Scientific balneology in Russia began to develop in the late 19th century.
Balneology for the first time began to be studied at Moscow University in 1865, at the same time it had been firmly established in medical practice.

In July 1921 was founded Central Research Institute of Balneology in Moscow. Its first goals were to study diseases to be treated at resorts, to study therapeutic effects of physical factors, organization of health resort industry and education. Significant attention was paid to exploration and development of deposits of mineral waters and peloids.

One of important areas for research was development of artificial mineral waters for external use (artificial hydrogen sulfide, carbon dioxide, radon, iodine-bromine bathes), that made it possible to apply them in health facilities out of resorts. Special devices allowed use of dry carbonic bathes, dry-air radon bathes, underwater spinal traction.

Research activities were aimed to increase the effectiveness of treatment of natural factors in patients with various diseases. To achieve these goals studies of mechanism of physiological and therapeutic action of hydrobalneoprocedures were conducted.
It concerned central regulatory mechanisms, biochemical processes, microcirculation changes and permeability of membranes, immune reactions, etc. Skin penetration and distribution of active substances of mineral waters and peloids have been studied.

Studies of specificity of reactions depending on physico-chemical composition of mineral water, study of minimal effective concentration of active ingredients were conducted.

Optimal parameters (temperature, concentration, duration of procedure, amount of procedures per treatment) for various diseases were identified. Methods of treatment of different diseases, indications and contra-indications for their use have been developed and published. Comparative analysis of efficiency, development of rational treatment complexes were carried out.

At present, studies of the mechanism of action balneological factors on the new methodological level, development of new approaches to applying the methods of hydro-balneotherapy, study and introduction of new balneological technology.

Keywords: Balneology, Peloids, Mineral waters