ILDIKÓ HULIÁK

University of Szeged
Faculty of Science and Informatics

Address: Közép fasor 52., H-6726 Szeged, Hungary

RESEARCH AREA

The tumor microenvironment (TME) has been recently recognized as a critical player in cancer progression. Beside the restructured extracellular matrix (ECM), the tumor stroma consists of numerous mesenchymal cells recruited to the TME. In addition to neoplastic cells, tumor stroma includes activated fibroblasts, various immune cells, endothelial cells, pericytes and adipocytes, which all communicate with each other. Due to these reciprocal interactions modulated by cytokines, chemokines and various growth factors, the stroma ultimately evolves into a tumor-promoting environment. Beside protein factors exosomal non-coding RNAs (miRNA, lncRNA) also facilitate tumor progression, however only a few ncRNAs were examined in relation to stromal cell – tumor cell communication. Our group investigates the involvement and the precise function of ncRNAs in tumor cell – stromal cell crosstalk.

TECHNIQUES AVAILABLE IN THE LAB

Standard mammalian cell culture techniques, transient transfection, in vitro toxicity measurements, cell viability and apoptosis assays, cell migration and invasion assays. Basic biochemical and molecular biological methods: isolation of nucleic acids, reverse transcription, conventional and quantitative PCR, isolation of proteins, western blot, immunocytochemistry, in-gel zymography.

SELECTED PUBLICATIONS

Kovács, F., **Huliák, I.**, Árva, H., Kiricsi, M., Erdős, D., Kocsis, M., Takács, G., Balogh, G.T., Frank É. (2023) Medicinal-chemistry-driven approach to 2-substituated benzoxazole-estradiol chimeras: synthesis, anticancer activity and early ADME profile. **Chem Med Chem** e202300352.

Nagy, F.I., Adamecz, D.I., Baji, Á., Kiricsi, Á., **Huliák, I.**, Rónavári, A., Kónya, Z., Frank, É., Gopisetty, M.K., Kiricsi M. (2023) Semi-synthetic dihydrotestosterone derivates modulate inherent multidrug resistance and sensitize colon cancer cells to chemotherapy. **Pharmaceutics 15:** 584.

Huliák, I., Bodai, L., Czepán, M., Kovács, D., Szabó, A., Tiszlavicz, L., Lázár, G., Rakonczay, Z. Jr, Hegyi, P., Boros, I.M., Kiricsi, M. (2019) Genetic, epigenetic and transcriptional comparison of esophagus tumor-associated and adjacent normal myofibroblasts. **Oncology Rep 41:** 839-852.

Borsos, B.N., **Huliák, I.**, Majoros, H., Újfaludi, Z., Gyenis, Á., Pukler, P., Boros, I.M., Pankotai, T. (2017) Human p53 interacts with the elongating RNAPII complex and is required for the release of actinomycin D induced transcription blockage. **Sci Rep 7:** 40960.

Huliák, I., Sike, Á., Zencir, S., Boros I.M. (2012) The objectivity of reporters: interference between physically unlinked promoters affects reporter gene expression in transient transfection experiments. **DNA Cell Biol 31:** 1580-4.