4th European symposium on focused ultrasound therapy

LEIPZIG October 26-27

Focused Ultrasound Therapy

4th European Symposium

October 26 – 27, 2017 Leipzig, Germany Salles de Pologne



Program and Membership info at: www.EUFUS.org

CME Credits

European CME Credits (ECME)

(SLÄK)

WLAN-name: Foren-Gast access key: ememertt



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www.eufus.org

Welcome to the 4th Symposium on Focused Ultrasound Therapy Leipzig, Germany October 26-27, 2017

The meeting will be held at a very prestigious location: the Salles de Pologne, surrounded by many highlights of Leipzig City Centre. Leipzig is ranked No. 3 in 2016 after Berlin and Munich among the top cities of Germany and No. 10 on the New York Times list of the "100 cities you have to visit in your lifetime". Some among many reasons for this are the cultural density leading to the nick name "Hypezig". Bach, Brahms, Mendelssohn Bartholdy, Lessing and many more famous figures lived and worked in Leipzig. Goethe regularly visited "Auerbach's Cellar"during his studies in Leipzig and dedicated his beloved restaurant a famous part in his "Faust".



EUFUS 2017 will be held in central Leipzig, Salles de Pologne.

Among lots of culture and enjoyment you can expect:

- Scientific presentations and invited lectures, poster sessions and other specialty interest workshops,
- practical based teaching about how to carry out focused ultrasound procedures,
- covering all major manufactures in open discussions led by experts in the field concentrating on the main areas of application.

Particular emphasis is applied to the clinical use reflected by handson seminars, face to face disputes, what can go wrong? Sessions and early attempts of consensus on FUS applications. But you will not miss latest developments and technologies.

Andreas Melzer, Wladyslaw Gedroyc, Matthias Matzko & Alessandro Napoli



EUFUS 2017

4th European Symposium on Focused Ultrasound Therapy

Dear Colleagues and Friends of Focused Ultrasound,

on behalf of the European Focused Ultrasound Charitable Society (EUFUS) it is our great pleasure to welcome you in Leipzig for the 4th Symposium on Focused Ultrasound Therapy - EUFUS 2017.

The event will take place on October 26 to 27, 2017 at Salles de Pologne, in the heart of Leipzig - a city full of culture and enjoyment. We will get together at the Ratskeller October 25 and enjoy an exotic buffet at the Mövenpick restaurant of Gondwanaland - a truly unique and exciting meeting place at Zoo Leipzig.

Following the great success of the previous three European Focused Ultrasound Therapy Symposia 2011 & 2013 in Rome and 2015 in London we have organized the 2017 Symposium under the same remit of clinical results of FUS and HiFU as well as novel promising applications presented by prestigious speakers from the leading European centers.

As previously speed scientific presentations and invited lectures on areas of topical interest to this field will take place. We hope to expand by including a substantial amount of practical based teaching and discussion about how to carry out focused ultrasound procedures. Poster sessions and other specialty interest workshops will also take place. The main symposium is augmented by a preconference workshop on October 25 supported by the Federal Ministry of Education and Research, BMBF project SONO-RAY of ICCAS, Leipzig and OncoRay, Dresden.

We are very much looking forward to seeing you all in Leipzig.

Organizing Committee

Andreas Melzer, Wladyslaw Gedroyc, Matthias Matzko & Alessandro Napoli

PROGRAM OVERVIEW

Pre-conference Workshop Experimental FUS and HIFU October 25, 2017

| 9.30 | Registration and Welcome |
|-------|--|
| 9.45 | Principles, technology and therapy planning |
| 10.40 | Coffee Break and poster session |
| 11.00 | Ultrasound and drug delivery |
| 11.30 | Bubbles, cavitation and simulations |
| 12.00 | Lunch Break |
| 13.00 | Phantoms and tumor cell treatment |
| 13.40 | Coffee Break |
| 14.00 | Hands-on: FUS, MR HiFU |
| 19.00 | Get together: Ratskeller Leipzig (see page 27) |

We are pleased to inform you that the 4th European symposium on Focused Ultrasound Therapy - EUFUS 2017, Leipzig, Germany, 25/10/2017-27/10/2017 has been granted 17 European CME credits (ECMEC°s) by the European Accreditation Council for Continuing Medical Education (EACCME°).

"The 4th European symposium on Focused Ultrasound Therapy -EUFUS 2017, Leipzig, Germany, 25/10/2017-27/10/2017 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 17 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity."

"Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME[®] credits to an equivalent number of AMA PRA Category 1 CreditsTM. Information on the process to convert EACCME[®] credit to AMA credit can be found at www.ama-assn.org/go/internationalcme."

| EUFUS 2017 Main Conference Day 1 October 26, 2017 | |
|---|---|
| 7.30 | Registration |
| 8.15 | Opening Session |
| 8.30 | Ferenc Jolesz Memorial Lecture |
| 9.00 | Industry Speed Sessions |
| 9.30 | Coffee Break |
| 9.45 | Organ Panel: Uterus |
| 11.35 | Coffee Break |
| 12.00 | Organ Panel: Prostate |
| 13.05 | Lunch Break |
| 14.40 | Organ Panel: Musculoskeletal |
| 16.20 | Hot topic: Heart |
| 16.30 | Coffee Break |
| 17.00 | EUFUS General Assembly (for members only) |
| 19.30 | Get together: ZOO Leipzig (see page 27) |

EUFUS 2017

Main Conference | Day 2 October 27, 2017

| 8.00 | Organ Panel: Brain |
|-------|--|
| 8.55 | Hot topic: Scanning ultrasound as a novel treatment modallty for Alzheimer's disease |
| 9.45 | Coffee Break |
| 10.15 | Special Lectures: Neuromodulation |
| 11.00 | Organ Panel: Breast |
| 12.00 | Lunch Break |
| 13.00 | Organ Panel: Abdomen |
| 14.25 | Special Lectures: Immunotherapy + TDD |
| 15.15 | Coffee Break |
| 15.45 | Special Focus Session: iPaCT (EU FP7 project) |
| 15.45 | Reimbursement |
| 17.00 | How to set up a center for FUS/HIFU? |
| 17.50 | Closing Ceremony |

Pre-conference Workshop Experimental FUS and HIFU Wednesday – October 25, 2017

| <u>9.30</u> | REGISTRATION AND WELCOME • Andreas Melzer (Leipzig, Germany) |
|-------------|--|
| <u>9.35</u> | Introduction to "SONO-RAY" Tumor therapy combining image-guided focused ultrasound and radiation therapy – introduction of SONO-RAY project |
| | (abstract 30) • Doudou Xu, L. Landgraf, A. Melzer et al. (Leipzig, Germany) |

| Principles, technology and |
|----------------------------|
| therapy planning |

| 9.45 – 10.40 | Chaired by: Chrit Moonen |
|--------------|--------------------------|
|--------------|--------------------------|

| 9.45 | Medical ultrasound: from imaging to FUS/HIFU • Steffen Tretbar (St. Ingbert & Sulzbach, Germany) |
|--------------|---|
| 9.55 | MR guided FUS/HIFU |
| | • Chrit Moonen |
| | (Utrecht, Netherlands) |
| 10.05 | Ultrasound guided FUS/HIFU |
| | Jean-Francois Aubry |
| | (Paris, France) |
| <u>10.15</u> | Treatment planning for abdominal HIFU |
| | Nader Saffari (London, UK) |

| 10.25 - 10.40 | Speed talks (3 min.) |
|----------------------|--|
| | A novel monitoring method for HIFU ablation using physics-based simulation (abstract 8) • Chloé Audigier, Y. Kim, E. M. Boctor et al. (Baltimore, USA) |
| | Prediction-based controller for MR-HIFU |
| | mediated hyperthermia (abstract 17) Lukas Sebeke, X. Luo, E. Heijman et al. (Cologne, Germany) |
| | Development of a fat tissue mimicking phantom for lesion assessment in USgHIFU (abstract 14) • Marta Gherardini, L. Morchi, |
| | A. Cafarelli et al. (Pisa, Italy) |
| | Enhancement of thermal contrast in HIFU treatments by perfluorocarbon (abstract 22) • Orane Lorton, S. Desgranges, L. Gui Lévy et al. (Geneva, Switzerland) |
| <u>10.40 – 11.00</u> | COFFEE BREAK |

Ultrasound and drug delivery

| 11.00 – 11.30 | Chaired by: Jean-Francois Aubry |
|---------------|---------------------------------|
| | |

| <u>11.00</u> | Nanoparticle-mediated drug delivery • Achim Aigner (Leipzig, Germany) |
|--------------|---|
| <u>11.10</u> | Ultrasound mediated delivery of macromolecules • Maya Thanou (London, UK) |
| <u>11.20</u> | MR guided HIFU induced delivery of liposomes |
| | • Edwin Heijman (Cologne, Germany) |

| Bubbles | s, cavitation and simulations |
|---------------|---|
| 11.30 – 12.00 | Chaired by: Steffen Tretbar |
| 11.30 | Cavitation enhanced heating Björn Gerold (Paris, France) |
| 11.40 | Approaches for a particle based in silico simulation model for combined effects of ultrasound and radiation on tumor cells (abstract 25) • Johann Berger, L. Landgraf, D. Xu et al. (Leipzig, Germany) |
| 11.50 | Computational models of FUS stimulation tissue effects • Marcus Kaiser (Newcastle, UK) |
| 12.00 - 13.00 | LUNCH BREAK |

