

Registration:

Due to limited capacity, a formless registration under FFrohns@gmail.com is necessary. Acknowledgement of receipt is not intended, only in case of overcrowding. There is no attendance fee.

Host and Sponsorship:

**Workgroup of
Prof. Dr. Paul G. Layer**
Fachbereich Biologie (10)
Entwicklungsbiologie und Neurogenetik
Schnittspahnstrasse 13
64287 Darmstadt

Dr. med. h. c. Erwin Braun Foundation,
Basel, Switzerland

Organizing committee:

Dr. Anja Heselich – Anja.Heselich@gmail.com
Dr. Florian Frohns – FFrohns@gmail.com

Venue:

B1/01, room 52
Small lecture hall at the botanical garden



Symposium on water-filtered infrared-A (wIRA)

April 11. & 12. 2013
TU Darmstadt, Fachbereich Biologie
Campus Botanischer Garten



Symposium

In cooperation with the *Dr. med. h. c. Erwin Braun Foundation* the group of Prof. Layer is holding a *symposium on water-filtered infrared-A radiation (wIRA) from 11.-12.04.2013*. The aim of this symposium is to bring together researchers and academicians from the infrared field to present and discuss their latest research and development in wIRA.

Invited Speakers

- **Dr. Edward Abraham**, Artesian Cancer Center, Claremore Oklahoma, U.S.A.
- **PD Dr. Ali Al-Ahmad**, Albert-Ludwigs University, Freiburg, Germany, Dept. of Operative Dentistry and Periodontology
- **Dr. Christian Blenn**, University of Zurich, Center for Applied Biotechnology and Molecular Medicine, Faculty of Veterinary Medicine
- **PD Dr. Debra Bickes-Kelleher**, Johannes Gutenberg University Mainz, Institute of Functional and Clinical Anatomy
- **Dr. Florian Frohns**, TU Darmstadt, Developmental Biology and Neurogenetics
- **Dr. James F. Hainfeld**, Medical Dept., Brookhaven National Laboratory, Upton, New York, U.S.A.
- **PD Dr. med. Mark Hartel**, Chirurgische Klinik, Klinikum Dortmund
- **Dr. Anja Heselich**, TU Darmstadt, Developmental Biology and Neurogenetics
- **Prof. Dr. med. Gerd Hoffmann**, Johann Wolfgang Goethe University, Frankfurt/Main, Institute of Sports Sciences

- **Dipl. Phys. Werner Müller**, Wetzlar
- **Dr. med. Markus Notter**, Service cantonal de radiothérapie Neuchâtel, La Chaux-de-Fonds, Switzerland
- **Dr. Helmut Piazena**, Charité - Universitätsmedizin Berlin, Dept. Medical Photobiology
- **Dr. Nicole Scherr**, Swiss Tropical and Public Health Institute, Basel
- **Prof. Dr. med. Peter W. Vaupel**, TU Munich, Department of Radiotherapy and Radiooncology

Programm

Thursday, 11.04.2013

- 9:00-9:15
Prof. Dr. Paul G. Layer
Welcome
- 9:15-10:00
Dipl. Phys. Werner Müller
Physical Basics
- 10:00-10:45
Dr. Helmut Piazena
Measurements of the Penetration Depths of wIRA
- 11:15-12:00
PD Dr. Debra Bickes-Kelleher
Review of the effects of infrared exposure *in vivo* and *in vitro*.
- 12:00-13:00
Prof. Dr. med Gerd Hoffmann
Clinical applications of water-filtered infrared-A (wIRA)
- 14:00-14:45
PD Dr. med. Mark Hartel
wIRA and Acute Surgical Wounds

14:45-15:30
PD Dr. Ali Al-Ahmad
wIRA and Antibacterial Photodynamic Therapy (PDT)

15:30-16:15
Dr. Christian Blenn
A single dose of infrared A inhibits acute chlamydial infection

16:15-17:00
Dr. Nicole Scherr
Experimental approaches to study the effect of wIRA on *Mycobacterium ulcerans*

Friday, 12.04.2013

9:00-9:45
Prof. Dr. med. Peter W. Vaupel
wIRA in Oncology

9:45-10:30
Dr. med. Edward Abraham
Hyperthermia and Infrared in Oncology

10:45-11:30
Dr. Markus Notter
wIRA and Low Dose Re-Irradiation

11:30-12:15
Dr. James Hainfeld
Nanogold, wIRA and Irradiation

13:00-13:30
Dr. Anja Heselich
Influence of wIRA Without Hyperthermia on Radiation Response

13:30-14:00
Dr. Florian Frohns
wIRA on Intercellular Communication and Influence of wIRA+Hyperthermia