

# Template for Evidence(s) UI GreenMetric Questionnaire

University : Alexandria University  
 Country : EGYPT  
 Web Address : <https://alexu.edu.eg/>

## [6] Education and Research (ED)

### [6.4] Total Research Funds Dedicated to Sustainability Research (in US Dollars)



**M.Sc. in:**  
**Natural Resources Sustainability for Land Development (NRSLD)**  
*Under the framework of SuReMap project*  
*(Sustainable Resource Management Programme to solve Deserted Challenges)*

**SuReMap Project:**

Aims to establish interdisciplinary programs that train students to address water, energy & food-related challenges in "Egypt's 2030 strategy".

NRSLD is an outcome of the SureMap Erasmus+ project that includes a consortium of 8 Egyptian and European universities. The program is cooperatively designed by the consortium, therefore; it has the advantage of the international and interdisciplinary perspective, European framework of recognition, and benefits from a wide network of participating professors from the following universities: RWTH Aachen, Heliopolis University, Alexandria University, CITY College – Sheffield University, The American University in Cairo, University of Palermo, Aswan University, and Technical University of Madrid.

**Program Vision:**

NRSLD program aims to prepare students with the knowledge and experience for the management and sustainable development of drylands' natural resources in the local, regional, and international related sectors.



**Program Mission:**

The Faculty of Science through NRSLD program seeks to qualify the graduates to be competitive at local, regional, and international levels, by creating an appropriate educational environment and fostering ethically, scientifically, and professionally sound approaches that enable graduates to serve the community and the institutions closely related to sustainable development plans.



1. Natural Resources Sustainability for Land Development (Erasmus+ Project, European Union) in collaboration of Alexandria University (Egypt) with Aachen University (Germany)

# Med-algae

Production of Biodiesel from Algae



Visitors,  
Stakeholders &  
Media

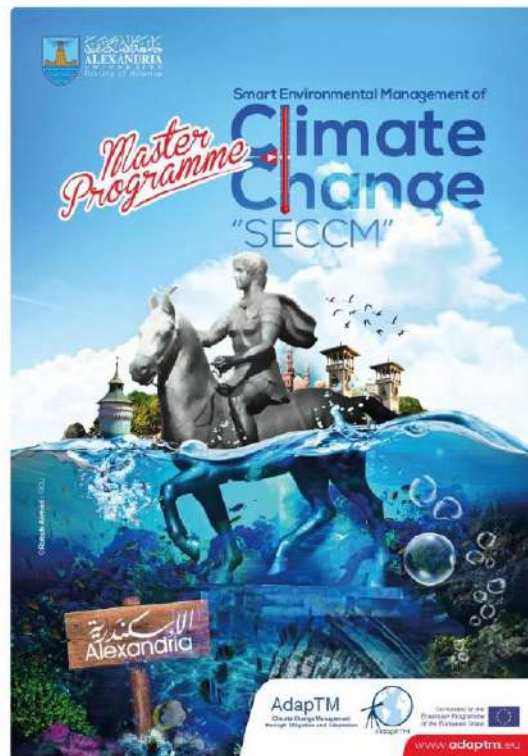
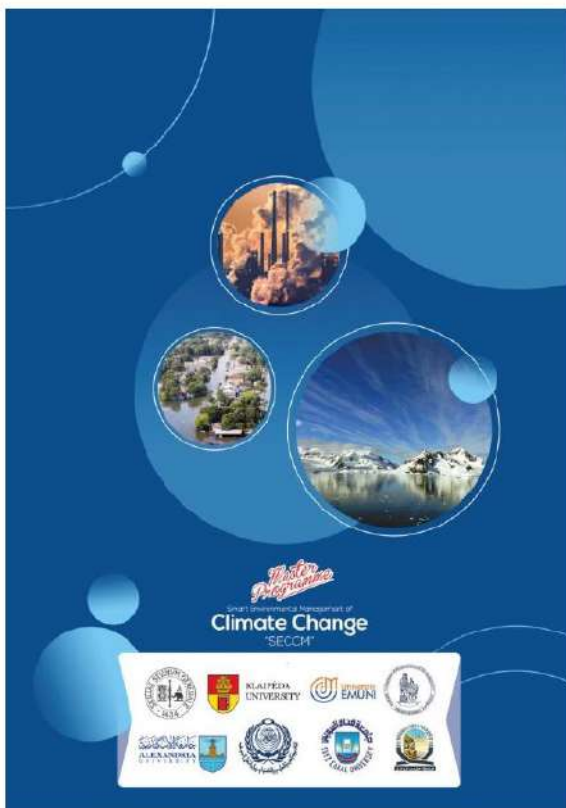
29 March 2014



