

# Working Group 3

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## Report

Sept. 2006 - March 2007

MCM 8  
Budapest  
29.&30. March 2007

A.W.Schmalwieser

# Joint Symposium with European Society for Photobiology

- Symposium within the Conference of the European Society for Photobiology, 1. - 6. September 2007, Bath, UK + WG3 Meeting

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	Saturday 1 Sep	Sunday 2 Sep	Monday 3 Sep	Tuesday 4 Sep	Wednesday 5 Sep	Thursday 6 Sep	
8.30		<b>Opening ceremony</b>	Overview of clinical applications of PDT	From photochemistry and photobiology to photobiotechnology of plants	Impacts of UVB radiation on biotic and abiotic systems in relation to global climate change	Combating the dark sides of sunlight: DNA repair from past to future	
8.45		<b>Young Investigator Award Lecture</b>		<b>P.-S. Song</b>	<b>J. F. Bornman</b>	<b>L. Mullenders</b>	
9.00			<b>S. Bown</b>				
9.15		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
9.30							
9.45							
10.00		<b>Parallel Symposia</b>	<b>Parallel Symposia</b>	<b>Parallel Symposia</b>	<b>Parallel Symposia</b>	<b>Parallel Symposia</b>	
10.15		ALA-based PDT	Vitamin D and solar radiation	Biophysics of photosensitization	New approaches to clinical phototherapy	Recent advances in the characterization of photooxidative damage at biomolecular level	
10.30		DNA damage and repair	Clinical applications of PDT and PDD	ESP-COST - A reconstruction of the past UV climatology over Europe for photobiological studies	Molecular and cellular effects of UV-A	Photodiagnosis and optical techniques for medical diagnosis	
10.45		New aspects of photoimmunology - mouse and man	Photobiology techniques for environmental monitoring and control	Biological consequences of UV damage	PDT, light and the immune system	Blue light regulation in plants and microorganisms	
11.00		Instrumentation in photobiology	Oral communications	ESP-BSP - Photodermatosis (in memory of Ian Magnus)			
11.15							
11.30							
11.45							
12.00	<b>Executive committee I</b>	Lunch break	Lunch break	Lunch break	Lunch break	<b>Closing</b>	
12.15							
12.30							
12.45							
13.00							
13.15							
13.30							
13.45							
14.00							
14.15			<b>Multiple regulatory pathways for photoimmune responsiveness</b>		<b>Parallel Symposia</b>		
14.30		<b>V. Reeve</b>		Photochemistry and phototoxicity of drugs	<b>Poster session II</b>		
14.45		<b>Parallel Symposia</b>	<b>Poster session I</b>	ESP-ESPD - Photoprotection			
15.00		Molecular and cellular aspects of PDT		ESP-ASP - UV and global climate change: effects in aquatic and terrestrial ecosystems	<b>Parallel Symposia</b>		
15.15		Sun sensitivity, DNA repair and skin cancer		PDT oral communications	Experimental photocarcinogenesis		
15.30			<b>Parallel Symposia</b>		PDT to treat microbial infections - Advances in understanding the mechanisms involved in the photosensitised inactivation of microbial cells (In memory of John Spikes)		
15.45		Photosynthesis: mimicking the natural system for solar energy conversion (in honour of Jim Barber)	Drug delivery technologies for PDT		Mechanistic and applied approaches to plant response in a changing climate		
16.00	<b>Registration</b>	Bioluminescence	ESP-EPA - Photochemistry and photobiology of carotenoids	<b>ESP General assembly</b>			
16.15			Photoorientation in plants and microorganisms				
16.30			UV-induced oxidative stress	<b>PPS Editorial Board meeting</b>	<b>Banquet, Medal awards</b>	<b>Executive committee II</b>	
16.45							
17.00							
17.15							
17.30							
17.45							
18.00							
18.15	<b>Welcome reception</b>						
18.30							
18.45							
19.00							
19.15							
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20.00							
20.15							
20.30							
20.45							
21.00							
21.15							



