

ESHO 2010

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ESHO 2010

Rotterdam, The Netherlands May 20 - 22, 2010

Firing up Cancer Treatment



26th Annual Meeting of the EUROPEAN SOCIETY for HYPERTHERMIC ONCOLOGY

Together with

6th ESHO Educational Day (Wednesday, May 19th)

19th European BSD Users Meeting (Friday, May 21st)

 **TU Delft**
Delft University of Technology

 **Erasmus MC**
University Medical Center Rotterdam

 **TU/e**
Technische Universiteit
Eindhoven
University of Technology

Final Program



ESHO 2010

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pertaining to the congress at

➔ www.esho.info/esho2010

Dear Colleagues

It is with great pleasure that we welcome you to the 26th Annual Meeting of the European Society for Hyperthermic Oncology (ESHO) in Rotterdam, the Netherlands. The meeting will take place at the World Trade Centre (WTC) conference rooms in a productive environment. Your active participation in the conference is essential to shape the future of hyperthermia.

We are happy that we may present to you an exciting program with renowned speakers at several major aspects of oncology. The first two keynote lectures will demonstrate the progress in the clinical application and pre-clinical evidence of the effectiveness of hyperthermia. The keynote lectures here after will address technology development and innovations in both equipment and in biological strategies. The plenary keynote lectures are followed by parallel sessions including invited and proffered papers and poster presentations. More than hundred abstracts were submitted to the conference.

Never before were the prospects of hyperthermia as promising as today. Following superior results in randomized phase III trials, the interest in hyperthermia is growing continuously as demonstrated by increased patients' requests, more professionals referring patients and increasing ESHO memberships.

Progress in thermosensitive liposomes brings also the field of nanotechnology in the scope of hyperthermia. This will broaden the clinical spectrum, and is increasingly supported by research on mechanisms how hyperthermia affects tumour physiology, which will add to our understating and will allow further development of this potentially powerful tool. All these options will enhance the use of hyperthermia in multimodal cancer treatment.

Progress in technology development has resulted in new hyperthermia devices, advanced hyperthermia treatment planning and non-invasive thermometry. On-line optimization of the temperature distribution during treatment is glowing at the horizon. These technical advances are the gateway to targeted heating and to exploitation of thermal-dose effect relationships.

That time is changing is also reflected by a growing interest of industry in our activities. This year we welcome several new companies that have never before participated in the industrial exhibition of the ESHO conference. The commitment of the industry to our scientific activities is also well illustrated by their generous financial support of the ESHO Awards. The ESHO-BSD Award will be presented for its twelfth time. This year ESHO was also able to double the ESHO Student Award gratuity thanks to industrial support. As a gratitude to their continuous support of our activities we kindly ask you to visit the stands of our exhibitors during coffee breaks.

A key aspect of ESHO meetings is that the conference environment facilitates good social meetings between hyperthermia friends. The WTC is ideal for this. It is located in the middle of Rotterdam and the organising committee hopes that the lively city centre of Rotterdam will inspire you to good scientific discussions with your colleagues and social gatherings in the nearby restaurants and bars, so that many new agreements for cooperation can be made. We are confident that the cumulate progress will open new challenging fields for hyperthermia as an important modality contributing to enhancing effectiveness of cancer treatment. Together, we can make the motto of the 26th ESHO annual meeting work:

“Firing up Cancer Treatment”

ESHO 2010 Organizing Committee



Local Organizing Committee

Presidents

Alexander Eggermont (Erasmus MC)

Peter Levendag (Erasmus MC)

Members

Gerard van Rhooen (Erasmus MC) (Chair)

Cobi van der Zee (Erasmus MC)

Timo ten Hagen (Erasmus MC)

Gerben Koning (Erasmus MC)

Anton Tijhuis (TU Eindhoven)

Koen van Dongen (TU Delft)

Martin Verweij (TU Delft)

Organizing Secretariat

Erasmus MC – Daniel den Hoed

Department of Radiotherapy

Hyperthermia Unit

Groene Hilledijk 301

3075 EA Rotterdam

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General Information

In case of urgent issues during the meeting please contact:

Ms. Sandra van der Sluis, 0031-6-52509193

Participant's registration will be May 20th from 7.30 and May 21st from 8.00.

