

## **Biochemistry and Molecular Biology Laboratory (CHS)**

Thermo Fisher Attune NxT BV	2-laser, 8-color flow cytometer
Thermo Fisher QuantStudio 6	qPCR system with 96- and 384-well blocks
Thermo Fisher EVOS M7000	Inverted fluorescence microscope with live cell imaging chamber
Thermo Fisher iBright FL1500	Fluorescence/chemiluminescence blot and gel imager
Thermo Fisher SimpliAmp	Thermal cycler
Thermo Fisher Nanodrop Lite	Nanospectrophotometer for nucleic acid and protein quantification
Agilent Seahorse XFp	Extracellular flux analyzer
Oroboros O2k	Oxygraph respirometer
CellRad	Live cell x-ray irradiation system
BioTek Synergy 2	Multimode plate reader (abs/fluor/lum)
BioTek Powerwave 340	Microplate spectrophotometer
BioTek ELx50	Microplate washer
Eppendorf Biophotometer	Cuvette spectrophotometer
Zeiss Axio Imager M2	Upright fluorescence research microscope
Olympus CKX31	Inverted microscope
Thermo 1300 A2 (2)	Biosafety cabinet
Thermo Scientific 1345	Biosafety cabinet
Hyperclean Truair 24	Fume hood
Fisher Heracell 240i	CO <sub>2</sub> incubator with O <sub>2</sub> control
Fisher Heracell 150i	CO <sub>2</sub> incubator
Isotemp Direct Heat CO <sub>2</sub>	CO <sub>2</sub> incubator
VWR Mini Incubator	Non-CO <sub>2</sub> incubator
Millipore Scepter 2.0	Handheld automated cell counter
StemCell Technologies EasyRights (2)	Magnetic cell sorting system
Alfa Wassermann Vet Axcel	Clinical chemistry system
BioRad Mini-Protean Tetra	Western blot system
BioRad Mini-Protean II	Electrophoresis cell
Invitrogen Xcell SureLock	Electrophoresis cell
BioRad Powerpac HC	Electrophoresis power supply
CBS Scientific EPS-300II	Electrophoresis power supply
TransBlot Turbo	Semi-dry blotting system
iBlot2	Dry blotting system
Thermo Scientific Orion 3-star	Benchtop pH meter
Boekel Scientific Jitterbug 130000	Microplate shaker
Fisher Scientific Hot Plate Stirrer	Hot plate stirrer
Corning PC-4200	Hot plate stirrer
Precision Model 180	Water bath
Reliable Scientific Model 55	Rocking shaker
Benchmark Digital Heat Block	Heat block / dry bath
Accuris W3100A-120	Analytical balance
Fisher Scientific 100FS Isotemp	Dry oven
Arrow Engineering JR4000	Rotorstator electric stirrer
Thermolyne MaxiMix Plus	Vortex
Fisher Vortex Mixer	Vortex
Scientific Industries Vortex-Genie	Vortex
Water purification system	Water purification system
Thermo IEC-CL31R	Refrigerated centrifuge with tube and plate swing rotors
Baxter Biofuge 17R	Refrigerated centrifuge with fixed rotor
IEC Centra-8	Non-refrigerated centrifuge
Fisher Scientific Accuspin microR	Refrigerated microcentrifuge
Eppendorf 5415R	Refrigerated microcentrifuge
LW Scientific Zipocrit	Hematocrit centrifuge
Daigger 100-VAC	Microcentrifuge
Arrow Engineering JR4000	Electric stirrer
Thermo Revco	Upright ultra-low freezer
Thermo Revco RLE	Upright ultra-low freezer
Fisher Isotemp	Chest ultra-low freezer

Fisher Isotemp 20CF  
GE refrigerator/freezer  
Kenmore refrigerator/freezer  
SGS Scientific 35VHC  
Sterilelite 16L  
Smart2Pure 3 UV/UF  
Manitowoc ice machine

