

ZOLTÁN BENYÓ



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RESEARCH AREA

Physiology and pathophysiology of the cardiovascular system.

Regulation of the cerebral blood flow.

Signaling pathways of the endothelium and smooth muscle.

Physiological and pathophysiological functions of lipid mediators in the cardiovascular system.

Tumor angiogenesis and metastasis formation.

Physiological control and dysfunctions of the urinary bladder.

TECHNIQUES AVAILABLE IN THE LAB

- Wire and pressure myography.
- Langendorff heart system.
- In vivo measurement of cardiovascular parameters and perfusion of the brain.
- Telemetric blood pressure recording.
- Cystometry.
- Protein- and mRNA-based gene expression analysis.

SELECTED PUBLICATIONS

Major, E., Lin, K-H., Lee, SC., Káldi, K., Györffy, B., Tigyi, G.J., **Benyó, Z.** (2025) LPA suppresses HLA-DR expression in human melanoma cells: a potential immune escape mechanism involving LPAR1 and DR6-mediated release of IL-10. **Acta Pharmacol Sin** **46**: 222–230.

Balla, H., Borsodi, K., Őrsy, P., Horváth, B., Molnár, P.J., Lénárt, Á., Kosztelnik, M., Ruisanchez, É., Wess, J., Offermanns, S., Nyirády, P., **Benyó, Z.** (2023) Intracellular signaling pathways of muscarinic acetylcholine receptor-mediated detrusor muscle contractions. **Am J Physiol Renal Physiol** **325**: F618-F628.

Borsodi, K., Balla, H., Molnár, P.J., Lénárt, Á., Kenessey, I., Horváth, A., Keszthelyi, A., Romics, M., Majoros, A., Nyirády, P., Offermanns, S., **Benyó, Z.** (2022) Signaling pathways mediating bradykinin-induced contraction in murine and human detrusor muscle. **Front Med** **8**: 745638.

Thomas, M.J., Major, E., Benedek, A., Horváth, I., Máthé, D., Bergmann, R., Szász, A.M., Krenács, T., **Benyó, Z.** (2020) Suppression of metastatic melanoma growth in lung by modulated electro-hyperthermia monitored by a minimally invasive heat stress testing approach in mice. **Cancers** **12**: 3872.

Dancs, P.T., Ruisanchez, E., Balogh, A., Panta, C.R., Miklós, Z., Nüsing, R.M., Aoki, J., Chun, J., Offermanns, S., Tigyi, G., **Benyó, Z.** (2017) LPA1 receptor-mediated thromboxane A2 release is responsible for lysophosphatidic acid-induced vascular smooth muscle contraction. **FASEB Journal** **31**: 1547-1555.