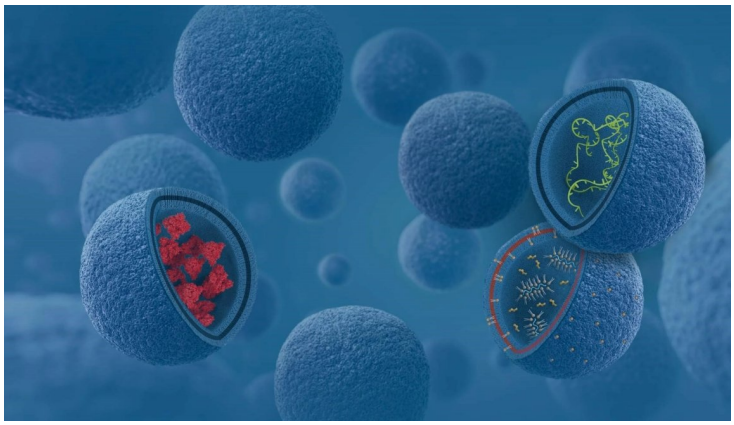
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Singapore boosts access to mRNA vaccines through innovative delivery platform

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CEPI invests in novel technologies that support the development of thermostable mRNA vaccines



New research led by a team of scientists in Singapore will explore whether a novel targeted delivery platform could help to increase the stability of mRNA-based vaccines and therefore help to improve global access to these lifesaving vaccines.

Norway-based Coalition for Epidemic Preparedness Innovations (CEPI) is providing up to $2.87 million to Singapore-based ACM Biolabs for preclinical proof of concept of its mRNA delivery technology, the ACM Tunable Platform (ATP), using Rabies as a model pathogen. ATP is a thermostable mRNA delivery vehicle that allows for mRNA storage at 2-8°C, in contrast to most existing mRNA delivery systems, which require ultra-low temperatures for storage.

To ensure the successful delivery of mRNA in the body, it is typically encased in fatty globules known as lipid nanoparticles (LNPs), which protect the mRNA long enough for it to reach and enter the target cells to elicit an immune response. However, the typical composition of LNPs are not thermostable and need to be stored at well below freezing.

ACM Biolabs' ATP technology could also offer better and more durable immune protection from mRNA-based vaccines. That's because it's thought the ATP may enhance the activation of T cells, which are associated with long-term immunity, as well as boosting antibody response, which help to fight off viruses.

Madhavan Nallani, Chief Executive Officer of ACM Biolabs, said: "Our ATP platform is engineered to address key challenges in the field, most notably by significantly enhancing thermostability, with the potential to improve immunogenicity and simplify distribution. Through this collaboration, we aim to generate robust scientific validation and accelerate the global reach of transformative vaccines that are both effective and accessible."