Phantoms and tumor cell treatment

13.00 – 13.40 Chaired by: Lisa Landgraf

| 13.00 | IGT-FUS reusable tissue mimicking |
|-------|---|
| | material phantom (abstract 40) • Andrew Dennison, J. Joy, A. Melzer (Dundee, UK) |
| 13.10 | Solutions for small animal FUS & HIFU • Erik Dumont (Pessac, France) |
| 13.20 | FUS/HIFU supporting radiation therapy Ina Patties (Leipzig, Germany) |
| 13.30 | Comparison of experimental setups for in vitro studies using a clinical HIFU device (abstract 24) |
| | • Lisa Landgraf, J. Berger, M. Unger et al. (Leipzig, Germany) |

<u>13.40 – 14.00</u> COFFEE BREAK

Hands-on: FUS/HIFU

14.00 - 16.30

| 1. | How to build an ultrasound |
|----|------------------------------------|
| | therapy system |
| | Marc Fournelle |
| | (Sulzbach, Germany) |
| 2. | Cell culture sonication |
| | • Lisa Landgraf (Leipzig, Germany) |
| | Walk to Department of Radiology |
| | University Hospital Leipzig |
| 3. | Sonalleve MRHIFU hands-on |
| 5. | demonstration |
| | |
| | • Edwin Heijman |
| | (Cologne, Germany) |

19.00

GET TOGETHER "Ratskeller Leipzig" Lotterstraße 1, 04109 Leipzig

more information see page 27

EUFUS 2017 | Main Conference Thursday – October 26, 2017

| 7.30 | REGISTRATION |
|--------|--|
| | Salles de Pologne, Hainstraße 18, 04109 Leipzig |
| | Coffee and Tea |
| 8.15 | Opening Session |
| | Opening remarks: Andreas Melzer, |
| | Matthias Matzko, Alessandro Napoli and |
| | Wladyslaw Gedroyc |
| 8.30 | 2 nd EUFUS Ferenc Jolesz Memorial Lecture |
| | Challenges of MR guided interventions, |
| | surgery and FUS |
| | Wladyslaw Gedroyc (London, UK) |
| 9.00 | Industry Hot Topics Speed Sessions |
| | • 3 min. + 2 min. discussion |
| | The road to 1 million patients |
| | Debra Emanuel (INSIGHTEC) |
| | Profound Medical and Philips |
| | Sonalleve, the way forward |
| | Thomas Andreae (Profound) |
| | Product developments of ArcBlate — |
| | a MRI guided HIFU system and its |
| | potential for abdominal applications |
| | • Jimmy Chang (EpiSonica) |
| | Echotherapy, today and tomorrow |
| | David Caumartin (Theraclion) |
| | Remote control of the MR scanner |
| | for HIFU applications with the novel |
| | Access-i interface |
| | Arne Hengerer (Siemens) |
| | Ferroperm™ Piezoceramics |
| | Thom Wurlitzer |
| | (Meggitt Sensing Systems) |
| 9.30 - | 9.45 COFFEE BREAK at Industry Exhibition |

Organ Panel: UTERUS

| 9.45 - 11.45 | _Chaired by: Roberto Blanco Sequeiros & Tomasz Lozinski |
|--|---|
| 9.45 | _Keynote: MRgFUS — What can go wrong? How to avoid complications • Matthias Matzko (Dachau, Germany) |
| 10.00 (8 min. + 3 min.) | _ MRgHIFU results: Uterus • Roberto Blanco Sequeiros (Turku, Finland) |
| 10.10 (8 min. + 3 min.) | _ MRgHIFU results: Uterus • Tomasz Lozinski (Rzeszów, Poland) |
| 10.20 (8 min. + 3 min.) | _MRgFUS results and update on pregnancy registry • Ronit Machtinger (Tel Aviv, Israel) |
| 10.30 (8 min. + 3 min.) | _MR guided FUS with a new platform independent system, initial experiences • Kai-Wen Huang (Taipei, Taiwan) |
| Speed Scier (3 min. + 2 min. | n tific Presentations discussion) |
| 10.50 | Artifact from myomectomy scars on MRI images — What does this mean for MRgFUS candidacy for uterine fibroids? (abstract 43) • Vikash Narayan Sinha, S. Mehta, S. LeBlang (Boca Raton, USA) |
| 10.55 | Clinical evaluation of uterine fibroids tissue using multi-parametric MRI sequences (abstract 19) • Inez Verpalen, K. Anneveldt, I. Slouwerhof et al. |

