"Treatment of Mast Cell and Basophil-Mediated Disease"

VCU #06-47

Applications

- Treatment of asthma and allergy
- Other inflammatory diseases such as arthritis, multiple sclerosis and
- heart disease

Advantages

- Novel use of fullerenes
- Easily derivatized
- Prevents inflammatory reactions before they occur

Inventors

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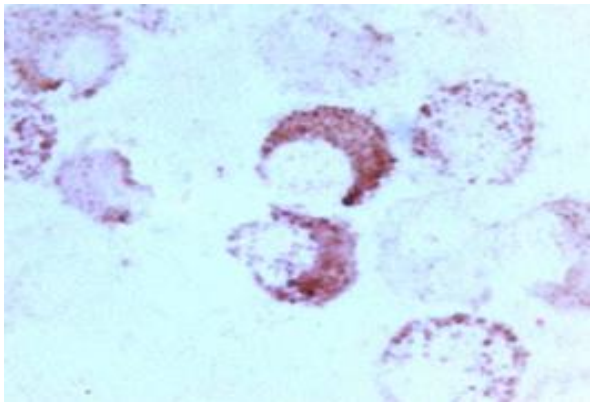
Market Need

Allergies are the sixth leading cause of chronic disease in the United States, and while various treatments have been developed to help control allergy, no cure has been found. Given that mast cells are potent effectors of the inflammatory response, playing an important role in atrophy, asthma, arthritis, and various other disorders, finding new ways of controlling mast cell numbers and responsiveness is essential for preventing inflammatory disease.

Technology Summary

VCU inventors have discovered that certain carbon fullerenes have the ability to turn off the allergic response by shutting down mast cells and basophils activity *in vivo* and *in vitro*. Thus, using fullerenes to control diseases largely driven by mast cell and basophil responses is a viable option. The molecules may also be used to treat other diseases associated with mast cell and basophil activation such as multiple sclerosis and heart disease.



Technology Status

U.S. Patent Issued: 7,947,262

In vivo and in vitro studies completed.

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