INVESTIGATING THE CARBOHYDRATE PROFILE OF GASTROINTESTINAL TRACT CELLS USING LECTIN HISTOCHEMISTRY

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Lectin histochemistry is a powerful auxiliary tool for the characterization of saccharide moieties in cytoplasm and cell surface during normal and pathologic processes. This work aims to evaluate changes in the expression of carbohydrates in organs of the gastrointestinal tract of rats submitted to ethanol stress (EG), treated with carotenoids (TG) and control group (CG). In EG, LTA (20 μg/mL) recognized residues of L-fucose in the membrane and cytoplasm of Lieberkühn cripts. In TG and CG, LTA recognized L-fucose in glycoconjugates only in the membrane of Lieberkühn cripts. PNA (50 μg/mL) stained apical cells of fundle gland in EG. While in TG and CG basal cells were also stained by PNA. In all groups, liver cells were not recognized by the lectins used. Con A (50 μg/ml) failed to recognize residues of D-glucose and/or D-mannose in cells of all organs. Results indicated that there are differences in the expression of carbohydrates in stomach, intestine and liver among rats exposed to ethanol stress and treated with carotenoids.

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