# Joint Symposium with European Society for Photobiology

- **Aim:** Give an overview of COST726 activities, results, cause interest, ..., get response and needs from photobiology
- **Part 1:** 4 invited speakers from COST726
- **Part 2:** 3-4 speakers + posters from an „Open call“ of the ESP-Conference: research+topics that (could) have a need for UV climatology

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# Joint Symposium with European Society for Photobiology

- 4 Invited Speakers:
- **1. A.W.Schmalwieser:** "The mission of COST 726: Long term changes and climatology of UV radiation over Europe" (overview, activities, results, cause interest)
- **2. P.Koepke:** "Modelling UV in the past: achievements and limitations"
- **3. G. Zipoli:** "From the physical approach to the biological interactions: the role of action spectra"
- **4. M. Blumthaler:** "Quality of UV measurements"

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# Joint Symposium with European Society for Photobiology

- Open Call:  
**until 15.May 2007**
- Selection process

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# Electronical Climatological Atlas

- **General IDEA:**  
**UV Climatology available  
for a broader audience**
- **Easy to use:** Data base on 2\*DVD, Information folder, Software for easy use (OS-Independent, No installation/compilation, Graphical Interface)
- **Maximum Information:**  
Daily spectral data -> production of time-series for a chosen location -> generating maps for a certain date + weighting with different and user defined AS

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# Electronical Climatological Atlas

- **Who does the jobs?**
- Spectral data: modeller
- Software design + development:  
M.Stanek & M.Janouch & A.Schm.

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# Advertisement

- **General Assembly of the European Geosciences Union**  
**15. - 20. April 2007, Vienna, Austria**
- **Poster 1:**  
**COST 726: Long term changes and climatology of UV radiation over Europe**  
Z. Lytinska (Chair), H. De Backer (WG1), P. Koepke (WG2), A.W. Schmalwieser (WG3), J. Gröbner (WG4) and +40 active members
- **Poster 2:**  
**Comparison of algorithms and input data for modelling solar ultraviolet radiation in the past**  
P. Koepke, A. W. Schmalwieser, H. De Backer, A. Bais, A. Curylo, K. Eerme, U. Feister, B. Johnsen, J. Junk, A. Kazantzidis, J. Krzyscin, A. Lindfors, J.A. Olseth, P. den Outer, A. Pribulova, H. Slaper, H. Staiger, J. Verdebout, L. Vuilleumier, P. Weihs

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# Advertisement

- **Poster will be available as \*.ppt files, format A0, from the web-page for free usage by COST 726 members (but message when used)**

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**Thank You**

# Plans for the Future

## Information for the „Public“ „The Booklet“

- **Content:**
  - Introduction (WG3)
  - Parameters affecting UV (Author from WG1)
  - Modelling (Author from WG2)
  - Biological Effects and Effectiveness (WG3)
- **Information Level:**
  - similar to COST 713 Booklet

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# Plans for the Future

## „Sommer School on Environmental Biologically Effective UV Radiation“

- **Aim:** Introduction of students to the broad field of environmental biologically effective UV radiation by: *lectures* as background and *active exercises and training*
- **Target-group:** students from all fields (medicine, .. biology, ..., meteorology, atm.physics)
- **Requirements:** should be able to express their interest
- Participation as open as possible, restricted to European participants

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# Plans for the Future

## „Sommer School on Environmental Biologically Effective UV Radiation“

- **Topics:**

General UV

Influence of met. Parameters ( $O_3$ , aerosol, clouds,..)

Measurements (spectral, broadband, dosimetry, quality, ....)

Modelling

Climatology

Photobiological effects and effectiveness

Standards

Results from COST726

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# Plans for the Future

## „Sommer School on Environmental Biologically Effective UV Radiation“

- **Lectures:** ?? Volunteers with ideas for lectures and exercises/training
- **Date/Duration:** Summer 2008, at least 5 working days
- **Location offer:** Institute of Medical Physics and Biostatistics, University of Veterinary Medicine, Vienna (computer rooms, optical laboratories, measuring station, accomodation (18,-€) at the campus, ....)

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