Annals of Clinical Trials and Vaccine Research



Preparation Differential Culture Medium for Cryptococcus Neoformans from Aqueous Extract of Leaves And Flowers Of Chrysanthemum Cinerariaefolium

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Abstract

A new medium was prepared to isolate and diagnose the yeast Cryptococcus neoformans from flower and leaves aqueous extract of chrysanthemum. Methods Prepared differential culture medium for C. neoformans from aqueous extract of leaves and flowers of Chrysanthemum cinerariaefolium and chemical, spectral tests of the extracts were tested, in addition of gas chromatography (GC)-mass was used to diagnose phenolic compounds in both leaves and flowers. Results Showed that the yeast was grow with typical colonies on the new medium compared with other media which using in diagnosed of this yeast such as Staib agar and Sabourauds dextrose agar and unlike the yeast Candida albicans (as a negative control), which appeared in cream to white on this medium. Furthermore, the colonies are dark brown in color on flower chrysanthemum medium and light brown color on leaves chrysanthemum medium. In addition, the results of the chemical and spectral tests of the extracts confirmed that the plant contains many active compounds such as alkaloids, turbines, tannins, and phenols. The analysis of the extracts of phenolic compounds using GC-mass led to the diagnosis of five compounds in the leaf extract and nine compounds in the flower extract of this plant. The media was prepared is differential medium that use to diagnosis of Cryptococcus such as Staib agar. Moreover, low economic cost, which consists of leaves and flowers of a plant available, abundance and the method of preparation is very simple.



Fig. 1: Growth of Cryptococcus neoformans on various media, (a) Staib agar, (b) SDA, (c) leaves medium, (d) flower medium



Fig. 2: Candida albicans (negative control) on the media (a) leaves, (b) flowers

Biography

Neeran Obied Jasim PhD.in Medical Mycology ,teaching in college of Pharmacy /university of AL-Qadisiyah .Of my research interests are pathogenic fungi ,treated infectious diseases by green ways ,Nano particles and biosynthesis its using fungi and plants, genetic and gene expression.

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NEERAN OBIED JASIM Preparation Differential Culture Medium For Cryptococcus Neoformans From Aqueous Extract Of Leaves And Flowers Of Chrysanthemum Cinerariaefolium, Noor Dakel Mehdi2 Asian J Pharm Clin Res, Vol 13, 2, 2020, 114-118.

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International Conference on Clinical Research and Case Reports Paris, France | June 15-16, 2020

Citation: Neeran Obied Jasim, Preparation Differential Culture Medium For Cryptococcus Neoformans From Aqueous Extract Of Leaves And Flowers Of Chrysanthemum Cinerariaefolium, Clinical Research 2020, International Conference on Clinical Research and Case Reports, Paris, France | June 15-16, 2020, 03:04