

Biochemical Characterization of Two Antifungal Proteins

From *Lippia Sidoides* Flowers

Almeida, R.G.¹; Moreira, J.S.^{1,2}; Amaro, D.S.¹; Pinto, M.F.S.¹; Tavares, L.S.²;
Singulari, J.L.²; Duque, A.P.N.²; Santos, M.O.²; Viccini, L.F.²;
Vasconcelos, I.M.³; Oliveira, J.T.A.³; Franco, O.L.^{1,2}

¹Centro de Análises Proteômicas e Bioquímicas, Programa de Pós-Graduação em Ciências Genômicas e Biotecnologia, Universidade Católica de Brasília, Brasília-DF, Brazil.

²Departamento de Biologia, Universidade Federal de Juiz de Fora, Juiz de Fora-MG, Brazil.

³Departamento de Bioquímica e Biologia Celular, Laboratório de toxinas vegetais, Universidade Federal do Ceará, Fortaleza-CE, Brazil.

Botrytis cinerea is a phytopathogenic fungus causing disease in a substantial number of economically important crops, mainly in strawberry fruit (*Fragaria ananassa*). To overcome microbial infections, plants have various defense responses involving antimicrobial proteins, secondary metabolites, among others. In this view, a wide variety of antifungal proteins have been isolated from diverse plants, such as *Lippia* genus, which are widely used in folk medicine and also presenting a valuable potential in combating phytopathogens. In this work, proteins isolated from *L. sidoides* flowers, were extracted with solution of 0.6M NaCl and 0.1% HCl and further precipitated with (NH₄)₂SO₄ (100%). Dialyzed rich fraction was applied onto an Octyl-Sepharose resin, generating one retained fraction (RF) and non-retained fraction (NRF). SDS-PAGE analyses of PR showed a major protein with molecular mass of approximately 15kDa and a lower of 10kDa. 50µL of fraction (RF) that shown inhibition growth of fungi *B. cinerea* was applied onto an HPLC column C-18. Two isolated proteins were sequenced by Edman degradation and your sequence compared to protein data bank, showing new classes of proteins with antifungal activity. In summary, these data could contribute, in a near future, to the development of biotechnological products as antifungal drugs and transgenic plants with enhanced resistance to pathogenic fungi.

Key words: *Botrytis*, *Lippia sidoides* flowers, Antimicrobial proteins

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