**Research Infrastructures - Laboratories and Equipment at the University of Cyprus**

**Department of Biological Sciences – Research and Teaching Laboratories**

**Research Infrastructure (RI) Name:**

University of Cyprus (UCY): Department of Biological Sciences

**Website**: <https://www.ucy.ac.cy/biol/en/>

**Mission:** The undergraduate and graduate programmes of the Department of Biological Sciences aim to provide students with high quality education at global standards, so that that can develop a deep understanding of their science and a versatile thinking, something critical for their professional career in the modern environment. Furthermore, the graduate and doctoral students can learn state-of-the-art laboratory experimental techniques and approaches that allow them access complex scientific problems and produce basic knowledge, equipping them in a way that enables them to meet the demands of modern research and contribute at a maximum level to the global scientific community.

**Research Services provided: The Department of Biological Sciences consists of the following Laboratories:**

Additional information regarding the laboratory space of the Department of Biological Sciences is provided below.

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| --- | --- | --- | --- | --- | --- | --- |
|  | **LABORATORY NAME** | **LABORATORY HEAD** | **PURPOSE** | **BLDG** | **ROOM(S)** | **AREA (m2)** |
|  |  |  APIDIANAKIS YIORGOS*Assιstant Professor* |  |  |  | 116 Common space with Assistant Prof.Chrysoula Pitsouli |
| 1. | Drosophila Infection and Carcinogenesis Laboratory | Academic research | FST 02 | 002003 |
|  |  |  |  |  |
|  |  |  |  |  |
| 2. | Cancer Biology and ChemopreventionLaboratory | CONSTANTINOU ANDREAS*Professor* | Academic research | FST 02 | B270 B270A | 60.93 |
| 3. | Laboratory of Molecular and Medical Genetics &Molecular Medicine | DELTAS CONSTANTINOS*Professor* | Academic research | Shiakolio | Floor -1 | 309 |
| 4. | Laboratory Developmental Biology and StemCells | GEORGIADES PANTELIS*Associate Professor* | Academic research | FST 02 | 3543 | 40.86 |
| 5. | Mouse Facility | GEORGIADES PANTELIS*Associate Professor* | Academic research | FST 02 | 040040A040C | 18.08 |
| 6. | Laboratory of Epigenetic Gene Regulation | KIRMIZIS ANTONIS*Associate Professor* | Academic research | FST 02 | B268 | 40.79 |
| 7. | Behavioral Ecology and Evolution Laboratory | KIRSCHEL ΑLEXANDER*Assistant Professor* | Academic research | FST 02 | 34 | 21.63 |
| 8. | Laboratory of Biotechnology and Molecular Virology | KOSTRIKIS LEONTIOS*Professor* | Academic research | FST 02 | B163 B164 B166 B170(Lab Suite) | 96.84 |
| 9. | Molecular Ecology and Evolution Laboratory | PAPADOPOULOU ANNA*Assistant Professor* | Academic research | FST 02 | B174& B169 | 63.60Common space with Associate Prof. Spyros Sfenthourakis |
| 10. | Drosophila Development and Homeostasis Labobartory | PITSOULI CHRYSOULA*Assistant Professor* | Academic research | FST 02 | 002 003 | 116Common space with AssistantProf. YiorosApidianakis |
| 11. | Bioinformatics Research Laboratory | PROMPONAS VASILIOS*Assistant Professor* | Academic research | FST 02 | 45484950 | 58.08 |
| 12. | Molecular Biology and Biochemistry Laboratory | SANTAMA NIOVI*Professor* | Academic research | FST 02 | B183 B183A | 42.97 |
| 13. | Biodiversity and Ecology Laboratory | SFENTHOURAKIS SPYROS*Associate Professor* | Academic research | FST 02 | B174 &B169 | 63.60Common space with Assistant Prof. Αννα Παπαδοπούλ |
| 14. | Cell and Developmental Biology Laboratory | SKOURIDES PARIS*Associate Professor* | Academic research | FST 02 |  38 |  34.22 |

