Cell based assays (human blood based assays)

Xvi-Blood models				
Stimulus	**Targets**	**End-points**	**Detection**	**Applications**
LPS	broad acting	cytokines chemokines phenotype	multiplex, flow cytometry	general inflamatory model, sepsis
LPS+ATP	inflammasome, monocytes, T cells			P2X7-mediated inflammation
LPS+chloesterol	monocytes, inflammasome			atherosclerosis, inflammation
LPS+Al(OH)$_3$	monocytes, inflammasome			adjuvants and vaccine formulations
fMLP	basophils, neutrophils			allergic responses
Coagulation induced inflammation	monocytes, neutrophils			thrombosis and would healing
Staphylococcus enterotoxin B	T cells, IFN γ responses			T cell functions
Zymosam	complement activation, TLR2/6 signaling			arthritis, fungal infection, inflammatory shock

PBMNCs ASSAYS				
Stimulus	**Targets**	**End-points**	**Detection**	**Applications**
TLR1/2 (PAM3SK4)	monocytes, macrophages	cytokines chemokines phenotypes	multiplex, flow cytometry	fungal infections,skin inflammation, autoimmune
TLR4 (LPS)	monocytes, macrophages			autoimmune diseases
TLR5 (Flagelin)	monocytes, macrophages			autoimmune diseases
TLR7 (Imiquimod)	pDC, B cells, monocytes			autoimmune diseases, psoriasis
TLR8 (ssRNA)	mDC			autoimmune diseases, rheuamatoid arthritis
TLR9 (CpG DNA)	B cells, pDC			T cell functions

Logistic pre-analytical requirements

collection tubes: Sterck Cytocheck BST
volume: 5-10mL
storage: RT (20-25^{0}C)
transportation: within 72h
**frozen peripheral blood MNCs are also acceptable for PBMNCs assays*

Cell based assays (inflammasome activation)

INFLAMMASOME SCREENING	
Description	Cellular platform to evaluate inflammasome activation
Application	Responsiveness and status defect in inflammatory diseases. Screening of inflammasome inhibitors or immune modulators
Readouts	Pro-inflammatory markers (IL-1β, IL-18), caspase-1 activity, ASC detection
Cell line	human monocytic THP-1 cell line
Materials requirement	10-20µM in DMSO
Number of replicates	2
Controls	3
Time	72h - 96h