

Sunday, September 4, Morning**Theatre**

- 08.45 **Opening Ceremony – Welcome Addresses**
- 09.00 **PL1 Young Scientist Award Lecture**
NF- κ B, a key player in PDT-induced inflammatory response
J.-Y. Matroule, C. Volanti, J. Piette (Liège, BEL) *introduced by F. Lenzi (Pisa, ITA)*
- 09.30 **Coffee Break**
- DNA damage and repair**
Chair: T. Douki (Grenoble, FRA)
- 10.00 **IL2 Base stacking and base pairing effects on electronic energy relaxation in DNA**
 C.E. Crespo-Hernández, B. Cohen, B. Kohler (Columbus OH, USA)
- 10.30 **IL3 Formation and repair of bipyrimidine photoproducts in mammalian cells exposed to UVB and UVA radiations**
T. Douki¹, S. Courdavault¹, E. Sage², C. Baudouin³, M. Charveron³, A. Favier¹, J. Cadet¹
 (¹Grenoble, FRA; ²Paris, FRA; ³Toulouse, FRA)
- 11.00 **IL4 Potential role of oxidative DNA damage and repair in the development of malignant melanoma**
 S. Hoffmann-Dörr¹, W. Eiberger¹, R. Greinert², B. Volkmer², T.M. Rüniger³, J.P. Radicella⁴, B. Epe¹
 (¹Mainz, GER; ²Buxtehude, GER; ³Boston MA, USA; ⁴Fontenay-aux-Roses, FRA)
- 11.30 **IL5 Mechanisms of DNA damage induced inhibition of transcription**
M. Fousteri, D. Arokx, A. Avanzeeland, L.H.F. Mullenders (Leiden, NED)
- 12.00 **OC6 Photochemistry of 5-Halouracil containing DNA**
 Y. Xu, H. Sugiyama (Kyoto, JPN)
- 12.15 **OC7 UVB-induced CPD-retaining cells in SKH1-hairless mice are BrdU-retaining stem cells which are NER-proficient**
J.G.W. Nijhof¹, C. van Pelt¹, D.L. Mitchell², W. van Ewijk¹, R. Willemze¹, L.H.F. Mullenders¹,
 F.R. de Gruij¹ (¹Leiden, NED; ²Smithville TX, USA)
- 12.30 **OC8 Daily UVB exposure stimulates the global nucleotide excision repair of cyclobutane pyrimidine dimers**
N. Bastien, P.J. Rochette, R. Drouin (Sherbrooke, CAN)

ALA-based PDT*Chair: N. Lange (Geneva, SUI)*

- 10.00 **IL9** **ALA-PDT: the basics**
R. Pottier (Kingston, CAN)
- 10.30 **IL10** **The involvement of the proteasome in regulation of PpIX synthesis and ALA-PDT**
Z. Malik, B. Grinblat, N. Greenberg (Ramat-Gan, ISR)
- 11.00 **IL11** **Prodrug approaches in biomedical optics**
N. Lange (Geneva, SUI)
- 11.30 **OC12** **Photobleaching kinetics and epithelial distribution of hexaminolevulinate induced PpIX in the photodynamic treatment of rat bladder cancer *in vivo***
S. El Khatib, H.P. Lassalle, L. Bezdetnaya, F. Guillemin, M.A. D'Hallewin (Nancy, FRA)
- 11.45 **OC13** **Ultra-sensitive fluorescence imaging of 5-ALA induced Protoporphyrin IX in human glioblastoma cells**
H. Schneckenburger^{1,2}, R. Sailer¹, M. Wagner², H. Emmert¹, W.S.L. Strauss¹ (¹Ulm, GER; ²Aalen, GER)
- 12.00 **OC14** **5-ALA and 5-ALA derivative-mediated effects on gram negative bacteria**
N Fotinos¹, M. Convert², J.-C. Piffaretti², N. Lange¹ (¹Geneva, SUI; ²Bellinzona, SUI)
- 12.15 **OC15** **Photosensitization response measured by reflectance spectroscopy**
P. Juzenas, A. Juzeniene, V. Iani, J. Moan (Oslo, NOR)
- 12.30 **OC16** **Phototoxic activity of 5-aminolevulinic acid-induced protoporphyrin IX against *Leishmania major***
S. Kosaka, O.E. Akilov, T. Hasan (Boston MA, USA)

Sunday, September 4, Morning**Lamartine 2**

Oxidative stress in plants

Chair: K. Apel (Zürich, SUI)

- 10.00 **IL17** **The genetics of ROS-mediated stress responses in *Arabidopsis***
K. Apel (Zürich, SUI)
- 10.30 **IL18** **Crosstalk and antagonistic response to singlet oxygen and other reactive oxygen species in *Arabidopsis thaliana***
C. Laloï¹, A. Baruah¹, E. Pers¹, M. Stachowiak¹, I. Murgia², K. Apel¹ (¹Zürich, SUI; ²Milano, ITA)
- 11.00 **IL19** **Genome wide analysis of photorespiratory hydrogen peroxide regulated gene expression in *Arabidopsis***
F. Van Breusegem, S. Vanderauwera (Gent, BEL)
- 11.30 **IL20** **Molecular biology of programmed cell death in *Arabidopsis thaliana***
T. Gechev^{1,2}, I. Gadjev², L. Bernier¹, M. Zwier¹, M. Ferwerda¹, I. Minkov², J. Hille¹ (¹Haren, NED; ²Plovdiv, BUL)
- 12.00 **OC21** **Ultraviolet illumination induces a stress effect upon higher plants (*Spirodela oligorrhiza*), as evident by the universal stress signal, alanine – an ¹⁵N NMR study**
E. B.-I. Monselise, D. Kost (Beer-Sheva, ISR)
- 12.15 **OC22** **Phototoxic phytoalexins: a new mechanism of light-mediated plant defence**
C. Flors, S. Nonell (Barcelona, ESP)

Novel blue light receptors*Chair: A. Losi (Parma, ITA)*

- 10.00 **IL23** **TbWC-1: the photoreceptor of an hypogeous fungus**
B. Grimaldi, P. Filetici, P. Ballario (Roma, ITA)
- 10.30 **IL24** **Multiple signal chains in the blue light dependent regulation of photosynthesis genes in *Rhodobacter sphaeroides***
H. Happ, Y. Han, S. Braatsch, G. Klug (Giessen, GER)
- 11.00 **IL25** **Signal transduction mechanism of the cryptochrome blue-light photoreceptor**
C.L. Partch, M.W. Clarkson, S. Özgür, A.L. Lee, A. Sancar (Chapel Hill NC, USA)
- 11.30 **IL26** **Effect of mutations on interdomain communication in the phototropin related *Bacillus subtilis* protein Ytva**
A. Losi¹, W. Gaertner² (¹Parma, ITA; ²Mülheim, GER)
- 12.00 **PII82** **Spectroscopic studies on photocycle of the flavin-binding photoreceptor AppA, a bacterial transcriptional anti-repressor of photosynthesis genes**
M. Gauden, S. Yeremenko, W. Laan, I.H.M. van Stokkum, J.A. Ihalainen, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis (Amsterdam, NED)
- 12.15 **OC27** **Functional expression of algal light-sensitive adenylyl cyclases in animal cells**
S.V. Schröder-Lang¹, P. Hegemann², M. Watanabe³, G. Nagel¹ (¹Frankfurt, GER; ²Berlin, GER; ³Hayama, JPN)
- 12.30 **OC28** **Light-induced multi-step intra-protein electron transfer in DNA photolyase and cryptochrome**
M. Byrdin¹, M. Vos², A. Eker³, J.P. Bouly⁴, A. Zeugner⁴, B. Giovani^{1,4}, M. Ahmad⁴, K. Brettel¹ (¹Saclay, FRA; ²Palaiseau, FRA; ³Rotterdam, NED; ⁴Paris, FRA)
- 12.45 **PII83** **A blue-light sensing, phototropin-related protein from *Pseudomonas putida*: a paradigm for an extended LOV construct**
U. Krauss¹, A. Losi², W. Gaertner³, K.-E. Jaeger¹, T. Eggert¹ (¹Jülich, GER; ²Parma, ITA; ³Mülheim, GER)

Sunday, September 4, Afternoon
Theatre
Molecular and cellular aspects of PDT
Chair: P. Agostinis (Leuven, BEL)

- 14.30 **IL29** **Molecular targets of photodynamic therapy and cell death pathways: traditional vs. novel linkages between them**
 N.L. Oleinick, L.-Y. Xue, S.-M. Chiu, K. Azizuddin, R.L. Morris, M. Lam, A.-L. Nieminen (Cleveland OH, USA)
- 15.00 **IL30** **Therapeutic exploitation of the tumor-protective mechanisms induced by the photodynamic therapy**
 J. Golab (Warsaw, POL)
- 15.30 **IL31** **Role of endoplasmic reticulum-Ca²⁺ emptying and multidomain pro-apoptotic BAX and BAK proteins in shaping cell death after photodynamic therapy**
 E. Buytaert, G. Callewaert, J.R. Vandenheede, P. Agostinis (Leuven, BEL)
- 16.00 **IL32** **Dissecting cellular and molecular events in PDT in combination with chemotherapy: additivity and synergy**
 A. Chiaviello, E. Crescenzi, G. Palumbo (Napoli, ITA)
- 16.30 **OC33** **Decrease in adhesion of prostate cancer cells following subcurative photodynamic therapy**
 N. Solban, I. Georgakoudi, W. Rice, C. Lin, T. Hasan (Boston MA, USA)
- 16.45 **OC34** **Modulation of cellular Ca²⁺ signalling during PDT**
 G. Pfaffel-Schubart¹, D.E. Bragin², C. Scalfi-Happ¹, C. Hauser¹, A. Uzdensky², A. Rueck¹ (¹Ulm, GER; ²Rostov, RUS)
- 17.00 **OC35** **Photoeffects of zinc(II)-phthalocyanine on cell-substrate adhesion in mouse keratinocytes**
 S. Galaz, J. Espada, F. Sanz, J.C. Stockert, A. Villanueva, M. Cañete, M. Pacheco, V. Moreno, A. Blázquez, A. Juaranz (Madrid, ESP)
- 17.15 **OC36** **Photodynamic injury of isolated crayfish stretch receptor: death of glial cells and neuroglial interactions**
 A.B. Uzdensky, M.S. Kolosov, D.E. Bragin, A.V. Lobanov (Rostov, RUS)
- 17.30 **OC37** **Cell specific effects of polyunsaturated fatty acids on 5-aminolevulinic acid based photosensitization**
 O.A. Gederaas¹, S.A. Schønberg¹, S. Ramstad¹, K Berg², A. Johnsson¹, H.E. Krokan¹ (¹Trondheim, NOR; ²Oslo, NOR)
- 17.45 **OC38** **Detecting apoptosis after PDT: PET imaging with Cu-64 labelled streptavidin following pretargeting of phosphatidylserine with biotinylated annexin-V**
 J.E. Van Lier, N. Cauchon, R. Lecomte, D. Hunting (Sherbrooke, CAN)
- 18.00 **OC39** **Intracellular trafficking of a photosensitizer immunoconjugate using quantum dots: a technique for selective photodynamic therapy**
 D.R. Errabelli, N. Szyncer-Taub, R. Peteranderl, S.K. Chang, B. Ortel, T. Hasan (Boston MA, USA)
- 18.15 **OC40** **Synthesis and *in vitro* testing of photosensitiser-peptide conjugates for use in photodynamic therapy**
 D.I. Vernon, I. Walker, S.B. Brown (Leeds, GBR)

Photocarcinogenesis*Chair: F.R. de Gruijl (Leiden, NED), D. Mitchell (Smithville TX, USA)*

- 14.30 **IL41** **P53 mutations as early events in UV carcinogenesis**
N.M. Wikonkál (Budapest, HUN)
- 15.00 **IL42** **UV-related p53 mutations in human skin carcinoma and precursor stages**
H. Backvall^{1,2}, A. Asplund¹, A. Gustafsson³, A. Sivertsson³, J. Lundeberg³, F. Ponten¹ (¹Uppsala, SWE; ²Boston MA, USA; ³Stockholm, SWE)
- 15.30 **IL43** **Inverse relationship between increased apoptosis and decreased skin cancer in UV-irradiated CD1d^{-/-} mice**
H.N. Ananthaswamy¹, Y. Matsumura², A.M. Moodycliffe³, D.X. Nghiem¹, S.E. Ullrich¹
(¹Houston TX, USA; ²Osaka, Japan; ³Lausanne, SUI)
- 16.00 **IL44** **Effect of DDB2 (Damaged DNA Binding) gene dose on sensitivity to UV carcinogenesis in hairless mice**
S. Alekseev, H. Kool, H. Rebel, M. Fousteri, C. Backendorf, F. R. de Gruijl, H. Vrieling, L.H.F. Mullenders (Leiden, NED)
- 16.30 **OC45** **Oncogenic potential of melanoma associated mutant BRAF**
C.L. Benjamin, V.O. Melnikova, C. Sreevidya, G. Liu, G. Lozano, H.N. Ananthaswamy
(Houston TX, USA)
- 16.45 **OC46** **Molecular analysis of risk factors associated with skin cancers from immunosuppressed renal transplantation patients**
S. Queille¹, L. Luron¹, A. Spatz¹, M.F. Avril¹, V. Ribrag¹, P. Duvillard¹, C. Hiesse², A. Sarasin¹, J.P. Armand¹, L. Daya-Grosjean¹ (¹Villejuif, FRA; ²Le Kremlin Bicêtre, FRA)
- 17.00 **OC47** **Loss of expression of CDKN2A via deletion and promoter hypermethylation in human non melanoma skin cancers**
A. Pacifico¹, G. Leone¹, M. Picardo¹, H.N. Ananthaswamy² (¹Roma, ITA; ²Houston TX, USA)
- 17.30 **OC48** **The increase in melanoma: are dietary photosensitizers responsible?**
R.M. Sayre (Memphis TN, USA)

Sunday, September 4, Afternoon**Lamartine 2**

Role of natural and artificial photosynthesis in sustainable energy development*Chair: A.L. Moore (Tempe AZ, USA)*