| 11.00 | Uterine fibroids: apparent diffusion coefficient as a biomarker for monitoring |
|---------------|---|
| | the success of high-intensity focused |
| | ultrasound therapy (abstract 46) |
| | • Teija Sainio, J. Saunavaara, |
| | R. Blanco Sequeiros |
| | (Turku, Finland) |
| | (Turku, Timanu) |
| 11.05 | Comparison of effects of radiofrequency |
| | ablation vs. high intensity focused |
| | ultrasound on uterus fibroid (abstract 49) |
| | Xiaodong Zhou, G. He, |
| | W. Luo (Xian Shi, China) |
| 11.10 | Effects of high intensity focused |
| | ultrasound plus radiofrequency on large |
| | uterus fibroid (abstract 48) |
| | Liwen Liu, X. Zhou, W. Luo |
| | (Xian Shi, China) |
| 11.15 | Factors improving efficiency during |
| | HIFU of uterine fibroids (abstract 20) |
| | Justyna Filipowska, T. Lozinski |
| | (Rzeszów, Poland) |
| 11.20 | Efficiency of uterine fibroid treatment |
| | with HIFU according to vascularity of |
| | fibroid (abstract 21) |
| | Tomasz Lozinski, J. Filipowska |
| | (Rzeszów, Poland) |
| 11.25 | Therapeutic effects of ultrasound- |
| | guided radiofrequency ablation on |
| | adenomyosis (abstract 47) |
| | • Wen Luo, G. He, X. Zhou |
| | (Xian Shi, China) |
| 11.30 | Efficacy of magnetic resonance-guided |
| | focused ultrasound surgery in the |
| | treatment of uterine adenomyosis |
| | (abstract 53) |
| | • Feng Yang, X. Gong |
| | (Beijing, China) |
| 11.35 – 12.00 | COFFEE BREAK at Industry Exhibition |
| | |

Organ Panel: **PROSTATE**

| 12.00 – 13.05 | _Chaired by: Jens-Uwe Stolzenburg & Behfar Ehdaie |
|---|--|
| 12.00 (12 min. + 3 min.) | _Keynote: Treatment of prostate cancer, state of the art and new concepts • Jens-Uwe Stolzenburg (Leipzig, Germany) |
| 12.15 (12 min. + 3 min.) | _ Keynote: Comparison of HIFU methods • Roman Ganzer (Bad Tölz, Germany) |
| 12.30 (12 min. + 3 min.) | _ MR guided transrectal FUS, overview • Behfar Ehdaie (New York, USA) |
| 12.45 (12 min. + 3 min.) | _ MR guided transurethral US David Bonekamp (Heidelberg, Germany) |
| 13.00 (3 min. + 2 min.) | MR guided transurethral US Ablation: 7 consecutive cases • Alberto Alomar Casanovas (Barcelona, Spain) |
| <u>13.05 - 14.30</u> | _LUNCH BREAK at Industry Exhibition and Poster Viewing |
| Special Topi (3 min. + 2 min. | c"Imaging Robotics for FUS/HiFU" discussion) |
| <u>14.30</u> | _ MR-guided focused ultrasound robots for pre-clinical use (abstract 1) • Christakis Damianou, M. Giannakou (Limassol, Cyprus) |
| 14.35 | _Set up of PET MR compatible robotics for FUS (abstract 33) • Michael Unger, T. Jochimsen, J. Berger, et al. (Leipzig, Germany) |

| Organ Panel: MUSCULOSKELETAL | |
|-------------------------------------|--|
| 14.40 - 16.20 | Chaired by: Markus Düx & Karun Sharma |
| 14.40 | Face to face dispute Osteoid Osteoma |
| | 10 min. each and 5 min. conclusion |
| | Alessandro Napoli (Rome, Italy) |
| | vs. Christoph Trumm |
| | (Munich, Germany) |
| 15.05 | Keynote I: Osteoid Osteoma, Desmoid |
| | and other MS tumors (MRgFUS) |
| | Pejman Ghanouni |
| | (San Francisco, USA) |
| 15.20 | Keynote II: Osteoid Osteoma, Desmoid |
| | and other MS tumors (MRHiFU) |
| | • Karun Sharma |
| | (Washington, USA) |
| 15.35 | Facet joints and bone lesions |
| (8 min. + 2 min.) | Markus Düx |
| | (Frankfurt/Main, Germany) |
| 15.45 | Bone mets and other bone lesions |
| (8 min. + 2 min.) | Alberto Bazzocchi (Bologna, Italy) |
| | and Francesco Arrigoni |
| | (l'Aquila, Italy) |
| Speed Scie (3 min. + 2 mi | entific Presentations n. discussion) |
| 15.55 | Targetability of osteoid osteoma and bone metastases by MR-guided high intensity focused ultrasound (MRgHIFU): |
| | A feasibility study (abstract 16) |
| | Jonathan Vappou, F. Bing, P. Cabras et al. |
| | |
| | (Strasbourg, France) |
| 16.00 | Low intensity ultrasound increases the |
| | lifespan of mesenchymal stromal cell |
| | transplants in skeletal muscle |
| | (abstract 36) |
| | • Joseph A. Frank, S. Burks, |
| | M. Nagle et al. (Bethesda, USA) |

