"Neuropeptides, flux theory, and regulation of juvenile hormone synthesis in mosquitoes"

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Juvenile hormone (JH) plays many roles in the control of ovary development in female mosquitoes. In this talk, Dr. Noriega will explore the existence of different flux directionalities, feedback loops, and pathway branching points in the JH biosynthesis pathway. He will also explain how the fine-tuning of JH synthesis to different physiological stages in mosquito reproduction seems to occur through changes in the size of precursor pools rather than by changes in mRNA and enzyme capacity levels.

Dr. Noriega is a Professor in the Department of Biological Sciences in Florida International University, Miami, FL. His research combines biochemistry, physiology, and molecular biology to address fundamental questions in insect biology. He is interested in understanding the mosquito's physiological processes, such as digestion, and the nutritional regulation of the endocrine system. Currently, the main focus of Dr. Noriega's research is the regulation of the synthesis of juvenile hormone, a molecule that controls development, reproduction, and behavior in the Aedes aegypti mosquito, the vector of dengue and yellow fever.