- 14.30 **IL49** **The Photosystem II reaction centre of *Acaryochloris marina*, a predominantly chlorophyll d containing cyanobacterium**
A. Telfer¹, M. Chen², A. Pascal³, A.W.D. Larkum², J. Barber¹ (¹London, GBR; ²Sydney, AUS; ³Gif-sur-Yvette, FRA)
- 15.00 **IL50** **Biomimicking photochemical reactions in artificial photosynthetic complexes**
A. Magnuson¹, N. Shaikh¹, O. Johansson², M. Borgström¹, J. Höglblom³, W. Shi¹, P. Huang¹, R. Lomoth¹, M. Anderlund², L. Sun², L. Hammarström¹, S. Styring¹ (¹Uppsala, SWE; ²Stockholm, SWE; ³Lund, SWE)
- 15.30 **IL51** **Biomimetic models of Photosystem II driven by ruthenium complexes**
F. Lachaud¹, A. Quaranta², Y. Pellegrin¹, P. Dorlet¹, M.-F. Charlot¹, S. Un², W. Leibl², A. Aukauloo¹ (¹Orsay, FRA; ²Gif-sur-Yvette, FRA)
- 16.00 **IL52** **Bioinspired energy conversion schemes**
M. Hambourger, D. Gust, T. Moore, A.L. Moore (Tempe AZ, USA)
- 16.30 **IL53** **The photochemistry of novel flavin-based photoreceptors**
J. Kennis (Amsterdam, NED)

**Visual pigments and phototransduction
(Joint with the American Society for Photobiology)***Chair: R.K. Crouch (Charleston SC, USA), D.-P. Häder (Erlangen, GER)*

- 14.30 **IL54** **Effects of ultraviolet on vision and the human eye – acute and delayed**
D.H. Sliney (Gunpowder MD, USA)
- 15.00 **IL55** **Effects of sunlight on the human eye – the ophthalmohelioses**
A. Cullen (Waterloo, CAN)
- 15.30 **IL56** **Production and clearance of all-trans retinol in bleached rod and cone photoreceptors**
P. Ala-Laurila¹, M. Estevez¹, R.K. Crouch², Y. Koutalos², B. Wiggert³, M.C. Cornwall¹
(¹Boston MA, USA; ²Charleston SC, USA; ³Bethesda MD, USA)
- 16.00 **IL57** **The role of the retinoid cycle in the visual process**
R.K. Crouch, B. Rohrer (Charleston SC, USA)
- 16.30 **IL58** **Visual pigment coexpression. A means of color cone development and regeneration?**
Á. Lukáts, Á.I. Berta, G. Halász, A. Szabó, Á. Szél (Budapest, HUN)
- 17.00 **PII73** **Late stages of photolysis: cone vs. rod visual pigments**
E.Yu. Golobokova, V.I. Govardovskii (St. Petersburg, RUS)
- 17.30 **PII74** **Light induced melatonin suppression – indications for a dose dependence**
K. Schulmeister¹, M. Weber¹, E. Schernhammer² (¹Seibersdorf, AUT; ²Boston MA, USA)

Monday, September 5, Morning**Theatre**

- 08.45 **PL59 Photobiology Update**
Signal transduction in keratinocytes under UV-A radiation
 J. Krutmann (Duesseldorf, GER) *introduced by J. Piette (Liège, BEL)*
- 09.30 **Coffee Break**
- Physical chemistry of photosensitizers: membrane interactions, vectorisation and targeting**
Chair: D. Brault (Paris, FRA), B. Ehrenberg (Ramat-Gan, ISR)
- 10.00 **IL60 Photosensitization in a confined membranal phase: uptake, topography and photochemistry of sensitizers in membranes**
 B. Ehrenberg (Ramat-Gan, ISR)
- 10.30 **IL61 Steady-state and dynamic interactions of photosensitizers with plasmatic proteins and membranes**
D. Brault, S. Bonneau, H. Mojžišová, C. Vever-Bizet (Paris, FRA)
- 11.00 **IL62 Distribution properties of hematoporphyrin in the mitochondrial permeability transition pore**
F. Ricchelli¹, S. Gobbo¹, G. Jori¹, V. Petronilli¹, P. Nikolov² (¹Padova, ITA; ²Sofia, BUL)
- 11.30 **IL63 Towards a targeted photodynamic therapy**
J. Blais¹, P. Maillard², V. Sol³, P. Krausz³ (¹Paris, FRA; ²Orsay, FRA; ³Limoges, FRA)
- 12.00 **OC64 Enhanced selectivity of tri-component pro-drugs: initial *in vitro* and *in vivo* results**
 E. Dickson, R. Goyan, J. Kennedy, K. Latulippe, R. Pottier, J. Wojtyk (Kingston, CAN)
- 12.15 **OC65 Proteolytically-induced photosensitization, a new tool in photodynamic therapy**
M.A. Campo, D. Gabriel, N. Lange, R. Gurny (Geneva, SUI)
- 12.30 **OC66 Effects of photosensitizers nanoencapsulation and of the size of the nanoparticles on photothrombic activity for the treatment of choroidal neovascularisation by photodynamic therapy**
B. Pegaz, E. Debeve, J.-P. Ballini, Y. Konan, H. van den Bergh (Lausanne, SUI)
- 12.45 **OC67 Vectorisation of photosensitisers (protoporphyrin IX and hypericin) by vesicles expelled by *Dictyostelium discoideum* cells: a new vectorisation tool for cancer diagnosis and photodynamic therapy (PDT)?**
I. Tatischeff, F. Lavialle (Evry, FRA)
- 13.00 **OC68 Photodynamic activity of an estrogen-pheophorbide (a) conjugate in human breast cancer cells (MCF7)**
 N. El-Akra, J.-P. Souchard (Toulouse, FRA)

Photodermatology**(Joint with the European Society of PhotoDermatology)***Chair: J.-C. Béani (Grenoble, FRA), R. Roelandts (Leuven, BEL)*

- 10.00 **IL69** **Anti-oxidants and natural UV filters in skin protection**
F. Boehm (Berlin, GER)
- 10.30 **IL70** **What's new in sunscreens**
G.M. Murphy (Dublin, IRL)
- 11.00 **IL71** **What's new in the photodermatoses**
J. Hawk (London, GBR)
- 11.30 **IL72** **Photodynamic therapy in dermatology: recent advances**
C. Bédane (Limoges, FRA)
- 12.00 **OC73** **Photodynamic action of red light for treatment of erythrasma. Preliminary results**
S. Darras, O. Carpentier, P. Vincent, A. Bonnevalle, P. Thomas (Lille, FRA)
- 12.15 **OC74** **Porphyrin photosensitizers, suitable for the photodynamic treatment of tinea infections caused by *Trichophyton rubrum*?**
T. Smijs, H.J. Schuitmaker, J.A. Bouwstra, S. Pavel (Leiden, NED)
- 12.30 **OC75** **Psoralen metabolism and psoralen ultraviolet-A (PUVA) sensitivity: a role for cytochrome P450 CYP1B1**
G. Smith, Y.Y. Deeni, J. Woods, J. Ferguson, C.R. Wolf, S.H. Ibbotson (Dundee, GBR)
- 12.45 **OC76** **Differential impact of XPD gene mutations associated with either the photosensitive cancer-free trichothiodystrophy or the cancer-prone xeroderma pigmentosum syndrome**
V. Bergoglio¹, L. Riou², O. Chevalier-Lagente¹, A. Sarasin¹, T. Magnaldo¹ (¹Villejuif, FRA; ²Fontenay-aux-Roses, FRA)
- 13.00 **OC77** **Mitochondrial damage and G1 arrest are the primary events for PUVA-induced apoptosis in human keratinocytes**
G. Viola, E. Fortunato, D. Vedaldi, L. Del Giudice, S. Disarò, G. Basso, F. Dall'Acqua (Padova, ITA)

Monday, September 5, Morning

Lamartine 2

Photodiagnosis and optical techniques for medical diagnosis*Chair: P. Taroni (Milano, ITA)*

- 10.00 **IL78** **Development of fluorescence cystoscopy with Hexvix®: the road from *in vitro* studies to clinical results**
H. van den Bergh¹, P. Jichlinski¹, D. Aymon¹, A. Marti¹, N. Lange², L. Guillou¹, P. Kucera¹,
H.-J. Leisinger¹, G. Wagnières¹ (¹Lausanne, SUI; ²Geneva, SUI)
- 10.30 **IL79** **Time domain optical mammography and spectroscopy of the breast**
P. Taroni, A. Pifferi, L. Spinelli, A. Torricelli, G. Danesini, R. Cubeddu (Milano, ITA)
- 11.00 **IL80** **Studying brain physiology and pathology with non-invasive near infrared spectroscopy**
J. Steinbrink (Berlin, GER)
- 11.30 **IL81** **High speed optical coherence tomography in ophthalmology**
M. Wojtkowski, I. Gorczyńska, T. Bajraszewski, M. Szkulmowski, A. Szkulmowska, P. Targowski,
A. Kowalczyk (Torun, POL)
- 12.00 **OC82** **Autofluorescence characterization of human steatotic liver**
A.C. Croce¹, U. Bareato², D. Neri², U. Cillo², I. Freitas¹, G. Bottiroli¹ (¹Pavia, ITA; ²Padova, ITA)
- 12.15 **OC83** **Influence of cholesterol on cell membrane dynamics probed by fluorescence spectroscopy and imaging**
P. Weber¹, H. Schneckenburger^{1,2}, M. Wagner¹, W.S.L. Strauss² (¹Aalen, GER; ²Ulm GER)
- 12.30 **OC84** **Comprehensive study of the phenomenological mechanisms involved in autofluorescence bronchoscopy**
T. Gabrecht, P. Uehlinger, T. Glanzmann, S. Andrejevic, P. Grosjean, A. Radu, P. Monnier,
H. van den Bergh, G. Wagnières (Lausanne, SUI)
- 12.45 **OC85** **Laser induced delayed luminescence from normal fibroblasts and melanoma cells: spectral analysis as a non-invasive diagnostic tool**
L.A. Applegate¹, F. Musumeci², H.J. Niggli³, A. Scordino², S. Tudisco² (¹Lausanne, SUI;
²Catania, ITA; ³Treyvaux, SUI)

UV and visible radiation effects on aquatic environments*Chair: F. Ghetti (Pisa, ITA)*

- 10.00 **IL86** **Interactive effects of UVR and mixing in aquatic environments**
E.W. Helbling, V.E. Villafañe (Playa Unión, ARG)
- 10.30 **IL87** **Photoreceptors in marine diatoms**
M. Mangogna¹, S. Coesel¹, M. Siaut¹, F. Maumus², A. Falciatore¹, A. De Martino^{1,2}, C. Bowler^{1,2}
(¹Napoli, ITA; ²Paris, FRA)
- 11.00 **IL88** **Synthesis and accumulation of mycosporine-like amino acids: an essential strategy to minimize UV damage in freshwater organisms**
R. Sommaruga (Innsbruck, AUT)
- 11.30 **IL89** **Models and molecular markers for UV-B stress evaluation in aquatic ecosystems**
R. Marangoni, D. Gioffré, G. Colombetti (Pisa, ITA)
- 12.00 **OC90** **Impact of solar UV radiation on bacterioplankton and phytoplankton biomasses and activities at different depths in NW Mediterranean coastal water during summer**
F. Joux¹, I. Obernosterer¹, P. Conan¹, F. Lantoine¹, W.H. Jeffrey², A. Baldwin²
(¹Banyuls-sur-mer, FRA; ²Pensacola FL, USA)
- 12.15 **PII80** **Solar UV radiation modulates daily production and DNA damage of marine bacterioplankton from a productive upwelling zone (36°S), Chile**
K.L. Hernández¹, R.A. Quiñones¹, G. Daneri^{1,2}, M.E. Farias³, E.W. Helbling⁴ (¹Concepción, CHI; ²Valparaíso, CHI; ³San Miguel de Tucumán, ARG; ⁴Playa Unión, ARG)

Monday, September 5, Afternoon

Theatre**Photoageing***Chair: K. Scharffetter-Kochanek (Ulm, GER)*

- 15.30 **IL91** **The role of mitochondria in photoaging and aging**
M. Berneburg (Tübingen, GER)
- 16.00 **IL92** **Changes in elastin and microfibrillar component in photoaging**
J.H. Chung (Seoul, KOR)
- 16.30 **IL93** **Epidermal-dermal interactions in photoaging and photocarcinogenesis**
F. Bernerd¹, M. Frechet², A. Sarasin², T. Magnaldo² (¹Clichy, FRA; ²Villejuif, FRA)
- 17.00 **IL94** **Overexpression of a putative ubiquitin c-hydrolase isolated from PUVA-senesced fibroblasts results in a senescence-like phenotype**
Y. Chen, M. Wlaschek, C. Hinrichs, W. Ma, N. Gall, K. Scharffetter-Kochanek (Ulm, GER)
- 17.30 **OC95** **Free-electron laser photoelectron emission microscopy of human pigments**
J.D. Simon¹, L. Hong¹, G.S. Edwards¹, R.J. Nemanich², J. Garguilo² (¹Durham NC, USA; ²Raleigh NC, USA)

