Alpha-synuclein or SNCA is a synuclein protein that is found predominantly in the presinaptic termini of neurons. Aggregates of SNCA, which are toxic to the cell, are the main structural component of Lewy bodies. This confers to the protein a central role in the pathology of Parkinson’s Disease (PD) and other neurodegenerative disorders. The wild-type SNCA itself can form unsoluble aggregates; however, some mutations of the gene coding for alpha-synuclein or a multiplication of its locus can be the cause of some forms of the hereditary Parkinson Disease. It is known also that insoluble SNCA can be released to extracellular medium and become toxic for other healthy neurons, spreading this way the pathogenic SNCA and the disease. Our company has developed a cell-based model for the screening of inhibitors of the transmission between culture cells of insoluble SNCA in order to be tested in HCS assays.