NAME: EVBARUNEGBE ADESUWA MITCHELE

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* The cochlear duct contains the **organ of Corti.**
* The organ of Corti contains:
  + A single row of inner hair cells
  + Three rows of outer hair cells that have stereocilia (but no kinocilium) on their apical border and synapse with bipolar neurons of the cochlear (spiral) ganglion of CN VIII
  + Supporting cells:
    - Pillar cells
    - Phalangeal cells
    - Border cells
    - Cells of Hensen
* The outer hair cells are in contact with a gelatinous mass called the **tectorial membrane** rich in **tectorin**.
* The organ of Corti responds to sound.



* Inner and outer pillar cells
  + Tall cells with wide bases and apical ends that are attached to basilar membrane
  + The central portions are deflected to form the walls of inner tunnel; apical portion contact each other.
* Phalangeal cells
  + Outer phalangeal cells
    - Tall columnar cells that are attached to basilar membrane
    - Apical portions are cup-shaped to support the basilar portions of outer hair cells along with efferent and afferent nerve fibers
    - Do not reach the free surface of organ of corti
    - Space of Nuel: a fluid-filled gap around unsupported regions of the outer hair cells
      * Communicates with inner tunnel
  + Inner phalangeal cells
    - Located deep to the innel pillar cells
    - Completely surround the inner hair cells
* Border cells
  + Delineate the inner border of the organ of Corti
  + Slender cells that support inner aspects of the organ of Corti
* Cells of Hensen
  + Define the outer border
  + Located b/w outer phalangeal cells and cells of Claudius