



3rd European symposium on focused ultrasound therapy

London
October

15·16th
2015

www.eufus.org

Focused Ultrasound Therapy

3rd European Symposium

Royal Geographical Society
London

October 15th-16th, 2015



www.fustherapysymposium2015.org

Welcome letter

Dear Friends and Colleagues,

*It is our great pleasure to invite you to London
for the 3rd symposium on focused ultrasound therapy.*

This event will take place on October 15th and 16th 2015 in central London.

Following the great success of the previous 2 European focused ultrasound symposia in Rome we have undertaken a further meeting which on this occasion will take place in central London in October 2015.

The meeting will be held at the historic Royal Geographical Society, which is situated in central London close to Hyde Park and the main London museums.

As previously scientific presentations and invited lectures on areas of topical interest to this field will take place.

We hope to expand however on previous symposia by including a substantial amount of practical based teaching about how to carry out focused ultrasound procedures. We will attempt to include teaching covering all major manufacturers in open discussions led by experts in the field concentrating on the main areas of application of this.

Poster sessions and other specialty interest workshops will also take place. On behalf of the European Focused Ultrasound charitable Society committee we are very much looking forward to welcoming you all to London in 2015.

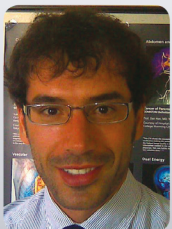
We hope to welcome old friends and introduce many new practitioners to this field

Wladyslaw Gedroyc, Alessandro Napoli, Andreas Melzer, Carlo Catalano

Organizing Committee



Wladyslaw GEDROYC, MD, PhD (London, UK)
Imperial College



Alessandro NAPOLI, MD, PhD (Rome, ITALY)
La Sapienza University of Rome



Andreas MELZER, MD, DDS (Dundee, UK)
IMSaT University, Dundee



Carlo CATALANO, MD, PhD (Roma, ITALY)
La Sapienza University of Rome

Faculty

A. BAZZOCCHI - Bologna, (Italy)

K. BUTTS PAULY - Stanford, (Usa)

C. COUSSIOS - London, (Uk)

I. DILLON - London, (Uk)

A. GANGI - Strasbourg, (France)

W. GEDROYC - London, (Uk)

P. GHANOUNI - Stanford, (Usa)

R. D. GOLDIN - London, (Uk)

E. GOMEZ GONZALEZ - Seville, (Spain)

Y. INBAR - Telaviv, (Israel)

Y. KIM - Seoul, (Korea)

M. MATZKO - Dachau, (Germany)

N. MCDANNOLD - Boston, (Usa)

G. NABI - Dundee, (Uk)

V. POPENECIU - Heidelberg, (Germany)

T. PREUSSER - Bremen, (Germany)

J. RABINOVICI - Telaviv, (Israel)

P. ROMANELLI - Milano, (Italy)

S. TAYLOR - ROBINSON - London, (Uk)

C. TEMPANY - AFDHAL - Boston, (Usa)

G. TER HAAR - Sutton Surrey, (Uk)

M. THANOU - London, (Uk)

B. WERNER - Zurich, (Switzerland)

M. WINKLER - London, (Uk)

CORPORATE SPEAKER:

M. Düx - Frankfurt (Germany) INSIGHTEC

Andrew Miller (UK) GLOBALACORN

General information

Congress venue

Royal Geographical Society Conference Centre

The Geographical Society of London was founded in 1830 as an institution to promote the advancement of geographical science.

Like many learned societies at the time of enlightenment, it started as a dining club in London, where select members held informal dinner debates on current scientific issues and ideas.



Under the patronage of King William IV, it later became known as The Royal Geographical Society and was granted its Royal Charter under Queen Victoria in 1859. In 1912 the Society purchased, and in 1913 Society moved to, its current location, Lowther Lodge.

The Society's purpose remains the same today as when it was first founded, namely the 'advancement of geographical science'. However, the manner in which that is done has expanded greatly over the years, while still continuing to include publishing, the support of field research and expeditions, lectures and conferences, and its collections.

The Society also devoted much attention to education and was responsible for both the incorporation of the study of geography in schools at the turn of the 20th century and for the first university positions in the discipline.

Today, with 15,000 members, the Society is the largest and most active of the scholarly geographical societies. It advances geography through supporting geographical research, education and outdoor learning, public engagement and policy.

