

7th Global Experts Meeting on

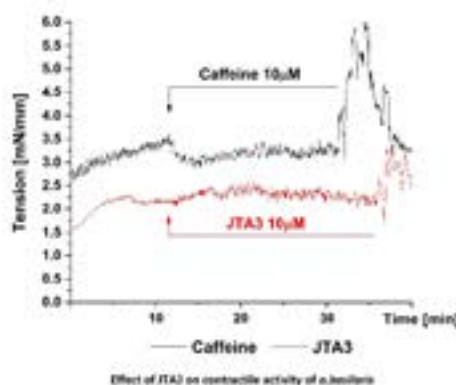
NEUROPHARMACOLOGY

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***In vitro* study of newly synthesized derivatives of caffeine-thioglycolic acid-effects on contractile activity of small brain vessels**

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Caffeine, the most widely consumed psychoactive substance in the world is contained not only in coffee but also tea, chocolate and a variety of drugs, including appetite suppressants, diuretics, analgesics and decongestants. Other substances with similar structure to that of the alkaloids present in the coffee, are an important component for the development of a potential treatment of Alzheimer's disease, asthma, cancer, diabetes and Parkinson's disease. We set to evaluate some newly synthesized derivatives of caffeine thioglycolic acid and their influence on contractility of brain vessels (*a. basilaris*). Two of the compounds, JTA3 and JTA5, derivatives of caffeine-8-thioglycolic acid, were investigated for possible vasoactive effects on brain vessels (*a. basilaris*). Arterial segments with length of 1.8-2 mm were mounted and tested on dual wire myograph (model 410A, JP Trading, Denmark). Intact basilar artery segments, JTA3 and JTA5 showed opposite physiological effects of caffeine-an increase of vascular tone. These effects may occur due to the different structure of the molecules of these caffeine derivatives and their different affinity to adenosine receptor subtypes (A1 or A2).



Biography

Martin Vasilev is a final year Pharmacy Student in Medical University of Sofia. Having an interest in wide range of health areas, he has a Clinical Pharmacy specialization, a practice in Hospital Pharmacy and a number of certificates from scientific symposiums, practical trainings and seminars. During his education, he gained experience in creating and introducing a variety of scientific oral presentations in different subjects. With his last work in the area of Neuropharmacology, he developed his skills in such an attractive and advanced method like wire myography. Working together with the Bulgarian Academy of Science, he presents one significant research which expands his growing interest in the Neuroscience. Exploring this field, he hopes to continue working on other scientific projects.

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