

**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. Dodeller<sup>1</sup>, B. Maunit<sup>1</sup>, N. Lourette<sup>1</sup>, L. Bezdetnaya<sup>2</sup>, F. Guillemin<sup>2</sup>, J.-F. Muller<sup>1</sup> (<sup>1</sup>Metz, FRA; <sup>2</sup>Nancy, FRA)
- PII4**     **On the correlation between hydrophobicity, liposome binding and cellular uptake of porphyrin sensitizers**  
S. Ben-Dror<sup>1</sup>, I. Bronshtein<sup>1</sup>, A. Wiehe<sup>2</sup>, B. Röder<sup>2</sup>, B. Ehrenberg<sup>1</sup> (<sup>1</sup>Ramat Gan, ISR; <sup>2</sup>Berlin, 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. Mines<sup>1</sup>, S.M. Gorun<sup>2</sup>, B. Ehrenberg<sup>1</sup> (<sup>1</sup>Ramat Gan, ISR, <sup>2</sup>Newark 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. Bronshtein<sup>1</sup>, T. Babushkina<sup>1</sup>, Z. Malik<sup>1</sup>, K.M. Smith<sup>2</sup>, B. Ehrenberg<sup>1</sup> (<sup>1</sup>Ramat Gan, ISR; <sup>2</sup>Baton Rouge LA, USA)
- PII8**     **Modularly synthesized porphyrazines with tuned hydrophobicity for near IR photosensitization**  
A. Sholto<sup>1</sup>, S. Lee<sup>2</sup>, B.M. Hoffman<sup>2</sup>, B. Ehrenberg<sup>1</sup> (<sup>1</sup>Ramat Gan, ISR; <sup>2</sup>Evanston 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. Miyatake<sup>1</sup>, K. Shitasue<sup>1</sup>, Y. Omori<sup>1</sup>, K. Nakagawa<sup>1</sup>, M. Fujiwara<sup>1</sup>, T. Matsushita<sup>1</sup>, H. Tamiaki<sup>2</sup> (<sup>1</sup>Otsu, JPN; <sup>2</sup>Kusatsu, 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. Antonenko<sup>1</sup>, E.A. Dutseva<sup>1</sup>, E.A. Kotova<sup>1</sup>, J.R. Pfeifer<sup>2</sup>, U. Koert<sup>2</sup> (<sup>1</sup>Moscow, RUS; <sup>2</sup>Marburg, 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. Delanaye<sup>1</sup>, C. Volanti<sup>1</sup>, N. Jacobs<sup>1</sup>, R. Greimers<sup>1</sup>, F. Tfibel<sup>2</sup>, M.-P. Fontaine Aupart<sup>2</sup>, A. Vanderplasschen<sup>1</sup>, M. Hoebeke<sup>1</sup>, J. Piette<sup>1</sup> (<sup>1</sup>Liège, BEL; <sup>2</sup>Orsay, 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. Zhou<sup>1</sup>, B.W. Pogue<sup>1</sup>, B. Chen<sup>1</sup>, E. Demidenko<sup>1</sup>, P.J. Hoopes<sup>1</sup>, T. Hasan<sup>2</sup> (<sup>1</sup>Hanover NH, USA; <sup>2</sup>Boston 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. Zupan<sup>1</sup>, L. Herényi<sup>1</sup>, K. Thót<sup>2</sup>, Z. Majer<sup>1</sup>, G. Csik<sup>1</sup> (<sup>1</sup>Budapest, HUN; <sup>2</sup>Heidelberg, 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. Camerin<sup>1</sup>, G. Jori<sup>1</sup>, M.A.J. Rodgers<sup>2</sup>, M.E. Kenney<sup>3</sup> (<sup>1</sup>Padova, ITA; <sup>2</sup>Bowling Green OH, USA; <sup>3</sup>Cleveland 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. Niziolek<sup>1</sup>, W. Korytowski<sup>1,2</sup>, A.W. Girotti<sup>2</sup> (<sup>1</sup>Kraków, POL; <sup>2</sup>Milwaukee WI, USA)
- PII32 Apoptosis accommodating effects of nitric oxide (NO) in photodynamically stressed tumor cells**  
