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Characterization and evaluation of the GG polymer to regulate intestinal motility in Hemiparkinsonism rat model

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Parkinson's disease (PD) is usually characterized by cardinal motor impairments. However, a range of non-motor symptoms precede the motor-phase and are major determinants for the quality of life. To date, no disease modifying treatment is available for PD patients. The gold standard therapy of levodopa is based on restoring dopaminergic neurotransmission, thereby alleviating motor symptoms, whereas non-motor symptoms remain undertreated. Constipation is a problem that affects approximately 50-70% of people with Parkinson's disease (PD) due to alterations in the autonomic nervous system (ANS), which regulates involuntary movements of the digestive tract. In this regard, it has been reported that the administration of soluble and insoluble fiber improves the symptoms of idiopathic chronic constipation. Guar gum (GG) is a polymer of relatively recent use, derived from the seeds of the Cyamopsis tetragonoloba plant from the Leguminosae family. GG has proven to be effective in softening and improving faecal production and increasing the capacity of faeces load and sensation of faecal excretion. Amaranth grain (AG) has unique protein content. Due its composition, amaranth protein resembles the one found in milk products and it is very close to the ideal protein characteristics proposed by the Food and Agriculture Organization (FAO) for human consumption. The purpose of this paper is to propose a product which chemical properties will contribute to increase the peristalsis.

Biography

Ehekatzin García Valdés is a biotechnology engineer, currently studying the master´s degree in Advance Technology at the Instituto Politécnico Nacional in a collaboration with Univesidad Nacional Autónoma de Mexico, where he is developing an alternative for the treatment of chronic constipation suffered by patients with Parkinson´s disease. He has experience in the development of functional foods, protein extraction and physical characterization.

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