



INTERNATIONAL CONFERENCE SMART BIO

3rd International Conference SmartBio  
2-4 May, 2019  
Kaunas

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INTERNATIONAL CONFERENCE SMART BIO

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# ABSTRACT BOOK

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# Activity Of Creatine Phosphokinase Of Blood Blades Of Different Stress Sensitivity

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## Abstract

The enzyme creatine phosphokinase (CPK) (EC 2.7.3.2.) belongs to the phosphotransferases enzyme group phosphotransferases, carriers of the phosphate groups. The level of the enzyme indicates the sensitivity to the action of stressors. The CPK test allows group comparisons to be carried out and identify the predisposition of animals to stress without negative health effects [1]. For conducting research from pure-breeding sows of large white breed, the sows at the age of 30-35 days were taken to be used for repairing the herd. Stress sensitivity was determined using a halothane test. After determination of stress sensitivity the selected piglets were kept in nests. After weaning, the piglets were kept in a separate group. The movement of piglets occurred in accordance with existing industrial technology [2]. The activity of serum creatine kinase was determined using a standard set of chemical reagents manufactured by LAHEMA. The activity of creatine phosphokinase in the blood was determined at the age of 2, 4, 6, 8 months. And also before and after the effect of technological stress (animals were not fed during the day). As a result of the research, it was found that at the age of 2 and 4 months, stress-sensitive animals had significantly higher enzyme activity, respectively, at 66.7 and 45.2% at  $P > 0.999$ ,  $P > 0.9$ . In the 6th and 8th months no significant difference in the activity of the enzyme has been established. It should be noted that the level of activity of the enzyme decreases with age from (2 months)  $33.67 \pm 2.51$  (stress-resistant)  $56.14 \pm 3.9$  (stress-sensitive) to 6.45 (8 months). At 8 months of age, pigs with different degrees of stress had the same level of activity of the enzyme. It was established that after the effect of technological stress in both experimental groups, the activity of creatine phosphokinase increased significantly by 54.6% and 84.5%, respectively. In this case, the activity of the enzyme in stress-sensitive animals was significantly higher by 29.9% ( $P > 0.999$ ). The level of CPK in the blood increases due to abnormal muscular reactions during stressful stresses [3].

**Keywords:** creatine phosphokinase, stress-resistant, stress-sensitive, halothane test, piglets

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