UV effects: oral communications*Chair: J. Piette (Liège, BEL)*

- 15.30 **OC96** **Ultraviolet-B radiation inhibits local T cell activation and systemically induces T cell migration into the liver**
S. Rana, S.N. Byrne, L.J. MacDonald, G.M. Halliday (Sydney, AUS)
- 15.45 **OC97** **Epidermodysplasia verruciformis human papillomavirus types are associated with squamous cell carcinomas of xeroderma pigmentosum patients**
L. Luron¹, M.F. Avril¹, B. Bouadjar², A. Sarasin¹, L. Daya-Grosjean¹ (¹Villejuif, FRA; ²Algers, ALG)
- 16.00 **OC98** **Examination of solar ultraviolet radiation exposure of road construction workers in Austria**
M. Weber¹, M. Schwaiger¹, K. Schulmeister¹, H. Brusl², P. Kindl³, P. Knuschke⁴ (¹Seibersdorf, AUT; ²Vienna, AUT; ³Graz, AUT; ⁴Dresden, GER)
- 16.15 **OC99** **Deficient inflammatory response in neonatal mouse skin may contribute to the susceptibility of HGF/SF transgenic mice to UV-induced melanoma**
A. Wolnicka-Glubisz, E. De Fabo, F.P. Noonan (Washington DC, USA)
- 16.30 **OC100** **Ultraviolet-induced ($\lambda=254\text{nm}$) degradation of the bacteriophage MS2 genome (ssRNA)**
J. Simonet, C. Gantzer (Nancy, FRA)
- 16.45 **OC101** **Diastereoselectivity and site-dependency in the photochemistry of ketoprofen in the bovine serum albumin matrix**
S. Monti¹, I. Manet¹, F. Manoli¹, S. Sortino² (¹Bologna, ITA; ²Catania, ITA)
- 17.00 **PI32** **Induction of CCL21/SLC and dendritic cell activation by photodynamic therapy**
S.O. Gollnick, B. Owczarczak, B.W. Henderson (Buffalo NY, USA)
- 17.15 **PI33** **Induction of tolerance by UV-induced, platelet activating factor-stimulated, IL-10 secreting, B cells**
Y. Matsumura, D.X. Nghiem, Y. Miyahara, S.N. Byrne, S.E. Ullrich (Houston TX, USA)
- 17.30 **PI35** **Directing the immune system by light**
C.H. Self, M.-C. Fawcett, A. Self, J.A. Smith, S. Thompson (Newcastle-upon-Tyne, GBR)
- 17.45 **PI34** **The effects of TL01 phototherapy on UVB-induced Langerhans' cell, CD11b+ and iC3b+ cell trafficking in polymorphic light eruption (PLE)**
A. Blackburn, S. Winhoven, M. Brownrigg, L.E. Rhodes, N.K. Gibbs (Manchester, GBR)

Monday, September 5, Afternoon**Lamartine 2**

**Photochemistry and photobiology of fullerenes
(Joint with the European Photochemistry Association)***Chair: R. Bensasson (Paris, FRA), G. Orlandi (Bologna, ITA)*

- 15.30 **IL102** **Environment effects on the spectroscopy and intramolecular relaxation processes of C₆₀**
M. Chergui (Lausanne, SUI)
- 16.00 **IL103** **Organic and hybrid [60]-fullerene multicomponent architectures**
N. Armaroli, G. Accorsi, J.N. Clifford, Y. Rio (Bologna, ITA)
- 16.30 **IL104** **Molecular engineering in artificial photosynthesis**
H. Imahori (Kyoto, JPN)
- 17.00 **IL105** **From photosynthesis to photonic molecular switches based on fullerenes**
D. Gust, T.A. Moore, A.L. Moore (Tempe AZ, USA)
- 17.30 **IL106** **Sequence-specific DNA photocleavage and potential applications**
A.S. Boutorine¹, T. Da Ros², M. Prato² (¹Paris, FRA; ²Trieste, ITA)
- 17.00 **IL107** **Radical scavenging by C₆₀ in model systems and inhibition by C₆₀ of hepatotoxicity induced by CCl₄ *in vivo***
F. Moussa (Chatenay Malabry, FRA)

Photomovements*Chair: K.J. Hellingwerf (Amsterdam, NED)*

- 15.30 **IL108** **Microbial rhodopsins: structure and mechanism in photomotility**
J.L. Spudich, E.N. Spudich, J. Sasaki, C.-S. Yang (Houston TX, USA)
- 16.00 **IL109** **Roles for photoactivated adenylyl cyclase (PAC) in photocontrol of flagellar movement in euglenoid cells**
M. Watanabe^{1,4}, S. Matsunaga¹, S. Yoshikawa², M. Iseki^{3,4} (¹Hayama, JPN; ²Obama, JPN; ³Kawaguchi, JPN; ⁴Okazaki, JPN)
- 16.30 **IL110** **Phototaxis and signal transduction in the cyanobacterium *Synechocystis* sp PCC6803**
D. Bhaya, J.T. Ross, F. Fazeli, M.S. Burriesci (Stanford CA, USA)
- 17.00 **IL111** **A balanced purple-bacterial motility response to illumination**
K.J. Hellingwerf¹, M.A. van der Horst¹, J.P. Armitage², M. Roberts² (¹Amsterdam, NED; ²Oxford, GBR)
- 17.30 **OC112** **Signal perception and response in benthic diatom photomovement**
D. McLachlan^{1,2}, A.R. Taylor², R.J. Geider¹, G.J.C. Underwood¹, C. Brownlee² (¹Colchester, GBR; ²Plymouth, GBR)

Tuesday, September 6, Morning**Theatre**

- 08.45 **PL113 Photobiology Update**
Oxidative DNA damage: from electron/hole injection to gel electrophoresis
N.E. Geacintov, V. Shafirovich (New York NY, USA) *introduced by J. Cadet (Grenoble, FRA)*
- 09.30 *Coffee Break*

Tuesday, September 6, Morning**Lamartine 1****Photoimmunology***Chair: J. Krutmann (Duesseldorf, GER)*

- 10.00 **IL114 UVB and UVA wavelengths target different skin compartments: implications for photo-immunology**
F. Bernerd (Clichy, FRA)
- 10.30 **IL115 A role for Platelet Activating Factor receptor binding in UV-induced immune suppression and skin cancer induction**
S.E. Ullrich (Houston TX, USA)
- 11.00 **IL116 The osmolyte taurine plays a critical role in ultraviolet B radiation-induced immunosuppression**
N. Schade¹, C. Esser¹, I. Felsner¹, U. Warskulat¹, A. Schwarz², T. Schwarz², S. Grether-Beck¹, D. Häussinger¹, J. Krutmann¹ (¹Duesseldorf, GER; ²Kiel, GER)
- 11.30 **IL117 UVA induced immunosuppression**
D. Moyal, A. Fourtanier (Clichy, FRA)
- 12.00 **OC118 UV-A-induced immunosuppression plays a role in UV-A induced melanoma metastasis in mice**
R. Pastila, L. Ylianttila, D. Leszczynski (Helsinki, FIN)
- 12.15 **OC119 5-HT₂ blockage prevents psoralen+UVA (PUVA)-induced suppression of delayed hypersensitivity**
P. Wolf^{1,2}, D.X. Nghiem², J.P. Walterscheid², H.N. Ananthaswamy², S.E. Ullrich² (¹Graz, AUT; ²Houston TX, USA)
- 12.30 **OC120 Ultraviolet radiation-induced immunosuppression in humans is prevented by topical nicotinamide (vitamin B₃) and is greater in men than women**
C.R. Patterson, G.M. Halliday, R.Stc. Barnetson, D.L. Damian (Sydney, AUS)
- 12.45 **OC121 DX5+ NKT cells from UV-irradiated mice regulate tumor immunity by suppressing CLT activity**
N.M. Khaskhely, Y. Matsumura, Y. Miyahara, N. Kazimi, S.N. Byrne, S.E. Ullrich (Houston TX, USA)
- 13.00 **OC122 Molecular changes in skin induced by exposure to different doses of ultraviolet A radiation**
M.P.F. Stapelberg, R.B.H. Williams, S.N. Byrne, G.M. Halliday (Sydney, AUS)
- 13.15 **OC123 Photoimmunoprotection by UVA radiation is determined by UVA dose and is dependent on cutaneous cyclic guanosine monophosphate (cGMP)**
V.E. Reeve, M. Allanson (Sydney, AUS)

Clinical applications of PDT*Chair: S.G. Bown (London, GBR)*

- 10.00 **IL124** **Optical diagnosis and treatment in hollow organs**
L.B. Lovat (London, GBR)
- 10.30 **IL125** **Photodynamic therapy for cancers of the head and neck**
P.-J. Lou^{1,2}, C. Hopper², S.G. Bown² (¹Taipei, TRE; ²London, GBR)
- 11.00 **IL126** **Photodynamic diagnosis and photodynamic therapy for brain tumors**
H. Kostron (Innsbruck, AUT)
- 11.30 **IL127** **Review of interstitial photodynamic therapy for tumours of solid organs**
S.G. Bown (London, GBR)
- 12.00 **OC128** **Synergistic combination of photochemical treatment and bleomycin on tumor growth**
K. Berg, A. Dietze, O. Kaalhus, A. Høgset (Oslo, NOR)
- 12.15 **OC129** **Evaluation of the photosensitizer Tookad for photodynamic therapy on the Syrian golden hamster cheek pouch model: light dose, drug dose and drug-light interval effects**
F. Borle, A. Radu, P. Monnier, H. van den Bergh, G. Wagnières (Lausanne, SUI)
- 12.30 **OC130** **Photodynamic therapy and fluorescent diagnostics in head and neck cancer patients with different photosensitisers**
E.G. Vakulovskaya (Moscow, RUS)
- 12.45 **OC131** **Photodynamic applications of superficial bladder cancer: from detection to treatment!**
P. Jichlinski (Lausanne, SUI)
- 13.00 **PII49** **Photodynamic therapy for COPD treatment. Clinical results**
N.E. Vasiliev (Novosibirsk, RUS)
- 13.15 **PII54** **Ultraviolet-induced autofluorescence characterization of normal and tumoral esophageal epithelium cells**
S. Villette, C. Vever-Bizet, G. Bourg-Heckly (Paris, FRA)
- 13.30 **PII45** **Combined action of Visudyne and coherent or non-coherent light on melanoma cells**
P. Nowak-Sliwinska, G. Stochel, K. Urbanska (Cracow, POL)

Tuesday, September 6, Morning**Lamartine 3**

Light-regulation in plants: growth and rhythms*Chair: S. Braslavsky (Mülheim, GER)*

- 10.00 **IL133** **Light signalling and plant transcriptome patterns**
J.J. Casal (Buenos Aires, ARG)
- 10.30 **IL134** **Quantitative trait locus analysis of the phase of the *Arabidopsis* circadian clock**
C. Darrah¹, B. Taylor¹, K. Edwards², P. Brown², A. Hall³, H. McWatters¹ (¹Oxford, GBR; ²Edinburgh, GBR; ³Liverpool, GBR)
- 11.00 **IL135** **A GAF-domain mutation of phytochrome a impairs chromophore incorporation and light responses in *Arabidopsis***
J. Mateos¹, J.J. Casal¹, S.E. Braslavsky², W. Gärtner² (¹Buenos Aires, ARG; ²Mülheim, GER)
- 11.30 **PII97** **Isolation and characterization of a novel photomorphogenic and circadian clock mutant in *Arabidopsis***
É. Kevei¹, P. Gyula¹, R. Tóth¹, B. Fehér¹, A. Viczián¹, L. Kozma-Bognár^{1,2}, A.J. Millar², F. Nagy¹ (¹Szeged, HUN; ²Edinburgh, GBR)
- 11.45 **PII98** **New light signalling component affecting circadian clock in *Arabidopsis thaliana***
B. Fehér¹, É. Kevei¹, P. Gyula¹, R. Tóth¹, V. Sokolova¹, L. Kozma-Bognár^{1,2}, A.J. Millar², F. Nagy¹ (¹Szeged, HUN; ²Edinburgh, GBR)

Photoprotection and sunscreens*Chair: A.R. Young (London, GBR)*

- 14.30 **IL136** **Low-dose UVB induces a p53-dependent gene program that increases the resilience of keratinocytes against further UVB-insults**
D. Decraene¹, K. Smaers¹, D. Maes², M. Matsui², L. Declercq³, M. Garmyn¹ (¹Leuven, BEL; ²Melville NY, USA; ³Oevel, BEL)
- 15.00 **IL137** **Heat shock proteins in intrinsic photoprotection**
F. Trautinger (Vienna, AUT)
- 15.30 **IL138** **Biological effects of simulated ultraviolet daylight – New approach to investigate daily photoprotection**
S. Seité¹, C. Medaisko¹, C. Bredoux¹, F. Christiaens¹, D. Compan-Zaouati², H. Zucchi¹, D. Lombard¹, A. Fourtanier¹ (¹Clichy, FRA; ²Chevilly, FRA)
- 16.00 **IL139** **Effects of repeated sub-erythemal UVR exposure on human skin *in vivo* and the role of sunscreens in their prevention**
A.R. Young (London, GBR)
- 16.30 **OC140** **Cosmesis-relevant biophysical changes in Asian volunteers induced by extensive exposure to sub-erythemal doses of ultraviolet daylight. Influence of sun filters and textiles**
W. Baschong¹, U. Osterwalder¹, M. Schaumann¹, C. Artmann² (¹Basel, SUI; ²München, GER)
- 16.45 **OC141** **Sunscreen use related to UV exposure, age, sex and occupation based on personal dosimeter readings and sun behaviour diaries**
E. Thieden, P.A. Philipsen, J. Sandby-Møller, H.C. Wulf (Copenhagen, DEN)
- 17.00 **PI58** **Twelve-month topical study to determine the influence of bisoctrizole (Tinosorb® M- Active) on photocarcinogenesis in hairless mice**
D.B. Learn¹, C.P. Sambuco¹, P.D. Forbes¹, A.M. Hoberman¹, J.R. Plautz², U. Osterwalder² (¹Horsham PA, USA; ²Basel, SUI)
- 17.15 **PI71** **Pulsed radiation studies of natural UV filters extracted from lichens: possible sunscreens**
R. Edge (Keele, GBR)

Tuesday, September 6, Afternoon**Lamartine 2**

Photochemistry and phototoxicity of drugs*Chair: N. Gibbs (Manchester, GBR)*

- 14.30 **IL142** **An outbreak of photoallergy**
J. Ferguson (Dundee, GBR)
- 15.00 **IL143** **Drug-nucleoside interactions in the excited states: a model to investigate the basic mechanisms of drug-photosensitized DNA damage**
M.Á. Miranda (Valencia, ESP)
- 15.30 **IL144** **Spectrum of cross-photosensitization in patients with contact photoallergy to ketoprofen: associated photoallergies to non-benzophenone-containing molecules**
F. Aubin, P. Girardin, Ph. Humbert, R. Laurent, M. Vigan (Besançon, FRA)
- 16.00 **IL145** **Identification of photoallergic potential in drugs and other chemicals**
M.D. Barratt (Bedford, GBR)
- 16.30 **OC147** **Primary processes in the photochemistry of fluoroquinolones**
S. Navaratnam (Warrington, GBR)
- 16.45 **OC148** ***In vitro* phototoxicity of lovastatin and a selected group of vitamin D3 isomers**
P.D. Forbes, C.P. Sambuco, S.M. Ksenzenko, D.B. Learn, A.M. Hoberman (Horsham PA, USA)
- 17.00 **OC149** **Carbanion-mediated photocages: from drug photostability to carbanion kinetics and new photocages**
J.C. Scaiano, M. Lukeman, E. Gagnon, J. Blake (Ottawa, CAN)

