

## The chemical structure of steviol-glycosides as base of biological activity

Ogorodnova U., Nevmerzhitskaya J., Strobykina A., Timofeeva O.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. This article is dedicated to study of the peculiarities of influence of glycosides extracted from *Stevia Rebaudiana* plant, namely stevioside, steviolbioside, rebaudioside A and C as well as of commercial mixture of steviol-glycosides "Sweta" on growth as well as on physical and biochemical processes of wheat plants. Compounds with glycoside nature often demonstrate various types of biological activity. The chemical structure of stevia glycosides is similar to the well-known plant growth and development regulating chemicals, i.e. gibberellins and alongside with that these glycosides induce the same physiological reactions in plants as gibberellins do. This fact puts glycosides within the zone of intense interest from the point of view of phytophysiological investigations. Since the difference between the mentioned compounds lies in composition and structure of a carbohydrate branch of a glycoside molecule study of correlation between the structure and the biological influence of such molecules on plants is the question of major priority. The article represents data indicative of direct relation between the chemical structure of a carbohydrate branch of a glycoside molecule and the impact on *Triticumaestivum* plants induced by it. There was demonstrated ambiguous nature of the studied compounds impact on the physiological and biochemical state of wheat plants.

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### Keywords

Plant growth and development regulating chemicals, Rebaudioside, Steviol-glycosides, Stevioside, *Triticumaestivum*