**Introduction**

**MMIC Information**

Director: Randall S. Davis, MD
Manager: Edule. M. Tabengwa, PhD
Contact: 975-0903; tabengwa@uab.edu
Web: http://www.uab.edu/medicine/mmic/

**Biacore T200 Components**

**Advantages of the Biacore T200**

- **Label-free measurements**
- **Real time** binding characteristics (on- and off-rates) observed in real-time
- **Non-invasive**
- **Direct visualizes**
- **Reveals multiple binding affinities**

**Biacore T200 Technology**

- **Integrated fluidic cartridge (IFC)**
- **Surface preparation**
- **Real-time analysis**
- **Regeneration**

**Biacore T200 Components**

- **Ligand:** molecule to be immobilized on the sensor chip
- **Sample:** sample to be injected over the chip surface for analysis

**Biacore Assay Steps**

**Surface Preparation**

- Immobilization of the ligand to the Sensor Chip

**Sample Injection**

- The sample is injected over the chip surface with immobilized ligand at a constant flow rate
- The analyte from the sample binds to the immobilized ligand resulting in a change in the mass on the chip surface, which is recorded
- Continued buffer flow allows monitoring of the analyte dissociation from the ligand

**Regeneration**

- The analyte is completely removed from the ligand
- Can be achieved by use of buffers with changes in pH, salt, or detergents
- After regeneration the immobilized ligand is maintained on the chip surface, with full activity
- To achieve high quality data effective regeneration is essential

**Data Evaluation**

- Flexible evaluation software for data analysis
- Software has quality control tools for guidance on data quality and validity

**Conclusion**

- Use of the Biacore T200 can provide comprehensive information from one system
- Analyzes molecular interactions in real time and obtains a wide range of critical binding data

**Selected MMIC-related publications**