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BALNEO-SPELEOTHERAPY PERSPECTIVES

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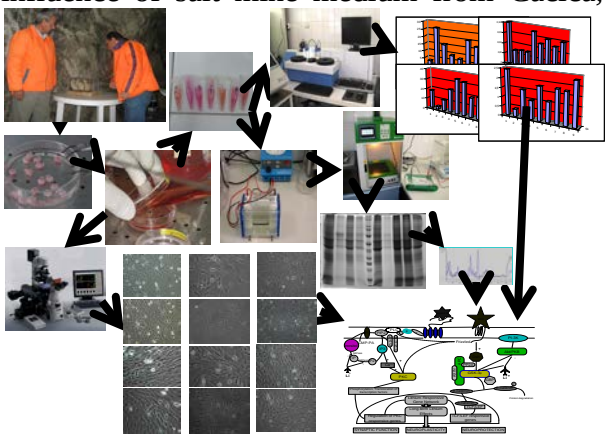
Abstract

Introduction. Speleotherapy – a special kind of climatotherapy, uses the certain conditions of caves and salt mines to cure several diseases, especially respiratory and skin diseases. The cave air is very low on dust, which could cause allergic reactions or asthmatic attacks. This fact reduces any kind of irritation; the symptoms of the diseases are reduced or eliminated completely, while the patient is in the cave. But that does not explain how it should have a longer lasting effect. Curing asthma involves spending 2-3 hours a day underground in subterranean caves or salt mines over a 1-2 month period. An old study describes a speleotherapy course, which was 4 hours a day for 6-8 weeks, with 100 COPD (Chronic Obstructive Pulmonary Disease) and asthma patients and reported improvement that lasted 6 months to 7 years (Skulimowski, 1965). The modern evaluation of the health, the welfare, and the quality of life imposes the continuation and development of scientific study for the establishment of action mechanisms and curative effects of the natural therapeutic factors. There are considered as a priority the studies on the methodology and effects of "health cures", which represent the most important domain of the primary prophylaxis of the major diseases from the pathology related to the life style of civilization from the new millennium.

Methods. Using pulmonary and dermal fibroblasts cultures to verify the therapeutic properties of saline mines medium represents an innovative and scientific new way to establish the medical methodology of preventing, treating and recovery of patients with various skin and pulmonary problems.

Results. The current study was designed to investigate the influence of salt mine medium from Cacica, Turda and Dej Salt Mines upon the cell morphology and electrophoretic expression of pulmonary and dermal fibroblasts in vitro obtained from Wistar rats tissues, in normal and Ovalbumin - "asthmatic" conditions.



Fibroblasts were cultured from lung and dermal parenchyma of control, ovalbumin-sensitized, and speleotherapy treated rats after ovalbumin-sensitization. Fibroblasts shape in culture can vary in accordance with the substrate, which on they is growing, and the space they have for movement.

Conclusion. Wistar rats sensitized with Ovalbumin have a low number pulmonary fibroblasts output cultures, with a more sensitive morphopatologic level. The morphological observations confirmed by the electrophoretic analyses, demonstrate through rising of the expression of many proteins and of total protein amount that the exposure of Ovalbumin-sensitized animals to the saline medium from Cacica and Dej Salt Mines is reversing the cells morphopathology of pulmonary fibroblasts in cultures;