Speakers are kindly requested to upload their presentations well in advance, at the latest in the break prior to their session. Further instructions will follow.

We kindly request all speakers to stay within their allocated time. The chairs have been instructed to strictly follow the scheduled program in order to assure that the last speaker of the session also receives the attention deserved.

Posters can be mounted from Thursday morning May 20th 08.00 hours at the poster boards available in the company exhibition area. They must be removed by Saturday May 22nd 13.00 hours.

This year the Student Award selection will differ from previous years. Several members of a jury panel will make marks during the conference on the presentation or layout of the poster (equal weight), scientific quality and scientific impact of each student presenting his/her work. The student with the highest score of the jury members will receive the ESHO student award.

There are three ESHO student award categories of each € 500:

- ESHO-Magforce student award for biology
- ESHO-ZMT student award for technology
- ESHO-Alba student award for medicine

The ESHO student award ceremony is on Saturday morning, May 22nd



Wednesday, May 19, 2010 **Educational Day**

08.30	Bus leaves from Beurs-WTC Rotterdam to Delft University of Technology
09.30	Welcome with coffee, Room F (F105)

Plenary Tutorials
Room F (F105)

10.00	Thermophysiology
10.50	Tumour Physiology
11.40	Introduction to Electromagnetics and Ultrasound
12.30	Lunch
14.00 - 17.00	ESHO Board Meeting, <i>Erasmus MC - Daniel den Hoed, Radiotherapy conference room</i>

Parallel Session I Room C117 **Parallel Session II** Room F (F105)

13.30	Clinical Workshop 1	Modeling 1
15.00	Coffee break	
15.30	Clinical Workshop 2	Modeling 2
17.00	Drinks	
18.30	Bus leaves from Delft University of Technology to Beurs-WTC Rotterdam	

Thursday, May 20, 2010 **ESHO 2010 Meeting**

Opening
Oscar Auditorium

07.30	start registration
08.30	Opening

Plenary Session I
Oscar Auditorium

09.30	Keynote Lectures
10.30	Coffee break

Parallel Session I Oscar Auditorium **Parallel Session II** Oldenbarnevelt Room

11.00	Clinical Trials	High Intensity Focused Ultrasound
12.30	Lunch + Poster viewing	

Plenary Session II
Oscar Auditorium

14.00	Keynote Lecture
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Parallel Session III Oscar Auditorium **Parallel Session IV** Oldenbarnevelt Room

14.30	Thermosensitive Nanomedicine 1	Head and Neck Tumours
16.00	Coffee break	

Plenary Session III
Oscar Auditorium

16.30	Selected Poster Presentations
17.25	ESHO BSD Award
18.10 - 18.40	General Assembly ESHO

19.00	Welcome Reception at City Hall
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Friday, May 21, 2010 **ESHO 2010 Meeting**

Plenary Session IV
Oscar Auditorium

08.00	start registration
08.30	Keynote Lecture

Parallel Session V Oscar Auditorium **Parallel Session VI** Oldenbarnevelt Room

09.00	Hyperthermia Technology	Surgical Approaches
10.30	Coffee break	

Parallel Session VII Oscar Auditorium **Parallel Session VIII** Oldenbarnevelt Room

11.00	Modeling	Pathophysiological Effects
12.30	Lunch + Poster viewing	IJHT Editorial Board Meeting <i>Captain's Lounge</i>

Plenary Session V
Oscar Auditorium

14.00	Keynote Lecture
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Parallel Session IX Oscar Auditorium **Parallel Session X** Oldenbarnevelt Room

14.30	BSD Users Meeting	Immunology 1
16.00	Coffee break	

Parallel Session XI Oscar Auditorium **Parallel Session XII** Oldenbarnevelt Room

16.30	Imaging	Thermosensitive Nanomedicine 2
17.50		

18.45 - 24.00	Conference Dinner at Blijdorp Zoo <i>trams will leave from meeting venue at 18.30, 18.45 and 19.00</i>	
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Saturday, May 22, 2010 **ESHO 2010 Meeting**

