

International Research Conference

AGING BRAIN AND COGNITIVE IMPAIRMENT: IDENTIFYING DYSREGULATED METABOLIC PATHWAYS THAT LEAD TO ALZHEIMER'S DISEASE

The purpose of the **International Research Conference, Varna 2020 (IRC AD, Varna 2020)**, is to promote a discussion on the Immerging New Directions in Alzheimer's disease Research. The conference in Varna, Bulgaria, a member of the EU, will provide a venue within the reach of the Eastern European Countries' teams working on Alzheimer's disease. While funding opportunities for Eastern European countries have recently become more and more accessible to them, a discussion promoting collaborative research between AD research teams in those countries with teams at Academic Institutions in the USA and Western European countries will provide a different opportunity and help in accomplishing goals relevant to early diagnosis and new therapeutic approaches in AD.

The idea, the scope of topics, timing and venue of the meeting have been inspired by the extremely successful Meeting two years ago – Alzheimer's disease, Varna-2017 (www.alz.org/varna). The 2017 Meeting in Varna was attended by more than 120 researchers, physicians, young professionals - neurologists and psychiatrists, postdocs and graduate students, community representatives, from 19 countries. The scientific topics were presented and moderated by internationally renowned experts in AD research from the USA, UK, Western European Countries, Israel and Asia. The presentation of 34 posters by postdocs and residents was one of the most remarkable features of the Meeting.

The conference will be a 3-day Meeting in **Varna, Bulgaria, October 16th – 18th, 2020**. The major funding is expected to be provided by the National Institute on Aging, which is part of the National Institutes of Health of the United States (NIA/NIH), the Medical University Varna (MUV), Bulgaria, a Grant – “TransBrain”, part of the Bulgarian National Program “European Scientific Networks”, awarded to the MUV, Bulgarian Science and Research Foundation, and Private sources.

We are considering a Program with the following Themes and major Topics:

1. Metabolic dysregulation in Alzheimer's disease”: molecular mechanisms and translational implications:

- a. Intracellular protein degradation; unfolded protein response and ER stress; Cell senescence and mitochondrial dysfunction;
- b. Interactions between peripheral organs and brain in the context of Alzheimer's disease –Extracellular Vesicles and communications between peripheral organs and brain;
- c. The aging brain, Adult hippocampal Neurogenesis and Alzheimer's disease;
- d. Nutrition, Lifestyle and Prevention; Physical activity and Intellectual exercise.

2. Understanding the role of Inflammatory mechanisms in Alzheimer's Disease: microglia, TREM2 and APOE:

- a. gene-gene, gene-environmental interactions, and how they translate to the level of a phenotype;
- b. animal models and human studies.

3. Early diagnosis: imaging and “biofluid biomarkers”:

- a. state-of-the-art of “old but good” practices;
- b. how promising are biofluid biomarkers and how do we go forward;
- c. MultiOmix approaches in Alzheimer's disease – from fundamental mechanisms to early diagnosis;
- d. what are the lessons learned from failures of Alzheimer's disease clinical trials?

4. Metabolic disorders and Alzheimer's disease in the Eastern European Countries: what is different?

5. Caregiving, families, economics and advocacy of Alzheimer's Disease in Eastern European countries; biobanking in EU and USA.

IRC AD, Varna 2020, will put a major effort to expand the knowledge of young professionals, postdocs and graduate students on the emerging concepts in AD research, as well as the impact of those concepts in developing new diagnostic and therapeutic strategies. At the Second Meeting we are planning oral presentations by young investigators at each of the Sessions and Round Table discussions with Young Scientists and Speakers. The venue will be **Flamingo Grand Hotel**: <http://flamingo-grand.albena.top-hotels-bg.com/en/>

We believe the participation of leading European, Internationally renowned scientists in important areas of AD research, the involvement of trainees, young investigators and a strong contingent of USA AD researchers will significantly contribute to the success of the meeting. The speakers and moderators will share their latest scientific achievements and will establish new collaborations, hopefully with research teams working on the Balkan Peninsula, where the level of research and diagnosis of AD are in their very beginning.

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