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Stable Immunogen Based on Inner Domain of HIV-1 GP120 for Inducing Immunity Against HIV

Summary

Antiviral therapy and prevention strategies have made a tremendous impact on the spread of Human Immunodeficiency Virus (HIV-1). However, an HIV vaccine is highly sought after to treat and prevent HIV. This technology is a set of stable protein immunogens comprised of portions of the inner domain of the HIV-1 gp120 protein for potential HIV vaccine development.

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Field
Vaccine

Technology
HIV

Advantages
Advantages here

Status
Available for licensing
Available for sponsored research

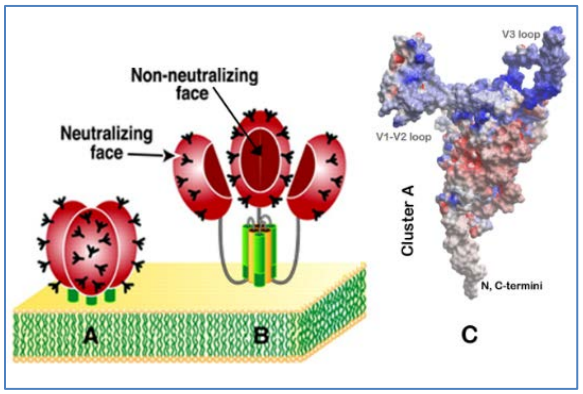
Patent Status
US 15/504,770

UMB Docket Reference
MP-2014-131

Market

In 2015, 39,513 people were diagnosed with HIV in the United States and an estimated 1.2 million American are living with HIV. Medical and scientific research has made tremendous strides in the prevention, care, and treatment of individuals affected by the disease. However, the majority of people living with HIV are in low and middle income countries where access to preventative and treatment is often difficult. An estimated 36.7 million people live worldwide with HIV, with an estimated 25.6 million living in sub-Saharan Africa. Current HIV drugs do not cure the disease and must be taken for life making treatment unfeasable for the majority of individuals affected by HIV.

Technology



Guided by recent structural studies, stable immunogens consisting of the inner domain of the gp120 core (ID) alone have been generated for potential use in preventing or modulating HIV-1 infection and vaccine induced protection in humans. The immunogens were developed using evidence that points toward a role of Fc-mediated effector function toward nonneutralizing epitopes in the first and second constant (C1/C2) region of gp120. These epitopes become exposed only after target cell CD4 receptor engagement (CD4-induced) and persist on freshly infected cell surfacesfor extended periods of time post-infection where they become excellent targets for Fc-mediated function activity. ID is engineered for selective and stable presentation of non-neutralizing Fc-mediated effector function epitopes inC1/C2 region and a candidate for further optimization and evaluation as a novel immunogen in vivo.

Technology Status

- Characteriation of lead candidates

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