Plenary Session VI
Oscar Auditorium

09.00	Keynote Lecture
09.30	Repair Mechanisms/Immunolgy 2
10.30	Coffee break

Plenary Session VII
Oscar Auditorium

11.00	Clinical Treatment
12.00	Award Session
12.30	Presentation ESHO 2011
12.45	Closure

ESHO
2010

Program at a Glance



EDUCATIONAL DAY

- 08.30 Bus leaves from Beurs-WTC Rotterdam to Delft University of Technology (Faculty Applied Sciences)
- 09.30 Welcome with Coffee

PLENARY TUTORIALS, ROOM F (F105)

- 10.00 Thermophysiology
W. van Marken Lichtenbelt
- 10.50 Tumour physiology
P. Vaupel
- 11.40 Introduction to electromagnetics and ultrasound
K. van Dongen
- 12.30 Lunch

PARALLEL SESSION I, ROOM C117

CLINICAL WORKSHOPS

Chair: **J. van der Zee**

- 13.30 Superficial Hyperthermia
- Introduction to hyperthermia in breast cancer
- Rotterdam: equipment, guidelines, procedure
- Superficial hyperthermia treatment planning
- 15.00 Coffee break
- 15.30 Deep Hyperthermia
- Introduction to hyperthermia in cervical cancer
- Rotterdam: equipment, procedure, quality assurance
- Deep hyperthermia treatment optimization

PARALLEL SESSION II, ROOM F (F105)

MODELING

- 13.30 Advanced electromagnetics and ultrasound
K. van Dongen
- 14.15 Computational methods
A. Tijhuis
- 15.00 Coffee break

PARALLEL SESSION II, ROOM F (F105) (CONTINUATION)

- 15.30 Clinical use of hyperthermia treatment planning and recent technology developments: an overview of the current status quo
J. Bakker
- 16.15 Nonlinear ultrasound
M. Verweij
- 17.00 Drinks
- 18.30 Bus leaves from Delft University of Technology to Beurs-WTC Rotterdam

ESHO BOARD MEETING (ON INVITATION)

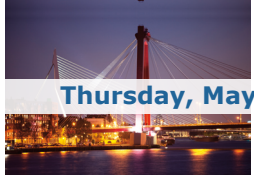
Erasmus MC Daniel den Hoed
Groene Hilledijk 301, Rotterdam-Zuid

RADIOTHERAPY-CONFERENCE ROOM

- 14.00 ESHO Board Meeting at Erasmus MC-Daniel Den Hoed
- 17.00 End



Thursday, May 20th



OPENING

Oscar Auditorium

08.30 **OPENING**

On behalf of Institutes:
H. Pols and I. Young

On behalf of Presidents:
A. Eggermont

On behalf of organizing committee:
G. van Rhoon

PLENARY SESSION I

Oscar Auditorium

KEYNOTE LECTURES

Chairs: J. van der Zee and M. Hulshof

09.30 Hyperthermia in cancer treatment - yes we can!
R. Issels

10.00 Summary of pre-clinical and clinical development of a thermally sensitive doxorubicin containing liposome
M. Dewhirst

10.30 **Coffee break**

PARALLEL SESSION I

Oscar Auditorium

CLINICAL TRIALS

Chairs: O. Ott and M. Franckena

11.00 Cochrane review of radiotherapy and hyperthermia in locally advanced cervical carcinoma
L. Lutgens

11.15 Long-term follow-up of a phase II feasibility study of regional hyperthermia added to chemoradiotherapy in advanced cervical cancer
A. Westermann

11.30 Feasibility of chemotherapy and locoregional hyperthermia in patients with intermediate/high risk non-muscle invasive urothelial carcinoma of the bladder
E. Geijssen

11.45 Hyperthermia combined with radio-chemotherapy in unresectable locally or recurrent advanced pancreatic cancer. A phase II perspective study.
S. Maluta

PARALLEL SESSION I (CONTINUATION)

Oscar Auditorium

12.00 Regional hyperthermia (RHT) combined with gemcitabine (G) + cisplatin (P) in patients with G-refractory locally advanced or metastasized pancreatic cancer: retrospective analysis of data
K. Tschoep