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| --- | --- | --- | --- | --- | --- | --- |
|  | **LABORATORY NAME** | **LABORATORY HEAD** | **PURPOSE** | **BLDG** | **ROOM(S)** | **AREA (m2)** |
| 15. | Microscopy Room |   SKOURIDES PARIS*Associate Professor* | Academic research | FST 02 | 040B | 1.92 |
| 16. | Xenopus Facility |   SKOURIDES PARIS*Associate Professor* | Academic research | FST 02 | 041041A | 15.69 |
| 17. | Mutliphoton Confocal Imaging Facility |   SKOURIDES PARIS*Associate Professor* | Academic research | FST 02 | 44 | 21.63 |
| 18. | Tumor Viruses and Cancer Laboratory | STRATI KATERINA*Assιstant Professor* | Academic research | FST 02 | B269 | 42.82 |
| 19. | Laboratory of Epigenetic Gene Regulation&Tumor Viruses and Cancer Laboratory | KIRMIZIS ANTONIS*Associate Professor*&STRATI KATERINA*Assιstant Professor* | Academic research | FST 02 | B270B | 17.65 |
| 20. | Cold Room | Department of Biological Sciences | Academic research | FST 02 | 39 | 4.00 |
| 21. | Common Equipment Laboratory | Department of Biological Sciences | Academic research | FST 02 | B267 | 41.33 |
| 22. | Common Equipment Laboratory | Department of Biological Sciences | Academic research | FST 02 | 42 | 20.10 |
| 23. | Cell Culture Room | Department of Biological Sciences | Academic research | FST 02 | B173 | 21.07 |
| 24. | Storage Room | Department of Biological Sciences | Storage of Laboratory Consumables | FST 02 | B274 | 16.76 |
| 25. | Computer/Study Room | Department of Biological Sciences | Postdoc and Student Office | FST 02 | 37 | 21.16 |
| 26. | Common Equipment Laboratory | Department of Biological Sciences | Academic research | FST 02 | B176 | 16 |
| 27. | Teaching Laboratory | Department of Biological Sciences | Teaching | FST 02 | B172 | 96.70 |

1. **Drosophila Infection and Carcinogenesis Laboratory**

 (Apidianakis Yiorgos, Assιstant Professor)

 Our long term goal is to establish a network of the host signaling pathways that predispose for intestinal inflammation and cancer. The work of my team aims towards a deeper understanding of critical aspects of intestinal human disease, including inflammatory bowel disease and intestinal tumor formation and metastasis. We use *Drosophila* genetics, cell biology and transcriptome analysis to identify the host genes that mediate inflammation and predispose for cancer. Modeling of human diseases in flies is possible because of the high degree of conservation between *Drosophila* and mammalian signaling pathways controlling inflammation and infection. Therefore, big *Drosophila* chambers, a microscopy room that includes Stereoscopes, Fluorescent Stereoscopes, a Fluorescent microscope and a confocal microscope and a molecular biology laboratory set up are necessary for our work.

1. **Cancer Biology and Chemoprevention Research Laboratory**

 (Constantinou Andreas Professor)

