manitoba neuroscience network

Deciphering the etiological puzzle of autism spectrum disorder (ASD) - results from the Negev Autism Centre

SEMINAR & VISITING SPEAKER SERIES

DATE

Monday, April 29, 2019
10:00 AM

LOCATION

Theatre C, BMSB

SPEAKER

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OBJECTIVES

1. Introduce the current challenges in ASD research

2. Discuss the activities and research findings of the Negev Autism Center

ABSTRACT

Autism spectrum disorder (ASD) is a remarkably heterogeneous condition with multiple genetic and non-genetic causes leading to a wide variety of phenotypic outcomes. Elucidating the heterogeneous etiological puzzle of autism requires comprehensive longitudinal data acquisition from large community based cohorts. With this in mind, we have established the Negev Autism Center (NAC), which comprises clinicians from Soroka University Medical Center (SUMC) and scientists from Ben-Gurion University (BGU). In this initiative, we collect comprehensive behavioral, clinical, neurological and biological data on all children who are referred to SUMC with a suspicion of autism. Moreover, children with a positive diagnosis of autism are invited to the SUMC clinics for follow-up visits every 6 to 12 months until the age six. During these visits, their diagnosis is re-evaluated and families are invited to participate in additional ongoing experiments. The wide variety of data collected from each child with ASD and his family, enable us to synthesize findings across different clinical and biological disciplines in order to "connect the dots" between specific risk factors through associated brain abnormalities to precise behavioral and cognitive phenotypes in various subtypes of autism. Such an understanding of ASD is essential for translating the science into personalized treatments for the disorder. In this seminar, I will introduce the current challenges in ASD research and discuss recent research findings from the NAC. Specifically, I will introduce new approaches for digital phenotyping of children with ASD that can accelerate both research and diagnosis of ASD. In addition, I will present new insights regarding the genetics of ASD as well as potential environmental risk factors of the disorder. Finally, I will talk about the future goals of the NAC.

BIO

Dr. Menashe, earned his PhD in Human Genetics and Bioinformatics from the Weizmann Institute of Science, Israel in 2007. He then completed four years of post-doctoral fellowship in the Biostatistics Branch of the Division of Cancer Epidemiology and Genetics at the National Cancer Institute, USA and one year as a senior scientist at MindSpec, a nonprofit organization that utilizes innovative bioinformatics strategies to accelerate research on common neurodevelopmental disorders. In 2012, Dr. Menashe joined the Faculty of Health Sciences and the Zlotowski center for neuroscience at the Ben-Gurion University (BGU), Beer-Sheva, Israel as an assistant professor.

At BGU Dr. Menashe is the head of the genetic epidemiology team at the school of public health. In addition, Dr. Menashe is a co-founder of the Negev Autism Center (www.negevautism.org), which is the leading autism research center in Israel. At the Negev Autism Center, Dr. Menashe and his colleagues collect and analyze comprehensive clinical, behavioral and biological data from hundreds of children with autism with the goal to elucidate the etiology of autism and its variable phenotypic manifestations. For more information, please visit: www.idanmen.com

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