



Research Project Proposal

Academic year 2018-2019

Project Nº 9

Title: Impact of thrombus composition on neurovascular damage in ischemic stroke.

Department/ Laboratory

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Summary: The prevalence of stroke, currently a leading cause of morbidity and mortality worldwide, will increase with the aging of the population. The enormous clinical, economic, and social burden of ischemic stroke (IS) contrasts with the limited therapeutic options available: 1) thrombolysis with tissue plasminogen activator (tPA), and 2) endovascular thrombectomy. In addition, there is a significant percentage of patients who do not respond to current therapies. Access to thrombi represents a unique opportunity in the search for new therapeutic options based on the characterization of its components and their impact on the recanalization of the occluded vessel that will have a clear translational implication. Therefore, the objectives of this work are: 1) to analyze whether the expression of microvesicles (MVs) in thrombi from thrombectomized patients can condition the outcome of recanalization therapies and the prognosis of patients with IS; 2) to study the transcriptome of MVs separated by cell origin (flow cytometry and sorting) and submitted to ultra-low-input RNAseq. This information will be crucial in identifying new prognostic markers and therapeutic targets that will contribute to decision-making, about the most appropriate procedure for each patient (precision medicine), as well as for the design of safer and more efficient thrombolytic strategies.

yes	
no	X

Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?