The laboratory of Cancer Biology and Chemoprevention (CBC), directed by Dr. Constantinou, is located at the department of Biological Sciences at the University of Cyprus. The CBC laboratory is approximately 60 square meters and is fully equipped with the necessary equipment required for cell and molecular biology experiments. The major equipment include: four microcentrifuges, one mid-range centrifuge, Leica inverted microscope, Leica upright fluorescent microscope with 4 filters for immunohistochemistry and other applications (i.e comet assay), a sonicator, several horizontal and vertical gel electrophoresis apparatuses with low and high voltage power supplies, two thermocyclers, a PCR prep station, spectrophotometer, two refrigerators, four mini refrigerators, three mini freezers, one freezer, several shakers, UV transilluminator and UV-crosslinker, vacuum pumps, several water baths, water circulator, water purification system, pH meters, gel documentation and analysis system, nucleic acid analysis systems, heating blocks, imaging system (Labotal) and a BioRad Gene Pulsar II electroporator for cell transfection. We also have access to two common equipment areas: one in the same floor as the CBC lab and another in the upper floor. The lower level common equipment lab includes: Two autoclaves, one Guava EasyCyteTM flow cytometer, additional ultra-low temperature freezers, large scale incubator shakers and an additional water purification system. The upper level common equipment area includes: cryogenic refrigerator, one ultracentrifuge, walk-in coolers, rotary microtome for tissue sectioning, tissue embedding system, one ibox small animal imaging system (UVP), a Zeiss inverted fluorescence microscope and a luminometer with computer-assisted image acquisition and analysis, and two ultra low temperature freezers. We also have access to a small mouse facility which is located in the upper level and has 3 racks with independent filtration systems housing up to 200 independent cages and approximately 1000 mice. In a culture facility also located in the upper level we have for our exclusive use: two class II biosafety cell culture hoods, two CO2 incubators, one liquid nitrogen storage tang, one water bath, one microcentrifuge, one mid-range centrifuge, one vortex and one TaliTM Image-based Cytometer.

1. **Laboratory of Molecular and Medical Genetics & Molecular**

**Medicine Research Center**

The MMRC is hosted with the Shakolas Educational Center for Clinical Medicine, next to the Medical School, consisting of 309 m2 in total. The activities of the Center include research in molecular genetics and cell biology of inherited kidney diseases, in search for new mutations in known genes, in search for new loci of undiagnosed diseases and in search for modifier genes of monogenic familial forms of microscopic hematuria. We are engaged in cell biology work, aimed at deciphering the molecular mechanisms of disease pathology, because of mutations in collagen IV genes, which are solely expressed in basement membranes, especially of the kidney glomerulus. In our interest is the role of plasma and urine miRNAs in modifying renal pathology and as potential early biomarkers of disease progression. We have created our own mouse models for Alport Syndrome, a most frequent childhood inherited glomerulopathy. We are interested in studying disease development at organismal and cellular level while we recently started a pre-clinical trial in the Alport mice, with approved repurposed drugs. The MMRC hosts the first Biobank in Cyprus, with medical data and DNA for more than 4,000 donors, for many of whom we also archived plasma, serum and urine.

We are equipped with basic and more modern genetics facilities that include clinical refrigerated centrifuges and microcentrifuges, horizontal agarose and vertical polyacrylamide gel electrophoresis, including slab SDS-PAGE electrophoresis along with high voltage and regular power packs, several thermal cyclers including temperature gradient cyclers, a Real-Time PCR cycler, Applied Biosystems ViiA7, which allows processing of samples in 96-well or 384-well plates, in addition to SNP analysis and High Resolution Melting, several refrigerators, several -20 oC and eight -80 oC freezers for the Biobank, a DNA analyzer of Αpplied Βiosystems with 16 capillaries for Sanger DNA sequencing (ABI3130*xl*), and tissue culture facilities. We also have the Ion Torrent (Life Technologies) next generation sequencing platform (NGS), for high- throughput gene panel analysis.

**4. Laboratory of Developmental Biology and Stem Cell**

 (Georgiades Pantelis, Associate Professor)

Our research focuses on investigating the ill-defined, but clinically important development of the early mammalian embryo and its extraembryonic tissues (such as the placenta and its progenitor, the early trophoblast) and the influence of the latter on early embryo patterning and fetal growth/viability. We investigate these at the tissue, cell, molecular and genetic levels. We use the mouse as an in vivo model system and embryo-derived stem cells (e.g. trophoblast stem cells) as in vitro models. Our work includes the use of gene knockout mice, embryo culture/microsurgery and lentivirus-mediated gene manipulation in embryos and stem cells in vitro. In addition to equipment for molecular biology techniques (e.g. PCR machine, nucleic acid quantification apparatus, electrophoresis apparatus etc.), the other major pieces of equipment in our laboratory include a biosafety level-II hood, two CO2 incubators and an ultracentrifuge that are crucial for the stem cell/embryo culture and lentivirus work we do. In addition, we have an inverted Zeiss microscope with fluorescent and digital image capture capabilities that is indispensable for the imaging of stem cells and embryos (histology or wholemount views of RNA in situ hybridization and immunochemistry). Our extensive histology and immunohistochemistry experiments make use of a microtome, a cryostat and a wax embedding station. Our various stem cell lines are stored in a specialized container under liquid nitrogen.