Tuesday, September 6, Afternoon

Lamartine 3

Plant photobiology in extreme environments

Chair: T.V. Callaghan (Abisko, SWE)

- 14.30 **IL150** **Plants in cold environments: an introduction to the symposium**
T.V. Callaghan (Abisko, SWE)
- 15.00 **IL151** **Tracking ancient UV-B fluxes**
B. Lomax¹, D. Beerling¹, T. Callaghan^{1,2}, W. Fraser³, M. Harfoot⁴, J. Pyle⁴, S. Self³, M. Sephton³,
C. Wellman¹ (¹Sheffield, GBR; ²Abisko, SWE; ³Milton Keynes, GBR; ⁴Cambridge, GBR)
- 15.30 **IL152** **Can marine microorganisms influence the melting of the Arctic pack ice?**
C. Leck (Stockholm, SWE)
- 16.00 **IL153** **Cryophylic cyanobacteria and algae and their succession in deglaciated landscapes**
J. Elster¹, J. Svoboda², K. Kaštovská¹ (¹České Budějovice, CZE; ²Mississauga, CAN)

Tuesday, September 6, Afternoon

Theatre

- 17.30 **ESP General Assembly**

Tuesday, September 6, Evening

Victoria

- 20.00 **Banquet – ESP Medals Awards**

Wednesday, September 7, Morning

Theatre

- 08.45 **PL154 Photobiology Update**
Looking for novel circadian clock mutants in *Arabidopsis*
 É. Kevei¹, P. Gyula¹, B. Fehér¹, R. Tóth², V. Sokolova¹, S. Davis², L. Kozma-Bognár^{1,2}, A. Millar³,
 F. Nagy¹ (¹Szeged, HUN; ²Köln, GER; ³Edinburgh, GBR) *introduced by J. Bornman (Slagelse, DEN)*

09.30 *Coffee Break*

Wednesday, September 7, Morning

Lamartine 1**Ocular light damage**

Chair: D.H. Sliney (Gunpowder MD, USA)

- 10.00 **IL155 The geometry and spectral aspects of ocular exposure influences risks**
 D.H. Sliney (Gunpowder MD, USA)
- 10.30 **IL156 Light damage to the retina: model and reality**
 C.E. Remé (Zürich, SUI)
- 11.00 **IL157 The photoreactivity of retinal melanin and lipofuscin granules**
 M.E. Boulton, M.B. Rozanowska (Cardiff, GBR)
- 11.30 **IL158 Optical radiation effects upon the lens**
 P. Soderberg¹, S. Löfgren², M. Ayala³, X. Dong¹, V. Mody¹, M. Kakar¹, L Meyer¹ (¹Stockholm, SWE;
²Lincoln, NE, USA; ³Örebro, SWE)
- 12.00 **PI43 Winter eye protection for ultraviolet radiation**
 D.H. Sliney¹, D. Sarkany² (¹Gunpowder MD, USA; ²Whistler, CAN)

Cellular response to solar UV*Chair: E. Sage (Paris, FRA)*

- 10.00 **IL159** **UVA modulation of iron and heme homeostasis – a crucial role for heme oxygenase**
R.M. Tyrrell, G. Edwards, C. Raval, S.A. Mitchell (Bath, GBR)
- 10.30 **IL160** **Role of cell cycle checkpoint proteins in UVA-induced S-phase arrest in mammalian cells**
P.-M. Girard, F. Delacôte, E. Sage (Orsay, FRA)
- 11.00 **IL161** **UV responses in NER-deficient mouse keratinocyte cultures**
G.J. Stout¹, J. de Wit², J.R. Mitchell², J.H.J. Hoeijmakers², F.R. de Gruijl¹, L.H.F. Mullenders¹,
C. Backendorf¹ (¹Leiden, NED; ²Rotterdam, NED)
- 11.30 **IL162** **Mono-ubiquitination of PCNA: a key modification for the polymerase switch after UV irradiation in human cells**
P. Kannouche (Villejuif, FRA)
- 12.00 **OC163** **RhoB up-regulation induced by UVB controls survival response of human keratinocytes**
B. Canguilhem, A. Pradines, C. Baudouin, C. Boby, I. Lajoie-Mazenc, M. Charveron, G. Favre (Toulouse, FRA)
- 12.15 **OC164** **Overexpression of phospholipid hydroperoxide glutathione peroxidase in human dermal fibroblasts abrogates UVA irradiation-induced expression of interstitial collagenase/matrix-metalloproteinase-1 by suppression of phosphatidylcholine hydroperoxide-mediated NFκB activation and interleukin-6 release**
S. Sulyok¹, J. Wenk², J. Schüller^{1,2}, C. Hinrichs^{1,2}, T. Syrovets¹, N. Azoitei¹, M. Podda³, T. Wirth¹, T. Simmet¹, K. Scharffetter-Kochanek^{1,2} (¹Ulm, GER; ²Cologne, GER; ³Frankfurt, GER)
- 12.30 **PI30** **UVB induced sunburn cell formation of human keratinocytes is mediated through the Ask-1-p38MAPK cascade**
A. Van Laethem, M. Garmyn, P. Agostinis (Leuven, BEL)

Wednesday, September 7, Morning**Lamartine 3**

Acclimation, stress and regulation of photosynthesis*Chair: E.-M. Aro (Turku, FIN), J.F. Bornman (Slagelse, DEN)*

- 10.00 **IL165** **Analysis of state transitions in *Chlamydomonas* and *Arabidopsis***
J.-D. Rochaix, S. Bellafiore, F. Barneche, L. Legendre, A. Willig, S. Miras (Geneva, SUI)
- 10.30 **IL166** **Elucidating the Mg-ProtoIX mediated signalling pathway**
Å. Strand (Umeå, SWE)
- 11.00 **IL167** **Carbon metabolite sensing and signalling: the role of the trehalose pathway**
M.J. Paul (Harpenden, GBR)
- 11.30 **IL168** **Chloroplast-mediated regulation of *Arabidopsis* transcriptome**
M. Piippo, Y. Allahverdiyeva, N. Battchikova, E.-M. Aro (Turku, FIN)
- 12.00 **OC169** **Singlet oxygen as a stress factor and signal in *Rhodobacter***
J. Glaeser¹, M. Zobawa², F. Lottspeich², G. Klug¹ (¹Giessen, GER; ²Martinsried, GER)
- 12.15 **OC170** **Molecular events underlying excitation energy control in the Photosystem II antenna**
A.V. Ruban (Sheffield, GBR)

Animal models of photocarcinogenesis

Chair: D. Mitchell (Smithville TX, USA), F.R. de Gruijl (Leiden, NED)

- 15.30 **IL171** **Regulation of DNA repair in E2F1 transgenic and knockout mice**
D.L. Mitchell, T. Berton, R. Guo, L. Paniker, D. Johnson (Smithville TX, USA)
- 16.00 **IL172** **DNA lesions and mutations induced by ultraviolet A and B radiation in human and mouse cells**
G.P. Pfeifer, A. Besaratinia (Duarte CA, USA)
- 16.30 **IL173** **Induction of CPD retaining basal cells after solar simulating UV-irradiation of human skin**
B. Volkmer¹, S. Henning¹, D. Mitchell², E.W. Breitbart¹, R. Greinert¹ (¹Buxtehude, GER;
²Smithville TX, USA)
- 17.00 **IL174** **Oncogenes, signal transduction and melanoma in *Xiphophorus***
 S. Meierjohann¹, C. Wellbrock², A. Gómez³, E. Geissinger¹, C. Froschauer¹, E. Wende¹, M. Papp¹,
 A. Kraiss¹, M. Schartl¹ (¹Würzburg, GER; ²London, GBR; ³Ribera de Cabanes, ESP)
- 17.30 **IL175** **Role of cell cycle regulating genes in susceptibility to UV-induced melanomas in *Xiphophorus* hybrids**
R.S. Nairn, R. Beard, D. Trono, A.P. Butler (Smithville TX, USA)
- 18.00 **OC176** **Deficient UV induction of melanoma in HGF/SF transgenic recessive yellow (*Mc1r^{el/e}*) mice**
F.P. Noonan¹, G. Merlino², A. Wolnicka-Glubisz¹, M. Anver³, E. De Fabo¹ (¹Washington DC, USA;
²Bethesda MD, USA; ³Frederick MD, USA)
- 18.15 **PI42** **Quantitative and temporal differences in UVR dose-dependent skin responses in hairless rodents (mice, rats, and guinea pigs)**
C.P. Sambuco, P.D. Forbes, D.B. Learn, M. Arocena, A.M. Hoberman (Horsham PA, USA)

Wednesday, September 7, Afternoon**Lamartine 2**

Antimicrobial PDT*Chair: G. Jori (Padova, ITA)*

- 15.30 **IL177** **Photodynamic therapy-based inactivation of viruses in the presence of red blood cells**
P. Ziolkowski¹, M.A. Valles², M.A. de Madariaga², O.I. Koifman³, R. Bonnett⁴ (¹Wroclaw, POL; ²Barcelona, ESP; ³Ivanovo, RUS; ⁴London, GBR)
- 16.00 **IL178** **Antimicrobial PDT with phenothiazinium dyes: new mechanistic findings**
M. Hamblin, T. Ndemidova, G. Ptegos (Boston MA, USA)
- 16.30 **IL179** **Photodynamic therapy of bacterial and fungal infections with phthalocyanines: basic and pre-clinical studies**
G. Jori¹, G. Roncucci² (¹Padova, ITA; ²Firenze, ITA)
- 17.00 **IL180** **Antimicrobial PDT: we have heard the theory, what about the practice?**
S.B. Brown (Leeds, GBR)
- 17.30 **OC181** **Photosensitization-based inactivation of harmful mycomycetes**
Ž. Lukšienė, D. Pečiulytė, A. Lugauskas (Vilnius, LTU)
- 17.45 **OC182** **Porphyrin polyamine conjugates : a new strategy for antimicrobial chemotherapy**
V. Sol, P. Branland, F. Lamarche, G. Garcia, R. Granet , B. Verneuil, P. Krausz (Limoges, FRA)
- 18.00 **OC183** **Photodynamic killing of *Leishmania major* with cationic dyes**
O.E. Akilov¹, S. Kosaka¹, J.W. Foley², T. Hasan¹ (¹Boston MA, USA; ²Cambridge MA, USA)
- 18.15 **PII70** **The treatment of leishmaniasis using photodynamic therapy**
C. Bristow, R.W. Boyle, T. Paget (Hull, GBR)

Spectroscopic studies of fast and ultrafast events in photobiology*Chair: M.M. Martin (Paris, FRA)*

- 15.30 **IL184** **Ultrafast electron transfer in photosynthetic reaction centres: on the way to a molecular understanding of photosynthetic electron transfer**
W. Zinth (München, GER)
- 16.00 **IL185** **Ultrafast dynamics in the Green Fluorescent Protein (GFP) and the GFP chromophore**
D. Stoner-Ma¹, A.A. Jaye², P. Tonge¹, S.R. Meech² (¹Stony Brook NY, USA; ²Norwich, GBR)
- 16.30 **IL186** **Ultrafast photo-isomerization of protonated retinal Schiff bases in different environments**
S. Schenk¹, G. Zgrablic¹, F. van Mourik¹, S. Haacke^{1,2}, M. Chergui¹ (¹Lausanne, SUI; ²Strasbourg, FRA)
- 17.00 **IL187** **Fast molecular processes in *Blepharisma japonicum*'s light perception**
M. Mahet¹, P. Plaza¹, M.M. Martin¹, G. Checcucci², F. Lenci² (¹Paris, FRA; ²Pisa, ITA)
- 17.30 **OC188** **Electronic structure, spectroscopy, ultrafast dynamics and aerobic reactivity of trichochromes: natural components of pheomelanins**
J.D. Simon (Durham NC, USA)
- 17.45 **PII86** **Ultrafast events in the Photoactive Yellow Protein chromophore : protein vs solution environment**
A. Espagne¹, P. Changenet-Barret¹, P. Plaza¹, K.J. Hellingwerf², M.M. Martin¹ (¹Paris, FRA; ²Amsterdam, NED)
- 18.00 **OC189** **Structural characterisation of the fucoxanthin chlorophyll-a/c protein complexes using resonance Raman spectroscopy: the effect on light harvesting and energy transfer dynamics**
L. Premvardhan¹, L. Bordes¹, H. Fey², C. Buchel², B. Robert¹ (¹Gif-sur-Yvette, FRA; ²Frankfurt, GER)
- 18.15 **OC190** **Observation of sub-100 ps conformational changes in photolyzed carbonmonoxy-myoglobin probed by time-resolved circular dichroism**
T. Dartigalongue, F. Hache (Palaiseau, FRA)

Thursday, September 8, Morning**Theatre**

08.45 **PL191 Photobiology Update**
Photoprotection and photorestitution of cultural heritage
 R. Salimbeni (Firenze, ITA) *introduced by F. Ghetti (Pisa, ITA)*

09.30 *Coffee Break*

Thursday, September 8, Morning**Lamartine 1**

Mechanisms of plant UV-response*Chair: R. Ulm (Freiburg, GER)*

- 10.00 **IL192 Regulation of UVB-induced photomorphogenesis in *Arabidopsis***
 A. Baumann¹, A. Oravecz¹, Z. Mate², F. Nagy², R. Ulm¹ (¹Freiburg, GER; ²Szeged, HUN)
- 10.30 **IL193 UV-B signalling and protection in *Arabidopsis***
 G.I. Jenkins (Glasgow, GBR)
- 11.00 **IL194 Impact of UV-B on maize**
V. Walbot¹, P. Casati² (¹Stanford CA, USA; ²Rosario, ARG)
- 11.30 **IL195 MAP kinases at the crossroads of UV-B and biotic stress signalling pathways**
 J. Stratmann (Columbia SC, USA)
- 12.00 **PII99 Analysis of the maize leaf proteome after various UV-B treatments of lines differing in UV-B sensitivity**
P. Casati^{1,2}, X. Zhang³, A.L. Burlingame³, V. Walbot¹ (¹Stanford CA, USA; ²Rosario, ARG; ³San Francisco CA, USA)
- 12.15 **OC196 The role of the FtsH and DegP proteases in the repair of Photosystem II after damage by UV-B radiation in *Synechocystis***
I. Vass¹, O. Cheregi¹, C. Sicora¹, P.B. Kos¹, P.J. Nixon² (¹Szeged, HUN; ²London, GBR)

