



38th Meeting of the American Society for Photobiology

Tampa Bay, Florida · May 21–26, 2016
Conference Chair: Elizabeth Galliard

FINAL PROGRAM

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WELCOME

TO THE 38TH MEETING OF THE AMERICAN SOCIETY FOR PHOTOBIOLOGY

Dear Conference Attendee,

Welcome to the 38th scientific meeting of the American Society for Photobiology! You will be taking part in an absolutely vibrant conference covering all aspects of contemporary photobiology with attendees from all corners of the globe. The meeting is being held at the Tampa Marriott Waterside Hotel & Marina, a breathtaking venue with all state of the art accommodations ensuring an enjoyable and productive meeting.

The scientific program includes 27 informative and diverse sessions as well as two poster sessions. We have an outstanding lineup of plenary speakers including Doug Brash (Yale University) speaking on "Chemiexcitation: A Dark Path to Melanoma", Rex Tyrrell, the current president of our sister society, the European Society for Photobiology, who will give us an historical perspective and two speakers, Carlos Crespo (Case Western Reserve University) and Mary Harrington (Smith College), presenting in the Kendrick C. Smith Interdisciplinary Symposium on Photobiology. There will also be presentations from recipients of the Research and New Investigator Awards.

For the first time, ASP is hosting a High School Science Fair event on Sunday May 22. Frank Gasparro is the coordinator and is chair of the session "What is Photobiology". In collaboration with the Tampa public school district, the high school science fair winners will have a poster session on Sunday.

The Associate members have a number of events planned that are distributed throughout the meeting schedule. These include the Pizza Party, the Mentoring Lunch, an industry discussion panel and networking event and a grant writing workshop. Be sure to check these out!

Finally, Tampa is located on the beautiful western Gulf Coast of Florida and is surrounded by fun and entertaining activities: the Florida Aquarium, Busch Gardens, the Tampa Zoo, the Morean Arts Center with the first permanent Chihuly collection to name a few, Cape Canaveral is only a two hour drive away. Wednesday has been left open for you to explore the site and sounds of Tampa. The meeting banquet will be held at the historic Columbia Restaurant in Ybor City.

We look forward to seeing you in Tampa!

Beth Gaillard,
Chair and Conference Organizer
ASP Past-President

Georg Wondrak
ASP President-elect

ASSOCIATE MEMBER ACTIVITIES

Dear Associate members,

The Associate Council of the American Society for Photobiology (ASP) is very excited to host the following networking and mentoring events for students and postdoctoral fellows (Associate Members) at the upcoming ASP meeting from May 21st – 26th at Tampa, FL. The goal of our events is to provide associate members with resources to further their knowledge on different career paths in Photobiology, Photochemistry and to foster a sense of community. We encourage all our associate members to participate and take advantage of these FREE events at the ASP meeting;

- 1. Pizza Party (May 22, 8:00pm – 10:00pm)** – At this popular informal event you will have the opportunity to socialize with other fellow students and enjoy FREE pizza and beer.
- 2. Mentoring Lunch (May 23, 12:00pm – 2:00pm)** – During this mentoring session, the students will have the opportunity to interact with early career scientist as well as experienced principal investigators from academia and industry and gain insights on career development, research interests, and much more.

Invited speakers: Dr. Theresa M. Busch (University of Pennsylvania) and Dr. Josh Williams (Johnson and Johnson).

Invited mentors for round table discussions: Dr. Alexander Greer, Dr. Jonathan Lovell, Dr. Imran Rizvi, Dr. Joanna Turner, Dr. Scott C. Davis, Dr. Bryan Spring and Dr. Srivalleesha Mallidi.

- 3. Grant Writing Workshop (May 23, 2:00pm – 4:00pm)** – This workshop will introduce the students and postdoctoral researchers to government funding opportunities and the basics of writing successful grant proposal, such as tips for making each section of the proposal stronger, communications with finding agencies during the grant process, and much more.

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ASSOCIATE MEMBER ACTIVITIES

Invited speakers: Dr. Shannon Gallagher (Program administrator in scientific review and grants administration at the AACR), Dr. Imran Rizvi (K99/R00 award recipient), and Dr. Srivalleesha Mallidi (F32 award recipient).

- 4. Careers in Industry Event (May 23, 8:00pm – 9:30pm)** – At this industry networking event the students and postdoctoral fellows will have the opportunities to interact with the research scientists from various industries. The goal of this event is to provide insider's insight on the skills and knowledge required to further career in industry and learn about the structures of life sciences in private industry sector.

Invited panelists: Dr. Doug Learn (Charles River Laboratories), Dr. Ludger Kolbe (Beiersdorf AG), Dr. Laurent Marrot (L'OREAL Research & Innovation), Dr. Josh Williams and Dr. Prithwiraj Maitra (Johnson and Johnson)

Please be advised that all the above events are FREE and open to all the attendees REGISTERED for the 2016 ASP meeting. Looking forward to meeting you at Tampa!

Best Regards,
Huang-Chiao (Joe) Huang and Ashwini A. Ghogare
Associate council members of the ASP