**5. Laboratory of Epigenetic Gene Regulation** (Kirmizis Antonis,Associate

 Professor)

The research in our laboratory aims to understand how epigenetic factors, such as histone modifications and non-coding RNAs, regulate gene expression. In an attempt to identify the biological pathways and molecular mechanisms which involve these epigenetic factors we use both yeast and mammalian cells as model systems. To accomplish our research goals we employ high-throughput genetic screens, such as Synthetic Genetic Array, using a Robotics system (BM3-SC from S&P Robotics Inc.) for automated replication and imaging of yeast colonies. We validate our genetic screens by performing yeast spore dissections using a tetrad dissector from Singer Instruments Inc. (SporePlay). Furthermore, to complement our genetic screens we use various biochemical assays, such as Chromatin Immunoprecipitation, gene expression profiling, and affinity purifications which require the use of a Real-Time PCR machine (CFX-96 from BioRad), a shaking incubator (ISFX-1), a UV-Vis spectrophotometer (Nanodrop 200c from Thermo Scientific), an ultrasonic disintegrator (Bioruptor from Diagenode), a high-throughput electrophoresis system (E-page from Invitrogen), and a multispectral imaging system (Biospectrum from UVP). In order to corroborate our results in higher eukaryotes we also perform the above analysis in human cells that are cultured and maintained in a laminar flow cabinet (Labcaire systems Ltd).

**6. Behavioural Ecology & Evolution Laboratory**

 (Kirschel Αlexander, Assistant Professor)

We examine how ecology, behavior, and biogeography explain patterns of biodiversity. We are particularly interested in understanding how interactions between related species are affected by resource and interference competition, sexual selection, and genetic relatedness, and how these interactions relate to patterns of phenotypic evolution and species distributions. We use birds as study systems and investigate interactions between related species in tropical rainforest and savanna in Africa, South America as well as in natural habitats in Cyprus. We are also studying intraspecific interactions among individuals of a population of birds in a Mexican rainforest, focusing on intra- and inter-sexual interactions to understand how the sexes use song to communicate with rivals and prospective mates. Further interests of the lab include display flight biomechanics of an African bird family, migration in raptors breeding in Cyprus, and the effects of grazing and related disturbances on Cyprus breeding bird distributions.

**7. Laboratory of Biotechnology and Molecular Virology**

(Leondios G. Kostrikis, Professor)

The Laboratory of Biotechnology and Molecular Virology (BMV) has been part of the Department of Biological Sciences at the University of Cyprus since 2004. The Laboratory is located in the University’s new campus buildings in Aglantzia, Nicosia.

For the last fifteen years, our research has concentrated almost exclusively on the study of human immunodeficiency virus type-1 (HIV-1). Our laboratory uses a variety of experimental approaches to understand the molecular mechanisms of HIV-1 transmission and the pathogenesis of AIDS. Over the years our research activity mainly includes studies to (i) to determine the global genetic diversity and immunological responses of HIV-1; (ii) to understand the implications of chemokine receptor polymorphisms in the transmission of HIV-1 and disease progression; (iii) to understand the evolutionary dynamics of HIV-1 drug resistance in patients treated with effective anti-retroviral therapy; (iv) to define the role of the cellular HIV-1 DNA load in the pathogenesis of HIV-1 infection and progression of HIV-1 disease; and (v) to develop swift diagnostic nucleic-acid-based assays for a variety of microbial and viral infectious agents.

