular energy with B group vitamins  
Gary M Halliday, Diona L. Damian, Devita Surjana (Sydney, NSW, Australia)

11:30 **IL205** Nicotinic acid and the nicotinic acid receptor in photodamaged skin: A new paradigm for prevention of skin cancer  
Myron K Jacobson, Yira Bermudez, Claudia A Benevante, Ralph G Meyer, W Russell Coyle, Elaine L Jacobson (Tucson AZ, United States) - The Niadyne Lecturer

12:00 **OC206** Impact of oral long chain omega-3 PUFA on a human contact hypersensitivity model of photoinmunosuppression and potential mediation by reduced cutaneous PGE2:PGE3 ratio  
Suzanne M Pilkington1, Karen A Massey2, Susan P Bennett1, Khaled Rosshdy1, Naser MI Al-Aasswad2, Anna Nicolaou3, Lesley E Rhodes3 (1Manchester, 2Bradford, United Kingdom)

12:20 **OC207** Green tea catechins are bioavailable in human skin and protect against UVR-induced skin inflammation  
Gemma Darby1, Tristan P Dew2, Karen A Massey2, Kayleigh A Clarke2, Susan Bennett1, Rachel E Watson1, Anna Nicolaou1, Gary Williamson2, Lesley E Rhodes1 (1Manchester, 2Leeds, 3Bradford, United Kingdom)

12:40 **OC208** Photoprotective properties of endogenous urocanic acid in human skin  
Zenas Yui, Joanne Tye, John H Walter, Christopher EM Griffiths, Neil K Gibbs (Manchester, M13 9T, United Kingdom)
Molecular and cellular aspects of PDT
Chair: Zvi N. Malik (Ramat Gan, Israel), Jacques G Piette (Liège, Belgium)

PpIx synthesis pathway and cellular stress mechanisms are central in the cancer metabolene and ALA-PDT efficacy
Zvi N. Malik (Ramat Gan, Israel)

Modulation of autophagy and apoptosis pathways by ROS after hypericin-PDT
Noemi Rubio, Johan Grooten, Jacques Piette, Patrizia Agostinis (Liège, Gent, Leuven, Belgium)

Coffee break

Therapeutic targeting of proteostatic cytoprotective mechanisms in photodynamic therapy
Jakub Golab (Warsaw, Poland)

PDT: questioning earlier assumptions
David Kessel (Detroit MI, United States)

Glioblastoma cell death mechanisms by ALA-PDT
Jacques G Piette (Liège, Belgium)

Synthesis and Evaluation of Folate Directed Photodynamic Therapy Agents
Kenneth W. Olsen, Godfred Boateng, Rojenia Jones, Prakash Sanjeevaiah, Basel Zaitoun, Marco Palomo, Amanda Moore, Andrew Canning, David S. Crumrine, Eric Schroeter (Chicago IL, United States)

The generation of both singlet oxygen and superoxide ion by halogenated sulfonamide bacteriochlorins, and their synergism in PDT
Luis G. Arnaut, Mariete M. Pereira, Sérgio Simões, Janusz M. Dabrowski, Artur A Abreu, Carlos JP Monteiro, Luis B Rocha, Gonçalo FF Sá, Elsa FF Silva, Peter R Ogilby (Coimbra, Portugal; Krakow, Poland)
### Environmental applications of photosynthetic organisms

Chair: Massimo Trotta (Bari, Italy), Peter Maroti (Szeged, Hungary)

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<tr>
<td>09:30</td>
<td>IL216</td>
<td>Photosynthetic bacteria play heavy metal</td>
<td>Massimo Trotta (Bari, Italy)</td>
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<td>10:00</td>
<td>IL217</td>
<td>Chromate reduction by the photosynthetic bacterium <em>Rhodobacter sphaeroides</em></td>
<td>Francesca Italiano¹, Sara Rinalducci², Lello Zolla², Luigi R Ceci¹, Francesca De Leo¹, Angela Agostiano¹, Massimo Trotta¹ (¹Bari, ²Viterbo, Italy)</td>
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<td>10:30</td>
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<td>Coffee break</td>
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<td>11:00</td>
<td>IL218</td>
<td>Biomonitoring the environment by photosynthetic bacteria</td>
<td>Peter Maroti, Emese Asztalos, Mariann Kis, Zoltán Gingl (Szeged, Hungary)</td>
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<td>11:30</td>
<td>IL219</td>
<td>Conformational control of cofactors in nature – Conservation of tetrapyrrole conformations in the photosynthetic reaction centers of purple bacteria</td>
<td>Mathias O. Senge (Dublin, Ireland)</td>
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<td>12:00</td>
<td>OC220</td>
<td>Regulation of photoprotection in plants</td>
<td>Alexander V Ruban (London, United Kingdom)</td>
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| 14:15 | **Plenary lecture**  
Chair: Norbert Lange (Geneva, Switzerland)  
**PL221**  
Excited-state dynamics of multichromophoric molecules: from DNA probing to artificial photosynthesis  
Eric Vauthey (Geneva, Switzerland) | Uni Dufour U600           | - **PL221**  
Excited-state dynamics of multichromophoric molecules: from DNA probing to artificial photosynthesis  
Eric Vauthey (Geneva, Switzerland) |

**Saturday, September 3, Afternoon**  
**Uni Mail S150**

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| 15:15 | **Nanotechnology: from photochemistry to photomedicine**  
Chair: Elena Reddi (Padova, Italy), Alexander J MacRobert (London, United Kingdom) | Uni Mail S150             | - **Introductory remarks**  
Elena Reddi (Padova, Italy)  
**IL222**  
Combination of Photodynamic and Nano Technologies for Therapy and Treatment Monitoring  
Tayyaba Hasan (Boston MA, United States)  
**IL223**  
Characterization of temoporfin-loaded PEGylated PLGA nanoparticles for use in photodynamic therapy  
Petra Kocbek¹, Matija Rojnič¹, Francesca Moretti², Chiara Compagnini², Lucia Celotti², Melissa J Bovis³, Josephine H Woodhams³, Alexander J MacRobert³, Dietrich Scheglmüller³, Wijnand Helfrich³, Marco V Verkaik³, Emanuele Papini³, Elena Reddi³, Janko Kos³  
¹Ljubljana, Slovenia; ²Padova, Italy; ³London, United Kingdom; ⁴Jena, Germany; ⁵Groningen, Netherlands |
15:15 **Photodermatological advances of the 21st Century (ESP/ESPD Joint Symposium)**
Chair: John LM Hawk (London, United Kingdom), Giovanni Leone (Rome, Italy), Marie-Claude Marguery (Toulouse, France)

15:15 **IL231** Photocarcinogenesis and photoageing: common mechanisms?
Antony R Young (London, United Kingdom)

15:45 **IL232** Vitamin D sufficiency and how to achieve it
Lesley E Rhodes, Jacqueline L Berry, Richard Kift, Ann R Webb (Manchester, United Kingdom)

16:15 Coffee break

16:45 **IL233** The Auto-Immune Photodermatoses –Are They Really Auto-Immune?
John LM Hawk (London, United Kingdom)

17:15 **IL234** The Porphyrias - New diseases, but any new treatments?
Alexander Vincent Anstey (Newport, United Kingdom)

17:45 **IL235** Sunscreen in Photoageing and Photocarcinogenesis –Does it Work?
Gillian M Murphy (Dublin, Ireland)

18:15 **IL236** Phototherapy Today –Its Use and Safety in the World of Biologies
Herbert Höngsmann (Vienna, Austria)
15:15  From the lab to the real world: metagenomics, microchips and bioinformatics in the field of photosensory biology  
Chair: Wolfgang Gärtner (Muelheim a. d. Ruhr, Germany)

15:15  IL237  Extreme photoreceptors from Argentinean High-Altitude Lakes (over 4,000 m)  
Virginia H Albarracin¹, Gopal Pathak¹, Maria E Farias², Claudio Borsarelli³, Wolfgang Gärtner¹
¹(Mülheim a. d. Ruhr, Germany; ²S. M. de Tucuman, ³Santiago del Estero, Argentina)

15:45  IL238  Metagenomes and novel blue-light photoreceptors  
Gopal P. Pathak¹, Aba Losi², Wolfgang Gärtner¹ (¹Mülheim a. d. Ruhr, Germany; ²Parma, Italy)

16:15  Coffee break

16:45  OC239  Function of photoreceptors in the plant pathogen Pseudomonas syringae  
Rashmi Shah¹, Victoria Moriconi², Matias Rugnone², Jorge Casal³, Wolfgang Gaertner¹ (¹Muelheim a. d. Ruhr, Germany; ²Buenos Aires, Argentina)