PDT: oral communications*Chair: J. Piette (Liège, BEL)*

- 10.00 **OC197** **Formulation of a thermosetting hydrogel of hexylaminolevulinat targeting Barrett's oesophagus**
S. Collaud¹, F. Evangelisti¹, L. James¹, Q. Peng², R. Gurny¹, N. Lange¹ (¹Geneva, SUI; ²Oslo, NOR)
- 10.15 **OC198** **On the importance of light delivery and intensity measurements during ALA PDT in otorhinolaryngology**
T. Vidóczy, P. Baranyai, L. Csokonai Vitéz, B. Horváth (Budapest, HUN)
- 10.30 **OC199** **ALA-PDT effect on adhesion and cytoskeleton of the cultured human carcinoma and glioma cells**
A. Uzdensky^{1,2}, E. Kolpakova¹, A. Juzeniene¹, J. Moan¹ (¹Oslo, NOR; ²Rostov-on-Don, RUS)
- 10.45 **OC200** **ALA-induced endogenous porphyrins in arthritic rabbit knee tissues: a spectroscopic study**
S. Bagdonas, G. Kirdaitė, R. Rotomskis (Vilnius, LTU)
- 11.00 **OC201** **Meta-tetra(hydroxyphenyl)chlorin (mTHPC) aggregation state and interaction with plasma albumin**
S. Sasnouski^{1,2}, V. Zorin², I. Khludeev², F. Guillemin¹, L. Bolotine¹ (¹Vandoeuvre-les-Nancy, FRA; ²Minsk, BLR)
- 11.15 **PII23** **Time dependent subcellular localisation of mTHPC and apoptotic response in photosensitized MCF-7 cells**
A. François, S. Marchal, F. Guillemin, L. Bolotine (Vandoeuvre-Lès-Nancy, FRA)
- 11.30 **OC202** **The effect of photofrin-photodynamic therapy (PDT) on mechanisms of cell death in EMT6 murine cells**
S.L. Hankin, T.J. Stephenson, M.W.R. Reed, A.G. Pockley, N.J. Brown (Sheffield, GBR)
- 11.45 **OC203** **Effect of hypericin on intracellular localization of PKC in U-87 MG human glioma cells: competitive binding of Hyp and PMA to C1B sub-domain of PKC**
S. Kocanova¹, D. Jancura¹, T. Hornakova¹, A. Mateasik², D. Chorvat Jr.², J. Ulicny¹, J. Hritz¹, M. Refregiers³, J.C. Maurizot³, P. Miskovsky^{1,2} (¹Kosice, SVK; ²Bratislava, SVK; ³Orléans, FRA)
- 12.00 **OC204** **Enhanced selectivity of chemo and photochemotherapeutic agents via protease mediated drug delivery**
E. Dickson, R. Goyan, J. Kennedy, K. Latulippe, R. Pottier, J. Wojtyk (Kingston, CAN)
- 12.15 **OC205** **FLIM and SLIM for molecular imaging in PDT**
A. Rück, F. Dolp, C. Hülshoff, C. Hauser, C. Scalfi-Happ (Ulm, GER)
- 12.30 **OC206** **Analyses of monolayer cells by MALDI-TOF/MS - Applications for photodynamic therapy**
B. Maunit¹, M. Dodeller¹, N. Lourette¹, L. Bezdetsnaya², F. Guillemin², J.-F. Muller¹ (¹Metz, FRA; ²Nancy, FRA)
- 12.45 **PII42** **Development of sensitizers based on squaraine moiety for photodynamic therapy**
D. Ramaiah¹, K.T. Arun¹, K. Jyothish¹, B. Epe² (¹Trivandrum, IND; ²Mainz, GER)
- 13.00 **OC146** **Photochemical internalisation of EGFR-targeting toxin conjugates**
A. Weyergang, P.K. Selbo, W.L. Yip, K. Berg (Oslo, NOR)

Thursday, September 8, Morning
Lamartine 3

Photochemistry and photobiology of biomolecules
Chair: J. Cadet (Grenoble, FRA)

- 10.00 **OC207 Interaction of UVC/UVB radiation with DNA simple and double helices: from photon absorption to photodamage**
D. Markovitsi¹, E. Emanuela¹, T. Gustavsson¹, E. Lazzarotto¹, R. Lavery², S. Marguet¹, P. Millié¹, D. Onidas¹, A. Sharonov¹, F. Talbot¹, K. Zakrzewska² (¹Gif-sur-Yvette, FRA; ²Paris, FRA)
- 10.15 **OC208 Photocaged radicals for the studies of oxidative DNA damage**
Y. Wang (Riverside CA, USA)
- 10.30 **OC209 Application of UV laser photochemistry to the studies of histone-DNA interactions and transcription factor binding to nucleosomes**
D. Angelov^{1,2}, H. Menoni^{1,2}, J. Cadet³, P. Bouvet¹, S. Dimitrov^{1,4} (¹Lyon, FRA; ²Sofia, BUL; ³Grenoble, FRA; ⁴La Tronche, FRA)
- 10.45 **OC210 Lipid hydroperoxides as an endogenous precursor of singlet molecular oxygen in the presence of metal ions and other reactive species**
S. Miyamoto¹, G.R. Martinez^{1,2}, A.P. Bortoletto Martins¹, M.H. Gennari Medeiros¹, P. Di Mascio¹ (¹São Paulo, BRA. ²Curitiba, BRA)
- 11.00 **OC211 Singlet oxygen-mediated formation of protein peroxides in cells and its consequences**
V.V. Agon, M. Gracanin, P.E. Morgan, M.J. Davies (Sydney, AUS)
- 11.15 **OC212 UVA radiation is highly mutagenic in cells that are unable to repair 7,8-dihydro-8-oxoguanine in *Saccharomyces cerevisiae***
E. Sage¹, S. Kozmin¹, G. Slezak², A. Reynaud-Angelin¹, S. Boiteux² (¹Orsay, FRA; ²Fontenay aux Roses, FRA)
- 11.30 **OC213 Sensitivity to polychromatic UV-radiation of strains of *Deinococcus radiodurans* differing in their DNA repair capacity**
P. Rettberg¹, U. Pogoda de la Vega¹, T. Douki², J. Cadet² (¹Köln, GER; ²Grenoble, FRA)
- 11.45 **OC214 Killed But Metabolically Active (KBMA) microbes: a new vaccine paradigm for eliciting effector T cell responses and protective immunity**
D.G. Brockstedt¹, K.S. Bahjat¹, M.A. Giedlin¹, W. Liu¹, M. Leong¹, W. Lockett¹, Y. Gao¹, P. Schnupf³, D. Kapadia¹, G. Castro¹, J.Y.H. Lim¹, A. Sampson-Johannes¹, A.A. Herskovits³, A. Stassinopoulos¹, H.G. Archie Bower², J.E. Hearst¹, D.A. Portnoy³, D.N. Cook¹, T.W. Dubensky Jr.¹ (¹Concord CA, USA; ²Portland OR, USA; ³Berkeley CA, USA)
- 12.00 **OC215 Experimental and theoretical study of the interaction of single-stranded DNA homopolymers and a monomethine cyanine dye: nature of specific binding**
L. Mikelsons, C. Carra, M. Shaw, C. Schweitzer, J.C. Scaiano (Ottawa, CAN)
- 12.15 **OC216 Photoinduced DNA damage by quinolizinium derivatives – Singlet oxygen generation and unusual formation of hydroxyl radicals**
H. Ihmels¹, C. Bohne², K. Faulhaber³, B. Giese⁴, A. Hofmann³, A.-K. Köhler⁴, A. Salbach¹, M.A.L. Sheepwash² (¹Siegen, GER; ²Victoria, CAN; ³Würzburg, GER; ⁴Basel, SUI)
- 12.30 **OC217 Photoprocesses in densely packed stable stacking aggregates of nucleic bases of candidates for the role of first genetic matrixes**
V.L. Rapoport, V.M. Malkin, S.V. Zorina, S.M. Komarov, V.V. Goriuchko (St. Petersburg, RUS)

Monday, September 5, (14.00 – 15.30)
Poster session I

Raphaël

- PI1 Two diastereomeric (6-4) adducts from photoreaction of uracil in frozen aqueous solution**
M.D. Shetlar, V.J. Basus (San Francisco CA, USA)
- PI2 Time-resolved study of thymine dimer formation**
S. Marguet, D. Markovitsi (Gif-sur-Yvette, FRA)
- PI3 Photo-induced guanine radical cation in short oligonucleotide is able to cross-link with lysines containing peptide**
S. Perrier¹, J. Hau², D. Gasparutto¹, J. Cadet¹, A. Favier¹, J.-L. Ravanat¹ (¹Grenoble, FRA; ²Lausanne, SUI)
- PI4 Crystal structure of the d(TpA) thymine-adenine photoadduct**
R.J.H. Davies, J.F. Malone (Belfast, GBR)
- PI5 Antigenotoxic activity of two essential oils (*Origanum compactum* and *Cinnamomum camphora*) against UV and 8-MOP+UVA induced mutagenic and recombinogenic events in diploid yeast (*Saccharomyces cerevisiae*)**
F. Bakkali^{1,2}, S. Averbeck², D. Averbeck², M. Idaomar¹ (¹Tétouan, MAR; ²Orsay, FRA)
- PI6 Photochemistry of DNA in spores of *Bacillus subtilis***
T. Douki¹, B. Setlow², P. Setlow² (¹Grenoble, FRA; ²Farmington CT, USA)
- PI7 Quantification of 4-hydroxy-2-nonenal adduct to glutathione and to DNA in humans cells**
O. Falletti, J. Cadet, A. Favier, T. Douki (Grenoble, FRA)
- PI8 Study of the photobiological effects of 8-methoxypsoralen (8-MOP) and UVA in eukaryotic cells using DNA microarray technology**
M. Dardalhon¹, W. Lin², A. Nicolas², D. Averbeck¹ (¹Orsay, FRA; ²Paris, FRA)
- PI9 Comparison between 8-oxo-7,8-dihydro-2'-deoxyguanosine and 1,N2-etheno-2'-deoxyguanosine levels in lung DNA of rats exposed to cigarette smoke**
S.A. Marques, A.P.M. Loureiro, O.F. Gomes, C.C. Garcia, P. Di Mascio, M.H.G. Medeiros (São Paulo, BRA)
- PI10 Reaction of singlet oxygen with 2'-deoxyguanosine and 8-methoxy-2'-deoxyguanosine**
G.R. Martinez¹, J.-L. Ravanat², J. Cadet², M.H.G. Medeiros³, P. Di Mascio³ (¹Curitiba, BRA; ²Grenoble, FRA; ³São Paulo, BRA)
- PI11 Steady-state and time-resolved studies on ketoprofen-thymine dyads**
C. Paris, N. Belmadoui, M.J. Climent, S. Encinas, M.Á. Miranda (Valencia, ESP)
- PI12 Photoinduced binding of ruthenium trisbipyrazine on 8-oxoguanine and inhibition of the replicative T4 polymerase**
N. El-Akra, J-P. Souchard, P. Vicendo (Toulouse, FRA)
- PI13 Photostability of ruthenium complexes in presence of proteins: influence in DNA photosensitization**
L. Bijeire, P. Vicendo (Toulouse, FRA)
- PI14 Spore photoproduct lyase - characterization of an iron-sulfur DNA repair enzyme**
O. Berteau, S. Ollagnier-de-Choudens, T. Douki, M. Atta, M. Fontecave (Grenoble, FRA)
- PI15 DNA-DNA crosslinking at guanines: a new and major class of oxidatively generated damage by UV laser biphotonic ionization in DNA**
H. Menoni^{1,2}, D. Gasparutto³, J.-L. Ravanat³, J. Cadet³, S. Dimitrov⁴, D. Angelov^{1,2} (¹Lyon, FRA; ²Sofia, BUL; ³Grenoble, FRA; ⁴La Tronche, FRA)
- PI16 Ozone induces singlet molecular oxygen generation in the presence of DNA**
S. Miyamoto¹, G.R. Martinez^{1,2}, M.H.G. Medeiros¹, P. Di Mascio¹ (¹São Paulo, BRA, ²Paraná, BRA)

