



2022

ПАВЛОДАР, КАЗАХСТАН

Международная конференция

**ИННОВАЦИОННОЕ РАЗВИТИЕ
НАУКИ И ОБРАЗОВАНИЯ
2022**

Сборник научных трудов
Павлодар, Республика Казахстан

and translation. HIF-1 β contains only one such analogous region, which is not needed for the complex function of HIF-1. Recent reports indicate that HIF-1 β is identical to a previously discovered vertebrate protein, the aryl hydrocarbon receptor nuclear translocator (ARNT).

HIF-1 is the main regulator of oxygen homeostasis in cells. As a transcription factor, it influences and regulates the expression of dozens of genes involved in maintaining homeostasis when oxygen concentration changes. One important function of HIF-1 is to promote angiogenesis; HIF-1 directs the migration of mature endothelial cells into a hypoxic environment. This is done through HIF-1 regulation of vascular endothelial growth factor (VEGF) transcription. VEGF is the main regulator of angiogenesis, which promotes the migration of endothelial cells towards the hypoxic region. During hypoxia, HIF-1 binds the regulatory region of the VEGF gene, inducing its transcription and initiating its expression. These endothelial cells eventually help form new blood vessels, supplying the area with oxygenated blood.

Conclusions. Summarizing the above, hypoxia-inducible factor 1 (HIF-1 α) is an important pathogenetic link in the development of oxygen deficiency, and its deficiency at an early stage can serve as an important diagnostic biomarker of toxic hepatitis, including that caused by heliothrin, since it belongs to pyrrolizidine compounds by chemical composition. alkaloids, and as you know, its precursor is cadaverdin, which is oxidized to gamma-aminobutyric aldehyde with the formation of non-innec alcohols with monobasic non-cinic acids.

Bibliography:

1. Chen EY, Fujinaga M, Giaccia AJ. Hypoxic microenvironment within an embryo induces apoptosis and is essential for proper morphological development. *Teratology*. 1999; 60:215–225.
2. Cramer T, Yamanishi Y, Clausen BE, et al. HIF-1 α is essential for myeloid cell-mediated inflammation. *Cell*. 2003; 112:645–657.
3. Date T, Mochizuki S, Belanger AJ, et al. Expression of constitutively stable hybrid hypoxia-inducible factor-1 α protects cultured rat cardiomyocytes against simulated ischemia-reperfusion injury. *Am J Physiol*. 2005;288:C314–C320.
4. Fox SB, Braganca J, Turley H, et al. CITED4 inhibits hypoxia-activated transcription in Cancer Cells, and its cytoplasmic location in breast cancer is associated with elevated expression of tumor cell hypoxia-inducible factor 1 α *Cancer Res*. 2004;64:6075–6081.
5. Genbacev O, Zhou Y, Ludlow JW, Fisher SJ. Regulation of human placental development by oxygen tension. *Science*. 1997; 277:1669–1672.

