
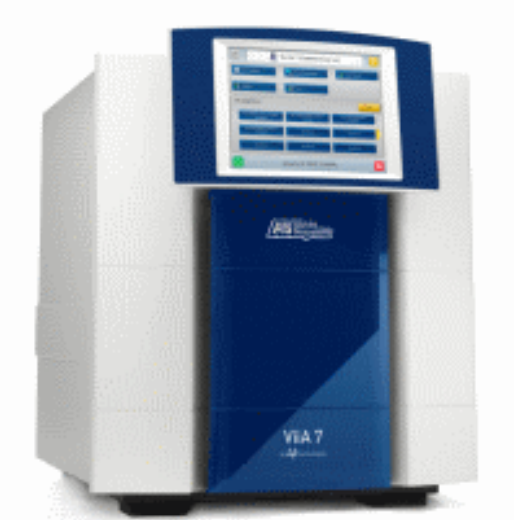






أهم الأجهزة البحثية بمعامل قسم علوم الحياة

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|  | 2066  | رقم المعمل<br>Lab<br>number | جهاز الطرد المركزي عالي السرعة<br>Ultra-Centrifuge | اسم الجهاز<br>Equipment name  |
|  | <p><b>Thermo Fischer Scientific - 46902 WX 100 – Japan</b></p> <ul style="list-style-type: none"> <li>- Spinning up to 100,000 rpm.</li> <li>- Deliver the speed and performance required for high performance processing applications.</li> <li>- Lightweight and fatigue-resistant</li> <li>- Carbon fiber rotors that do not need to be derated over time.</li> <li>- Intuitive, easily accessible touch screen interface.</li> </ul> <p>Imbalance tolerance to accelerate run set-up.</p> |                             |  | <p>موديل الجهاز ومواصفاته الأساسية</p> <p><b>Model and main characteristics</b></p> |
|  | <ul style="list-style-type: none"> <li>- يستعمل في مجال أبحاث البيولوجيا الجزيئية</li> <li>- يستعمل في فصل المكونات الدقيقة للخلايا والأنسجة</li> <li>- له تطبيقات طبية حيوية وصناعية</li> </ul> <ul style="list-style-type: none"> <li>- Used in molecular biology</li> <li>- Separation of tissue and cell components</li> <li>- Biomedical and bio industrial applications</li> </ul>  |                             |  | <p>وظيفة الجهاز</p> <p><b>Equipment uses</b></p>                                    |



|   | 2066  | رقم المعمل<br><b>Lab<br/>number</b> | جهاز تفاعل البلمرة المتسلسل ذو الوقت الحقيقي<br><b>Real-Time PCR System</b>   | اسم الجهاز<br><b>Equipment name</b>  |
|---|---|-------------------------------------|---|--|
|   | <p align="center"><b>Applied Biosystems - ViiA7 – Singapore</b></p> <ul style="list-style-type: none"> <li>- Interchangeable blocks for 96-well, Fast 96-well, and 384-well plates, as well as TaqMan Array Cards</li> <li>- User-friendly software and analysis tool</li> <li>- Quick block changes: Easy to use for all levels of experience</li> <li>- Easy touch-screen interface: Including one-touch protocols for fast and easy run-start for a broad range of applications</li> <li>- Automation compatibility: Integrated with Twister II Robot, the ViiA 7 System maximizes productivity for automated environments</li> <li>- Peace of mind: Data recovery capability for 100+ runs</li> </ul> |                                     |   | <p>موديل الجهاز ومواصفاته الأساسية<br/><b>Model and main characteristics</b></p> |
| <ul style="list-style-type: none"> <li>- Used in molecular biology</li> <li>- Amplification of nucleic acids</li> <li>- Detection of genetic pathologies</li> </ul> |   |                                     | <ul style="list-style-type: none"> <li>- يستخدم في مجال أبحاث البيولوجيا الجزيئية</li> <li>- الكشف عن الأمراض الوراثية</li> <li>- مضاعفة أجزاء من الحمض النووي</li> </ul> | <p>وظيفة الجهاز<br/><b>Equipment uses</b></p>                                    |


