AMINOPEPTIDASES PRESENT IN NORMAL, CANCER AND BPH PROSTATE.

Oliveira-Montanaro, S.M.; Sugimoto, E.; Teixeira, M.A.; *DE.Arruda,H.O.; Alves, K.B.

Dep. de Bioquímica, *Dep. de Urologia, UNIFESP/EPM, São Paulo, BRAZIL.

In prostate cancer, aminopeptidase (AP) is expressed at high levels and is supposed to be involved in the invasion and metastasis. Modification of aminopeptidase occurs in the tumor formation and seems to participle in the neovascularization. The aim of this work was to purify and characterize APs present in normal (NP), benign prostate hyperplasia (BPH) and prostate carcinoma (PC). Solubilization of the APs was obtained from prostate fragments and after centrifugation, the supernatant was submitted to ion exchange chromatography. From PC it was eluted C_0 (2.5 mS), C_1 (6.4 mS) and C_2 (12.8 mS); from BPH, B_1 (7.7 mS) and B_2 (11.1 mS) and from NP, N_1 (8.0 mS), N_2 (12.5 mS) and N_3 (15.7 mS) with activity upon Ala-, Arg- and Leu-NA. B1 and B2 were submitted to a hydrophobic interaction chromatography and it was eluted from B_1: B_1a_1 (20mS) B_1a_2 (15 mS) and from B_2, B_2a_1 (15 mS), B_2b_1 (5.4 mS) and B_2c_1 (0.04 mS) all with activity upon Ala-, Arg- and Leu-NA. Each protein peaks, when submitted to a gel filtration, was eluted in only one active protein peak. B_1a_1 B_1b_1 B_2a_1 are neutral AP, metal dependent, without –S-S- group important for its activity, inhibited by puromycin and endometacine. B_2a_1, B_2b_1 are basic AP, metal-dependent, inhibited by bestatin, puromycin and endometacine. B_2c_1 has important –SH group while B_2b_1 does not have.