M. Niziolek<sup>1</sup>, T. Krisak<sup>2</sup>, W. Korytowski<sup>1,2</sup>, A.W. Girotti<sup>2</sup> (<sup>1</sup>Krakow, POL; <sup>2</sup>Milwaukee 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. Stoklosa<sup>1</sup>, D. Nowis<sup>1</sup>, M. Legat<sup>1</sup>, T. Grzela<sup>1</sup>, G. Wilczyński<sup>1</sup>, E. Wilczek<sup>1</sup>, A. Jalili<sup>1</sup>, E. Głodkowska<sup>1</sup>, P. Mrówka<sup>1</sup>, M. Makowski<sup>1</sup>, T. Issat<sup>1</sup>, J. Dulak<sup>2</sup>, A. Józkowicz<sup>2</sup>, M. Adamek<sup>3</sup>, P. Nazarewski<sup>1</sup>, M. Jakóbiński<sup>1</sup>, J. Golab<sup>1</sup> (<sup>1</sup>Warsaw, POL; <sup>2</sup>Kraków, POL; <sup>3</sup>Katowice, POL)
- PII36 On the role of calcium elevation in glioblastoma cell death under hypericin-induced photodynamic treatment**  
D.E. Bragin<sup>1</sup>, G. Pfaffel-Schubart<sup>2</sup>, A. Rück<sup>2</sup> (<sup>1</sup>Albuquerque NM, USA; <sup>2</sup>Ulm, GER)
- PII37 Singlet oxygen generation by selected phthalocyanines and naphthalocyanines**  
A.M. Edwards<sup>1</sup>, M. Fajardo<sup>1</sup>, M. Muñoz<sup>1</sup>, G. Jori<sup>2</sup> (<sup>1</sup>Santiago, CHI; <sup>2</sup>Padova, ITA)
- PII38 Fluorescence spectroscopic study of hypericin-photosensitized oxidation of low-density lipoproteins**  
S. Kascakova<sup>1,2</sup>, M. Refregiers<sup>2</sup>, D. Jancura<sup>1</sup>, F. Sureau<sup>3</sup>, J.-C. Maurizot<sup>2</sup>, P. Miskovsky<sup>1,4</sup>  
(<sup>1</sup>Kosice, SVK; <sup>2</sup>Orleans, FRA; <sup>3</sup>Bobigny, FRA; <sup>4</sup>Bratislava, 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. Lassalle<sup>1</sup>, F. Marchal<sup>1</sup>, S. Marchal<sup>1</sup>, M.A. D'Hallewin<sup>1</sup>, F. Guillemin<sup>1</sup>, J. Moan<sup>2</sup>, L. Bezdetnaya<sup>1</sup>  
(<sup>1</sup>Vandœuvre-les-Nancy, FRA; <sup>2</sup>Oslo, NOR)
- PII42 Development of sensitizers based on squaraine moiety for photodynamic therapy**  
D. Ramaiah<sup>1</sup>, K.T. Arun<sup>1</sup>, K. Jyothish<sup>1</sup>, B. Epe<sup>2</sup> (<sup>1</sup>Trivandrum, IND; <sup>2</sup>Mainz, 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. Arnaut<sup>1</sup>, J.M. Dabrowski<sup>2</sup>, C. Monteiro<sup>1</sup>, A. Peixoto<sup>1</sup>, M.M. Pereira<sup>1</sup>, S.J. Formosinho<sup>1</sup>, G. Stochel<sup>2</sup>, K. Urbanska<sup>2</sup> (<sup>1</sup>Coimbra, POR; <sup>2</sup>Krakow, 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. Aerts<sup>1</sup>, P. Leuraud<sup>1</sup>, I. Laville<sup>1</sup>, J. Blais<sup>1</sup>, Ph. Maillard<sup>2</sup>, L. Desjardins<sup>1</sup>, M.F. Poupon<sup>1</sup>, F. Doz<sup>1</sup> (<sup>1</sup>Paris, FRA; <sup>2</sup>Orsay, 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. Cottrell<sup>1</sup>, T.H. Foster<sup>1</sup>, A.R. Oseroff<sup>2</sup> (<sup>1</sup>Rochester NY, USA; <sup>2</sup>Buffalo 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. Villette<sup>1</sup>, T.G. van Leeuwen<sup>1,2</sup>, C. Otto<sup>1</sup> (<sup>1</sup>Enschede, NED; <sup>2</sup>Amsterdam, 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-Laize<sup>1</sup>, V. Chalau<sup>1</sup>, A.J. MacRobert<sup>1</sup>, I.J. Bigio<sup>2</sup>, L.B. Lovat<sup>1</sup>, S.G. Bown<sup>1</sup> (<sup>1</sup>London, GBR; <sup>2</sup>Boston 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. Tobita<sup>1</sup>, J. Oshima<sup>1</sup>, H. Naoumi<sup>1</sup>, S. Komaba<sup>1</sup>, T. Yoshihara<sup>1</sup>, A.K. Mishra<sup>2</sup> (<sup>1</sup>Kiryu, JPN; <sup>2</sup>Chennai, IND)