THE AMERICAN SOCIETY FOR PHOTOBIOLOGY THANKS

THE 2016 MEETING ORGANIZING COMMITTEE

Chair

Elizabeth Gaillard

Officers and Councilors

Keith Cengel, President

Georg Wondrak, President-Elect

Elizabeth Gaillard, Past-President

Theresa Busch, Treasurer

P. Donald Forbes, Secretary

Brett Burk, Executive Secretary

Organizing Committee

Igor Alabugin

Frank Gasparro

David Sliney

Robert Blankenship

Albert Girotti

Kimberley S. Samkoe

Douglas Brash

Alec Greer

Tadeusz Sarna

Theresa Busch

Mary Harrington

Charles Simone

Jean Cadet

Yu-Ying He

Bryan Q. Spring

Keith Cengel

Stephen Kanick

Joanna Turner

Regine Choe

Lisa Kelly

William W. Ward

Scott C. Davis

Doug Learn

Georg Wondrak

Don Forbes

Jon Lovell

Wolfgang Gaertner

Prithwiraj Maitra

2016 AWARDS

Lifetime Achievement Award

Frances Noonan

Research Award

Antony Young

Photocite-A Award

Peter R. Ogilby

Photocite-B Award

Jean Cadet & Thierry Douki

Editor's Student Research Award

Ashwini A Ghogare

Frederick Urbach Memorial Student Travel Award

Sriram Anbil

Roxanne Bérubé

Shyamosree Bhattacharya

Emma Briars

Zinflou Corinne

Richard Davis IV

Marie-Catherine Drigeard

Desgarnier

Damilola Fajuyigbe

Ashwini Ghogare

Shipra Gupta

Huang Chiao (Joe) Huang

Devi Kalyan Karumanchi

Daniel Kraus

Karl Lawrence

Pratheeba Palasuberniam

Anna Pilat

Marvin Pollum

Zachary Silber

Stacey Sova

Michael Vega

Sally Yacout

THE AMERICAN SOCIETY FOR PHOTOBIOLOGY THANKS

THE FOLLOWING SPONSORS

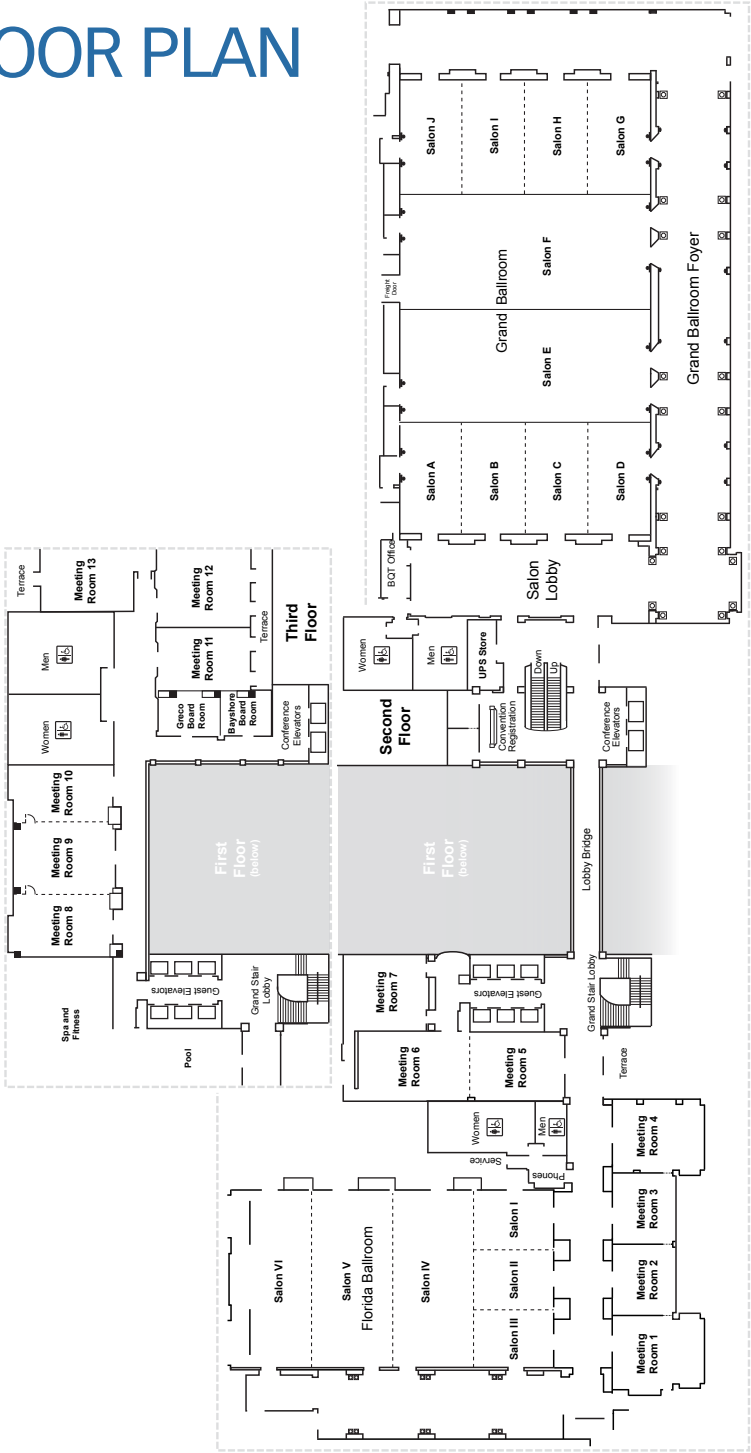


THE AMERICAN SOCIETY FOR PHOTOBIOLOGY THANKS

THE FOLLOWING SPONSORS



FLOOR PLAN



ABBREVIATED SCHEDULE

DAY 1 – Saturday, May 21

TIME	EVENT	CHAIR(s)	ROOM
10:00am – 12:00pm	Executive Committee Meeting		Meeting Rooms 5-6
12:00pm – 4:00pm	Exhibitor Set Up		Florida 6
1:00pm – 4:00pm	Council Meeting		Meeting Rooms 5-6
4:00pm – 7:00pm	Registration		Florida Ballroom Foyer
6:00pm – 8:00pm	Welcome Reception		IL Terrazo

ABBREVIATED SCHEDULE

DAY 2 – Sunday, May 22

TIME	EVENT	CHAIR(s)	ROOM
8:00am – 4:00pm	Registration		Florida Ballroom Foyer
9:00am – 10:00am	Presidential Lecture: Clinical Aspect of PDT	Cenegel	Florida 4-5
9:30am – 4:00pm	Exhibits Open		Florida 6
10:00am – 12:00pm	Current Trends in Photochemistry and Imaging	Greer/Kelly	Florida 1
10:00am – 12:00pm	Frontiers in Nanoparticulate Approaches to Imaging and Photodynamic Therapy	Lovell	Florida 2
10:00am – 12:00pm	Frontiers in Clinical Photodiagnosis and Photodynamic Therapy	Simone	Florida 3
1:00pm – 3:00pm	High School Student Poster Session		Salon 6
1:00pm – 5:00pm	In Honor of Jack Saltiel's Birthday	Gaillard/ Alabugin	Florida 1
3:00pm – 5:00pm	Symposium: What is Photobiology?	Gasparro	Florida 2
6:00pm – 8:00pm	Poster Session I		Florida 6
8:00pm – 10:00pm	Associate Member Pizza Party		Tampa Pizza Company

ABBREVIATED SCHEDULE

DAY 3 – Monday, May 23

TIME	EVENT	CHAIR(S)	ROOM
8:30am – 4:00pm	Registration		Florida Ballroom Foyer
9:00am – 10:00am	Plenary Lecture: Chemiexcitation: A Dark Path to Melanoma	Brash	Florida 4-5
10:00am – 12:00pm	Nitric Oxide-Mediated Photobiological Responses	Girotti	Meeting Room 2
10:00am – 12:00pm	Frontiers in Photophysics and Biomedical Applications	Kanick/Spring	Florida 1
10:00am – 12:00pm	Offered Papers	Ward/Karumanchi	Florida 2
10:00am – 12:00pm	Dynamics and Mechanism of DNA Repair by Photolyase: Experiment and Theory – Part 1	Zhong	Florida 3
12:00pm – 2:00pm	Mentoring Lunch		Meeting Room 5
2:00pm – 4:00pm	Frontiers in Optical Imaging	Choe	Florida 1
2:00pm – 5:00pm	Frontiers in Skin Photodamage and Sun Protection	Wondrak/Kolbe	Florida 2
2:00pm – 4:00pm	Current Topics in Photobiology, I	Williams/Justiniano	Florida 3
2:00pm – 4:00pm	Grant Writing Workshop		Meeting Room 5
5:00pm – 6:00pm	ASP Business Meeting		Florida 4 & 5
6:00pm – 8:00pm	Poster Session 2		Florida 6
7:00pm – 10:00pm	Editorial Board Meeting <i>(Invitation Only)</i>		Meeting Room 3
8:00pm – 9:30pm	Industry Panel Discussion		Florida 1

ABBREVIATED SCHEDULE

DAY 4 – Tuesday, May 24

TIME	EVENT	CHAIR(S)	ROOM
7:30am – 4:00pm	Registration		Florida Ballroom Foyer
8:00am – 12:10pm	Frontiers in DNA Bipyrimidine Damage and Repair	Cadet	Meeting Room 5
8:00am – 11:30am	Antenna Processes in Photosynthesis	Blankenship	Florida 1
8:00am – 10:00am	Frontiers in Molecular Mechanisms of Skin Photocarcinogenesis	He	Florida 2
8:00am – 10:00am	Ocular Photobiology, 1	Gaillard/Sarna	Florida 3
10:00am – 12:00pm	Optical-Image-Guided Interventions	Kanick/Davis	Meeting Room 4
10:00am – 12:00pm	Frontiers in the Mechanisms of UV-induced Inflammation	Wu	Florida 2
10:00am – 12:00pm	Frontiers in Models, Measurement and Monitoring in Environmental UV	Turner	Florida 3
12:00pm – 1:00pm	Past President's Luncheon		Meeting Room 3
1:00pm – 2:00pm	Research Award: Solar UVR – Friend and Foe		Florida 4-5
2:30pm – 3:30pm	New Investigator I and II		Florida 4-5
3:30pm – 4:30pm	ESP Presidential Lecture: From Sarasota to Tampa		Florida 4-5
4:00pm – 8:00pm	Exhibit Tear Down		Florida 6
7:00pm – 10:00pm	ASP Banquet		The Columbia Restaurant

ABBREVIATED SCHEDULE

DAY 5 – Wednesday, May 25

TIME	EVENT	CHAIR(s)	ROOM
7:30am – 12:00pm	Registration		Florida Ballroom Foyer
8:00am – 12:00pm	Phytochromes	Gartner	Florida 2
8:00am – 9:45am	Current Topics in Photobiology, II	Crespo/ Pollum	Florida 3
8:30am – 11:45am	ASP/ESP Lecture: Combinational Approaches in PDT	Busch	Florida 4-5
10:00am – 12:00pm	Dynamics and Mechanism of DNA Repair by Photolyase: Experiment and Theory – Part 2	Zhong	Florida 3
10:00am – 12:00pm	Ocular Photobiology, 2	Slaney	Meeting Room 4
12:00pm – 4:00pm	Free Afternoon		
6:00pm – 8:00pm	Kendric C. Smith Symposium		Florida 4-5

DAY 6 – Thursday, May 26

TIME	EVENT	CHAIR(s)	ROOM
8:30am – 10:00am	Registration		Florida Ballroom Foyer
9:00am – 11:00am	Frontiers in the Effects of Light on Circadian Rhythms	Harrington	Florida 1
11:00am – 2:00pm	Council Meeting		Meeting Rooms 5-6

GENERAL INFO

Registration Desk Hours

Location: Florida Ballroom Foyer

Day	Time
Saturday, May 21	4:00pm – 7:00pm
Sunday, May 22	8:00am – 4:00pm
Monday, May 23	8:30am – 4:00pm
Tuesday, May 24	7:30am – 4:00pm
Wednesday, May 25	7:30am – 12:00pm
Thursday, May 26	8:30am – 10:00am

Refreshment Breaks

Refreshments will be available in the poster area from 8-9 am and in the afternoon from 3:30-4:30 pm.

