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RESEARCH AREA

Oxidative stress is characterized by the imbalance between the release of oxygen and nitrogen-derived free radicals and oxidants and the body's antioxidant capacity. Accumulating free radicals and oxidants can damage cellular components, which play important role in the development and maintenance of several diseases. Our group examines these processes and their predictive value in physiological and pathophysiological conditions; in pregnancy and its complications, in inflammatory and in cardiovascular diseases.

TECHNIQUES AVAILABLE IN THE LAB

Histological techniques, immunohistochemistry, ELISA, Western blot, PCR, flow cytometry.

SELECTED PUBLICATIONS

Lajtai, K., Tarszabó, R., Bányai, B., Péterffy, B., Gerszi, D., Ruisánchez, É., Sziva, R. E., Korsós-Novák, Á., Benkő, R., Hadjadj, L., **Horváth, E. M.** et al. (2021) Effect of Vitamin D Status on Vascular Function of the Aorta in a Rat Model PCOS. *Oxid Med Cell Longev* 2021: 8865979.

Lajtai, K., Nagy, Cs.T., Tarszabó, R., Benkő, R., Hadjadj, L., Sziva, R.E., Gerszi, D., Bányai, B., Ferdinand, P. Nádas, Gy.L., **Horváth, E.M.** et al. (2019) Effects of Vitamin D Deficiency on Proliferation and Autophagy of Ovarian and Liver Tissues in a Rat Model of Polycystic Ovary Syndrome. *Biomolecules* 9: 471.

Horvath, E.M., Magenheim, R., Beres, N.J., Benko, R., Pek, T., Tabak, A.G., Szabo, C. (2018) Oxidative-Nitrative Stress and Poly (ADP-Ribose) Polymerase Activation 3 Years after Pregnancy. *Oxid Med Cell Longev* 2018: 1743253.

Barany, T., Simon, A., Szabo, G., Benko, R., Mezei, Zs., Molnar, L., Becker, D., Merkely, B., Zima, E., **Horvath, E.M.** (2017) Oxidative Stress-Related Parthanatos of Circulating Mononuclear Leukocytes in Heart Failure. *Oxid Med Cell Longev* 2017: 1249614.

Horváth, E.M., Magenheim, R., Kugler, E., Vácz, G., Szigethy, A., Lévárdi, F., Kollai, M., Szabo, C., Lacza, Z. (2009) Nitritative stress and poly (ADP-ribose) polymerase activation in healthy and gestational diabetic pregnancies. *Diabetologia* 52: 1935-1943.