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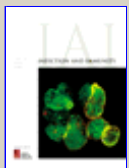
JOURNAL ARTICLE

The primary culture of rat prostate basal cells

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The objective of this study was to identify the cells from rat prostate epithelium that attach and proliferate in primary culture. Minced ventral prostate was dissociated by DNase/collagenase digestion, suspended in RPMI-1640 containing 10% fetal bovine serum, and subjected to Percoll centrifugation to separate the epithelial cells from stromal cells. With the use of lectins, it became possible to identify and monitor the fate of the dissociated epithelial cells held in suspension at 37 degrees C for several hours. In tissue sections of the rat prostate, Griffonia simplicifolia I-isolectin B4 (GSI-B4) specifically bound to basal cells, while Glycine max (soybean agglutinin [SBA]) was specific for secretory cells. Double staining with lectins and propidium iodide of dissociated cells revealed a preponderance of GSI-B4-positive live cells. The cells were plated in WAJC-404 medium supplemented with various factors, including insulin (5 ng/ml), transferrin (5 ng/ml), EGF (10 ng/ml), and bovine pituitary extract (30 microg/ml). Epithelial colonies that formed and proliferated from these cells also stained positively for GSI-B4 marker and for cytokeratins specific for basal cells as assessed by immunocytochemical staining. Proliferation was greater in cells grown on a collagen Type I matrix. These findings suggest that the epithelial cells that survived in suspension and proliferated in culture originated from basal cells of the rat prostate epithelium.

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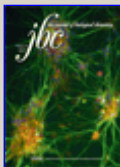
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