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**Free Papers (F866)****ID: 866.2****Inflammatory, invasive and neoplastic features of primary and secondary cholesteatomas: immunohistochemical and histological findings**Presenting Author: **Nadir Yildirim**Nadir Yildirim<sup>1</sup>, Ayşenur Deger<sup>2</sup>, Onur Erdogan<sup>3</sup>, Sinan Aksoy<sup>3</sup><sup>1</sup>Dumlupınar Üniversitesi Medical Faculty,<sup>2</sup>DPU Medical Faculty Department ofPathology, <sup>3</sup>DPU Medical Faculty Department of ORL-HNS

*Learning Objectives:* Objective: Etio-pathogenesis of middle ear cholesteatoma has not been wholly understood. Acquired cholesteatomas are classified into epitympanic/primary (PAK) and mesotympanic/secondary (SAK) subtypes. Herewith, we aimed to investigate the expression of multiple inflammatory, invasive and neoplastic markers in cholesteatomas using immunohistochemistry (IHC) and hematoxyline-eosin (H&E) staining with special reference to the PAK and SAK.

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*Material-Method:* We statistically compared 74 (33 primary, 41 secondary) cholesteatoma matrices and normal (control) skin samples harvested from operated cholesteatoma patients for 10 different markers within, and between the subgroups using IHC and H&E staining. Evaluating pathologist was blinded.

*Results:* Statistically, staining scores for IHC markers of Ki67, collagen type-4, Proliferating cell nuclear antigen (PCNA), keratinocyte growth factor (KGF), fibronectin (FN), interleukin1 $\alpha$  (IL-1 $\alpha$ ), tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ); and staining with H&E for vascularization and lymphocyte numbers were significantly higher in cholesteatomas than control materials of both subgroups except for collagen type-7. However, no difference in significances was found between the subgroups.

*Conclusion:* These results indicate that acquired cholesteatoma is pathologically the same invasive, inflammatory and hyperproliferative disease at different locations, irrespective of their different etio-pathology. Non-expression of collagen type-7 in cholesteatoma might be related to its interfacing location in uninvolved part of the basal membrane.

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**Free Papers (F866)****ID: 866.4****Regional differences of mouse utricle hair cells proliferation and differentiation and establishment of the planar cell polarity**Presenting Author: **Dongdong Ren**

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*Learning Objectives:* Cochlear sensory epithelial cells stop proliferation from the apical turn, while the earliest differentiated cochlear hair cell originates from the basal turn. Up to now, very few studies have been done to characterize the vestibular hair cells proliferation and differentiation. Planar cell polarity (PCP) is a special cell arrangement regularity. Vestibular organ has special cell polarity, with hair cell arrangement closely correlated with the function of vestibule. Whether the PCP establishment has the relationship with vestibular HC differentiation is still unknown. In this study, By collecting the embryonic utricles at the different stages, first we observed the 3D-schematic view of PCP in E18.5 mouse vestibular system, which showed the different PCP in five sensory organs. We choose utricle as an example, we found that the number of Edu/Myosin7a double positive cells peaks at E11.5 in medial extrastriola(MES) and striola zone of utricle. In the lateral extrastriola(LES), the number peaks at E13.5. Besides, at E12.5, P27 and Math1 positive cells were mainly observed in striola. At E13.5, P27 and Math1 positive cells occur in striola and MES. Edu positive cells decrease first in striola and then in MES. Interestingly, the PCP of hair cells stereocilia bundles also established first in the striola and MES region at E13.5. After overexpression of Emx2 in the E13.5 utricle epithelia, PCP of cultured utricle epithelia was disturbed, the orientation of HCs along the supposed LPR(line of polarity reversal) was not opposite, especially the orientation of the hair bundle arranged as a circular. Here we discovered the regional difference in the timing of terminal mitosis of hair cell precursors could account for the difference in their planar cell polarity. PCP of utricle epithelia regional establishment is consistent with HC proliferation and differentiation. Emx2 plays the role of the regional polarity formation in the developing utricle epithelia.

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**Free Papers (F866)****ID: 866.5****Comparative Genomic Hybridization Analysis of Patients with Severe Cisplatin Ototoxicity**Presenting Author: **Yüksel Olgun**