Project funded by the  
EUROPEAN UNION



2. Production of Bio-Diesel from Algae in Selected Mediterranean Countries: Med-Algae Project, Faculty of Science, Alexandria University, Egypt. Fuded by CBCMED-ENPI (CROSS BORDER COOPERATION IN THE MEDITERRANEAN-European Neighborhood and Partnership Instrument)



3. Smart Environmental Management of Climate Change in collaboration with Catania University, Italy. (AdapTm-Erasmus project) – Faculty of Science, Alexandria University, Egypt.



**FishAqu Project**

A consortium of eight EU & Egyptian universities are establishing a modern, needs-oriented master study programme on fisheries and aquaculture.

**FISHeries**  
**AQUaculture**

4. Sustainable Management of Fisheries and Aquaculture Science, in collaboration with University of Aveiro, Portugal (Erasmus+ Project, European Union) - Faculty of Science, Alexandria University, Egypt.



Alexandria Center for Maritime Archaeology and Underwater Cultural Heritage

HOME COURSES PROJECTS TRAINING & MOBILITY PUBLICATIONS NEWS CONTACT US



Alexandria Center for Maritime Archaeology and Underwater Cultural Heritage

HOME COURSES PROJECTS TRAINING & MOBILITY PUBLICATIONS NEWS CONTACT US

5. Alexandria University Center for Maritime Archaeology & Underwater Cultural Heritage was established as a European Union project under the EU-Tempus III Program.



**( Second HEEPF Project )**



[www.areac-agr.com](http://www.areac-agr.com)













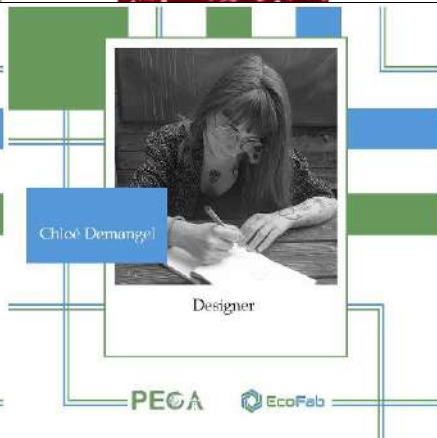
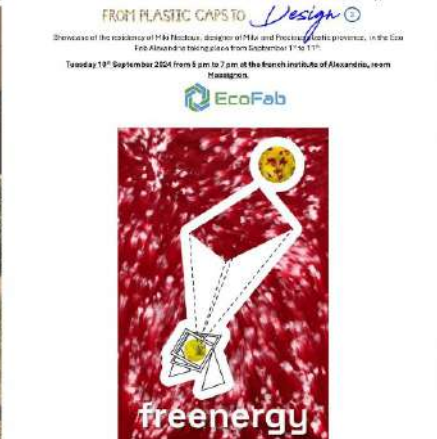
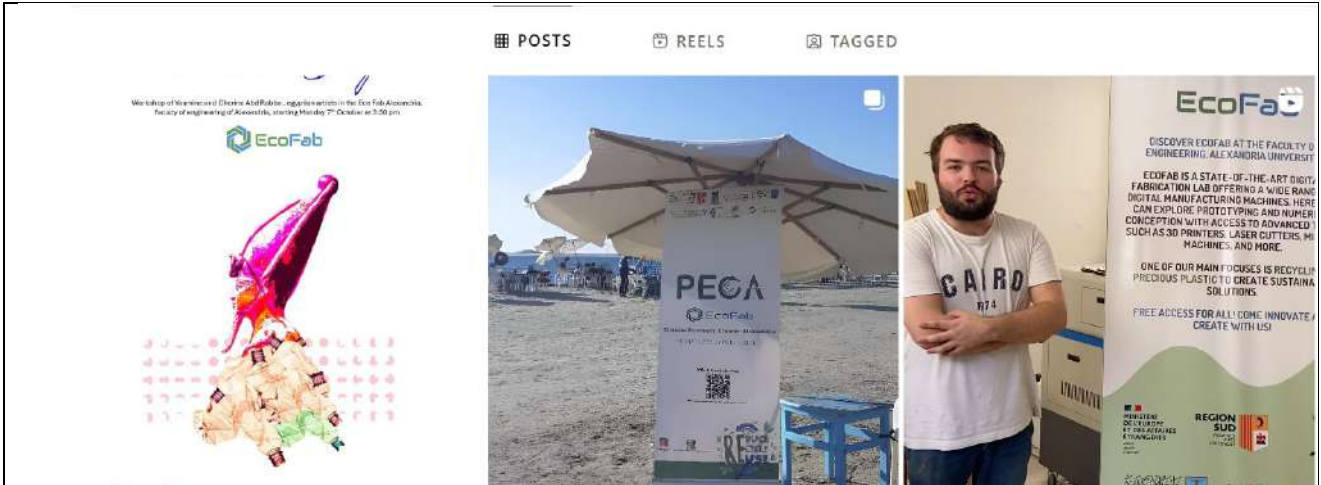


