

## In-vitro Pharmacokinetics & Drug Metabolism Profiling Assays

### 1. Solubility of Test Item at pH 7.4

UV Spectrophotometric analysis of serially diluted solutions (six levels) from stock using ACN and buffer, to evaluate the solubility of NCE's in buffer)

### 2a. Metabolic Stability

1 Test Compound, 4 Species (human, dog, rat and mouse), 1 substrate Concentration, 1 protein concentration, with and without cofactor, singlet measurement, along with data for positive control substrate, % metabolism at 30 min.

### 2b. Metabolic Stability

1 Test Compound, 1 Species (monkey), 1 substrate Concentration, 1 protein concentration, with and without cofactor, singlet measurement, along with data for positive control substrate, % metabolism at 30 min.

### 3. Metabolite Identification

1 Test Compound, Microsomes from two Species (rat or mouse, human), incubated at 30 min and 2 hours, scan with LC-MS/MS for possible metabolites.

### 4. CYP Inhibition

1 compound, 5 assays (1A2, 2C9, 2C19, 3A4 & 2D6), (9-12 test item concentrations), singlet measurement, along with  $IC_{50}$  of positive control inhibitor.

### 5a. Protein Binding

Plasma of three species (human, dog, rat) equilibrium dialysis-5h, 1 test concentration, 3 replicate cells, estimation of concentration in plasma and buffer in single curve

### 5b. Protein Binding

Plasma or microsomes or rat brain homogenate in equilibrium dialysis-5h, 1 test concentration, 3 replicate cells, estimation of concentration in plasma and buffer in single curve

### 6. Brain in Beaker

Concentration gradient to draw small molecules out of brain homogenate. The brain homogenate is in dialysis membrane compartment and is spiked with upto 4 test compounds and a standard, quality control compound, quantitation using LC-MS/MS system.

Suven Life Sciences Limited

Serene chambers, Road No - 5, Avenue-7 Banjara Hills, Hyderabad 500 034, INDIA

Tel: 91-40-23556039/38 Fax: 91-40-23541152

Contact : nvsrk@suven.com, knvishu@suven.com