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INFECTIOUS DISEASES:

“Molecular Biology of the Odorant Receptors”

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*Supported by the National Institute on Deafness and Other Communication Disorders,
National Institutes of Health*

GRANT DESCRIPTION

Insects are important vectors of human infectious disease and use olfactory cues to find hosts. This project studies the mechanism of action of the insect repellent DEET and novel chemical antagonists of insect odorant receptors. By understanding how DEET functions, we can improve upon the chemical design principles of such compounds and devise new methods to prevent the spread of disease by insects.

SCIENCE AND HEALTH IMPLICATIONS

Mosquitoes spread infectious diseases such as malaria, yellow fever, dengue, and West Nile virus. Understanding how these insects find humans to bite will allow us to develop new tools to prevent biting and thereby reduce the spread of infectious diseases.

RESEARCH IMPACT: IN THEIR WORDS

“With this ARRA grant, I was able to hire a recent college graduate who was working three part-time jobs including babysitting, waitressing, and working part-time in my laboratory. She is interested in biomedical research, and this grant allowed me to create a full-time position for her immediately.”

—Leslie Vosshall, Primary Investigator



According to NIH, “NIH’s two-year infusion of American Recovery and Reinvestment Act (ARRA) funds will empower the nation’s best scientists to discover new cures, advance technology, and solve some of our greatest health challenges.”

The Society for Neuroscience (SfN) is the world’s largest organization of scientists and physicians devoted to advancing understanding of the brain and nervous system. Since its inception in 1969, the Society has grown from 500 members to more than 40,000.