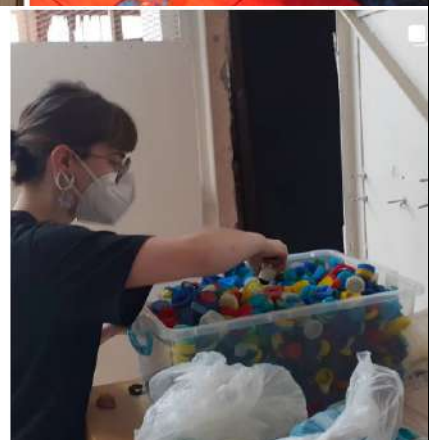
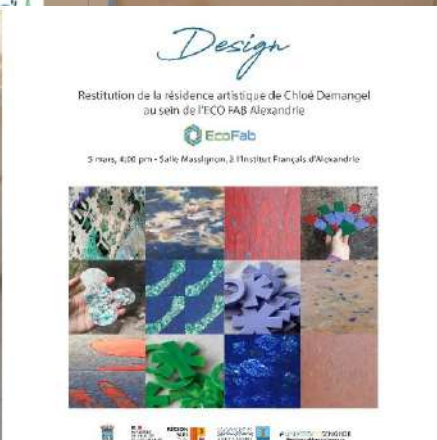
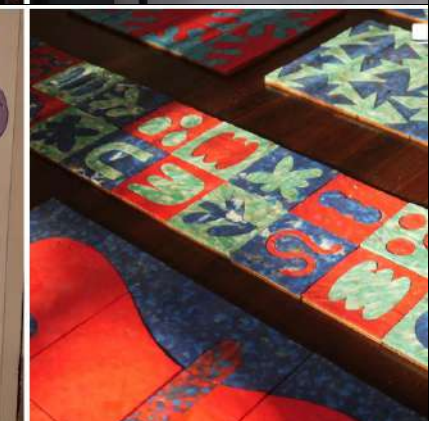
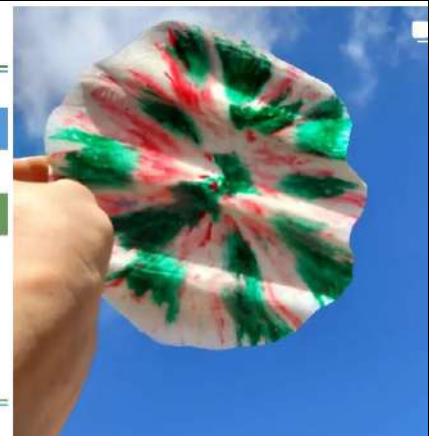


**6. The Renewable Energy Center at Faculty of Agriculture Alexandria University**



The European Union project to convert several buildings of Alexandria University into green buildings by reducing energy consumption in addition to establishing solar-powered power stations: the Specialized Scientific Programs Building at the Faculty of Engineering, the Faculty of Education Building within the Literary Colleges Complex, and the Manchester Building at the Faculty of Medicine.