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|   | 2066   | رقم المعمل<br><b>Lab number</b> | جهاز نانو قطرة لقياس الطيف الضوئي<br>Nano-drop Spectrophotometer | اسم الجهاز<br><b>Equipment name</b>   |
|    | <p align="center"><b>Thermo Fischer Scientific – Nanodrop 2000c – USA</b></p> <ul style="list-style-type: none"> <li>- Full-spectrum, UV-Vis spectrophotometer</li> <li>- It is the only microvolume spectrophotometer with patented sample retention technology that measure sample volumes as small as 0.5µL.</li> <li>- Advanced micro-volume pedestal technology</li> <li>- Dual modes - choose cuvette or pedestal</li> <li>- Broader concentration range for measuring very low or very high concentrations</li> <li>- Cuvette capability allows for kinetics (time or time/temperature studies) and cell culture (OD 600) measurements</li> </ul> |                                 |  | <p>موديل الجهاز ومواصفاته الأساسية</p> <p><b>Model and main characteristics</b></p> |
| <p>- يستعمل لتقدير تراكيز الحمض النووي والبروتينات إضافة الى تقييم مدى نقاوتها</p> <p>- Used to quantify and assess purity of DNA, RNA and proteins</p> |  |                                 |  | <p>وظيفة الجهاز</p> <p><b>Equipment uses</b></p>                                    |

|   | 2093  | رقم المعمل<br><b>Lab<br/>number</b> | جهاز قياس التدفق الخلوي<br>Flow Cytometer | اسم الجهاز<br><b>Equipment name</b>   |
|---|---|-------------------------------------|---|---|
|   | <p><b>Amnis corporation – Flowsight – USA</b></p> <ul style="list-style-type: none"> <li>- A compact and affordable 12-channel flow cytometer with unrivalled fluorescence sensitivity and the breakthrough ability to produce imagery of every cell.</li> <li>- The modular can be upgraded in the factory or the field with up to four lasers, a 96-well Auto Sampler, and a Quantitative Imaging package.</li> <li>- With 12 detection channels, visual verification of every cell</li> <li>- Based on the proven Image Stream X architecture and shares its remarkable fluorescence sensitivity.</li> </ul> |                                     |   | <p>موديل الجهاز ومواصفاته الأساسية</p> <p><b>Model and main characteristics</b></p> |
|   | <ul style="list-style-type: none"> <li>- Immunophenotyping:</li> <li>- Cell Sorting:</li> <li>- Cell Cycle Analysis:</li> <li>- Apoptosis:</li> <li>- Cell Proliferation Assays</li> <li>- Intracellular Calcium Flux: The flux of calcium into the cell is measured to determine the extent to which cells respond to the stimuli.</li> </ul>  |                                     |   | <p>وظيفة الجهاز</p> <p><b>Equipment uses</b></p>                                    |


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|  | 2100   | رقم المعمل<br><b>Lab number</b> | المجهر الفلورسنتي<br>Fluorescent microscope | اسم الجهاز<br><b>Equipment name</b>   |
|   | <p align="center"><b>OPTIKA - N-400FL – Italy</b></p> <p>- The basic structure is dedicated to the most demanding applications of routine fluorescence analysis.</p> <p>- N400FL offers, in the same unit, brightfield and, optionally, darkfield and phase contrast capabilities, thus extending its potentials to most multi-contrast applications</p>   |                                 |   | <p>موديل الجهاز ومواصفاته الأساسية</p> <p><b>Model and main characteristics</b></p> |
|   | <p>- يستخدم في دراسة خصائص المواد</p> <p>- التعرف على تواجد الأحياء الدقيقة (البكتيريا و الفيروسات)</p> <p>- تعيين تواجد البروتينات و الكربوهيدرات داخل الأنسجة</p> <p>- تعيين الاختلافات الوراثية في الكروموسومات</p> <p>Identification of microorganisms ( virus, bacteria, ..) in samples</p> <p>- Detection of protein expression, cytoskeleton, cell division and carbohydrates in tissues.</p> <p>- Study of chromosomes and detection of anomalies.</p> |                                 |   | <p>وظيفة الجهاز</p> <p><b>Equipment uses</b></p>                                    |

