

Scientists from the Siberian Federal University (SFU) have proposed a method for assessing the suitability of protein drugs. The development is based on the use of a special mark that can detect changes in the structure of the protein. The results of the study are published in the journal Biophysical Chemistry.

Proteins play a key role in the body, and the slightest deviations in their spatial structure can lead to loss of functionality. Damaged protein in the composition of the medicine can be not only ineffective, but also dangerous to health. In order to identify such changes in advance, Siberian scientists introduced the so-called spy molecule-fluorescein into the protein structure.

This label is attached to the protein using a strong chemical bond and emits light, the parameters of which depend on the state of the protein structure. In case of violation of the shape of the protein, the brightness and shade of the glow change, which allows us to judge its suitability.

The development has already been tested on proteins of different types - from transport to antibacterial. It is noted that testing is carried out outside the body, in laboratory conditions, and the label itself does not violate the natural structure of the protein. The tag device is compared with a button, which can be reliably sewn to the clothes without damaging the fabric.