| <u>16.05</u> | In vivo measurements of MBN depth for focused ultrasound ablation of patients with facet related back pain: Predictors for patient candidacy (abstract 42) • Hannah Zwiebel, D. Baldor, S. LeBlang et al. (Medford, USA) |
|-------------------------------------|--|
| <u>16.10</u> | Mechanical focused ultrasound forces directly activate TRPC1 cation channels in murine kidney and skeletal muscle to enhance stem cell homing (abstract 41) • Joseph A. Frank, M. Nagle, M. Bresler et al. (Bethesda, USA) |
| <u>16.15</u> | New patented FUS amplitude modulation technique for tissue ablation by acoustic cavitation (abstract 7) • Fares Mayia, M. Yamany, M. Asiri et al. (Riyadh, Saudi Arabia) |
| <u>16.20 – 16</u> (8 min. + 2 mi | 30 Hot Topic: Heart n. discussion) |
| 16.20 | Peak Negative Pressure (PNP)-dependent molecular and pathologic responses of rat myocardium by pulsed focused ultrasound (abstract 38) • Joseph A. Frank, K. Jang, TW. Tu et al. (Bethesda, USA) |
| <u> 16.30 – 17.00</u> | COFFEE BREAK and Poster Viewing at Industry Exhibition |
| <u>17.00 – 18.30</u> | EUFUS General Assembly Proposals and decisions for next meetings 2019 & 2021 and board elections |
| 19.30 | DINNER at "Gondwanaland" ZOO Leipzig more information see page 27 |
| | |

EUFUS 2017 | Main Conference Friday – October 27, 2017

Organ Panel: BRAIN

| 8.00 – 10.00 | Chaired by: Wladyslaw Gedroyc & Jürgen Götz |
|----------------------|--|
| 8.00 | Keynote: DBS or MRgFUS? The neurologist view • Gioacchino Tedeschi |
| | (Naples, Italy) |
| 8.15 | MRgFUS results UK |
| (8 min. + 2 min.) | • Dipankar Nandi (London, UK) |
| 8.25 | MRgFUS results Israel |
| (8 min. + 2 min.) | Menashe Zaaroor (Haifa, Israel) |
| 8.35 | MRgFUS results Spain |
| (8 min. + 2 min.) | Alberto Alomar Casanovas (Barcelona, Spain) |
| 8.45 | MRgFUS results Italy |
| (8 min. + 2 min.) | Cesare Gagliardo (Palermo, Italy) |
| <u>8.55 - 9.10 </u> | Hot Topic: Scanning ultrasound as a novel treatment modality for Alzheimer's disease (abstract 5) • Jürgen Götz, R. M. Nisbet, G. Leinenga (Brisbane, Australia) |

Speed Scientific Presentations (3 min. + 2 min. discussion)

| 9.10 | Early experience of epilepsy with |
|------|---|
| | MRgFUS treatment (abstract 13) |
| | • Toshio Yamaguchi, T. Hori, T. Taira (Tokyo, Japan) |

| 9.15 | Multiple courses of BBB opening with |
|--------------|---|
| | pulsed focused ultrasound and |
| | microbubbles promotes phosphory- |
| | lated tau production (abstract 37) |
| | Joseph A. Frank, Z. Kovacs, |
| | M. Sundby et al. (Bethesda, USA) |
| 9.20 | Closed-loop cavitation control for |
| | safe FUS-mediated targeted drug |
| | delivery in mouse brain (abstract 10) |
| | Beat Werner, M. Cavusoglu, |
| | J. Zhang et al. |
| | (Zurich, Switzerland) |
| 9.25 | Bisphosphonate could improve skull |
| | density ratio of MRgFUS candidates |
| | (abstract 23) |
| | Hisashi Ito, K. Yamamoto, |
| | S. Fukutake et al. (Fujisawa, Japan) |
| 9.30 | Statistical shape model based targeting |
| | for MR-guided focused ultrasound |
| | neurosurgery (abstract 35) |
| | Ronald Bauer, A. Jakab, Z. Goey |
| | et al. (Zurich, Switzerland) |
| 9.35 | Focusing precision and lesion size in |
| | cerebello-thalamo-tractotomy by MR |
| | imaging-guided high intensity focused |
| | ultrasound (MRgFUS) |
| | (abstract 31) |
| | Ronald Bauer, E. Martin, |
| | S. Haegele-Link et al. |
| | (St. Gallen, Switzerland) |
| 9.40 | An in vitro study of ultrasound-induced |
| | hyperthermia combined with radiation |
| | therapy for glioblastoma cells (abstract 34) |
| | • Xinrui Zhang, D. Xu, L. Landgraf |
| | et al. (Leipzig, Germany) |
| 9.45 - 10.15 | COFFEE BREAK and Poster Viewing at |
| | Industry Exhibition |

