

PECIAL WORKSHOP SESSIONS

ANIMALAB DEMONSTRATIONS AND VIRTUAL WORKSHOPS

Wednesday (September 15, 2021; 13:20 – 14:05)

Thursday (September 16, 2021; 9:00 – 9:40; 13:30 – 14:15)

DETAILED ANIMALAB LECTURES AND PRESENTATIONS SCHEDULE

(Wednesday 15, 2021; 13:20 – 14:05; virtual stream B)

Sp1.S1 PHYSIOLOGY COMPLEXITY AND ITS TECHNOLOGY. EXAMPLES FROM MOTOR FUNCTION TO CIRCADIAN RHYTHMS BY UGO BASILE, ITALY. **Federico Montechiaro**, (UGO Basile, Gemoni, Italy).

(Thursday 16, 2021; 9:00 – 9:40, virtual stream C)

Sp1.S2 HEART RATE VARIABILITY, TIME DOMAIN AND FREQUENCY DOMAIN ANALYSIS. **Federico Cardona** (ADInstruments, Oxford, United Kingdom).

(Thursday, 16, 2021; 13:30 – 13:55, virtual stream B)

Sp1.S3 THE USE OF SMALL ANIMAL TELEMETRY IN PHYSIOLOGY. **Holger Russig** (TSE Systems, Bad Homburg, Germany).

(Thursday, 16, 2021; 13:55 – 14:15, virtual stream B)

Sp1.S4 NEW APPROACHES TO TEACHING PHYSIOLOGY **Tony McKnight, Federico Cardona** (ADInstruments, Oxford, United Kingdom).

PHYSIOLOGY COMPLEXITY AND ITS TECHNOLOGY.
EXAMPLES FROM MOTOR FUNCTION TO CIRCADIAN RHYTHMS
BY UGO BASILE, ITALY

F. MONTECHIARO

UGO Basile, Gemoni, Italy

Animal physiology is such a large field. Today we will approach it from the behavioural angle as Ugo Basile is a leading provider of behavioral instrumentation for animal research in physiology. We will demonstrate in a live session from Italy the following instruments:

- Muscle function/exercise:

Whole Animal: horizontal treadmill, rotarod for rats and mice, Grip strength meter.

Isolated tissues: smooth and striated muscles coupled to chemical or electrical stimulation for measurement of contraction in isometric or isotonic mode.

- Central nervous system:

Memory: fear conditioning, active/passive avoidance, water maze, radial maze, videotracking.

Pain: central and peripheral nervous system interaction.

- Fatigue: treadmill.

- Heart, cardiovascular and respiratory: volume-controlled ventilators and gas anaesthesia systems.

- Aging: a number of aging index to evaluate physical activity, motor function and aging in general.