Explore Tampa!

The Visit Tampa Bay will be available during Saturday evening's Welcome Reception to answer all of your questions about our host city. Whether you're looking for the best pizza in town or fresh seafood, this is where you'll find the answers. They can also recommend museums, local tours, outdoor adventures, and local shopping areas.

If you aren't able to connect with the Visit Tampa Bay on Saturday night, no worries! City maps and visitor's guides will be available at the registration check-in desk.

TECHNICAL PROGRAM

Saturday, May 21, 2016

Executive Committee Meeting

10:00am – 12:00pm Meeting Rooms 5-6

Exhibitor Set Up

12:00pm – 4:00pm Florida 6

ASP Council Meeting

1:00pm – 4:00pm Meeting Rooms 5-6

New Council members to arrive at 11:00am

Registration

4:00pm – 7:00pm Florida Ballroom Foyer

Welcome Reception

6:00pm – 8:00pm IL Terrazo

Sunday, May 22, 2016

Registration

8:00am – 4:00pm Florida Ballroom Foyer

Presidential Lecture: Clinical Aspect of PDT

9:00am – 10:00am Florida 4-5 Chair: Keith Cengel

Exhibits Open

9:30am – 4:00pm Florida 6

Current Trends in Photochemistry and Imaging

Session Sponsored by Andor

10:00am – 12:00pm Florida 1

Co-Chairs:

Alec Greer, Lisa Kelly

- 2-1 10:00am – 10:25am
Phototherapy and Photoreporters – Efforts Towards Inorganic Therapeutics and Research Tools
Glazer, E., Heidary, D., Wachter, E., Sun, Y.
University of Kentucky
- 2-2 10:25am – 10:50am
Heptamethine Cyanine Near-IR Uncaging Chemistry: Discovery and Applications
Schermann, M., Nani, R., Gorka, A.
National Cancer Institute
- 2-3 10:50am – 11:15am
Metal Coordination Complexes as Photosensitizers for Photodynamic Therapy
McFarland, S.
Acadia University
- 2-4 11:15am – 11:40am
Multifunctional Prodrugs for the Spatiotemporal Combination of Photodynamic Therapy and Site-Specific Chemotherapy
You, Y.
University of Oklahoma Health Sciences Center
- 2-5 11:40am – 11:50am
Photooxidative Crosslinking and Affinity Labeling of Proteins Using Naphthalene Imides
Sova, S.
University of Maryland Baltimore County
- 2-6 11:50am – 12:00pm
An Unusual Photooxygen-Atom Exchange Reaction of Nitrosamines with Molecular Oxygen: Dependence on Nitrosamine Substituents
Ghogare, A., Debaz, C., Abramova, I., Greer, E., Oliveira, M., Prado, F., Di Mascio, P., Greer, A.
Brooklyn College and Graduate Center of the City University of New York, Baruch College, University of Sao Paulo

Frontiers in Nanoparticulate Approaches to Imaging and Photodynamic Therapy

10:00am – 12:00pm

Florida 2

Chair: Jon Lovell

3-1 10:00am – 10:30am

Nanoparticle Clusters for Cancer Imaging and Therapy

Sokolov, K.

The UT M.D. Anderson Cancer Center

3-2 10:30am – 11:00am

Ferritin-Facilitated Photodynamic Therapy Against Cancer

Xie, J.

University of Georgia

3-3 11:00am – 11:30am

Targeted Gold Nanoparticles for PDT Drug Delivery in Brain Tumors

Broome, A., Dixit, S., Zhu, Y., Moore, A.

Medical University of South Carolina

3-4 11:30am – 12:00pm

Doxorubicin Encapsulated in Long Circulating Stealth Liposomes Conferred with Light-triggered Drug Release

Luo, D., Carter, K., Razi, A., Geng, J., Shao, S., Giraldo, D., Sunar, U., Ortega, J., Lovell, J.

University at Buffalo, State University of New York, McMaster University, Wright State University

Frontiers in Clinical Photodiagnosis and Photodynamic Therapy

10:00am – 12:00pm

Florida 3

Chair: Chuck Simone

4-1 10:00am – 10:20am

Photodiagnosis and Photodynamic Therapy: Can They Ever Be Combined in the Same Molecule?

Arnaut, L., Pereira, M., Dabrowski, J., Schaberle, F., Rocha, L., Gomes-da-Silva, L., Calvete, M., Soares, H., Silva, A., Lobo, A.

University of Coimbra, Portugal, Jagiellonian University, Poland, Luzitin SA, Portugal

4-2 10:20am – 10:40am

Repurposing Tetracyclines to Potentiate a Bi-Directionally Interactive Combination of Photodynamic Therapy and Irinotecan for Cancer

Huang, H., Rizvi, I., Liu, J., Hasan, T.

Massachusetts General Hospital and Harvard Medical School

- 4-3 10:40am – 11:00am
 Biomodulation of Metabolic and Signaling Pathways to Enhance
 Photodynamic Therapy Efficacy for Pancreatic Adenocarcinoma and
 Oral Squamous Cell Carcinoma
Anbil, S., Rizvi, I., Baglo, Y., Broekgaarden, M., Maytin, E., Hasan, T.
Howard Hughes Medical Institute, Harvard Medical School, Massachusetts
General Hospital, Wellman Center for Photomedicine, Cleveland Clinic Lerner
Research Institute
- 4-4 11:00am – 11:20am
 Advances in Photodynamic Therapy for Thoracic Malignancies:
 Frontiers for Mesothelioma and Lung Cancer
Simone, C.
University of Pennsylvania
- 4-5 11:20am – 11:40am
 Challenges of and Solution for Interstitial Photodynamic Therapy
Davis, S.
Thayer School of Engineering at Dartmouth
- 4-6 11:40am – 12:00pm
 Randomized Clinical Trial on the Efficacy and Safety of UV-Free Blue
 Light for Treating Mild Psoriasis Vulgaris
Liebmann, J., Born, M., Pfaff, S., von Felbert, V.
Philips GmbH, Innovative Technologies, Aachen, Germany, University Hospital,
RWTH Aachen University, Aachen, Germany

2016 High School Science Fair Winners Poster Session

1:00-3:00 pm Salon 6 Chair: Frank Gasparro

In Honor of Jack Saltiel's Birthday

Symposium Sponsored by Florida State University

1:00pm – 5:00pm Florida 1 Co-Chairs: Beth Gaillard,
 Igor Alabugin

1:00pm – 1:10pm
 Opening Remarks

- 5-1 1:10pm – 1:40pm
 Synthetic Oligo- and Poly-(phenylene ethynylene)-Electrolyte/Biological
 Interfaces
Whitten, D., Pappas, H., Donabedian, P., Hill, E., Chi, E., Neumann, A.
University of New Mexico

- 5-2 1:40pm – 2:10pm
Tracking Photoinduced Charge Separation in DNA
Lewis, F.
Northwestern University
- 5-3 2:10pm – 2:40pm
Expanding the Range of Caged Bioinitiators: 2-PE (500 - 700 nm)
Excitation of p-Hydroxyphenacyl Caged ATP
Givens, R., Elles, C., Houk, A.
University of Kansas
- 5-4 2:40pm – 3:10pm
Photochemistry in Confined Spaces: Medium is the Message
Ramamurthy, V.
University of Miami
- 5-6 3:10pm – 3:40pm
High Energy Long-Lived Excited States in Model Duplexes and Natural DNA
Markovitsi, D.
LIDYL, CEA, CNRS
- 5-7 3:40pm – 4:10pm
Chemometric Analysis of Chromoprotein Photocycles
Zimanyi, L.
Biological Research Centre of the Hungarian Academy of Sciences
- 5-8 4:10pm – 4:40pm
Triplet States in Organometallic Conjugated Materials
Schanze, K.
University of Florida
- 5-9 4:40pm – 5:00pm
Closing Remarks

Symposium: What is Photobiology?

