

## PROFILE EXPRESSION OF THE GALECTIN-3 INTO PROSTATE TUMOUR DISEASES

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Galectins have been used extensively as immunohistochemical probes. The present study aims to quantify, morphometrically, the immunostain of the galectin-3 expressed in normal prostate (NP), benign hyperplasia (BH) and prostatic adenocarcinoma (PA) in humans. Immunohistochemistry was developed using monoclonal anti-galectin-3 antibody. Surgical specimens from different patients with BH (n=5), PA (n=5) and NP (n=6) were fixed in formalin, processed and paraffin embedded. Slices (4µm) were incubated with antibody solution for one hour. The stain pattern was visualized by incubation in solution containing DAB and hydrogen peroxide. Image analysis was managed using OPTIMAS<sup>®</sup> software. Hyperplastic prostatic cells were recognized staining intensity varying from intense to moderate. For prostatic carcinoma neoplastic cells no stained for the galectin-3. Computer image analysis detected the area of hyperplastic prostatic cells stained which were expressed as area of transformed benign ( $611.8 \pm 37.4 \mu\text{m}^2$ ), malign ( $580.2 \pm 54.3 \mu\text{m}^2$ ) and normal prostatic cells ( $290.9 \pm 39.6 \mu\text{m}^2$ ). The different patterns of galectin-3 expression distinguished the nodular hyperplastic cells from normal prostatic ones and clearly differentiated the prostatic carcinoma cells from their normal counterparts. These findings demonstrate that computer analysis is a reliable auxiliary tool, as immunohistochemistry, for the diagnosis of prostatic pathologies.

**Key words:** Galectin, prostate, immunohistochemistry.