

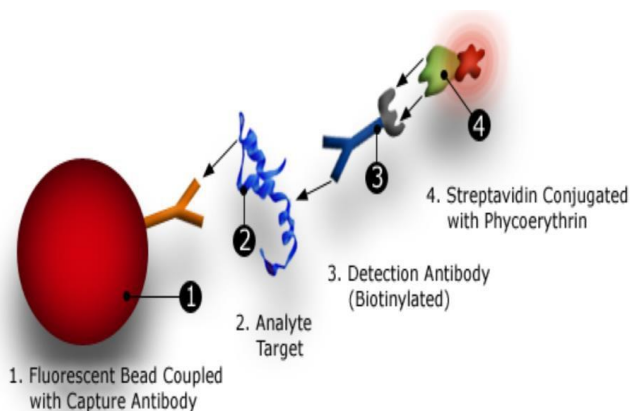


## LUMINEX-BASED MULTIPLEX IMMUNOASSAYS

### LUMINEX ASSAY

Luminex assay are high-throughput, multiplex bead-based assays. We simultaneously examine multiple analytes in a single sample (as little as 10  $\mu$ L per sample from human, mouse, etc), such as ~ **150** mouse cytokines/chemokines, ~ **300** human cytokines/chemokines, and many proteins (expression or phosphorylation level) involved in signaling pathways of cancer, apoptosis, acute phase response, inflammation, immunity, diabetes, kidney toxicity, etc. We also simultaneously interrogate multiple histone H3 PTMs, transcription factors-specific DNA binding activity, gene expression and DNA copy number variation, etc.

### HOW DOES OUR ASSAY WORK?



### OUR ASSAYS ARE WIDELY USED IN BIOLOGY OF VARIOUS DISEASES

- ✓ Acute phase response
- ✓ Allergy / allergen testing
- ✓ Angiogenesis
- ✓ Antibody isotyping
- ✓ Apoptosis
- ✓ Autoimmunity and rheumatology
- ✓ Cancer growth and proliferation
- ✓ Cancer metastasis
- ✓ Cardiovascular disease (CVD biomarkers)
- ✓ cell survival
- ✓ Cellular Signaling
- ✓ Circulating cancer biomarkers
- ✓ Diabetes and obesity
- ✓ Endocrine (Pituitary, Thyroid, & IGFs)
- ✓ Gene expression profiling
- ✓ Histone H3 PTMs,
- ✓ Immune checkpoint blockade
- ✓ Immunity
- ✓ Inflammation
- ✓ Kidney toxicity
- ✓ Liver injury
- ✓ Metabolism
- ✓ MicroRNA profiling
- ✓ Neurodegenerative diseases
- ✓ protein phosphorylation
- ✓ Stem cell differentiation & characterization
- ✓ Transcription factors-specific DNA binding



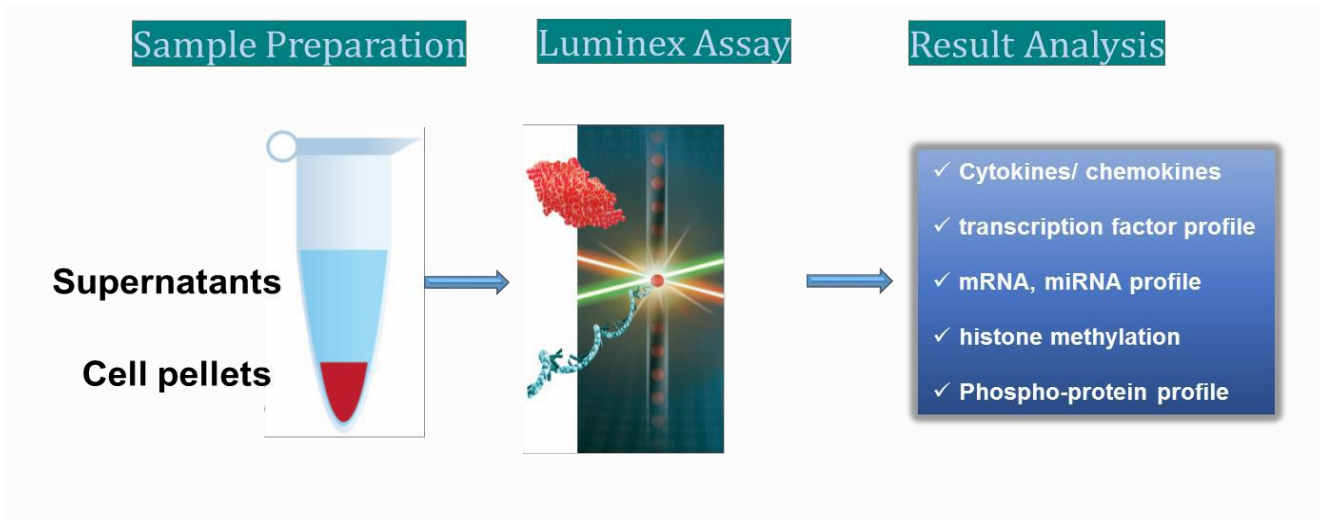
### OUR SERVICE FEATURES

- ❖ **Variety of Samples:** serum, plasma, cell lysates, cell culture supernatants, milk,



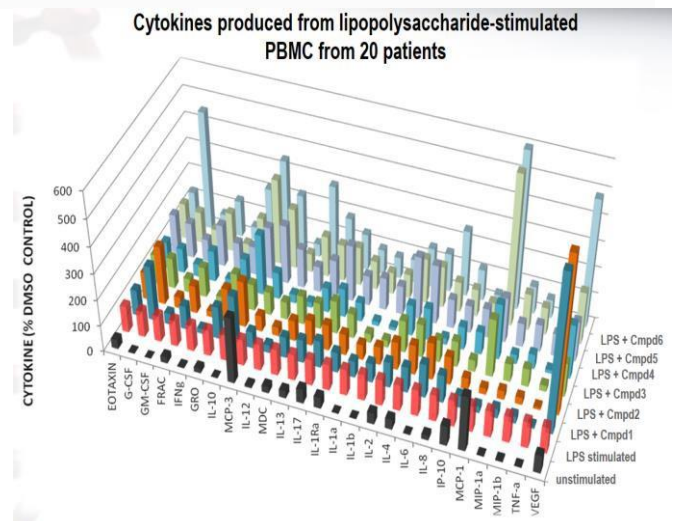
- saliva, nasal lavage, exhaled breath condensate, urine, tear, etc.
- ❖ **Variety of Targets:** cytokines /transcription factors /protein phosphorylation/histone acetylation/ mRNA, miRNA, etc.
- ❖ **High throughput:** 96-well format, duplicate or triplicate
- ❖ **Robust and highly reproducible** (CV<10%)

- ❖ **Well-validated reagents**
- ❖ **State-of-art platforms:** Bioplex 200; Bioplex 100
- ❖ **Simultaneous measurement** of proteins and genes in a single sample
- ❖ **Quick Turnaround Time:** 1-3 weeks or sooner, upon receiving test samples
- ❖ **20+ years of experience:** Expert data analysis and interpretation, scientific and technical support



### SAMPLE REQUIREMENTS

- Test samples should be Bio-Safety Level II or below.
- Any extraction or preparation procedures can be arranged in advance.
- Samples should be submitted in a minimum-binding 96-well plate accompanied by a template that outlines the sample order.
- sufficient volume 10-300 µl depending on duplicate or triplicate.
- ship samples in dry ice if possible



**Example.** *In vitro* effects of 6 compounds on expression of 25 cytokines from LPS-stimulated PBMC from patients (n=20)