3:00pm – 5:00pm

Florida 2

Chair: Frank Gasparro

Poster Session I

Poster Session Sponsored by Loreal

6:00pm – 8:00pm

Florida 6

- P1-2 Photocaged Carbohydrates as Versatile Tools for Synthetic Bio(techno)logy and Single Cell Applications**
Binder, D., Bier, C., Hilgers, F., Graberger, A., Loeschcke, A., Kohlheyer, D., Pietruszka, J., Jaeger, K., Drepper, T.
University Dusseldorf, FZ Juelich, IBG-1, FZ Juelich
- P1-4 Major Inter-Individual Variation in the UVB Induced Increase and Maximal Level of 25-Hydroxy Vitamin D**
Datta, P., Philipsen, P., Olsen, P., Petersen, B., Johansen, P., Morling, N., Wulf, H.
Department of Dermatology, Bispebjerg Hospital, Denmark, Department of Forensic Medicine, University of Denmark
- P1-5 A Non-Invasive Modality for In Vivo Detection of Neutrophil Influx in Preclinical Models of Mesothelioma**
Davis, R., Miller, J., Yuan, M., Busch, T.
University of Pennsylvania
- P1-6 What is Photobiology? An Introduction for High School Students**
Gasparro, F.
Hamden Hall Country Day School
- P1-7 Combination of Verteporfin-PDT and PI3K Pathway Inhibitor BEZ235 Synergistically Enhances Endothelial Cell Growth Inhibition and Apoptosis**
Kraus, D., Chen, B.
University of the Sciences
- P1-8 Therapeutic Enhancement of Aminolevulinic Acid-based Tumor Imaging and Therapy**
Palasuberniam, P., Chen, B.
University of the Sciences in Philadelphia
- P1-9 Plasmonic Nanocomposites for Rapid Tissue Sealing and Repair**
Rege, K., Urie, R., Flake, T., Mushaben, M., Heys, J., Jaffe, M.
Arizona State University, Montana State University, Midwestern University
- P1-10 Guidelines for Defining Type I and II Photosensitized Oxidation**
Baptista, M., Cadet, J., Di Mascio, P., Ghogare, A., Greer, A., Hamblin, M., Lorente, C., Ribeiro, M., Thomas, A., Vignoni, M.
University of Sao Paulo, University de Sherbrooke, Brooklyn College and Graduate Center of the City University of New York, Massachusetts General Hospital and Harvard Medical School, INIFTA, Universidad Nacional de La Plata (UNLP) and CONICET, Institute of Energy and Nuclear Research

- P1-11** Traces of Pollutants from Particulate Matter Induce a Strong Phototoxic Stress in Human Keratinocytes Exposed to UVA1: Requirement of an Appropriate Photoprotection Strategy
Belaïdi, J., Denat, L., Perez, P., Soeur, J., Zobiri, O., Marrot, L.
L'Oreal R&I
- P1-12** Investigating the Chemical Composition of Human Retinal Lipofuscin in Association with Age Related Macular Degeneration (AMD)
Denius, K., Tournear, J., Gaillard, E.
NIU
- P1-13** Impact of Human Skin Dermis on the Repair Efficiency of UV-Induced DNA Damage in the Epidermis
Dorr, M., Rochette, P.
Université Laval and Centre Hospitalier Universitaire de Québec Research Center
- P1-14** Photochemistry of Cholestatrienol – A Fluorescent Analogue of Cholesterol
Gupta, S., Chakraborty, S., Clark, R., Saltiel, J.
Florida State University
- P1-15** Mitochondrial Reactive Oxygen Species Accelerated Cellular Uptake of 5-Aminolevulinic Acid in Gastric Cancer Cells
Ito, H., Tamura, M., Matsui, H., Indo, H., Majima, M.
University of Tsukuba, Kagoshima University
- P1-16** B6-Vitamers are Endogenous Photosensitizers of Photo-Oxidative and Genotoxic Stress in Cultured Human Keratinocytes and Reconstructed Epidermis
Justiniano, R., Park, S., Williams, J., Perer, J., Lesson, J., Wondrak, G.
UA Cancer Center and College of Pharmacy, University of Arizona
- P1-17** Sustained Release Liposomal Drug Delivery for Treating Ocular Angiogenesis
Karumanchi, D., Pantoja, Y., Street, A., Freeman, D., Roth, F., Gaillard, E.
Northern Illinois University
- P1-18** Biological Effects of Heat Generated by Infrared Exposure on Human Skin In Vivo
Kim, M., Jung, Y., Kim, E., Lee, H.
Amorepacific R&D Center

- P1-19** 'All-in-One' Photodynamic Device and its Performance for In-Vivo Sensitizer Release
Ghogare, A., Miller, J., Mondal, B., Lyons, A., Cengel, K., Busch, T., Greer, A.
Brooklyn College and the Graduate Center of the City University of New York, University of Pennsylvania, College of Staten Island and The Graduate Center of the City University of New York
- P1-20** Phase Separation of Reactive Oxygen Species: Singlet Oxygen Chemistry at Interfaces
Ghogare, A., Malek, B., Fang, W., Walalawela, N., Choudhury, R., Liu, Y., Zhao, Y., Xu, Q., Lyons, A., Greer, A.
Brooklyn College and the Graduate Center of the City University of New York, College of Staten Island and Graduate Center of the City University of New York
- P1-21** Oral Vitamin D3 as a Neoadjuvant for Combination Photodynamic Therapy (cPDT): Preclinical Studies in a Murine Model to Predict the Therapeutic Response in Vitamin D3 Deficient Human Populations
Anand, S., Thomas, E., Hasan, T., Maytin, E.
Cleveland Clinic, Harvard Medical School
- P1-23** Zinc Phthalocyanine Functionalised Gold Nanoparticles for Photodynamic Cancer Therapy
García Calavia, P., Marín, M., Chambrier, I., Cook, M., Russell, D.
University of East Anglia

Associate Member Pizza Party

8:00pm – 10:00pm Tampa Pizza Company

Monday, May 23, 2016

Registration

8:30am – 4:00pm Florida Ballroom Foyer

Plenary Lecture: Chemiexcitation: A Dark Path to Melanoma

9:00am – 10:00am Florida 4-5 Chair: Douglas Brash

Nitric Oxide-Mediated Photobiological Responses

10:00am – 12:00pm Meeting Room 2 Chair: Al Girotti

8-1 10:00am – 10:30am

Nitric Oxide Derivatives and Skin Environmental Exposure to Light:
From Molecular Pathways to Therapeutic Opportunities

Suschek, C.

Department of Trauma and Hand Surgery, Medical Faculty of the Heinrich-Heine-University Dusseldorf

8-2 10:30am – 11:00am

Constitutive Nitric Oxide Synthases as a Chemopreventive Target for
UVB-Induced Skin Carcinogenesis

Wu, S., Tong, L.

Ohio University

8-3 11:00am – 11:30am

Role of Endogenous Nitric Oxide in Hyper-Aggressiveness of Cancer
Cells Surviving a PDT-Like Oxidative Challenge

Fahey, J., Girotti, A.

Medical College of Wisconsin

8-4 11:30am – 12:00pm

Nitric Oxide-Mediated Bystander Cell Responses in an Anti-tumor
Photodynamic Therapy Model

Bazak, J., Korytowski, W., Fahey, J., Girotti, A.

Jagiellonian University, Medical College of Wisconsin and Jagiellonian University

Frontiers in Photophysics and Biomedical Applications

10:00am – 12:00pm Florida 1 Co-Chairs: (Stephen) Chad Kanick, Bryan Spring

- 9-1 10:00am – 10:30am
In Vivo Multiphoton Imaging of Mouse Brain
Xu, C.
Cornell University
- 9-2 10:30am – 11:00am
Design and Optimization of Optical-Sectioning Microscopes via Realistic Simulations of Diffraction, Refraction, and Scattering in Tissues
Glaser, A., Chen, Y., Liu, J.
UW Seattle
- 9-3 11:00am – 11:30am
Sub-Diffusive Imaging of Tissue Microstructure in a Wide Field of View
Kanick, S.
Dartmouth College

Offered Papers

10:00am – 12:00pm Florida 2 Co-Chairs: William Ward, Kalyan Karumanchi

- 10-1 10:00am – 10:20am
Low Level Laser Therapy and Memory Enhancement: Effect of Different Energy Doses
Pandey, R.
- 10-2 10:20am – 10:40am
Persistence of DNA Damage Induced by Chronic UVB Irradiation in the Human Genome
Bérubé, R., Drigeard Desgarnier, M., Rochette, P.
University Laval and Centre Hospitalier Universitaire de Quebec Research Center
- 10-3 10:40am – 11:00am
An Integrated Optical Coherence Microscopy Imaging and Optical Stimulation System for Optogenetic Pacing in *Drosophila Melanogaster*
Alex, A., Li, A., Men, J., Jerwick, J., Tanzi, R., Zhou, C.
Lehigh University, Massachusetts General Hospital
- 10-4 11:00am – 11:20am
Purifying GFP by Modified Three-Phase Partitioning
Ward, W., Turner, C.
Rutgers University

10-5 11:20am – 11:40am
The Effect of Psoralen Ring Substituents and DNA Base Composition on Photoreactivity
Trehan, A., Wang, C., Crockett, M., Buhimschi, A., Jing, H., Buhimschi, I., Gooden, D., Gasparro, F.
Hamden Hall Country Day School, Yale University, Nationwide Childrens Hospital, Duke University

