

**Horizon 2020
Marie Skłodowska Curie Actions
PROFILE FORM**

Organization Name / Department	Center for Laser Microscopy Institute for Physiology and Biochemistry Faculty of Biology University of Belgrade	Organization Short Name	CLM
Organization Type	<input checked="" type="checkbox"/> University <input type="checkbox"/> Public Research Centre <input type="checkbox"/> Large Scale Enterprise <input type="checkbox"/> Small and Medium Scale Enterprise	<input checked="" type="checkbox"/> Public Body <input type="checkbox"/> International NGO <input type="checkbox"/> National NGO	
Research Fields	<input type="checkbox"/> Chemistry CHE Social and Human Sciences SOC <input type="checkbox"/> Economic Sciences ECO <input type="checkbox"/> Information Science and Engineering ENG <input type="checkbox"/> Environment and Geosciences ENV <input checked="" type="checkbox"/> Life Sciences LIF <input type="checkbox"/> Mathematics MAT <input type="checkbox"/> Physics PHY	<u>Sub-Fields / Keywords:</u> Biology Biomedicine Neuroscience	
Short Description of the Organization / Department	<p>The Centre for Laser Microscopy (CLM; http://clm.bio.bg.ac.rs) was founded in 2004. It is situated at the premises of the Institute for Physiology & Biochemistry at the Faculty of Biology University of Belgrade.</p> <p>The Centre consists of the preparatory laboratory and the imaging facility with a confocal (LSM 510 ZEISS) and a videomicroscope system (Visitron, Axiovert Zeiss and Evolve CCD). The Centre is also situated in the vicinity of the School's electron microscope and close to the Animal block.</p> <p>Upon founding the strategic aims of the Centre were defined as the following :</p> <ul style="list-style-type: none"> • strengthening the research potential of the Faculty, especially of the Institute for Physiology & Biochemistry, • strengthening the hands-on potential for education, • providing research and teaching positions for young colleagues, • development of innovative protocols in research, • increasing competitiveness for national and international projects, and • to increase the impact of national science. 		
Previous Related Projects / Research Experience	<p>Previous projects: National project Biophysical neuroprofiling on experimental models of CNS damage and recovery; International projects "NEUROIMAGE" EU – FP6-INCO WBC SSA3; Bilateral projects Pathogenesis mechanism of C9ORF72 repeat expansion in amyotrophic lateral sclerosis and frontotemporal dementia; Molecular imaging on cells from animal model of amyotrophic lateral sclerosis – ALSIMAGE; The state of mitochondria in the pyramidal cells of hippocampus after an ischemic episode; The role of endosomes in excitotoxic neural damage – the implications in pathogenesis of amyotrophic lateral sclerosis; Calcium stores in ALS neuroimmunology (IMUNOCALS); Neuroimmunology of ALS – a biophysical approach; Multilateral projects (actions) Academic synapsing in the Balkans; Brain Extracellular Matrix in Health and Disease (ECMNet); Akademischer Neuaufbau Südosteuropa (Stabilitätspakt SOE); Neural Regeneration and Plasticity (NEREPLAS). Grants Verification of trace elements on the subcellular level in astrocytes isolated from a rat model of Amyotrophic Lateral Sclerosis; SOD1 protein aggregates in intact astrocytes – a cellular model of Amyotrophic lateral sclerosis; ERAWEB – Erasmus Mundus-Western Balkans; "Centre of Excellence" grant.</p>		

Short Description of the Project idea (if foreseeable)	<p>AUTOMATED FUNCTIONAL SCREENING OF IgGs FOR DIAGNOSTICS of NEURODEGENERATIVE DISEASES.</p> <ul style="list-style-type: none"> • Development of experimental cellular models and procedures with immunoglobulins (IgGs) from patient sera as <i>diagnostic and prognostic technologies</i> related to neurodegenerative diseases particularly amyotrophic lateral sclerosis (ALS), Alzheimer’s disease, and multiple sclerosis. • Defining mark-up characteristics of the standardized <i>in vitro</i> approach for <i>personalized diagnostic protocols</i> for neurodegenerative diseases • Design of a <i>small-scale platform</i> based on automated fluorescence microscopy.
Related Call	<p>- H2020-MSCA RISE</p> <p>Also: HEALTH (SCI) WIDESPREAD (Twinning)</p>
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