- PI17 Interplay of nitration and oxidation reactions in DNA: insights from laser flash photolysis and oxygen-18 labeling experiments**
R. Misiaszek, C. Crean, N.E. Geacintov, V. Shafirovich (New York NY, USA)
- PI18 Miniaturized instrumentation for the high throughput screening of DNA repair inhibitors**
R. Hara¹, A. North¹, J.E. Hearst^{1,2}, S. Yeung², K. Singh², R.A. Mathies² (¹Concord CA, USA; ²Berkeley CA, USA)
- PI19 Effect of (5'S)-5',8-Cyclo-2'-deoxyadenosine on the conformation of di and trinucleotides**
B. Karwowski, J. Gaillard, A. Grand, J.Cadet (Grenoble, FRA)
- PI20 Study of 8-bromo-2'-deoxyinosine by photochemical and radiolytic methods**
L. Jimenez^{1,2}, S. Encinas¹, M.Á. Miranda¹, M. Russo², M. D'Angelantonio², Q.G. Mulazzani², C. Chatgialiloglu² (¹Valencia, ESP; ²Bologna, ITA)
- PI21 A plasmid biochip for DNA repair measurement, adaptation of HeLa cells to UVB irradiation**
J.-F. Millau, A. Micoud, S. Caillat, A. Favier, S. Sauvaigo (Grenoble, FRA)
- PI22 Formation and biological significance of one-electron oxidation products of 5-hydroxypyrimidine residues**
Ph. Simon¹, D. Gasparutto¹, C. Saint-Pierre¹, J.R. Wagner², A. Favier¹, J. Cadet¹ (¹Grenoble, FRA; ²Sherbrooke, CAN)
- PI23 Modification of the genotoxic effect of UV-irradiation by chemicals**
G. Emri¹, C. Bayerl², E. Remenyik¹, I. Horkay¹ (¹Debrecen, HUN; ²Mannheim, GER)
- PI24 Studies on the photocleavage of nucleic acids by the dibenzo[b,g]quinolizinium salt and its dimer**
D. Otto¹, A. Bergen¹, H. Ihmels¹, G. Viola² (¹Siegen, GER; ²Padova, ITA)
- PI25 Long-time fluorescence components of poly(dA).poly(dT)**
F. Talbot, D. Markovitsi, T. Gustavsson, E. Lazzarotto (Gif-sur-Yvette, FRA)
- PI26 A comparison of solar UV induced DNA-damaging effects between Southern and Central Europe and Arctic high latitudes**
A. Bérces¹, S.A. Chernouss², H. Lammer³, N.K. Belisheva², G. Kovács¹, H.I.M. Lichtenegger³, G. Rontó¹ (¹Budapest, HUN; ²Apatity, RUS; ³Graz, AUT)
- PI27 Ground-based measurement of solar light intensity (illuminance), temperature, and relative humidity from the tropics (Turen, East Java, Indonesia) between 1995 and 2001**
L. Fidhiany, K. Winckler (Berlin, GER)
- PI28 Effects of sublethal (7.4 W/m²) UVA irradiation on activity levels of oxidative defense enzymes (catalases, superoxide dismutases, glutathione reductase) and on protein oxidation and survival after lethal UVA in *Escherichia coli***
J.D. Hoerter, A.A. Arnold, A. Shibuya, D. Kuczynska, C.S. Ward, M.G. Sauer, A. Gizachew, T.M. Hotchkiss, T. Fleming, S. Johnson (Big Rapids MI, USA)
- PI29 The role of Bach-1 and NF-E2-related factor 2 in ultraviolet A (oxidant) mediated activation of heme oxygenase-1 in human skin cells**
G.P. Edwards, C.M. Raval, S.A. Mitchell, R.M. Tyrrell (Bath, GBR)
- PI30 UVB induced sunburn cell formation of human keratinocytes is mediated through the Ask-1-p38MAPK cascade**
A. Van Laethem, M. Garmyn, P. Agostinis (Leuven, BEL)
- PI31 Efficacy of different UV emitting sources in the induction of T cell apoptosis**
Z. Novák¹, A. Bérces², G. Rontó², A. Dobozy¹, L. Kemény¹ (¹Szeged, HUN; ²Budapest, HUN)
- PI32 Induction of CCL21/SLC and dendritic cell activation by photodynamic therapy**
S.O. Gollnick, B. Owczarczak, B.W. Henderson (Buffalo NY, USA)
- PI33 Induction of tolerance by UV-induced, platelet activating factor-stimulated, IL-10 secreting, B cells**
Y. Matsumura, D.X. Nghiem, Y. Miyahara, S.N. Byrne, S.E. Ullrich (Houston TX, USA)

- PI34 The effects of TL01 phototherapy on UVB-induced Langerhans' cell, CD11b+ and iC3b+ cell trafficking in polymorphic light eruption (PLE)**
A. Blackburn, S. Winhoven, M. Brownrigg, L.E. Rhodes, N.K. Gibbs (Manchester, GBR)
- PI35 Directing the immune system by light**
C.H. Self, M.-C. Fawcett, A. Self, J.A. Smith, S. Thompson (Newcastle-upon-Tyne, GBR)
- PI36 Modulation of contact hypersensitivity in mice by photolysis products of psoralens**
A.Ya. Potapenko, L.A. Kozir, Z.I. Moshnina, A.A. Kyagova (Moscow, RUS)
- PI37 Lack of antigen-specific immunity in the very early stage of photocarcinogenesis in an animal model**
É. Remenyik^{1,2}, N.M. Wikonkál^{1,2,3}, W. Zhang¹, V. Paliwal¹, D.E. Brash¹ (¹New Haven CT, USA; ²Debrecen, HUN; ³Budapest, HUN)
- PI38 Effect of UV irradiation on cellular responses and DNA damage of human keratinocytes harboring HPV16**
S. Mouret¹, T. Douki², S. Courdavault², A. Favier², J.C. Beani¹, M.T. Leccia¹ (¹La Tronche, FRA; ²Grenoble, FRA)
- PI39 The UV(B) fingerprint dominates the PTCH mutation spectrum of psoralen plus UVA-associated basal cell carcinomas**
E. Heitzer, A. Lassacher, H. Kerl, P. Wolf (Graz, AUT)
- PI40 Activating c-Kit exon 11 mutation is absent in Merkel cell carcinoma**
A. Lassacher, E. Heitzer, H. Kerl, P. Wolf (Graz, AUT)
- PI41 UVA sensitivity in Smith-Lemli-Opitz syndrome: possible involvement of cholesta-5,7,9(11)-trien-3 β -ol**
C.F. Chignell, B.M. Kukielczak, P.J. Bilski, Y.-Y. He, R.H. Sik (Research Triangle Park NC, USA)
- PI42 Quantitative and temporal differences in UVR dose-dependent skin responses in hairless rodents (mice, rats, and guinea pigs)**
C.P. Sambuco, P.D. Forbes, D.B. Learn, M. Arocena, A.M. Hoberman (Horsham PA, USA)
- PI43 Winter eye protection for ultraviolet radiation**
D.H. Sliney¹, D. Sarkany² (¹Gunpowder MD, USA; ²Whistler, CAN)
- PI44 UV-A irradiance at typical indoor life space**
S. Takeshita, M. Sasaki (Kanagawa, JPN)
- PI45 Efficacy of RGD-porphyrins on murine tumoral melanocytes: preliminary results**
A. Sparsa, K. Faucher, V. Sol, P. Krausz, M. Guilloton, F. Sturtz, C. Bédane (Limoges, FRA)
- PI46 Photodegradation of folic acid during extracorporeal photochemotherapy**
M. Der-Petrossian, M. Födinger, R. Knobler, F. Trautinger (Vienna, AUT)
- PI47 Efficacy of variable pulsed light in the treatment of hypertrichosis in 103 patients**
R. Knobler, H. Nahavandi, R. Neumann (Vienna, AUT)
- PI48 Impact of polymorphic light eruption on quality of life across four seasons and at a range of latitudes in Europe**
T.C. Ling¹, H.I. Richards¹, A.S. Janssens², F. Aubin³, C. Jansen⁴, L. Anastassopoulou⁵, A.J. Stratigos⁵, C. Antoniou⁵, T.I. Diepgen⁶, N.K. Gibbs¹, L.E. Rhodes¹ (¹Manchester, GBR; ²Leiden, NED; ³Besançon, FRA; ⁴Turku, FIN; ⁵Athens, GRE; ⁶Heidelberg, GER)
- PI49 The effects of TL-01 phototherapy on erythema and provocation responses in polymorphic light eruption (PLE)**
S. Winhoven, A. Blackburn, M. Brownrigg, L.E. Rhodes, N.K. Gibbs (Manchester, GBR)
- PI50 Acute UV irradiation and heat shock induced exon 26A mRNA and protein expression of elastin in human skin *in vivo***
J.Y. Seo, Z. Chen, S.R. Lee, Y.K. Kim, J.H. Chung (Seoul, KOR)

- PI51 Photochemical properties of aged human RPE melanosomes**
G. Szewczyk¹, A. Pawlak¹, M. Zareba¹, J.M. Burke², C.M.B. Skumatz², M.B. Rozanowska³, M.E. Boulton³, T. Sarna¹ (¹Krakow, POL; ²Milwaukee WI, USA; ³Cardiff, GBR)
- PI52 Modulation of oxidative damage, MAPK activation and cell death in neuronal cells by the fermented papaya preparation**
O.I. Aruoma¹, R. Colognato², K. Koike³, I. Laurenza², L. Benzi², L. Migliore² (¹London, GBR; ²Pisa, ITA; ³Gifu, JPN)
- PI53 Effect of ageing on the expression of cell defence genes after UVA irradiation of human male cutaneous fibroblasts using cDNA arrays**
F. Hazane¹, K. Valenti², S. Sauvaigo², A. Peinnequin¹, C. Mouret¹, A. Favier², J.-C. Beani^{1,2} (¹La Tronche, FRA; ²Grenoble, FRA)
- PI54 Can broad-spectrum sunscreens prevent the secretion of proinflammatory cytokines in human keratinocytes when exposed to the phototoxic drug lomefloxacin and UVA radiation?**
P. Reinhardt, M. Cybulski, S.M. Miller, C.L. Ferrarotto, R. Wilkins, Y. Deslauriers (Ottawa, CAN)
- PI55 Season of diagnosis is a strong prognostic factor in cancer. A possible role of sun-induced vitamin D**
A.C. Porojnicu, T.E. Robsahm, J. Moan (Oslo, NOR)
- PI56 Reaction of antioxidants with a stable colored free radical as a mean to assess their activity**
O. Friaa, D. Brault (Evry, FRA)
- PI57 Twelve-month topical study to determine the influence of bemotrizinol (Tinosorb® S) on photocarcinogenesis in hairless mice**
D.B. Learn¹, C.P. Sambuco¹, P.D. Forbes¹, A.M. Hoberman¹, J.R. Plautz², U. Osterwalder² (¹Horsham PA, USA; ²Basel, SUI)
- PI58 Twelve-month topical study to determine the influence of bisoctrizole (Tinosorb® M- Active) on photocarcinogenesis in hairless mice**
D.B. Learn¹, C.P. Sambuco¹, P.D. Forbes¹, A.M. Hoberman¹, J.R. Plautz², U. Osterwalder² (¹Horsham PA, USA; ²Basel, SUI)
- PI59 Is it possible to use the photodynamic effect to determine an antioxidant activity?**
M. Bancirova (Olomouc, CZE)
- PI60 Photoinduced DNA cleavage and binding studies of benzophenone-based sunscreen absorbers**
J. Kasavel, A.S. Sewlall, B.S. Martincigh (Durban, RSA)
- PI61 The effect of antioxidants on the *para*-aminobenzoic acid photosensitised formation of singlet oxygen**
A.M. Salim, B.S. Martincigh (Durban, RSA)
- PI62 An investigation of the photostabilisation of sunscreen absorbers by plant polyphenols**
G.J. Mturi, B.S. Martincigh (Durban, RSA)
- PI63 Incorporation of sunscreen-active agents in the nanospaces of layered double hydroxides**
M.K. Rotich, B.S. Martincigh (Durban, RSA)
- PI64 Photostability and photochemical analysis of commercial sunscreens**
T. Bunhu, B.S. Martincigh (Durban, RSA)
- PI65 Computational studies of the photodimerisation of 2-ethylhexyl- *para*-methoxycinnamate**
W. Waudu, H.G. Kruger, B.S. Martincigh (Durban, RSA)
- PI66 The UVB filter, 2-phenylbenzimidazole-5 sulfonic acid, enhances the formation of cyclobutane pyrimidine dimers and oxidative damage following UVA and simulated sunlight irradiation**
N. Bastien¹, M. Rouabhia², R. Drouin¹ (¹Sherbrooke, CAN; ²Quebec City, CAN)
- PI67 On the influence of application amount of sun protection products on their efficacy and photostability**
H. Tronnier¹, B. Garbe¹, U. Heinrich¹, D.Kockott² (¹Witten, GER; ²Hanau, GER)

- PI68** **Influence of substitution at the benzylic position on the behavior of stereoisomeric phosphorus compounds as precursors of possible antioxidants**
 J. Pérez-Prieto¹, R.E. Galian¹, M.C. Morant-Miñana¹, P.O. Burgos², M.Á. Miranda¹, F. López-Ortiz²
 (¹Valencia, ESP; ²Almería, ESP)
- PI69** **Antioxidant activity of mycosporine-like amino acids (MAAs) from marine dinoflagellates**
 M.R. Flores^{1,2,3}, M.I. Isla^{1,3}, M.E. Farías^{1,3}, E.W. Helbling^{2,3} (¹San Miguel de Tucumán, ARG; ²Playa Unión, ARG; ³CONICET, ARG)
- PI70** **Seasonal changes in UV exposure**
S. Wengraitis, D. Sliney (Gunpowder MD, USA)
- PI71** **Pulsed radiation studies of natural UV filters extracted from lichens: possible sunscreens**
 R. Edge (Keele, GBR)
- PI72** **Betamethasone phototoxicity: *in vitro*, *in vivo* and *ex vivo* studies**
 G. Miolo¹, F. Gallochio¹, S. Caffieri¹, F. Baccichetti¹, C. Marzano¹, M.G. Zanirato²,
 G. Beyersbergen van Henegouwen¹ (¹Padova, ITA; ²Conselve, ITA)
- PI73** **Effects of aqueous preparations on the phototoxicity of curcumin**
E.M. Bruzell¹, E. Morisbak¹, H.H. Tønnesen² (¹Haslum, NOR; ²Oslo, NOR)
- PI74** **Singlet excited state properties of fluoroquinolones: emission of norfloxacin and derivatives in aqueous media**
 M.C. Cuquerella, M.Á. Miranda, F. Boscá (Valencia, ESP)
- PI75** **Photophysical techniques for the study of drug-protein interactions: flurbiprofen-human serum albumin as model system**
M.C. Jiménez, I. Vayá, M.Á. Miranda (Valencia, ESP)
- PI76** **Stereodifferentiation in the interaction between chiral carprofen and human serum albumin: from whole protein to model dyads**
V. Lhiaubet-Vallet, F. Boscá, M.Á. Miranda (Valencia, ESP)
- PI77** **Singlet oxygen-mediated photodegradation of folic acid and photosensitizing activity of its photoproducts**
P. Vorobey^{1,2}, M.K. Off¹, A. Vorobey^{1,2}, J. Moan¹ (¹Oslo, NOR; ²Minsk, BLR)
- PI78** **Effects of buffers, pH, and hydroxylated molecules on fluorescence emission of protein**
A.M. Almehdi, G.A. Ahmed (Al-Ain, UAE)
- PI79** **Photosensitizing activity of di- or tetraaryl-porphyrins on HCT116 cells**
S. Banfi, E. Caruso, L. Buccafurni, R. Murano, E. Monti, M.B. Gariboldi, R. Ravizza, F. Terni (Varese, ITA)
- PI80** ***In vitro* photodynamic efficacy of emodine bearing porphyrins**
S. Banfi¹, E. Caruso¹, E. Monti¹, M.B. Gariboldi¹, S. Alemani², G. Nasini² (¹Varese, ITA; ²Milano, ITA)
- PI81** **Photostabilities of some photoactive organic species common in some sunscreens with different SPF**
 M. Tamam^{1,3}, A.M. Molokhia³, M.S.A. Abdel-Mottaleb^{1,2} (Cairo, EGY)