FREE WIFI

Network: RGS-IBG
Password: not required

General information

How to get there

The Society is located in Kensington at the junction of Exhibition Road and Kensington Gore.

TUBE



South Kensington (Circle, District and Piccadilly Lines) - a 10 to 15 minute walk up Exhibition Road (beyond the Science Museum and Imperial College) to the Society.

Knightsbridge (Piccadilly Line) - a 15 minute walk along Kensington Road to the Society.

Lancaster Gate (Central Line) - a 15 to 20 minute walk across Hyde Park to the Society.

BUS



There are several bus routes which stop outside or within the vicinity of the Society building.

- **9:** Hammersmith/Aldwych
- **10:** Hammersmith/King's Cross
- **52:** Willesden/Victoria
- **360:** Kensington/Elephant and Castle
- **452:** Wandsworth/Willesden

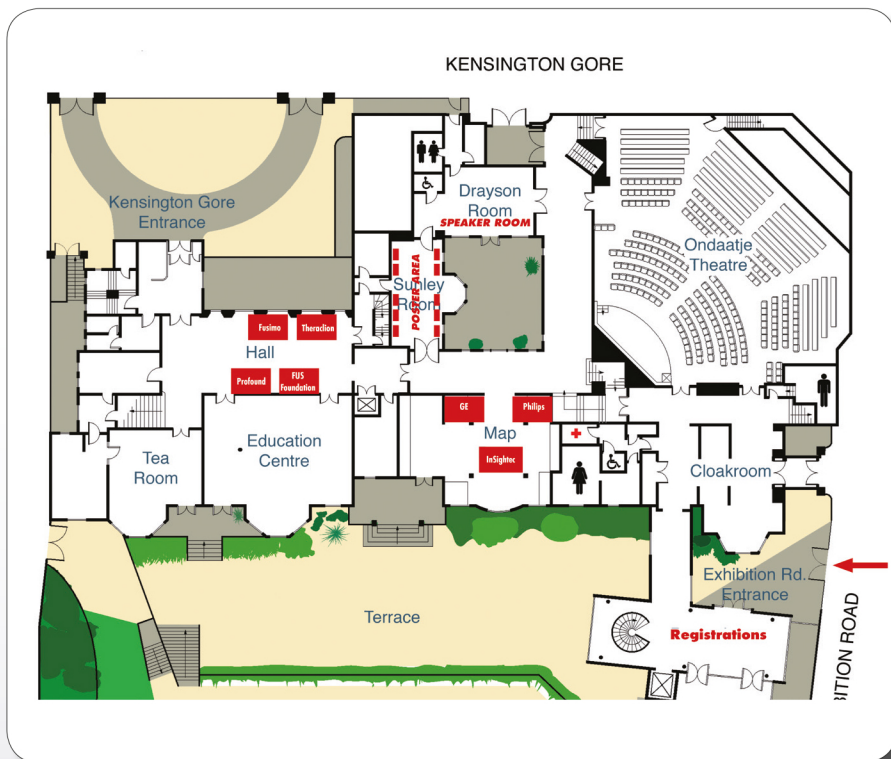
RAIL



The nearest mainline railway stations are London Victoria (you can then take the **52** bus to the Society) and London Paddington (a 25 minute walk to the Society).

General information

Congress Map



General information

Endorsements

**Società Italiana
Radiologia Medica**



EUFUS

European Focused Ultrasound Charitable Society is a research and educational organization serving as a philanthropic forum to establish research funding, sharing experiences, reviewing best practices and promoting cooperation in the field of Focused Ultrasound for better patient treatment.

For more information please visit: www.eufus.org

Organizing secretariat

Congress Secretariat/CME/Exhibition Organizer:  **arseducandi**

Viale Gian Galeazzo, 3 - 20136 Milano, ITALY - Web: www.arseducandi.it

Telephone: +39 02.58189.243 - Fax: +39 02.58189.343

Email: secretariat@fustherapysymposium2015.org

Hotel Accommodation & Travel Agency:  **AGENCY**
Communication by events

Viale Gian Galeazzo, 3 - 20136 Milano, ITALY

Web: www.pvagency.it - Telephone: +39 02.58189.204 - Fax: +39 02.58189.304

Email: accommodation@fustherapysymposium2015.org

Congress registration

Registration Fee for all delegates includes annual membership of the European focused ultrasound charity for 2016 so that all delegates will become members of EFUS

EARLY BIRD RATE	FROM 31st August, 2015
MD	€ 500,00
Students* & Residents**	€ 180,00
Ultrasound Researcher	€ 250,00

* students (under the age of 27) must submit by e-mail or by fax a certificate of study and a copy of a valid ID together with their registration.