10-6 11:40am – 12:00pm
DNA and RNA Analogs for Topical Photodynamic Therapy
Pollum, M., Guan, L., Ahsanuddin, S., Baron, E., Lam, M., Crespo-Hernandez, C.
Case Western Reserve University

Dynamics and Mechanism of DNA Repair by Photolyase: Experiment and Theory – Part 1

10:00am – 12:00pm Florida 3 Chair: Dongping Zhong

11-1 10:00am – 10:30am
Dynamics and Mechanisms of UV-Damaged DNA Repair by Photolyases
Zhong, D.
The Ohio State University

11-2 10:30am – 11:00am
Microbial Members of the Photolyase/Cryptochrome Family: Common Structures, Common Mechanisms?
Essen, L.
Philipps University

11-3 11:00am – 11:30am
Utilizing Light for Repair of Light-induced DNA Damages: The Clever Mode of Action of DNA Photolyases
Faraji, S., Dreuw, A.
University of Southern California, Ruprecht-Karls University of Heidelberg, Germany

11-4 11:30am – 12:00pm
The Blue Light-Dependent Phosphorylation of Arabidopsis CRY2
Lin, C.
UCLA

Mentoring Lunch

Sponsored by Charles River Laboratories

12:00pm – 2:00pm Meeting Room 5

Grant Writing Workshop

2:00pm – 4:00pm

Meeting Room 5

Frontiers in Optical Imaging

2:00pm – 4:00pm

Florida 1

Chair: Regine Choe

12-1 2:00pm – 2:20pm

Monitoring Hemodynamic Responses to Treatments for Bone Graft and Breast Cancer with Diffuse Optical and Correlation Tomography
Choe, R.

12-2 2:20pm – 2:40pm

An Integrated Optical Coherence Microscopy Imaging and Optical Stimulation System for Optogenetic Pacing in *Drosophila Melanogaster*

12-3 2:40pm – 3:00pm

Miniature MEMS-Scanned Dual-Axis Confocal Microscopes for Point-of-Care Pathology
Liu, J.
UW Seattle

12-4 3:00pm – 3:20pm

Personalizing Photodynamic Therapy Based Treatment Strategies with Photoacoustic Imaging
Mallidi, S., Ichikawa, M., Alkhateeb, A., Khan, A., Mai, Z., Hasan, T.
Harvard Medical School

12-5 3:20pm – 3:40pm

Porphyrin-Phospholipid Liposomes: Emerging Applications in Chemophototherapy
Lovell, J.
SUNY Buffalo

Frontiers in Skin Photodamage and Sun Protection

Symposium sponsored by Beiersdorf

2:00pm – 5:00pm

Florida 2

Co-Chairs: Georg Wondrak,
Ludger Kolbe

13-1 2:00pm – 2:30pm

UVA and Oxidative Stress: Will Antioxidants Enhance Endogenous Protection?
Tyrrell, R.
University of Bath

- 13-2 2:30pm – 3:00pm
 Phospholipid Oxidation in UV Stress and Cellular Senescence in the Skin
Narzt, M., Nagelreiter, I., Bochkov, V., Latreille, J., Grillari, J., Tschachler, E., Gruber, F.
Medical University of Vienna, University of Graz, AUT, Chanel PB, Pantin, FRA,
VBIT-BOKU, CDL Skin, Vienna, AUT
- 13-3 3:00pm – 3:30pm
 Deleterious Synergy Between Pollution and Sunlight: Pollutants from
 Particulate Matter Aggravate Oxidative Impact of UVA1 in Skin Models
Marrot, L.
- 13-4 3:30pm – 4:00pm
 Hormonal Regulation of the Repair of UV Photodamage in Melanocytes
 by the MSH-MC1R Signaling Axis
Jarrett, S., Wolf Horrell, E., D'Orazio, J.
University of Kentucky
- 13-5 4:30pm – 5:00pm
 Photoprotective Properties of Licochalcone a from Glycyrrhiza Inflata
 on Human Skin In Vitro and In Vivo
Kolbe, L.
Beiersdorf AG
- 13-6 4:00pm – 4:30pm
 Redox-Directed Interventions Targeting Skin Photodamage: An
 'Inside-Out' Approach Harnessing NRF2
Wondrak, G.
UA Cancer Center and College of Pharmacy, University of Arizona

Current Topics in Photobiology, I

2:00pm – 4:00pm Florida 3 Co-Chairs: Josh Williams,
 Rebecca Justiniano

- 14-1 2:00pm – 2:15pm
 Molecular Engineering of Photosensitizers for Enhanced
 Photodynamic Therapy Against Pigmented Melanoma
Dabrowski, J., Pucelik, B., Stochel, G., Arnaut, L.
Faculty of Chemistry, Jagiellonian University, Krakow, Poland, Chemistry
Departament, University of Coimbra, Coimbra, Portugal
- 14-2 2:15pm – 2:30pm
 Wavelengths from 385 – 405nm Cause Photodamage to Skin Cells
Lawrence, K., Sarkany, R., Acker, S., Herzog, B., Young, A.
King's College London, BASF Grenzach GmbH

- 14-3 2:30pm – 2:45pm
Potential Hot Spots for Solar-Induced DNA Lesions
Ramazanov, R., Maksimov, D., Kononov, A.
St.Petersburg State University
- 14-4 2:45pm – 3:00pm
Long-Term Skin Pigmentation after a Single Sunburn Reveals Altered Hemidesmosome Plasticity
Coelho, S., Miller, S., Michele, T.
Center for Drug Evaluation and Research, FDA
- 14-5 3:00pm – 3:15pm
Rapid Deamination of Cyclobutane Pyrimidine Dimers at TCG Sites in the FOS Nucleosome In Vivo
Cannistraro, V., Pondugula, S., Song, Q., Taylor, J.
Washington University
- 14-6 3:15pm – 3:30pm
Towards Label-Free Evaluation of Oxidative Stress in Human Skin Exposed to Sun Filters
Osseiran, S., Wang, H., Suita, Y., Roider, E., Fisher, D., Evans, C.
Massachusetts General Hospital
- 14-7 3:30pm – 3:45pm
Ultraviolet A – Induced Oxidation in Cornea: Characterization of the Early Oxidation-Related Events
Zinflou, C., Rochette, P.
University Laval and Centre Hospitalier Universitaire de Quebec Research Center, Canada

ASP Business Meeting

5:00pm – 6:00pm Florida 4 & 5

Poster Session 2

Poster Session Sponsored by L'oreal

6:00pm – 8:00pm

Florida 6

- P2-1** Comparison of Photoactivation and Photorepair of T(6-4)T and T(6-4)C Photoproducts by Xenopus (6-4) Photolyase on FTIR Study
Kumagai, M., Yamada, D., Iwata, T., Yamamoto, J., Getzoff, E., Iwai, S., Kandori, H. Nagoya Institute of Technology, Osaka University, The Scripps Research Institute
- P2-5** A Broader Filtration of UVA1 Wavelengths Improves Skin Photoprotection, In Vitro
Marionnet, C., Pierrard, C., Golebiewski, C., Candau, D., Bernerd, F. L'Oreal Research and Innovation
- P2-6** Tuning the Photophysical Properties of Fluorinated Porphyrin Derivatives: Effect on Biological Activity and its Application in Design of Efficient Anticancer and Antimicrobial PDT Agents
Pucelik, B., Paczynski, R., Vinagreiro, C., Gonzalves, N., Arnaut, L., Pereira, M., Dabrowski, J. Jagiellonian University and Malopolska Centre of Biotechnology, Poland, University of Coimbra, Portugal, Luzitin SA Ed. Bluepharma, Portugal
- P2-7** The Austrian UVA-Network
Schmalwieser, A., Blumthaler, M., Klotz, B., Schwarzmam, M., Baumgartner, D., Schauburger, G. University of Veterinary Medicine, Institute of Physiology and Biophysics, Div. of Biomedical Physics, Medical University Innsbruck, University of Graz, Kanzelhoehe Observatory
- P2-8** PUVA Pretreatment Down-Modulates Key Inflammatory Cytokines and Leads to Reduced Activation of the Signal Transducer and Activator of Transcription (STAT1/3) Pathway in the Imiquimod Model of Psoriasis
Shirsath, N., Ober, J., Frei, R., Mayer, G., Heinemann, A., Wolf, P. Department of Dermatology and Venereology, Center for Medical Research, Institute of Experimental and Clinical Pharmacology, Medical University of Graz, Graz, Austria
- P2-9** PhotochemCAD 3. Diverse Modules for Photophysical Calculations with Accompanying Spectral Databases
Taniguchi, M., Du, H., Lindsey, J. North Carolina State University
- P2-10** Investigating the Effects of Blue Light Irradiation on Retinal Pigment Epithelial (RPE) Cell Death in Relation to Age Related Macular Degeneration (AMD)
Tournear, J., Denius, K., Gaillard, E. NIU