Major equipment items within the Laboratory of Biotechnology and Molecular Virology include programmable thermal cyclers for polymerase chain reaction, agarose gel electrophoresis apparatuses, UV-VIS spectrophotometer, microcentrifuges and refrigerated table-top centrifuges, an image documentation system capable of storing images in a format appropriate for the computer-driven quantitative analysis of autoradiograph images, workstations, analytical balances, autoclave, biological safety cabinet class II, -80°C and -30°C freezers, water purification systems, biosafety and laminar-flow hoods, bacterial incubators/shakers, gamma counters, a real-time PCR fluorescence thermocycler (ABI model 7900HT) and an automated DNA sequencer (ABI Model 3130).



Figure 1. The Biotechnology and Molecular Virology Laboratory (BMV) at University of Cyprus. Upper left, side view of the building of the School of Pure and Applied Sciences and panoramic views of the University of Cyprus, campus. Upper Right, internal view of the BMV laboratory which is located at the 2nd floor, final wing of the School of Sciences building. Lower left, images of the equipment and personnel currently at the BMV laboratory

**8. Molecular Ecology and Evolution Laboratory**

 (Papadopoulou Anna, AssistantProfessor)

The Molecular Ecology and Evolution Lab applies molecular genetics and genomic tools to address ecological questions, with a special focus on the study of island communities. Specifically, we use molecular markers and genomic data to study the phylogeny, phylogeography and population genetics of island taxa, while we also apply DNA-based methodologies to the analysis of biodiversity patterns. All the essential equipment for molecular ecology applications and Next Generation Sequencing library preparation is available, including PCR machines, Qubit fluorometer for accurate quantification of DNA and RNA, Pippin Prep for DNA size selection, centrifuge, vortex, incubators, multichannel pipettes, magnetic plates etc. The lab is also equipped with high quality stereoscopes and photographic equipment for specimen digitization and freezers for storing biological materials.

**9. Drosophila Development and Homeostasis Laborator**

(Pitsouli Chrysoula, *Assistant Professor)*

The *Drosophila* Development and Homeostasis Laboratory uses fruit flies to unravel the basic signaling mechanisms underlying tubular organ remodeling during normal development, homeostasis and disease. We are using genetics, molecular biology, biochemistry, histochemistry, imaging and confocal microscopy to understand the epithelial cell changes in our assays. Major equipment necessary for our research (which is shared with Yiorgos Apidianakis’s laboratory) include: 2 large insect incubators, dissecting stereoscopes, 1 fluorescent stereomicroscope, 1 fluorescent microscope, -20oC and -80oC freezers, electrophoresis apparatus, thermocycler, qPCR machine, Nanodrop spectrophotometer, incubator shaker and BL2 laminar flow cabinet. In addition, a Leica TCS SP2 AOBS DMIRE2 inverted confocal microscope equipped with 5 lasers for multispectral imaging (donated by Prof. Norbert Perrimon, Harvard Medical School & HHMI to the Department of Biological Sciences) is also indispensable for our work and is located in an appropriately ventilated room in the campus.

**10. Bioinformatics Research Laboratory**

 (Promponas Vasilios, Assistant Professor)

The Bioinformatics Research Laboratory (BRL), headed by Dr Promponas, has been instantiated as part of the Department of Biological Sciences at the University of Cyprus since 2005. The BRL is physically located at the New University Campus, and its core space (58.08 m2) offers the workspace for BRL Researchers, students and visitors, with access to modern workstations and development servers. The BRL production servers and the BRL web server (troodos.biol.ucy.ac.cy) are located in the dedicated server room of the department.