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|  | 2100   | رقم المعمل<br><b>Lab number</b> | جهاز تحضير ملء أطباق بتري<br>Petri Swiss PS20 | اسم الجهاز<br><b>Equipment name</b>   |
|  | <p align="center"><b>Biotool - CH-8580 Amriswi - Switzerland</b></p> <ul style="list-style-type: none"> <li>- The unit fills sets of 20 dishes and these are available directly in the PetriRack.</li> <li>- The dishes are safely stacked in the PetriRack and can even be transported, chilled or incubated in the rack.</li> <li>- Fully autoclavable rack and the dishes can be taken from the rack continuously.</li> </ul> |                                 |   | <p align="center">موديل الجهاز ومواصفاته الأساسية</p> <p align="center"><b>Model and main characteristics</b></p> |
|  | <p align="center">- تحضير وتعقيم أوساط النمو وأطباق بتري المستعملة في مختبرات الأحياء الدقيقة</p> <p>Fills dishes directly into the PetriRack. No need for manual stacking or any other manual operations.</p>   |                                 |   | <p align="center">وظيفة الجهاز</p> <p align="center"><b>Equipment uses</b></p>                                    |


|   | رقم المعمل<br>Lab<br>number     | 2093 | جهاز تمرير وصبغ العينات وتغطية الشرائح<br>Autostainer with cover slipper  | اسم الجهاز<br>Equipment name   |                                       |
|---|---------------------------------|------|---|--|---------------------------------------|
|  | <b>Leica - TS5015 – Germany</b> |      |   | موديل الجهاز ومواصفاته<br>الأساسية<br><b>Model and main characteristics</b>  |                                       |
|  |                                 |      | - High specimen throughput that supports your protocols with up to 10 racks of 30 slides at a time and continuous loading capability.<br>- 15 user-defined staining protocols can be programmed.<br>- Accessible, single-tiered cabinet is designed for safe, quick and convenient reagent changes.<br>- Features integrated, dual-filter fume extraction system. | - صبغ القطاعات اليا وتغطيتها<br>Offer new therapeutic approaches in microsurgery.<br>- Provide innovative solutions for vision, measurement, lithography and analysis of microstructures | وظيفة الجهاز<br><b>Equipment uses</b> |


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|  | 2101   | رقم المعمل<br><b>Lab number</b> | جهاز الانبعاث الذري اللهب<br>Flame photometer | اسم الجهاز<br><b>Equipment name</b>                                      |
|   | <b>JENWAY – PFP7 – UK</b>  |                                 |   | موديل الجهاز ومواصفاته الأساسية<br><b>Model and main characteristics</b> |
|   | - The PFP7 is low temperature, single channel emission flame photometer designed for the routine determination of sodium (Na), potassium (K) and lithium (Li).<br>- Additional filters for the determination of calcium (Ca) and barium (Ba) are supplied with the PFP7.<br>- Fitted with an automatic flame failure detection for user safety<br>- Specifically designed for use in clinical applications. The in-built lineariser circuitry enables readings of both Na and K, at normal clinical serum concentrations to be displayed directly in mmol/l. |                                 |   |  |
| - Used in clinical, industrial or educational applications.                       |  |                                 | وظيفة الجهاز<br><b>Equipment uses</b>         |  |