17:00  IL240  Light-modulation of cellular cAMP by a small bacterial photoactivated adenylyl cyclase, bPAC  
Manuela Stierl¹, Rolf Hagedorn¹, Suneel Kateriya², Peter Hegemann¹ (¹Berlin, Germany; ²New Delhi, India)

17:30  IL241  Autofluorescent Proteins. Building blocks of intelligent probes and superresolution.  
Thomas Gensch (Juelich, Germany)

18:00  IL242  Structural basis of photosensitivity in a bacterial light-oxygen-voltage/helix-turn-helix (LOV-HTH) DNA-binding protein  
Hartmut Hudel Luecke (Irvine CA, United States)
08:30  **Plenary lecture**  
*Chair: Janet F. Bornman (Perth, Australia)*

**PL301**  Role of protein kinases and phosphatases in the assembly and dynamics of photosynthetic complexes  
Jean-David Rochaix (Geneva, Switzerland)

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**Sunday, September 4, Morning**  
**Uni Mail S150**

09:30  **PDT for skin cancer: present and future (ESP/ASP Joint Symposium)**  
*Chair: Lesley E Rhodes (Manchester, United Kingdom), Edward V. Maytin (Cleveland OH, United States), Rolf-Markus Szeimies (Recklinghausen, Germany)*

09:30  **IL302**  Novel Differentiation Therapies for Enhancement of PDT  
Edward V. Maytin (Cleveland OH, United States)

10:00  **IL303**  Iron-chelators to enhance PDT –experience from laboratory to clinic.  
*Sandra M Campbell, Alison Curnow (Truro, United Kingdom)*

10:30  **Coffee break**

11:00  **IL304**  Photodynamic therapy-induced immunosuppression in humans  
*Diona Damian, Georgia Frost, Gary Halliday (Camperdown, Australia)*

11:30  **IL305**  Immunosuppression as an explosive mix for the skin: PDT in field cancerization of renal transplant recipients.  
Günther FL Hofbauer (Zürich, Switzerland)

12:00  **IL306**  Light fractionated ALA-PDT: from mouse to man  
Dominic J Robinson (Rotterdam, Netherlands)

12:30  **IL307**  Daylight-mediated PDT  
Hans Christian Wulf (Copenhagen, Denmark) – The Galderma Lecturer
09:30  The impact of climatic and environmental factors on personal UV radiation exposure and human health
Chair: Antony R Young (London, United Kingdom), Ann R Webb (Manchester, United Kingdom)

09:30  IL308  The impact of climatic and environmental factors on personal UV radiation exposure
Mario Blumthaler (Innsbruck, Austria)

10:00 IL309  The EC ICEPURE project: An overview of the biological aspects
Antony R Young (London, United Kingdom)

10:30  Coffee break

11:00 IL310  Dosimetry and modelling of personal UV exposure in ICEPURE
Paul Eriksen (Copenhagen, Denmark)

11:30 IL311  Assessing Real-life Exposures from Controlled Experiments
Ann R Webb, Richard Kift, Jacqueline E Berry, Lesley E Rhodes (Manchester, United Kingdom)

12:00 OC312  Natural skin protection against solar UV radiation in the course of the year
Peter M. Knuschke¹, Marco Janßen², Guenter Ott², Ines Unverricht¹ (¹Dresden, ²Dortmund, Germany)

12:15 OC313  Impact of lifestyle differences on UV exposure patterns and dosages in the photosensitive population
Richard Kift, Lesley E Rhodes, Jacqueline L Berry, Sarah J Cooper, Marie T Durkin, Andy Vail, Andrew RD Smedley, Ann R Webb (Manchester, United Kingdom)

12:30 OC314  Modelling the biologically effective UV exposure distribution of the human body
Aqif Nasufi¹, Alois W. Schmalwieser¹, Mette M.-L. Grage², Paul Eriksen², Graham Harrison³, Antony Young³, Katarzyna Baczymska⁴, Andy Pearson⁴, John O'Hagan⁴, Elisabeth Thieden⁵, Jakob Heydenreich⁵, Peter Philipsen⁵ (¹Vienna, Austria; ²Copenhagen, ³Copenhagen, Denmark; ⁴London, ⁵Chilton, United Kingdom)

12:45 OC315  Sun Exposure In Farmers' Families: Like Parent, Like Child
Mette B Larsen, Bibi Petersen, Peter A. Philipsen, Elisabeth Thieden, Hans Christian Wulf (Copenhagen, Denmark)
09:30 **Photostability, photochemistry and phototoxicity of drugs**  
*Chair: Hanne Hjorth Tønnesen (Oslo, Norway), Miguel A Miranda (Valencia, Spain)*

09:30 **IL316 Photostability testing in practice**  
David Clapham (Ware, United Kingdom)

10:00 **IL317 Photophysical properties and formulation of curcuminoids**  
Hanne Hjorth Tønnesen (Oslo, Norway)

10:30 **Coffee break**

11:00 **IL318 Photobehavior of drugs encapsulated within transport proteins**  
Maria Consuelo Jimenez (Valencia, Spain)

11:30 **IL319 A Theoretical Perspective of Photodegradation and Photostability of NSAIDs**  
Leif A Eriksson (Galway, Ireland)

12:00 **OC320 Photosafety Evaluation of Investigational Drugs: A Threshold-Based Tiered Testing Strategy**  
Daniel Bauer (Basel, Switzerland)

12:15 **OC321 Drug photosensitization induced in proteins and in cells**  
Giuseppina Bracchitta, Alfio Catalfo, Guido De Guidi (Catania, Italy)

12:30 **OC322 Use of a modified oral UV-LLNA in Balb/c mice for the investigation of phototoxicity mechanisms and pharmacokinetic properties in skin**  
Stéphanie Boudon, Catherine Schiltz, Philippe Scheubel, Brendan Prideaux, Daniel Luehrs, Markus Stoeckli, Jens Schuemann, Daniel Bauer (Basel, Switzerland)
09:30  **Photomorphogenesis**  
*Chair: Ida Ruberti (Rome, Italy)*

09:30  **IL323  Intra- and intercellular features of phytochrome-A mediated signalling**  
Daniel Kirchenbauer, Eva Adam, Stefan Kircher, Laszlo Kozma-Bognar, Eberhard Schafer, Ferenc Nagy (Freiburg, Germany; Szeged, Hungary)

10:00  **IL324  Regulation of asymmetric growth responses by members of the Phytochrome Kinase Substrate (PKS) family**  
Christian Fankhauser, Matthieu de Carbonnel, Chitose Kami, Emilie Demarty (Lausanne, Switzerland)

10:30  **Coffee break**

11:00  **IL325  Molecular mechanisms of plant adaptation to canopy shade**  
Ida Ruberti, Giovanna Sessa, Andrea Ciolfi, Marco Possenti, Monica Carabelli, Massimiliano Sassi, Valentino Ruzza, Giorgio Morelli (Rome, Italy)

11:30  **IL326  Shining light on temperature signalling**  
14:15  **Research insights in the photosensitivity disorders**  
*Chair: Alexander Vincent Anstey (Newport, United Kingdom), François Aubin (Besançon, France)*

14:15  **IL327  Update on solar urticaria**  
François Aubin (Besançon, France)

14:45  **IL328  Update on erythropoietic protoporphyria (EPP)**  
Alexander Vincent Anstey (Newport, United Kingdom)

15:15  **IL329  Photosensitivity in lupus: what is new?**  
Annegret Kuhn (Muenster, Germany)

15:45  **Coffee break**

16:15  **IL330  What is new in PLE?**  
Rik Roelandts (Leuven, Belgium)

16:45  **IL331  Alpha-MSH and cutaneous disorders: what is new?**  
Dennis J Wright (Baar, Switzerland)
14:15  **Plant photobiology and climate change**  
*Chair: Janet F. Bornman (Perth, Australia)*

14:15  **IL332**  
Variations of UV radiation in the 21st century due to ozone and climate changes  
Alkiviadis F. Bais (Thessaloniki, Greece)

14:45  **IL333**  
Implications for plant systems from environmental impacts of climate change  
Janet F. Bornman (Perth, Australia)

15:15  **IL334**  
Acclimative leaf antioxidant responses to UV-B  
Eva Hideg¹, Petra Majer² (¹Pécs, ²Szeged, Hungary)

15:45  Coffee break

16:15  **IL335**  
UV-stimulated methane emissions from plants: methods, rates and global impact  
Wes T Fraser, Andy R McLeod, Stephen Fry, Mark F Newman, Dave S Reay (Edinburgh, United Kingdom)

