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## New Medgenics data confirms presence of specific genetic mutations in many ADHD children

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New data presented at AACAP's 63<sup>rd</sup> Annual Meeting (Oct. 24-29, 2016 in New York, NY) confirmed the presence of specific genetic mutations in many children with <u>Attention Deficit Hyperactivity Disorder</u> (ADHD). The study team, led by Dr. Josephine Elia, M.D., Neuroscience Center, Department of Child and Adolescent Psychiatry, Nemours/Alfred I. DuPont Hospital for Children, studied a US population of children suffering from ADHD. The data confirm the observations previously made by Dr. Elia and colleagues at The Children's Hospital of Philadelphia (CHOP) in 2010 and underscore the importance of the role of glutamate receptors (mGluR) in diseases like ADHD. The study was sponsored by Medgenics, Inc.

"There is increasing interest in the critical role of glutamate neurotransmission in ADHD and other neuropsychiatric disorders," said Josephine Elia, M.D., Neuroscience Center, Department of Child and Adolescent Psychiatry, Nemours/Alfred I. DuPont Hospital for Children and principal study investigator. "This study suggests that mutations that can disable genes in this critical network can be causally associated with ADHD. Such mutations are present in up to 25 percent of children with ADHD, and suggest new genomics targeting strategies to better treat the disease."

A total of 23 investigators in centers across the USA enrolled 1,013 children, aged 6-17 years, with established ADHD. Phenotype data was collected and saliva samples were submitted to The Center for Applied Genomics (CAG) at CHOP for genotyping. Overall, the mutation frequency was 22%, with a higher prevalence of 25% observed in patients aged 6-12. Interestingly, when compared to mutation negative ADHD patients, the patients with the mGluR mutations were more likely to have concerns about anger control and disruptive behaviors. Medgenics is currently conducting additional research to better understand the relative severity of ADHD in patients with a network mutation and the contribution of individual genes.

"The results of this study support our ongoing Phase 2/3 interventional

adolescent ADHD trial, known as SAGA" said Liza Squires, M.D., Vice President, Research & Development, Medgenics, Inc. "Our ultimate aim is to develop a genomically targeted, safe and superior product for this subpopulation of ADHD patients. This would be the first such targeted therapy in any CNS disease and highlights the emergence of precision medicine in this therapeutic area."

ADHD is the most common neurodevelopmental disorder of childhood and is generally characterized as a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. Approximately 11% – or 6.4 million – of U.S. children (4-17 years of age) have been diagnosed with ADHD, according to a recent study conducted by the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration.

## Source:

http://www.medgenics.com/