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# SPATIO-TEMPORAL LOCALIZATION OF INTERMEDIATE FILAMENTS IN THE ORGAN OF CORTI BETWEEN THE EMBRYONIC DAY 18 (E18) AND THE POST-NATAL DAY 15 (P15) IN RAT

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The mammalian auditory organ, the organ of Corti (OC), is composed of mechanosensory hair cells and nonsensory supporting cell types. Based on their morphology and physiology, a least four types of supporting cells can be identified in the OC: inner pillar cell, outer pillar cell, phalangeal cell and Deiter's cells. The structure of this organ is well reported in adult but its development is still little known.

Using antibodies directed against different proteins of intermediate filaments cytoskeleton, we studied the spatial-temporal localization of cytokeratins (typical of epithelial cells) and vimentin (typical of mesenchymal cells) during the differentiation of the OC in rat from the embryonic day 18 (E18) to the postnatal day (P15).

Whatever the antibody used, we observed an obvious labelling over the supporting cells after the birth. In particular, an intense labelling is observed in the pillar cells and in the Deiters' cells at P8 and at P10.

These results suggest that the epithelial-mesenchymal transition might be implicated in the opening of Corti's tunnel between the pillar cells and the formation of the Nuel's spaces between the Deiters' cell and their outer hair cells, at P8 and at P10 respectively.