

# NJ MEDICAL SCHOOL RECEIVES \$2.1M FOR AUTISM RESEARCH (NJ101.5)<sup>2/11/2013</sup>

By [Kelly Waldron](#)

Research that will focus on stem cells as a means of unlocking some of the mysteries surrounding Autism Spectrum Disorder (ASD) has earned a \$2.125 million grant from the New Jersey Governor's Council for Medical Research and Treatment of Autism.



Autism in New Jersey (Flickr: hepingting)

The research will be led by James Millonig, PhD, associate professor of neuroscience and cell biology at the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School.

“Autism is defined by a spectrum of behavioral and neurological abnormalities, with distinct characteristics for each individual denoting that there are multiple underlying genetic causes,” said Dr. Millonig, who also is assistant dean of medical science training at Robert Wood Johnson Medical School and a member of the Center for Advanced Biotechnology and Medicine, a joint institute of the medical school and Rutgers. “Working with my colleagues in neuroscience and at the Child Health Institute of New Jersey and Rutgers, we hope to identify the neurobiological, molecular and genetic basis, the biological signature, of autism.”

Autism is a disorder of the brain, which is mostly comprised of neurons. Induced pluripotent stem cells (iPSCs) are scientifically-derived stem cells from individuals that mimic the traits of embryonic stem cells and can be used to create other cell types.

Therefore, the research team will use iPSCs to create human neurons in order to understand how they develop abnormally in individuals with autism. The scientists will then test FDA-approved drugs on the neurons to identify therapeutic treatments that may improve or reverse the disorder.

**“We know of a lot of genes associated with autism, but don’t know when, where and how they act in development,” said Dr. Millonig. “We need to look at neurons and determine how they mature differently in order to develop better drug therapies that are tailored to the needs of individuals with autism.”**