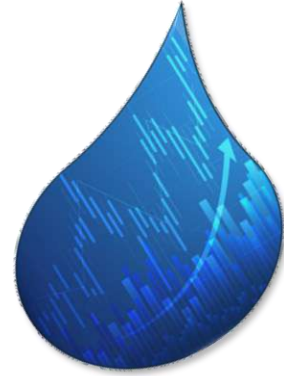


### Eco Fab Alexandria

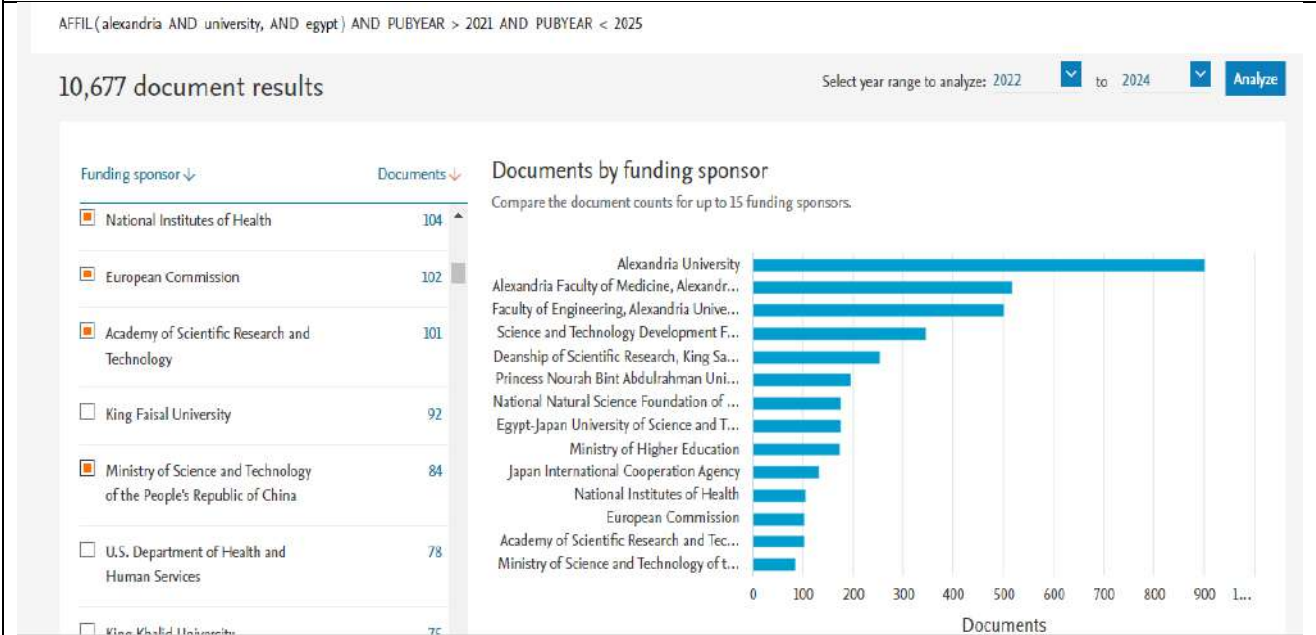
The Eco Fab is a fab lab dedicated to plastic recycling in Alexandria, Egypt and part of PECA project (Circular economy hub in alexandria).