Research activities of the BRL are mainly oriented towards the interpretation of large-scale genomic data and the use of computational methods in order to reveal the principles governing the Molecular Basis of Life. We are mainly interested in the elucidation of protein sequence to structure/function relationships with a strong expertise in developing/applying sequence similarity, statistical and machine learning techniques. In particular, our research primary focus is on: **(i)** *compositional features of gene/protein/genome sequences*, such as practical considerations when performing database searches (e.g. masking), their functional/structural signals (e.g. rare codon clusters in coding sequences; transmembrane protein topology and structure), and the correlation of genome-wide composition to phenotypic traits (e.g. pathogenicity), **(ii)** *method development and application for large-scale comparative genomics*, with particular interest in understanding bacterial genome function and evolution. Recently, we are particularly interested in studying the structure, function and evolution of eukaryotic endomembrane systems (e.g. nuclear pores, selective autophagy).

 **11. Molecular Biology and Biochemistry Lab**

 (Santama Niovi, *Professor)*

The MBBLab is well equipped to conduct research in molecular and cell biology and aspects of biochemistry. Major pieces of equipment include PCR *Peltier* thermocyclers (including gradient and 96-well cyclers), units for sequencing gel electrophoresis, horizontal agarose gelelectrophoresis and slab SDS-PAGE protein electrophoresis, systems for electroporation of prokaryotic and eukaryotic cells and for electroblotting, a selection of centrifuges (floor to desktop), high voltage and regular power packs, one large-capacity bacterial culture incubator, several freezer units and other standard laboratory equipment. The laboratory has its own, fully- equipped tissue culture facility and has access to facilities such as modern animal house facilities, microinjection and FACS analysis equipment and additional electroporation systems. Laboratory members have routine access to facilities such as a real-time PCR cyclers, DNA sequencers, pulse-field gel electrophoresis units, high-speed, vacuum and bench top refrigerated centrifuges, a digital gel imaging system with CCD camera for visualization of nucleic acid and protein gels, a fully equipped suite for radioactive work and a cold room.

The MBBLab is hosting and running a Light Microscopy Facility in a dedicated suite, adjacent to one of its main laboratory areas. The facility consists of a Carl Zeiss Axiovert 200M inverted fluorescence microscope with a motorized stage and Plan-Apochromatic lenses (x10, 20, 63 and 100), fully equipped for phase contrast, Differential Interference Contrast (DIC) and fluorescence microscopy (with a selection of filters to accommodate most widely used fluorochromes including far red). The microscope is linked to a C. Zeiss AxioCam HRc digital camera for multicolor brightfield acquisition, and an AxioCam MRm camera for high-sensitivity fluorescence acquisition. It is operated with a XEON 2.8GHz workstation, equipped with Zeiss Axiovision 4.6 software for image processing and electronic archiving. The microscope also incorporates modules for motorized multichannel fluorescence acquisition, a module for autofocus capability and the ApoTome module for optical sectioning, complete with the Inside 4D (3D plus time) Z-stack sectioning processing and visualization module. The high specialization of this microscope enables advanced high resolution microscopy in cell biological research.

 **12. Ecology and Biodiversity Laboratory**

 (Sfenthourakis Spyros, Associate Professor)

The ‘Ecology and Biodiversity’ lab focuses on research related to various aspects of biodiversity, mainly of terrestrial and freshwater fauna, such as island biogeography, phylogeography and systematics of arthropods, effects of climate change on endemic arthropods, community assembly, DNA barcoding of bird species, behavioral ecology of reptiles etc.

The lab is equipped with most of the necessary materials for these kinds of studies, such as good quality stereoscopes with photographic equipment, PCR machines and related apparatuses (electrophoreses, centrifuges etc.), freezers for storing biological material, various data loggers and other collecting material (traps, tubes, GPS, etc.) for field work, specialized software and respective dedicated computers (e.g., for GIS, modeling, ecological analyses etc.).

