

## Healthy Homes Grantees in Region VI, Southwest

**Name of Grantee:** University of Cincinnati  
**Name of Project:** Sampling of Biological Contaminants from Surfaces in Flooded Homes of New Orleans: Development, Evaluation and Implementation of a New Protocol  
**Amount Awarded:** \$ 400,000  
**Year of Grant:** 2006  
**Contact Info:**  
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**Project Partners:** Tulane University (New Orleans), Columbia University (New York), US EPA, and several community organizations

### Summary of Project Activities:

We will study the release of moisture-related biocontaminants (mold, endotoxin, and dust mite allergen) from surfaces using a novel source testing method. A new protocol will be developed through an extensive laboratory effort and validated in 30 New Orleans area homes that suffered from major flooding in 2005. The dust and air sampling data (conventional methods) will be used for comparison. The specific aims that have been developed to test the hypothesis mentioned above are listed below.

- I.** Select 30 homes with major moisture problems in the New Orleans area affected by Katrina and Rita.
- II.** Laboratory evaluation: Develop a field-compatible testing protocol for aggressive sampling of biocontaminants such as mold, endotoxin, and dust mite allergens from surfaces. Establish quality control and quality assurance procedures for sampling and analysis of the above biocontaminants; analyze QC dust samples provided by the HUD OHHLHC. Perform pilot validation experiments in the laboratory with three floor materials and one mattress material obtained in homes with identified moisture problems.
- III.** Field evaluation: Perform sampling for mold, endotoxin, and dust mite allergen in 30 selected homes, using the newly-developed aggressive surface sampling protocols as well as conventional dust and air sampling methods, during two seasons - summer and winter. Analyze the samples for  $\beta$ -(1-3)-D-glucan (surrogate for mold), endotoxin, as well as Der f 1, and Der p 1 (dust mite allergens). Finalize the new test protocol for its future utilization by HUD and others. Conduct demonstration sessions for the HUD staff and NOFA fund recipients as well as for the regional/local agencies and community.
- IV.** Calculate the "worst case" scenario of the respiratory deposition of biocontaminants ( $\beta$ -(1-3)-D-glucan, endotoxin, Der f 1, and Der p 1) released from surfaces using the human respiratory tract deposition model. Calculate inhalation exposure for children and adults.

### Partner organizations:

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**Product Outcomes/Outputs:**

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