



## FAU Scientist Finds New Use for Antipsychotic Drug

In newly published findings, Osama Refai, Ph.D., a postdoctoral fellow in the laboratory of Randy D. Blakely, Ph.D., reports a novel use for an antipsychotic medication. Refai found that the drug rapidly blocks the paralytic actions of excess dopamine signaling in nematodes. Refai, and colleagues in the field, study dopamine signaling in the nematode *C. elegans* due to the powerful genetic tools available to study the organism, its simple nervous system and behaviors, and its transparency, which permits easy visualization of nerve cells. Refai's work centers on the use of genetic approaches to identify genes linked to excess dopamine signaling, a trait believed to contribute to schizophrenia, ADHD and mania. Because the dopamine receptors in the worm have similarity to those in human, and needing a drug that could block the effects of mutations producing excess dopamine signaling, Refai reasoned that a human dopamine receptor blocker might do the trick. And it worked! Within minutes of application of the drug azaperone, worms paralyzed in water by excess dopamine signaling, begin to swim again. The key benefit of the finding, notes Refai, is that worm researchers now can test for a role of dopamine signaling in their experiments without time-consuming genetic crosses they would otherwise employ. Additionally, researchers can now use the drug to identify pathways engaged by activation of dopamine receptors, leading possibly to new insights into human dopamine-linked disorders. [Learn More.](#)