

Hormel Institute Equipment List: Updated April 2019

Instrument	Manufacturer	Model	Room #	Description
Flow Cytometry				
FACSCalibur Flow Cytometer	BD	FACSCalibur	2221	Two laser, four color analyzer
FACS Aria II Flow Cytometer Cell Sorter	BD	ARIA II	2221	Five laser, fifteen color cell sorter. Can sort into tubes, well plates, or onto slides
BD LSRFortessa	BD	LSR Fortessa	2221	Five excitation lasers, sixteen colors
Microscopy				
Confocal Microscope	Nikon	Eclipse TE 2000-E with Spectral Imaging System CI si	2215	4x, 10x, 20x, 40x oil. 60x water 100x oil objective. DAPI, FITC, GFP, Texas Red, Cy2, Cy3, Cy5 plus spectral imaging
Zeiss Apotome Microscope	Zeiss	Axio Observer	2218	5x, 10x, 20x, 40x, 63x oil objective. Fluorescence and brightfield. Apotome allows for 3D imaging of fluorescent objects
Zeiss laser microdissection microscope	Zeiss	Palm Microbeam	2219	5x, 10x, 20x, 40x, 63x objectives. Can be used to isolate homogenous, morphologically-identified or fluorescently-labelled samples and can place samples in a centrifuge tube for RNA, DNA or protein analysis.
Fluorescent Microscope	Leica	DMIRB	2216	4X, 10X, 20X, 40X, 63X oil objectives. Fluorescence, Phase and brightfield, with camera and mechanical stage. Has automated soft agar colony counting program
Dissecting (Stereo) Microscope	Zeiss	Discovery V20	2217	0.5x, 1.0x and 3.5x objective, zoom feature allows for higher magnification. Large object field allows view of entire slide mount or entire organism.
Centrifugation				
Ultracentrifuge w/rotors	Beckman	Optima 90K	177	Comes with Ti 90, Ti 70, SW40 Ti and SW 60Ti rotors, tubes are available for some rotors
Centrifuge - High Speed w/rotors	Beckman	J-E	177	Comes with F10 (6x500ml), JA14 (6x250ml), JA20.1 (32 x 15ml) and JA 25.5 (6x50ml) rotors
Centrifuge - High Speed w/rotors	Sorvall	Lynx 6000	2223	Auto-Lock rotors include F12 (6x500ml), F14 (14x50ml conical tube), T29 (8x50ml round bottom tube), F9 (6x1000ml)
Analytical Ultracentrifuge	Beckman	Optima AUC	2225	Ultracentrifuge with UV-Vis absorbance optics for analysis of samples in their native state
X-Ray Crystallography				
X-Ray Crystallography System	Rigaku	Micromax 007 HF X-Ray Generator with R-Axis IV +/- detector	B122	20 - 40 kV, 10 - 30 mA, copper anode target
Protein Crystallography Robot	Art Robbins	Phoenix	185B	For preparing protein crystals
Digital Microscope	Cryscam		185B	Can be used to screen 96 well plates for protein crystals
Histology				
Cryostat	Leica	CM 1850	2222	For cutting tissue sections under cold conditions up to -20°C or colder
Tissue Processing System	Leica	TP 1020	2222	automated tissue processing system with vacuum based fume control
Embedder	Leica	EG 1160	2222	Has separately heated paraffin dispenser, for embedding processed tissue in paraffin
Microtome	Leica	RM 2235	2222	a rotary microtome for paraffin sectioning
Mass Spectrometry				
Mass Spectrometer	ABSCIEX	Triple TOF 5600	185	A sensitive and high resolution mass spectrometer for proteomics and other analysis
Source for Mass Spec (nano spray for Proteomics)	ABSCIEX		185	
Nano LC for Mass Spec	Eksigent	Ultra 1D plus	185	
Nano LC autosampler	Eksigent	Nanolc AS-2	185	
Live Cell Imager				
Live Cell Imager	Essen Biosciences	IncuCyte S3	2222	4x, 10x, 20x objectives. Red and Green Fluorescence plus phase. Live cell imager stays inside incubator, image acquisition is automatic and based on user parameters
Imagers, Spectrophotometers, and Plate Readers				
Chemiluminescent and Fluorescent Imager	GE	AI600	2222	for imaging gels and membranes, has chemiluminescent (for Western blots) and fluorescent capabilities and can image dyed gels
