CORE INSTRUMENTATION

- Vevo 2100 High-frequency Ultrasound System (VisualSonics), the most updated system that allows high-resolution imaging under B-, M-, color and pulse-wave Doppler mode, 3-D construct, and Vevo strain. (Figures: Mouse Echo; Tumor Imaging)

- Telemetry System (DSI) allows long-term recordings of blood pressure, biopotential (ECG, EEG, EMG), sympathetic nerve activity, and blood glucose concentration. It can be interfaced with flowmeters (Transonic), e.g., for simultaneously long-term recordings of blood pressure and cardiac output (Figure: Long-term BP and CO)

- MP150 Acquisition System (BioPac): 16-channel modular system interfaced with various transducers or amplifiers of pressure, volume, flow, biopotential, and temperature, as well as Mikro-tip catheters (Millar), flowmeters (Transonic), and cardiac output computer (Columbus Instruments)

- Environment System (Kent Scientific) allows customized exposure of hypoxia or hyperoxia (Figure: CIH setup)

- Pressure-volume loop system (Transonic) for comprehensive analysis of cardiac function in vivo or in isolated heart preparation

- Tailcuff Blood Pressure System (SC1000, Hatteras)

MISSION

The Physiological Phenotyping Core (PPC) provides cutting-edge phenotyping services with a focus on cardiovascular and respiratory systems. The core has a 10-year track record of services, including microsurgery, telemetry recordings, high-frequency ultrasound, and pressure-volume loop analysis.

CORE SERVICES

- Microsurgery and animal models: catheter and device implanting; coronary artery ligation; aortic banding; artery wire denudation or ligation; chronic hypoxia

- Biomicroscopy (high-frequency ultrasound) of the hearts, large or small vessels, tumors, or abdominal organs

- Acute in vivo measurements: hemodynamics, pressure-volume loop analysis, respiratory mechanics, sympathetic nerve activity

- Long-term recordings: blood pressure, aortic or organ blood flow, sympathetic nerve activity, ECG, EEG, EMG, temperature

- Equipment Rent
PHYSIOLOGICAL PHENOTYPING CORE

CIBR: Center for Innovative Biomedical Resources

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