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RESEARCH AREA

Present research field: Characterisation of stem cells of dental origin, studies on tissue regeneration-, differentiation capacity and immunomodulatory effects in vitro; studies on the structural and functional differentiation of the salivary gland and its secretion and transport processes. Development of a 3D cellular model of the ameloblast, studies on its structural and functional differentiation, secretion and transport processes. Covid research. previous research field: Functional neuroanatomy of the neuroendocrine hypothalamus, mapping of stress-related CNS networks; neurobiological effects of drug withdrawal, role and effects of histamine in the regulation of feeding (nutrition).

TECHNIQUES AVAILABLE IN THE LAB

Cell culture (primary cell culture), 3D cell culture (membrane, scaffold, organoid) molecular biology methods: real-time PCR, iPSC, in situ hybridisation, northern blot, PCR, gel shift assay, plasmid design, western blot, immunocytochemistry/immunohistochemistry, short-circuit current measurement, experimental design, animal experiments (rat, mice), animal surgery (e.g. adrenalectomy, lesions), isotope labelling techniques.

SELECTED PUBLICATIONS

Földes, A., Reider, H., Varga, A., Nagy, K.S., Perczel-Kovach, K., Kis-Petik, K., DenBesten, P., Ballagi, A., Varga, G. (2021) Culturing and Scaling up Stem Cells of Dental Pulp Origin Using Microcarriers. **Polymers 13**: 3951.

Földes, A., Sang-Ngoen, T.*, Kádár, K., Rácz, R., Zsembery, Á., DenBesten, P., Steward, M.C., Varga, G. (2021) Three-Dimensional Culture of Ameloblast-Originated HAT-7 Cells for Functional Modeling of Defective Tooth Enamel Formation. **Front Pharmacol 12**: 682654.

Földes, A., Kadar, K., Keremi, B., Zsembery, A., Gyires, K., Zádori, Z.S., Varga, G. (2016) Mesenchymal stem cells of dental origin - their potential for anti-inflammatory and regenerative actions in brain and gut damage. **Curr Neuropharmacol 14**: 914-934.

Fülöp, A.K., **Földes, A.***, Buzás, E., Hegyi, K., Miklós, I.H., Romics, L., Kleiber, M., Nagy, A., Falus, A., Kovács, K.J. (2003) Hyperleptinemia, visceral adiposity, and decreased glucose tolerance in mice with a targeted disruption of the histidine decarboxylase gene. **Endocrinology 144**: 4306-4314.

Kovács, K.J., **Földes, A.**, Sawchenko, P.E. (2000) Glucocorticoid negative feedback selectively targets vasopressin transcription in parvocellular neurosecretory neurons. **J Neurosci 20**: 3843-3852.