"NOVEL TREATMENT FOR ASTHMA AND AUTOIMMUNE DISEASES" VCU #09-75

Applications

- Treatment for asthma
- Treatment for allergies
- Treatment for autoimmune disease

Advantages

- Specific for B cell – related diseases
- Potential to have less side-effects
- Phase I of KAR inhibitor for CNS indications completed

Inventors

Daniel Conrad, Ph.D.
Jamie Sturgill, Ph.D.

Contact

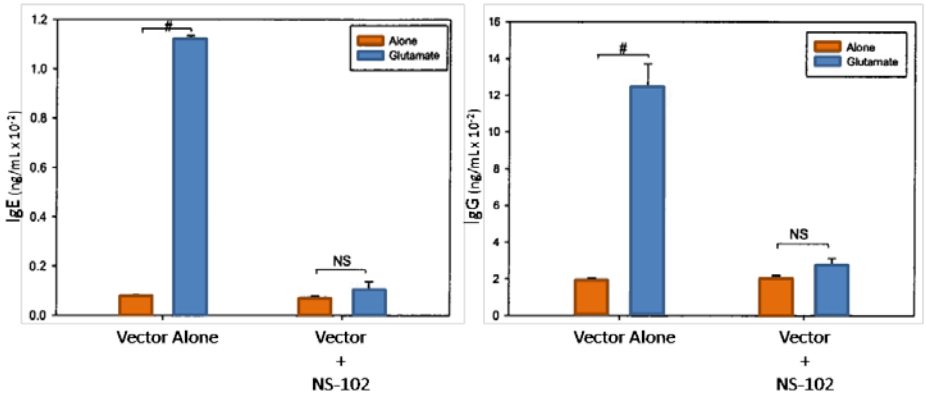
T. Allen Morris, Ph.D., MBA
Associate Director
amorris5@vcu.edu
Direct 804-827-2211

Market Need

Asthma and autoimmune diseases affect over 30 million people in the United States. Asthma is the country's most common and costly disease. Various treatments are available to control these diseases, but for most there is no cure. In addition, many of the drugs used to treat autoimmune diseases, especially immunosuppressants, have serious side effects.

Technology Summary

Researchers at VCU have discovered the kainate receptor (KAR) plays a key role in the series of events that lead to an allergic reaction. This represents a novel target for developing drugs for treating B cell-mediated diseases, including allergies, asthma and autoimmune disorders. In addition, the KAR inhibitor NS-102 was shown to block isotype switching in human B cells, thereby reducing the inflammatory response. KAR inhibition could be used for treatment of asthma, allergies and autoimmune diseases that have a strong autoantibody (IgG) component, such as lupus.



Activated kainate receptor (KAR) with Glutamate, which subsequently activates components of the immune system (IgE and IgG). KAR inhibitor NS-102 blocks affects on immune system.

Technology Status

Patent pending: U.S. rights are available (see 13/574,808).

This technology is available for licensing to industry for further development and commercialization.