12.15 Atzelsberg circle and development of ESHO clinical trials
O. Ott

12.30 **Lunch + poster viewing**

PARALLEL SESSION II

Van Oldenbarnevelt Room

HIGH INTENSITY FOCUSED ULTRASOUND

Chairs: G. ter Haar and K. van Dongen

11.00 Targeting the brain with ultrasound: old dreams, new hopes
J. Aubrey

11.25 Status of clinical HIFU - an update
G. ter Haar

11.45 Simulation of nonlinear ultrasound beams using the iterative Nonlinear Contrast Source method
M. Verweij

12.00 A novel finite amplitude method for determining the acoustic nonlinearity parameter of ablated and non-ablated animal tissue
L. Retat

12.15 A feasibility study of non-invasive temperature measurement for HIFU
M. Verweij

12.30 **Lunch + poster viewing**

PLENARY SESSION II

Oscar Auditorium

KEYNOTE LECTURE

Chair: R. Issels

14.00 Design and in vitro testing of novel thermally sensitive liposomal formulation for treatment of local tumors: how to achieve drug release in the blood stream
D. Needham



PARALLEL SESSION III

Oscar Auditorium

THERMOSENSITIVE NANOMEDICINE 1

Chairs: L. Lindner and L. Li

- 14.30 Nanomedicines that target tumor vasculature
R. Schiffelers
- 14.50 Intravital microscopy setup to study the intratumoral fate of thermosensitive liposomes and triggered drug release
G. Koning
- 15.10 Drug delivery by thermosensitive polymeric micelles: from formulation technology to preclinical studies
R. van Nostrum
- 15.30 Improving drug delivery: changing from liposome extravasation to heat-triggered intravascular drug release
A. Manzoor
- 15.40 Maghemite-based nanoparticles from viewpoint of hyperthermia treatment
N. Kazantseva
- 15.50 Accumulation of doxorubicin in tumor using thermosensitive liposomes in combination with mild hyperthermia - in vivo study in rats
R. Schmidt

16.00 Coffee break

PARALLEL SESSION IV

Van Oldenbarnevelt Room

HYPERTHERMIA IN HEAD AND NECK TUMOURS

Chairs: D. Brizel and A. Al-Mamgani

- 14.30 The role of hyperthermia in head and neck cancer treatment
D. Brizel
- 14.50 Dysphagia related quality of life in oropharyngeal cancer: en route to application of quasi-simultaneous radiation therapy and deep hyperthermia
P. Levendag
- 15.05 Integration of technology into the clinic to facilitate focused treatment of advanced head and neck tumours
M. Paulides
- 15.20 Intratumoral thermotherapy using magnetic nanoparticles in combination with external beam radiotherapy in patients with recurrent glioblastoma multiforme
A. Jordan

PARALLEL SESSION IV (CONTINUATION)

Van Oldenbarnevelt Room

- 15.35 Hyperthermia with radiation in the treatment of locally advanced Head & Neck cancer: A report of the randomized trial
N. Huilgol
- 15.50 The results of thermoradiation therapy for locally advanced cancer of the larynx
O. Kurpeshev

16.00 Coffee break

PLENARY SESSION III

Oscar Auditorium

SELECTED POSTER PRESENTATIONS

Chairs: P. Maccarini and R. Canters

- 16.30 Hyperthermia treatment of tumors in the oropharynx: feasibility and possibilities for treatment planning validation
Z. Rijnen
- 16.35 Complex permittivity measurement on non-homogenous agar phantom
J. Vorlicek
- 16.40 SAR distribution of large curved CFMA antennas: measurements and analysis
D. Correia
- 16.45 Study of SAR focusing by array of stripline TEM mode applicators
B. Vrbova
- 16.50 Assessment of the SAR exposure of the eyes during a superficial hyperthermia treatment
T. Drizdal
- 16.55 Hyperthermia treatment optimization of temperature measurement and accurate data evaluation
G. van Stam
- 17.00 Temperature distribution in a phantom when using various methods of HF-hyperthermia
O. Kurpeshev



PLENARY SESSION III (CONTINUATION)