Wednesday, September 7, (14.00 – 15.30)
Poster session II
Raphaël

- PII1** **Enhanced selectivity of tri-component pro-drugs: enzyme specificity**
 E. Dickson, R. Goyan, J. Kennedy, K. Latulippe, R. Pottier, J. Wojtyk (Kingston, CAN)
- PII2** **Aggregation susceptibility on phototransformations of hematoporphyrin derivatives**
 P.F.C. Menezes, H. Imasato, V.S. Bagnato, J.R. Perussi (São Carlos, BRA)
- PII3** ***In situ* detection of singlet oxygen in intact HT29 cells by MALDI-TOF mass spectrometry**
M. Dodeller¹, B. Maunit¹, N. Lourette¹, L. Bezdetnaya², F. Guillemin², J.-F. Muller¹ (¹Metz, FRA; ²Nancy, FRA)
- PII4** **On the correlation between hydrophobicity, liposome binding and cellular uptake of porphyrin sensitizers**
S. Ben-Dror¹, I. Bronshtein¹, A. Wiehe², B. Röder², B. Ehrenberg¹ (¹Ramat Gan, ISR; ²Berlin, GER)
- PII5** **The thermodynamic effect of temperature and ionic strength on the binding of porphyrins to liposomes**
H. Weitman, R. Mines, I. Bloch, M. Gal, B. Ehrenberg (Ramat Gan, ISR)
- PII6** **Acid-base properties and liposome binding of a perfluoroalkylated phthalocyanine**
R. Mines¹, S.M. Gorun², B. Ehrenberg¹ (¹Ramat Gan, ISR, ²Newark NJ, USA)
- PII7** **Microscopic studies of cellular uptake and photocytotoxicity of hematoporphyrins in cancer cells. Effect of pH on the affinity, penetration depths and sensitization in membranes**
I. Bronshtein¹, T. Babushkina¹, Z. Malik¹, K.M. Smith², B. Ehrenberg¹ (¹Ramat Gan, ISR; ²Baton Rouge LA, USA)
- PII8** **Modularly synthesized porphyrazines with tuned hydrophobicity for near IR photosensitization**
A. Sholto¹, S. Lee², B.M. Hoffman², B. Ehrenberg¹ (¹Ramat Gan, ISR; ²Evanston IL, USA)
- PII9** **Interaction between porphyrins and filamentous phages as non-covalent supramolecular antenna system**
N. Angelini, M.A. Castriciano, A. Romeo, N. Micali, C. Lo Passo, I. Pernice, F. Felici, L. Monsù Scolaro (Messina, ITA)
- PII10** **Chiral recognition in bimolecular electron transfer between amino acids and photoactivated acceptors**
R.E. Galian, M.C. Morant-Miñana, L. Pastor-Pérez, J. Pérez-Prieto, M.Á. Miranda (Valencia, ESP)
- PII11** **Simultaneous determination of physical (k_q) and chemical (k_r) rate constants for singlet oxygen quenching using a steady-state IR luminescence technique**
C. Pierlot, J. Marko, J. Barbillat, J.-M. Aubry (Villeneuve d'Ascq, FRA)
- PII12** **Accumulation of sensitizer in rat embryos: spectroscopic studies**
 V. Legenis, A. Sukackaitė, V. Žalgevičienė, G. Gražlienė, J. Didžiapetrienė, R. Rotomskis (Vilnius, LTU)
- PII13** **Time-dependent self-assembly of 31-epimerically pure and mixed zinc methyl bacteriopheophorbides-*d***
T. Miyatake¹, K. Shitasue¹, Y. Omori¹, K. Nakagawa¹, M. Fujiwara¹, T. Matsushita¹, H. Tamiaki² (¹Otsu, JPN; ²Kusatsu, JPN)
- PII14** **A synthetic route to novel porphyrin - cyclam/cyclen conjugates for cancer therapy**
C. Welch, R.W. Boyle, S.J. Archibald (Hull, GBR)
- PII15** **Synthesis and *in vitro* investigation of cationic 5,15-diphenyl porphyrin-monoclonal antibody conjugates as targeted photodynamic sensitizers**
 N. Pesa, K.A. Smith, H. Savoie, J. Greenman, R.W. Boyle (Hull, GBR)
- PII16** **Photodynamic inactivation of ion channels formed by mini-gramicidin in bilayer lipid membranes**
 Y.N. Antonenko¹, E.A. Dutseva¹, E.A. Kotova¹, J.R. Pfeifer², U. Koert² (¹Moscow, RUS; ²Marburg, GER)
- PII17** **Tetraazachlorins - new efficient near infrared photosensitizers for photodynamic therapy**
S.V. Barkanova, E.A. Lukyanets, E.A. Makarova, N.B. Morozova, L.V. Umnova, R. I. Yakubovskaya (Moscow, RUS)

- PII18 Improvement by solubilization in DMPC liposomes of PPME photodynamic effect – A study in human colon cancer cells HCT-116**
L. Delanaye¹, C. Volanti¹, N. Jacobs¹, R. Greimers¹, F. Tfibel², M.-P. Fontaine Aupart², A. Vanderplasschen¹, M. Hoebeke¹, J. Piette¹ (¹Liège, BEL; ²Orsay, FRA)
- PII19 Photodynamic therapy induces activation and translocation of HIF-1alpha as reported by green fluorescent protein *in vitro***
S. Mitra, S. Cassar, J. Puskas, J.G. Frelinger, T.H. Foster (Rochester NY, USA)
- PII20 Photosensitizer dosimetry reduce inter-subjects variation of photodynamic therapy treatment response**
X. Zhou¹, B.W. Pogue¹, B. Chen¹, E. Demidenko¹, P.J. Hoopes¹, T. Hasan² (¹Hanover NH, USA; ²Boston MA, USA)
- PII21 Aggressive tumours might be radiosensitized by porphyrins**
Ž. Lukšienė (Vilnius, LTU)
- PII22 PDT-induced changes in angularly resolved light scattering from intact cells as a reporter of mitochondrial and lysosomal morphology**
J.D. Wilson, T.H. Foster (Rochester NY, USA)
- PII23 Time dependent subcellular localisation of mTHPC and apoptotic response in photosensitized MCF-7 cells**
A. François, S. Marchal, F. Guillemin, L. Bolotine (Vandoeuvre-Lès-Nancy, FRA)
- PII24 Caspase-2: a possible trigger of apoptosis induced by ZnPc photodynamic treatment in A-549 cells**
 J. Cristobal, M. Cañete, A. Villanueva, S. Rello, A. Juarranz, J.C. Stockert (Madrid, ESP)
- PII25 Time-resolved singlet oxygen phosphorescence detection in cells using kHz diode-pumped solid-state lasers**
 S. Nonell (Barcelona, ESP)
- PII26 Binding of cationic porphyrin to double stranded viral DNA analyzed by comprehensive spectroscopic methods**
 K. Zupan¹, L. Herényi¹, K. Thót², Z. Majer¹, G. Csik¹ (¹Budapest, HUN; ²Heidelberg, GER)
- PII27 An ESR study on type I and type II photoreaction induced by neutral and cationic porphyrin derivatives**
M. Egyeki, G. Csik, P. Gróf (Budapest, HUN)
- PII28 Systemic suppression of contact hypersensitivity in mice induced by products of merocyanine 540 photolysis**
A.A. Kyagova, L.A. Kozir, E.A. Kozhinova, A.Ya. Potapenko (Moscow, RUS)
- PII29 Photothermal therapy of experimental tumours using Pd(II)- and Pt(II)-octabutoxy-naphthalocyanines as sensitizers**
M. Camerin¹, G. Jori¹, M.A.J. Rodgers², M.E. Kenney³ (¹Padova, ITA; ²Bowling Green OH, USA; ³Cleveland OH, USA)
- PII30 Antitumour properties of irradiated visible light active titanium dioxide photocatalysts**
A. Jańczyk, W. Macyk, K. Urbańska, G. Stochel (Kraków, POL)
- PII31 Nitric oxide-induced long-term protection of tumor cells against photooxidative killing**
M. Niziolek¹, W. Korytowski^{1,2}, A.W. Girotti² (¹Kraków, POL; ²Milwaukee WI, USA)
- PII32 Apoptosis accommodating effects of nitric oxide (NO) in photodynamically stressed tumor cells**
M. Niziolek¹, T. Krisak², W. Korytowski^{1,2}, A.W. Girotti² (¹Krakow, POL; ²Milwaukee WI, USA)
- PII33 Influence of aggregation, pH and environment on photostability of TPPS4: spectroscopic study**
J. Zerebcova, J. Valanciunaite, S. Bagdonas, G. Streckyte, R. Rotomskis (Vilnius, LTU)
- PII34 Application of N-acetyl-3,7-dihydroxyphenoxazine as singlet oxygen and hydrogen peroxide sensor in photodynamic reactions**
A. Ryabova, A. Stratonnikov, E.A. Lukyanets, V. Loschenov (Moscow, RUS)

- PII35 Heme oxygenase-1 protects tumor cells against PDT-induced toxicity**
T.A. Stoklosa¹, D. Nowis¹, M. Legat¹, T. Grzela¹, G. Wilczyński¹, E. Wilczek¹, A. Jalili¹, E. Głodkowska¹, P. Mrówka¹, M. Makowski¹, T. Issat¹, J. Dulak², A. Józkowicz², M. Adamek³, P. Nazarewski¹, M. Jakóbiśiak¹, J. Golab¹ (¹Warsaw, POL; ²Kraków, POL; ³Katowice, POL)
- PII36 On the role of calcium elevation in glioblastoma cell death under hypericin-induced photodynamic treatment**
D.E. Bragin¹, G. Pfaffel-Schubart², A. Rück² (¹Albuquerque NM, USA; ²Ulm, GER)
- PII37 Singlet oxygen generation by selected phthalocyanines and naphthalocyanines**
A.M. Edwards¹, M. Fajardo¹, M. Muñoz¹, G. Jori² (¹Santiago, CHI; ²Padova, ITA)
- PII38 Fluorescence spectroscopic study of hypericin-photosensitized oxidation of low-density lipoproteins**
S. Kascakova^{1,2}, M. Refregiers², D. Jancura¹, F. Sureau³, J.-C. Maurizot², P. Miskovsky^{1,4}
(¹Kosice, SVK; ²Orleans, FRA; ³Bobigny, FRA; ⁴Bratislava, SVK)
- PII39 Photothermal sensitisation of mammalian cells with nickel-octabutoxy-naphthalocyanine**
S. Rello-Varona, V. Moreno, Á. Villanueva (Madrid, ESP)
- PII40 Mechanisms of uptake of a water-soluble anionic zinc phthalocyanine in murine fibrosarcoma cells (RIF-1)**
M.M. Rashid, J. Griffiths, J. Schofield, S.B. Brown, D.I. Vernon (Leeds, GBR)
- PII41 m-THPBC potential as photosensitizer for liver PDT**
H.-P. Lassalle¹, F. Marchal¹, S. Marchal¹, M.A. D'Hallewin¹, F. Guillemin¹, J. Moan², L. Bezdetnaya¹
(¹Vandœuvre-les-Nancy, FRA; ²Oslo, NOR)
- PII42 Development of sensitizers based on squaraine moiety for photodynamic therapy**
D. Ramaiah¹, K.T. Arun¹, K. Jyothish¹, B. Epe² (¹Trivandrum, IND; ²Mainz, GER)
- PII43 QSAR modeling and prediction of tumoricidal activity of aryl-porphyrins in photodynamic therapy**
E. Papa, P. Gramatica, S. Banfi, E. Caruso (Varese, ITA)
- PII44 Halogenated water-soluble porphyrins and their photodynamic action in melanoma cells**
L.G. Arnaut¹, J.M. Dabrowski², C. Monteiro¹, A. Peixoto¹, M.M. Pereira¹, S.J. Formosinho¹, G. Stochel², K. Urbanska² (¹Coimbra, POR; ²Krakow, POL)
- PII45 Combined action of Visudyne and coherent or non-coherent light on melanoma cells**
P. Nowak-Sliwinska, G. Stochel, K. Urbanska (Kraków, POL)
- PII46 Complete model of oxygen transport in photodynamic therapy: a simulation of oxygen dynamics *in vivo***
K.K.-H. Wang, S. Mitra, T.H Foster (Rochester NY, USA)
- PII47 Preclinical evaluation of photodynamic therapy in new retinoblastoma xenografts**
I. Aerts¹, P. Leuraud¹, I. Laville¹, J. Blais¹, Ph. Maillard², L. Desjardins¹, M.F. Poupon¹, F. Doz¹ (¹Paris, FRA; ²Orsay, FRA)
- PII48 Synthesis and preclinical studies of targeted, two-photon activated photo-dynamic therapy agents**
J.R. Starkey, F. Meng, A. Gong, B.L. Moss, A. Rebane, M. Drobizhev, C.W. Spangler (Bozeman MT, USA)
- PII49 Photodynamic therapy for treatment of COPD. Clinical results**
N.E. Vasiliev (Novosibirsk, RUS)
- PII50 Peripheral benzodiazepine receptors and apoptotic response in REH-cells after ALA-PDT**
Ž. Lukšienė (Vilnius, LTU)
- PII51 Spectroscopic monitoring during ALA-PDT of human basal cell carcinoma**
W.J. Cottrell¹, T.H. Foster¹, A.R. Oseroff² (¹Rochester NY, USA; ²Buffalo NY, USA)
- PII52 ALA-PDT attenuates expression of chimeric oncoprotein BCR-ABL in chronic myelogenous leukemia cells K562 and disrupts the cytoskeleton structure**
M. Pluskalová, D. Grebeňová, K. Kuželová, P. Halada, Z. Hrkal (Prague, CZE)

