

BCDD - BLAVATNIK CENTER for Drug Discovery (Ramot)

code: 12-2017-1120

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Turning Excellent Multidisciplinary Science into Therapeutic Leads

HTS Biological assays unit:

The research capabilities of the High Throughput Screening (HTS) and Biological Assays Unit at the BCDD include:

Cell culture of multiple cell types modeling disease.

Performance of a diverse range of biological assays adapted for HTS of drugs in 96, 384 or 1536 well plates such as:

Image-based HTS analysis assays

HT QRT-PCR and miRNA microarray assays

HT fluorometry – spectrometry – luminometry assays

HT DNA-RNA-Protein extraction for “omics”

Medicinal Chemistry unit

The Medicinal Chemistry Unit at the BCDD provides a continuous process from hit prioritization and analysis, through in-house synthesis, analogue design, structure-activity relationship studies and final optimization.

The Unit is equipped with ultra modern synthetic and analytical equipment in order to accelerate the “hit to lead” optimization process.

Founded on the principle of scientific innovation, the BCDD is focused on sustaining capabilities for cutting-edge formulation and drug delivery technologies for solubility and bioavailability enhancement.

Specific equipment at the BCDD:

The HTS room: Two integrated Freedom EVO 150 and EVO 200 Tecan robots equipped with: 2 Robotic Manipulation arms, liquid handling 8 channels unit, liquid handling 96 channels unit, Carousel for 220 microplates and deepwell plates, Centrifuge, TECAN Hydrospeed 96/384 plate washer, Multidrop reagent dispenser, Tecan infinite M1000 Pro-Multi mode plate reader, Chill/heat plate, plate shaker, plate incubator MIO2 system, Pin Tools for TECAN MCA96, Lyconic 44 plates CO2 incubator, TECAN HP300 digital dispenser, In Cell 2200 image Analyzer (GE Healthcare), Quant Studio 12K Flex (Applied Biosystems), 3 PC computers and specific software licenses for TECAN, IN Cell 2200 and Quant studio 12K Flex for applications programming, running and data analysis.

The TC room: 3 MS12 Laminar HEPA-flow biological cabinets, 4 HERA-Cell VIOS 160I CO2 Incubators (Thermo Scientific), TC microscope (Zeiss), Cell counter, Water bath, bench 4oC refrigerator and -20oC freezer.

The Cryo room: Revco -80oC and -20oC freezers (Thermo Scientific), Double door 4oC refrigerator for TC reagent storage, Liquid nitrogen storage for 6000 samples and backup N2 tank, ice-maker.

The Medicinal Chemistry lab: Semi-prep and Analytical HPLC (Dionex, Ultimate 3000), both HPLCs are connected to a CORONA (Charged Aerosol) detector and a UV-Vis detector, Biotage Isoletra One Flash chromatography system, Liberty Blue Peptide synthesizer equipped with microwave oven and a parallel synthesis equipment. Access to TAU school of Chemistry core research facilities such as NMR, Mass Spectrometry Unit, Crystallography and advanced analytical chemistry lab.

<http://www.bcdd.tau.ac.il/>

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