

**Sten Harris (1942 - 2008)**  
A pioneer in audiology and paediatric cochlear implantation



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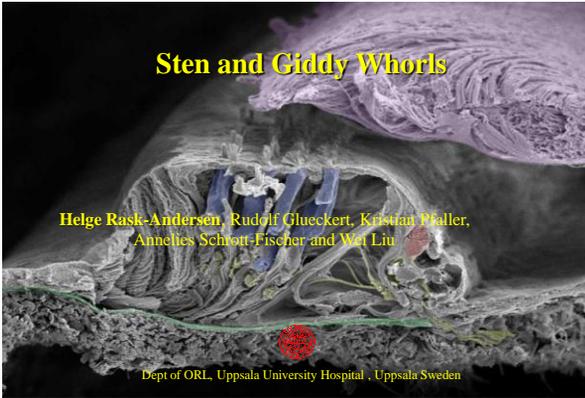
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### Sten and Giddy Whorls

Helge Rask-Andersen, Rudolf Glueckert, Kristina Waller,  
Annelies Schott-Fischer and Wei Liu

Dept of ORL, Uppsala University Hospital, Uppsala Sweden



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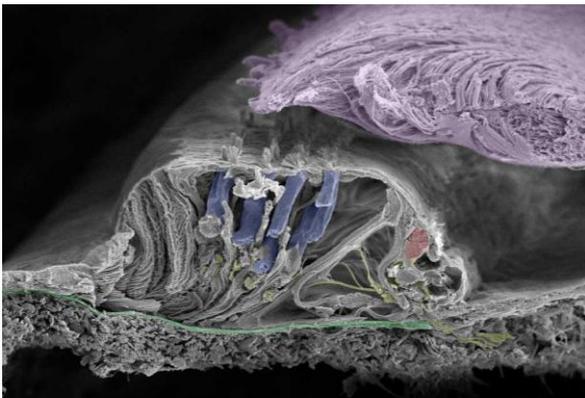
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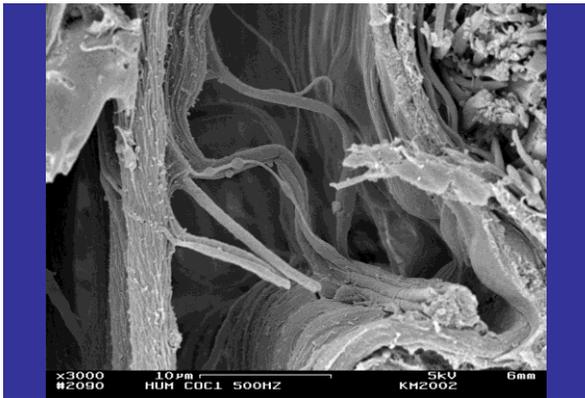
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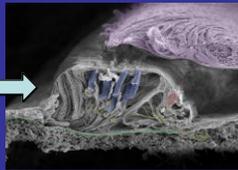
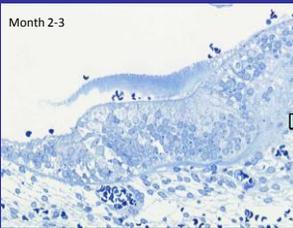
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### A hearing organ is formed— A miracle

Month 2-3



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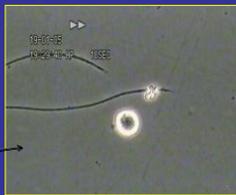
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### Auditory neuron formation



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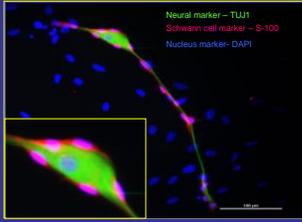
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### Axon meets Schwann



