

The 5th Rijeka Forum on Neurodegenerative Diseases „Neurodegenerative Diseases: Toward therapy“

Online, 8th and 9th of November, 2021.

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The symposium 5th Rijeka Forum on Neurodegenerative Diseases titled “Neurodegenerative diseases: Toward therapy” was held online on the 8th and 9th of November under the patronage of the Department of Biomedical Sciences in Rijeka of the Croatian Academy of Sciences and Arts, the Medical Faculty of the University of Rijeka, the Croatian Neurological Society and the Rijeka branch of the Croatian Medical Association. This year’s symposium has elevated the Rijeka Forum on Neurodegenerative disease to a tradition, and even though it had to be held virtually due to the current pandemic, hopes are that it will be live next year.

This year 25 lecturers from 9 countries, experts in the field of neurodegenerative diseases, delivered timely lectures focusing on the advances in therapies of neurodegenerative diseases, as well as some new findings in general regarding the diagnosis and biomarkers in the field. The symposium had free registration online and attracted a wide audience, from graduate and postgraduate students, to basic and clinical medicine scientists.

The symposium was opened with introductory talks of the president of the scientific committee, Daniel Rukavina, full member of Croatian Academy of Sciences and Arts and the Head of the Department of Biomedical Sciences in Rijeka of the Croatian Academy of Sciences and Arts and president of the organizing committee Vladimira Vuletić, head of the Department of Neurology at the Faculty of Medicine Rijeka and head of the Clinic of Neurology at the Clinical Hospital Center Rijeka. Furthermore, welcome addresses to all lecturers and participants were given by Zdravka Poljaković, President of the Croatian Neurological Society, Alen Ružić, Head of the Clinical Hospital Centre Rijeka, and Snježana Prijić Samaržija, Rector of the University of Rijeka.

The symposium was split into five main topics. The topics of the first day focused on the genetic aspects, neuromodulation, and dementias. The opening lecture of the first topic was held by the esteemed prof. John Hardy (UCL Institute of Neurology, United Kingdom), who spoke about the genetic analysis of decline of disease rate. He was followed by prof. Nir Giladi (Tel Aviv Medical Center, Israel), who spoke about the genetics of Parkinson’s disease, with a focus on GBA and LRRK mutations in Ashkenazi Jews. After that, prof. Borut Peterlin (University Medical Centre Ljubljana, Slovenia) gave an interesting lecture on advanced therapies for genetic neurodegenerative disorders. The second topic, focused on neuromodulation and neurodegeneration, was opened by prof. Elena Moro (Grenoble Alpes University, France) with an interesting talk on hopes, hopes and actualities of neuromodulation. The



remaining lectures by prof. Zvezdan Pirtošek (University Medical Centre Ljubljana, Slovenia) and Federica Provini (University of Bologna, Italy) respectively focused on the role of senolytics in cellular senescence in brain aging and on sleep disorders in synucleinopathies. The final topic for the first day centered around Alzheimer's disease and dementias. The first talk, on Lewy Body dementia, was given by prof. Nenad Bogdanović (Karolinska Institute, Sweden). An update on current blood biomarkers for amyloid and tau pathophysiology in Alzheimer's disease was given by prof. Kaj Blennow (Gothenburg University), and it was an insightful talk on the usefulness of biomarkers for Alzheimer's disease profiling. The importance of a healthy lifestyle in prevention of neurodegenerative disease was highlighted by academician prof. Vida Demarin (Croatian Academy of Sciences and Arts, Croatia). The day was finished by three interesting lectures focused on an update in Alzheimer's disease and cognitive rehabilitation, that were held, in order, by prof. Fran Borovečki (University Hospital Centre Zagreb, Croatia), Gabriela Novotni (Ss Cyril and Methodius, Macedonia) and Assist. Prof. Nataša Klepac University Hospital Centre Zagreb, Croatia).

The morning of the 2nd day was reserved for talks regarding Parkinson's disease. It was opened by an interesting talk from Assist. prof. Maja Trošt (University Medical Centre Ljubljana), who spoke about the role of pumps in Parkinson's disease. It was followed by Assist. prof. Vladimira Vuletić (University of Rijeka, Croatia), who focused on the role of microbiota in Parkinson's disease. The importance of brain MRI in the diagnostic follow-up was highlighted by Assist. prof. Slavica Kovačić (University of Rijeka, Croatia), while the use of deep brain stimulation for the vegetative state and minimally conscious state was the centre of a talk by prof. Darko Chudy (University Hospital Dubrava, Croatia).

The second topic for the day focused on multiple sclerosis and other neurodegenerative diseases. Talks by Gregor Brecl Jakob (University Medical Centre Ljubljana, Slovenia) and prof. Mario Habek (University Hospital Centre Zagreb, Croatia) focused on novel therapeutic paradigms in slowing neurodegeneration and the importance of early treatment with high efficacy disease modifying therapies in multiple sclerosis. Prof. Zdravka Poljaković (University Hospital Centre Zagreb, Croatia) followed with an insightful talk on whether we can consider stroke a neurodegenerative disease, while prof. Tamas Revesz (UCL Queen Square, London) talked about the landmark studies about the neuropathology of corticobasal degeneration. Prof. Tomislav Babić (Neuroscience Franchise Worldwide Clinical Trials, London) highlighted the recent drug developments in frontotemporal dementia, and prof. Ivana Munitić (University of Rijeka, Croatia) spoke about the neuroimmunity of amyotrophic lateral sclerosis. The last two lectures of the symposium by Paolo Manganotti (Ospedale di Cattinara Trieste, Italy) and Martin Rakuša (University Medical Centre Maribor, Slovenia) focused on clinical neurophysiology in neurodegenerative disease, with a focus on Alzheimer's disease.

The symposium was finished by an interesting round table discussion moderated by Assist. Prof. Vladimira Vuletić and prof. Nenad Bogdanović.

Overall, this international symposium very interesting and timely talks, which were valuable for all participants. Importantly, it presented as a great occasion for young students and researchers to discuss these important topics with the leading international experts in an online setting. The next Symposium will be held next year in a similar period, hopefully live in Rijeka when the current pandemic subsides.