### **Making Physiology Happen**

iWorx offers complete solutions for the teaching of human/animal physiology, as well as advanced, high performance systems for research. The numerous "hands-on" experiments provide student involvement that enhances the overall

# Ultimate Animal and Human Lab Kit





learning experience.







# Ultimate Animal and Human Physiology Kits Include:

- TA-ROAM Recorder with Wireless ROAM (ECG, EMG, EEG) Amplifier, Built-in Pre-calibrated Sensors
- LabScribe<sup>TM</sup> Software and Lab Manual
- Spirometer Flow Head, Heart Sounds Sensor
- Pulse, SPO2 and Temperature Sensor
- Non-Invasive Blood Pressure Sensor
- Grip Force Sensor, Muscle Twitch Sensor
- Single-axis Goniometer, Patellar Reflex Hammer
- Respiration Monitor
- Event Marker, Force Transducer
- Dissolved Oxygen Sensor
- Nerve Bath Chamber, Needle Electrodes
- Bipolar Stimulating Electrode
- Headphones

### Human Physiology Measurements:

- ECG, EMG, GSR
- Hemispheric EEG
- Blood Pressure, Heart Sounds
- Spirometry
- Reflex Testing, Reaction Times, Polygraph
- Facial EMG, Skin Temperature
- Stroop Test, Eriksen Flanker Test

## Animal Physiology Measurements:

- Muscle Contraction
- Frog ECG
- Action Potentials
- Cellular Metabolism
- Mechano-reflexes and more!



#### Animal and Human Lab Manual

iWorx ultimate lab manual includes over 91 experiments and 250 exercises in cardiovascular, neuromuscular and spirometric physiology, as well as all of the components and a professionally developed lab manual. Use pre-configured teaching kits or iWorx unique LabsByDesign approach to choose only the equipment you need for the labs you want to teach.

#### **Human Circulation:**

- Blood Pressure, Peripheral Circulation, and Body Position
- Blood Pressure, Peripheral Circulation, and Imposed conditions
- Pulse Wave Velocity

#### **Human Heart:**

- The Electrocardiogram (ECG) and the Pulse
- Heart Sounds and the Electrocardiogram (ECG)
- The Effects of Exercise on the Electrocardiogram (ECG) and the Pulse
- The Six-Lead Electrocardiogram
- The Diving Reflex
- Heart Rate Variability (HRV)

#### **Human Muscle:**

- Grip Strength and Electromyogram (EMG) Activity
- Electromyogram Activity in Antagonistic Muscles
- EMG and Arm Wrestling
- Oculomotor Muscle Activity
- Response, Work, Summation and Tetanus in Human Muscle
- Kinesiology Targeted Muscles
- Human Muscle Twitch

### **Human Spirometry:**

- Breathing Parameters at Rest and after Exercise
- Breathing and Gravity
- Factors that Affect Breathing Patterns
- Lung Volumes and Heart Rate

#### **Human Nerve:**

- Auditory and Visual Reflexes
- Stretch Receptors and Reflexes with Reflex Hammer
- Stretch Receptors and Reflexes with Plethysmograph
- Human to Human Interface

#### **Animal:**

- Skeletal Muscle Work, Summation and Tetanus
- Smooth Muscle Contraction
- Byssal Retractor Muscle
- Frog Electrocardiogram
- Crayfish Heart
- Membrane Potentials
- Compound Action Potentials
- Cockroach Leg Mechanoreceptors
- Cockroach Cercal Sense Organs