

Method for Treatment of Pathologies (#7878)

A antiviral method that uses mRNA acting as a targeted RNA cleaving enzyme from various bacterial species

Inventors at Georgia Tech have developed an antiviral method that uses mRNA acting as a targeted RNA cleaving enzyme from various bacterial species. This method of targeting specific genes from viruses could be a broadly applicable strategy for both prevention and treatment of a variety of infections. The method acts as an effective anti-viral agent against viral pathogens and has proven to be an effective anti-bacterial agent against antibiotic resistant species. Lastly, it has been successful in immune-regulation against immune system genes, anti-cancer activity, other metabolic diseases, and potential toxins.

Benefits/Advantages

- **Fast** - activity is immediate (within 2 hours)
- **Easy to use** - applied to nasal sprays or skin patches
- **Safe** – less immunogenic

Potential Commercial Applications

- Therapeutic agents against metabolic and auto-immune disorders
- Defense applications as antimicrobial, antiviral, antifungal, and/or anti-parasitic agent for combat personnel
- Response to pandemic infections
- Treatment and/or prevention of viral infections through
 - Nasal spray
 - Skin patches
 - Intravaginal ring/ patch/soluble capsules/applicator
 - Intra-rectal applicator
 - Enema
 - Topical cream/gels

Background/Context for This Invention

Viral infections, such as the flu, are prominent worldwide and continue to spread. Current antiviral drugs only treat one of these infections and struggle with several barriers including resistance, genetic shift, delivery, high dosage, side-effects, and time and cost of drug development.

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More Information

Publications

For more information about this technology, please visit:

<https://licensing.research.gatech.edu/technology/method-treatment-pathologies>

Images: