



DSF  
DEPARTMENT OF  
PHARMACEUTICAL  
AND  
PHARMACOLOGICAL SCIENCES

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[Technical Services and Scientific Equipments](#)

## Cell Culture Facility

### Description

The Cell Culture Facility comprises two dedicated laboratories that provide access to equipment essential for the preparation and maintenance of mammalian cell lines and primary cells. The facility currently houses all the necessary items to support cell culture, including four laminar flow hoods equipped with vacuum pumps, two controlled environment carbon dioxide incubators, two centrifuges, an automated cell counter with computer, two vortex shakers, two refrigerators/freezers, two inverted microscopes (one with a digital camera), two autoclaves, a real-time PCR detection system, and a spectrophotometer for DNA/RNA quantification.

The facility is utilized by multiple groups, who maintain and employ numerous mammalian cell lines and primary cells for research purposes.

Moreover, the specialized technical staff is available to train and help inexperienced users.

### Applications:

- Use of cell culture laboratories for investigators without their own facilities ●  
Cell culture maintenance and *in vitro* experiments
- Transmitted light microscopy: phase contrast and bright-field imaging
- Cell counts and viability analysis
- Expert consultation regarding cell culture needs, media, and experimental design ●  
Use of all necessary items to support mammalian cell manipulation
- Biological waste management
- Training in aseptic and cell culture techniques
- Molecular biology experiments for real-time quantification of gene expression ●  
Equipment maintenance and minor repairs

### **Location**

Department of Pharmaceutical and Pharmacological Sciences (DSF)  
Building C, largo E. Meneghetti, 2 - 35131 Padova  
Geotec: 00200 00 0040, 00200 00 015, 00200 -1 006 and 00200 -1 017

### **Facility manager**

Carla Argentini, PhD

## Staff

Carla Argentini, PhD; Federico Cusinato, PhD; Alessia Forgiarini, PhD

## Contacts

Phone, e-mail: 049.8275363/5082, [carla.argentini@unipd.it](mailto:carla.argentini@unipd.it)

9:00 a.m. - 5:00 p.m. Monday-Friday

## Scientific supervisor:

Prof. Sara De Martin

## How to book

All the researchers can book the laminar flow hoods, autoclaves, real-time PCR system and spectrophotometer using the online system and log in with accredited credentials (<http://147.162.61.199/strumenti2> Cell Culture Facility). All the other instruments can be used without booking.

Time of slot 15 min. Instructions and a specific and adequate training for the correct and safe use of the Cell Culture Facility equipment are provided to users. The staff members will release a certificate of attendance that allows users to use the equipment.

The staff provides assistance and support in teaching duties and to external users.

## Lab Equipment

### ➤ Room 00200 00 040:

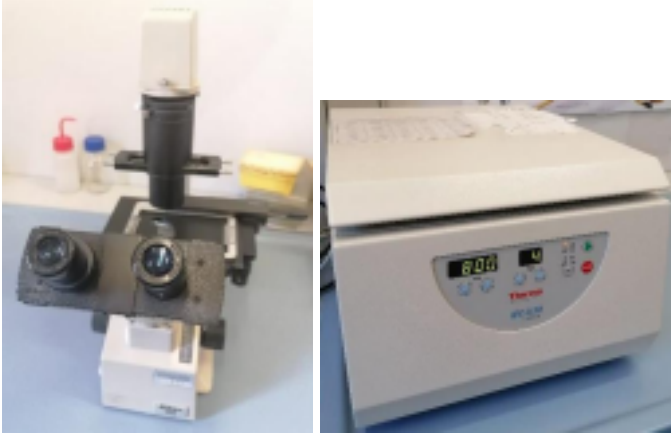
**Faster BH-EN 2004** - Two laminar flow biohazard hoods, that permit to work with cell cultures in aseptic conditions. Both equipped with vacuum pumps.

**Heracus HERA cell** - CO<sub>2</sub> incubator with a controlled environment (37° C and 5% CO<sub>2</sub>) for cell cultures.



**Nikon TMS** - Inverted microscope equipped for bright field and phase contrast. Objectives: 4x PhL; 10x Ph1, 20x Ph2 and 40x Ph3. Light source: Halogen lamp.

**Thermo IEC CL10** - Benchtop centrifuge equipped with a swing-out rotor with 15 ml or 50 ml tube adapters. Spin up to 4000 rpm. Variable acceleration and deceleration rate.



➤ **Room 00200 -1 006:**

**Faster CytoFAST Top** - A laminar flow biohazard hood (CYTOSAFE), that permits to work with cell cultures in aseptic conditions and to manipulate cytotoxic and cytostatic drugs. Equipped with a vacuum pump.

**Binder Incubator** - CO<sub>2</sub> incubator with a controlled environment (37° C and 5% CO<sub>2</sub>) for cell cultures.



**Optika IM-3** - Inverted trinocular microscope equipped for bright field, phase contrast. Objectives: 4x, 10x, 20x and 40x, bright field and phase contrast. Light source: white LED. Detector: 3Mpx color RGB camera.

**Ohraus Frontier 5706** - Benchtop centrifuge equipped with fixed-angle rotors for 15 ml or 50 ml tubes. Spin up to 6000 rpm. Variable acceleration and deceleration rate.

**CytoSMART Corning** - Cell counter that generates images that are automatically analyzed and can be used to count mammalian cells and organoids. Useful to measure the cell concentration, size and



viability. All data is collected in on-line reports stored in the CytoSMART Cloud.



### **Real-time PCR detection system**

**Genova Plus Spectrophotometer** - It allows the measurement of DNA and RNA concentrations and purity ratios using wavelengths recorded at 260, 280, and 230 nm.

➤ **Room 00200 00 015:**

**Faster Cytosafe-N** - A laminar flow biohazard hood, that permits to work with cell cultures in aseptic conditions.

➤ **Room 00200 -1 017:**

**Autoclaves** - Two autoclaves used to sterilize laboratory equipment by pressurized steam. A specific and adequate training is compulsory for the correct and safe use of autoclaves. Only users that possess the certificate of attendance are allowed to use them.