NOVEL PLANT GROWTH REGULATORS FOR MEDICAL CHEMISTRY

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Phytohormones have a wide range of biological activity both in plants and in animals. For example, there is the anti-aging and anti-cancer activity of cytokinins, which have already found application in cosmetology [1].

We have synthesized a large number of synthetic derivatives of aryl-substituted urea with cytokinin-like activity which are interesting and promising easily synthesized plant growth regulators, suitable for use in agriculture [1–3].

A number of the obtained substances were tested for anti-cancer and antioxidant activity on animal cells. Among them, pyridyl substituted urea is interesting as new anti-cancer substances, and ethylene-bis-urea derivatives are attracting as protectors against oxidative stress and hypoglycemia.

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References

- [1] M. Oshchepkov, A. Kalistratova, E. Savelieva et.al., Russian Chemical Reviews. 2020, 89-8, 787-810.
- [2] A. Kalistratova, L. Kovalenko, M. et.al., Bulgarian Journal of Agricultural Science. 2019, 26-4, 772-776.
- [3] A. Kalistratova, L. Kovalenko, M. Oshchepkov et.al., Journal of Mendeleev Communication. 2020, 30-2, 153-156.