16:45  **IL336**  
Exploiting plant responses to solar UV radiation in improved protecting cropping systems  
Eslam Elfadly¹, Jason Wargent², Jason Moore³, Wagdy Sobeih³, Nigel Paul³ (¹Alexandria, Egypt; ²Palmerston North, New Zealand; ³Lancaster, United Kingdom)
14:15  **New drugs and drug delivery for PDT**  
*Chair: Kristian Berg (Oslo, Norway), Norbert Lange (Geneva, Switzerland)*

14:15  **IL337**  
**Drug Delivery Session: Biodistribution, Clearance, and Elimination of Optically Active Nanoparticles**  
John V. Frangioni (Boston MA, USA)

14:45  **IL338**  
**Photochemical internalization (PCI), a technology for site-specific drug delivery. Recent advances**  
Kristian Berg¹, Anette Weyergang¹, Marie Vikdal¹, Maria Bergstad¹, Bente Bull-Hansen¹, Michael Rosenblum², Pål Kristian Selbo¹ (¹Oslo, Norway; ²Houston TX, United States)

15:15  **IL339**  
**Bioconjugation of photosensitisers with anti-angiogenic monoclonal antibodies –Synthesis and biological evaluation.**  
Ross W Boyle (Kingston-upon-Hull, United Kingdom)

15:45  Coffee break

16:15  **IL340**  
**New drug developments in the treatment of non melanoma skin cancer**  
Rolf-Markus Szeimies (Recklinghausen, Germany)

16:45  **OC341**  
**Development of a new LDL based transport system for hydrophobic drug delivery to cancer cells**  
Pavol Miskovsky¹, Veronika Huntosova¹, Dana Petrovajova¹, Zuzana Nadova¹, Franck Sureau², Daniel Jancura¹ (¹Kosice, Slovakia; ²Paris, France)

17:00  **OC342**  
**Photochemical internalization (PCI) of immunotoxins targeting cancer stem cell markers**  
Monica Bostad, Kristian Berg, Anders Hogset, Pål Kristian Selbo (Oslo, Norway)

17:15  **OC343**  
**Using PEGylated PLGA nanoparticles to enhance the delivery of m-THPC for in vivo PDT**  
Melissa J Bovis¹, Josephine H Woodhams¹, Rachael Fisher², Matija Rojnik³, Petra Kocebek³, Janko Kos³, Marilena Loizidou¹, Stephen G Bown¹, Alexander J Macrobert¹ (¹London, ²Edinburgh, United Kingdom; ³Ljubljana, Slovenia)

17:30  **OC344**  
**Selective antitumor effect in PhotoDynamic Therapy mediated by photo-activatable molecules, activated by endopeptidases**  
Marc Verhille, Hamanou Benachour, Régis Vanderesse, Muriel Barberi-Heyob, Philippe Arnoux, Céline Frochot (Nancy, France)
14:15  Photobiology oral communications
Chair: Thierry Douki (Grenoble, France)

14:15  OC345 Sunburns, sunscreen use, exposure and validation of self-reported sunburns in sun worshippers during one week on Tenerife and in skiers during one week in Austria.
Bibi Petersen, Peter Philipsen, Elisabeth Thieden, Hans Christian Wulf (København N.V., Denmark)

14:30  OC346 People stick to their sun exposure behaviour
Elisabeth Thieden, Peter Philipsen, Jakob Heydenreich, Hans Christian Wulf (Copenhagen NV, Denmark)

14:45  OC347 What do outdoor workers think about occupational photo protection? The AUVA working trade survey
Harald Maier, Alois W. Schmalwieser, Emmerich Kitz (Vienna, Austria)

15:00  OC348 Phototesting in rosacea patients
Magdalena Misiak-Galazka, Hanna Wolska (Warsaw, Poland)

15:15  OC349 Antagonising the CXCR4-CXCL12 chemokine pathway inhibits sunlight-induced skin tumour formation
Seri Narti Edayu Sarchio, Gary Halliday, Scott Byrne (New South Wales, Australia)

15:30  OC350 Chemical versus UVB carcinogenesis regimens yield opposing tumor responses in skin of Chop/gadd153 null mice
Sanjay Anand, Edward V Maytin (Cleveland OH, United States)

15:45  Coffee break

16:15  OC351 Cellular effects of melanogenesis stimulus in melanoma cells - above and beyond melanin synthesis
Elizabeth S. Cunha, Rebeca Kawahara, Eduardo Aliprandini, Hudson G. Amstalden, Sheila M.B. Winnischofer, Guilhermina R Noletto, Silvia M.S.C. Cadena, Maria E.M. Rocha, Glauca R Martinez (Curitiba, Brazil)

16:30  OC352 Use of two-photon laser microscopy for skin imaging – ex vivo and in vitro safety evaluation
Norbert M Wikonkal (Budapest, Hungary)

16:45  OC353 Photo-controlled induction of membrane asymmetry, bending and permeabilization: cholesterol-related stress relaxation
Rachid Kerdous, Stéphanie Bonneau (Paris, France)

17:00  OC354 Time resolved sub-cellular singlet oxygen detection --ensemble measurements vs. single cell experiments
Steffen Hackbarth, Jan Schlothauer, Annegret Preuss, Carmen Ludwig, Beate Roeder (Berlin, Germany)

17:15  OC355 Aggregation of Merocyanine 540 in the presence of salts of mono-, di- and trivalent cations.
Alexander Ya Potapenko, Tatiyana A. Shmigol, Elena A. Kozhinova, Alla A. Kyagova, Mikhail V. Malakhov (Moscow, Russian Federation)

17:30  OC356 Fluorescent cholic acid derivatives for biological applications
Maria L. Marin, Miguel A. Miranda, Miguel Gomez-Mendoza (Valencia, Spain)
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<td>17:45</td>
<td><strong>ESP General Assembly</strong></td>
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<td>19:45</td>
<td><strong>Conference Gala Dinner and Medal Award Ceremony</strong></td>
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**Sunday, September 4, Afternoon**

**Uni Mail S150**

**Sunday, September 4, Evening**

**Café Restaurant Du Parc des Bastions**
08:30  **Plenary lecture**  
*Chair: Lesley E Rhodes (Manchester, United Kingdom)*

**PL401  Ocular Photobiology**  
Joan E Roberts (New York City NY, United States)

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09:30  **Photobiology and environment**  
*Chair: Francesco Ghetti (Pisa, Italy), Giulio Jori (Padova, Italy)*

09:30  **IL402  Applications of chlorophyll fluorescence to assess the vitality of plants**  
Reto J Strasser¹, Sheng Qiang², Shiguo Chen³, Vasily Gol'tsev⁴ (¹Jussy/Geneva, Switzerland; ²Nanjing, China; ³Sofia, Bulgaria)

10:00  **IL403  Porphyrin-photosensitised processes: an environmentally friendly approach for the prevention of malaria**  
Giulio Jori (Padova, Italy)

10:30  **Coffee break**

11:00  **IL404  Chlorophyllin-based photosensitization for food safety**  
Zivile Lukišienė (Vilnius, Lithuania)

11:30  **OC405  Applicability of photodynamic antimicrobial chemotherapy as an alternative to inactivate fish pathogenic bacteria in aquaculture systems**  
Adelaide Almeida, Carla Pereira, João Tomé, Amparo Faustino, Graça Neves, Augusto Tomé, José Cavaleiro, Angela Cunha, Newton Gomes (Aveiro, Portugal)

11:48  **OC406  Photodynamic Control of Malaria, Filaria and Dengue Fever Vectors in Sub-Saharan Africa Swamps**  
Mahmoud Hashem Abdel-Kader¹, Tarek Abdallah Eltayeb² (¹New Cairo, ²Cairo, Egypt)

12:06  **OC407  A critical review on photoinitiated degradation of triazine and phenylurea herbicides in aqueous solutions**  
Sarka Klementova (Ceske Budejovice, Czech Republic)

12:24  **OC408  Influence of species on serum resistance to singlet oxygen**  
Thierry Patrice¹, Isabelle Lhommeau¹, Samuel Douillard¹, Régis Bataille², Edith Bigot¹ (¹Nantes, ²Saint Herblain, France)

12:42  **OC409  Personal electronic UVR dosimeter and corresponding ground station for sun behaviour field studies**  
Jakob Heydenreich (Copenhagen NV, Denmark)
09:30  **State of the art of phototherapy**  
*Chair: Sally H Ibbotson (Dundee, United Kingdom), Peter Wolf (Graz, Austria)*

09:30  **IL410  Current understanding of mechanisms of phototherapy**  
Thomas Schwarz (Kiel, Germany)

10:00  **IL411  New insights into the mechanisms of PUVA**  
Peter Wolf, Tej P Singh (Graz, Austria)

10:30  **Coffee break**

11:00  **IL412  Profiling of current phototherapeutic modalities: strengths and weaknesses**  
Adrian Tanew (Vienna, Austria)