- PII65 Fluorescent diagnostics in gynecological cancer with alasense**  
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 alasense**  
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. Silva<sup>1</sup>, F. Giuntini<sup>1</sup>, M.A.F. Faustino<sup>1</sup>, J.P.C. Tomé<sup>1</sup>, M.G.P.M.S. Neves<sup>1</sup>, A.C. Tomé<sup>1</sup>, A.M.S. Silva<sup>1</sup>, M.G. Santana-Marques<sup>1</sup>, A.J. Ferrer-Correia<sup>1</sup>, J.A.S. Cavaleiro<sup>1</sup>, M.F. Caeiro<sup>2</sup>, R.R. Duarte<sup>2</sup>, S.A.P. Tavares<sup>2</sup>, I.N. Pegado<sup>2</sup>, B. d'Almeida<sup>2</sup>, A.P.A. De Matos<sup>2</sup>, M.L. Valdeira<sup>2</sup> (<sup>1</sup>Aveiro, POR; <sup>2</sup>Lisbon, 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. Radžiutė (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 (Moscow, RUS)
- PII74 Light induced melatonin suppression – indications for a dose dependence**  
K. Schulmeister<sup>1</sup>, M. Weber<sup>1</sup>, E. Schernhammer<sup>2</sup> (<sup>1</sup>Seibersdorf, AUT; <sup>2</sup>Boston 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. Villafañe<sup>2</sup>, K. Gao<sup>1</sup>, P. Li<sup>1</sup>, G. Li<sup>1</sup>, E.W. Helbling<sup>2</sup> (<sup>1</sup>Guangdong, CHN, <sup>2</sup>Playa 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-Surget<sup>1</sup>, F. Joux<sup>1</sup>, T. Douki<sup>2</sup> (<sup>1</sup>Banyuls-sur-mer, FRA; <sup>2</sup>Grenoble, 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. Hernández<sup>1</sup>, R.A. Quiñones<sup>1</sup>, G. Daneri<sup>1,2</sup>, M.E. Farias<sup>3</sup>, E.W. Helbling<sup>4</sup> (<sup>1</sup>Concepción, CHI; <sup>2</sup>Valparaíso, CHI; <sup>3</sup>San Miguel de Tucumán, ARG; <sup>4</sup>Playa Unión, ARG)
- PII81 Lack of reddening in Lake Tovel (Brenta Dolomites, Trento, Italy): photobiological aspects**  
C. Bagnoli<sup>1</sup>, M. Cantonati<sup>2</sup>, F. Ghetti<sup>1</sup>, D. Spitale<sup>2</sup>, M. Tardio<sup>2</sup> (<sup>1</sup>Pisa, ITA; <sup>2</sup>Trento, ITA)
- 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)
- PII83 A blue-light sensing, phototropin-related protein from *Pseudomonas putida*: a paradigm for an extended LOV construct**  
U. Krauss<sup>1</sup>, A. Losi<sup>2</sup>, W. Gärtner<sup>3</sup>, K.-E. Jaeger<sup>1</sup>, T. Eggert<sup>1</sup> (<sup>1</sup>Jülich, GER; <sup>2</sup>Parma, ITA; <sup>3</sup>Mülheim, GER)
- PII84 A flavoprotein isolated from phototactic zoospores of a brown alga, *Scytosiphon lomentaria*: a new member of “Old Yellow Enzyme” family**  
S. Fujita<sup>1</sup>, S. Okamoto<sup>2</sup>, S. Yoshikawa<sup>3</sup>, M. Iseki<sup>4</sup>, M. Watanabe<sup>5</sup>, T. Motomura<sup>6</sup>, H. Kawai<sup>1</sup>, A. Murakami<sup>1</sup> (<sup>1</sup>Kobe, JPN; <sup>2</sup>Kyoto, JPN; <sup>3</sup>Fukui, JPN; <sup>4</sup>Aichi, JPN; <sup>5</sup>Kanagawa, JPN; <sup>6</sup>Hokkaido, JPN)
- PII85 Peridinin triplet state dynamics in Peridinin–Chlorophyll-a–Protein (PCP)**  