** Resident (under the age of 35) must submit by e-mail or by fax a certificate signed by the Head of the Department and a copy of a valid ID together with their registration.

How to register

ONLINE REGISTRATION

Credit card payment only with: Visa and Mastercard.

Credit card payment is allowed until 9th October, 2015.

General information

Registration by Email or Fax

Download and complete the registration form and send it by mail to secretariat@fustherapysymposium2015.org or fax it to +39 02 58189.343

Bank Details

I have transferred total amount to Banca Nazionale del Lavoro - Ag. 2 - Milan
IBAN: IT10R01005 01602 000000015392 - SWIFT BIC: BNLITRR - BENEFICIARY: Arseducandi Srl

Reference: Participant name - *FUS Therapy 2015*

Bank transfers must be made before 2nd October, 2015.

PLEASE NOTE: BANK TRANSFERS

Are not allowed after 2nd October, 2015

Cancellation and Substitution Policy

Any Cancellation or substitution of registrations must be notified in writing to: secretariat@fustherapysymposium2015.org and will be subject to the following conditions:

Cancellations

Until July 31st, 2015: € 100,00 administrative charge

After July 31st, 2015: no refund

Substitutions

Until July 31st, 2015: € 60,00 administrative charge

No-shows will be charged the full registration fee.

Visa: How do i get my invitation letter?

Personal Invitation letters will be available after payment is received at our account. Please note that Arseducandi's Organizing Secretariat does not send/issue any documents other than electronic Invitation Letter.

Please contact secretariat@fustherapysymposium2015.org for further information.

General information

CME/ECM Credits

FUS CME credits

The FUS was granted: 10 European CME credits by EACCME

FUS ECM credits (only for Italian delegates)

An application has been made to Age.Na.S. for: Radiographers and MD, disciplines accepted: Neuroradiology, Oncology, Radiodiagnostics, Radiology.

Only participants who attend the FUS Congress and complete the FUS CME TEST will obtain CME/EACCME credit certificate.

What are CME/EACCME credits?

A system for Continuing Medical Education (CME) is aimed to assure a high level of theoretic and clinical competence throughout the working life of medical specialists. Doctors are faced with an exploding amount of literature and new technologies as well as a concern about escalating medical costs with a great emphasis on efficacy.

CME provides educational activities, which allow one to maintain, develop and increase medical knowledge and skill and to improve the professional performance to ensure better and safer treatment for the patient.

The UEMS – European Union of Medical Specialists is representing 34 European Countries.

BEST ABSTRACT AWARD

The three best abstract selected by the Faculty Board will receive a prize (Gold - Silver - Bronze) during the last GlobalAcorn Session on October 16th.

Scientific program

..... **Thursday October 15th**

07.30 Welcome Reception & Registration

08.00 Welcome and opening remarks

08.10 Ultrasound physics for physicians (*Gail Ter Haar*)

08.30 Cavitation, the good, bad or ugly (*Emilio Gomez Gonzalez*)

08.45 MR thermometry (*Kim Butts Pauly*)

09.00 FIBROID PANEL

Moderator: *Wladyslaw Gedroyc*

- Inclusion and exclusion (*Yael Inbar*)
- Early results (*Young Kim*)
- Pregnancy (*Jaron Rabinovici*)
- Amper clinic Germany: results Insight (*Matthias Matzko*)
- Difficult cases and complications, how to improve technology (*H.Tröster, Suzanne Le Blang*)

.....
10.15 Coffee Break

10.35 Pathology of Cell Viability after Thermal Ablation (*Robert Goldin*)

10.55 Anaesthesia and Sedation (*Ivan Dillon*)

11.15 Speed Scientific Sessions

24 A correction framework for slow physiological drifts during MR-guided HIFU interventions in the abdomen: Proof of Concept (*C. Zachiu*)

16 MR-HIFU Ablation of Uterine Fibroids: Effect of Bowel Interposition on Procedure Feasibility and a Unique Bowel Displacement Technique (*Y. Kim*)

