Medicinal Potential, Phytochemical Composition and Identification of Bioactive Compounds in Corn Silks (Zea mays L.) Extracts

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Corn (Zea mays L.) is a plant belonging to the Gramineae/Poaceae family, the third most cultivated cereal planet. This way, the stigma of the plant, also known as hair, silk, beard or corn doll, is used in popular medicine as an anti-inflammatory, anti-oxidant, diuretic, astringent and as an aide in the treatment of infections. The growing use of this part of the plant by the Brazilian population and it's application in self-medication triggered this project which goal is to identify bioactive compounds in corn silks extracts from its chemical and pharmacological properties, verifying their medicinal potential. Based semisolid formulations of the extracts were produced to analyze their viability in the fight against cellulite. After that, antimicrobial tests were performed with the hydro alcoholic extracts of corn silks against strains of Escherichia coli and Shigella sonnei bacteria. The raw extract of corn silks inhibited 100% of bacterial culture of E. coli growth. In addition, data was collected thru questionnaires applied to corn silks users in the city of Imperatriz (urban and rural areas), to understand the popular knowledge of corn silks. The chromatographic profiles of the extracts were drafted and accelerated stability was obtained by centrifugation. The results point to diuretic, antioxidant and anti-inflammatory properties of corn silks, identifying product potential in cellulite combat. This project confirms the medicinal potential of the species and the possibility of development of new drugs in the future, in view of the chemical composition of Z. mays L. providing safer and more effective treatments.