

SCREENING OF STRAINS *Aspergillus* OF THE COLLECTION URM-UFPE FOR COLLAGENASES PRODUCTION

Lins Campos, R. A.^{1,2,3}; Sales, M. R.^{2,3}; Albuquerque, M. S.⁴; Silva, F. O.^{2,3}; Motta, C. S.⁴; Lima Filho, J. L.²; Porto, A. L. F.^{2,3}.

¹Bolsista PIBIC-FACEPE-UFRPE

²Laboratório de Imunopatologia Keiso Asami – Lika, UFPE, Pernambuco, Brasil;

³Departamento de Morfologia e Fisiologia Animal – UFRPE, Pernambuco, Brasil;

⁴Departamento de Micologia, UFPE, Pernambuco, Brasil.

The group of the filamentous fungus has been mentioned in the literature as producing of several proteolytic enzymes, among them the collagenases have been isolated since 1967. In this work, fifteen samples of filamentous fungus were activated of the collection URM-UFPE, and tested as for the capacity to degrade gelatin in liquid medium. For this selection the samples *Aspergillus carbonarius*, *A. aculeotus*, *A. heteromorphus*, *A. japonicus*, *A. terreus*, *A. niveus*, *A. niger*, *A. phomices* were tested. The cultivations were carried out in Erlenmeyer (250mL) containing the culture medium where the gelatin was the only source of carbon and nitrogen, in orbital shaker (120 rpm) during seven days to 30°C. The enzymatic extract was obtained by filtration and centrifugation of the fermented broth (15min, 10.000xg to 4°C) and used for the determinations of the collagenolytic activity, protein determination and pH. The *A. niveus* and the *A. heteromorphus* presented the best collagenolytic activities tends as producing best the *A. niveus* showing an activity of 34U/mL obtained in alkaline pH among 7,5 - 8,8. The results indicate that the *Aspergillus niveus* can be a source promising for collagenases production in industrial scale, with a substrate economically viable and carried out in a short space of time.