D.C. Lührs<sup>1</sup>, M.T.A. Alexandre<sup>1</sup>, I.H.M. van Stokkum<sup>1</sup>, R. Hiller<sup>2</sup>, M. Groot<sup>1</sup>, J.T.M. Kennis<sup>1</sup>, R. van Grondelle<sup>1</sup> (<sup>1</sup>Amsterdam, NED; <sup>2</sup>Sidney, AUS)
- PII86 Ultrafast events in the Photoactive Yellow Protein chromophore: protein vs solution environment**  
A. Espagne<sup>1</sup>, P. Changenet-Barret<sup>1</sup>, P. Plaza<sup>1</sup>, K.J. Hellingwerf<sup>2</sup>, M.M. Martin<sup>1</sup> (<sup>1</sup>Paris, FRA; <sup>2</sup>Amsterdam, NED)

- PII87**     **Structure, energetics and spectra of the most stable isomers of some C<sub>60</sub>X<sub>12</sub> and C<sub>60</sub>X<sub>6</sub>Y<sub>6</sub> 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. Rassadina<sup>1</sup>, S.F. Koval<sup>2</sup>, N.G. Averina<sup>1</sup> (<sup>1</sup>Minsk, BLR; <sup>2</sup>Novosibirsk, RUS)
- PII90**     **Self-assembly of amphiphilic zinc chlorins possessing a hydrophilic oligooxyethylene group**  
 T. Miyatake<sup>1</sup>, T. Onishi<sup>1</sup>, S. Kato<sup>1</sup>, M. Fujiwara<sup>1</sup>, T. Matsushita<sup>1</sup>, H. Tamiaki<sup>2</sup> (<sup>1</sup>Otsu, JPN; <sup>2</sup>Kusatsu, JPN)
- PII91**     **Supramolecular gels prepared with self-assembly of amphiphilic zinc chlorines**  
 T. Miyatake<sup>1</sup>, S. Tanigawa<sup>1</sup>, E. Takenaka<sup>1</sup>, M. Fujiwara<sup>1</sup>, T. Matsushita<sup>1</sup>, H. Tamiaki<sup>2</sup> (<sup>1</sup>Otsu, JPN; <sup>2</sup>Kusatsu, JPN)
- PII92**     **Streptomycin effects on the activity of chlorophyll biosynthesis in barley seedlings**  
E.B. Yaronskaya, E.R. Gritskevitch, 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. Vrábliková<sup>1</sup>, M. McEvoy<sup>2</sup>, K.A. Solhaug<sup>2</sup>, M. Barták<sup>1</sup>, Y. Gauslaa<sup>2</sup> (<sup>1</sup>Brno, CZE; <sup>2</sup>Ås, 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 (*Oriza sativa* L.) leaves by photocatalyst (TiO<sub>2</sub>)**  
S.C. Hong<sup>1</sup>, A.C. Chang<sup>1</sup>, P.G. Shin<sup>1</sup>, S.H. Kim<sup>1</sup>, K.S. Lee<sup>1</sup>, C.W. Lee<sup>2</sup> (<sup>1</sup>Suwon, KOR; <sup>3</sup>Chongju, KOR)
- PII97**     **Isolation and characterization of a novel photomorphogenic and circadian clock mutant in *Arabidopsis***  
É. Kevei<sup>1</sup>, P. Gyula<sup>1</sup>, R. Tóth<sup>1</sup>, B. Fehér<sup>1</sup>, A. Viczián<sup>1</sup>, L. Kozma-Bognár<sup>1,2</sup>, A.J. Millar<sup>2</sup>, F. Nagy<sup>1</sup> (<sup>1</sup>Szeged, HUN; <sup>2</sup>Edinburgh, GBR)
- PII98**     **New light signalling component affecting circadian clock in *Arabidopsis thaliana***  
B. Fehér<sup>1</sup>, É. Kevei<sup>1</sup>, P. Gyula<sup>1</sup>, R. Tóth<sup>1</sup>, V. Sokolova<sup>1</sup>, L. Kozma-Bognár<sup>1,2</sup>, A.J. Millar<sup>2</sup>, F. Nagy<sup>1</sup> (<sup>1</sup>Szeged, HUN; <sup>2</sup>Edinburgh, GBR)
- PII99**     **Analysis of the maize leaf proteome after various UV-B treatments of lines differing in UV-B sensitivity**  
P. Casati<sup>1,2</sup>, X. Zhang<sup>3</sup>, A.L. Burlingame<sup>3</sup>, V. Walbot<sup>1</sup> (<sup>1</sup>Stanford CA, USA; <sup>2</sup>Rosario, ARG; <sup>3</sup>San 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)