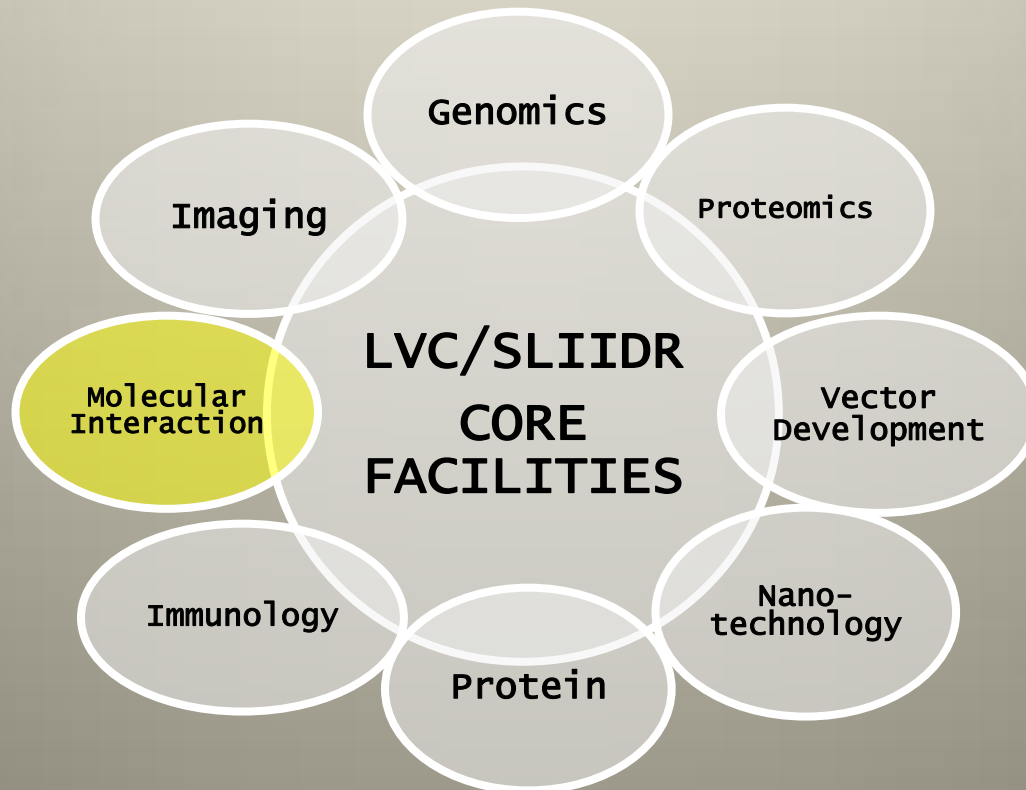LVC & SLIIDR are working together to develop & support a series of Core Facilities to serve investigators in the field of bioscience with access to state-of-the-art equipment in support of their research.

LVC/SLIIDR CORE FACILITIES

- Genomics
- Proteomics
- Vector Development
- Nano-technology
- Protein
- Immunology
- Molecular Interaction
- Imaging