### Axon-aligned Schwann cell growth



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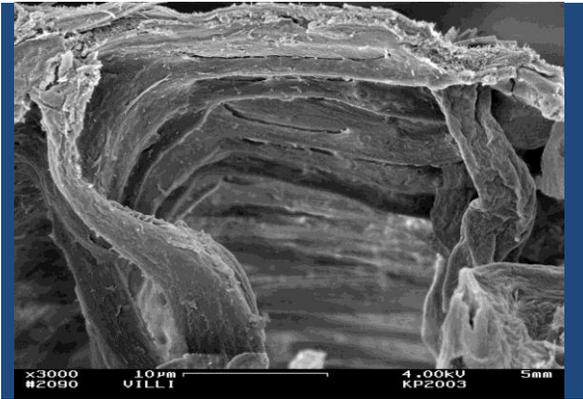
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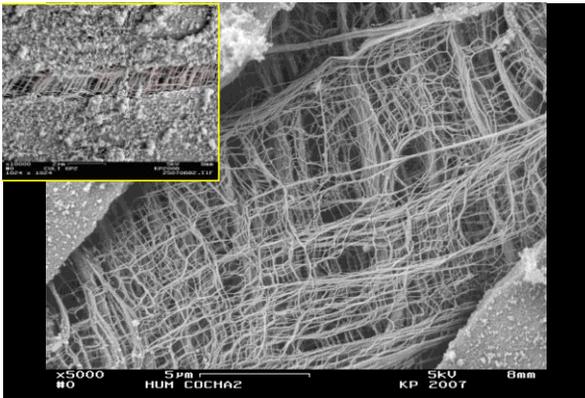
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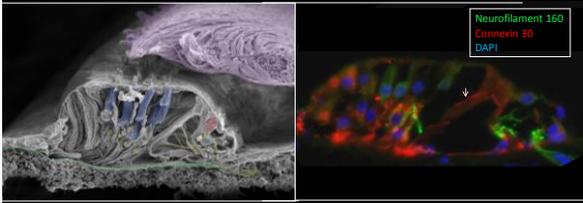
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### Immunohistochemistry of the human cochlea