<u>10.15 – 10.35</u> SPECIAL LECTURE Neuromodulation: State of the art, is there any space for FUS/HIFU?

Arno Villringer, Max Planck
Institute for Neurocognitive
Science (Leipzig, Germany)

<u>10.35 – 10.55</u> Overview of current ultrasound induced neurostimulation methods

• Jean-Francois Aubry, Institute Langevin (Paris, France)

Organ Panel: BREAST

11.00 – 12.00 Chaired by: Chrit Moonen & David Brenin

| <u>11.00</u> | Keynote: State of the art and research FUS/HIFU in breast cancer • Chrit Moonen (Utrecht, The Netherlands) (ISTU) |
|-------------------|--|
| 11.15 | Thyroid Adenoma |
| (8 min. + 2 min.) | • tba |
| 11.25 | Breast fibroadenoma |
| (8 min. + 2 min.) | Markus Hahn |
| | (Tübingen, Germany) |
| 11.35 | US-guided HIFU of breast |
| (8 min. + 2 min.) | fibroadenoma — a perspective |
| | for long-term disease control |
| | Roussanka Kovatcheva |
| | (Sofia, Bulgaria) |
| | |

| Speed Scientific Presentations (3 min. + 2 min. discussion) | |
|---|--|
| 11.45 | Ultrasound guided high intensity focused ultrasound ablation of breast fibroadenoma: Early report from the United States pilot study (abstract 2) • David Brenin, G. Stukenborg, C. Rochman (Charlottesville, USA) |
| <u>11.50</u> | Volume reduction after circum- ferential high intensity focused ultrasound of breast fibroadenoma (abstract 32) • Michael Douek, M. Peek, R. Baker (London, UK) |
| <u>12.00 - 13.00</u> | LUNCH BREAK and Poster Viewing at Industry Exhibition |

| Organ Pane | I: ABDOMEN |
|------------|------------|
|------------|------------|

| 13.00 – 14.25 | Chaired by: Joan Vidal-Jové & |
|---------------|-------------------------------|
| | Wladyslaw Gedroyc |

 13.00
 Keynote: MR-guided FUS/HiFU

 of abdominal organs

• Wladyslaw Gedroyc (London, UK)

| 13.15 | Technology update: FUS/HiFU on | |
|-------------------|--------------------------------|--|
| (8 min. + 2 min.) | moving organs | |
| | Chrit Moonen | |

(Utrecht, The Netherlands)

| 13.25 (8 min. + 2 min.) 13.35 | Novel technology for liver MRgFUS TRANS-FUSIMO EU FP7 project • Tobias Preusser (Bremen, Germany) for the Consortium Keynote: Treatment options of ultrasound guided FUS/HIFU for pancreatic cancer and liver cancer, 7 year follow up (abstracts 28, 29) • Joan Vidal-Jové, A. Jaen, M. Paraira et al. (Barcelona, Spain) |
|--|--|
| Speed Scier (3 min. + 2 min. | n tific Presentations . discussion) |
| 13.50 | An experimental demonstration of HIFU self-scanning treatment in moving tissue (abstract 11) • Orane Lorton, N. Möri, P. Guillemin et al. (Geneva, Basel, Switzerland) |
| 13.55 | Magnetic resonance guided high intensity focused ultrasound (MRgHIFU) treatment planning of abdominal neuroblastoma utilizing diagnostic 3D CT images – a retrospective analysis (abstract 15) • Stephanie Tung, A. Fahy, M. Lamberti-Pasculli et al. (Toronto, Canada) |
| 14.00 | Cavitation threshold in murine model of pancreatic cancer (abstract 50) • Lorenzo Francesco Giuliani, M. Primavera (Rome, Italy) |
| 14.05 | 3D ultrasound based motion tracking with MR-thermometry (abstract 45) • Bruno Quesson, P. Bour, V. Ozenne et al. (Bordeaux, France) |
| 14.10 | Comparison of static and dynamic motion models for MRI guided focused ultrasound liver treatment (abstract 54) • Joyce Joy, A. Dennison, J. Strehlow et al. (Dundee, UK) |

| 14.15 | In silico first-stage Evaluation of a |
|-------|--|
| | focused ultrasound treatment system for |
| | moving targets (abstract 44) |
| | Michael Schwenke, J. Strehlow, |
| | D. Demedts et al. |
| | (Bremen, Germany) |
| 14.20 | Translation of research for MR guided |
| | focused ultrasound application for |
| | moving target tumor ablation in |
| | abdominal area: Coil selection criteria |
| | (abstract 3) |
| | J. Mihcin, J. Strehlow, |
| | Andreas Melzer et al. |