Featured Core Facility

Molecular Interaction
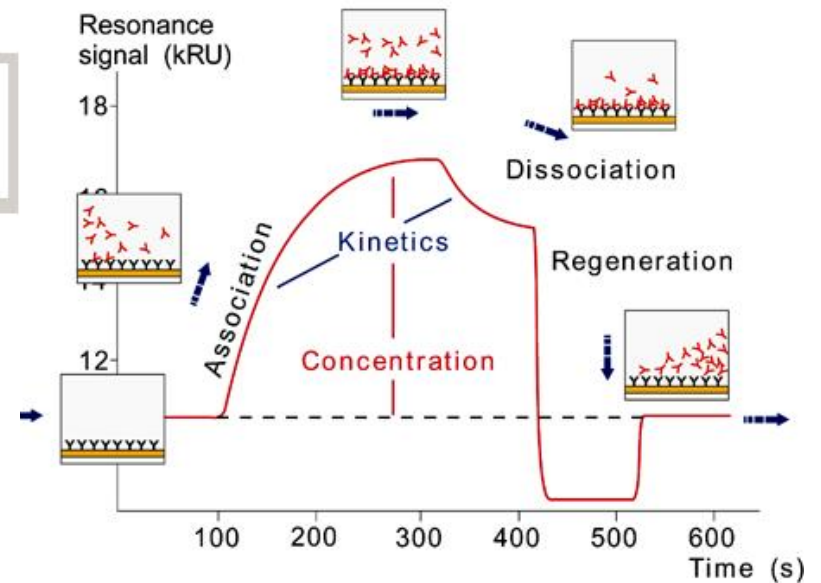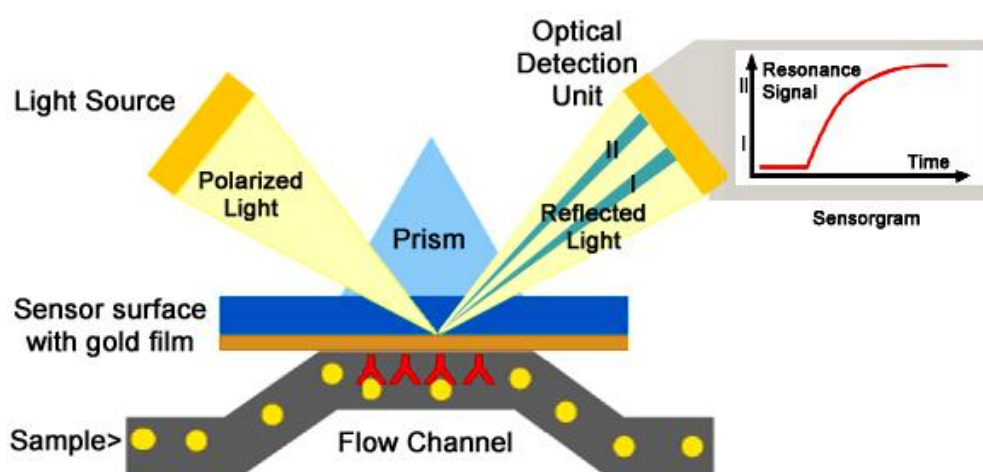
Molecular Interaction Core

Objective

- **To visualize and analyze label-free molecular interactions in real time using surface plasmon resonance technology**

Services

- Sensor surface preparation.
- Optimization of experimental conditions and sensor surface regeneration conditions.
- Generation of ligand-analyte interaction curves.
- Analysis of data.

Molecular Interaction Core

Surface Plasmon Resonance

Molecular Interaction Core

How can the surface plasmon resonance technology be applied to biomedical research?

- Binding specificity.
- Interaction kinetics.
- Concentration in complex samples.
- Monoclonal antibody screening.
- Antibody-antigen affinity.
- Epitope mapping.
- Receptor ligand interactions.
- Multiple complex formation.
- Ligand fishing for MS analysis.

- Proteins
- Carbohydrates
- Nucleic acids
- Lipid bilayers
- Intact cell membranes
- Cell/tissue lysates
- Serum/plasma
- Viruses
- Whole cells

Molecular Interaction Core

Sensor Surface Chips

Chip	Dextran	Modification	Application
CM5	100 nm	100% carboxylation	General (amine, thiol, aldehyde, maleamide coupling)
CM4	100 nm	30% carboxylation	Cell extracts / serum samples (decreased charge)
CM3	30 nm	100% carboxylation	Cell extracts / serum samples (increased sensitivity)
C1	None	100% carboxylation	Phage binding
NTA	100 nm	Nitrilotriacetic acid	Capturing poly-HIS tags
HPA	None	Hydrophobic	Capturing Lipids
L1	100 nm	Lipophilic substances	Forming bilayers that mimic membranes
SA	100 nm	Streptavidin	Capturing biotin
AU/J1	None	None	User defined surface chemistry

Molecular Interaction Core

Contact Information

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