

EXTRACELLULAR VESICLES AS A BRAIN MECHANISM OF INTERCELLULAR AND INTERREGIONAL COMMUNICATION ALTERED IN SCHIZOPHRENIA

Final Degree Project

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This project is strictly confidential

The brain communication systems are disrupted in schizophrenia and the molecular basis for these alterations have not been yet established. In this work, we employed state-of-the-art neuroproteomics and systems biology approach to characterize the proteome composition(s) of brain extracellular vesicles (EVs), as key mediators of intercellular communication, between three specific brain regions: the prefrontal cortex, the caudate and the hippocampus. Post-mortem brain tissues of patients with schizophrenia were profiled (n=30). The results revealed depictive proteome regulation changes in the hippocampus. Moreover, some of the proteins identified were revealed as associated to a disrupted EVs-mediated interregional brain communication system in psychotic brains.