Nanodisc based targeted drug delivery

This technology is a method for developing a nanodisc-based, drug nanoformulation to be used as a **targeted therapy**, specifically for organs (e.g., brain, lymphoid tissue, kidney).

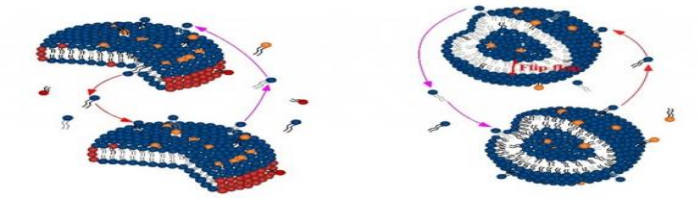
Problem

Conventional drug therapy is often untargeted and allows certain organs (e.g., the brain, kidney etc.) to act as a haven for viruses and other disease-causing pathogens. Additionally, some therapy regiments must be taken frequently as they do not allow for sustained release over longer periods of time.

Solution

Inventors at UTRGV have developed a way to encapsulate drugs in a nanodisc form that allows them to pass through the Blood Brain Barrier and release the drug payload in small, controlled dosages over an extended period, to destroy the virus in reservoirs where it usually persist during normal antiviral treatment.

Nanodisc Structure



Value Proposition

Currently available Anti-HIV drugs fail to pass through the Blood-Brain Barrier(BBB). With the inclusion of the current nanodisc technology, the same HIV drug easily passes through the BBB and safely releases the drug in the brain.

Competitive Advantages

- Extended-release property; after entering the brain, the nanodrug allows for a sustained release of drug for longer periods than currently available drugs
- Targeted release results in higher therapeutic efficacy with less amount of drug
- Compatible with multiple Anti-HIV drugs

Stage of Development

- *in vitro* characterization, with plans to soon move on to *in vivo* optimization.
- Seeking implementation and research advancement partners

IP Status

- PCT application filed - PCT/US21/46708
- Licensing Available

For further information regarding this Technology please contact:
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