- PII53 Photodynamic treatment with 5-aminolevulinic acid induces mitotic arrest in HeLa cells**
V. Moreno, A. Juarranz, J.C. Stockert, M. Cañete, S. Rello, A. Villanueva (Madrid, ESP)
- PII54 Ultraviolet-induced autofluorescence characterization of normal and tumoral esophageal epithelium cells**
S. Villette, C. Vever-Bizet, G. Bourg-Heckly (Paris, FRA)
- PII55 Combined resonance Raman and absorption microspectroscopy of single living erythrocytes underline the extreme photosensitivity of oxyhemoglobin**
S. Villette¹, T.G. van Leeuwen^{1,2}, C. Otto¹ (¹Enschede, NED; ²Amsterdam, NED)
- PII56 *In vivo* measurement of mTHPBC pharmacokinetic by using elastic scattering spectroscopy (ESS) in an improved xenografted athymic rat model with hepatic metastasis of human colon adenocarcinoma**
F. Marchal, V. Chalau, S. Marchal, L. Bolotine, F. Guillemin (Vandœuvre-les-Nancy, FRA)
- PII57 Rat neocerebellum cortex during normal and injured developing: an autofluorescence study**
A.C. Croce, G. Bottiroli, E. Roda, M.B. Pisu, G. Bernocchi (Pavia, ITA)
- PII58 Optical pharmacokinetics of photosensitiser aluminium disulphonated phthalocyanine**
C. Eliot-Laize¹, V. Chalau¹, A.J. MacRobert¹, I.J. Bigio², L.B. Lovat¹, S.G. Bown¹ (¹London, GBR; ²Boston MA, USA)
- PII59 Selective accumulation and photobleaching of indocyanine green in tumors measured by fluorescence and absorption spectroscopy**
A. Stratonnikov, A. Ryabova, V. Loschenov (Moscow, RUS)
- PII60 Developing fluorescence probes for reactive oxygen species detection**
B. Heyne, J.C. Scaiano (Ottawa, CAN)
- PII61 Depth-resolved fluorescence measurements of quantum dots in scattering medium**
J. Venius, V. Karabanovas, R. Rotomskis (Vilnius, LTU)
- PII62 Comparison between HP- and GFP-mediated fluorescence reflectance imaging of HeLa tumor**
M. Autiero, L. Celentano, R. Cozzolino, P. Laccetti, M. Marotta, G. Mettievier, M.C. Montesi, P. Riccio, G. Roberti, P. Russo (Napoli, ITA)
- PII63 Porphyrin derivatives as photodiagnostic agents**
V.V. Serra, M.A.F. Faustino, D.C.G.A. Pinto, M.G.P.M.S. Neves, A.C. Tomé, A.M.S. Silva, S.G. Paz, M.F.C. Amador, E.F. Cruz e Silva, J.A.S. Cavaleiro (Aveiro, POR)
- PII64 Interactions of 3-aminobenzonitriles with human serum albumin studied by fluorescence spectroscopy**
S. Tobita¹, J. Oshima¹, H. Naoumi¹, S. Komaba¹, T. Yoshihara¹, A.K. Mishra² (¹Kiryu, JPN; ²Chennai, IND)
- PII65 Fluorescent diagnostics in gynecological cancer with alaseense**
E.G. Vakulovskaya, A.N. Gubin, V. Kuznecov, E.S. Vakurova, B.K. Poddybny, A. Gricai (Moscow, RUS)
- PII66 Fluorescent diagnostics of oral cancer with alaseense**
E.G. Vakulovskaya, L. Oumnova, V. Vorozhtsov, S. Kuzmin, E.A. Lukyanets (Moscow, RUS)
- PII67 Photoinactivation of wastewater microorganisms by cationic and neutral porphyrins**
A.T.P.C. Gomes, C.M.B. Carvalho, M.A.F. Faustino, J.P.C. Tomé, M.G.P.M.S. Neves, A.C. Tomé, Z. Lin, J.P. Rainho, S.C.D. Fernandes, A.C.B. Prata, M.A. Almeida, M.A. Cunha, J. Rocha, J.A.S. Cavaleiro (Aveiro, POR)
- PII68 *In vitro* activity against herpes simplex virus type I of beta cationic meso-tetraphenylporphyrins**
E.M.P. Silva¹, F. Giuntini¹, M.A.F. Faustino¹, J.P.C. Tomé¹, M.G.P.M.S. Neves¹, A.C. Tomé¹, A.M.S. Silva¹, M.G. Santana-Marques¹, A.J. Ferrer-Correia¹, J.A.S. Cavaleiro¹, M.F. Caeiro², R.R. Duarte², S.A.P. Tavares², I.N. Pegado², B. d'Almeida², A.P.A. De Matos², M.L. Valdeira² (¹Aveiro, POR; ²Lisbon, POR)
- PII69 Tetraaryl-porphyrins as antibacterial photosensitizers**
S. Banfi, V. Battini, E. Caruso, L. Buccafurni, S. Zazzaron, P. Barbieri, V. Orlandi (Varese, ITA)

- PII70 The treatment of leishmaniasis using photodynamic therapy**
C. Bristow, R.W. Boyle, T. Paget (Hull, GBR)
- PII71 Photoactive pesticides for insect pest control: effects on leafminer *Liriomyza bryoniae* (Diptera, Agromyzidae)**
V. Būda, Z. Lukšienė, S. Radžiūtė (Vilnius, LTU)
- PII72 Photosensitization action of some photosensitizers on whitefly (*Bemesia tabaci*)**
S.A. Elfeky, A.-S.A.M. Al-Sherbini, T.A.E. Eltayeb, M.H. Abdel-Kader (Cairo, EGY)
- PII73 Late stages of photolysis: cone vs. rod visual pigments**
E.Yu. Golobokova, V.I. Govardovskii (St.Petersburg, RUS)
- PII74 Light induced melatonin suppression – indications for a dose dependence**
K. Schulmeister¹, M. Weber¹, E. Schernhammer² (¹Seibersdorf, AUT; ²Boston MA, USA)
- PII75 Time series study in a freshwater lagoon of Patagonia: solar acclimation of phytoplankton measured by pulse amplitude modulated (PAM) techniques**
S.E. Barbieri, R.J. Gonçalves, V.E. Villafañe, E.W. Helbling (Playa Unión, ARG)
- PII76 *In situ* variability in photosynthetic quantum yield in phytoplankton assemblages from a freshwater lagoon in Southern China**
V.E. Villafañe², K. Gao¹, P. Li¹, G. Li¹, E.W. Helbling² (¹Guangdong, CHN, ²Playa Unión, ARG)
- PII77 UV and VIS photodegradation of triazines and triazine derivatives - catalysed and sensitized reactions**
Š. Klementová (Ceske Budejovice, CZE)
- PII78 Combined effects of nutrient limitations and UV radiation on the viability, metabolic activities and DNA damages in the marine *Vibrio angustum* S14**
S. Mattalana-Surget¹, F. Joux¹, T. Douki² (¹Banyuls-sur-mer, FRA; ²Grenoble, FRA)
- PII79 Interactive effect of nutrient concentration and ultraviolet radiation on three marine phytoplankton species**
M.A. Marcoval, E.W. Helbling (Playa Unión, ARG)
- PII80 Solar UV radiation modulates daily production and DNA damage of marine bacterioplankton from a productive upwelling zone (36°S), Chile**
K.L. Hernández¹, R.A. Quiñones¹, G. Daneri^{1,2}, M.E. Farias³, E.W. Helbling⁴ (¹Concepción, CHI; ²Valparaíso, CHI; ³San Miguel de Tucumán, ARG; ⁴Playa Unión, ARG)
- PII81 Lack of reddening in Lake Tovel (Brenta Dolomites, Trento, Italy): photobiological aspects**
C. Bagnoli¹, M. Cantonati², F. Ghetti¹, D. Spitale², M. Tardio² (¹Pisa, ITA; ²Trento, ITA)
- PII82 Spectroscopic studies on photocycle of the flavin-binding photoreceptor AppA, a bacterial transcriptional anti-repressor of photosynthesis genes**
M. Gauden, S. Yermenko, W. Laan, I.H.M. van Stokkum, J.A. Ihalainen, R. van Grondelle, K.J. Hellingwerf, J.T.M. Kennis (Amsterdam, NED)
- PII83 A blue-light sensing, phototropin-related protein from *Pseudomonas putida*: a paradigm for an extended LOV construct**
U. Krauss¹, A. Losi², W. Gärtner³, K.-E. Jaeger¹, T. Eggert¹ (¹Jülich, GER; ²Parma, ITA; ³Mülheim, GER)
- PII84 A flavoprotein isolated from phototactic zoospores of a brown alga, *Scytosiphon lomentaria*: a new member of “Old Yellow Enzyme” family**
S. Fujita¹, S. Okamoto², S. Yoshikawa³, M. Iseki⁴, M. Watanabe⁵, T. Motomura⁶, H. Kawai¹, A. Murakami¹ (¹Kobe, JPN; ²Kyoto, JPN; ³Fukui, JPN; ⁴Aichi, JPN; ⁵Kanagawa, JPN; ⁶Hokkaido, JPN)
- PII85 Peridinin triplet state dynamics in Peridinin–Chlorophyll-a–Protein (PCP)**
D.C. Lührs¹, M.T.A. Alexandre¹, I.H.M. van Stokkum¹, R. Hiller², M. Groot¹, J.T.M. Kennis¹, R. van Grondelle¹ (¹Amsterdam, NED; ²Sidney, AUS)
- PII86 Ultrafast events in the Photoactive Yellow Protein chromophore: protein vs solution environment**
A. Espagne¹, P. Changenet-Barret¹, P. Plaza¹, K.J. Hellingwerf², M.M. Martin¹ (¹Paris, FRA; ²Amsterdam, NED)

- PII87 Structure, energetics and spectra of the most stable isomers of some C₆₀X₁₂ and C₆₀X₆Y₆ heterofullerenes**
E. Emanuele, F. Negri, G. Orlandi (Bologna, ITA)
- PII88 Regioselective self-assembly of zinc 3-hydroxymethyl-13-formyl-chlorin and the corresponding 3,13-inverted pigment**
M. Kunieda, H. Tamiaki (Kusatsu, JPN)
- PII89 Disturbance of chlorophyll formation at the level of 5-aminolevulinic acid and magnesium-porphyrins biosynthesis in isogenic lines of spring wheat (*Triticum aestivum* L.) marked by genes *cn-A1* and *cn-D1***
V.V. Rassadina¹, S.F. Koval², N.G. Averina¹ (¹Minsk, BLR; ²Novosibirsk, RUS)
- PII90 Self-assembly of amphiphilic zinc chlorins possessing a hydrophilic oligooxyethylene group**
T. Miyatake¹, T. Onishi¹, S. Kato¹, M. Fujiwara¹, T. Matsushita¹, H. Tamiaki² (¹Otsu, JPN; ²Kusatsu, JPN)
- PII91 Supramolecular gels prepared with self-assembly of amphiphilic zinc chlorines**
T. Miyatake¹, S. Tanigawa¹, E. Takenaka¹, M. Fujiwara¹, T. Matsushita¹, H. Tamiaki² (¹Otsu, JPN; ²Kusatsu, JPN)
- PII92 Streptomycin effects on the activity of chlorophyll biosynthesis in barley seedlings**
E.B. Yaronskaya, E.R. Gritskévitch, N.G. Averina (Minsk, BLR)
- PII93 Regulation of 5-aminolevulinic acid synthesis in roots of barley seedlings**
I.V. Vershilovskaya, E.B. Yaronskaya, N.G. Averina (Minsk, BLR)
- PII94 Seasonal dynamics of xanthophyll cycle pigments in lichen *Xanthoria parietina***
H. Vráblíková¹, M. McEvoy², K.A. Solhaug², M. Barták¹, Y. Gauslaa² (¹Brno, CZE; ²Ås, NOR)
- PII95 Photosynthetic characterization of the seagrass *Cymodocea nodosa* along depth and within leaf gradients**
I. Olivé, M.P. García-Sánchez, J.J. Vergara, J.L. Pérez-Lloréns (Cádiz, ESP)
- PII96 Activation of photosynthetic electron transport and differential expression of proteins in rice (*Oryza sativa* L.) leaves by photocatalyst (TiO₂)**
S.C. Hong¹, A.C. Chang¹, P.G. Shin¹, S.H. Kim¹, K.S. Lee¹, C.W. Lee² (¹Suwon, KOR; ³Chongju, KOR)
- PII97 Isolation and characterization of a novel photomorphogenic and circadian clock mutant in *Arabidopsis***
É. Kevei¹, P. Gyula¹, R. Tóth¹, B. Fehér¹, A. Viczián¹, L. Kozma-Bognár^{1,2}, A.J. Millar², F. Nagy¹ (¹Szeged, HUN; ²Edinburgh, GBR)
- PII98 New light signalling component affecting circadian clock in *Arabidopsis thaliana***
B. Fehér¹, É. Kevei¹, P. Gyula¹, R. Tóth¹, V. Sokolova¹, L. Kozma-Bognár^{1,2}, A.J. Millar², F. Nagy¹ (¹Szeged, HUN; ²Edinburgh, GBR)
- PII99 Analysis of the maize leaf proteome after various UV-B treatments of lines differing in UV-B sensitivity**
P. Casati^{1,2}, X. Zhang³, A.L. Burlingame³, V. Walbot¹ (¹Stanford CA, USA; ²Rosario, ARG; ³San Francisco CA, USA)
- PII100 Expression of genes for early light inducible proteins under oxidative stress in barley**
E.N. Pogulskaya, N.P. Yurina (Moscow, RUS)
- PII101 Photooxidative stress in barley leaves treated with Rosa Bengal**
N.V. Shalygo, N.V. Kozel (Minsk, BLR)