



## ***In vitro* DMPK Studies**

BSL BIOSERVICE is offering a flexible range of *in vitro* DMPK research services to suit the metabolism profiling needs of your development candidate. These range from relatively simple assays supporting preclinical candidate selection to models that provide DMPK data required as part of the documentation submitted for the approval of Phase I studies.

### ***In vitro* Drug metabolism**

#### **1. Metabolic stability**

- Liver microsomes or hepatocytes
- Human, mouse, rat, dog, monkey\*
- Marker reaction control
- Standard: 2 conc. / 4-5 time points

#### **2. Comparative metabolic profiles**

- Liver microsomes or hepatocytes
- Human, mouse, rat, dog, monkey\*

#### **3. CYP profiling**

- rCYP isoform specific clearance (Supersomes<sup>®</sup>)
- HLM individual donor correlation studies

\* Further species on request

### ***In vitro* Drug interaction**

#### **1. CYP inhibition**

- Human liver microsomes (>10 donors)
- FDA approved reference inhibitors and marker substrates
- Full inhibition control
- Screen (IC<sub>50</sub> estimate), IC<sub>50</sub>, K<sub>i</sub>
- On request: available in human hepatocytes (fresh / cryopreserved, suspension / monolayer)

#### **2. CYP induction**

- Human hepatocytes (fresh / cryopreserved)
- Monolayer culture (sandwich on request)
- FDA approved reference inducers and marker substrates
- Standard: CYP 1A2, 3A4, 2C9 (more available)
- Cytotoxicity and morphology assessment
- Optional: pre-experimental hepatotoxicity range-finding study

### ***In vitro* Drug transport**

#### **Drug permeability and active efflux**

- Caco-2 cell system (21 day culture)
- Quality control of barrier system by TEER resistance monitoring and Lucifer yellow permeability assessment
- Permeability and efflux (P-gp) controls
- P-gp inhibition studies are available as well