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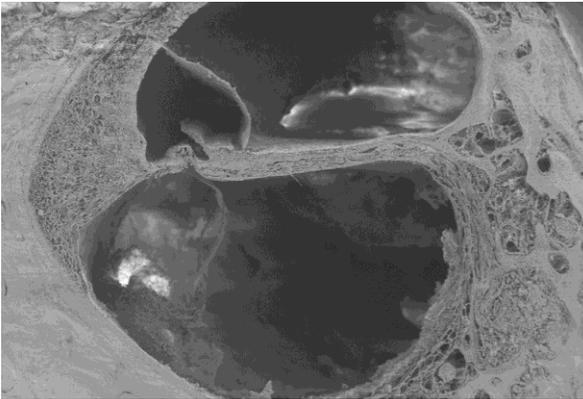
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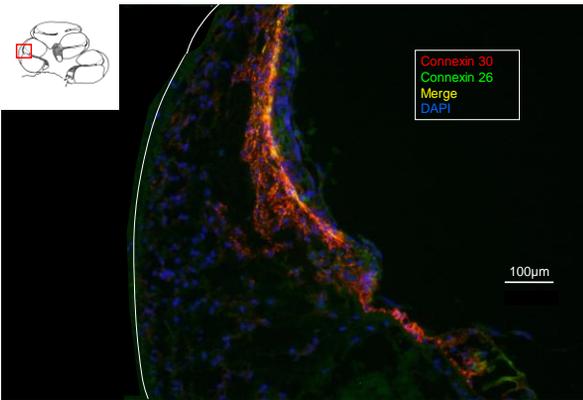
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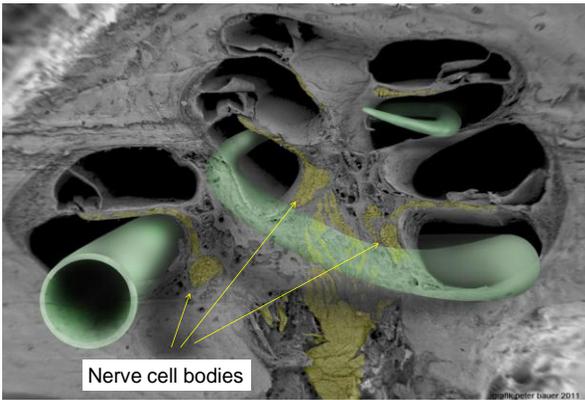
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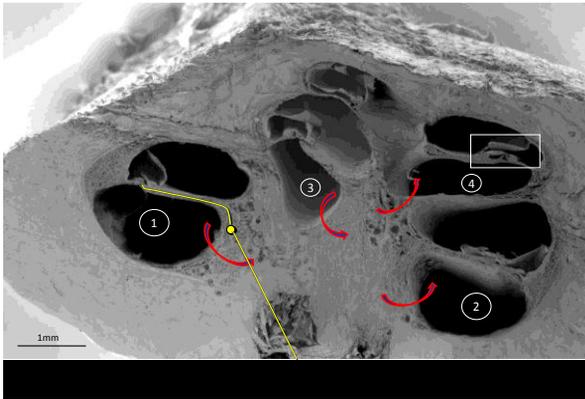
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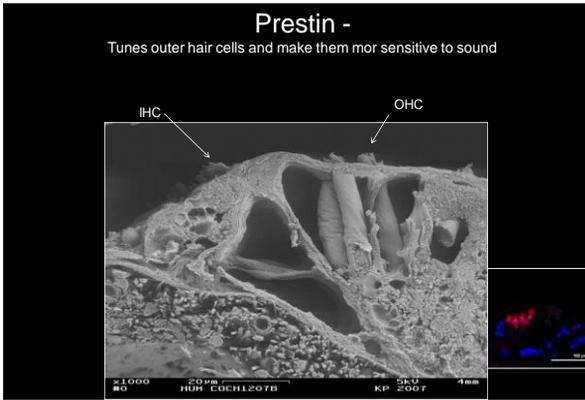
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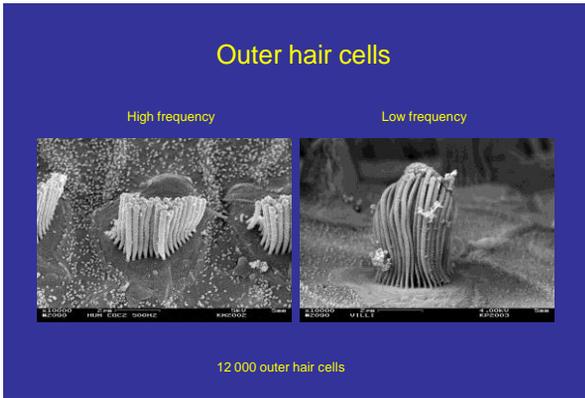