Oscar Auditorium

- 17.05 Palliative treatment of peritoneal carcinomatosis: the role of IPHC
(Intraperitoneal Hyperthermic Chemotherapy) in a single centre experience
G. Astara
- 17.10 In vitro models for testing the effect of mediator on heating in electro-hyperthermia
P. Humpolicek
- 17.15 Re-irradiation plus hyperthermia for cancer en cuirasse; a good palliative option
S. Oldenburg
- 17.20 End
- 17.25 ESHO BSD AWARD
Chair: M. Dewhirst
- 18.10 GENERAL ASSEMBLY ESHO
- 18.40 End
- 19.00 Welcome reception at City Hall



PLENARY SESSION IV

Oscar Auditorium

KEYNOTE LECTURE

Chair: **G. van Rhoon**

- 08.30 Advances in hyperthermia techniques
H. Crezee

PARALLEL SESSION V

Oscar Auditorium

HYPERTHERMIA TECHNOLOGY

Chairs: **P. Stauffer** and **N. Huilgol**

- 09.00 Towards non-invasive, real-time monitoring of hyperthermia treatment using multiple antennas
A. Tjihuis
- 09.20 Feasibility of a 70 MHz waveguide system for treatment of deep seated breast tumours.
D. Correia
- 09.30 Can we freely exchange Sigma-60 applicator to Sigma-Eye (or vice versa)?
D. Fatehi
- 09.40 Improving tumour temperatures by increasing the operating frequency of the 3D AMC-8 loco-regional hyperthermia system: a simulation study
H. Kok
- 09.50 Hot spot management in time reversal hyperthermia
H. Dobšiček Trefná
- 10.00 Characterization of the first conformal ultrawideband metamaterial lens applicator for hyperthermia
P. Maccarini
- 10.10 Regularization for online hyperthermia treatment optimization
M. Ranneberg
- 10.20 Lens applicator for microwave thermotherapy
J. Vrba

10.30 Coffee break

PARALLEL SESSION VI

Van Oldenbarnevelt Room

SURGICAL APPROACHES

Chairs: **A. Eggermont** and **S. Dall'Oglio**

- 09.00 Peritonitis carcinomatosa, current standards
V. Verwaal
- 09.20 Heat it or Beat it?
C. Verhoef
- 09.40 Optimization of tumor perfusion
A. Eggermont
- 10.00 Preoperative regional hyperthermia in locally advanced rectal cancer: correlation between thermal parameters and pathologic complete remission
S. Dall'Oglio
- 10.10 Clinical outcomes after preoperative chemoradiotherapy with or without hyperthermia for locally advanced rectal cancer
M. Kang
- 10.20 End

10.30 Coffee break

PARALLEL SESSION VII

Oscar Auditorium

MODELING

Chairs: **J. Lagendijk** and **A. Tjihuis**

- 11.00 Latest advances in hyperthermia treatment modeling
N. Kuster
- 11.20 Improved treatment planning in deep hyperthermia. A new study and preliminary results
R. Canters
- 11.35 Automatic 3D tissue segmentation from MRI for hyperthermia treatment planning
S. Pyatykh
- 11.50 Clinical implementation of hyperthermia treatment planning guided steering: a cross over trial to assess its current contribution to treatment quality
M. Franckena
- 12.00 Interactive multigoal optimization in hyperthermia treatment planning
A. Kyriacou



PARALLEL SESSION VII (CONTINUATION)

Oscar Auditorium

- 12.10 Hot feet in the BSD Sigma 60: a numerical study of whole-body exposure
J. Bakker
- 12.20 Numerical tools for analysis and synthesis in magneto-fluid hyperthermia
P. Di Barba
- 12.30 Lunch + Poster viewing

PARALLEL SESSION VIII

Van Oldenbarnevelt Room

PATHOPHYSIOLOGICAL EFFECTS

Chairs: M. Horsman and A. Manzoor

- 11.00 Mechanism of the hypoxia response after hyperthermia treatment
M. Dewhirst
- 11.20 Thermoregulatory responses to mild systemic thermal stress increase tumor vascular perfusion, decrease interstitial fluid pressure and hypoxia and enhance radiation response
E. Repasky
- 11.40 Improvement in tumor blood flow and oxygenation upon mild localized hyperthermia: short-lived, sustained or non-existent?
P. Vaupel
- 12.00 Influence of the vascular disrupting agent oxi4503 on tumour response to variations in the time interval between radiation and mild temperature hyperthermia
M. Horsman
- 12.20 Optimization in hyperthermia: the influence of perfusion uncertainty
M. de Greef

