Core Facility Staff

We are a group of full-time scientists with expertise in instrumentation, analytical chemistry, biochemistry, and molecular biology. TTDDDP offers step-by-step and in-depth training for users’ quick and independent access to new technologies.

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Targeted Therapeutic Drug Discovery & Development Program Core Facility (TTP Core Facility)

- Fully staffed instrumentation facility
- Located at the center of UT-Austin Campus
- For users from the University of Texas at Austin, other universities, and industry.
- Capabilities include plate readers, spectroscopy, imaging, liquid handlers, and cell culture.
- Users can be trained to perform experiments independently or an experienced staff member can assist/perform experiments for upon users’ requests.

For more information visit:
http://sites.utexas.edu/TTDDDP

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Multi-mode Plate Reader

**Synergy Neo2 & H4 (Biotek)**
- Both filter & monochromator based
- UV-Vis (230-999nm, 0-4 OD), Fl (250-850nm), Lum, FP, TRF, BRET
- 6- to 1536-well plates, Temp control (~ 65°C)
- Top/bottom reading, Spectral & well-area scanning
- Take3 multi-vol plate for low vol of (2 µL) microspots.
- 2 reagents dispenser (down to 10uL) & Bar-code reading

**EnVision (Perkin Elmer)**
- Filter-based, dual detector
- UV-Vis(240-850nm, 0-4 OD), Fl(240-850nm), Ultra-Lum, FP, TRF, Ultra-Alpha
- 6- to 1536-well plates, Top/bottom reading.
- Two channel dispenser for real-time kinetic measurement.
- Automated (50 plates) or manual plate loading, Bar-code reading.

**Cytation 5 (Biotek)**
- Fl (4 color simultaneous), brightfield, color brightfield, phase contrast microscopy (4,10, 20, 40x), conventional multi-mode microplate reading (UV-Vis, Fl, FP, Lum).
- 6- to 1536-well plates, compatible with slides, cell culture dishes & flasks (T25), hemocytometers, chamber slides.
- Temp control (~ -65°C).
- CO2/O2 control, incubation and shaking for live cell assays

**IncuCyte Zoom (Essen Bioscience)**
- Dual fluorescent and HD-phase contrast imaging microscope (4x, 10x, 20x) housed in a standard incubator for real time quantitative live-cell imaging and analysis.
- Read up to 6 microtiter plates.

**FlexStation 3 (Molecular Devices)**
- A monochromator based, dual detector, fast kinetic measurement with an integrated 8 channel pipettor (max 200 µL) for programmable reagent dispensing.
- UV-Vis(200-1,000 nm, 0-4 OD), Fl(250-850nm), Lum, FP, TRF
- Temperature control (~ -45°C).
- 6- to 384 well plates, Top/bottom reading

**MicroBeta TriLux (Perkin Elmer)**
- Specific for radioactive assay utilizing liquid scintillation or luminescence detection.

Liquid Handling Equipment

**Echo 550/Access (LabCyte)**
- Automated and flexible pipetting based on acoustic dispensing for precise nL volume (2.5 nL–10 µL). Bar-code reading
- Economic and environmental friendly (no disposable tips).
- Access ready-to-go robotic system for automated plate handling

**Janus Automated Workstation (Perkin Elmer)**
- Offering automated and flexible pipetting with the widest dynamic volume (0.5 µL –200 µL).
- Compatible with any labwares including tubes, vials, standard and high density microplates (up to 1536 well)
- 8 tip module for serial dilution or cherry pick. 96 or 384 MDT head for high throughput pipetting.
- Plate/tip box loader allows walk-away automation.

**Microflo Select (BioTek)**
- Rapid bulk liquid dispenser with wide dispense volume range of 500 nL to 3 mL
- 6- 1536-well plates
- Automated (30 plates) or manual plate load

**EL405lx Plate washer (BioTek)**
- Rapid wash (aspirate/dispense) of 96- or 384 microwell plates.
- Versatile application from basic ELISA to sensitive cell or bead washing.
- Lumines® xMAP® approved (magnetic or polystyrene bead assay)

Tissue Culture

- Forma 3110 CO2 Incubator (37°C/5% CO2).
- Leica DMI 1 microscope (4x, 10x, 20x).
- Biosafety hood, centrifuge, & water bath.

Other Tools for HTS

**J-815 CD spectrometer (Jasco)**
- Specific for optically active chemicals and secondary structure analysis of biological molecules.
- Autosampling (2 x 96 well plates).
- Temp control (6–110°C) for thermal melting & 6 cell simultaneous analysis

**Automated Heat Plate Sealers**
- ALSP 3000 (ThermoFisher) & PlateLoc (Agilent).
- Seals up to 10 plates/min
- Gas purging option in PlateLoc (useful for plate storage under inert atmosphere)
- Accommodate a wide range of microplates and tube racks and various seal tapes.

**Centrifuges**
- VSpin (Agilent) & Centrifuge 5810R (Eppendorf)
- high- or medium-throughput applications such as PCR purification, cell harvesting, and air bubble removal in high-density microplates
- Temp (4°C~40°C) and speed (~14,000 rpm) control

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