Neuropsy2QB

TOWARDS A QUANTITATIVE BIOLOGICAL APPROACH FOR NEUROPSYCHIATRY

Draft Call
NEUROPSY2QB – WHY?

- Neuropsychiatric drug discovery has almost completely stalled
  - Psychotic and affective disorders still present significant challenges, not least those associated with an aging population
  - Treatments for other aspects of neuropsychiatry, e.g. cognitive dysfunction, have only minimal effect
- Diagnosis of neuropsychiatry conditions is still based on *qualitative* assessment of symptoms, defined by convention, rather than *quantitative* analysis of aberrant biology
CHALLENGE & OPPORTUNITY

• Validation of biologically based diagnostic criteria would enhance:
  • Choice of the right treatment for the right patient
  • Better and more consistent stratification for clinical trials
  • Identification of new targets & routes for registration
  • Reverse and forward translation

• A wide range of technologies & opportunities are emerging including: EEG, AER, MEG, Imaging MRI & PET, Improved Blood biomarker platforms, Neuropsychology testing, etc
CONCEPT

• A battery of techniques would be implemented to assess subjects in an unbiased manner both clinically and by homology pre-clinically.

• One or more traditional symptom domains (e.g. psychosis) would be used to identify two, or more, patient groups for comparison (e.g. dementia and schizophrenia).

• Post-hoc analysis would identify amongst others:
  • a minimal diagnostic set and rational criteria for stratification
  • Causal relationships with underlying biological substrates
  • Parameters for reverse translation to pre-clinical studies
  • Understanding of neural circuits and the connectome