

Modified Grifithsin (GRFT) Protein to Fight Glycosylated Viruses (19051)

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Technology description

Grifithsin (GRFT) is a protein found in red algae, called Grifithsia, that has antiviral activity. GRFT fights life-threatening diseases — such as HIV, Ebola, yellow fever, Zika, SARS, Japanese encephalitis virus, HSV and HEPC — by binding to the outside of these viruses and stopping their activity.

However, GRFT's use is limited due to its short half-life. Currently, GRFT is only available as a topical HIV prophylactic that must be applied to the skin or mucosa. If GRFT could be made to have a longer life span, it could be used to treat a much wider range of diseases and viruses.

To that end, researchers at the University of Louisville have discovered a way to solve this problem. By modifying the peptide, they have designed a GRFT drug to have increased half-life and reduced immunogenicity, or tendency to induce an unwanted immune response. With this modified peptide, GRFT may be able to be administered systemically, allowing it to fight against a wide variety of life-threatening and hard to treat diseases. This could revolutionize the field of medicine and save lives everywhere.

Advantages

This modified form of GRFT is designed to increase half-life and reduce immunogenicity;

Allows for parenteral administration of the drug;

Fights a wide range of lifethreatening viruses.

Institution

[University of Louisville](#)

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