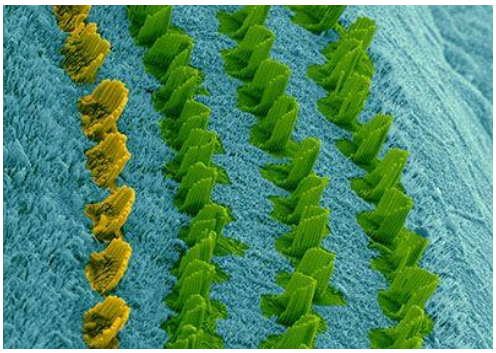
ARO 2019 Photo Contest

Below you will find stunning images from the research labs of our members, submitted in response to an ARO Art Contest held in February 2019. These images can be seen scattered throughout our web pages. Please make sure that you do not use these images without crediting the source. Thank you, and enjoy!

First Place

Credit: Leonardo Andrade, Waitt Advanced Biophotonics Core BPHO.

Description: SEM of a 1 month-old rat organ of Corti sensory epithelium. Inner hair cells (yellow), outer hair cells (green).



Second Place

Credit: Carl Nist-Lund and Bifeng Pan from the Holt/Geleoc lab.

Description: Rat organ of Corti

Third Place

Credit: C. Albert Noyes and Suzanne L. Mansour, University of Utah

Description: A paint-filled embryonic day 15.5 mouse inner ear illustrating its complex morphology in the context of the whole head.

Fourth Place

Credit: Daniel Jagger, UCL Ear Institute, University College, London.

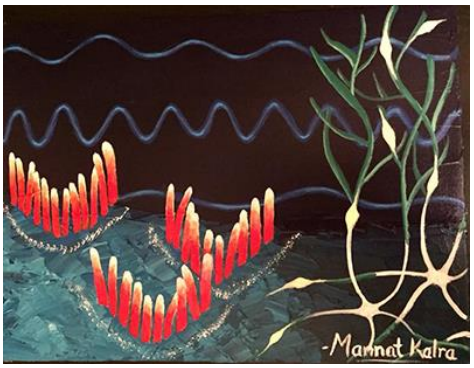
Description: This is a vibratome section of a 21-day rat cochlea from the apical turn of the organ of Corti. It is stained for acetylated tubulin (magenta), actin (green) and nuclei with DAPI (blue).

Honorable Mentions - in no specific order.

13 photos and one movie (shown as a still image)

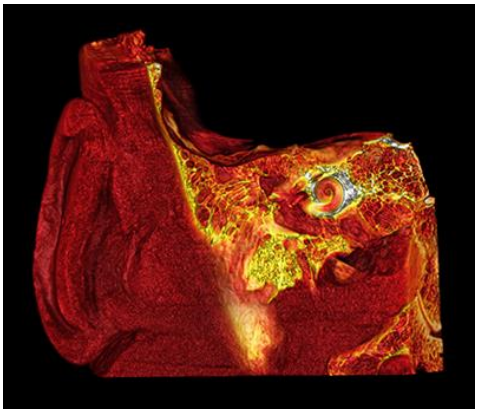
Mannat Kalra, University of Maryland

Description: "It's an acrylic painting that I made, inspired by my research in the hearing field. It is titled "Auditory Transduction/Under The Sea" as it depicts sound waves, hair cells and neurons using sea imagery".



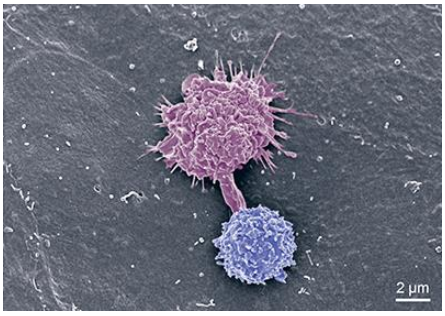
Credit: Janani S. Iyer, Harvard.

Description: Micro-computed tomography image of the human head, virtually sectioned through the temporal bone to reveal the malleus, stapes, and cochlea.



