

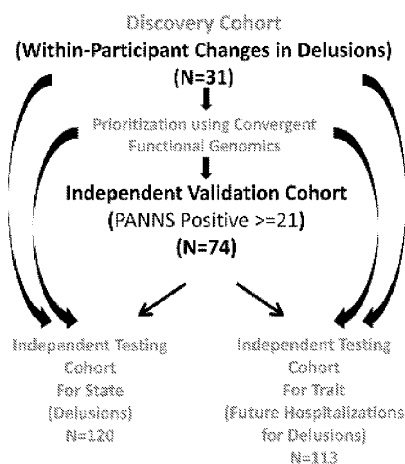


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(54) **Title:** PRECISION MEDICINE FOR SCHIZOPHRENIA AND PSYCHOTIC DISORDERS: OBJECTIVE ASSESSMENT, RISK PREDICTION, PHARMACOGENOMICS, AND REPURPOSED DRUGS

FIG. 1A

A. Figure 1 Cohorts used in study depicting flow of discovery, prioritization, validation, and testing of biomarkers



(57) **Abstract:** Disclosed are novel compounds for treating and preventing schizophrenia, and more generally psychosis, by bioinformatics drug repurposing using novel genes expression biomarkers involved in psychotic symptoms (delusions, hallucinations); methods for assessing severity, determining future risk, matching with a drug treatment, and measuring response to treatment, for psychosis in a subject; and method of using repurposed drugs and natural compounds to prevent and to treat psychosis. Methods are disclosed using a universal approach, in everybody, as well as personalized approaches by gender. The discovery describes compounds for use in everybody (universal), as well as personalized by gender (males, females). Methods for identifying which subjects should be receiving which treatment, using genes expression biomarkers for patient stratification and measuring response to treatment. The disclosure also relates to algorithms. The algorithms combine biomarkers as well as clinical measures for psychosis, to identify subjects who are at risk of psychosis, and to track responses to treatments.

[Continued on next page]

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