### Participating Universities

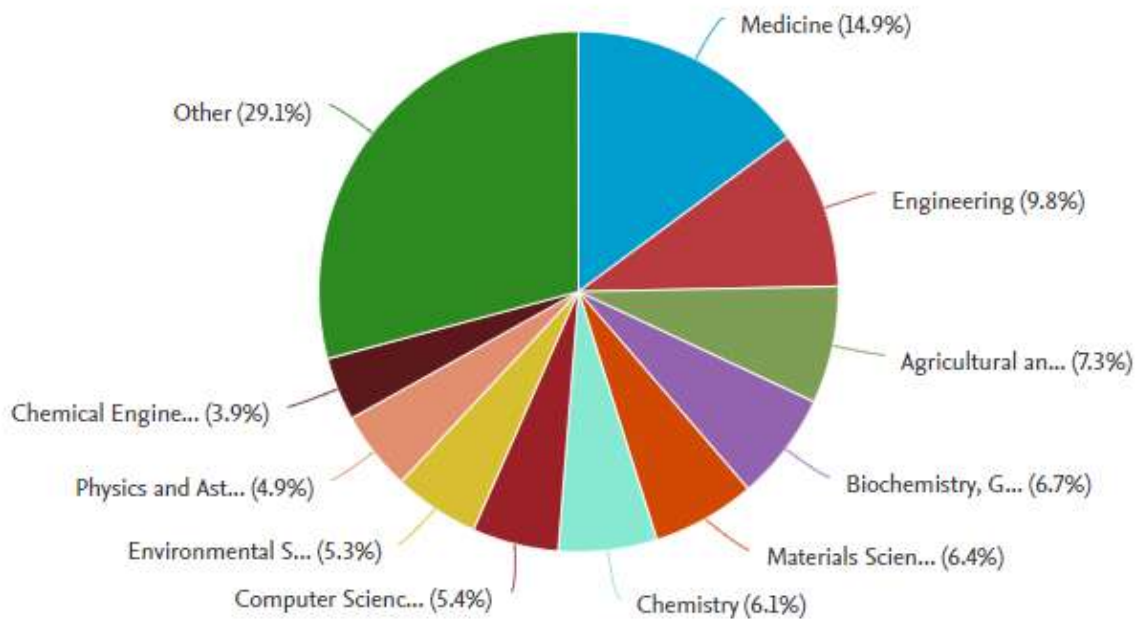
- Egypt: Alexandria University
- France: Université du Littoral
- Greece: University of the Aegean
- Italy: Università degli Studi di Palermo
- Egypt: Arab Academy for Science, Technology, and Maritime Transport
- Tunisia: University of Sousse
- Tunisia: University of Monastir
- Jordan: University of Jordan
- Jordan: Al-Bayt University



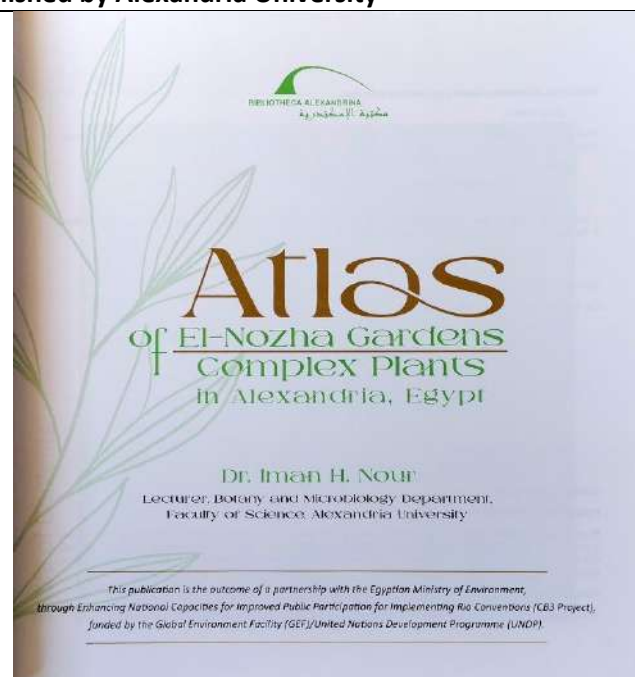
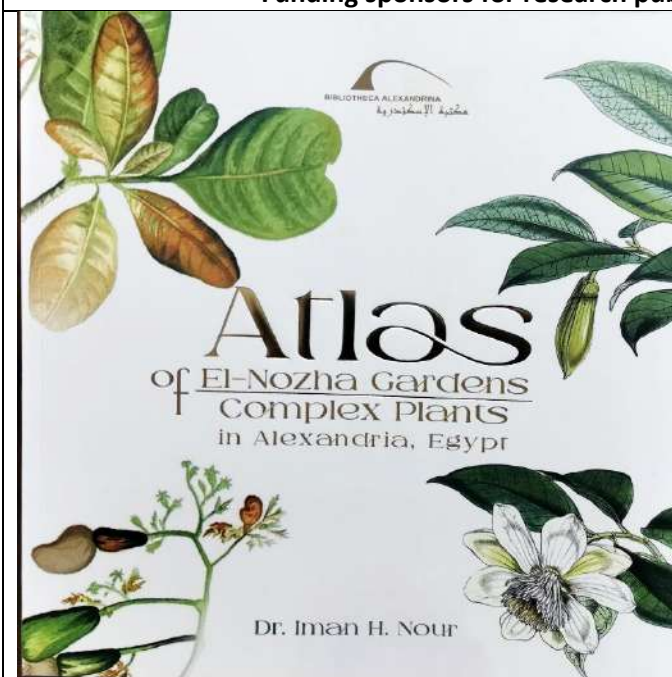
### BLUE-ERA: Curriculum Development for the Sustainable Blue Economy Study toward the achievement of Ocean Decade in Tunisia, Egypt, and Jordan. ERASMUS-EDU-2023-CBHE-STRAND-2 (Erasmus+)



