The scientists of SibFU suggested using fluorescent proteins for the toxicity analysis.

The scientists of Siberian Federal University in cooperation with their colleagues from the School of Biophysics of the Siberian Branch of Russian Academy of Sciences have studied the effect of toxins on fluorescent proteins. The results of their studies may lead to developing a new type of medicaments. "TASS", Russian news agency, describes the studies in detail.

Fluorescent proteins were the object of studies. In particular, these were the proteins that can be found in marine organisms, like medusa Aequorea and Phialidium (Clytia) or hydroid polyp Obelia longissima. Proteins of these organisms contain coelenterazine, an organic substance that is oxidized and transmuted into celenetramide, a substance that can fluoresce under the excitation light.

"*The use of fluorescent proteins that contain celenetramide makes the understanding of toxic effects simpler, at the level of elementary physical and mathematical processes. Probably, this movement will lead to the creation of a new type of medicaments and re-thinking of the effects of the existing ones,*" — said **Nadezhda Kudryasheva**, a co-author of the study, Doctor of Physical and Mathematical Sciences, Professor of the Department of Physical and Inorganic Chemistry of the School of Nonferrous and Materials Science of SibFU.

The scientists affected the celenetramide with temperature, toxic materials (e.x. alcohol), beta and gamma radiation. They found out that fluorescent protein changes its light from the blue-green to the violet under the influence of all these factors. According to the scientists, the toxicity can be evaluated in accordance with "the changing of violet and blue-green fluorescence," — the more protein lights with violet, the higher is the toxicity.

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