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## Biomarkers and pharmacogenomics in CNS disorders

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The promise of personalized medicine in providing the most effective and safe therapeutics to specific subpopulation of patients relies on the proper diagnosis of the disease and understanding of pharmacogenomics of pharmacological agents and the causes of variations of drug effects in different patient populations. Variations in drug efficacy and safety have been associated to differences in disease pathology, pharmacokinetics and pharmacodynamics actions of agents. Recent advances in personalized/stratified medicine are occurring mainly due to the completion of the human genome, rapid growth in the use of next-generation sequencing technologies and application of advanced techniques for identifying novel biomarkers in understanding disease pathology and response to therapeutic agents or other interventions. This talk will provide an overview of biomarkers in CNS disorders, and the integration of different types of biomarkers in understanding disease pathology, in drug discovery and development process with particular focus in CNS disorders. Pharmacokinetic, pharmacodynamic and pharmacogenomic biomarkers that are used to optimize treatment outcomes will be discussed. Particular attempts to understand genetic variations driving susceptibility to CNS disorders in different patient populations across geographical regions and drug efficacy and therapeutic efficacy will be reviewed.

### Biography

Subbu Apparsundaram completed his Doctorate in Pharmacology at the University of Houston and Post-doctoral work in neuropharmacology at the Vanderbilt University. He was a faculty at the University of Kentucky and was a senior scientist at Roche Pharmaceuticals. Currently, he is Chief Science Officer at VClinBio. He has wide experience in neuropharmacology and is focused in the application of translational research for advancing biomarker discovery, diagnostics development and personalized medicine in multiple therapeutic areas. He has more than 40 peer reviewed publications.

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