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## JOURNAL ARTICLE

# Structural features of cultured epithelial cells from the adult rat epididymis

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Epithelial cells isolated from the caput epididymidis of adult rats were placed in primary culture and examined daily for ten days for changes in external anatomy, reorganization of cytoskeletal components, maintenance of characteristic cytoplasmic features, and response to media formulated to minimize nonepithelial cell proliferation. Significant cell attachment to the substrate began after the first 24 hours of culture. After attachment, the cells underwent a progressive flattening and became closely applied to the substrate. This was accompanied by a redistribution of microvilli on the cell surface and a reorganization of cytoskeletal elements within the cell. After flattening, the cultured cells displayed an extensive array of 10-nm filaments which were associated with the desmosomes attaching adjacent cells. Immunofluorescence studies demonstrated that these were keratin-containing intermediate filaments and 2-D gel electrophoresis of intact cells and cell cytoskeletons revealed that a family of "keratin-like" polypeptides were major components of the cells. Epithelial cell attachment, morphology, and maintenance in the primary culture were unaffected by D-valine, cytosine arabinoside, or both; however, these agents, either individually or in combination, reduced significantly the number of cells incorporating 3H-thymidine. These data show that isolated epithelial cells retain some differentiated structural features that characterize the intact cell and that enriched cultures of epithelial cells can be maintained under conditions where fibroblast proliferation is inhibited.

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