(Leipzig, Germany)

<u>14.25 – 14.45</u>SPECIAL LECTURE Where are we with FUS/HIFU mediated drug delivery?

• Edwin Heijman (Cologne, Germany)

<u>14.45 – 15.05</u> EUFUS HORIZON LECTURE Focused ultrasound immunotherapy

Gosse J. Adema
 (Nijmegen, The Netherlands)

15.05 – 15.15 SELECTED ABSTRACT

Pulsed focused ultrasound modulation of tumor microenvironments: Implications for immunotherapy (abstract 9)

> • Joseph A. Frank, O. Aydin, P. Chandran et al. (Michigan, USA)

<u>15.15 – 15.45</u> COFFEE BREAK and Poster Viewing at Industry Exhibition

Special Focus Session: iPaCT

Room 2 + 3 (5th Floor)

| 15.45 – 17.00 | iPaCT — Image-guided pancreatic |
|---------------|---|
| | cancer therapy |
| | Organised by the EU FP7 iPaCT consortium |
| | Chaired by: Lars Lindner |
| 15.45 | iPaCT project |
| 13.43 | • Lars Lindner |
| | (Munich, Germany) |
| 15.50 | Hyperthermia and temperature-sensitive |
| | liposomes for local drug delivery |
| | Lars Lindner |
| | (Munich, Germany) |
| 16.10 | A novel, MR-compatible, focused |
| | ultrasound transducer with |
| | reduced near-field heating |
| | Chrit Moonen |
| | (Utrecht, The Netherlands) |
| 16.30 | New software tools for combined |
| | MR-US imaging |
| | • Fons de Lange |
| | (Eindhoven, The Netherlands) |
| 16.40 | Model-based control algorithms for |
| | HIFU-based hyperthermia |
| | • Lukas Sebeke |
| | (Cologne, Germany) |
| 16.50 | Visualization of the celiac plexus with 3D |
| | SHINKEI: An opportunity for new |
| | applications? |
| | Cyril Ferrer (Utreacht The Netherlands) |
| | (Utrecht, The Netherlands) |

Reimbursement Discussion Panel

| <u> 15.45 – 17.00</u> | Reimbursement, clinical trial and registry Chaired by: Thomas Kahn & Ronit Machtinger |
|-----------------------------------|--|
| 15.45 (8 min. + 2 min.) | Germany: Status of current GBA study on uterus applications Germany launch (§137e MR-HIFU Uterusmyome) • Michael Weisser (Lörrach, Germany) |
| 15.55 (8 min. + 2 min.) | Exemplary reimbursement strategies in Europe: "Forfait Innovation" France • Michel Nuta (Paris, France) |
| 16.05 (8 min. + 2 min.) | Exemplary reimbursement strategies in Europe: HMO Israel • Ronit Machtinger (Tel Aviv, Israel) |
| 16.15 (8 min. + 2 min.) | Exemplary reimbursement strategies in Europe: Finland • Roberto Blanco Sequeiros (Turku, Finland) |
| 16.25 (8 min. + 2 min.) | Exemplary reimbursement strategies in Europe: Poland • Tomasz Lozinski (Rzeszów, Poland) |
| 16.35 (8 min. + 2 min.) | Exemplary reimbursement strategies in Europe: NHS UK • Wladyslaw Gedroyc (London, UK) |

Optional panel discussion, all speakers

How to Set up a Center for FUS/HIFU?

| 17.00 – 17.50 | Chaired by: Pejman Ghanouni & Matthias Matzko |
|---------------|--|
| | short reports (5 min.) and discussion about requirements and procedures |
| 17.00 | United States: MRgFUS |
| | Pejman Ghanouni (San Francisco, USA) |
| 17.05 | Germany: MRgFUS |
| | Matthias Matzko (Munich, Germany) |
| 17.10 | Germany: MR HIFU (abstract 39) |
| | • Leonard Leifels, M. Beimler, J. Melasch et al. (Leipzig, Germany) |
| 17.15 | Italy: MRgFUS |
| | Alessandro Napoli (Rome, Italy) |
| 17.20 | United Kingdom: MRgFUS |
| | • Wladyslaw Gedroyc (London, UK) |
| 17.25 | Finland: MR HIFU |
| | Roberto Blanco Sequeiros (Turku, Finland) |
| 17.30 | Establishing an MRI guided HIFU |
| | treatment centre: key challenges and strategies for implementation (abstract 27) |
| | • Imogen Ptacek, D. Butler, F. Fedele et al. (London, UK) |
| 17.40 | Panel Discussion |
| | |

