Asterand
Partners in Human Tissue Research

CORE ASSAY LIST 2008

THERAPEUTIC AREA - INFLAMMATORY

REF #	PROJECT TYPE	ASSAY PRINCIPLE	TURNAROUND TIME	MINIMUM COMPOUND REQUIRED	STANDARD FORMAT
PZR1	CustomMapping™	**Test model:** Determination of gene expression in human inflammatory tissues (tissues selected by client, diseased and non-diseased). Compare gene expression between diseased and non-diseased tissues for target and biomarker validation. **Assay format:** qRT-PCR. **Data format:** Word™ report with data available in an Excel™ file.	6 weeks (assumes no tissue sourcing required)	N/A	Profiling of 1 to 20 genes in up to 182 tissues and includes a final repor COST PER GENE REDUCES SIGNIFICANTLY THE MORE THAT ARE PROFILED
PZR2	*In situ* hybridization	**Test model:** Determination of gene expression in frozen sections of human inflammatory tissues (selected by client, diseased and non-diseased).Identify expression patterns of target mRNA at the cellular level to understand potential function of the gene of interest and its possible role in disease. **Assay format:** *In situ* hybridization. **Data format:** Standard ISH report to include detailed description of distribution of mRNA expression on target mRNAs in frozen sections of human inflammatory tissues.	Stage 1 and Stage 2 in approximately 4-5 weeks	cDNA clones or accession number of mRNA sequence and any information on suitable positive control human tissue	1 target, 1 tissue, 3 donors Using validated riboprobe pairs
PZR3	Immunohistochemistry	**Test model:** Determination of protein expression in human inflammatory tissues (selected by client, diseased and non-diseased). identify the pattern of expression of a target protein at the cellular level to understand potential function of that target and its possible role in disease. **Assay format:** Immunohistochemistry. **Data format:** Standard IHC report to include methodology and detailed analysis of expression of target proteins in selected tissues.		5mg	1 target, 1 tissue, 6 donors Full scale Stage 1 optimization

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PZR4	FFPE Tissue Arrays	**Test model:** Localization of target proteins in custom made inflammatory disease TMAs. Screen and analyze many tissues and disease indications simultaneously. **Assay format:** Tissue microarray. **Data format:** Word™ report with clinical and experimental datasets and JPEG images to illustrate main findings.		N/A	1 target in a 250 core FFPE tissue microarray Full scale Stage 1 optimization with positive control tissues
PZR5	Immunofluorecence	**Test model:** Simultaneous examination of the expression of one protein relative to the distribution of a panel of inflammatory cell marker proteins (T-cells, B-cells, neutrophils, macrophages and mast cells in FFPE sections of tissues. **Assay format:** Immunofluorecence. **Data format:** Standard immunofluorecence report to include description of target protein immunoreactivity relative to the distribution of marker proteins.	Stage 1 and Stage 2 in approximately 4-5 weeks	Proprietary antibodies or nomination of commercially available antibodies incl. marker proteins for phenotyping.	1 target, 1 tissue, 6 donors 8 phenotyping targets
PZIN - 06	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in whole blood. Useful for lead optimization ofanti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 96-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 6 concentrations tested in triplicate Measure up to 2 cytokines
PZIN - 07	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in lymphocytes. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 96-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 6 concentrations tested in triplicate Measure up to 2 cytokines
PZIN - 08	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in monocytes. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 96-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 6 concentrations tested in triplicate Measure up to 2 cytokines

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PZIN - 09	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in alveolar macrophages. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 24-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	4 weeks per donor	5mg	Up to 6 compounds at 6 concentrations tested in triplicate Measure up to 2 cytokines
PZIN - 10	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in bronchial epithelial cells. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 24-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	5 weeks per donor	5mg	Up to 6 compounds at 6 concentrations tested in triplicate Measure up to 2 cytokines
PZIN - 11	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in HUVECs. Support lead optimization for anti-inflammatory compounds or to investigate their potential side effects. **Assay format:** Incubations in 96-well plates. ELISA. **Data format:** Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 6 concentrations tested in triplicate
PZIN - 12	Mediator release	**Test model:** Determine effect of compounds on (stimulated) cytokine release in hepatocytes. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 96-well plates. ELISA. **Data format:**Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 6 concentrations tested in triplicate
PZIN - 13	Cell proliferation	**Test model:** Determine effect of mitogens/inhibitors on cell proliferation in whole blood. Useful for lead optimization of anti-inflammatory compounds or the investigation of their potential compound. **Assay format:** Incubations in 96-well plates. [3H]thymidine incorporation. **Data format:** Word™ report with data available in an Excel™ file.	3 weeks per donor	5mg	Up to 4 compounds at 9 concentrations tested in quadruplicate

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PZIN - 14	Enzyme activity	**Test model:** Determine effect of compounds on tyrosine aminotransferase (TAT) activity in hepatocytes. Support lead optimization for anti-inflammatory compounds or to investigate their potential side effects. **Assay format:** Incubations in 48-well plates. Colometric assay. **Data format:** Word™ report with data available in an Excel™ file.	4 weeks per donor	5mg	Up to 3 compounds at 10 concentrations tested in triplicate
PZIN - 15	Changes in gene expression	**Test model:** Determine gene expression changes in response to standard and test compounds in hepatocytes. Support lead optimization for anti-inflammatory compounds or to investigate their potential side effects. **Assay format:** Incubations in 96-well plates. qRT-PCR. **Data format:** Word™ report with data available in an Excel™ file.	5 weeks per donor	5mg	Up to 4 compounds at 5 concentrations tested in quadruplicate at 2 timepoints