Brief Description of the DNA Methylation Testing

Clozapine is the most effective antipsychotic for people with schizophrenia or other psychotic disorders who do not respond to treatment with first- or second-generation antipsychotics. It remains unknown how this medication achieves its efficacy however. Emerging data suggests that dysfunction of the GABAergic/glutamatergic network in schizophrenia may have an important role in symptom severity. Some evidence suggests GABAergic dysfunction is mediated by down-regulation of reelin gene expression, which in turn is associated with NDA methyltransferase. Clozapine may therefore exert an effect by activating DNA demethylation.

Few studies have investigated this mechanism to date, and most rely on limited post-mortem tissues. DNA methylation in peripheral blood may mirror the changes taking place in the brain and permit broader inquiry. Recent research also documents success in testing DNA methylation in peripheral blood samples from this clinical population.

This research project measures DNA methylation in a variety of different populations and will test to see if people with schizophrenia and on clozapine have a different pattern of DNA methylation found in a blood sample.

Study responsibilities involve up to four visits for a blood draw and interviews. Participants are compensated for their time and offered arranged transportation where eligible. This research is being conducted by Dr. Deanna Kelly (http://www.medschool.umaryland.edu/profiles/Kelly-Deanna/) at the Maryland Psychiatric Research Center (University of Maryland, School of Medicine).

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