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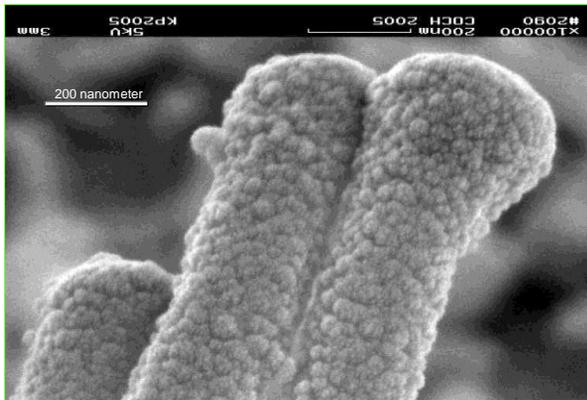
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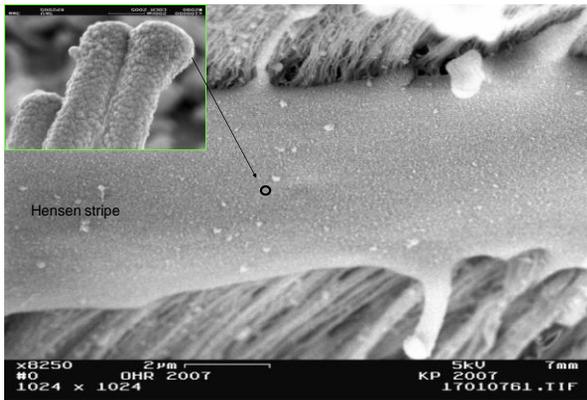
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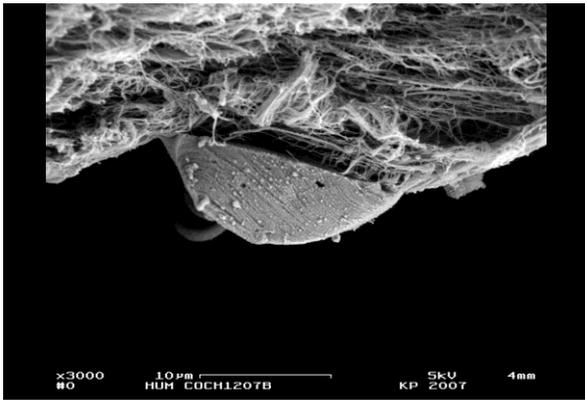
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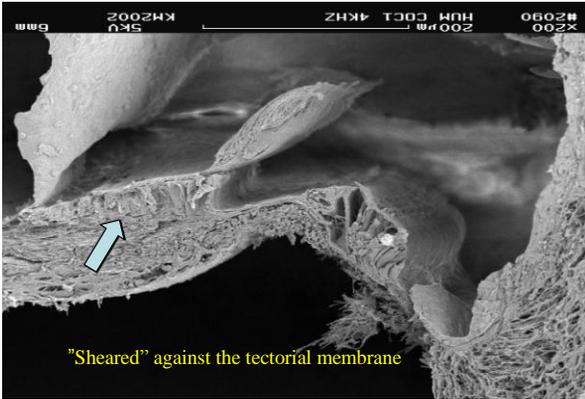
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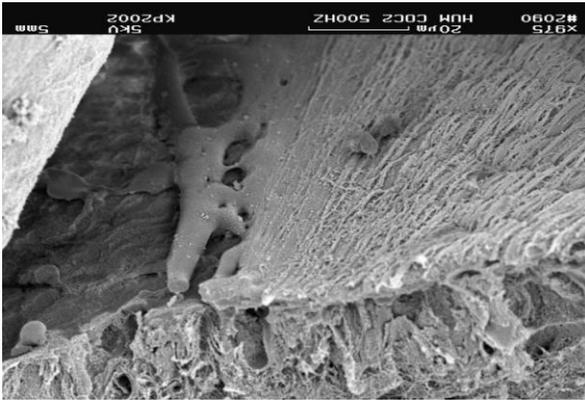
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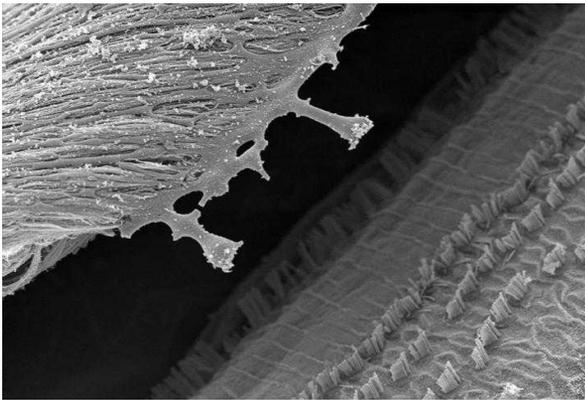
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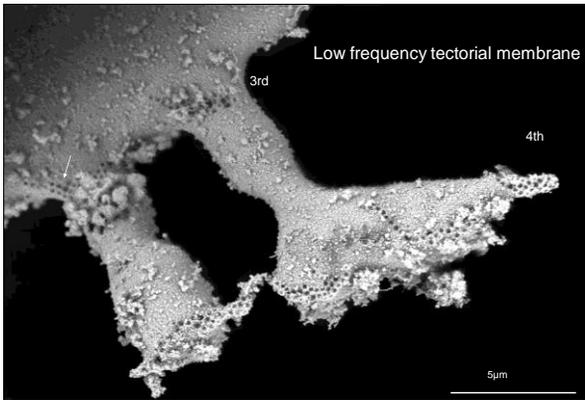