12.30 Lunch + Poster viewing

INTERNATIONAL JOURNAL OF HYPERTHERMIA EDITORIAL BOARD MEETING

- 12.30 International journal of hyperthermia editorial board meeting in the captain's lounge

PLENARY SESSION V

Oscar Auditorium

KEYNOTE LECTURE

Chair: J. Gellermann

- 14.00 The use of on line MRI guidance in hyperthermia: can MRI produce the required breakthrough?
J. Lagendijk

PARALLEL SESSION IX

Oscar Auditorium

BSD USERS MEETING: IMAGE-GUIDED HYPERTHERMIA

Chairs: U. Gaipf and P. Turner

- 14.30 New Product Developments
M. Wadepohl
- 14.40 Spectroscopy as a Method for Absolute Thermometry
S. Baichowitz
- 15.00 Discussion
- 15.05 Initial Duke experience with MR thermometry for extremities and breast
P. Maccarini
- 15.25 Discussion
- 15.30 Practice of image guided hyperthermia
J. Gellermann
- 15.50 Discussion and closing remarks
- 16.00 Coffee break

PARALLEL SESSION X

Van Oldenbarnevelt Room

IMMUNOLOGY 1

Chairs: R. Debets and T. ten Hagen

- 14.30 Immune therapy to treat solid tumors: towards potent yet safe T cell responses
R. Debets
- 14.50 Underappreciated role of temperature in co-stimulation of T lymphocytes
E. Repasky
- 15.10 Targeting membrane Hsp70 by using cmHsp70.1 mAb as a tumor-specific recognition structure and for in vivo imaging
G. Multhoff



PARALLEL SESSION X (CONTINUATION)

Van Oldenbarnevelt Room

- 15.30 Combination of hyperthermia and bortezomib results in additive killing in mantle cell lymphoma cells
V. Milani
- 15.45 Natural killer cell function is impaired in sarcoma patients but can be restored by in vitro stimulation
V. Buecklein
- 16.00 Coffee break

PARALLEL SESSION XI

Oscar Auditorium

IMAGING

Chairs: **M. Verweij** and **M. Paulides**

- 16.30 Magnetic resonance for non-invasive temperature monitoring: An approach for optimization of regional deep hyperthermia in children
R. Wessalowski
- 16.50 Microvascular quantification by contrast-ultrasound diffusion imaging
M. Misch
- 17.10 Non-oncologic application for hyperthermia and microwave radiometry: detection of vesicoureteral reflux
P. Stauffer
- 17.25 MR-characterization of hyperthermia induced gadodiamide release from thermosensitive liposomes
M. Peller
- 17.40 Optimal Gd-based MR contrast agent encapsulated in DPPG2-based thermosensitive liposomes for improved MR-guided chemothermotherapy
T. Wang
- 17.50 Feasibility study of temperature estimation based on nonlinear acoustics
E. Both
- 18.00 End

PARALLEL SESSION XII

Van Oldenbarnevelt Room

THERMOSENSITIVE NANOMEDICINE 2

Chairs: **G. Koning** and **R. Schmidt**

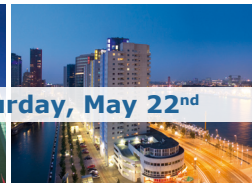
- 16.30 Temperature induced drug delivery under MRI guidance
H. Gruell
- 16.55 Thermosensitive liposomes based on phosphatidyl-(oligo)-glycerols
L. Lindner
- 17.20 A two-step approach for intratumoral drug delivery using optimized long-circulating thermosensitive liposomes and mild hyperthermia
L. Li
- 17.30 Factors influencing drug release from thermosensitive liposomes
M. Hossann
- 17.40 Thermosensitive cationic liposomes and hyperthermia for drug delivery to endothelial and tumor cells
B. Dicheva
- 17.50 End

CONFERENCE DINNER

- 18.45 Dinner with guided tour at Blijdorp Zoo, "Old Entrance", at the van Aerssenlaan, Rotterdam. A historical tram leaves from the meeting venue at 18.30, 18.45 and 19.00 to take you there. Return at own initiative.
For more information about Blijdorp Zoo see: <http://www.Blijdorp.nl>



