

ANTIFUNGAL PROPERTIES OF PINEAPPLE LEAF EXTRACT

Zottich, U.P.¹, Zorzal, P.B.¹, Calheiros, J.C.¹, Ventura, J.A.^{1,2}, Fernandes, P.M.B.¹

¹Núcleo de Biotecnologia, Universidade Federal do Espírito Santo-UFES,
²Instituto Capixaba de Pesquisa, Assistência Técnica e Extensão Rural-INCAPER,
Vitória, ES, Brazil.

Fungi diseases are the major cause of pineapple culture losses. The present work aim to investigate the antifungi activity of pineapple leaf extract of a fusariosis resistant genotype (EC-099) developed at INCAPER. Soluble proteins were extracted from the whole leaves of pineapple seedlings, followed by salt precipitation, resulting in 3 fractions of low (F1), medium (F2) and high (F3) molecular weight. Total phenols and tannins were assayed as control. Antifungal activity of each fraction was evaluated through determination of growth inhibition of 10 different fungi of economical interest ($1,5 \times 10^6$ spores/ml in potato dextrose medium). F1 inhibited growth of all tested fungi and showed the best correlation between protein concentration and fungi growth inhibition. F2 and F3 fractions presented higher specificity to *Beuveria bassiana*, *Colletotrichum gloeosporioides* and *C. musae*. In order to confirm that the detected inhibition was due to protein, the extract was boiled for 10 min at 100 °C and no inhibition was found. Also, the low amount of total phenols and tannins in the leaf extract invalidated the account of these compounds in prevent fungi growth. Thus, we asserted that EC-099 genotype possess different classes of proteins with antifungi activity.

Financial support: FINEP, CNPq, BNB

Key words: *Ananas comosus*, fungi, proteins.