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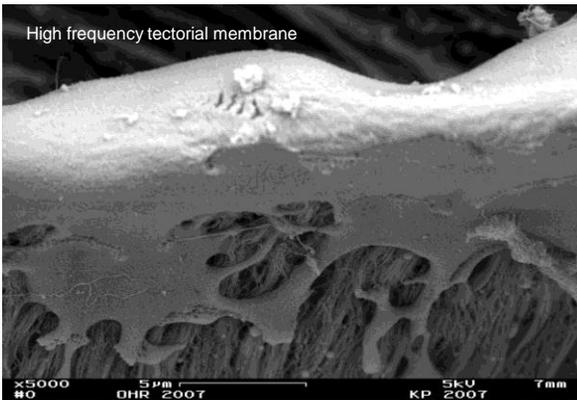
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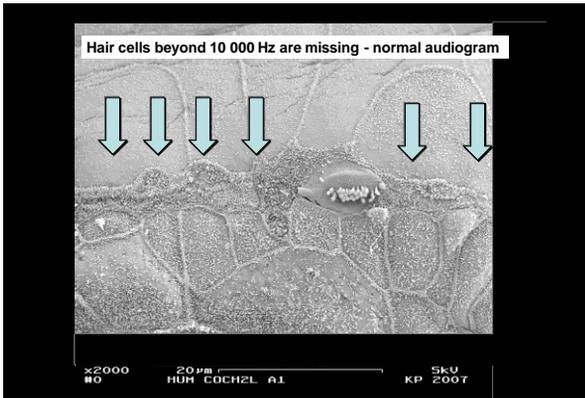
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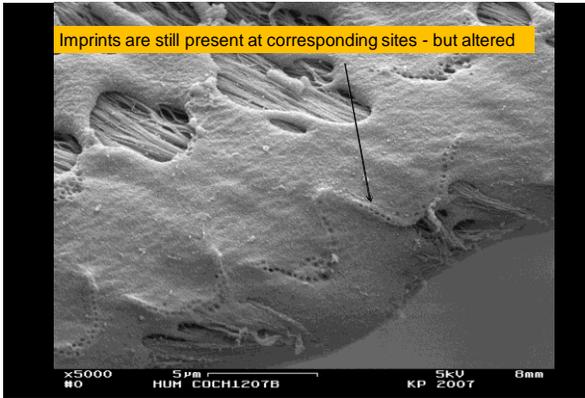
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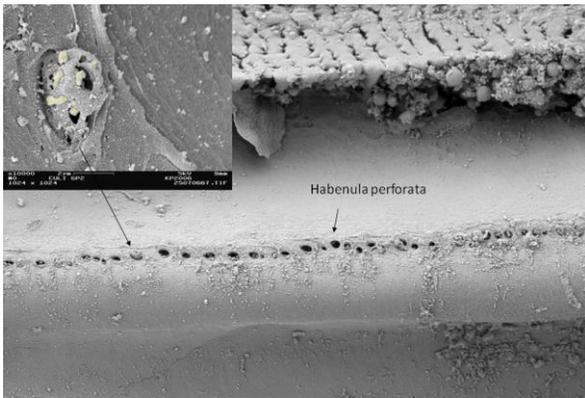
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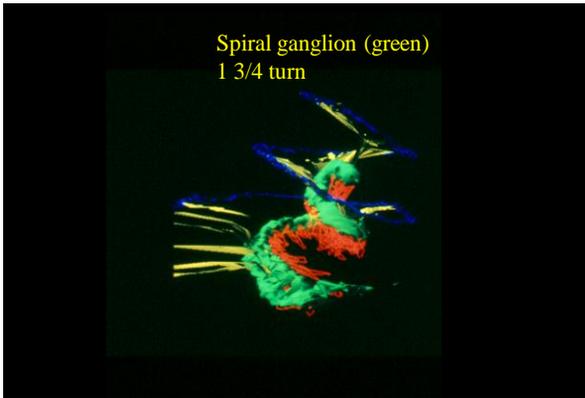
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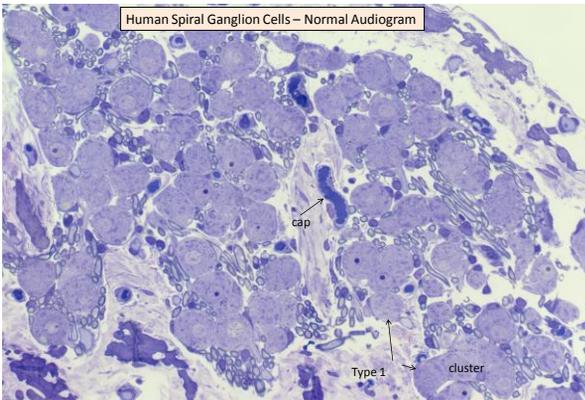