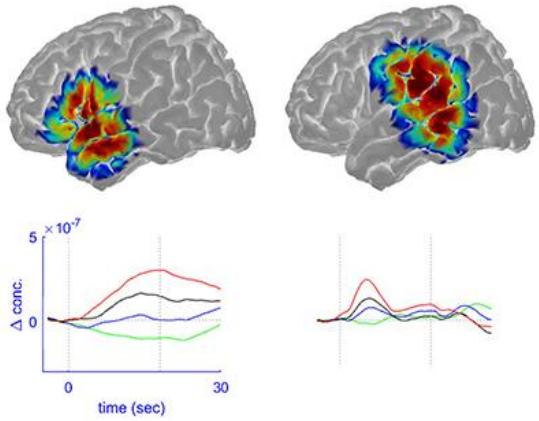
Credit: Celia Zhang and Bo Hau Hu, University at Buffalo

Description: Scanning electron micrograph illustrating interaction between two immune cells on the luminal surface of the scala tympani after acoustic injury in C57BL/6J mouse cochlea.



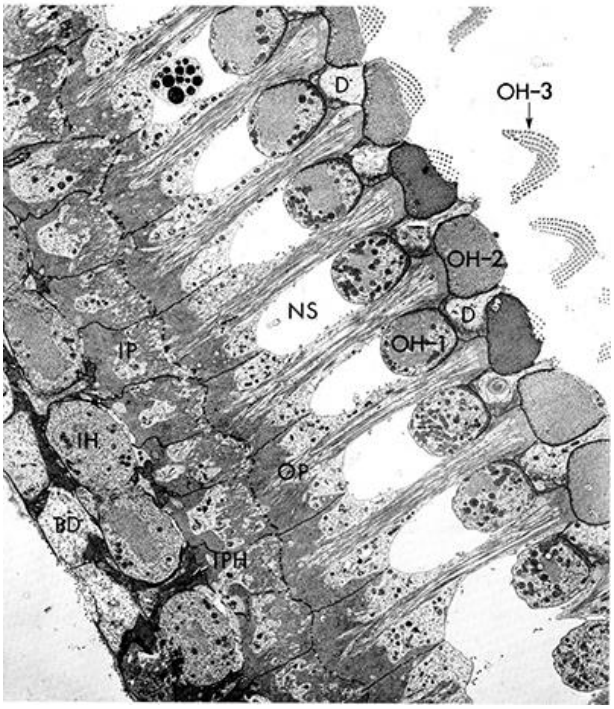
Credit: Stefan Weder

Description: The Picture is showing the effect of sound intensity on cortical haemoglobin saturation changes. Higher intensity levels lead to an increased brain activation (green 15dB SPL, blue 40dB SPL, black 65dB SPL, red 90dB SPL). Two activation patterns could be detected: a phasic/early response in the supramarginal and postero-superior temporal gyrus and atonic/late response in the antero-superior temporal gyrus and Broca's area.



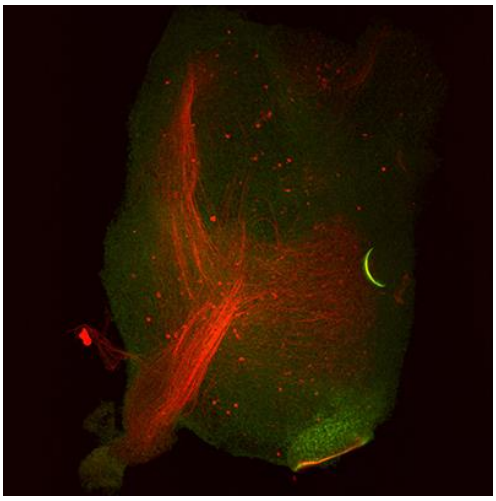
Credit: M. Lenoir; INSERM, Montpellier, submitted by Remi Pujol

Description: Semi-flat TEM (transmission electron microscopy) section of the organ of Corti



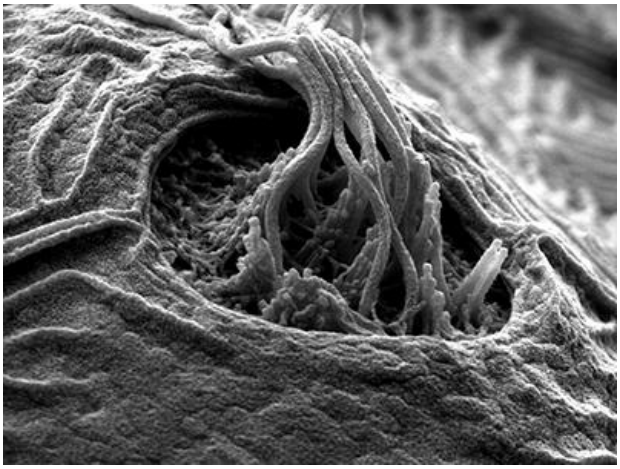
Credit: Travis Babola, Wendy Zhang-Hooks and Dwight E. Bergles, Johns Hopkins Medical Institute

Description: Auditory nerve fiber projections labeled with TdTomato into the cochlear nucleus (mice, PND 7, postnatal day 7).



