

КОНФЛИКТ ИНТЕРЕСОВ

Авторы заявляют об отсутствии конфликта интересов.

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Metabolism and Receptor Mechanisms of Niacin Action

S. E. Boronovskiy^a, V. S. Kopylova^{a, *}, and Y. R. Nartsissov^{a, b}

^a*Institute of Cytochemistry and Molecular Pharmacology, Moscow, 115404 Russia*

^b*Biomedical Research Group, BiDiPharma GmbH, Siek, 22962 Germany*

*e-mail: kopilova.veronika@yandex.ru

The article discusses the metabolism of niacin, also known as vitamin B3 or PP, and the mechanisms of its receptor-induced functions in the human body. Niacin exists as a several molecular compounds that act as the nicotinamide coenzymes precursors. These coenzymes being electron donors or acceptors in redox reactions catalyzed by various enzymes play a crucial role in metabolism. Maintenance of the intracellular niacin pool is vital not only for redox metabolism, but also for the NAD-dependent pathways functioning. At the same time, pathophysiological situations and changes in enzyme activity can affect the necessity for various niacin forms. In addition to indirect effects via nicotinamide coenzymes, it also has a number of direct effects, including anti-lipolytic, vasodilatory, and neuroprotective functions, the exact mechanism of which has not been studied fully up to date. Overall, niacin plays a vital role in maintaining the efficient cell functioning, and further study of its influence on various physiological aspects, including the gut microbiome and epigenetic regulation, could lead to new discoveries and treatments for various diseases.

Keywords: vitamin B3, niacin, metabolism, NAD