<u>17.50 – 18.30</u> Awards & announcement of EUFUS 2019, ISTU and FUS Foundation 2018

GENERAL INFORMATION

Venue

Pre-Conference Workshop Experimental FUS and HIFU

October 25, 2017

Innovation Center Computer Assisted Surgery (ICCAS) **Meeting Point:** Philipp-Rosenthal-Str. 55, 04103 Leipzig (Germany)

EUFUS 2017 | Main Conference

October 26 - 27, 2017 Salles de Pologne Hainstraße 18 04109 Leipzig (Germany)

Technical Support

Pamela Schwartz & Peter Medina | INSIGHTEC Thomas Andrea | Philips Anja Kleber | Theraclion Frederik Krabbes, Kathrin Scholz, Anika Schreyer, Simon Rosenow | ICCAS Christine Melzer | EUFUS e.V. & Bernd Scheler, Bodenheim, D

Clinical and Scientific Support

Thomas Kahn & Patrick Stumpp | Department of Diagnostic and Interventional Radiology of the University Hospital Leipzig Holger Grüll | Department of Diagnostic and Interventional Radiology of the University Hospital of Cologne

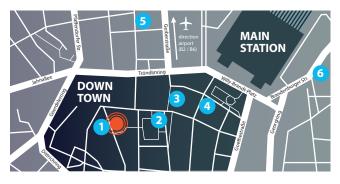
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ORIENTATION MAP



VENUE of EUFUS 2017

Salles de Pologne Hainstraße 18, 04109 Leipzig

HOTELS

| 1 | Arthotel <u>Ana Symphonie</u> ★★★ | _Hainstraße 21, 04109 Leipzig 40 m to "Salles de Pologne" |
|---|---|---|
| 2 | ibis Leipzig City ★★ | _Reichsstraße 17, 04109 Leipzig 350 m to "Salles de Pologne" |
| 3 | Marriott Hotel Leipzig ★★★★ | _Am Hallischen Tor 1, 04109 Leipzig 400 m to "Salles de Pologne" |
| 4 | Seaside Park Hotel Leipzig ★★★★ | _Richard-Wagner-Straße 7, 04109 Leipzig 600 m to "Salles de Pologne" |
| 5 | The Westin Leipzig ★★★★ | _Gerberstraße 15, 04105 Leipzig 700 m to "Salles de Pologne" |
| 6 | A&O Leipzig <u>Hauptbahnhof</u> | _Brandenburger Str. 2, 04103 Leipzig 1 ,5 km to "Salles de Pologne" |

AIRPORT



from down town to airport (Leipzig Halle) 20 min by taxi 15 min by rail (S-Bahn, every 30 min)

SOCIAL EVENTS

Wednesday – October 25, 2017 | 7.00 pm

Ratskeller Leipzig

The Ratskeller is one of the most traditional restaurants of the trade fair city. The restaurant is located in the new city hall – the largest city hall in the world – with all tourist attractions of the city centre of Leipzig within



walking distance. The 110th anniversary of the restaurant was celebrated in 2014. The extraordinary and rustic cellar ambience welcomes you for the opening event of EUFUS 2017. The restaurant's kitchen presents culinary delicacies made from recipes of the plain Saxon kitchen. | Free admission for all registered participants; for an accompanying person we charge 30 €.

Venue: Lotterstraße 1, 04109 Leipzig

Thursday – October 26, 2017 | 7.30 pm

Gondwanaland ZOO Leipzig

Entering Gondwanaland will appeal to all of your senses as you come into close contact with the tropical rainforests of Africa, Asia and South America. In



Gondwanaland live about 100 exotic animal species and flourish over 500 different plant types. Enjoy the exotic welcome cocktail before you dip into the tropical world of Gondwanaland. | We charge $40 \in$ for all registered participants of EUFUS 2017 and accompanying person(s); free admission only for faculty.

Venue: Pfaffendorfer Str. 29, 04105 Leipzig

Entrance: Please use the entrance of the event foyer of the Gondwanaland, which is close to the delivery entrance, 100 m right from the main entrance of the Zoo Leipzig.

The Gondwanaland evening event is kindly supported by Insightec & Siemens.

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