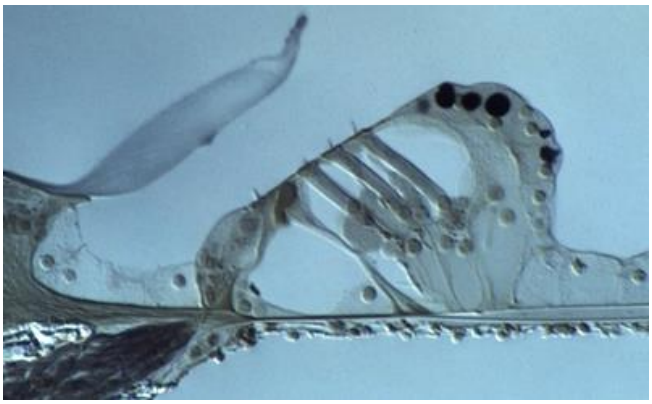
Credit: Alexandria Hudson

Description: 34,000 magnification scanning electron micrograph image of a larval zebrafish neuromast (cluster of hair cells).



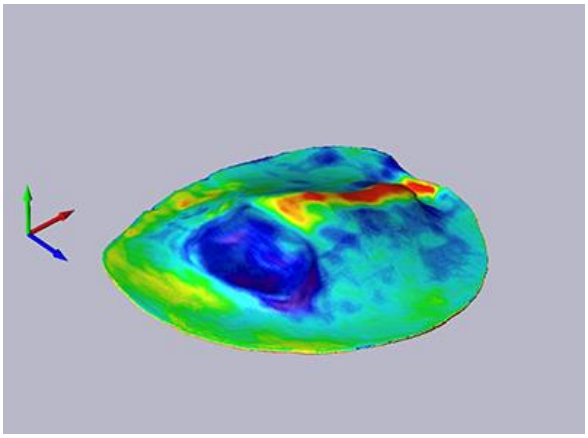
Credit: M. Lenoir; INSERM, Montpellier, submitted by Remi Pujol

Description: Nomarski at the apex of the organ of Corti.



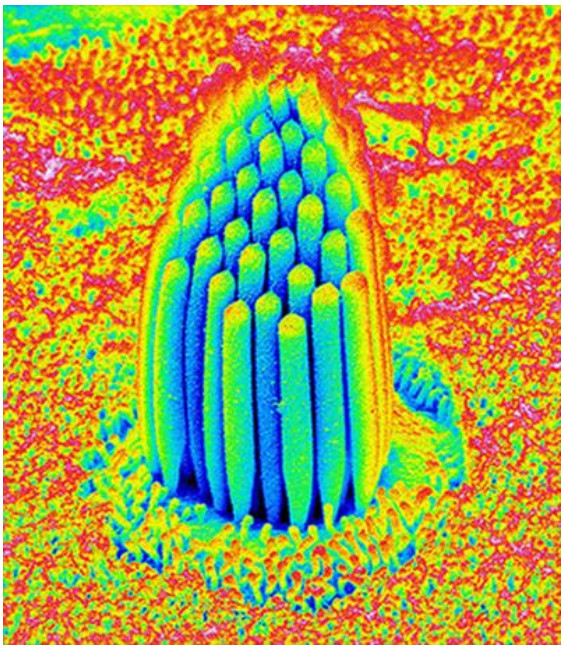
Credit: Sam Van der Jeught and Joris Dirckx, BIMEF, University of Antwerp, Belgium

Description: Thickness map of human eardrum obtained with Optical Coherence Tomography, demonstrating structural atrophy with retraction pocket. Color map denotes thickness (blue: 50 microns, red: 150 microns).