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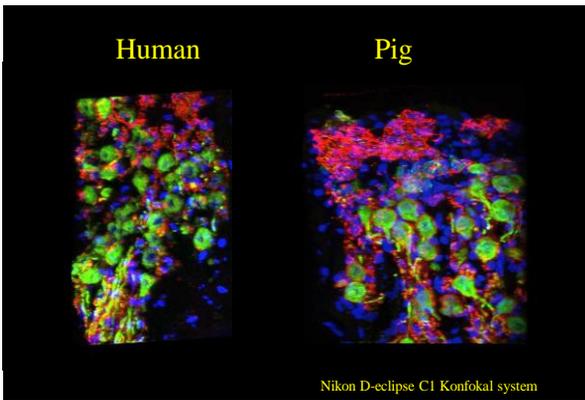
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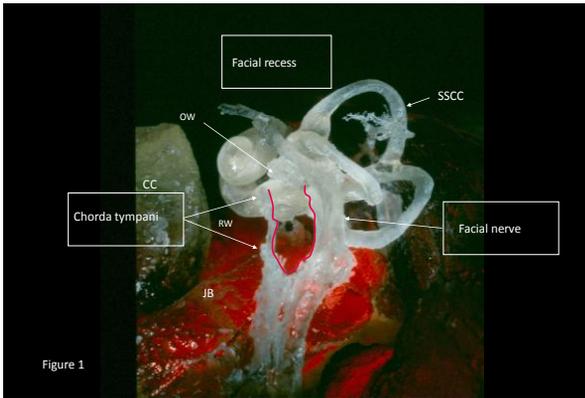
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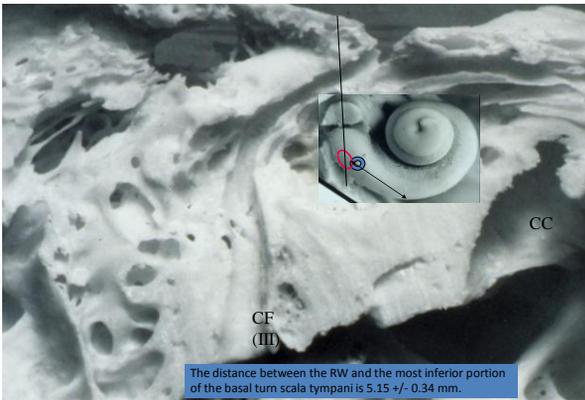
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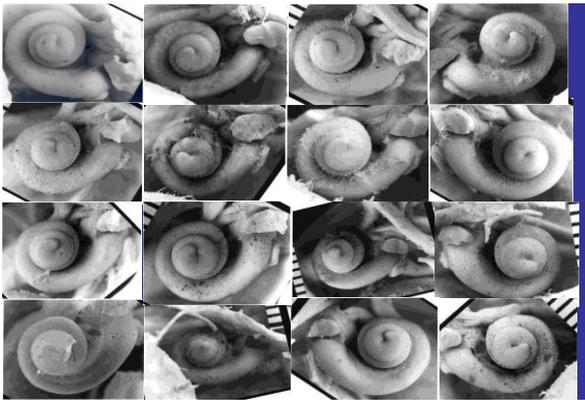
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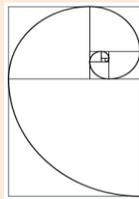
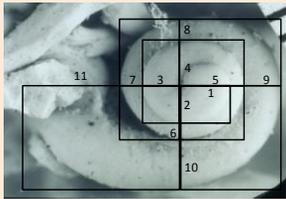
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Human Cochlea is not a Golden Spiral



