

Title: A new anti-viral drug with a quick, direct effect

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Abstract:

Substituting the classical, precisely conservative structure of anti-viral drugs for a dynamic, self-organizing system made of peptide molecules that are similar to but ultimately different from each other, which aggregate into a biologically active supramolecular complex when they have reached the target. The targets are the cellular and virally induced importins/exportins, the blockage of which will lead to a sharp decrease in viral replication in those viruses whose cell cycles depend on the cell nucleus. Nuclear pores are a kind of "gate" into the cell nucleus for viruses. They open if the signal peptides are recognized by the nuclear pores. It is these signal peptide sequences that are found and interacted with by our system.

Setting: drug-design and preclinical research of new drugs

Methods: drug-design, docking, bioorganic, peptide synthesis, culture cells research (antiviral action and toxicity), animals model studying

Results: The drug has shown high activity against viral infections and in relation to different human viruses, including influenza, coronavirus, herpes 1 and 2, cytomegalovirus, the Epstein-Barr virus, the hepatitis C virus, etc.

Conclusion: Albuvir (our revolutionary drug) has a wide spectrum of anti-viral activity, is non-toxic, adapts independently to the host's body and the virus, and does not cause resistance in the virus or the body. The components for the drug are accessible, and high-volume production may be set up; the drug is ready to be presented for trials.