

Rutgers Entomologist wins the 2015 Award of Excellence from the Northeast Extension Directors, July 7, 2015

In recent years, bed bugs resurged as an important urban pest. The U.S. Environmental Protection Agency, U.S. Department of Housing and Urban Department, and the National Road Map for Integrated Pest Management recognized that preventing and controlling bed bug infestations in multifamily housing and other build environments as a high priority. To meet this critical challenge, Dr. Wang and his colleagues led an aggressive campaign against bed bugs.

Dr. Wang's innovative research program led to the invention a series low cost, safe, and highly effective bed bug management tools and methods. They are now adopted by the public and pest management professionals and generated tremendous economic, social, and environmental impact. His invention "dry ice bed bug monitor" was featured on TIME magazine in May 2010 and reached more than 3.4 million people. Most recently, his team invented a sugar-yeast bed bug monitor that is similarly effective as dry ice bed bug monitor. Each of these home-made monitors costs about \$20 compared to \$450 for a commercial monitor (94% saving per trap). These home-made monitors are the most affordable and effective bed bug monitors that contain lures. Dr. Wang co-invented "Climbup Insect Interceptor" for monitoring bed bugs and other insects. This monitoring device is currently the most effective and widely used passive monitor (monitor that does not have lure) for bed bugs in the U.S. and is also sold in Canada, Asia, Europe, and Australia. Dr. Wang's team also invented the first bed bug lure, which can increase the efficacy of bed bug monitors up to 7 times. This lure is the only bed bug lure that has proven efficacy for attracting bed bugs. Dr. Wang received 3 patents from United Kingdom and has 3 pending patent applications.

The fact sheet "Detecting bed bugs using bed bug monitors" was frequently used by pest management professionals, educators, and residents nationwide. In addition to new tools for managing bed bugs, Dr. Wang's team also developed more cost-effective bed bug control methods and programs which have significant social and environmental impact. Dr. Wang developed a carbon dioxide fumigation technique that is very affordable, highly effective, and relatively safe method to treat bed bug infested items. He found DEET is the most effective bed bug repellent and can be used to prevent/reduce accidental introduction of new infestations. During 2012-2013, his team developed and implemented a model integrated pest management program in a low income housing community. The program resulted in 90% reduction in bed bug infestation within 12 months. It reduced pesticide use by > 90% compared to chemical-based bed bug control programs that were conducted in similar environments. Dr. Wang's team collaborated with 6 low income communities (> 3,000 apartments) in controlling bed bug and cockroach infestations. These research and education programs resulted in > 90% reduction in pest populations. Post-treatment surveys indicated these programs significantly improved residents' quality of life, satisfaction level to the pest management practice, and reduced pesticide applications.

Below are images of the event.



Dan Lerner, VT, NEED Chair presenting award to Dr. Changlu Wang July



Dr. Wang's spouse, Dan Lerner (VT), Dr. Wang (Rutgers), Mary Jane Willis (NJ) and chair of the NEED awards committee



Mary Jane Willis, NJ, introducing Dr. Wang