

ABSTRACT

The chemistry of natural products has attracted great interest in term of the biosynthesis and cellular mechanisms of action of these substances. Particularly interesting among these products is quinine which is the bulk of more than twenty alkaloids extracted from the bark of Cinchona ledgeriana. While the effects of quinine and quinidine alkaloids on certain microorganisms have been well studied, those on yeasts have received scant attention.

The use of selective growth culture medium is a powerful tool to obtain new strains of yeast with industrial value.

I studied the effects of quinidine sulfate and quinine sulfate on different strains of yeasts used in the wine industry and on yeast fusion products in order to see which kind of alterations these alkaloids produced on yeast behavior.

The yeasts studied have shown different answers to variable concentrations of the alkaloids, possible due to individual yeast genetic variability. Resistant mutant yeasts have been obtained which exhibit normal growth in high alkaloid concentration. Evidence for a link of the quinine sulfate to the yeast DNA is presented.

I suggest that these alkaloids can be used to improve selective growth culture medium in order to obtain new strains of yeasts with industrial value.