Fonacci numbers: 1,1,2,3,5,8,13,21,34,55,89,  $a+b/a = a/b = 0.618$

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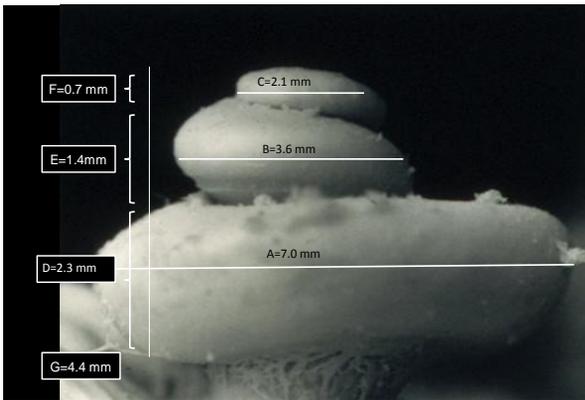
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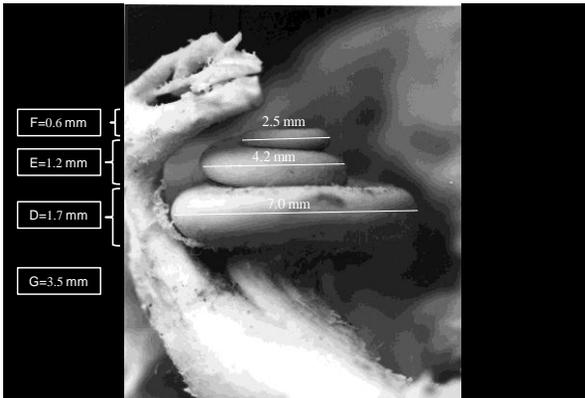
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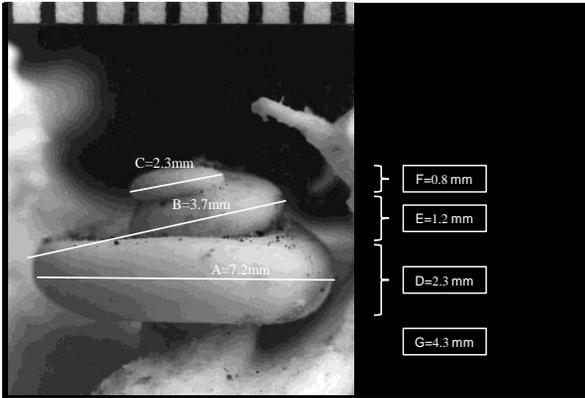
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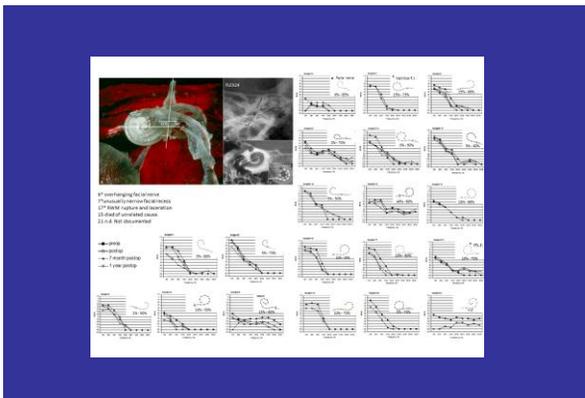
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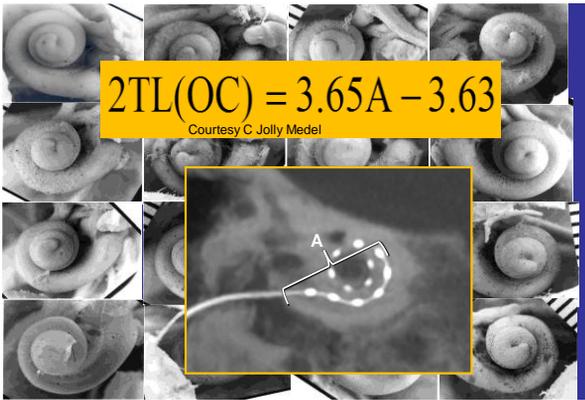
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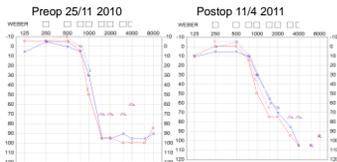
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Op. Right ear EAS

