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# Morphological Characteristics of Adaptation of the Lung Ground Spinal

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**Abstract:** This article discusses the morphological changes in the structures of the lungs when adapting t extreme factors and environmental conditions.

One of the most pressing problems of biology is the elucidation of the mechanisms of adaptation of the human b animals to changing environmental conditions [1-7].

This problem can be viewed in two aspects: firstly, in terms of the emergence of adaptive rearrangements in th when exposed to environmental factors as a manifestation of the body's plasticity in ontogenesis, secondly, in t the emergence of adaptation, as genetically and phenotypically fixed adaptation of living organisms to the co environment, which arose in the course of evolution [8-13].

The key point here is the identification and comparison of subtle mechanisms of similar (to the same enviro factor) adaptation that arise in ontogenesis and formed in phylogenesis [14-21].

**Keywords:** Morphological, characteristics of adaptation, lungs, ground, spinal.

## INTRODUCTION

This paper presents the results of a study at the cellular level of similar adaptations of the respiratory part of the lungs of terrestrial vertebrates in ontogeny and phylogenesis. For this purpose, an electron microscopic study of the respiratory part of the rats' lungs was carried out during various experiments, in particular under the influence of extreme natural (high and low temperatures, hypoxia, physical activity) and anthropogenic (tobacco smoke) factors. At the same time, to clarify the ultrastructural basis of the evolutionary adaptation of the lungs, data from electron microscopic studies from representatives of some species of terrestrial vertebrates (amphibians, reptiles, mammals) from steppe and mountain biotopes are examined with the aim of a central organ of external gas exchange to various biotopes during evolution as in animals of different species, and the same species.

Such studies are very important both for theoretical biology (evolutionary theory, ecological, comparative morphology and physiology), and for medicine [22-25].

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## DISCUSSION

Ultrastructural analysis of the respir the lungs when exposed to tobacco s high temperature, hypoxia, physical act number of submicroscopic adaptive r form of pronounced functional stres structures. A characteristic feature of reactions was their non-specificity. Ada In caudate amphibians (common triton steppe, adaptive reactions manifested enhanced secretion of surfactant, mucous cells, "mixed" cells with ultrastr pneumocytes of type II and mucou apparently preventing fluid loss from surface of the lungs. On the apical "mixed" type cells, many microvilli w thickness of the aerohematic membra significant. Increased secretion of mu cells of the "mixed" type was also scanning microscopy data.

In caudal amphibians (frog-creste mountain biotope, the number of gla cells decreased, secretion of surfactant aerohematic membrane system thinne of the respiratory surface increas microscopy data showed an increase in surface area, which was documented