11:30  **IL413  Optimising clinical use of phototherapy**  
Sally H Ibbotson (Dundee, United Kingdom)

12:00  **IL414  Long term risk of phototherapies**  
Robert S Dawe (Dundee, United Kingdom)

12:30  **OC415  Cell death induced *in vitro* by the bulk photovoltaic effect under low-intensity visible light**  
Alfonso Blázquez-Castro, Juan C. Stockert, Begoña López-Arias, Fernando Agulló-López, Ángel García-Cabañas, Mercedes Carrascosa (Madrid, Spain)

12:45  **OC416  Skin thickening due to UV radiation – the dose-response relationship**  
Peter M. Knuschke, Maximiliano Cuevas, Edmund Koch, Henriette Rönsch, Angela Sauer (Dresden, Germany)
09:30 Sphingolipids as mediators of light-tissue interaction
Chair: Mladen Korbelik (Vancouver, Canada), Duska Separovic (Detroit MI, United States)

09:30 IL434 The Sphingolipid response to UV light: the many facets of one pathway.
Chiara Luberto (Charleston SC, United States)

10:00 IL435 Novel insights into the regulation and role of sphingolipids in cell death after PDT
Duska Separovic¹, Alicja Bielawska², Mladen Korbelik³ (¹Detroit MI, ²Charleston SC, United States; ³Vancouver BC, Canada)

10:30 Coffee break

11:00 IL436 Role of sphingolipid activity in tumor response to photodynamic therapy
Mladen Korbelik¹, Duska Separovic² (¹Vancouver BC, Canada; ²Detroit MI, United States)

11:30 IL437 A PS-lectin conjugate targeting T/Tn antigens triggers ceramide increase and both apoptotic and necrotic cell deaths by phototherapy
Guillaume Poiroux, Marguerite Pitié, Bruno Ségui, Geneviève Pratviel, Pierre Rougé, Annick Barre, Thierry Levade, Hervé Benoist (Toulouse, France)

12:00 IL438 Inhibition of de novo biosynthesis of ceramide rescues photoreceptor function in a mouse model of Retinitis Pigmentosa
Riccardo Ghidoni¹, Claudia Gargini², Paolo Gasco³, Giusy Sala¹, Elena Novelli⁴, Ilaria Piano⁵, Enrica Strettoi² (¹Milano, ²Pisa, ³Torino, ⁴Roma, Italy)
09:30  **PDT oral communications**  
*Chair: Pål Kristian Selbo (Oslo, Norway), Norbert Lange (Geneva, Switzerland)*

09:30  OC417  Development of Mouse Models of Skin Cancer for Pre-Clinical Exploration of New Combination Approaches to Aminolevulinate-Based Photodynamic Therapy (ALA-PDT)  
Sanjay Anand¹, Tayyaba Hasan², Edward V Maytin³ (¹Cleveland OH, ²Boston MA, United States)

09:45  OC418  Responses of Human Bladder Cancer Cells to Laser-Induced Phototoxicity with Sulfonated Aluminum Phthalocyanines  
Rehab Amin¹, Carmen Hauser², Ingrid Kinzler², Claudia Scalfi-Happ², Angelika Rueck² (¹Giza, Egypt; ²Ulm, Germany)

10:00  OC419  Fluorescence imaging of living A549 cells combined with HLF cells: Reducing PVP-Hypericin side effects on HLF cells by modifying excitation light dose of pulsed blue LED  
Rozhin Penjweini, Hans G Loew, Maria Eisenbauer, Paul Breit, Karl W Kratky (Vienna, Austria)

10:15  OC420  Vascular damage photoinduced by liposomal formulations of mTHPC in xenografted CAM: influence of drug release  
Julie Garrier¹, Vadzim Reshetov¹, Clémentine Ruch¹, François Guillemin¹, Vladimir Zorin², Lina Bezdetnaya¹ (¹Vandœuvre-lès-Nancy, France; ²Minsk, Belarus)

10:30  Coffee break

11:00  OC421  Interactions of mTHPC liposomal formulations with serum proteins  
Vadzim A. Reshetov¹, Agnieszka Siupa², Lina Bezdetnaya³, Vladimir Zorin⁴ (¹Minsk / Vandœuvre-Les-Nancy, France; ²Minsk, Belarus; ³Amesbury, United Kingdom; ⁴Vandœuvre-Les-Nancy, France)

11:15  OC422  Amphiphilic photosensitizers used in photochemical internalization are not substrates for the cancer stem cell marker ABCG2  
Pål K Selbo, Anette Weyergang, Monica Bostad, Anders Høgset, Kristian Berg (Oslo, Norway)

11:30  OC423  Vascular targeting of tumors by photochemical internalization  
Marie Vikdal, Anette Weyergang, Kristian Berg (Oslo, Norway)

11:45  OC424  Photodynamic therapy modulates inflammation and positively influences healing of excisional wounds in human skin  
Mark D Farrar, Stuart J Mills, Christopher EM Griffiths, Gillian S Ashcroft, Lesley E Rhodes (Manchester, United Kingdom)

12:00  OC425  Comparative *in vitro* and *in vivo* study on the characteristics of water-soluble halogenated chlorin and bacteriochlorin photosensitizers for PDT  
Janusz Marcin Dabrowski (Krakow, Poland)

12:15  OC426  Hypericin mediated photodynamic killing of melanoma cells  
Britta Kleemann, Dirk Lang, Lester M Davids (Cape Town, South Africa)

12:30  OC427  Photodynamic Molecular Beacons: Image-Guided Therapeutic Approach for Vertebral Metastases  
Tracy WB Liu, Margarete K Akens, Juan Chen, Lisa Wise-Milestone, Brian C Wilson, Gang Zheng (Toronto ON, Canada)

12:45  OC428  PDT effect on the crayfish nerve cord: proteomics study  
Mikhail S Kolosov, Mikhail Y Bibov, Svetlana V Demyanenko, Anatoly B Uzdensky (Rostov-on-Don, Russian Federation)
14:15 PDT oral communications  
Chair: Pål Kristian Selbo (Oslo, Norway), Norbert Lange (Geneva, Switzerland)

14:15 OC429 Novel PEG-organized biocompatible fluorescent nanoparticles doped with an ytterbium cyanoporphyrazine complex for biophotonic applications† 
Larisa Klapshina (Nyzhny Novgorod, Russian Federation)

14:30 OC430 Methacrylate monomers increase cellular photosensitivity  
Terje Christensen¹, Pål Kristian Selbo², Ellen M. Bruzell² (¹Østerås, ²Oslo, Norway)

14:45 OC431 A comparative spectroscopic study of endogenous porphyrins induced with aminolevulinic acid (ALA) and its methyl ester in rabbit rheumatoid arthritis model in vivo, and in human synoviocytes ex vivo  
Saulius Bagdonas, Romualdas Rudys, Giedre Streckyte, Gailute Kirdaite (Vilnius, Lithuania)

15:00 OC432 In vivo measurement of the PpIX delayed fluorescence lifetime to monitor the tissular oxygen depletion during PDT  
Filippo Piffaretti, Anna-Maria Novello, Rajendran Senthilkumar, Patrycja Nowak-Sliwinska, Hubert E. van den Bergh, Georges A. Wagnieres (Lausanne, Switzerland)

15:15 OC433 Photochemical internalization (PCI) of HER2-targeted toxins. Synergy is dependent on the treatment sequence  
Maria E. B. Berstad, Anette Weyergang, Kristian Berg (Oslo, Norway)

Monday, September 5, Afternoon

14:15 Photobiology Poster session
15:30  **Photoaging - mechanisms and reversal**  
*Chair: Sewon Kang (Baltimore MD, United States), Rachel E B Watson (Manchester, United Kingdom)*  

15:30  **IL439 UV modulation of the skin’s microfibrillar network**  
Rachel E B Watson (Manchester, United Kingdom)  

16:00  **IL440 Thermal skin aging**  
Soyun Cho, Mi Hee Shin, Yeon Kyung Kim, Young Mee Lee, Chi-hyun Park, Jin Ho Chung (Seoul, Korea, Republic Of)  

16:30  Coffee break  

17:00  **IL441 Stressed out mitochondria**  
Mark Birch-Machin (Newcastle upon Tyne, United Kingdom)  

17:30  **IL442 Repair of photoaged skin –a unifying concept**  
Sewon Kang (Baltimore MD, United States)  

18:00  **IL443 Cosmeceuticals in Antiaging treatment**  
Stacy Hawkins (Trumbull CT, United States)  

