



Yarmouk University

**Faculty of
Medicine**

Applied and Scientific Research Lab

Lab Overview:

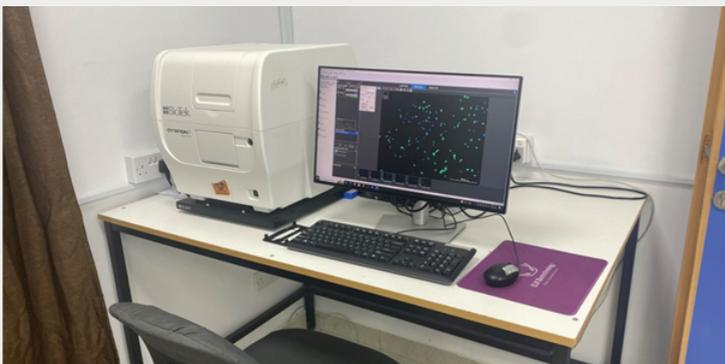
The Basic and Applied Research Lab Established less than two years ago but already become the flagship of the Faculty of Medicine. It's a well-equipped modern lab used by the faculty staff to perform high-quality advanced research in basic medical sciences, including anatomy, histology, physiology, pharmacology immunology and microbiology.

Studies performed in the laboratory range from regenerative medicine and cancer biology to molecular pharmacology and microbiology. The researchers study the biological behaviors of mesenchymal stem cells (Mesenchymal stem cells; MSCs) and the potential mechanisms of their regenerative effects. Other studies look at the mechanisms of survival and resistance of cancer cells to treatment. Other studies involving experimental animals examined pain physiology in osteoarthritis and the effects of synthetic cannabinoids on the central nervous system and other organs. In addition, a number of microbiology studies are being conducted in the designated area.

Devices in the lab:

1	PCR Thermal Cycler	Drawell PCR Thermal Cycler with Adjustable Pressure Hot Lid (DW-K640)	Conventional PCR – qualitative results
2	Real-Time PCR	Bio-Rad CFX96 Touch™ Real-Time PCR Detection System	Quantitative results
3	Cytation 5	BioTek Cytation 5 Cell Imaging Multi-Mode Reader	Imaging platform for quantifiable cellular analysis and dynamic imaging studies.
4	ELISA close system	BIOTEK 800TS ultra micro plate reader	Absorbance reader
5	Fusion solo X	Vilber, Chemiluminescence – FUSION Solo-X and Solo-S Series ,Imagin and Gel documentation system	visualize and photo-document nucleic acid samples separated through gel electrophoresis and separate protein samples on western blots

Bio Tek Cytation 5 Cell Imaging Multimode Reader RUO

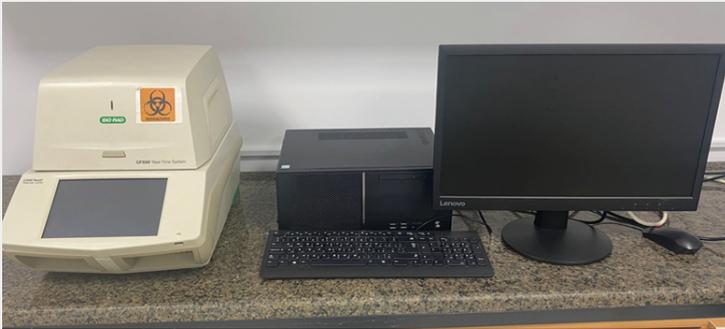


Cytation 5 combines automated microscopy and conventional micro plate detection in a configurable, upgradable platform. The microscopy module offers up to 40x magnification in fluorescence, bright field, and color bright field, to address many applications and workflows.

Plate reading: absorbance, fluorescence; luminescence; advanced reading modes.

Imaging: fluorescence; phase contrast; high-contrast brightfield; brightfield; color brightfield.

Real-time PCR



The CFX96 Touch System is a powerful, precise, and flexible real-time PCR detection system. This six-channel (five colors and one FRET channel) real-time PCR instrument combines advanced optical technology with precise temperature control to deliver sensitive, reliable detection for singleplex or multiplex reactions.

Gel Documentation System



Chemiluminescence Western, Northern or Southern blot
Optional applications: DNA and RNA gels and fluorescence stain imaging with UV-Pad or Blue-Pad
Colorimetric stained protein gels, X-Ray film, autorads, SSCP gels, colony dish and flask imaging with WhiteLight-Pad or UV-Pad + conversion screen
Fluorescence Western blot with Spectra Capsules: 365nm - 440nm - 480nm - 530nm 640nm - 680nm - 740nm - 780nm

Bio Tek 800 TS Absorbance Reader RUO



The BioTek 800 TS absorbance reader is a high-quality microplate reader for assays in 6- to 384- well formats. Applications include ELISA, protein quantification, enzyme kinetics and cell-based assays.

Thermal cycler DW



The thermal cycler (also known as a thermocycler, PCR machine or DNA amplifier) is a laboratory apparatus most commonly used to amplify segments of DNA via the polymerase chain reaction (PCR)

Research lab technicians

1- Rawan Al-Mazari Bachelor of Medical Laboratories

Proficient in the following skills:

- Cellculture techniques
- Western Blot
- Eliza
- Immunostaining techniques for cells and tissues
- Microbiology Techniques
- PCR techniques

2- Alaa Al-Damin, Master of Microbiology and Immunology

Proficient the following skills

- Cell culture techniques
- Eliza
- Immunostaining techniques for cells and tissues
- Microbiology Techniques

Contact Information:

Faculty of medicine

0096227211111 Ext: (3037)

Email: medicine.fac@yu.edu.jo