### Documents by subject area



### Funding sponsors for research published by Alexandria University



An Atlas of El-Nozha Botanic Gardens in Alexandria has been published as the outcome of a partnership between the *Bibliotheca Alexandrina* and the Egyptian Ministry of Environment, funded by the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP).

Nour, I.H. (Editor); Mohamed, D.M.; Mesalam, H.G.; ElGedily, Y.A.; Mohamed, Y.G.; Gabr, Z.H. (2023). *Atlas of El-Nozha Gardens Complex Plants in Alexandria, Egypt. Bibliotheca Alexandrina.*

(ISBN 978-977-452-667-5, Dar El-Kuttub Depository Number: 11676/2023).



**Description:**

**Total research fund dedicated to sustainability research in 2021 = 1,716,690 US Dollars**

**Total research fund dedicated to sustainability research in 2022 = 2,128,253 US Dollars**

**Total research fund dedicated to sustainability research in 2023 = 1,198,113 US Dollars**

**The averaged annum last 3 years of research fund dedicated to sustainability research = 1,681,018.67 US Dollars**

The recent decrease in the research funding amount expressed in US dollars, in year 2023 compared to year 2022, from 2,128,253 US dollar to 1,198,113 US dollar, is directly attributable to the significant depreciation of the Egyptian pound. Over the past period, the exchange rate has shifted from 19 EGP to 49 EGP per US dollar. While this change results in a lower dollar value of the funding, it is important to note that in local currency terms, the total funding has actually increased. This reflects the impact of the currency devaluation on the funding's purchasing power within Egypt.

**Additional evidence link:** [www.pmu.alexu.edu.eg](http://www.pmu.alexu.edu.eg)

**Link for Sustainable Development:** <https://alexu.edu.eg/index.php/en/sustainable-development>

<https://alexu.edu.eg/index.php/en/2015-11-24-10-38-07/ranking?id=6011>

<http://sustainability.alexu.edu.eg/>

**Link for Green University:**

[https://alexu.edu.eg/index.php/?option=com\\_content&view=article&id=5932&catid=21&lang=ar-AA](https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5932&catid=21&lang=ar-AA)

**Example of some projects:**

**1. Natural Resources Sustainability for Land Development (Erasmus+ Project, European Union) in collaboration of Alexandria University (Egypt) with Aachen University (Germany)**

**Erasmus+ Project, European Union**

The participating countries and Universities: Germany (RWTH Aachen), Egypt (Alexandria University, Heliopolis University, the American University in Cairo, Aswan University), Cyprus (CITY College – Sheffield University), Italy (University of Palermo), Spain (Technical University of Madrid).

**Additional evidence link:** <https://suremap.eu>

<https://www.facebook.com/suremapproject>

<https://www.linkedin.com/company/suremap-project>

**2. Production of Bio-Diesel from Algae in Selected Mediterranean Countries: Med-Algae Project, Faculty of Science, Alexandria University, Egypt**

It is funded by CBCMED-ENPI (CROSS BORDER COOPERATION IN THE MEDITERRANEAN-European Neighborhood and Partnership Instrument)

**3. Smart Environmental Management of Climate Change in collaboration with Catania University, Italy (AdapTm-Erasmus project)**

The participating countries and Universities: Italy, Greece, Lithuania, Slovenia, Egypt (Alexandria University, Suez Canal University, South Valley University, Arab Academy for Science and Technology and Maritime Transport).