18:30  **OC444 Photodamaged Extracellular Matrix Proteins: Mechanisms and functional consequences**  
Sarah A Thurstan, Rachel E. B. Watson, Chris E. M. Griffiths, Neil K Gibbs, Mike J Sherratt (Manchester, United Kingdom)  

18:45  **OC445 Resistance to singlet oxygen of sera from cancer patients**  
Thierry Patrice, Samuel Douillard, Isabelle Lhommeau, Edith Bigot, Régis Bataille (Nantes, France)
15:30  **PDT and vascular targeting**  
*Chair: Tayyaba Hasan (Boston MA, United States), Patrycja Nowak-Sliwinska (Lausanne, Switzerland)*

15:30  **IL446** Image-based anti-vascular therapy with PDT  
Tayyaba Hasan, Sung Chang, Nicolas Solban, Zhiming Mai, Bryan Spring (Boston MA, United States)

16:00  **IL447** Novel ways of angiogenesis inhibition and drug delivery to tumor endothelial cells  
Arjan W Griffioen (Amsterdam, Netherlands)

16:30  Coffee break

17:00  **IL448** Cellular photodynamic responses  
David Kessel (Detroit MI, United States)

17:30  **IL449** Circulating Endothelial Cells as Biomarkers and Targets for Photodynamic Therapy  
Charles Gomer (Los Angeles CA, United States)

18:00  **IL450** Efficacy assessment of photodynamic vascular damage in combination with anti-angiogenic kinase inhibitors  
Patrycja M Nowak-Sliwinska (Lausanne, Switzerland)

18:30  **OC451** PDT for Drug Delivery: Combination Therapy Improving Leakage  
Elodie Debefve, Yabo Wang, Thorsten Krueger, Hans-Beat Ris, Hubert van den Bergh (Lausanne, Switzerland)

18:45  **OC452** VEGFR2 expressing cells are hypersensitive to PDT  
Anette Weyergang¹, Pål Kristian Selbo¹, Johannes Waltenberger², Kristian Berg¹ (¹Oslo, Norway; ²Münster, Germany)
15:30  **UVA and oxidative stress**  
*Chair: Paolo Di Mascio (São Paulo, Brazil), Albert W Girotti (Milwaukee WI, United States)*

15:30  **IL453**  
18O-Hydroperoxides, 18O-singlet oxygen, mass spectrometry, and light emission as valuable tools for studying the role of O₂ (1Δg) in biological systems  
Paolo Di Mascio (São Paulo, Brazil)

16:00  **IL454**  
Oxidatively generated damage to isolated and cellular DNA by sensitization reactions to UVA radiation  
Jean Cadet, Jean-Luc Ravanat, Thierry Douki (Grenoble, France)

16:30  **Coffee break**

17:00  **IL455**  
A dynamic regulation of nitric oxide production and oxidative-stress in ultraviolet light-irradiated keratinocytes  
Shiyong Wu (Athens OH, United States)

17:30  **IL456**  
Cytoprotective Upregulation of Nitric Oxide Synthase in Photodynamically Stressed Tumor Cells  
Albert W Girotti, Reshma Bhowmick (Milwaukee WI, United States)

18:00  **OC457**  
Antioxidant treatment after UVAI exposure offers protection against ROS and DNA photodamage  
George J Delinassios, Marcus S Cooke, Antony R Young (Leicester, United Kingdom)

18:15  **OC458**  
UVA1 induces key molecular events associated with inflammation, response to hypoxia and immunosuppression in vivo in humans.  
Angela Tewari, Robert Sarkany, Antony Young (London, United Kingdom)
### Tuesday, September 6, Morning

#### Uni Dufour U600

08:30  **Plenary lecture**  
*Chair: Miguel A Miranda (Valencia, Spain)*

**PL501**  Using photochemistry to make nanoparticles, and nanoparticles to direct catalytic and biochemical behaviour  
Tito Scaiano (Ottawa ON, Canada)

### Tuesday, September 6, Morning

#### Uni Mail S150

09:30  **PDT to treat microbial infections**  
*Chair: Michael R Hamblin (Boston MA, United States), Mark Wainwright (Liverpool, United Kingdom)*

09:30  **IL502**  Photodynamic therapy can induce a protective immune response against a bacterial pathogen.  
Michael R Hamblin¹, Masamitsu Tanaka¹, Pawel Mroz², Yuji Morimoto² (¹Boston MA, United States; ²Tokorozawa, Japan)

10:00  **IL503**  Enzyme Targeted Photodynamic Therapy and Rapid Optical Diagnostics  
Tayyaba Hasan, Ulysses Sallum, Xiang Zheng, Sarika Verma (Boston MA, United States)

10:30  **Coffee break**

11:00  **IL504**  Relationship between membrane interaction/damage to the efficiency of photoinduced cell death  
Mauricio S Baptista (São Paulo, Brazil)

11:30  **IL505**  MBDs –Getting Towards the Clinic?  
Mark Wainwright (Liverpool, United Kingdom)

12:00  **OC506**  Possibilities of improving activity of antimicrobial photodynamic therapy  
Kamola Rustamovna Kasimova (Tashkent, Uzbekistan)

12:15  **OC507**  Cationic meso-substituted porphyrins as antimicrobial photodynamic agents *in vivo*: treatment of spontaneous bacterial infections in dogs  
Giulio Jori, Ilaria Cattin, Furio Corsi, Clara Fabris, Marina Soncin (Padova, Italy)

12:30  **OC508**  Antifungal effects of silicon phthalocyanine Pc 4 photodynamic therapy  
Elma D. Baron, Paul Jou, Minh Lam, Pranab Mukherjee, Mahmoud Ghannoun, Nancy Oleinick, Kevin Cooper (Cleveland OH, United States)
09:30 **Molecular and cellular effects of UVA**  
*Chair: Evelyne Sage (Orsay, France), Rex Tyrrell (Bath, United Kingdom)*

09:30 **IL509** UVA activation of gene expression and cellular redox homeostasis  
Rex Tyrrell (Bath, United Kingdom)

10:00 **IL510** A novel molecular mechanism potentiating cutaneous photo-oxidative damage: UVA impairs autophagic flux with p62/Lamp-1 accumulation downstream of cathepsin B inactivation  
Georg T Wondrak (Tucson AZ, United States)

10:30 Coffee break

11:00 **IL511** The slowing down of DNA replication by UVA-induced ROS: the fact of DNA damage or protein oxidation?  
Evelyne Sage, Dany Graindorge, Pierre-Marie Girard (Orsay, France)

11:30 **IL512** UVA-induced epigenetic changes in human primary keratinocytes  
Ruediger Greinert (Buxtehude, Germany)

12:00 **OC513** UVA1 induced epidermal and dermal thymine dimers in human skin in vivo  
Angela Tewari, Robert Sarkany, Antony Young (London, United Kingdom)

12:15 **OC514** The specificity of UV-induced DNA damage in human melanocytes  
Thierry Douki, Stéphane Mouret, Anne Forestier (Grenoble, France)

12:30 **OC515** UVA-Mediated Protein Crosslinking to DNA 6-TG In Vivo and In Vitro  
Quentin Gueranger, Feng Li, Azadeh Kia, Sally Dewhurst, Peter Karran (South Mimms, United Kingdom)

12:45 **OC516** UVA induced epigenetic regulation of p16INK4a in human keratinocytes is dependent on UV-exposure patterns  
I-Peng Chen, Stefan Henning, Alexandra Faust, Rüdiger Greinert, Beate Volkmer (Buxtehude, Germany)
09:30  **Sunlight exposure, sunbeds and vitamin D**  
*Chair: Frank R. de Gruijl (Leiden, Netherlands), Ann R Webb (Manchester, United Kingdom)*

09:30  **IL517 Genetic influences on seasonal vitamin D statuses**  
Greta Snellman¹, Håkan Melhus¹, Rolf Gedeborg¹, Sylvia Olofsson¹, Alicia Wolk², Nancy L Pedersen², Karl Michaëlsson¹ (¹Uppsala, ²Stockholm, Sweden)

10:00  **IL518 Relative risk of vitamin D insufficiency in people with photosensitivity conditions compared with healthy individuals at northerly latitude**  
Lesley E Rhodes, Richard Kift, Jacqueline L Berry, Sarah J Cooper, Marie T Durkin, Andy Vail, Ann R Webb (Manchester, United Kingdom)

10:30  Coffee break

11:00  **IL519 1,25-dihydroxyvitamin D3 analogue in prevention of polymorphic light eruption**  
Peter Wolf, Alexandra Gruber-Wackernagel (Graz, Austria)

11:30  **IL520 UV exposure inhibits intestinal tumor development in intestine-specific Apc mutant mice kept on low vitamin D diet.**  
Heggert Rebel, Celia van der Spek, Els C. Robanus-Maandag, Frank R. de Gruijl (Leiden, Netherlands)

