



New Jersey Center for Tourette Syndrome  
AND ASSOCIATED DISORDERS

*Collaborative Partnerships  
for the Tourette Syndrome Community*

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## **New approach for those with Tourette Syndrome being tested by Overlook Medical Center expert and others**

*Dr. Roger Kurlan, who regularly collaborates with the NJ Center for Tourette Syndrome, is one of 6 researchers working on a new clinical trial for the drug AZD5213*

SUMMIT, N.J. – Medical researchers are hopeful that a new investigational drug being tested in clinical trials will prove to be an effective treatment for Tourette Syndrome – an inherited, misdiagnosed, misunderstood neurological disorder that presents in childhood and causes involuntary motor and vocal tics.

The new drug, AZD5213, targets the human histamine H<sub>3</sub> receptor. In the brain, this receptor regulates neurotransmitters associated with Tourette Syndrome – including dopamine and histamine. [A mutation that affects histamine synthesis](#)

was recently confirmed to be the cause of TS in a father and all eight of his children, a finding supported by research in mice.



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If approved for treatment of Tourette, AZD5213 might represent an alternative to antipsychotics, which don't work well in all patients and can cause serious negative side effects. Discovered by AstraZeneca, AZD5213 has been shown to have a favorable safety profile, with no serious drug-related side effects reported in Phase 1 and Phase 2 clinical trials completed at the time of this report.

"AZD5213 represents an exciting new approach to the treatment of Tourette Syndrome, and we are currently recruiting teenagers suffering from the disorder to participate in the clinical trial," says Dr. Roger Kurlan, Director of the Movement Disorders Program at Overlook Medical Center's Atlantic Neuroscience Institute in Summit, N.J.

Dr. Kurlan, who frequently collaborates with the NJ Center for Tourette Syndrome & Associated Disorders (NJCTS) in Somerville, N.J., is a leading expert in the treatment of Tourette and is one of approximately six medical researchers involved in the clinical trial.

AZD5213 already has been studied in other clinical trials, including those for Alzheimer's disease. With Tourette Syndrome, which is associated with changes in brain chemistry that appear to cause the characteristic symptoms of the disorder, AZD5213 might be able to counteract these changes – with the potential to provide symptomatic relief with less of the negative side effects associated with existing treatments. More than 200 human subjects have already received single or multiple doses of AZD5213, with no serious drug-related adverse side effects.

The clinical trial is a 6-month, multicenter, randomized, safety, tolerability, pharmacokinetic, and preliminary efficacy study of AZD5213 in adolescents 12 to 17 years of age with Tourette Syndrome. The trial includes an up to 21-day screening period, 6 months of once-daily treatment with placebo or AZD5213, and a 3-week follow-up period.

Because of the crossover design of the trial, all enrolled patients will receive AZD5213 for at least part of the trial. Approximately 24 subjects will be treated in this study. Safety will be carefully ensured by a battery of safety tests administered at visits throughout the study, and efficacy will be determined by means of questionnaires designed to assess the severity of symptoms associated with Tourette Syndrome.

According to the Centers for Disease Control and Prevention (CDC), 1 in 100 children show signs of Tourette Syndrome. The disorder is three times as likely in boys as in girls, and most patients experience their worst symptoms in their early teen years. There is no cure, and symptoms can persist throughout life – although most patients see improvement as they approach and enter adulthood.

Exaggerated portrayals of Tourette Syndrome have been used for comic relief in films and TV shows, usually featuring characters who shout obscenities involuntarily. In reality, this type of verbal tic – known as coprolalia – is present in only 10 to 15 percent of those with TS.

“In real life, Tourette's is no laughing matter,” Dr. Kurlan says. “These patients often struggle with self-esteem and socialization issues, which generally arise at a crucial time in their social development. Sadly, many are victims of bullying and the ridicule of their peers.”

Tourette's is most often present in combination with other neurological disorders, such as attention deficit-hyperactivity disorder (ADHD) or obsessive-compulsive disorder (OCD), and Tourette's patients are commonly troubled by depression, anxiety and developmental delays.

For more information on participating in this trial at Atlantic Neuroscience Institute at Overlook Medical Center, please call 908-522-5901 or e-mail [caroline.panter@atlantichalth.org](mailto:caroline.panter@atlantichalth.org). More information about Tourette Syndrome is available by calling 908-575-7350 or by visiting [www.njets.org](http://www.njets.org).

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