

**PhaseZERO®  
Drug Discovery Services –  
Therapeutic area coverage**

The table shows examples of Asterand’s core capabilities in generating data to support target validation and compound evaluation across a range of therapeutic areas.

Custom assays can be developed on request.

TARGET VALIDATION	RESPIRATORY	INFLAMMATION	CARDIOVASCULAR	METABOLIC	CNS	GASTROINTESTINAL	GENITOURINARY	ONCOLOGY
	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™	Gene expression (qRT-PCR) XpressWay™, CustomMapping™
Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)	Gene localization (ISH)
Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™	Protein localisation (IHC) XpressArray™
Inflammatory cell profiling (multiple labeling immunofluorescence)	Inflammatory cell profiling (multiple labeling immunofluorescence)							
COMPOUND EVALUATION	RESPIRATORY	INFLAMMATION	CARDIOVASCULAR	METABOLIC	CNS	GASTROINTESTINAL	GENITOURINARY	ONCOLOGY
<b>EFFICACY</b>	Cell-based assays Cytokine release from alveolar macrophages & bronchial epithelial cells	Cell-based assays Cytokine release from alveolar macrophages & bronchial epithelial cells  Superoxide release from neutrophils  Cytokine release from other human primary cells (hepatocytes, alveolar macrophages, bronchial epithelial cells, HUVECs)		Subcellular assays Functional binding to CB1 receptor ([35S]-GTPγS)  Cell-based assays GSIS (human islets)	Subcellular assays Radioligand binding (competition)  Functional binding ([35S]-GTPγS) Enzyme activity  Tissue-based assays Radioligand binding (autoradiography)  Tissue-based assays Radioligand binding (autoradiography)  Functional binding ([35S]-GTPγS)			
<b>DISPOSITION</b>	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber) Lung metabolism	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber) Gut metabolism	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)	Metabolism & Toxicity Hepatic metabolism Drug absorption (Ussing chamber)
<b>SAFETY</b>	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction Cytotoxicity in alveolar macrophages & bronchial epithelial cells	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction  Therapeutic antibody profiling FDA cross reactivity screen (human TMA)	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction  Therapeutic antibody profiling FDA cross reactivity screen (human TMA)	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction	Drug interactions and cytotoxicity Hepatic cytotoxicity Hepatic DME induction  Therapeutic antibody profiling FDA cross reactivity screen (human TMA)