12:00  **OC521 Lack of responsibility in the artificial tanning business: The Vienna Tanning Bed Survey 2010/2011**  
Harald Maier, Alois W. Schmalwieser, Markus Grabenhofer, Bernhard Maier, Angela Tichy (Vienna, Austria)

12:15  **OC522 UV measurements in sunbeds related to selected biological effects**  
Lill Tove N Nilsen¹, Tommy N Aalerud¹, Merete Hannevik¹, Marit B Veierød² (¹Østerås, ²Oslo, Norway)

12:30  **OC523 Does sunscreen thickness influence vitamin D production in humans?**  
Peter A Philipsen, Ditte Beyer, Morten Bogh, Hans Christian Wulf (Copenhagen, Denmark)

12:45  **OC524 Parameters influencing the efficiency of vitamin D production caused by solar radiation, solar simulated radiation or sunbed radiation**  
Peter M. Knuschke, Andrea Bauer, Bodo Lehmann, Andrea Loos, Henriette Rönsch (Dresden, Germany)
PDT Posters

P001 Photodynamic Therapy To Treat Basal-Cell Skin Cancer In The Periorbital Area
Violeta A Purtskhvanidze, Alexander A Radaev, Natalia V Kovaleva (Moscow, Russian Federation)

P002 Combined Photodynamic Therapy and Laser Hyperthermia with Low-teperature Patronage of Healthy tissue in patients with nodular malignant skin tumors
Elena V. Filonenko (Moscow, Russian Federation)

P003 Photosensitizer for PDT in mode of photodynamic dose saturation
Boris Kogan, Nikolay Malimonenko, Alexander Butenin, Semen Dudkin, Elena Makarova, Eugeny Lukyanets, Georgiy Vorozhtsov (Moscow, Russian Federation)

P004 Gold Nanoparticles as a Drug Delivery System for Bactofen; Synthesis and Characterization.
Sarah A. Aboulmagd, Mona B. Mohamed, Mahmoud H. Abdelkader (Cairo, Egypt)

P005 Antitumor effects of the combination of photodynamic therapy and methylotransferase inhibitor
Malgorzata Wachowska, Weronika Bednarek, Angelika Muchowicz, Jakub Golab (Warsaw, Poland)

P006 Enhancement of PDT selectivity using folic acid-targeted PEGylated liposomes as carriers of meta-tetra(hydroxyphenyl)chlorin
Francesca Moretti, Dietrich Scheglmann, Elena Reddi (Padova, Italy; Jena, Germany)

P007 Liposomal formulations of photosensitizers for photodynamic cancer therapy
Edyta Paszko, Gisela F Vaz, Carsten Ehrhardt, Mathias O Senge (Dublin, Ireland)

P008 Photophysical properties of porphyrin-pyrazole derivatives
Nuno M M Moura, Maria A F Faustino, Maria G P M S Neves, Augusto C Tomé, E M Rakib, A Hannouf, S Mojahidi, Artur M S Silva, Philipp Hackbarth, Beate Röder, José Cavaleiro (Aveiro, Portugal; Beni-Mellal, Morocco; Berlin, Germany)

P009 Analysis of stress and DNA damage responses induced by hexylaminolevulinate-mediated photodynamic treatment
Yan Baglo, Rebekka Müller, Marit Otterlei, Odrun Arna Gederaas (Trondheim, Norway)

P010 Photoactivated Hypericin induced PKC isoforms subcellular relocalization
Lenka Dzurova, Veronika Hunosova, Franck Sureau, Pavol Miskovsky, Zuzana Nadova (Kosice, Slovakia; Paris, France)

P011 Gtp78-targeting subtilase cytotoxin potentiates Photofrin-PDT in prostate cancer cell lines
Malgorzata Firczuk, Magdalena Gabrysiak (Warsaw, Poland)

P012 Transport of Hypericin and Emodin through bilayer lipid membranes
Alena Strejckova, Jana Stancova, Gregor Bano, Katarina Stroffeckova, Gabriela Fabriciova, Pavol Miskovsky (Kosice, Slovakia)

P013 Controlled-Release of Photosensitizer into Homogeneous Solutions and Liposomes via a Fiber Optic Device
Adaikapillai Mahendran, Goutam Ghosh, Yasemin Kopkalli, Mihaela Minnis, Ashwini Ghogare, Matibur Zamadar, David Aebisher, Lesley Davenport, Alexander Greer (Brooklyn NY, United States)

P014 Reaction of Singlet Oxygen with Hydrazone Prodrugs as a Potential Route to Nitroamine Drugs
Alvaro Castillo, Ashwini Ghogare, Benjamin Rudshteyn, Nahed Sawaw, Alexander Greer (Brooklyn NY, United States)
**P015**  Influence of photoactivated hypericin on metabolic state of mitochondria  
Dana Petrovajova¹, Zuzana Nadova¹, Xavier Ragaσ², Maria Garcia², Daniel Jancura¹, Santi Nonell², Alzbeta Chorvatova², Pavol Miskovsky³ (¹Kosice, ²Bratislava, Slovakia; ³Barcelona, Spain)

**P016**  A high content analysis method for the research and development of novel photosensitizers  
Gisela M F Vaz, Edyta Pazko, Anthony M Davies, Mathias O Senge (Dublin, Ireland)

**P017**  Biological characterisation of temocene: a new photosensitizer for possible biomedical application  
Jorge Soriano¹, Maria Garcia-Diaz², David Sanchez Garcia², Maria Lluisa Sagristá², Margarita Mora², Angeles Villanueva¹, Juan Carlos Stockert¹, Santi Nonell², Magdalena Cañete¹ (¹Madrid, ²Barcelona, Spain)

**P018**  Photophysical properties and tumor cell localization of amphiphilic galactopyranosyl Zn(II)-phthalocyanine in dependence on spectrum of applied light irradiation.  
Ivan Angelov¹, Vanya Mantareva¹, Anton Kriil¹, Roumen Dimitrov¹, Veselin Kusovski¹, Lachesar Avramov¹, Ekaterina Borisova¹, Dieter Wohlrö² (¹Sofia, Bulgaria; ²Bremen, Germany)

**P019**  Evaluating Primary Human Ovarian Cancer using a targeted multi-modal theranostic agent  
Tracy WB Liu, Jocelyn Stewart, Juan Chen, Jiyun Shi, Thomas D MacDonald, Brian C Wilson, Gang Zheng (Toronto ON, Canada)

**P020**  The role of thioredoxin system in tumor cells resistance to photodynamic therapy.  
Angelika Muchowicz, Szymon Kossowski, Ryszard Ostaszewski, Jakub Golab (Warsaw, Poland)

**P021**  Enhanced efficacy of PDT upon the combined injection of two photosensitizing agents: studies at the cellular and animal level  
Pilar Acedo¹, Monica Camerini², Giulio Jori², Angeles Villanueva¹ (¹Madrid, Spain; ²Padova, Italy)

**P022**  Spectroscopic study of ALA and its methyl ester induced endogenous porphyrins in human synoviocytes and cartilage tissue  
Romualdas Rudys, Saulius Bagdonas, Giedre Strecktė, Gailutė Kirdaitė (Vilnius, Lithuania)

**P023**  Glutamate and NAAG prevent photoinduced apoptosis of crayfish glial cells  
Anatoly B Uzdensky, Mikhail Rudkovskii, Elena Berezhnaya, Vera Kovaleva (Rostov-on-Don, Russian Federation)

**P024**  Irradiation- and Sensitizer-Dependent Changes in the Lifetime of Intracellular Singlet Oxygen Produced in a Photosensitized Process  
Elsa FF Silva¹, Brian W Pederson¹, Rasmus Toftegaard¹, Thomas Breitenbach¹, Luis G. Arnaut², Peter R. Ogilby¹ (¹Aarhus, Denmark; ²Coimbra, Portugal)

**P025**  Comparison of blue and red light LED arrays as illumination devices for hexylaminolevulinate mediated photodynamic therapy  
Linda Helander¹, Kristian Plaetzer², Aloys Munyeshyaka¹, Barbara Kramer³, Odrun A Gederaas¹ (¹Trondheim, Norway; ²Salzburg, Austria)

**P026**  Expression of surface markers associated with aggressiveness in synovial mesenchymal stem cells of patients with Rheumatoid arthritis and the dynamics of protoporphyrin IX accumulation  
Jaroslav Denkovskij, Eiva Bernotiene, Gailute Kirdaite (Vilnius, Lithuania)

**P027**  On the trail of cationic porphycenes for photodynamic therapy. State of the art  
Rubén Ruiz (Barcelona, Spain)