54 Magnetic Resonance-guided Focused Ultrasound of Uterine Fibroids: Patient Follow-up 5 years after Treatment (*G. Hesley*)

25 Image-guided targeted doxorubicin delivery with hyperthermia to optimize loco-regional control in breast cancer; the i-GO feasibility study (*R. Deckers*)

39 Preliminary Clinical Evaluation of Oxytocin-assisted MR-guided Focused Ultrasound for the Treatment of Uterine Fibroids (*Y. Wang*)

Scientific program

..... Thursday October 15th

- 41 Using microbubble sonographic contrast agent to enhance the effect of high intensity focused ultrasound for the treatment of uterine fibroids (*J.I. Quittlet*)
- 11 Uterine fibroids treatment selection using Magnetic Resonance Imaging: MR guided High Intensity Focused Ultrasound, Uterine Artery Embolization and Surgery. A per group analysis of outcomes (*F. Ciolina*)
- 23 Years' experience of using the MRgFUS ablation in uterus myoma treatment (*A. Ishchenko*)
- 65 Less is More: Accelerated MR-guided Focused Ultrasound Ablation of Uterine Fibroids Using Vascular Targeting (*M. Kohl*)
- 64 Far-field protection: a case report of a new strategy for minimizing risk to far-field skin during MRgHIFU (*M. Bucknor*)
- 34 Beyond Osteoid Osteoma: MRgFUS in the treatment of other benign but painful bone lesions (*F. Arrigoni*)
- 22 MR guided High Intensity Focused Ultrasound (MRgHIFU) for pain palliation of bone metastases: preliminary experiences (*S.L. Giles*)
- 29 MR-guided focused ultrasound surgery palliative treatment of pain caused by bone metastases using ExAblate: preliminary results in China (*S. Wang*)
- 75 Magnetic Resonance guided Focused Ultrasound Surgery (MRgFUS) treatment of osteoid osteoma: a prospective development study (*B. Sacconi*)
- 70 Magnetic Resonance-guided Focused Ultrasound or Radiation Treatment for Bone Metastasis: A Matched-Pair Analysis (*J.F. Chiou*)
- 21 Magnetic resonance guided focused ultrasound surgery for pain palliation of bone metastases: prospective clinical study in China (*H. Wang*)
- 67 MR G FUS Frankfurt experience (*M. Duex*)
- 32 The Safety and Short-term Efficacy of MR Guided Focused Ultrasound Surgery for Bone Metastases Pain Palliation (*J. Zhang*)
- 43 A real-time data processing framework for steered FUS (*M. Schwenke*)
- 55 A tissue-mimicking phantom for in-vitro accuracy evaluation of USgHIFU procedures (*A. Cafarelli*)
- 68 Capsule-based Ultrasound-mediated Targeted Gastrointestinal Drug Deliver (*F. Stewart*)

Scientific program

..... Thursday October 15th

13.00 **Lunch Symposium** - INSIGHTEC

Running a commercial MRgFUS center in Germany: opportunities and challenges (*M. Dux*)

Providing a multi indication MRgFUS service - is this the next generation operating room? (*P. Ghanouni*)

14.00 **Speed Scientific Session**

45 Histopathologic features of in and ex vivo MR-HIFU ablation of breast cancer in comparison with radiofrequency ablation (*F. Knüttel*)

73 Computational simulation of acoustic scattering at ribcages for transcostal HIFU treatment planning (*E. van't Wout*)

66 Particle-Filter-Based Liver Motion Tracking for MRgFUS (*S. Rothlubbers*)

10 Spontaneous breathing vs mechanical ventilation for respiratory-gated MR-HIFU ablation in the liver: an update (*J. M. van Breugel*)

56 Subcutaneous Pelvic Fat and Rectus Abdominis Thickness as a Predictor of Anterior Wall Inflammation or Necrosis in the Treatment of Uterine Fibroids with MR Guided Focused Ultrasound (*S. LeBlang*)

72 Intrahepatic cell delivery in Nagase analbuminemic rats with HIFU mediated histotripsy (*K. J. Pahk*)

36 Ablative algorithms for reducing near field heating and treatment time of focused ultrasound sessions (*C. Damiannou*)

