

Broad Spectrum Antiviral Agent



EXECUTIVE SUMMARY

TEAM

Joshy Jacob, PhD

Marpe Therapeutics LLC,
Chief Scientific Officer

Gary Altman, PhD

Marpe Therapeutics LLC,
Interim CEO

FUNDING

\$277K Biocivity Grant

INTELLECTUAL PROPERTY

Patents pending (PCT)

STATUS

Lead Candidate Optimization

TECHNOLOGY

The therapeutic agent under development has shown compelling results as a broad-spectrum antiviral agent. Initial proof of concept has demonstrated positive results against Influenza, HIV, Zika, and Dengue. Results show the antiviral agent disrupts virion membranes effectively killing Zika, Dengue serotypes 1-4, HIV transmission clades A-B-C, and Influenza H1N1, H3N2, H1N2, and H3N1 viruses.

To combat the aforementioned viruses, the technology leverages the use of synthesized peptides that act like host defense peptides. Host defense peptides are an ancient part of the innate immune system which are the first line of defense against pathogens in multicellular organisms. Due to the peptide's unique mechanism of action, the antiviral medication is expected to overcome the drug resistance challenges seen in currently marketed therapies.

MARKET NEED

Annually 3-5M severe cases of influenza, 36M HIV infections, 200K Zika, and 100M Dengue infections occur. Progressively the prevention and treatment of these viruses have become increasingly challenging as medical options are either limited in effectiveness or nonexistent.

In the case of influenza, vaccine mismatch and pandemic strains limit the effectiveness of inoculation strategies, and the emergence of drug-resistant virus strains are of major concern. Virus mutations and the development and transmission of drug-resistant HIV pose a threat despite advancements in HIV treatment. In regard to Zika and Dengue, there is no gold standard for medical care or approved antiviral medication. While there is a vaccination against Dengue, the WHO selectively recommends it leaving some populations vulnerable.

Ultimately current vaccination strategies and available antivirals have shown to be minimally effective, and the emerging threat of Influenza, HIV, Zika, and Dengue mandates a quick response.

STATUS

Marpe Therapeutics LLC is developing the antiviral agent. Proof of principle has been demonstrated in vitro and in vivo in murine models. Current preclinical studies focus on lead optimization & delivery of the drug candidate for the prophylactic treatment of influenza & other viruses.

For more information on this technology contact:

Joshy Jacob, Principal Investigator, jjacob3@emory.edu

Gary Altman, Interim CEO, gary@garyaltman.com