



Biomedicine and Molecular Biosciences



COST Action BM1309 EMF-MED

COST EMF-MED

European network for innovative uses of EMFs
in biomedical applications

**Workshop "Designing Focused Deep Hyperthermia by EMF",
Training on Hyperthermia,
3rd Working Group Meetings**

Zurich, 23-24 June 2015

Final Program

Meeting Venue:
TECHNOPARK Zürich
Technoparkstrasse 1
8005 Zurich
Switzerland

Local organiser:
IT'IS Foundation represented by Prof. Niels Kuster

Workshop "Designing Focused Deep Hyperthermia by EMF"

(Chair: Prof. Gerard van Rhoon, *Erasmus MC Cancer Institute, Rotterdam*)

WG1 and WG3 Meetings: Activities Reports & Road Map Discussions

(WG1 Leader: Prof. Gerard van Rhoon, WG3 Leader: Prof. Niels Kuster)

Time	Presenter	Title
09.00	A. Šarolić (COST EMF-MED Chair)	Welcome
09.05	G.C. van Rhoon (Workshop Chair)	Short introduction of the program
Workshop: Definition of Biological and Clinical Needs (Chair: Gerard van Rhoon)		
09.15	M.W. Dewhirst (invited speaker)	Thermal dose challenges for the 2020 hyperthermia system
09.50	M. Paulides (invited speaker)	Towards target conformal RF-hyperthermia: a clinical perspective
10.25	All	General Discussion
10.40	<i>Coffee/Tea</i>	
Workshop: Potentials and Limitations of Technology Solutions (Chair: Gerard van Rhoon)		
11.00	A.G. Tjihuis (invited speaker)	Solutions for High Density Antenna Arrays for the 2020 Hyperthermia System
11.35	D. Vrba	Metamaterial-Applicators for Microwave Hyperthermia Treatments
11.55	D. de Jong	E-field Measurements in the Sigma-60 Water Bolus for Antenna Feed Point Correction
12.15	T. Samaras	Deep hyperthermia: How much focusing is good enough?
12.35	All	General Discussion
12.45	<i>Lunch</i>	
Workshop & WG3 Meeting 1/2: Dosimetry: Temperature Measurement (Chair: Niels Kuster - WG3 Activities)		
13.30	E. Balidemaj	MR based reconstruction of the local SAR deposition using CSI-EPT
13.50	J. Hartmann	Non-invasive thermometry with reference to the practical application in a clinical environment
14.10	S. Lechner	Temperature mapping in adipose and aqueous tissue with joint T1 and PRFS quantification using Balanced SSFP
Workshop & WG3 Meeting 2/2: Dosimetry: Hyperthermia Treatment Modeling (Chair: Niels Kuster - WG3 Activities)		
14.30	E. Neufeld (invited speaker)	Ideal treatment planning system for deep localized hyperthermia in the future
15.00	Domenica Iero	Towards Optimal Patient-Specific Hyperthermia Treatment-Planning via Constrained Power Focusing
15.20	M. Gosselin	Current IT'IS hyperthermia treatment planning platform, interactive demonstration
15.40	Plenary	WG3 Roadmap Discussion
16.10	<i>Coffee/Tea</i>	
Workshop & WG1 Meeting: Other Hyperthermia Applications and Other Cancer EMF Interactions (Chair: Gerard van Rhoon - WG1 Activities)		
16.30	M. Morega	Thermal Control of Target Tissue Volume in Interstitial Hyperthermia
16.50	V. Lopresto	Microwave thermal ablation for cancer treatment: clinical gaps and research challenges to develop predictive models for treatment planning
17.10	L. Vesellinova	Enhancement of rf-emf therapy by means of selective accumulation of glucose conjugated magnetic nanoparticles in vivo in rats
17.30	J. Crezee	Thermal effects of irreversible electroporation
17.50	Plenary	WG1 Roadmap Discussion
18.30	<i>Closure</i>	
COST EMF-MED Social Dinner (free for COST participants): time and meeting point to be announced		

Training on Hyperthermia (ESHO Educational Day)

Transfer to Kantonsspital Aarau (free for COST EMF-MED participants): 07:30h in front of Novotel hotel

- 09:00 – 09:15 G. van Rhoon: Clinical indications for superficial and deep hyperthermia. The ESHO recommendations
- 09:15 – 09:30 O. Dahl: Molecular insight of combined hyperthermia and radio-/chemotherapy
- 09:30 – 09:45 U. Gaipf: Hyperthermia and immunomodulation
- 09:45 – 10:00 G. van Tienhoven: Reirradiation and hyperthermia in breast cancer; how to proceed
- 10:00 – 10:15 J. van der Zee: Progress in the treatment of gynaecological tumours
- 10:15 – 10:30 O. Ott: What did we learn from hyperthermia in rectal cancer?
- 10:30 – 11:15 Coffee Break & Practical Session
- 11:15 – 11:30 R. Wessalowski: Guidelines for regional deep hyperthermia (RHT) in pediatric oncology
- 11:30 – 11:45 M. Capstick: Hardware and technology for radiofrequency hyperthermia
- 11:45 – 12:00 H. Dobsicek Trefna: How can we assure treatment quality and what is a good hyperthermia treatment?
- 12:15 – 14:00 Lunch & Bus transfer to Zurich (free for COST EMF-MED participants)
- 14:00 – 16:00 Visit to Vetsuisse, Zurich:
M. Paulides: Hyperthermia treatment planning and workflow
C. Rohrer-Bley, M. Capstick: Guided Tour / Practical Presentation
- 18:00 – 20:00 Social event: ESHO Conference Opening & Apero (free for COST EMF-MED participants, regardless of their participation in ESHO conference)