

Regenerative Medicine Laboratory, Department of Clinical Sciences, Cummings School of Veterinary Medicine at Tufts University, North Grafton, MA, Building 21, Rooms 102A-F

Introduction: The Regenerative Medicine Laboratory (RML) is a core laboratory for the support of Department of Clinical Sciences faculty, trainees and their collaborators. For specific information on resources listed below, call (508) 887-4589 and ask for Airiel Davis or Dawn Meola.

Environment: Bldg 21 is the Tufts Biotechnology Transfer Center on the Cummings School campus which houses both academic and industry laboratories. The RML is a secure 900 sq ft lab space, with 3 offices, desktop computers (Dell Optiplex 990 *3, misc Dell *6), common/conference area (120 sq ft), fax/phones/wireless printer – LaserJet Pro400/wireless internet network (secure + guest), photographic printer (HP Deskjet 5940), autoclave, ice machine; emergency generator circuitry.

Major equipment: **FACS Aria IIu (2014) w/ 3 lasers – red, blue, violet** equipped with filters 502 LP, 450/40 BP, and 530/30 BP (BD Biosciences); **AutoMac Pro Separator Magnetic cell separator** (Miltenyi); **Mx3000P quantitative real-time PCR** (Stratagene); **Agilent Bioanalyzer 2100**; **Axiomager Z1** upright microscope w/ fluorescence 100-630xmag optical, AxioVision software, Sigma Scan v.5; **AxioVert** phase contrast microscope 5-400xmag, with RGB fluorescence filters; **AxioObserver Z1** Inverted Microscope with Fluorescence (LED excitation) and DIC with Automated X-Y stage and Definite Focus Module, ZEN workstation, Hamamatsu high speed camera and stage incubator; **1100 series HPLC** for size exclusion chromatography (Agilent); **Nanosight NS300 w/ 630nm laser excitation** (Malvern); **Optima L-90K Ultracentrifuge** with SW-28 and 70.1 Ti rotors (Beckman Coulter); **Bioplex MagPix** (Multiplex, BioRad); **XYClone Zona Infrared Laser Optical System** with class 1 laser 1480 λ, REDi laser module, Digital Camera, and imaging software (Hamilton-Thorne).

Misc lab equipment: ; Cytospin4 Cytocentrifuge (Shandon/ThermoScientific); Cold Microfuge (Eppendorf); Cryostat (Leica Model 1800); Deparaffin setup/glassware (e.g Coplin jars), Microwaves (2), pH meter, Hemacytometers; Eppendorf epGradient MasterCycler, 2D gel electrophoresis system, Digital heater block, Vortexes (3), sonicator, RNA/protein isolation supplies; Biosafety BSL2 (2) and fume hoods (2); Trigas Incubator (ThermoFischer) *1 and standard CO2 Incubators *2 (ThermoFischer); 37oC incubator, Dessicator (250oC, vacuum); BioRad immunoblot systems (2); iBlot; RevCo/Thermo-Electron -80 freezers (1 tall, 1 short), Fisher -20 freezers (small - 2); Upright refrigerators (1), Upright tall freezer -20 VMR (1), VMR under counter refrigerators (2), Liquid Nitrogen vapor-liquid cell storage unit (ThermoElectron Cryo 200 *1, Cryoplus 2 *1); Liquid nitrogen storage tanks (20 psi, 230 L capacity * 2, leased); Accuspin 3R (Fisher) refrigerated programmable centrifuge; Physiologic (respiratory, live animal data acquisition) systems: Buxco Forced Maneuver system (counter top) w/ XA Biosystem software, FlexiVent system for mouse/rat software v5.2, Awake plethysmograph for mice (restrained system custom made);

Additional resources on Tufts University campuses:

Laboratory Animal Medicine (AAALAC accredited) services, and facilities for housing / breeding mouse, rat, rabbits, swine, dogs, sheep, goats, cattle, horses and camelids; additional lab equipment: AccuriC6 flow cytometer (488 nm, 633 nm lasers) in Building #21, the New England Regional Biosafety Laboratory (BSL3 labs and vivaria): IVIS In Vivo imaging system, LSR Fortessa (14 color), Zeiss Confocal. Tufts' Boston (core facilities): MoFlo and LSRII, transgenic animals, genomics, proteomics, expression vectors, laboratory animal resources; TEM Dr. Qiaobing Xu lab (Medford).

Large animal resources: Hospital for Large Animals with housing, 24/7 monitoring by certified animal health technicians, Toshiba Aquilon Spiral CT, 1.5 Tesla Siemens MRI, Siemens LFOV gamma camera for perfusion/ventilation studies, digital radiography, complete PFT/Hoffman laboratory for large animals (resistance/compliance - Buxco Electronics; Forced oscillometry - OTN; Calorimetry (human, large animal); Heliometers (Morgan Scientific); CO monitors (Morgan Scientific); Exercise testing treadmill (large animal), several research mechanical ventilators, Data Passport II monitor with SpO2/HR/BP/ECG/Capnography, OxiMax N600x Nelcor pulse oximeter portable system for SpO2/HR, Olympus gastroscopes/bronchoscopes*6.