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#### JSCB **Dispensability of Tubulin Acetylation for** 15-protofilament Microtubule Formation in the Mammalian Cochlea Justine Renauld<sup>1,2</sup> Nicolas Thelen<sup>1\*</sup> Odile Bartholomé<sup>1</sup>

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Cell Structure and Function

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ived for publication, July 2, 2020, accepted, December 24, 2020 and published on meanware terr parametron, and y. 2003, eccepted. Becember 24, 2023 and published anthe, January 26, 2021 The divergencent of beams in namentals explores the hermitical and they increating and a high organized and as capitalism in some as the organ of Core. This exploration excertism terr torpes of earlies, the assoring of all increases of a starting information, and the summaringle approximation galaxies, the assoring of derological ophical-beam excerning the an anthropical gradient galaxies and amentalian colds reported to constite the manual "Special/terrinom increases". The supporting colds are paraflament microstrolical approximation that accord and form day after terring the microstrol of colds in micro. We also then that control works has been detected in the namendal explores one Coldsond begades increases and subservices that accord and form day after terring the control design and control microstrol accords the microstrol and form day after terring the control design and begades increases and the control of the control and the production in increase and the control bead accords the microstrol and the control and the control and the terring terr

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MAPs microtubulca associated proteins Pf proteillament

abundant amount of actin times with equilation when holds a abundant amount of actin filternatis whith the carcoula of th sonsory colls as well as microtubules within the surroundin supporting colls, have been statisfied for decades for their importan-in developing and maintaining the precise morphology of the orga negatived for hearing (Antarek, 2015; Henderane et al., 1994

#### Plain Language Summary

In the organ of Corti, a structure within the mammalian cochlea, hair cells convert sound waves to electrical signals and pillar cells maintain the organ's structure. Pillar cells are the only mammalian cells known to contain microtubules with 15 - rather than 13 protofilaments. Unusual protofilament arrangements have been studied in invertebrates, but little is known about their development in vertebrates. Renauld and co-authors show for the first time that 15-protofilament microtubules appear between the second and fourth day after birth in pillar cells in mice. Contrary to what has been described for invertebrates, the formation of these microtubules is not affected by acetylation of their tubulin subunits.

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FRET Images of a brain transverse section of E14.5 embryo expressing EKAREV. Cell Structure and Function 37: 65-73 (2012). Courtesy of Drs Yuji Kamioka and Michiyuki Matsuda.