50 Acoustic Simulations of tcMRgFUS in Patient Specific Models: Acoustic Loss in Different Subjects (*U. Vyas*)

42 Cancer therapy by the combination of ultrasound mediated hyperthermia and immunotherapy (*R. Suzuki*)

48 Reusable Tissue Mimicking Phantom with Anatomical Geometries for Multimodality Image Guided FUS Applications (*A. Dennison*)

30 Thermal Lesion Angulation in tcMRgFUS (*K. Butts Pauly*)

57 Feasibility study: Quantitative measurement and Real-time tracking of High Intensity Focused Ultrasound using Phase-Sensitive Optical Coherence Tomography (*M. Nhan*)

15.00 **Alternate Prostate Therapies** (*Ghulam Nabi*)

Scientific program

..... **Thursday October 15th**

15.20 The Heidelberg clinical experience (*Valentin Popeneciu*)

15.40 *Coffee Break*

16.00 **PROSTATE PANEL**

Moderator: *Wladyslaw Gedroyc*

- Inclusion and exclusion for ultrasound guidance (*Alessandro Napoli*)
- Urologists viewpoint (*Matthias Winkler*)
- Difficult cases, complications, where next with technology (*Clare Tempany*)

Scientific program

..... Friday October 16th

- 08.00** Focused ultrasound of bone tumours results of FDA studies
(*Pejiman Ghanouni*)
- 08.20** Alternative Bone Therapies (*Afshin Gangi*)
- 08.40** **BONE PANEL**
- What tumours are suitable for treatment (*Alberto Bazzocchi*)
 - How I set cases up (*Alessandro Napoli*)
 - Difficult cases, complications, where next with technology
(*Pejiman Ghanouni*)
- 09.40** Problem of hepatocellular carcinoma worldwide (*Simon Taylor Robinson*)
- 10.00** **Coffee Break**
- 10.20** Evolving Liver Focused Ultrasound Solutions the Fusimo Project
(*Andreas Melzer, Tobias Preusser*)
- 11.40** **Speed Scientific Sessions**
- 40 Interventional Oncology: role of Focused Ultrasound (USgHIFU) in pancreatic cancer. Five years experience and tumor ablation considerations on the European stage (*J.J. Vidal*)
 - 46 Cost-effectiveness of MR-guided High Intensity Focused Ultrasound ablation for the treatment of early-stage breast cancer (*F. Knüttel*)
 - 60 Assessment of Soft-embalmed Human Breast Tissue as a model for preclinical trials of Focused Ultrasound Surgery in Breast Cancer (*J. Joy*)
 - 33 US-guided moving-beam HIFU treatment of benign solid thyroid nodules: 3 months of follow-up (*R. Kovatcheva*)
 - 74 Ultrasonic Stimulation of Peripheral Nervous Tissue: A Study of Mechanisms (*C.J. Wright*)
 - 31 Long-term efficacy of US-guided high-intensity focused ultrasound (HIFU) treatment of breast fibroadenoma (*R. Kovatcheva*)
 - 37 MR fusion imaging (STIR and FOCUS-DWI) for targeting of transcranial MR-guided focused ultrasound (TcMRgFUS) thalamotomy in patients with essential tumor (*T. Yamaguchi*)
 - 27 MRI Guided Focused US as a Neurosurgical Tremor Treatment Tool (*M. Zaaroor*)

Scientific program

..... **Friday October 16th**

- 58 Unilateral MR Imaging-Guided High Intensity Focused Ultrasound (MRgFUS) for Essential (Dystonic) Tremor (*R. Bauer*)
- 19 Rabbit model for Alzheimer amyloid beta plaques for MRI GUIDED Focused Ultrasound in synergy with antibody drugs (*C. Damianou*)
- 28 Ultrasonic potentiation of doxorubicin-induced cell death in 4T1 cells in vitro (*B. Rogez*)
- 35 Strategies for rapid & sustainable volumetric hyperthermia for targeted release of thermosensitive liposomes using a Clinical System (*P. Lyon*)
- 38 Investigation of the effects of surgical sutures on thermal deposition of MR-guided Focused Ultrasound Therapy (*G. Kalantzis*)

.....
12.50 Lunch

13.20 European Focussed ultrasound society Biannual General Meeting
(attendance for all delegates)

14.30 1st Annual Ferenc Jolesz oration in Focused ultrasound
(Clare Tempany)