|  | 2101  | رقم المعمل<br>Lab<br>number | جهاز قياس الأسموزية (التناضح)<br>Osmometer   | اسم الجهاز<br>Equipment name  |
|--|---|-----------------------------|--|---|
|  | <p><b>Knauer - K-7400 - Germany</b></p> <ul style="list-style-type: none"> <li>- The freezing point osmometer enables freezing point depression to be measured.</li> <li>- The measurement run is completely automated after the sample is injected.</li> <li>- The instrument is equipped with a peltier cooling and an integrated microprocessor. - The measuring head is available in two versions, one for glass vials and one for plastic vials with attached cap.</li> <li>- Can be controlled by EuroOsmo7400 software.</li> <li>- It is possible to work with the osmometer as standalone device or with a special printer or with software.</li> </ul> |                             |  | <p>موديل الجهاز ومواصفاته الأساسية</p> <p><b>Model and main characteristics</b></p> |
|  |   |                             | <ul style="list-style-type: none"> <li>- لقياس اسموزية المحاليل في الأغشية المختلفة (نباتية - حيوانية)</li> <li>- تحديد تركيز الأملاح الذائبة والسكريات في العينات المختلفة</li> </ul> | <p>وظيفة الجهاز</p> <p><b>Equipment uses</b></p>                                    |

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|  | 2101  | رقم المعمل<br><b>Lab number</b> | حضانة زراعة نباتات<br>Plant Growth Chamber | اسم الجهاز<br><b>Equipment name</b>   |
|  | <b>Pars Azma - IN09 – USA</b><br>- Deliver uniform temperature, humidity and light<br>- For precise control of environmental parameters within flexible and space-efficient designs |                                 |  | موديل الجهاز ومواصفاته الأساسية<br><b>Model and main characteristics</b>  |
|  | - Culture of plants under controlled conditions<br>- For agricultural biotechnology, phytopathology, and other plant science research.  |                                 |  | زراعة النباتات تحت ظروف محكمة<br>-اعداد الأجزاء النباتية المراد زراعتها<br><b>وظيفة الجهاز<br/>Equipment uses</b> |

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|  | 2100   | رقم المعمل<br><b>Lab number</b> | تفاعل اليلمرة المتسلسل العادي<br>Thermal Cycler PCR System | اسم الجهاز<br><b>Equipment name</b>                                      |
|  | <p align="center"><b>Applied Biosystems - 9700 – Singapore</b></p> <ul style="list-style-type: none"> <li>- Interchangeable sample block modules for greater flexibility</li> <li>- Gold-plated silver blocks for high speed 5°C/sec average heating/cooling rate of block</li> <li>- Interchange the 96-well 0.2mL block with another block type if your throughput needs change</li> <li>- Access the system remotely</li> <li>- Program the instrument in seconds with a simple-to-use touchscreen interface</li> </ul> |                                 |  | موديل الجهاز ومواصفاته الأساسية<br><b>Model and main characteristics</b> |
|  | Has a wide array of applications such as cloning, gene expression analysis, genotyping, sequencing, and mutagenesis.   |                                 |  | وظيفة الجهاز<br><b>Equipment uses</b>                                    |

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|   | 2066   | رقم المعمل<br><b>Lab number</b> | جهاز الصعقة الخلوية<br>Electroporation | اسم الجهاز<br><b>Equipment name</b>                                      |
|   | <b>Eppendorf – 2510 – USA</b>  |                                 |  | موديل الجهاز ومواصفاته الأساسية<br><b>Model and main characteristics</b> |
|   | <ul style="list-style-type: none"> <li>- Programmable voltage and optimized, fixed pulse times</li> <li>- Preadjusted voltages for the most frequent applications</li> <li>- Requires minimum benchtop space</li> <li>- Integrated cuvette holder</li> <li>- Electronic safety circuit for arc prevention</li> <li>- Data documentation via printer or PC</li> </ul> |                                 |  | وظيفة الجهاز<br><b>Equipment uses</b>                                    |
| <p>Electroporation is a physical transfection method that uses an electrical pulse to create temporary pores in cell membranes through which substances like nucleic acids can pass into cells. It is a highly efficient strategy for the introduction of foreign nucleic acids into many cell types, including bacteria and mammalian cells.</p> |  |                                 |  |  |