- P2-11** **Synthesis and Characterization of Long Chain Pterin Derivatives: O vs N Substitution**
Vignoni, M., Walawela, N., Ghogare, A., Bonesi, S., Thomas, A., Greer, A. Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA) and UNLP-CONICET, Brooklyn College and Graduate Center of the City University of New York, Centro de Investigaciones de Hidratos de Carbono (CIHIDECAR) and FCEN-CONICET
- P2-12** **Alkyne Photochemistry for Double DNA-Cleavage and Aldehyde Release**
Alabugin, I., Roy, S., Breiner, B., Yang, W., Mohamed, R., De Faria, T. Florida State University
- P2-13** **Mechanisms of Photoisomerization of the Vitamin D3 Isomers Pre-, Provitamin-D3 and Lumisterol in EPA Glass at 77 K**
Bayda, M., Redwood, C., Gupta, S., Dmitrenko, O., Saltiel, J. Florida State University, Tallahassee, Faculty of Chemistry, Adam Mickiewicz University, University of Delaware
- P2-14** **Metal Chelation Modulates Phototherapeutic Properties of Mitoxantrone-Loaded Porphyrin-Phospholipid Liposomes**
Carter, K., Wang, S., Geng, J., Luo, D., Shao, S., Lovell, J. University at Buffalo, State University of New York
- P2-15** **Carbohydrate Coated Gold Nanoparticles as SERS Probes for Confocal Raman Microscopy of Cancer Cells**
Gomes, M., Cunha, A., Tome, J., Trindade, T., Zheng, G. University of Aveiro, University of Lisbon, University Health Network Toronto, University of Toronto
- P2-16** **Keeping Tabs on Your Lab: Recognition and Detection of Data Manipulation**
Hill, H. Rutgers NJ Medical School
- P2-17** **Indomethacin-Derived Mitochondrial Reactive Oxygen Species Accelerated Cancer Specific Porphyrin Accumulation to Enhance Photodynamic Therapeutic Effect in Gastric Epithelial Cells**
Ito, H., Tamura, M., Nagano, Y., Matsui, H., Indo, H., Majima, H. University of Tsukuba, Kagoshima University
- P2-18** **Selective Cell Targeting in Zebrafish Embryos**
Jones, R., Erhard, S., Gen, A., Malham, M., Olsen, K., Dale, R. Loyola University Chicago

- P2-19 Photodynamic Elimination of Melanoma and Nonmelanoma Skin Cancer Cells Using the Endogenous Tryptophan Photoproduct 6-Formylindolo[3,2-b]carbazole (FICZ)
Justiniano, R., Park, S., Williams, J., Wieland, D., Wondrak, G.
University of Arizona, UA Cancer Center and College of Pharmacy
- P2-20 BSA Based, Folate Directed Photodynamic Therapy Agent's Effectiveness in HeLa Cells
Olsen, K., Jones, R., Hira, S., Kiernan, K., Khaleeluddin, H., Kooistra, R., Sullivan, K., Kanzok, S.
Loyola University Chicago
- P2-21 Selective Oxidations in Biological Samples by Atomic Oxygen
Petroff, J., Baumann, S., Solomon, E., Jez, J., McCulla, R.
Saint Louis University, Washington University in St. Louis
- P2-22 The Effect of Iron Enrichment on Expression of Heme Oxygenase-1 and Ferritin in Retinal Pigment Epithelium Cells Containing Phagocytized Melanosomes
Pilat, A., Zadlo, A., Sarna, T.
Jagiellonian University, Poland
- P2-23 Electronic Excitation Energy Transfer in DNA and DNA-Ag Cluster Complexes
Reveguk, Z., Ikonnikov, E., Kononov, A.
Saint-Petersburg State University
- P2-24 Resistance of Oral Cancer Cells to 5-Aminolevulinic Acid-Mediated Photodynamic Therapy
Rosin, F., Corrêa, L.
School of Dentistry, University of Sao Paulo
- P2-25 Tumor-Selective Photodynamic Therapy Using Copper-Free Click-Conjugated Liposomes
Silber, Z., Obaid, G., Kuriakose, J., Broekgaarden, M., Wang, Y., Hui, J., Tsourkas, A., Hasan, T.
Northeastern University, Massachusetts General Hospital, University of Pennsylvania

Editorial Board Meeting (*Invitation Only*)

7:00pm – 10:00pm Meeting Room 3

Industry Panel Discussion

8:00pm – 9:30pm Florida 1

Tuesday, May 24, 2016

Registration

7:30am – 4:00pm

Florida Ballroom Foyer

Frontiers in DNA Bipyrimidine Damage and Repair

8:00am – 12:10pm

Meeting Room 5 Chair: Jean Cadet

8:00am – 8:10am

Introductory Remarks: Formation and Repair of DNA Photo-induced Damage

15-1

8:10am – 8:40am

Combined Actions of UVB and UVA on DNA Damage and Repair

Douki, T.

University Grenoble Alpes / CEA-Grenoble

15-2

8:40am – 9:10am

DNA Repair Genomics: Mapping DNA Damage and DNA Repair at Single-Nucleotide Resolution across the Human Genome

Adar, S., Hu, J., Lieb, J., Sancar, A.

University of North Carolina

15-3

9:10am – 9:40am

Development of an In Vivo Assay to Detect DNA Excision Repair Events in Mammalian Cells

Choi, J., Kemp, M., Sancar, A.

Korea Research Institute of Standards and Science, University of North Carolina School of Medicine

15-4

9:40am – 10:10am

Single Molecule Analysis of DNA Repair Enzymes Reveals a Novel "Recognition at a Distance" Mechanism

Van Houten, B.

UPCI

10:10am – 10:30am

BREAK

- 15-5 10:30am – 11:00am
 Multiple Roles for the ATR Kinase in the Cellular Response to UV-induced DNA Damage
Kemp, M., Lindsey-Boltz, L., Sancar, A.
Wright State University, University of North Carolina
- 15-6 11:00am – 11:30am
 Cellular Mechanisms of Repair and Response to Oxidized Nucleotides
Sobel, R.
University of South Alabama Mitchell Cancer Institute
- 15-7 11:30am – 11:50am
 Effect of Nucleosome Formation and Bending on Cyclobutane Dimer Formation in T11-Tracts
Wang, K., Taylor, J.
Washington University
- 15-8 11:50am – 12:10pm
 Improvement of UV-induced DNA Damage Repair by Chronic Low Dose of UV
Drigeard Desgarnier, M., Rochette, P.
University Laval and Centre Hospitalier Universitaire de Quebec Research Center, Canada

Antenna Processes in Photosynthesis

8:00am – 11:30am Florida 1 Chair: Bob Blankenship

- 16-1 8:00am – 8:30am
 Molecular Mechanisms of Photosynthetic Antenna Regulation
Blankenship, R.
Washington Univ.
- 16-2 8:30am – 9:00am
 Elucidation of the Photoprotective Mechanisms in Algal Light Harvesting
Schlau-Cohen, G.
MIT
- 16-3 9:00am – 9:30am
 Quantitative Imaging of Photosynthetic Pigments and Proteins in Live Cells
Timlin, J.
Sandia National Laboratories

- 16-4 9:30am – 10:00am
 Artificial Photosynthesis with a Single Redox Centre Based on the Engineered Flavoprotein LOV
Ueda, N., Ono, Y., Iwata, T., Iwaki, M., Kandori, H.
Nagoya Institute of Technology
- 10:00am – 10:15am
 BREAK
- 16-5 10:15am – 10:45am
 Thylakoid Membrane Dynamics in Cyanobacteria
Urban, V., Stingaciu, L., O'Neill, H., Liberton, M., Pakrasi, H., Ohl, M.
Oak Ridge National Laboratory, Julich Centre for Neutron Science, Washington University, St. Louis
- 16-6 10:45am – 11:15am
 Towards a Full Atomic Resolution Model of a Photosynthetic Antennae Complex
Da, M., Cuneo, M.
Oak Ridge National Laboratory
- 16-7 11:15am – 11:45am
 Incorporation of Algal Carotenoids into the Light-Harvesting System from a Purple Photosynthetic Bacterium
Hashimoto, H., Yukihiro, H., Sugai, Y., Fujiwara, M., Iha, M., Sakaguchi, K., Katsumura, S., Gardiner, A., Cogdell, R.
Kwasnei Gakuin University, South Product, Osaka City University, University of Glasgow