girl 15 år



Skeeter drill Elektrode EAS 24 mm

9 el. 360°



Round window

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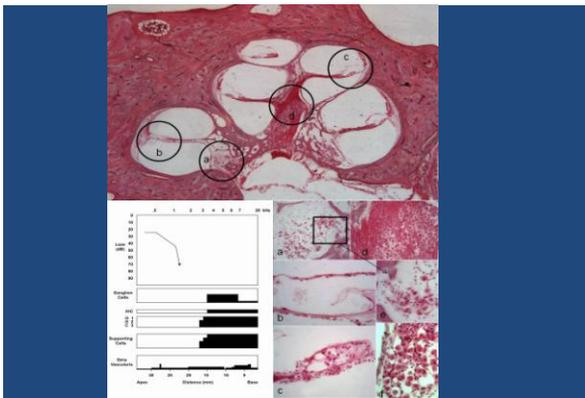
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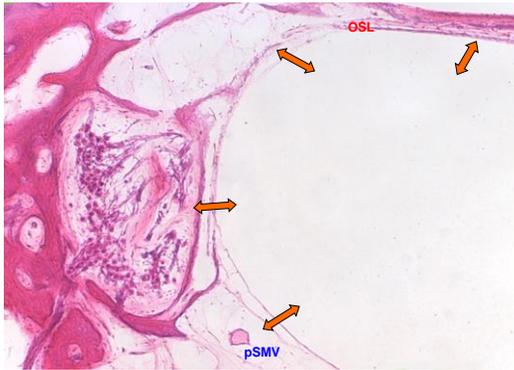
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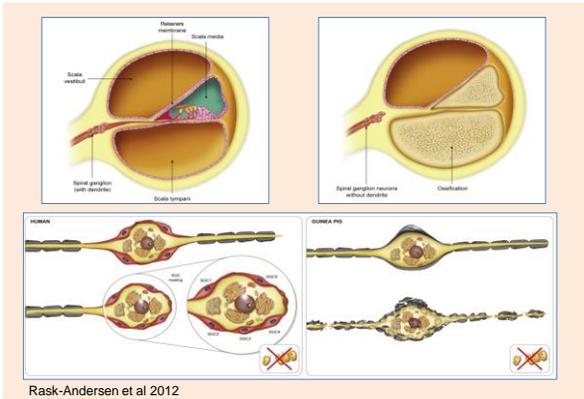
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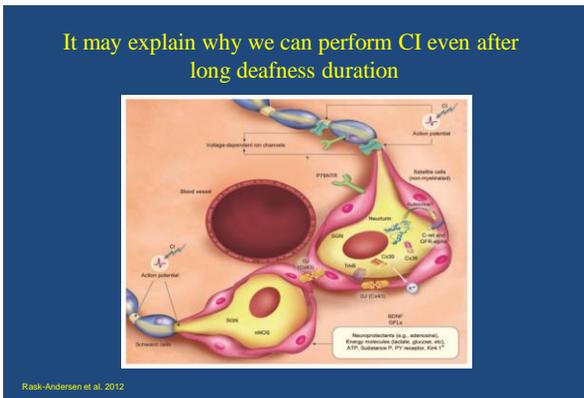
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