

Discussion results: Instrumental food-procuring movements are accompanied by a validated HR decrease occurring at the moment of food ball capturing with further restoration to the original level in some seconds. The findings give evidence of direct correlation between training level and the HR decrease.

Conclusion: Combined response of the autonomic nervous and motion control systems suggests that reactions revealed are caused by a CNS joint center. Greater levels of HR decrease evolved in the process of skill improvement may contribute to more successful capturing of food balls.

Keywords: heart rate, rat, food-procuring movements

34. GENETIC CONTROL OF HYPERTENSION

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Introduction: Hypertension is a multifactorial, complex and polygenic human disease that causes significant morbidity and mortality worldwide. The World Health Organization suggests that the number of people affected by hypertension will rise to 1.5 billion in 2020, or 29% of the total population by 2025. In adults there is a continuous, incremental risk of cardiovascular disease, stroke and renal disease associated with high blood pressure. Identifying risk factors for this disease is one of the main directions of research initiated by World and European scientific community. Among these, genetic factors have a decisive impact, role of genetic factors ranging from 31% to 68%. Monogenic and polygenic forms of hypertension have been described. Rare monogenic blood pressure syndromes are characterized by a major gene defect, affecting a single pathway ordinarily involving renal electrolyte balance. Thus, there is a pressing need for a greater understanding of the pathophysiological and genetic underpinnings of blood pressure regulation and dysregulation.

Purpose and Objectives: characterization of the genetic factors involved in the production of high blood pressure; classification of the etiopathogenetic factors that predispose to the occurrence of hypertension; characterization of genes involved in the control of hypertension; study the distribution of the polymorphisms II, DD, ID of the ACE gene and GG, TT, GT of the NOS gene in people affected by essential hypertension and non-affected from the population of Republic of Moldova.

Materials and methods: The study has included 30 persons, 15 affected by essential hypertension and 15 non-affected. Methods which have been used are DNA isolation, PCR and electrophoresis of DNA fragments.

Results: The results of the analysis of the ACE genotype frequency in the study group showed an increased frequency of 55% for ID genotype in compared to 25% for II and 20% for DD genotypes. The results of the analysis of the NOS genotype frequency in the study group showed an increased frequency of 72% for GT genotype in healthy individuals, the homozygous genotypes are seen with greater frequency in affected individuals.

Conclusion: There is an association between ACE and NOS gene polymorphisms with hypertension prevalence. DD genotype of ACE gene and TT genotype of NOS gene may be associated with increased risk of hypertension.

Keywords: genetic control, hypertension, ACE, NOS

35. SUICIDE CELLS IN NORMAL AND PATHOLOGICAL

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Introduction: The cells of a multicellular organism are members of a highly organized community. The number of cells in this community is highly regulated — not simply by controlling the rate of cell division, but also by controlling the rate of cell death. If cells are no longer needed, they commit suicide by