



NanoCliqu

Vaccine for Leishmaniasis

EXECUTIVE SUMMARY

TEAM

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COO

FUNDING

\$50,000 NSF
\$50,000 GRA
\$111,545 Biocity

INTELLECTUAL PROPERTY

PCT: WO2019035870A1
Other Patents Pending

STATUS

Lead candidate selected.
Currently completing pre-clinical animal studies.

TECHNOLOGY

NanoCliqu is a preclinical stage life sciences company in Atlanta, Georgia. Formed in 2016 by founders from Georgia Tech, our team is developing a new class of vaccine by leveraging protein nanoparticle technology to stimulate and train the immune system to fight parasitic diseases.

NanoCliqu's vaccine is built on the novel nQ nanoplatform conjugated with a specialized carbohydrate signature for trypanosomal parasites. Studies conducted in areas with endemic Leishmaniasis, our first indication, with our collaborating lab in Brazil have demonstrated complete protection from the disease in challenged animals. We believe our technology has pan-vaccine potential to address other trypanosomal diseases.

MARKET NEED

Leishmaniasis is the second greatest parasitic killer behind malaria with approximately 350 million people at risk. It is a global human health problem endemic to more than 88 countries and poses a growing threat in Europe (Spain, Italy, France), the Middle East (Israel, Saudia Arabia) and the U.S. with no prophylactic vaccine on the horizon. With 1-2 million new cases each year, organizations such as the Gates Foundation and the U.S. DoD count Leishmaniasis among their top global concerns.

Leishmaniasis is spread by the bite of a small sand fly which deposits the parasite into the skin where it ulcerates flesh. The range of the sand fly vector is increasing with climate change, with cases appearing as far north as North Dakota in recent years. Cutaneous Leishmaniasis induces ulcers localized to the skin. It can also cause metastatic lesions in mucosal surfaces, resulting in loss of the nose or mouth. Visceral Leishmaniasis spreads to internal organs and can be lethal within days if not treated.

The standard of care is a chemotherapy and four to six weeks of hospitalization. With the accelerating spread of strains of the parasite resistant to the most effective chemotherapeutics, multiple rounds of chemotherapy are becoming increasingly common.

STATUS

NanoCliqu is currently completing animal work in pursuit of human clinical trials The Biocity scope of work includes validation of our lead candidate as a prophylactic vaccine in the four major strains of Leishmaniasis as well as therapeutic validation for use in treatment of infected patients. Preliminary safety studies will be completed, as well as dosage studies and optimization. This data will be used to prepare for an FDA Type-C meeting to confirm completeness of the experimental design to take the drug into first in human clinical trials.