Novinky v biomedicínském výzkumu/ Biomedical Research News

The life of an ear drum: development, defects and repair.

Prof. Abigail S. Tucker

1. LÉKAŘSKÁ FAKULTA
Univerzita Karlova

úterý 23. listopadu 2021 / Tuesday November 23, 2021
Síň Coriových, U Nemocnice 5, Praha 2, prezenčně i ONLINE youtu.be/FiJeZbEqYd8

Prof. Abigail S. Tucker, Centre for Craniofacial & Regenerative Biology King's College London
She moved to the department of Craniofacial Development within the Dental Institute at King's College London in 2002 and was promoted to Professor in 2015. She is currently a holder of a Wellcome Senior Investigator Award. In addition the lab is funded by the Medical Research Council (MRC) with addition grants from Action on Hearing Loss (RNID). Prof Tucker is a Fellow of the Royal Society of Biology, a Fellow of the Anatomical Society and a Fellow of the Higher Education Academy. She is a member of the Editorial board of the Journal of Anatomy, Journal of Dental Research and Developmental Dynamics and sits on grant panels for the Wellcome Trust, Action on Hearing Loss and the Anatomical Society. Prof. Tucker has published over 120 papers in scientific journals. Overall her papers have been cited more than 5700 times (H-index of 39).

13.45 Registration for students

14.00–15.00 The life of an ear drum: development, defects and repair.
Hearing as one of the five human senses is important not only for communication but also for our quality of life and integration into society. The ear is divided into three parts, the external ear (pinna and ear canal), middle ear, with its three little bones, and inner ear, where the hair cells sense vibrations and transfer information to the brain. In between the external and middle ear sits the ear drum, a thin transparent membrane that converts sound waves into vibrations. This membrane is very susceptible to damage caused by ear infections, pressure changes or head trauma.

In this talk we follow the life of an ear drum, as it forms in the embryo, and how it is able to repair itself in adult life. For this we use mouse and human embryos to understand how the three layers of the drum communicate so that they come together to create a thin membrane. Additionally, we use transgenic mouse models to follow the contribution of putative stem cell populations and investigate the impact of manipulation of key signalling pathways during repair in adults. Such knowledge is crucial for understanding the mechanisms underlying ear drum defects and suggesting new avenues for therapeutics in the future.

Contact information:
Doc. MUDr. Jan Živný, Ph.D., e-mail: jan.zivny@lf1.cuni.cz, tel.: 224965865
Prof. MUDr. Stanislav Štípek, e-mail: stanislav.stipek@lf1.cuni.cz, tel.: 224964143

Přednáškové odpoledne je součástí kurzu „**Novinky v biomedicínském výzkumu**", který je jedním z doporučených povinně volitelných kurzů pro Ph.D. studenty oboru **Biochemie a patobiochemie** (Oborová rada 04) a **Fyziologie a patofyziologie člověka** (Oborová rada 05). Účastníci na konci kurzu získají zápočet. Kurz je sestaven z přednášek zahraničních a domácích světově uznávaných odborníků zabývajících se molekulovými mechanismy etiologie, patogeneze a terapie chorob. Vítáni jsou i studenti jiných oborů a zájemci z řad vědeckých pracovníků a lékařů.