Upright -20°C freezer  
Refrigerator/freezer  
Refrigerator/freezer  
Liquid nitrogen storage  
Autoclave  
Water purification system  
Ice machine

### **Animal Equipment (CHS)**

EchoMRI-100  
Isoflurane system  
Multi-lane mouse treadmills (2)

Mouse body composition analyzer  
Isoflurane system  
Treadmills

### **Other (CHS)**

Hologic DXA  
Parvo-Medics metabolic system  
GE 12-lead ECG  
CardioTEch GT-400  
Lode Excaliber Sport  
Omron HEM-907XL

DXA scanner  
O<sub>2</sub> and CO<sub>2</sub> analysis system  
Auto-interpretive ECG unit  
Auto-interpretive resting and stress ECG  
Cycle ergometer  
Blood pressure monitor

### **Biomechanics and Musculoskeletal Analyses (CHS)**

9-Camera Qualisys 3D System  
6-Camera Portable Qualisys 3D System  
Noraxon TeleMYO System  
2 AMTI 3D in-ground force platforms  
CSMi Solutions, HUMAC NORM  
Philips Lumify Ultrasound  
Bertec Treadmill  
I Measure U IMU, VICON  
PCB Accelerometer  
Novel Loadsol Insoles  
TekScan Pressure Mat  
Arch Height Index Measurement System  
Lafayette Timer and Photo-Cells  
Solo-step Harness System  
Hitting and Pitching Cage  
C-Motion Visual3D Software  
I Measure U IMU-Step Software

3D motion capture  
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Wireless EMG (muscle activity) system  
Ground reaction force plates  
Isokinetic dynamometer  
Portable diagnostic ultrasound MSK and cardiovascular probes  
3D force instrumented treadmill  
Inertial Measurement Units  
3D wired industry-grade accelerometer  
Vertical force insoles  
Plantar pressure mat  
JakTook, Arch measurement system  
Electronic timer and photo-cells  
Safety harness system  
Netting for sports  
Biomechanical analysis software  
Athlete monitoring platform

### **Integrated Microscopy Center (Core) \*provides full service histology on fee for service basis**

Nikon A1rSi  
Nikon Eclipse 800  
Nikon Eclipse TS100  
Nikon E200  
Nikon Stereomicroscope  
NovaNano SEM 650  
Jeol JEM-1200  
Shanon Citadel 2000  
Histostar  
Microm HM360  
Leica Autostainer XL  
Shandon Cryotome FE

Confocal laser scanning inverted microscope with spectral imaging  
Confocal scanning upright microscope  
Binocular inverted microscope  
LED binocular microscope  
Stereomicroscope  
Scanning Transmission Electron Microscope  
Transmission Electron Microscope  
Tissue processor  
Paraffin embedding station  
Microtome  
Automated tissue stainer  
Cryostat

### **Feinstone Center for Genomic Research (Core) \*provides bioinformatics services including data analysis**

Illumina NextSeq

Next generation sequencing system

Illumina MiSeq	Next generation sequencing system
Affymetrix GeneChip	DNA microarray system
BioRad Molecular Imager FX	Phosphor Imager with laser upgrade
BioRad Gel Documentation	Gel documentation system
Agilent Bioanalyzer	Chip-on-chip bioanalyzer
BioRad iCycler	qPCR system
Sage Blue Pippin	DNA size selection system
Thermo Fisher Nanodrop	Nanospectrophotometer for nucleic acid and protein quantification
Invitrogen Qubit	Fluorometer
Beckman DU640	Spectrophotometer
Cary Eclipse	Fluorescence spectrophotometer
Covaris	Ultrasonicator
MilliQ	Ultrapure water system
Supporting equipment including:	Ultra- and high-speed centrifuges, speed-vac systems, gel dryer

Both the university and the Feinstone Center also maintain High Performance Computing clusters which are in most cases free for use of UM faculty members.