

# Challenge Whole Body Plethysmography IC

## S\_CHL\_003

### Purpose

The purpose of this procedure is to record the respiratory function of mice, with a LPS challenge, by means of Unrestrained Whole-Body Plethysmography, using a lipopolysaccharides (LPS) challenge.

Description: Spontaneous bronchospasm after LPS challenge

### Experimental Design

- **Minimum number of animals** : 6M + 6F
- **Age at test**: Week 13
- **Sex**: We would expect the results of this test to show sexual dimorphism

### Equipment

1. Flow chambers
2. Plethysmographs
3. Computer connected to flow chamber
4. Challenge reagents
5. Personal safety equipment (masks, gloves, etc.)

### Procedure

1. Before starting, calibrate the plethysmographic chambers
2. Freshly prepare a 200 µg/mL LPS (O55:B5 serotype) solution in sterile saline (NaCl 0.9 %).
3. Inject 50 mg/kg ketamine and 3.3 mg/kg xylazine to mice in 100 µL volume by intraperitoneal injection
4. Administrate 25 µL of LPS solution (5 µg / mice)
5. Mouse are next placed in decubitus on a heated plate during 10-15 min
6. Place mice in the chambers
7. Start the experimental recording phase (6 hours)
8. Remove mice from chambers and place back in the home cages.

### Parameters and Metadata

# Frequency of breathing (f) ICS\_CHL\_001\_001 | v1.0

seriesParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: true

Unit Measured: bpm

Increments: Minimum 1

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# Tidal volume (TVb) ICS\_CHL\_002\_001 | v1.0

seriesParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: true

Unit Measured: ml

Increments: Minimum 1

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# Enhanced pause (Penh) ICS\_CHL\_003\_001 | v1.0

seriesParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: true

Increments: Minimum 1

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**Start of challenge timestamp** ICS\_CHL\_004\_001 | v1.0

procedureMetadata

Req. Analysis: false      Req. Upload: true      Is Annotated: false

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**End of challenge timestamp** ICS\_CHL\_005\_001 | v1.0

procedureMetadata

Req. Analysis: false      Req. Upload: true      Is Annotated: false

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**Experimenter ID** ICS\_CHL\_006\_001 | v1.0

procedureMetadata

Req. Analysis: false      Req. Upload: false      Is Annotated: false

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**Equipment ID** ICS\_CHL\_007\_001 | v1.0

procedureMetadata

Req. Analysis: false      Req. Upload: true      Is Annotated: false

Options: Whole body unrestrained plethysmograph,

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# Equipment manufacturer ICS\_CHL\_008\_001 | v1.0

procedureMetadata

Req. Analysis: true                      Req. Upload: true                      Is Annotated: false

Options: EMKA Technologies,

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# Equipment model ICS\_CHL\_009\_001 | v1.0

procedureMetadata

Req. Analysis: true                      Req. Upload: true                      Is Annotated: false

Options: PLY3211,

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# Duration of challenge ICS\_CHL\_010\_001 | v1.0

procedureMetadata

Req. Analysis: false                      Req. Upload: true                      Is Annotated: false

Unit Measured: min

Options: 360,

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# Date equipment last calibrated ICS\_CHL\_011\_001 | v1.1

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