**P028**  Synthetic strategies for unsymmetrical porphyrins and porphyrin arrays for QSAR studies in photodynamic therapy.  
Luke Rogers, Aoife Ryan, Prof. Mathias Senge (Dublin, Ireland)
PEG-ylated LDL particles: a potential drug delivery system
Diana Buzova1, Daniel Jancura1, Peter Kasak2, Pavol Miskovsky4 (1Kosice, 2Bratislava, Slovakia)

Pharmaceutical preformulation of the novel photosensitizer TPCS2a for use in photochemical internalization (PCI)
Marianne Lilletvedt, Hanne Hjorth Tonnesen, Anders Høgset, Gro Smistad, Solveig Kristensen (Oslo, Norway)

Physicochemical evaluation of four structurally related meso-porphyrin photosensitizers as part of drug formulation
Jan J. Sobczynski

PCI of HER2 targeted immunotoxins; a novel approach for breast cancer therapy
Bente Bull-Hansen1, Maria E. B. Berstad1, Kristian Berg1, Michael G. Rosenblum2, Anette Weyergang1 (1Oslo, Norway; 2Houston TX, United States)

Design, Synthesis and Biological Evaluation of Glycosylated Lipid Porphyrin Derivatives as Anti-Cancer Therapeutics
Claire Moylan, Robin Daly, Gisela Vaz, Carsten Ehrhardt, Mathias O. Senge, Eoin M. Scanlan (Dublin, Ireland)

Aptamers based photodiagnostic
Henri-Pierre Lassalle1, Frédéric Ducongé2, Agnès Cibiel1, Sophie Marchal1, Aurélie François1, François Guillemin1, Lina Bezdetnaya1 (1Vandœuvre-lès-Nancy, 2Orsay, France)

Cationic phthalocyanine derivatives as antibacterial agents
Joana B Pereira, Eliana F A Carvalho, Maria A F Faustino, Maria G P M S Neves, José A S Cavaleiro, Ângela Cunha, Adelaida Almeida, João P C Tomé (Aveiro, Portugal)

The photo-induced antitumor efficiency of meso-tetraaryl bacteriochlorin derivatives
Raisa Yakubovskaya, Natalya Morozova, Anna Platinskaia, Valery Chissov, Evgeny Lukyanets, Georgy Vorozhtsov, Elena Makarova, Semen Dudkin, Anna Shchukina (Moscow, Russian Federation)

Monoglycoconjugated water-soluble phthalocyanines. Design, synthesis and investigation of their in vitro behaviour
Fabienne Dumoulin1, Huguette Savoie2, Yunus Zorlu1, Dominique Lafont1, Vefa Ahsen1, Ross W Boyle2 (1Gebze Kocaeli, Turkey; 2East Yorkshire, UK HU6 7RX, United Kingdom; Villeurbanne, France)

Towards the near-infra red absorption: a water-soluble non-peripherally octasulfanyl substituted Zn phthalocyanine
Duygu Aydın, Fabienne Dumoulin, Mahmut Durmuş, Ayşe Gül Gürek, Vefa Ahsen (Gebze Kocaeli, Turkey)

Visible Light photoactivated trans-Platinum Complexes for Chemotherapy
Julie-Ann Woods1, Kim S Robinson1, Ana M Pizarro2, Nicola J Farrer2, Harry Moseley1, Virginia Appleyard2, Karen Murray1, Peter J Sadler2 (1Dundee, 2Coventry, United Kingdom)

Photochemical internalization (PCI) of the vascular targeting immunotoxin VEGF121/rGel, a novel method for selective targeting of tumor vasculature
Anette Weyergang1, Maria EB Berstad1, Lawrence Cheung1, Michael Rosenblum1, Khalid Mohamedali2, Johannes Waltenberger1, Kristian Berg1 (1Oslo, Norway; 2Houston TX, United States; 3Münster, Germany)

Study of ytterbium cyanoporphyrin complex as a potential photosensitizer for fluorescence diagnostics and photodynamic therapy of cancer
Marina V. Shirmanova, Irina V. Balalaeva, Larisa G. Klapshina, Natalya Yu. Lekanova, Anna A. Brilkina, Elena V. Zagaynova (Nizhny Novgorod, Russian Federation)

Heterogeneous sensitizer for germ photodynamic inactivation
Nina A. Kuznetsova1, Olga A. Yuzhakova, Oleg L. Kaliya, Georgy N. Vorozhtsov, Alexander E. Nedachin, Tamara Z. Artemova, Elena K. Gipp, Raisa A. Dmitrieva, Tatiana V. Doskina, Natalya N. Butorina, Anzhelika V. Zagaynova, Tatjana N. Maksimkina (Moscow, Russian Federation)

Selective photoinactivation of Escherichia coli using a derivative of Zinc Phthalocyanine
Wanessa C. M. A. Melo1, Tania T. Tominaga2, Anderson O. Ribeiro2, Janice R Perussi1 (1Sao Carlos - SP, 2Guarapuava-PR, 3Santo Andre - SP, Brazil)

Selective photoinactivation of Escherichia coli using a derivative of Zinc Phthalocyanine
Wanessa C. M. A. Melo1, Tania T. Tominaga2, Anderson O. Ribeiro2, Janice R Perussi1 (1Sao Carlos - SP, 2Guarapuava-PR, 3Santo Andre - SP, Brazil)
P046  Behaviour of a non-enveloped virus after ten repeated cycles of aPDT
Liliana AS Costa, Maria AF Faustino, João PC Tomé, Maria GPMS Neves, Augusto C Tomé, JoséAS Cavaleiro, Angela Cunha, Newton CM Gomes, Adelaide Almeida (Aveiro, Portugal)

P047  Photodynamic Inactivation of Conidia of Penicillium chrysogenum by Cationic Porphyrins
Maria C. Gomes1, Sandra M. Woranovicz-Barreira2, Maria A. F. Faustino1, Rosa Fernandes3, Maria G. P. M. S. Neves1, Augusto Tomé1, JoséA. S. Cavaleiro1, Adelaide Almeida1, Ângela Cunha1, João P. C. Tomé1 (‘Aveiro, ‘Curitiba, ‘Coimbra, Portugal)

P048  Effect of merocyanine 540 aggregation on the photosensitized inactivation of Staphylococcus aureus and Pseudomonas aeruginosa
Tatiana Shmigol, Elena Sysolyatina, Vladimir Bekhali, Elena Nagurskaya, Svetlana Ermolaeva, Alexander Potapenko (Moscow, Russian Federation)

P049  Photodynamic therapy with water-soluble and cationic phthalocyanines for advance inactivation of dental pathogenic microorganisms
Vanya Mantareva1, Veselin Kusovski1, Ivan Angelov1, Slavcho Dimitrov1, Dieter Wohrle2 (‘Sofia, Bulgaria; ‘Bremen, Germany)

P050  Photodynamic inactivation of bacteria and bacteriophages with new cationic nanomagnet-porphyrin hybrids
Eliana Alves, Liliana Costa, Carla M.B. Carvalho, João P.C. Tomé, Maria A.F. Faustino, Maria G.P.M.S. Neves, Augusto C. Tomé, JoséA.S. Cavaleiro, Adelaide Almeida, Ângela Cunha, Zhi Lin, João Rocha (Aveiro, Portugal)

P051  Photodynamic Inactivation for water disinfection using cationic photosensitizers casted in chitosan membranes
Cintia R. Camargo, Virginia C.A. Martins, Ana M.G. Plepis, Janice R Perussi (Sao Carlos, Brazil)

P052  Effect of gold nanoparticles in the treatment of established collagen arthritis in rats
Teisutis Asmenavicius, Laima Leonaviciene, Galaute Kirdaite, Ruta Bradunaite, Dalia Vaitkiene, Audrius Vasiliauskas, Almyra Ramanaviene, Arunas Ramanavicius, Zygmunt Mackiewicz (Vilnius, Lithuania)

P053  Cancer stem-like cells and their response to Quantum Dots
Simona Petrosiute, Simona Lukoseviute, Petras Juzenas, Ricardas Rotomskis (Vilnius, Lithuania)

P054  Silver coated carbon dots for photodynamic applications
Andrius Kleinauskas1, Ya-Ping Sun2, Petras Juzenas1 (‘Oslo, Norway; ‘Clemson SC, United States)

P055  Carbon dots as antioxidants and prooxidants
Ingeborg L Christensen1, Ya-Ping Sun2, Petras Juzenas1 (‘Oslo, Norway; ‘Clemson SC, United States)

P056  Elucidating the mechanism of cellular uptake of carboxylated and platelet-derived growth factor-coated quantum dots
Vitalijus Karabanovas, Ricardas Rotomskis, Mindaugas Valius (Vilnius, Lithuania)

