composition revealed the main features characteristic of the invertebrate collagen of mesodermal origin. The total carbohydrate content was 11.5% and most of it was neutral sugars. It was also rich in glycosylated hydroxylysine and more than 90% of the total glycosylated hydroxylysine was present as glu-gal- hydroxylysine.

BSFD006

PURIFICATION AND CHARACTERIZATION OF CATHEPSIN D FROM BUFFALO KIDNEY LYSOSOMES

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Cathepsin D is a major lysosomal endopeptidase involved in intracellular protein degradation. In renal tissues, it is thought to play an important role in the degradation of proteins reabsorbed from glomerular filtrate. It is also implicated in malignancies associated with various tissues. However, the molecular mechanisms underlying the action of cathepsin D under various physiopathological conditions are poorly understood. Although this enzyme has been purified from various animal tissues, very little work has been done on the characterization of cathepsin D from kidney cortex lysosomes. In this report two types of cathepsin D are purified from buffalo kidney lysosomes by affinity chromatography with pepstatin agarose, gel filtration on Sephadex G-100 and HPLC. The purified major enzyme termed cathepsin D-1 was 3,200 fold purified over the homogenate with a yield of 2.5% while the corresponding values for the minor enzyme (cathepsin D-II) were 320 fold and 0.83% respectively. In SDS- PAGE, both the enzymes showed two protein bands each. Both the enzymes exhibited similarities in characteristics such as pH and temperature optima and inhibitor response. However, they were found to differ in molecular weights, carbohydrate content and electrophoretic mobility on native PAGE.

BSFD007

MOLECULAR CHARACTERISTICS OF FIBROTIC LIVER COLLAGEN IN RATS

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Hepatic fibrosis was induced in albino rats after administration of dimethylnitrosamine (DMN) intraperitoneally in doses of lmcl (diluted 1:100 with 0.15 M sterile NaCl)/100 g body weight. The injections were given on the first three consecutive days of each week over a period of 21 days. The animals were sacrificed on days 7, 14 and 21 and the liver collagen was extracted and purified. The and chains of purified pepsin solubilised collagen were separated by SDS-PAGE. The α1 (III) chains were resolved from α1(I) chains by interrupted electrophoresis with 2- mercaptoethanol. The aldehyde content and fibril formation curves were also studied. Electrophoretic studies revealed that the subunit composition of type I collagen did not differ significantly in control and DMN treated rats. Reduction with 2- mercaptoethanol indicated the presence of type III collagen in the electrophoretic field. A significant increase in the aldehyde content and an increased rate of fibril formation were noticed in DMN induced liver collagen. The data of the present investigation revealed that the DMN induced liver collagen did not undergo any qualitative cnanges, except a higher degree of cross linking.