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and, not indifferent for the inhabitants of the surrounding area, the dust turned out to be in Vorwald's experiment barely fibrogenous. Uncritically going along with the indicated authors, some of our investigators asserted without proof that unlike quartz, asbestos acts mainly because of its own acicular structure and traumatization of tissue.

Another group of researchers, Beger (1935), M. M. Vilenskiy (1940), M. A. Kovnatskiy (1957), proceeded from the fact that asbestos, as any other silicate, is slowly dissolved upon contact with tissue juices, and resorbed silicic acid causes damage to pulmonary tissue with its subsequent substitution with the connective tissue. In favor of such a hypothesis such facts were advanced as the increased content of SiO_2 in the blood of the asbestosis patients (Emdina, V. A., 1940, Pleshchitser, A. Ya., 1948), the appearance of extrapulmonary pathological changes and finally the development of pneumoconiosis among those working with non-fibrous silicates: nepheline, olivine and others.

Our first doubts of the legitimacy of these hypothesis were conceived when upon routine examination those working on recovery of asbestos ores, cases of asbestosis were revealed, although, in the composition of the suspended dust, the major portion is made up of particles of serpentine (average percentage of asbestos equalling 4-5). However it was not possible to exclude the fact that even a small admixture of the long filaments of asbestos could play a decisive role in the genesis of asbestosis.

An appropriate experiment was set up. On intratracheal introduction of pure asbestos and serpentine it was established that, disregarding its granulated structure, serpentine indisputably exerts a fibrogenous effect. During the inhalation of air with mean concentration on the order of 115 mg/m^3 , for animals that inhaled the dust of serpentine there developed an interstitial fibrosis, as in "asbestos" animals, although in the first months