Saturday, May 22nd



Saturday, May 22nd



PLENARY SESSION VI

Oscar Auditorium

KEYNOTE LECTURE

Chair: **O. Dahl**

- 09.00 DNA damage repair and its relevance in hyperthermia
R. Kanaar

REPAIR MECHANISMS / IMMUNOLOGY 2

Chairs: **E. Repasky** and **J. Essers**

- 09.30 Combination of ionising irradiation and hyperthermia induce immunogenic colorectal tumour cell death contributing to the maturation of dendritic cells
U. Gaipl
- 09.50 Using high-level whole body hyperthermia (HL_WBH) to deplete the quiescent HIV infected cell reservoir
M. Yatvin
- 10.10 Mild systemic thermal stress as a novel treatment for improving neutrophil recovery following total body irradiation
M. Capitano
- 10.20 Revealing the mechanism of action of modulated electro-hyperthermia experimentally in nude mouse tumor xenograft model
G. Andocs

10.30 Coffee break

PLENARY SESSION VII

Oscar Auditorium

CLINICAL TREATMENT

Chairs: **S. Maluta** and **E. Geijsen**

- 11.00 Re-irradiation plus hyperthermia for unilateral locoregional recurrent breast cancer; a retrospective analysis
S. Oldenburg
- 11.10 The tolerance of skin transfers after re-irradiation and hyperthermia for breast cancer recurrences
M. Linthorst
- 11.20 Long-term outcome and toxicity of combined radio-thermotherapy in patients with localized prostate cancer: a prospective monocenter study
M. Messmer

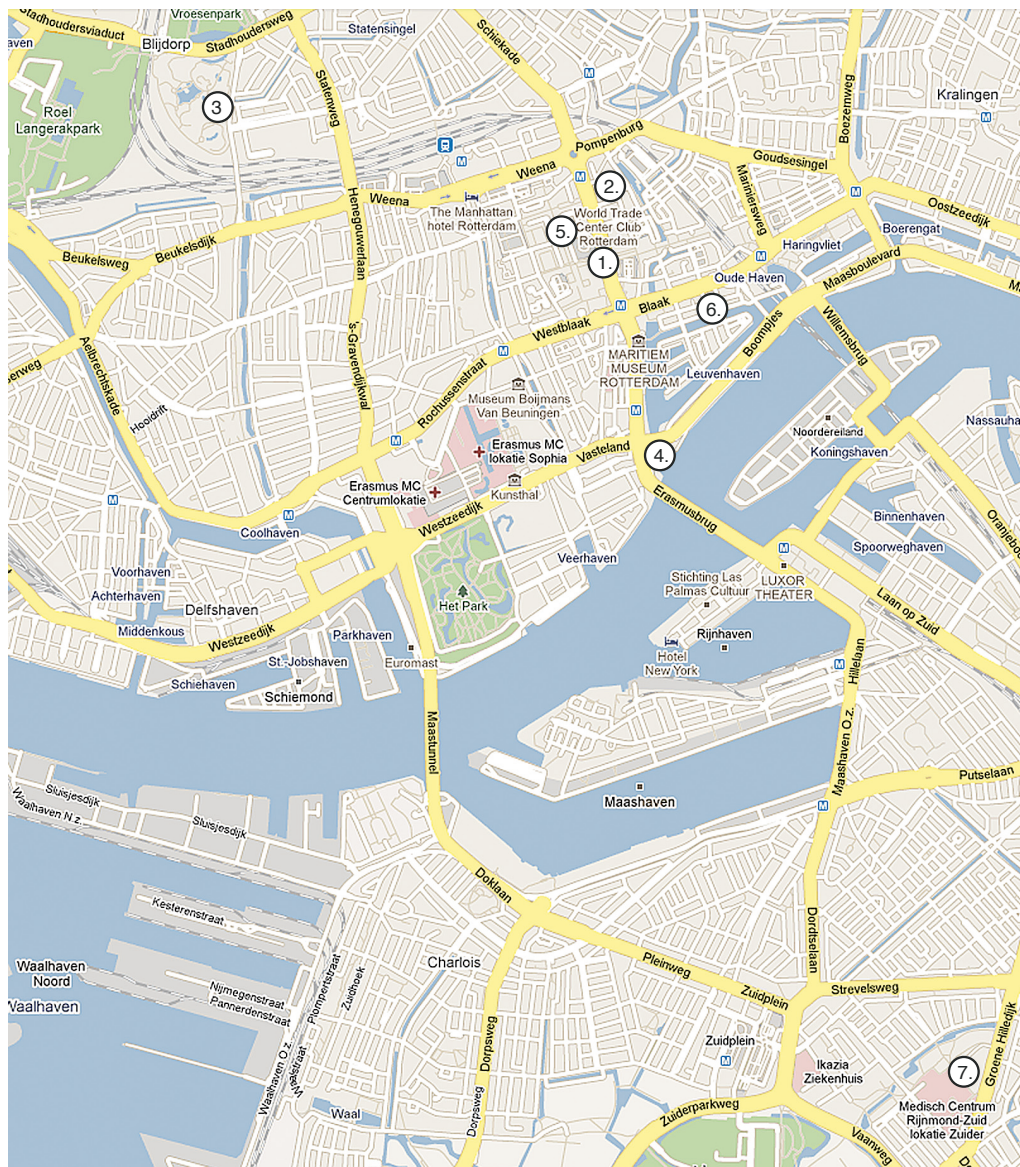
PLENARY SESSION VII (CONTINUATION)

