IN VITRO EVALUATION OF SOME VEGETAL EXTRACTS AGAINST PATHOGEN CANDIDA ALBICANS

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SUMMARY

It is estimated out of more than 250,000 species of plants found on Earth, a relatively small percentage (1 to 10%) are used as foods by both human and other animal species, while more are used for medicinal purposes. [1]

Secondary metabolites of plants (more than 12,000 have been isolated), a number estimated to be less than 10% of the total. [2] In many cases, these substances serve as plant defense molecules and induce specific mechanisms against predation by microorganisms, insects, and herbivores. Many phytochemicals, such as terpenoids, give plants their odors; anthocyanins, flavonoids and carotenoids are pigments, while others (quinones and tannins) are responsible for bitterness. [3]

Phytochemicals have antifungal effects, i.e. Callendula officinalis extracts inhibits Candida albicans growth.

Initial screening of potential antifungal compounds from plants may be performed with pure substances or crude extracts.

The aim of this study is to test the efficacy of some plant extracts (tinctures, glycerine) in vitro. We compared the efficacy of vegetal extract with the hexoral drug against the pathogen Candida albicans, isolated from different patients with oral candidosis.

The biological material was: marigold flowers (Callendula officinalis), dill (Anethum graveolens) and Melissa (Melissa officinalis) extracted in mixtures (10%) of ethanol-water or glycerine-water.

Screening on co-cultivation (24 hours) of Candida albicans with different volumes of each extract showed different antifungal activity. The highest efficacy was attributed to dill vegetal extract, at concentration of 200 µl.

BIBLIOGRAPHY

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