15.00 Brain focused ultrasound where we are now, where we will be in 5 years
(Beat Werner)

15.20 Brain FUS at 1.5T (*Pantaleo Romanelli*)

15.40 Blood Brain Barrier Disruption (*Nathan McDannold*)

.....
16.00 Coffee Break

16.15 Principles of Drug Activation with Focused Ultrasound
(Constantin C. Coussios)

16.35 Thermal drug activation with focused ultrasound: early animal results
(Maya Thanou)

17.00 Future of drug activation using FUS and road to human trials
(Andrew Miller)

BEST ABSTRACT AWARD



17.20 Closing remarks

Main sponsor

INSIGHTEC

PHILIPS



GE imagination at work



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Medical Inc.



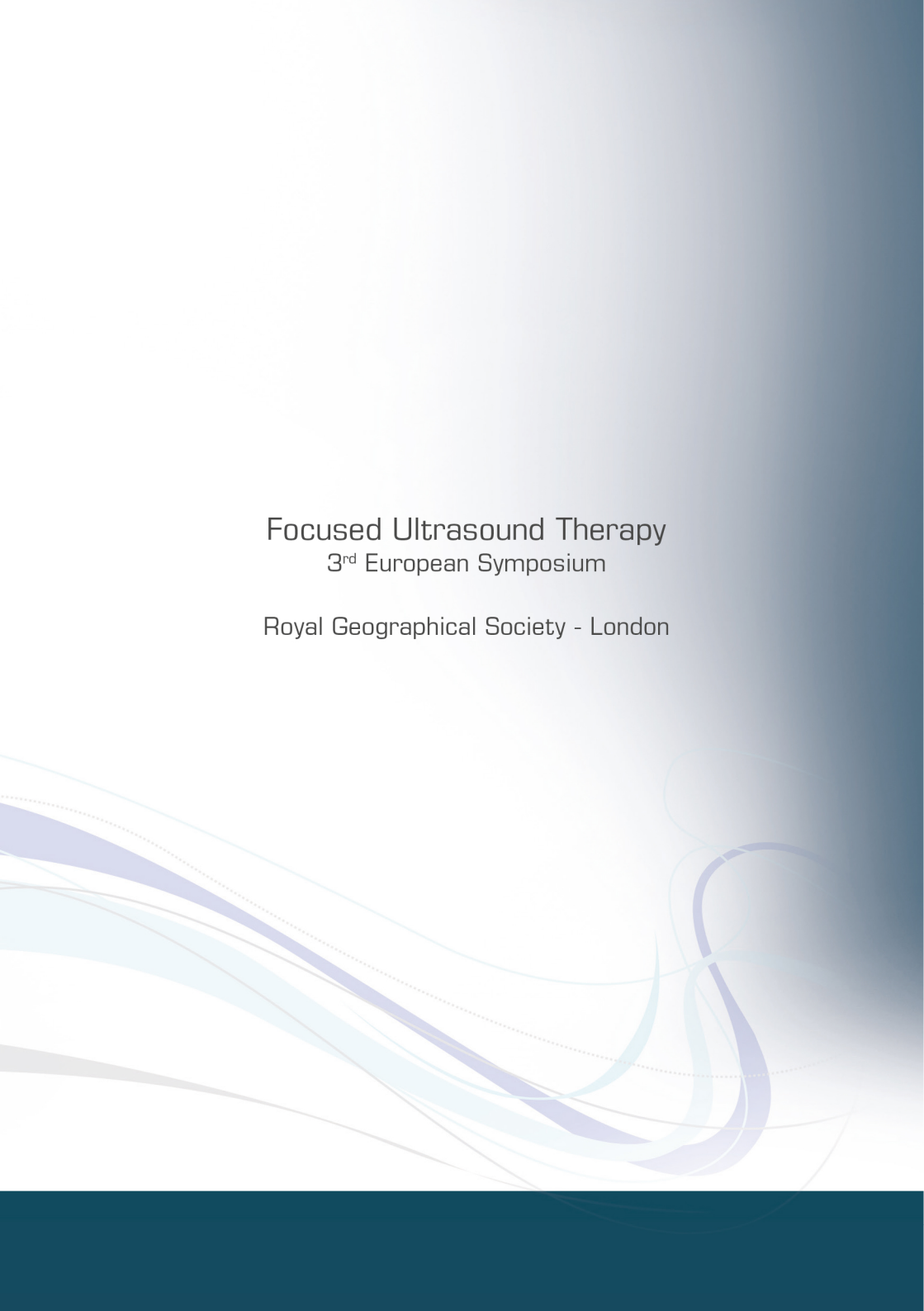
Heraclion
THE SOUND THERAPY



GlobalAcorn
ADVANCED THERAPEUTICS

TRANS **FUSIMIO**

Notes

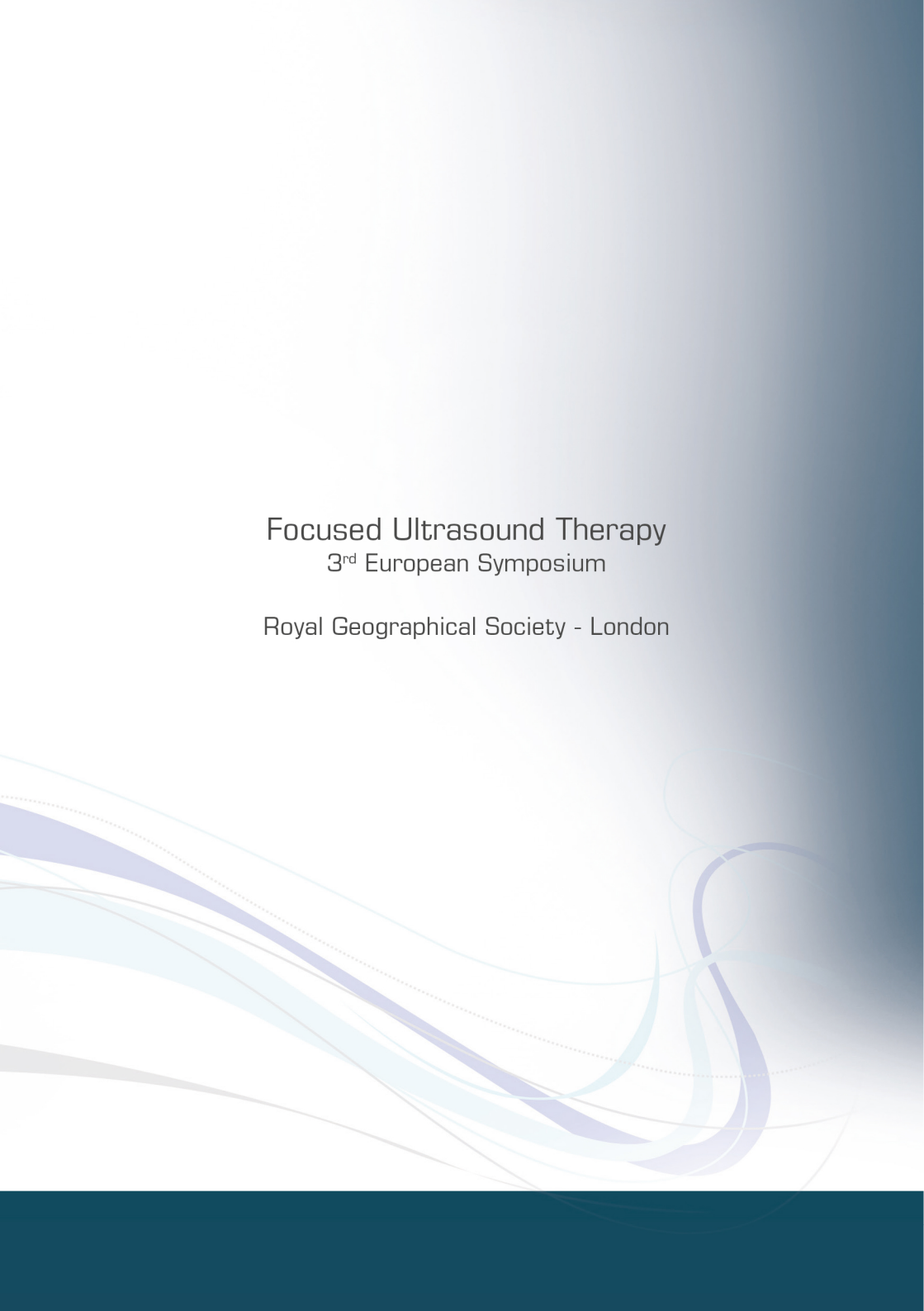


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Notes



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