**Additional evidence link:** <https://emuni.si> › ADAPTM-handout\_2\_Mod



**4. Sustainable Management of Fisheries and Aquaculture Science, in collaboration with University of Aveiro, Portugal (Erasmus+ Project, European Union)**

The participating countries and Universities: Portugal (University of Aveiro), Italy, Croatia, Slovenia, Egypt (Alexandria University, Aswan University, Matrouh University, Arab Academy for Science and Technology and Maritime Transport).

**Additional evidence link:** <http://fishaqu.eu>

**5. Alexandria University Center for Maritime Archaeology & Underwater Cultural Heritage was established as a European Union project under the EU-Tempus III Program.** The project aimed to create a specialized center for postgraduate studies which provides education and training at different levels in aspects of maritime and underwater archaeology, and to develop a postgraduate Diploma and Master programs in Maritime Archaeology and Underwater Cultural Heritage, designed and structured in accordance with EU standards.

**Additional evidence link:** <http://www.cmauch.org/>  
<https://alexu.edu.eg/index.php/en/2015-11-24-10-43-20/training>

**6. The Renewable Energy Center at Faculty of Agriculture Alexandria University.**

- The center along with partner from Greece, Germany, Spain Morocco and Tunisia awarded a Six Framework project (FP6 project) from the European commission to developed Hybrid renewable energy system to supply service for Mediterranean partner countries.
- The center representing AU and Las Palm University in Spain awarded a project from the Spanish cooperation Spanish Agency for International Co-Operation (AECE), in the area of water desalination by Renewable Energy.
- Recently with cooperation with the Faculty of Engineering, the center awarded an STDF project. The project title is "Development of hybrid renewable energy - RO desalination system and minigrids for remote and desert areas in Egypt (HAREDES)".

The Center Goals are to:

- Remove the knowledge barriers against the installation of RE systems in Egypt.
- Enhance the utilization of renewable energy.
- Develop educational and e-learning program about renewable energy.
- Educate students, graduates, public and key stakeholders in Egypt and the Arab world on the various sources of renewable energy and its successful applications.
- Build the infrastructure necessary to develop, install and maintain renewable energy applications.
- Present a show case or a model for the successful utilization of renewable energy in Egypt.
- Continue excellence in all of our educational programs.

**7. Renewable sources in electricity production project in cooperation with the European Union in Alexandria University buildings in 2023-2024**

- In light of the keenness to rationalize energy consumption in university buildings and the general trend to increase the percentage of reliance on new and renewable sources in electricity production, and in cooperation with the European Union, the European Union funding was accepted for a project to transform some buildings of Alexandria University into green buildings by reducing energy consumption in addition to constructing Electrical power stations powered by solar energy on the roofs of some qualified faculty and institute buildings suitable for this purpose.
- Accordingly, three buildings belonging to the university's faculties were chosen as a first stage to study the feasibility of applying the project to them in terms of the building's ability to bear the weight of solar stations to produce electricity, as well as studying the spaces available for building these stations and the extent of those spaces' exposure to solar radiation throughout the day. The

opportunities available to reduce reliance on usual energy sources were also studied in terms of using more efficient lighting, increasing reliance on natural lighting during the day, and reducing the building’s air conditioning loads.

- After research and review, the specialized scientific programs will be developed in the Faculty of Engineering, the Faculty of Education building within the Literary faculties Complex, and the Manchester Building in the Faculty of Medicine, which were chosen due to the recent construction of these buildings and their ability to accommodate the proposed development in terms of the electrical load network and the development of air conditioning systems and water heating systems used in laboratories and bathrooms.
- These buildings were visited and their suitability for the project was evaluated. The current electricity consumption and the possibility of covering these loads with electricity generated from solar energy were studied. The roof areas facing south and suitable for establishing solar stations were inspected and raised. The available roof area in the Specialized Scientific Programs Building at the **Faculty of Engineering**, Alexandria University, was 2,400 square meters. It can be used to create a solar station with an area of 1,000 square meters with a capacity of **120 kilowatts**, so that the station will be able to generate **360 megawatt hours** of electricity annually. As for the **Faculty of Education** building, the total area of the building was 4,000 square meters, and the appropriate spaces for building the station accommodate 1,000 square meters of solar cells with a capacity of **120 kilowatts**, so that the station is capable of generating **360 megawatt hours** of electricity annually, and for the Manchester building at the **Faculty of Medicine**, 1,200 square meters is capable of accommodating a solar power station with an area of 800 square meters. With a capacity of **96 kilowatts**, the station is capable of generating **288 megawatt hours** of electricity annually. These stations also contribute to reducing carbon dioxide emissions by a total of approximately 214 tons annually. The total expected cost of the project is about 300,000 euros.
- The time to recover the capital was estimated through providing the electricity consumed in the three buildings for approximately seven years from the date the stations entered service at full capacity, considering the periodic maintenance necessary to continue the station’s operation with the greatest possible efficiency. Detailed reports were also prepared for each building and submitted to the general coordinator of the project, for review and to take the necessary steps to start this vital project, which is an important step in strengthening the efforts of the Egyptian state towards switching to renewable energy and reducing dependence on fossil fuels that have a negative impact on the environment.

