EDITORIAL

European Molecular Imaging Meeting 2020: Be Invited to Thessaloniki, Greece

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During the last two decades, we have experienced a true revolution in the way we approach in vivo biological interrogations, disease monitoring and therapeutics. Fundamental paradigms in imaging science and technology have been shifted towards new and exciting methodologies that have completely altered our ability to visualize biology inside living organisms with unprecedented accuracy and fidelity. Such ground-breaking technologies include nanoscopy or super resolution microscopy (2014 Chemistry Nobel Prize), optoacoustic imaging, whole body PET, real-time MRI, hyperpolarized MRI, magnetic particle imaging, regenerative medicine, immunotherapy, theranostics, machine learning and artificial intelligence. These advancements have a profound effect to fundamental research, but most importantly to translational and transformative methods and applications with a significant impact on healthcare and societal wellbeing. Molecular imaging has been at the forefront of these advancements, driving imaging science forward, challenging current thinking and creating the appropriate ecosystem for new technologies to be assessed, further developed and optimized before translation to clinical practice.

Focusing on such breakthroughs and advancements as well as fostering scientific excellence and knowledge exchange, the Program Chairs and Committees of the 15th EMIM have carefully determined the Educational and the Scientific Program, the Plenary Lectures and the Focus Sessions. However, the essence and substance of the program is formed and created by the people participating, by the science they submit and present during the meeting. In essence by YOU! Be invited to the EMIM 2020 held during March 24–27 in Thessaloniki, Greece.

The EMIM has been growing over the past years and we are expecting 700 international attendees from all fields of imaging science. It is a very friendly, open-minded meeting on an exceptional high scientific standard. Its strength is based on the dedicated and enthusiastic people who always create a very warm and family-friendly environment that

enhances interactions, free expression and exchange of ideas, engagement of young scientist and the fermentation of future technologies in the fields of basic science, translational research and clinical applications with a significant impact on society. Characteristic of the exceptional dedication of people to the success of EMIM is the fact that 500 scientists have accepted to serve as reviewers during the laborious evaluation process, which will define the structure of the scientific sessions of the meeting. Each of the 24 parallel sessions starts with an overview talk of about 20 min followed by six shorter talks chosen from the best ranking abstract submissions. In addition to these, two dedicated poster sessions are scheduled with no competitive session in parallel, providing the best opportunity to discuss your work. The Main Abstract Categories for 2020 are as follows: Oncology Imaging; Neuroimaging; Cardiovascular Imaging; Immunology & Inflammation; Intra-Operative Imaging; Imaging Metabolism; Probe Chemistry; Imaging Technologies; Data Processing & Quantification, representing a full overview of the Molecular Imaging field.

Furthermore, capitalizing on the ESMI focus on educating the next generation of scientists a dedicated Educational Program is designed with four sessions, meant not only for Junior scientists. Starting in EMIM 2020, a dedicated Educational Committee has designed a complete program covering the basics of Molecular Imaging science in a 4-year curriculum. You might consider it as going through a review article on the corresponding themes, which are selected from four main categories: Physics & Instrumentation, Data Acquisition & Processing, Chemistry & Contrast Agents, Biology & Medicine. For 2020, the themes are as follows: Imaging Probes; Image Processing; Neuroscience and Nuclear Imaging.

The four Educational Sessions are accompanied by one Educational Spotlight Symposium highlighting an emerging *hot* topic. In this edition of the EMIM, the spotlight is on “Theranostics: Image-guided surgery, drug delivery and radionuclide therapy”.

In addition to the Educational Program, the first day is completed by special Project Sessions presenting scientific achievements from National or European projects organized

by the corresponding consortia and the dedicated Meetings organized by each of the nine ESMI Study Groups; Image-guided drug Delivery, Onco-Immunology and Therapy, Cardiovascular Imaging, Mass Spectroscopy, Neuroimaging, Hyperpolarized MRI, Standardization in Small Animal Imaging, X-Ray Imaging and Intra-Operative Imaging.

The highly active and motivated Young ESMI Groups organize the Scientific Speed Dating and three “Meet the Experts Sessions”, targeting at enlarging the scientific network and enhancing soft skills of the next generation of scientists. For EMIM 2020, the three sessions that they have planned focus on very important subjects; “Publishing in High ranked Journals”, “Animals in Research” and “Women in Science”.

