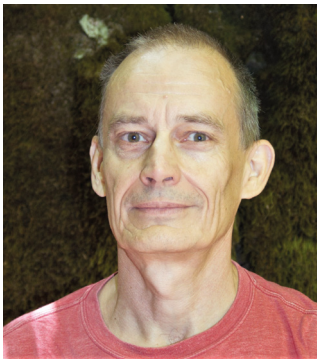
TAMÁS MÉSZÁROS



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RESEARCH AREA

Our research group is dedicated to the selection of aptamers with diagnostic and therapeutic potential, along with the development of methods related to this field. We collaborate closely with partners to explore the practicality of the aptamers we select in a variety of cellular model systems. To fulfill the protein needs for aptamer selection, our research group has fine-tuned an in vitro translation system. This system not only aids in generating the necessary proteins but also facilitates our protein functional tests, with a primary focus on mitogen-activated protein kinases.

TECHNIQUES AVAILABLE IN THE LAB

General molecular biological methods, SELEX, emulsion PCR, qPCR, cell transfection, protein production in cellular systems and with in vitro translation, protein interaction studies with ALPHA, FP and MST methods.

SELECTED PUBLICATIONS

Percze, K., Tolnai, Z.J., Eleveld, M., Ou, L., Du, H., Olia, A.S., Kwong, P.D., de Jonge, M.I., **Mészáros, T.** (2023) Tryptophan-like side chain holding aptamers inhibit respiratory syncytial virus infection of lung epithelial cells. **Sci Rep 13:** 1 Paper: 9403 , 12 p.

Tolnai, Z.J., András, J., Szeitner, Z., Percze, K., Simon, L.F., Gyurcsányi, R.E., **Mészáros, T.** (2020) Spiegelmer-based sandwich assay for cardiac troponin i detection. **Int J Mol Sci 21:** 14 Paper: 4963 , 11 p.

Tolnai, Z., Harkai, Á., Szeitner, Z., Scholz, É.N., Percze, K., Gyurkovics, A., **Mészáros, T.** (2019) A simple modification increases specificity and efficiency of asymmetric PCR. **Anal Chim Acta 1047** pp. 225-230. , 6 p.

Percze, K., Szakacs, Z., Scholz, E., Andras, J., Szeitner, Z ., Kieboom, CH., Ferwerda, G., Jonge, M.I., Gyurcsanyi, R.E., **Meszaros, T.** (2017) Aptamers for respiratory syncytial virus detection. **Sci Rep 7** Paper: 42794 , 11 p.

Nagy, S.K., Darula, Z., Kallai, B.M., Bogre, L., Banhegyi, G., Medzihradszky, K.F., Horvath, G., Meszaros, T. (2015) Activation of AtMPK9 through autophosphorylation that makes it independent of the canonical MAPK cascades. **Biochem J 467:** 1 pp. 167-175., 9 p.