P057  Micellar containers for chemiluminescent oxalates as light sources in PDT
Andrei V. Romanyuk, Umed T. Boltavel, Nickolay S. Melik-Nubarov (Moscow, Russian Federation)

P058  Interactions in the system chlorin E6 –Pluronic F127 –albumin –lipid membranes
Umed T Boltavel, Timur M Zhijyentayev2, Anna B Solovieva1, Nikolay S Melik-Nubarov1 (‘Moscow, Russian Federation; ‘Pasadena CA, United States)

P059  Improved efficacy of HER2 targeted immunotoxins using Photochemical internalization (PCI)
Maria E. B. Berstad, Kristian Berg1, Michael G. Rosenblum2, Yu Cao3, James Marks3, Anette Weyergang1 (‘Oslo, Norway; ‘Houston TX, ‘San Francisco CA, United States)

P060  Photodynamic activity of photosensitizer loaded nanoparticles on mesothelioma cells: preparation, characterization and in vitro application
Nil Saydan, Gulden Asci, Meltem Goksel, Pelin Balcik Ercin, Ayhan Celik (41400-KOCAELI, Turkey)

P061  Mechanisms of mTHPC-PDT in hepatocellular carcinoma
Jasmin Breymayer, Ingrid Kinzler, Carmen Hauser, Rudolf Steiner, Angelika Rueck (Ulm, Germany)
P062 Ruthenium-Porphyrin Conjugates with Cytotoxic and Phototoxic Antitumor Activity
Cinzia Spagnul, Teresa Gianferrara, Alberta Bergamo, Ioannis Bratsos, Barbara Milani, Gianni Sava, Enzo Alessio (Trieste, Italy)

P063 Hypericin incorporation and localization in fixed HeLa cells
Thi Kim Thanh Vuong, Christine Vever-Bizet, Stéphanie Bonneau, Geneviève Bourg-Heckly (Paris, France)

P064 Gold nanorods: a precious bio-medical tool
Raffaella Mercatelli, Giovanni Romano, Fulvio Ratto, Paolo Matteini, Sonia Centi, Antonio Conti, Roberto Pini, Franco Fusi (Firenze, Sesto Fiorentino, Italy)
**Photobiology Posters**

**P065** Repair of UVB-induced DNA damage by photolyase-encoding mRNA delivery  
Gabor Boros¹, Dávid Rózsa¹, Eszter Emri¹, Georgina Nagy¹, Edit Mikó¹, Attila Juhász¹, György T.S. van der Horst², Hiromi Muramatsu³, Drew Wiessman³, Katalin Karikó³, Irén Horkay³, Gabriella Emri¹, Éva Remenyik¹ (¹Debrecen, Hungary; ²Rotterdam, Netherlands; ³Philadelphia PA, United States)

**P066** Simultaneous quantification of exocyclic DNA by an on-line liquid chromatography-electrospray tandem mass spectrometry assay  
Marisa H. G. Medeiros (São Paulo, Brazil)

**P067** Evaluation of psoriasis climate therapy using reflectance spectroscopy and UV measurements  
Lise Lyngnes Randeberg¹, Julio E. Hernandez-Palacios², Lill Tove Norvang Nilsen¹, Anne-Lene Krogstad³ (¹Trondheim, ²Lørenskog, ³Østerås, ³Oslo, Norway)

**P068** Photoinduced color changes in two polymorphic forms of riboflavin  
Milica Vukicevic¹, Lise L. Randeberg, Jøs E. Boschker³, Thomas Tybell³, Solveig Kristensen³, Hanne H. Tønnesen³ (³Oslo, ³Trondheim, Norway)

**P069** Phototoxicity of blebbistatin in normal and cancer cells  
Aliaksandr Mikulich¹, Simona Lukoseviciute¹, Vasili A. Mostovnikov², Petras Juzenas¹ (¹Oslo, ²Minsk, Belarus)

**P070** Fluorescence based host cell reactivation assay to determine the repair of UV induced damages  
Stefanie Haller, Katharina Burger, Katja Matt, Daniel Gebhard, Jörg Bergemann (Sigmaringen, Germany)

**P071** Comparison of modelled and measured UVR on horizontal and inclined surfaces  
Mette M-L Grage¹, Jakob Heyedenreich¹, Andy Pearson³, Katarzyna Baczynska³ (³Copenhagen OE, ³Chilton, United Kingdom)

**P072** Reactivity of nucleosides with hydroxyl radical in non-aqueous medium  
Gemma Maria Rodriguez (Valencia, Spain)

**P073** Photosensitizing properties of dipicolinic acid  
Virginie Lhiaubet-Vallet, Giacomo Nardi, Miguel Angel Miranda (Valencia, Spain)

**P074** Suppression of contact hypersensitivity to 2,4-dinitrofluorobenzene in mice caused by psoralen photooxidation products  

**P075** Assessment of solar radiation-induced tissue damage in porcine skin explants and organotypic human skin model  
Daniel Bacqueville, ChloëBelles, Laure Duprat, Sandrine Bessou-Touya, Hélène Duplan (Toulouse, France)

**P076** DNA repair by photolyase: Kinetics of cyclobutane thymine dimer splitting directly monitored in the UV  
Viruthachalam Thiagarajan¹, Martin Byrdin¹, AndréPM Eker², Pavel Müller¹, Klaus Brettel¹ (¹Gif-sur-Yvette, France; ²Rotterdam, Netherlands)

**P077** Assessment of the tissue oxygenation *in vivo* by measuring the luminescence lifetime of Ru(Phen)2+ as poorly photosensitizing probe  
Sandrine Gay, Rajendran Senthilkumar, Cedric Paulou, Patrycja Nowak-Sliwinska, Georges Wagnieres (Lausanne, Switzerland)

**P078** Photochemical and photophysical properties of dibenzoylemethane derivatives within protein
**P079** Infrared light induced protective effect and transgenerational genetic instability on mice and their offspring  
Mireia Marin1, Virginie Lhiaubet-Vallet1, Cecilia Paris1, Minoru Yamaji2, Miguel Angel Miranda1  
(1Valencia, Spain; 2Gunma, Japan)

**P080** Probing Lipid Peroxidation Using Linoleic Acid and Benzophenone as Paradigm  
Inmaculada Andreu (Valencia, Spain)

**P081** The photochemistry of 5-tert-butyl uracil  
M. Consuelo Cuquerella (Valencia, Spain)

**P082** Two-Photon Irradiation of an Intracellular Singlet Oxygen Photosensitizer: Achieving Localized Sub-Cellular Excitation in Spatially-Resolved Experiments  
Brian W Pedersen1, Thomas Breitenbach1, Robert W Redmond2, Peter R Ogilby1 (1Aarhus, Denmark; 2Boston MA, United States)

**P083** Photoinduced aggregation in psoralen aqueous solutions and its role in hemolytic effects of photooxidized psoralen  
Mikhail V. Malakhov, Ilya A. Pyatnitskiy, Eugene V. Nevezhin, Alexey D. Ryabov, Alexander Ya. Potapenko (Moscow, Russian Federation)

**P084** Optical characterisation of biomaterial/radiation-exposed oral mucosa by reflection spectroscopy  
Lise L. Randeberg1, Jon E. Dahl2, Ellen M. Bruzell2 (1Trondheim, 2Oslo, Norway)

**P085** The role of microenvironment in generation of free radicals and singlet oxygen photosensitized by WST11  
Tomasz Oles, Grzegorz Szewczyk, Tadeusz Sarna (Kraków, Poland)

**P086** Dose-limiting progressive sunscreens. A new strategy for photoprotection?  
Adaya Gallardo (Barcelona, Spain)

**P087** Photomovement of *Dunaliella Teod.*  
Iurii Posudin, Nadia Massjuk, Galyna Lilitskaya (Kiev, Ukraine)

**P088** Narrowband Ultraviolet B phototherapy is a suitable treatment option for solar urticaria  
Marina Venturini, Maria Teresa Rossi, Raffaella Sala, Cristina Zane, Piergiacomo Calzavara-Pinton (Brescia, Italy)

**P089** Local angioedema following sun exposures: a report of five cases  
Marina Venturini, Maria Teresa Rossi, Raffaella Sala, Cristina Zane, Piergiacomo Calzavara-Pinton (Brescia, Italy)

**P090** Dermoscopic, histological and immunohistochemical evaluation of cancerous features in acquires melanocytic nevi that have been repeatedly exposed to UVA or UVB  
Marina Venturini, Ausilia Maria Manganoni, Maria Teresa Rossi, Raffaella Sala, Elena Sereni, Marco Ungari, Piergiacomo Calzavara-Pinton (Brescia, Italy)