Frontiers in Molecular Mechanisms of Skin Photocarcinogenesis

8:00am – 10:00am Florida 2 Chair: Yu-ying He

- 17-1 8:00am – 8:20am
 Immune Mechanisms of p53 Mutant Keratinocyte Clonal Expansion and Cutaneous Carcinogenesis
Lewis, J., Turban, J., Girardi, M.
Yale University
- 17-2 8:20am – 8:40am
 Engineering Bioadhesive Biodegradable Nanoparticle Encapsulation of Organic Sunscreen Agents to Enhance their Performance and Safety
Girardi, M., Deng, Y., Ediriwickrema, A., Lewis, J., Suh, H., Fong, L., Saltzman, W.
Yale University

17-3 8:40am – 9:00am
Regulation of UVB-induced Carcinogenesis by Apigenin and Thrombospondin-1
Tong, X., Mirzoeva, S., Bridgeman, B., Veliceasa, D., Crawford, S., Cornwell, M., Volpert, O.
Northwestern University, Stanley Manne Children's Research Institute, North Shore University Research Institute

17-4 9:00am – 9:20am
Lack of Tumor Development in C/EBP β Knockout Mice after UVB Exposure Involves Increased Apoptosis and Decreased EGFR and ERK1/2 Expression and Phosphorylation
Anand, S., Maytin, E.
Cleveland Clinic

17-5 9:20am – 9:40am
Autophagy Regulates UV-Induced DNA Damage Repair and Controls Photocarcinogenesis
He, Y.

Ocular Photobiology, 1

8:00am – 10:00am Florida 3 Co-Chairs: Beth Gaillard, Tad Sarna

18-1 8:00am – 8:30am
The Accumulation of Lipofuscin and A2E Depend on Retinal Anatomy
Ablonczy, Z., Herrmann, J., Pallitto, P., Drake, R., Koutalos, Y., Crouch, R., Donello, J.
Medical University of South Carolina, Allergan, Inc., Robert Wood Johnson Medical School, Rutgers University

18-2 8:30am – 9:00am
The Effect of Iron Enrichment on Expression of Heme Oxygenase-1 and Ferritin in Retinal Pigment Epithelium Cells Containing Phagocytized Melanosomes
Pilat, A., Zadlo, A., Sarna, T.
Jagiellonian University, Krakow, Poland

18-3 9:00am – 9:30am
The Effect of In Vitro Photoaging of Bovine RPE Melanosomes on Morphology, Reactivity and Photoprotective Efficiency of the Partially Photobleached Pigment Granules
Zadlo, A., Szewczyk, G., Sarna, M., Pilat, A., Sarna, T.
Jagiellonian University, Poland

18-4 9:30am – 9:45am
Early Diagnosis of Diabetes through the Eye
Karumanchi, D., Gaillard, E., Karumanchi, D.
Northern Illinois University

18-5 9:45am – 10:00am
Investigating the Cell Death Mechanisms of ARPE-19 Cells using
Modified ARPE-Derived ECM to Model Aging and Disease
Gaillard, E., Tourneir, J.
Northern Illinois University

Optical-Image-Guided Interventions

10:00am – 12:00pm Meeting Room 4 Co-Chairs: Chad Kanick,
Scott C. Davis

19-1 10:00am – 10:30am
Optical Molecular Image-Guided Treatment of Residual Microscopic
Tumors and Suppression of Multiple Treatment Escape Pathways
*Spring, B., Sears, R., Zheng, L., Mai, Z., Watanabe, R., Sherwood, M., Pogue, B.,
Pereira, S., Villa, E., Hasan, T.*
*Northeastern University, Emmanuel College, Massachusetts General Hospital,
University of California San Diego, Dartmouth College, University College
London*

19-2 10:30am – 11:00am
Quantitative Spectroscopy for Optical Monitoring of PDT
Robinson, D.
Erasmus University Medical Center

19-3 11:00am – 11:30am
All-Organic Nanovesicles for Multimodal PET/CT and Optical
Fluorescence Assessment of Lymphatic Disseminations
Valic, M., Ye, T., Zhang, C., Jiang, W., Chen, J., Bernardini, M., Zheng, G.
University of Toronto and Princess Margaret Cancer Centre

19-4 11:30am – 12:00pm
IRDye® 700DX: A Demonstration of Structural Stability and
Photodynamic Principles with Small Molecule Conjugates
Kovar, J., Cradduck, M., Volcheck, B., Xing, K., Draney, D., Padhye, N., Urlacher, T.
LI-COR Biosciences

Frontiers in the Mechanisms of UV-induced Inflammation

10:00am – 12:00pm

Florida 2

Chair: Shiyong Wu

20-1 8:00am – 8:20am

New Evidence for an Essential Role of the p38/MSK1/NF κ Bp65Ser276 Axis During Intracellular Signaling Pathways Leading to UVB-Induced Cutaneous Inflammation and Hyperkeratinization

*Imokawa, G., Terazawa, S., Mori, S., Yasuda, M., Nakajima, H.
Chubu University, Tokyo University of Technology*

20-2 8:20am – 8:40am

Regulation of Cutaneous Inflammation by Thrombospondin-1

*Tong, X., Mirzoeva, S., Bridgeman, B., Plebanek, M., Cornwell, M., Crawford, S., Volpert, O.
Northwestern University, North Shore University Research Group*

20-3 8:40am – 9:00am

UV-Induced Inflammation at the Molecular, Cellular, and Organismal Levels

*He, Y.
University of Chicago*

20-4 9:00am – 9:20am

Carnosol as a Therapeutic Compound in Preventing and Treating UVB-Induced Skin Cancer Through its Anti-Inflammatory and Pro-Apoptosis Characteristics

*Tong, L., Wu, S.
Ohio University*

20-5 9:20am – 10:00am

Antioxidant Baicalin Displays a Higher Toxic Impact on p53-Mutated Keratinocytes (HaCat or A431 Carcinoma Cells) Versus Normal Human Keratinocytes

*Boissout, F., Perez, P., Soeur, J., Marrot, L.
L'Oreal R&I*

Frontiers in Models, Measurement and Monitoring in Environmental UV

10:00am – 12:00pm

Florida 3

Chair: Jo Turner

21-1 10:00am – 10:20am

Recent Advances in 3D Modelling of the UV Body Exposure

Schmalwieser, A.

University of Veterinary Medicine, Institute of Physiology and Biophysics

21-2 10:20am – 10:40am

Population UVR Exposure Doses are Highly Depended on Environmental Observation – Based on Personal UVR Measurements

Philipsen, P., Bodekær, M., Petersen, B., Grage, M., Heydenreich, J., Thieden, E., Eriksen, P., Wulf, H.

Bispebjerg Hospital, Denmark, Danish Meteorological Institute, Denmark

21-3 10:40am – 11:00am

Solar UV Radiation: Measurement, Monitoring and Public Awareness in Sub-Saharan Africa

Wright, C., Albers, P.

South African Medical Research Council and University of Pretoria

21-4 11:00am – 11:20am

Characterization of UV and Sun Exposure Behaviors and Skin Cancer in the Estrie Region of Quebec Province

Drouin, R., Lapointe, G., Genereux, M., Bouffard, C.

Laval University, QC, University of Sherbrooke, QC

21-5 11:20am – 11:40am

Objective Assessment of UVR-induced Erythema and Pain Sensitivity in Different Skin Types

Fajuyigbe, D., Damato, E., McMahon, S., Penney, G., Coleman, A., Sarkany, R., Young, A.

21-6 11:40am – 12:00pm

Using Smartphone Hardware to Measure Ultraviolet Radiation

Turner, J., Parisi, A., Igoe, D., Amar, A.

