

**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)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)	Protein localisation (IHC)
XpressArray™	XpressArray™	XpressArray™	XpressArray™	XpressArray™	XpressArray™	XpressArray™	XpressArray™	XpressArray™
Inflammatory cell profiling (multiple labeling immunofluorescence)	Inflammatory cell profiling (multiple labeling immunofluorescence)	Inflammatory cell profiling (multiple labeling immunofluorescence)						
COMPOUND EVALUATION	RESPIRATORY	INFLAMMATION	CARDIOVASCULAR	METABOLIC	CNS	GASTROINTESTINAL	GENITOURINARY	ONCOLOGY
EFFICACY	Cell-based assays Cytokine release from alveolar macrophages & bronchial epithelial cells	Cell-based assays Cytokine release from alveolar macrophages & bronchial epithelial cells		Subcellular assays Functional binding to CB1 receptor ([35S]-GTPγS)	Subcellular assays Radioligand binding (competition)			
		Superoxide release from neutrophils		Cell-based assays GSIS (human islets)	Functional binding ([35S]-GTPγS) Enzyme activity			
DISPOSITION	ADME Hepatic metabolism Drug absorption (Ussing chamber) Lung metabolism	Cytokine release from other human primary cells (hepatocytes, alveolar macrophages, bronchial epithelial cells, HUVECs)			Tissue-based assays Radioligand binding (autoradiography)			
		ADMET Hepatic metabolism Drug absorption (Ussing chamber)	ADMET Hepatic metabolism Drug absorption (Ussing chamber)	ADMET Hepatic metabolism Drug absorption (Ussing chamber)	ADMET Hepatic metabolism Drug absorption (Ussing chamber)	ADMET Hepatic metabolism Drug absorption (Ussing chamber) Gut metabolism	ADMET Hepatic metabolism Drug absorption (Ussing chamber)	ADMET Hepatic metabolism Drug absorption (Ussing chamber)
SAFETY	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	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	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)		Therapeutic antibody profiling FDA cross reactivity screen (human TMA)				Therapeutic antibody profiling FDA cross reactivity screen (human TMA)