

## ALLERGIES, ASTHMA, AND DUST MITES

Asthma can be fatal and is especially serious in children under age 13. As many as 5,000 children in the United States die annually from allergy related asthma. It is estimated that allergies cause 3.8 million lost work or school days per year. Asthma and allergy attacks are often triggered by pet dander, dust mite allergens, and other indoor allergens.

Dust mites produce a potent indoor allergen. These mites feed upon shed human skin and live primarily in heavily trafficked areas and within mattresses and bedding.

Finding ways to significantly reduce the overall level of allergens in the environment to which the sensitized individual is exposed has been shown to be a very effective intervention.

According to government studies, dust mites are found in 84% of homes. About a quarter of U.S. homes have high enough allergen levels to trigger an asthma attack.

The only viable method of complete dust mite eradication is through deep freezing at very low temperatures and humidity, which is the exclusive method used by CarboNix.

For more information on asthma please see:  
<http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/>

CarboNix LLC has been awarded three Small Business Innovative Research (SBIR) grants from the National Institute of Environmental Health Sciences of the National Institutes of Health dealing with killing dust mites and denaturing and/or removing indoor allergens that trigger asthma or allergy attacks. CarboNix is in the process of completing a Phase II SBIR grant entitled **Allergens and Induced Asthma: Eradicating Indoor Allergens from Dust Mites** that will include a field trial involving sixty homes. This study will be jointly performed with the assistance of epidemiologists from the Medical University of South Carolina. It is designed to measure the impact on indoor allergens levels, especially dust mite, the Triple Phase Treatment has over a one-year period.

We are located in downtown Columbia, SC, in the BB&T Building. We are in the South Carolina Technology Alliance suite.

For technical details, please refer to United States patents 8,722,607 and 8,709,164.

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For more information please email us at [info@carbonix.org](mailto:info@carbonix.org) or call 1-559-NO-MITES

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LEARN HOW  
**CARBO**NIX  
CAN MAKE YOUR  
HOME A HEALTHIER  
PLACE TO LIVE BY  
REMOVING INDOOR  
ALLERGENS

## CLEAN SCIENCE FOR HEALTHY LIVING

The patented CarboNix *Triple Phase Treatment* kills dust mites, slows re-infestation and removes multiple allergens and asthma triggers from your home.



- Our treatment is safe and odor free. Your home can be inhabited immediately after treatment.
- We can treat carpet, upholstery, and mattresses without damaging or staining fabric.
- Our treatment removes a broad spectrum of allergy and asthma triggers, including those produced by dust mites, pets, cockroaches, and rodents.

## HOW DOES THE PROCESS WORK?

- Our technician will sample your home to test for allergens and dust mites. You will receive the results to share with your doctor.
- We will schedule the Triple Phase Treatment for your home.
- The treatment will remove allergen triggers and dust mites and will leave your home safe and usable in a half a day or less.



## WHO IS CARBONIX?

CarboNix is a technology company located in Columbia, SC, which was founded based on research performed in the College of Engineering at the University of South Carolina. The R&D to conceive, design, and develop the Triple Phase Treatment process was funded through Small Business Innovative Research (SBIR) grants from the National Institute of Environmental Health Sciences, an institute in the National Institutes of Health.



CarboNix, LLC is founded by:

### Michael Matthews, CTO

Mike Matthews, PhD, joined the University of South Carolina in 1994. He is a professor of Chemical Engineering and a member of the Biomedical Engineering program.



### Allan Quick, CEO

Al Quick is a USC alumnus, a retired industry senior executive and an entrepreneur. He has served on the USC College of Engineering Partnership Board for more than 25 years, and has been a member of both the USC and the Clemson University Research Foundation boards of directors.



Find out how CarboNix and the Triple Phase Treatment can help make your home a healthier place to live.

Contact us today:  
[info@carbonix.org](mailto:info@carbonix.org)  
or call  
**559-NO-MITES**



For more information about asthma triggers and dust mites see the back of this brochure.