The convergence of geology and medicine goes deep into culture and history. Ancient Chinese, Egyptian, Greek and Islamic chronicles describe a significant curative effect of different rocks and minerals, and also harm that they can do to health. The originators of studying the interrelationships between the geological objects and human health were such scholars of the ancient times as Ge Hong, Avicenna, Hippocrates, James Cook, Georgius Agricola, Paracelsus and others. Many centuries ago, minerals and rock formations as medicinal agents were prevalent with the peoples living in mountainous areas, while in the lowlands different plants predominated. According to the professor of Lomonosov Moscow State University G. A. Pelymsky, various schools of medicine were developed for centuries accumulating their own composition of medicinal agents and traditions of treatment reflecting geographic and geological peculiarities of territories, for example of Tibet, East and West Europe etc.

Russia and the CIS states are accumulating their own experience and are also borrowing the experience of the peoples of Near, Middle and Far East and of West Europe.

The research carried out by the outstanding scholars of the Middle Ages, such as Avicenna, Biruni and others, was characterized by detailed investigations of minerals properties, including their physical state, chemical features and medicinal properties. Avicenna in his famous “The Canon of Medicine” (11th century) gave recommendations on the use of more than thirty curative minerals and described formulations of many pharmaceutical drugs based on them. A little later, another wonderful scientific creator Biruni summarized the early period of studying and using semi-precious stones in his tractate “Collection of Data for Learning Gems. Mineralogy” that included the information about 450 minerals and naturally occurring compounds. Biruni also represented the data of the research of semi-precious stones possessin medicinal properties.

The historical experience of using minerals for medicinal purposes in Georgia was described by I. S. Tabagari. The ancient Georgian epic “A Legend of Amirani” (2nd millenium by old chronology) describes herbs used in medical treatment, and mineral waters possessing medicinal properties. This epic is the earliest source of rational pharmaceutical science. The data of archaeological excavations of the 1st century in Borjomi and Armazishevi testify to an active use of mineral waters in
those days. During the slave-owning period in Georgia, medicines of “chemical and mineral” origin were abundantly used. In particular, in Iberia nitric acid, fuchsin, potash alumen, and copper sulfate were used, and in the territory of historical Colchis – sodium sulphite, sodium bicarbonate, potassium carbonate, magnesium sulfate, potash alumen, boric acid and others. Precious stones were also widely used as medicines.

According to academician N. P. Uyshkin, the history of the theory of medicinal properties of minerals in Russia started with the introduction of Christianity in Russ in the 10th century, in the epoch of Prince Vladimir. The first reported data on medicinal properties of a number of minerals can be found in the “Anthologies” by Svyatoslav compiled in 1073, in “Gardens of Health” (15th–17th centuries), in “Trade Book” (16th–17th centuries) and in “Glossary” (17th–19th centuries).

The pharmacopeia started developing in Russia beginning with early 17th century during the reign of Peter I, but already in the 16th century there were drugstores where one could buy pharmaceutical drugs based on such minerals and chemical compounds as saltpetre, potash, colofonia, sulfur, sodium borate, mercury, greenverditer, wax, and also precious stones – sapphire and ruby which were used in making medicines.

Below are several examples of the use of precious stones in the medieval medicine taken from the works of academician N. P. Uyshkin:

Emerald: “And also often looking at the emerald enhances human eyesight and protects the eyes from approaching illnesses and keeps you in good health, and the wearer feels happy”.

Turquoise: “When it is ground, it can be drunk and helps to recover from snakebites”.

Quartz: “Cristal stone must be grated and mixed with sweet honey, it increases maternal milk”. These formulations almost completely coincide with those of medieval lapidaries (British bishop of Renn, 11th century, Arab scholars Talib and Shirazi, 12th century).

In the early 17th century, such formulas on the use of different mineral forms and chemical compounds were prescribed to be applied in the Russian army.

Later, a Russian scientist V. M. Severgin made a contribution to the development of pharmaceutical chemistry and the use of minerals for medicinal purposes. In 1798, he translated into Russian a book “Natural History” by Pliny which contained information about minerals and included a description of their medicinal properties. It was him who introduced the term “Medical Mineralogy”.
Amber-succinite (AS) holds a special position on the list of curative minerals. AS is a natural biostimulant. It possesses unique properties to repair human biofield bearing charges of static electricity to all the vital organs. AS facilitates arterial tension recovery, inhibits the development of cancerous cells and the destruction of red corpuscles. AS since the late Paleolithic age has been forming a symbol of incontrovertible belief in its healthfulness, a panacea for all diseases. The golden age of amber use for medicinal purposes was in the early 20th century. However, today we are witnessing a rising tide of interest in amber as a curative mineral material and, first and foremost, in its use in medicinal products for human immune system reinforcement.

The traditions of medical mineralogy, which have been establishing for years, are living and developing both in Russian and in the CIS states. Natural minerals and their blends are actively studied and used. The materials based on known geological formations – minerals and rock formations, also those combined with medicative herbs, possess properties valuable for humans; they are used in cosmetics, for preventive care and treatment of different diseases, ranging from skin diseases to a wide spectrum of medical diseases, sequellae of injuries and fractures. At present, almost 500 known minerals are used in medicine, including zeolites, shungites, flintstones, amber, various clay minerals, minerals of nonferrous metal ores and of rare-earth metals etc.