



Jupiter Neuroscientist Awarded For Keeping Her Mind On What Matters

BOCA RATON, Fla. (October 7, 2015) — Tanja Godenschwege, Ph.D., associate professor in the Department of the Biological Sciences, was just awarded nearly \$450,000 from the National Institute of Neurological Disorders and Stroke for three years to study the function of L1-type cell adhesion molecules (CAMs) in the fruit fly's nervous system. Studies gaining insight into the functions of these proteins may lead to novel therapeutic avenues for treating Alzheimer's disease, spinal cord regeneration and cancer.

CAMs are proteins that link the inside of one cell to the outside of a second cell. They adhere cells together. But some CAMs have additional functions in activating signaling pathways within the cell, resulting in turning other genes on or off. In particular, mutations in genes for human L1-type CAMs underlie problems in both neurological disorders and cancer.

Godenschwege studies the fruit fly's only L1-type CAM using fluorescent imaging that tracks the protein's location. She actually visualizes the protein moving up and down the axons of a fly's neuron while the fly's nervous system is still alive. Her innovative techniques have shown that in the adult nervous system, surprisingly, the L1-type CAM moves backwards (from a neuron's synapse back to the cell's soma or center), suggesting that the CAM has a different and unknown function in the adult brain versus that in the developing fly brain.

She plans to use the NIH funds to pay for undergraduate internships, graduate student stipends and a part-time postdoctoral fellow. Having previous success in obtaining both NIH funding as well as FAU internal grants, when asked what her immediate thoughts were on obtaining her most recent NIH grant, Godenschwege replied, "Now I have time to write my next grant."