Oscar Auditorium

- 11.30 Immediate results of loco-regional hyperthermia and chemotherapy for liver metastases of colo-rectal cancer
O. Kurpeshev
- 11.40 Modeling of biological effect of hyperthermia on radiotherapy dose distributions
A. Bel
- 11.50 Hot spots created by aperture and water bolus resonances
J. Vrba

AWARD SESSION

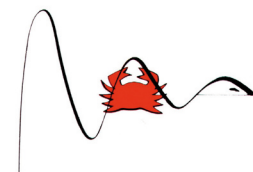
- 12.00 Presentation ESHO student awards
G. van Rhoon and **R. Issels**
- 12.20 Presentation International Journal of Hyperthermia editorial award
M. Dewhirst
- 12.30 Presentation ESHO 2011
- 12.45 Closure
P. Levendag



ESHO 2010

1. Beurs-WTC Rotterdam
Beursplein 37
3001 DE Rotterdam
2. City Hall
Coolingsingel 40
3011 AD Rotterdam
3. Blijdorp Zoo
Van Aerssenlaan
3041 JE Rotterdam
4. Golden Tulip
Leuvehaven 80
3011 EA Rotterdam
5. NH Atlanta
Coolingsingel/Aert van Nesstraat, 4
3012 CA Rotterdam
6. H2Hotel
Wijnhaven 20a
3011 WR Rotterdam
7. Erasmus MC- Daniel den Hoed
Groene Hilledijk 301
3075 EA Rotterdam





EUROPEAN SOCIETY FOR HYPERTHERMIC ONCOLOGY (ESHO)

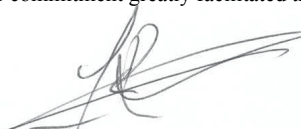
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COUNCIL: R.D. Issels (Germany), G.C. van Rhoon (The Netherlands), V. Milani (Germany), G. ter Haar (United Kingdom), P. Gabriele (Italy), F. Dughiero (Italy), M.C.C.M. Hulshof (The Netherlands), M. Horsman (Denmark), N. Piotrkowicz (Poland).

The European Society for Hyperthermic Oncology, the organizing committee and the presidents of the 26th ESHO Annual Meeting are most gratefully recognizing the financial support of the following companies and organizations:

Premium Partner:	Dr. Sennewald Medizintechnik GmbH
Gold Partner:	Alba Hyperthermia Systems Hippocampus Healthcare B.V. FISO-Fiber Optic Sensors and Solutions ZMT-Zurich MedTech
Bronze Partner:	Heckel Medizintechnik GmbH CST-Computer Simulation Technology AG
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Gerard van Rhoon,
secretary general ESHO
chair organizing committee ESHO2010

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