University of Southern Queensland

Past President's Luncheon

12:00pm – 1:00pm Meeting Room 3

Research Award: Solar UVR – Friend and Foe

1:00pm – 2:00pm Florida 4-5

Awardee: Antony Young

New Investigator I and II

2:30pm – 3:30pm Florida 4-5

Awardees: Conor Evans, Imran Rizvi

ESP Presidential Lecture:

From Sarasota to Tampa – A Photobiological Quest

3:30pm – 4:30pm Florida 4-5

Awardee: Rex Tyrrell

Exhibit Tear Down

4:00pm – 8:00pm Florida 6

ASP Banquet

7:00pm – 10:00pm The Columbia Restaurant

Tickets can be purchased at the Registration Desk

Registration

7:30am – 12:00pm Florida Ballroom Foyer

ASP/ESP Lecture: Combinational Approaches in PDT

8:30am – 11:45am Florida 4-5 Chair: Theresa Busch

- 25-1 8:30am – 9:00am
Targeting the Tumor Vasculature; Extracellular Vimentin as an Ideal Target for the Treatment of Cancer
Griffioen, A., Huijbers, E., Nowak-Sliwinska, P., van Beijnum, J. VU Medical Center
- 25-2 9:00am – 9:30am
Informing and Implementing Combinational Approaches in Photodynamic Therapy
Busch, T. University of Pennsylvania
- 25-3 9:30am – 10:00am
Tumor Vascular Shutdown After Photochemical Internalization (PCI). Impact on Treatment Outcome
Vikdal, M., Selbo, P., Hompland, T., Sellevold, S., Fremstedal, A., Rofstad, E., Weyergang, A., Peng, Q., Berg, K. Oslo University Hospital -Radium Hospital, Oslo, Norway
- 10:00am – 10:15am
BREAK
- 25-4 10:15am – 10:45am
PDT Enhanced Anti-Tumor Immunity: Mechanisms and Exploitation
Gollnick, S. Roswell Park Cancer Institute
- 25-5 10:45am – 11:15am
Design of Optimal Combination Therapy for the Treatment of Disease
Nowak-Sliwinska, P. University of Geneva

- 25-6 11:15am – 11:45am
Combination Treatments in Cancer Therapeutics: Role of Spatiotemporal Synchronization
Hasan, T.
Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School

Phytochromes

8:00am – 12:00pm Florida 2 Chair: Wolfgang Gartner

- 26-1 8:00am – 8:30am
Cyanobacteriochrome Regulation of Second Messenger-Dependent Processes in Cyanobacteria
Montgomery, B.
Michigan State University
- 26-2 8:30am – 9:00am
Phytochromes in Myxobacteria: Implications for Light-Controlled Morphogenesis
Gallagher, K., Mihalas-Sanchez, E., Mapara, A., Duong, P., Nugent, A., Bizhga, D., Patel, H., Weitowich, N., Stojkovic, E.
Northeastern Illinois University
- 26-3 9:00am – 9:30am
Structural Insights into Phytochrome Fluorescence
Bhattacharya, S., Lehtivuori, H., Forest, K.
- 26-4 9:30am – 10:00am
Structural Basis of Color Perception and Signal Integration in Cyanobacteriochromes
Shin, H., Zeng, X., Ren, Z., Yang, X.
University of Illinois at Chicago
- 10:00am – 10:30am
BREAK
- 26-5 10:30am – 11:00am
The GAF-3 Domain from SLR 1393: Photochemistry and Insight into Structural Changes
Gaertner, W.
MPI Chemical Energy Conversion

26-6 11:00am – 11:30am
Synthetic Photobiology in Near-infrared
Gomelsky, M., Gomelsky, M.
University of Wyoming

Current Topics in Photobiology, II

8:00am – 9:45am Florida 3 Co-Chairs: Carlos Crespo,
Marvin Pollum

27-1 8:00am – 8:15am
Singlet Oxygen at the Nanoscale
Macia, N., Planas, O., Nonell, S., Heyne, B.
University of Calgary, University Ramon Llull

27-2 8:15am – 8:30am
*Cellular Killing and Transformation by Ultraviolet and Ionizing Radiation: A
Fundamental Difference*
Sutherland, J.
Augusta University

27-3 8:30am – 8:45am
The CIE Action Spectrum for Pre-Vitamin D Requires Adjustment to be
Valid in Vivo for 25(OH)D in Humans
Philipsen, P., Morgan, K., Harrison, G., Petersen, B., Wulf, H., Young, A.
Bispebjerg Hospital, Denmark, King's College London, United Kingdom

27-4 8:45am – 9:00am
Quantitative Imaging of Oxygen in Tissues with Bright Porphyrin
Phosphors and Bandages
Evans, C.
*Wellman Center for Photomedicine, Harvard Medical School, Massachusetts
General Hospital*

27-5 9:00am – 9:15am
Photodynamic Therapy-Based Combinations Overcome Tumor
Endothelial Cell-Induced Heterogeneity and Chemoresistance in 3D
Ovarian Cancer Cultures
*Rizvi, I., Briars, E., Bulin, A., Anbil, S., Vecchio, D., Broekgaarden, M., Hanna, W.,
Celli, J., Hasan, T.*
*Wellman Center for Photomedicine, Massachusetts General Hospital, Harvard
Medical School, University of Massachusetts Boston*

27-6 9:30am – 9:45am

Wavelength Dependent Increase in Cell Sensitivity after Glutathione Inhibition by Methacrylate Monomers

*Christensen, T., Danielsen, T., Jaworska, A., Brunborg, G., Bruzell, E.
Norwegian Radiation Protection Authority, Norwegian Institute of Public Health and Centre for Environmental Radioactivity (CERAD CoE), Nordic Institute of Dental Materials*

Dynamics and Mechanism of DNA Repair by Photolyase: Experiment and Theory – Part 2

10:00am – 12:00pm

Florida 3

Chair: Dongping Zhong

28-1 10:00am – 10:30am

DNA Bases Beyond Watson and Crick

*Carell, T.
LMU Munich*

28-2 10:30am – 11:00am

On the Time Scale of the Repair of (6-4) Photoproducts by their DNA Photolyase

*Yamamoto, J., Brettel, K.
Osaka University, I2BC/CEA Saclay*

28-3 11:00am – 11:30am

Light-Induced Difference FTIR Spectroscopy of Photolyase

*Kandori, H.
Nagoya Institute of Technology*

28-4 11:30am – 12:00pm

Spore Photoproduct within DNA is a Surprisingly Poor Substrate for its Designated Repair Enzyme – The Spore Photoproduct Lyase

*Yang, L., Jian, Y., Setlow, P., Li, L.
Indiana University Purdue University Indianapolis (IUPUI), UConn Health*

Ocular Photobiology, 2

10:00am – 12:00pm

Meeting Room 4

Chair: David Sliney

29-1 10:00am – 10:20am

What are the Spectral Limits of Visual Radiation?

*Sliney, D., Sliney, D.
Johns Hopkins Bloomberg School of Public Health*

- 29-2 10:20am – 10:40am
 Identifying Novel Fluorophores in Human RPE Melanin
Vega, M., Gaillard, E.
Northern Illinois University
- 29-3 10:40am – 11:00am
 Photochemical/Spectroscopic Studies in Turbid and Scattering Media
Solntsev, K., Boxrud, P., Lorenz, J., DeSa, R.
OLIS, Inc.
- 29-4 11:00am – 11:20am
 Evaluating the Influence of Melanin in Cytokine Secretion in Photo-Stressed Retinal Pigment Epithelial Cells
Yacout, S., Elsawa, S., Gaillard, E.
Northern Illinois University
- 29-5 11:20am – 11:40am
 Syntonic Phototherapy – An Introduction
Gottlieb, R.
College of Syntonic Optometry
- 29-6 11:40am – 12:00pm
 Measuring Absorption Coefficients in Human Retinal Pigmented Epithelium Cells and Subcellular Fractions
Wigle, J., Cone, M., Mason, J., Figueroa, E., Hokr, B., Bixler, J., Gonzales, C., Rockwell, B., Yakovlev, V., Fry, E.
Air Force Research Laboratory, Texas A&M University

Kendric C. Smith Symposium

6:00pm – 8:00pm Florida 4-5

- 30-1 6:00pm – 7:00pm
 DNA + Light: From Nucleic Acid Bases to Modifications that Sensitize Damage in Cells
Crespo-Hernandez, C.
Case Western University
- 30-2 7:00pm – 8:00pm
 Circadian Clock Disruption and Health
Harrington, M.
Smith College

Frontiers in the Effects of Light on Circadian Rhythms

9:00am – 11:00am Florida 1 Chair: Mary Harrington

31-1 9:00am – 9:30am

Light Effects on the Human Circadian Timing System

Duffy, J., Chinoy, E., Zitting, K.

Harvard Medical School and Brigham and Women's Hospital

31-2 9:30am – 10:00am

Circadian Clock, UV-DNA Repair and Skin: Implications in Skin Carcinogenesis and Sunburn Erythema

Gaddameedhi, S.

Washington State University

31-3 10:00am – 10:30am

Using Light to Tell Time

Lucas, R.

University of Manchester

31-4 10:30am – 11:00am

Mammalian Period Performs Both Repressor and Activator Functions by Displacing the CLOCK-BMAL1 Activator Complex in a Cryptochrome-Dependent Manner

Chiou, Y., Yang, Y., Rashid, N., Ye, R., Selby, C., Sancar, A.

UNC Chapel Hill

Registration

8:30am – 12:00pm Florida Ballroom Foyer

Council Meeting

11:00am – 2:00pm Meeting Rooms 5-6

NOTES



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