Captions

1. Colour-enhanced scanning electron micrograph of the inside of a guinea pig inner ear showing the hearing organ, or cochlea. Running along the spiral structure are rows of sensory cells which respond to different frequencies of sound. The whole organ is just a few millimeters long. Credit: Dr. David Furness/Wellcome collection

2. Cochlea of the inner ear. A scanning electron micrograph of the inside of a guinea pig inner ear showing the hearing organ, or cochlea (left). Along the spiral structure is the Organ of corti (right) that contains rows of sensory hair cells which respond to different frequencies of sound. The cells send impulsesalong the auditory nerve to the brain.
   Credit: Dr. David Furness/Wellcome collection

3. Mechanotransduction in hair cells of the inner ear. (A) Scanning electron micrograph of hair bundle (bullfrog sacculus; David P. Corey's Lab.). This top view shows the stereocilia arranged in order of increasing height. (B) Model for mechanotransduction. Deflection of a hair cell's bundle causes the stereocilia to bend and the tip links between them to tighten. (C) Ion channels attached to intracellular elastic elements (ankyrin repeats) open in response to tension on the rather inextensible tip link.

4. Christine Petit, Head of Genetics & Physiology of Hearing Unit at the Institut Pasteur. She also professor at College de France. Credit: William Beaucardet

5. A. James Hudspeth, F. M. Kirby Professor and head of the Laboratory of Sensory Neuroscience at the Rockefeller University. Credit: Rockefeller University

6. Robert Fettiplace, Steenbock Professor of Neural and Behavioral Sciences, at the University of Wisconsin–Madison.