

ANTICOAGULANT ACTIVITY OF THE GALACTOMANNAN SULFATED
CHEMICALLY FROM THE LICHEN *PARMOTREMA TINCTORUM*

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Several polysaccharides have been studied in terms of their anticoagulant activities, particularly with sulfated derivatives which increase this activity. A galactomannan was obtained from the lichen *Parmotrema tinctorum* (Parmeliaceae) by extraction with aqueous 2% KOH, followed by successive ethanol precipitation, freezing/thawing and Fehling precipitation of the supernatant. It was sulfated by dissolution in pyridine-formamide, followed by treatment with chlorosulfonic acid (O'Neill, Can. J. Chem., 33:1097-1101, 1955). The degrees of substitution (DS) obtained was 1.70 and was determined according to Dodgson & Price (Biochem. J., 84:106-109, 1962). Anticoagulant activity was evaluated by Thrombin Times (TT) using normal human plasma and comparing this with that of standard heparin. The polysaccharide without derivatization show no activity, whereas the galactomannan sulfated show the dose-dependent activity and at a dose of 0.5 ug/ml the plasma was not coagulate. Besides this "in vitro" result is promissory, "in vivo" experiment is necessary to confirm the desired effects.

Supported by PIBIC-PUCPR.