 **13. Cell and Developmental Biology Laboratory**

 (Skourides Paris, Associate Professor)

The goal of our research group is to understand the cellular and molecular mechanisms involved in generating the three dimensional organization of tissues and the overall process by which the basic body plan of vertebrate embryos is established. During gastrulation cell and tissue movements on a massive scale create great complexity from a very simple starting form, resulting in highly diversified organisms with a precise three dimensional architecture. Elucidating the mechanisms underlying these movements is important, because genetic mutations and environmental insults during gastrulation can lead to significant developmental deformities. A comprehensive understanding of this process and how it is affected by genetic mutations will help develop diagnostic and therapeutic tools for dealing with human developmental disorders. The study of gastrulation and morphogenetic movements has always demanded cutting edge imaging and the pace of discovery in the field has been set by advances in imaging technologies. The complexity of morphogenetic movements together with our inability to image them *in vivo* has forced Researchers to study each movement isolated from the others. Yet if we are to truly comprehend the way morphogenetic movements give rise to form we need to begin the process of integrating what we know back to the embryo and view gastrulation as a unified process rather than individual components. Our laboratory with the use of is developing new imaging methods and technologies, which enable the study of morphogenesis at the organismal, cellular and molecular level *in vivo*.

**14. Tumour Viruses and Cancer Laboratory**

 (Strati Katerina, Assιstant Professor)

The lab is investigating the roles of the human papillomavirus oncogenes E6 and E7 in the viral life cycle and carcinogenesis. In particular, a major focus of the lab is the interplay of these oncogenes with tissue stem cells at sites of infection and the modulation of cellular plasticity in infected cells. In order to address these questions we use both *in vivo* and *in vitro* systems. The lab is fully equipped for standard molecular biology and biochemistry techniques and also mouse and cell culture work. Most of the laboratory equipment resides in our lab with adjacent office space for students and post-docs. We also house equipment in common facilities such as a mouse facility with individually ventilated cages (Allentown) where the mouse colony is maintained, as well as a cell culture facility where a BSL-2 tissue culture hood (Labcaire), routine cell culture microscope (Leica) and CO2 incubator (Binder) reside. Most miscrosopy needs are covered by an inverted microscope (Zeiss) equipped for phase-contrast, light and fluorescence microscopy.

**15. Teaching laboratory**

The Biological Sciences Teaching Laboratory (B172) is primarily used for the introductory laboratory lessons of the undergraduate second year students which mainly include basic techniques of molecular (protein and DNA analysis) and developmental biology. Occasionally the Teaching Laboratory is also used by third and fourth year students in the form of demonstrations, as part of the lessons in the area of Ecology and Marine Biology. It has 4 benches of 6 positions each, which in total can accommodate 24 students. The main equipment includes two chemical fume hoods, a water purification system, a refrigerated centrifuge, 15 basic stereoscopes, 5 benchtop centrifuges, a PCR machine, a shaking incubator, water baths and balances.

**16. Common Equipment Laboratories**

* The Common Equipment Laboratory (FST 02, B267) is a laboratory containing mainly common equipment used by several laboratories of the Department. Its main equipment is an autoclave machine, a lab washer, a refrigerated centrifuge, an ice-machine, 3 ultra-low temperature freezers (-80oC), 2 shaking incubators, various common incubators, various PCR machines and a few other pieces of small equipment. It also includes a robotic system for yeast cultures and a yeast dissection microscope, belonging to the Laboratory of Epigenetics.
* The Common Equipment Laboratory (042) is a laboratory containing mainly common equipment used by several laboratories of the Department. Its main equipment is a multi-function imaging system, a chemical fume hood, an autoclave machine, a cryostat, a refrigerated centrifuge, an ice-machine, 2 shaking incubators, various PCR machines and a few other pieces of small equipment.
* The cell culture room (FST 02, B173) is a common equipment laboratory used mainly by the research laboratories involved in cell culture techniques. It includes three biological hoods, 3 CO2 incubators and a refrigerated centrifuge, all used exclusively for cell cultures. It also includes some small freezers and refrigerators, a microscope, an image cytometer and a few other pieces of small equipment.

The equipment for robotics LegoWedo

* Beebots, Bluebots, Probots, Tablets, various educational programs, robotics mats
* LegoWeDo robotics kits
* -Beebots, Bluebots, Probots, Tablets, Various educational programs, Educational robotics mats