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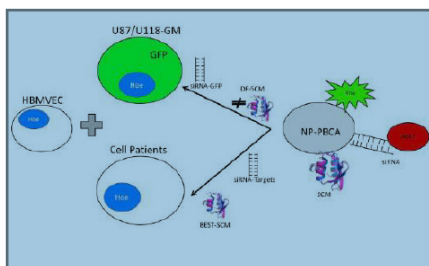
4TH WORLD BIOTECHNOLOGY CONGRESS

May 20-21, 2019 London, UK

Delivery method of the silencers RNA by PBCA nanoparticles for the treatment of multiform glioblastoma

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Glioblastoma multiform (GBM) has been reported as the most severe and the deadliest brain cancer, with a prognosis of only 14 months. Treatment is executed by the extraction of the tumor, followed by a radiation therapy and chemotherapy. Nowadays, brain therapy has found great obstacles to become effective due to factors such as the drug resistance and the difficulty to cross the blood-brain barrier. One of the great promises for the diagnosis, treatment and precaution of several diseases has been the use of nanoparticles (NPs). Among the different types of NPs, the PBCA nanoparticles have been gaining space in medicine because of its unique properties and its multiples employability. PBCA nanoparticles also have the ability to cross the blood-brain barrier (BBB). Another great promise in the treatment of diseases is the use of interfering RNA technique by presenting a specific and unique gene silencing capacity through molecules denominated in this project a silencers RNA. Several researches have been conducted focusing on several categories of cancers, which have been employed different NPs, as well as the use of diverse silencers RNA. The aim of this project is to create a delivery method of RNA silencers by nanoparticles for the treatment of GBM. So, to achieve it, different mechanisms will be used in the topography of PBCA-NPs to make them specific tumor tissue, besides using the silencers RNA focused on genes that brings resistance to most important drug and also genes responsible for the maintaining of tumor cells in different lines cell: U87/U118-GM and patients cells. Therefore, the main purpose of this project is to create an alternative method of treating one of the deadliest cancers from two scientific pillars of major biotechnological fields of modern medicine: nanoparticles and interfering RNA.



Biography

Cyro von Zuben, PhD student has his expertise in interfering RNAs (RNAi). He worked with the use of RNAi tool for the control of pests in the agriculture, by which he awarded as the first place in Congress Open for Biology Students (2013) and he was selected for the oral presentation in 10th Latin Congress of Entomology (2018th). Actually, he has a team in the best University of Latin America with the professor Henrique Marques-Souza to found news genetics molecules for the most important Brazilian pests. This technology was also awarded as the best technology by the companies that were present in Open Innovation Week (2018). Last year, Cyro was approved on the program "New Talents" of one of the most prestigious and famous Institute of Brazil: Institute for Technological Research. By now, he is developing the nanoparticles with the RNAi technology for the treatment of diseases as cancer.

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