The program also includes jointly organized Focus Sessions, which are held during the EMIM in cooperation with related societies. The format differs from the Parallel Sessions, three 30-min talks are presented, highly relevant to the focus theme. For 2020, four Focus Sessions are scheduled, jointly organized between ESMI and the World Molecular Imaging Society (WMIS), the International Research Group on Immuno-Scintigraphy and Therapy (IRIST), the European Association for Nuclear Medicine (EANM) and the COMULIS, the EU-funded European Cooperation in Science and Technology (COST) Action.

Parallel to the scientific program, Industry Sessions present the latest commercial developments from EMIM’s exhibitors, complementing a lively market place/exhibition. The arrangement is always such that this exhibition plays the role of the center stage, where everybody gathers during the breaks and can work, discuss, chat, refresh, eat or simply relax during the scientifically intense days of the EMIM.

Without doubt though, the true highlights of the EMIM are always the Plenary Lectures reflecting the cutting edge scientific and technological advancements achieved by the true pioneers of their respective fields. The overall concept of plenary lectures in this 15th edition will focus on imaging life at the micro scale—shedding light on the nano world.

The program starts right after the opening ceremony with Prof. Vasilis Ntziachristos, Professor and Chair for Biological Imaging, Technische Universität München, talking on “Optical and Optoacoustic imaging: the revolution of label free observations”, a highly appropriate start of the EMIM2020 presented by a graduate of the University of Thessaloniki, a block away from the conference venue. The second Plenary is given by Prof. Dara Kraitchman, from Johns Hopkins University presenting on “Stem cells and embolics: Is seeing where you are and have been important?”. The next day Prof. Jens Frahm from the Max Planck Institute for Biophysical Chemistry, in Göttingen, Germany, will present on “Real-time MRI and Beyond - a New Horizon”, right before the two Plenaries from our distinguished winners of the “ESMI Award 2020” and the “ESMI award for excellent PhD thesis 2019”. On behalf of the Board and the Award Selection Committee, it is with

pleasure to announce the ESMI Award Winner 2020: we are proud and honoured to present the Award to Prof. Sanjiv Sam Gambhir. The Committee recognizes Sam as one of the founding fathers of the field in which we all have the privilege to work. He has been a pioneer and visionary, a mentor and inspiration—thanks for your continuous and passionate dedication for imaging science. The second award is presented to one of the finest young scientists for an Excellent PhD Thesis, Dr. Frederike Bensch from the University Medical Center Groningen, The Netherlands, for her thesis on “Molecular imaging on the move – From feasibility to contribution in clinical questions”. The day will close with Prof. Mikhail Shapiro, Professor of Chemical Engineering, California Institute of Technology with his lecture on “Talking to Cells: Biomolecular Engineering for Non-Invasive Imaging and Control of Cellular Function”. The last Plenaries of the meeting are given by the three Young Investigator Award finalists; the winner is decided in situ by the Award Committee. The Program closes by awarding the Best Posters and the Farewell, by the current and next President of the Society, announcing at the same time the EMIM2021, which will be held in Goettingen, Germany, “The city of science”.

The European Society for Molecular Imaging, an independent, non-profit and apolitical community is proud to organize the EMIM, which has been established as a prominent meeting in the field of Molecular Imaging, devoted to scientific and technical excellence, innovation and quality, promoting and fostering knowledge exchange, vibrant interactions and interdisciplinary cooperation. The venue of the EMIM2020 is the HELEXPO Exhibition and Congress Center in Thessaloniki, Greece, a modern yet charming and welcoming metropolis, a city renowned for its lively college-town energy, care-free mood and vitality of the locals, with exceptional culinary tradition and great hospitality. A city with a long history that spans through several millennia, that has being cross-fertilized from multiple cultures and has been associated to great empires, a history that has created and curved its cosmopolitan modern character.

Extending interactions to past scientific program hours, we take a small tour to the Kalamaria district in the south east with stunning views of the bay and the city for our Get-Together party until very late or very early, it’s all a matter of perception. Thessaloniki is legendary for its vibrant atmosphere and night life, its music scene and endless choices for energizing “Barathons” (bar marathons) and one of its famous night clubs is hosting us. Be prepared...

It’s exciting times, anticipating the EMIM2020 and even though, the submission deadline has already passed, do not worry if you missed it. You have the chance to submit your abstract during Late Breaking submission scheduled for early February 2020. Be alert and do not miss to participate; present your scientific work and hear about the hottest new developments in Molecular Imaging during the European Molecular Imaging Meeting 2020. We are looking forward to welcoming you in Thessaloniki!