

Biologists sequenced red flour beetle genome

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Most of us hate to find the red flour beetle living happily in the flour sack in our pantries. But for several scientists at Kansas State University, and many others throughout the world, this pest of stored grain and grain products is the best organism for studying genetics.

The superior status of this beetle, *Tribolium castaneum*, as an experimental system is largely because of the work of two Kansas State University faculty, Susan Brown, professor of biology, and Rob Denell, university distinguished professor of biology. They worked in collaboration with Richard Beeman, research entomologist at the U.S. Department of Agriculture Grain Marketing and Production Research Center in Manhattan.

This team won funding to get *Tribolium*'s genome sequenced, making it one of the earliest insect genomes to be sequenced and the first pest insect to be studied in this way.

“We’ve been able to exploit *Tribolium*'s ease of culture, short life cycle, and facile genetics to create an array of sophisticated methodologies,” Denell said. “It now joins the fruit fly *Drosophila* as a premier insect genetic system, and even offers advantages in some areas of study.”

The journal *Nature* will publish an article March 27 announcing the sequencing of the beetle's genetic material and summarizing the implications of this work.

“It's really exciting to see the burst of activity in *Tribolium* studies that

has accompanied the sequencing project,” Brown said. “This new information will greatly aid research on topics as diverse as insect pest management and the genetic control of development.”

The genomic sequence, genetic maps and gene information are available from the National Center for Biotechnical Information and at www.beetlebase.org.

Source: Kansas State University

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