

Guest Talk



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**Genetic and molecular signatures
of remembering and forgetting
as a basis for innovative drug development**

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<https://call.lifesizecloud.com/15070818>

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Genetic and molecular signatures of remembering and forgetting as a basis for innovative drug development

Abstract

Large collaborative efforts have led to the identification of numerous well-validated genetic risk factors for common, complex diseases. Importantly, known drug targets for such complex diseases as type 2 diabetes, hyperlipidemia, multiple sclerosis, and psoriasis have turned up in the genome-wide association studies (GWAS). Recent mega-analyses have also led to the robust identification of genetic risk factors for common neuropsychiatric disorders and to the notion that many of these factors are shared across diagnostic categories.

Given the current evidence it is logical to assume that GWAS have the potential of translating into novel treatment targets for neuropsychiatric conditions. As will be shown and discussed, strategies for applying human genetics to drug discovery in neuroscience are being developed, have already provided promising repurposing candidates, and have led to the initiation of clinical trials. Importantly, the exploration of associations between a gene encoding a drug target and a number of phenotypes rather than a sole monolithic disease category will be crucial to capture a broader spectrum of relevant biological information and to provide drug repurposing opportunities. This aspect of genome-guided drug discovery is particularly relevant for neuropsychiatry and underscores the importance of using physiologically relevant cognitive, behavioral and emotional domains in addition to binary neuropsychiatric diagnoses.