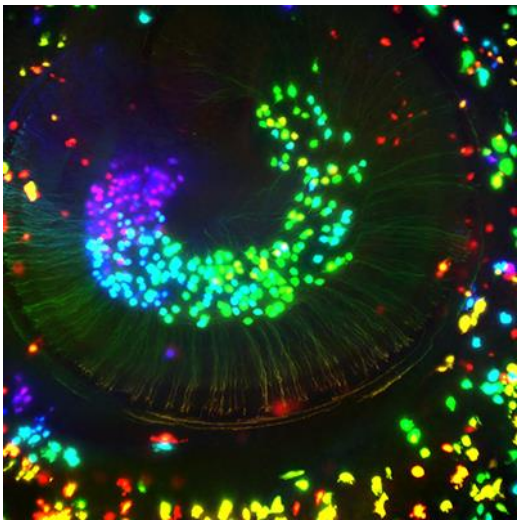
Credit: Leonardo Andrade, Waitt Advanced Biophotonics Core BPHO

Description: SEM (Scanning Electron Micrograph) of a 1 month-old rat organ of Corti outer hair cell.



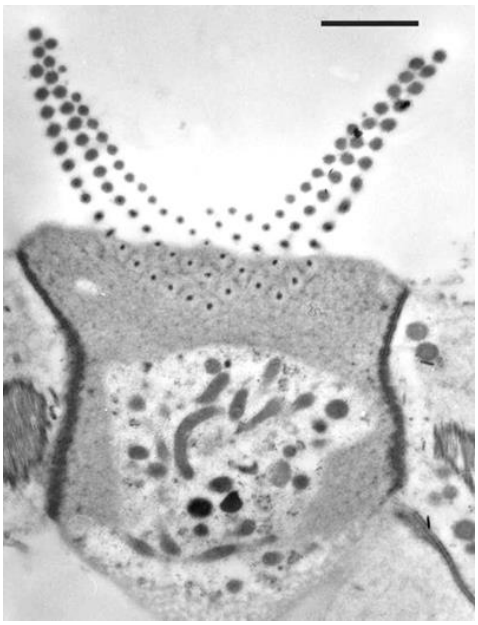
Credit: Travis Babola, Wendy Zhang-Hooks and Dwight E. Bergles

Sparse labeling of spiral ganglion neurons color-coded based on depth (mice, PND7, postnatal day 7).



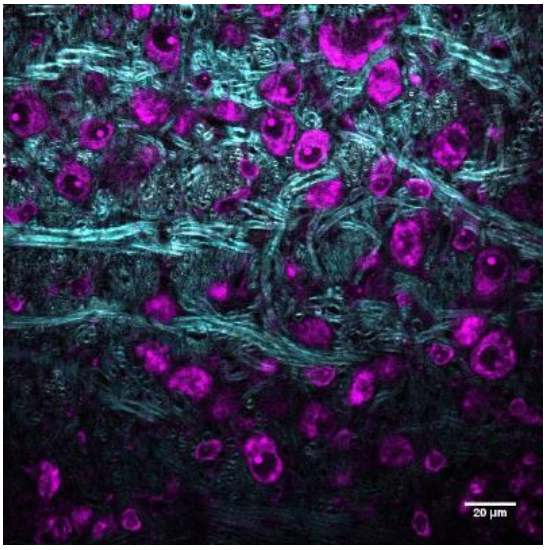
Credit: M. Lenoir; INSERM, Montpellier, submitted by Remi Pujol

Description: TEM (transmission electron microscope) section through OHC (outer hair cell) stereocilia.



Credit: Alexandra Lucas (Achim Klug lab), University of Colorado School of Medicine

Description: Images are part of ongoing research into the effects of autism on the sound localization pathway of ht auditory brainstem. The medial nucleus of the trapezoid body (MNTB) is a master source of well-timed inhibition in the auditory brain stem and is involved in our ability to isolate sound sources in noisy environments. To support the precise timing, afferent axons to MNTB neurons are heavily myelinated, and this myelination decreases with age. The image shows principal neurons of MNTB (magenta) and axons (cyan), taken with CARS (Coherent Anti-Stokes Raman Spectroscopy) with a 60x objective.



Credit: Dale Hailey and Dave Raible

Description: Screen shot from a movie entry. A series of images were taken. They are a progressive cross sectional series though a zebrafish neuromast. The zebrafish expresses the red (shown in cyan) protein in mechanosensory hair cells of the lateral line, and a green protein that labels all membranes in the cells of the fish. You can see the long kinocilia, the stair step ladder of the stereocilia close to the apical region of the hair cells, support cells surrounding the hair cells, and skin and muscle cells in the fish. The zebrafish was alive when this image series was taken using a Zeiss Airyscan SuperResolution microscope.