Media Advisory

APPLIED BEE-NOMICS

How the Honey Bee Genome Project is Revolutionizing Pollinator Research

Washington, DC – June 11, For Immediate Release – The honey bee genome research project and its contributions to improving the health of honey bees and other pollinators will be discussed at National C-FAR’s hill research seminar on Monday, June 17 at noon in 1300 Longworth House Office Building, in conjunction with National Pollinator Week. The featured speaker is Professor May Berenbaum, Department Head, Department of Entomology, University of Illinois at Urbana-Champaign.

“Honey bees and other pollinators that are essential partners in U.S. agriculture and natural ecosystems are in serious trouble,” warns Berenbaum. “The honey bee genome project has at the forefront of efforts to address Colony Collapse Disorder and other threats to pollinator health and in the process has produced a diversity of powerful new tools for understanding honey bee health.”

Abstract: The complete sequence of the honey bee genome was published in 2006 after four years of concentrated effort. The project, the brainchild of a consortium of scientists comprising university laboratories around the world, the U.S. apiculture industry, and the USDA, was funded by NIH, the USDA, and private donors, including industry representatives. The timing proved opportune in that release of the genome coincided with the first reports of unprecedented bee losses associated with the phenomenon now known as Colony Collapse Disorder (CCD). Although CCD remains challenging, the availability of the bee genome proved transformative in elucidating basic bee biology and investigating the stresses experienced by America’s honey bees, providing new insights and new tools for investigating bee health. These tools facilitated the identification of many hitherto unreported bee pathogens and enabled the identification of predictive markers and potential molecular diagnostics for CCD. At the same time, the discovery of a universal bacterial flora revealed the existence of symbiotic gut flora that may be critical to bee health. Also facilitated was identification of genes encoding specific enzymes that metabolize acaricides used by beekeepers to control the parasitic varroa mite and pesticides encountered by bees as they forage for pollen and nectar and provide pollination services to U.S. agriculture. The investment in sequencing the honey bee genome was immediately justified in generating useful new knowledge and continues to provide the foundation for an ongoing revolution in bee science.

Seminar presentations are available at http://www.ncfar.org/Hill_Seminar_Series.asp. The seminar is open to the public and the media.

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NATIONAL C-FAR is a nonprofit, nonpartisan, consensus-based, and customer-led coalition that brings food, agriculture, nutrition, conservation, and natural resource stakeholders together with the food and agriculture research and extension community, serving as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension, and education. National C-FAR’s Hill Seminar Series, now in its sixth year, regularly presents leading-edge researchers working to provide answers to pressing issues confronting the public and Congress. The Hill Seminar Series helps demonstrate the value of public investment in food and agricultural research—investment that returns 45 percent per year on average, and $20 in economic benefit from every $1 investment in food and ag research.

Go to http://www.ncfar.org/Hill_Seminar_Series.asp for more information about the seminar series and past topics. Interviews with National C-FAR President Chuck Conner are available by request. For additional information, go to www.ncfar.org; or contact Tom Van Arsdall, Executive Director, at tom@vanardsall.com or (703) 509-4746.