Chemiluminescent Imager	GE	Image quant LAS400	177	For imaging chemiluminescent membranes(Western blots), ethidium bromide stained gels, and dyed gels
Plate Reader: Luminescence, Fluorescence, Absorption	Bio-Tek	Neo 2	2222	microplate reader with luminescence, fluorescence and absorbance capabilities, has monochromator fluorescence wavelength range 250 - 850 nm absorbance 230nm - 999nm
Fluorescence/Phosphorescence Imager	Molecular Dynamics	Storm 840	177	Can read chemiluminescent membranes, has storage phosphor mode
Gel Documentation System	Carestream	Gel Logic 212 Pro	177	Has UV transilluminator and epi-white light transmission, can read Ethidium Bromide stained gels and gels with a visible stain
Nanodrop Spectrophotometer	Thermo	Nano Drop 2000c	185	UV - Vis spectrophotometer with a wavelength range of 190nm - 840nm. Can analyze samples for RNA DNA or protein with a sample size ranging from 0.5 - 2.0 ul. Can also accommodate cuvettes.
Nano drop spectrophotometer	Bio-Tek	Epoch	177	can read microwell plates - has Take 3 for microvolume detection (2µl)
DU 800 Spectrophotometer	Beckman	DU 800	177	190nm - 1100 nm range read from 1ml cuvettes or use SiP system to draw sample into flow cell, has an adapter for smaller volumes
DU 640 Spectrophotometer	Beckman	DU 640	177	Basic spectrophotometer - reads from 1ml cuvettes
Real-Time PCR				
RT PCR (qPCR)	Bio-Rad	CFX 96 touch	2222	plates or tubes can be used has a thermal gradient option that can be used to find optimal temperature for primer annealing
Real Time PCR System	AB	7500	177	A five color RT-PCR instrument
SPR Instrument & ITC				
SPR detection (binding kinetics)	Biacore	T200	2223	Uses SPR technology as a label free way to characterize protein-protein, protein-small molecule, and lipid interactions. The instrument can analyze multiple ligands per sample to assay for kinetics, affinity, and calibration
Isothermal Titration Calorimeter	TA Instruments	Nano ITC 2G	2223	Measures heat gain or loss in small samples, can be used to calculate reaction stoichiometry, binding constant, dissociation constant (K _d), enthalpy (ΔH) and entropy (ΔS).
Animal Facility				
Irradiator				
Rad Source		RS2000	Animal Facility	Small animal and cultured cell irradiator. Delivers uniform doses for bone marrow ablation or for cultured cell experiments.
Animal Imaging System	Bruker	Carestream In-Vivo Xtreme FI 16MP	Animal Facility AF114	Small animal imager that detects luminescence or fluorescing cells in a small animal. Comes with X-ray as well.
HPLC and FPLC				
HPLC System Autoinjector Diode Array UV/Vis Detector	Beckman	168 DAD detector 126 pumping system	185	HPLC system with UV/diode array detector and gradient capability. Comes with a fluorescence detector as well
HPLC Fluorescence Detector	Jasco	FP 2020 plus	185	Fluorescence detector with Beckman HPLC system
HPLC	Waters	600 pump 2487 dual λ detector	2223	Capable of gradient or isocratic flow. 2487 UV-Vis dual wavelength detector 190 - 700 nm
FPLC	GE		2223	
Other				
Scintillation Counter	Beckman	LS6500	183	A liquid scintillation counter
Thermal Cyclers	Eppendorf	Master Cycler	177	
Orbital Shaker - Floor Model	Thermo Scientific	Max Q 5000	177	Floor model incubated and refrigerated shaker
Thermal Cycler	Eppendorf	96well capability, gradient	2222	
Centrifuge	Beckman	Allegra 6R	2222	
Sonic Dismembrator	Fisher	Model 100	2222	
Sonifier	Branson	450	2222	
Platform Shaker	Innova	2200		Can be set up if needed
Speedvac Concentrator	Thermo	Savant	2223	