

Abstract

Methoxyphenyl Imidazolines as Potential Activators of p53[†]

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† Presented at the 8th International Electronic Conference on Medicinal Chemistry, 1–30 November 2022; Available online: <https://ecmc2022.sciforum.net/>.

Abstract: The use of p53-MDM2/X inhibitors is a prospective strategy in anti-cancer therapy for tumors with wild type p53 protein. In our study, new low-molecular-weight inhibitors of the p53-mdm2 interaction have been proposed. The two-step synthesis of the imidazoline core with subsequent modifications for the nitrogen atom was carried out. New molecules caused the accumulation of p53 protein levels more than seven times than in comparison with the control. The accumulation of proapoptotic proteins such as p21 and PUMA has also been investigated, and the mechanism of cell death has been shown.

Keywords: p53; nutlin; mdm2; mdmx; imidazoline

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/ECMC2022-13494/s1>.

Author Contributions: Investigation D.R.B., N.V.P.; Conceptualization N.A.L., G.S.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Russian Science Foundation, grant number 22-23-20141.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.



Citation: Bazanov, D.R.; Pervushin, N.V.; Lozinskaya, N.A.; Kopeina, G.S. Methoxyphenyl Imidazolines as Potential Activators of p53. *Med. Sci. Forum* **2022**, *14*, 100. <https://doi.org/10.3390/ECMC2022-13494>

Academic Editor: Amélia
Pilar Rauter

Published: 7 November 2022

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