### **New European Union Project for Renewable energy production (Solar panels)**

<b>No</b>	<b>Location</b>	<b>Production (in kWh)</b>
<b>1</b>	<b>Faculty of Engineering</b>	<b>360,000</b>
<b>2</b>	<b>Faculty of Education</b>	<b>360,000</b>
<b>3</b>	<b>Faculty of Medicine</b>	<b>288,000</b>
	<b>Total</b>	<b>1,008,000</b>

### **8. Fab Lab Project (Alexandria University)**

The overall goal of the project is to develop the circular and creative economy model by creating an innovation place equipped with machines Low Tech in Alexandria is hosted by Alexandria University. This place will play a role in creating local dynamism Transversal to become a crossroads between different audiences and actors from different backgrounds. To connect waste collection Plastic and its evaluation. Horizons Solidarités and the University of Corsica, in partnership with their peers in Alexandria, based on their experience in Fab Lab Corte, conduct experiments on recreating value for plastic in Alexandria. The goal is to connect all actors from assembly through training to development and dissemination.

### The scope of work in the project

- Environment, climate, and energy
- Education, social aspect, and research

These goals will be implemented through the establishment of a FabLab within Alexandria University, which is a space for innovation. Derives place this innovation is energized by a generation that has innovative ideas in the fields of environment, citizenship, and culture. This revival is embodied in women and the men who are partners in the project. The high skills of Alexandria University and Senghor University, Francophone operator in Alexandria, ensures the long-term commitment of their students and the sustainability of the local dynamism. Implementation benefits from facilities Headquarters provided by Alexandria University Project Engine. VSI contributes to the unification of links between regions. Project depends on the Alexandria Business Association (ABA), a trade organization that invests in creating startups in the circular economy and selling finished products. A multi-representative consortium from both sides of the Mediterranean could be formed from these dynamics that will support the project over time.



### Eco Fab Alexandria - PECA project

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Message

Like

The French side confirmed that the Fab Lab at the University of Corsica in France has become a very successful experiment on the economic and environmental levels, and is considered one of the most important strategic projects in France and receives the attention of the French Presidency and the Mediterranean region. The French side explained that it seeks to benefit from the expertise of Alexandria University, and that they are fully prepared. To provide full support for the project and coordinate with the relevant authorities in France for the success of this experiment, which will benefit both sides on the environmental, economic and environmental levels.

Led by the South Region and its partner Alexandria Governorate, this project aims to be part of an inter-regional dynamic with the participation of the **Corsican community**. This project is part of the “Zero Plastic Waste” regional strategy in the Mediterranean. It is also part of the dynamics of the memorandum signed on September 5, 2022 between the region and IUCN Med on the occasion of the World Nature Congress in Marseille, which aims to develop joint actions for the benefit of a Mediterranean region without plastic. On the other hand, this project is part of the context of the twenty-seventh session of the Conference of the Parties held in Egypt. It joins the global effort undertaken by the Egyptian state in order to effectively combat the effects of climate change. Its realization in Alexandria makes it possible to structure a permanent cooperation with the



governorate around a symbolic project that will, in the long term, enhance the social impact of research and university cooperation. In addition, this project promotes decentralized cooperation between the three regions. Indeed, supporting this project will highlight the role of the region, Alexandria Governorate, and Corsica in supporting innovative solutions to adapt regions to changing Climate. The strategy is based on four pillars: **digital communication in three languages, the production of digital communication media intended for the general public, organizing competitions for artists and architects from the two countries to enhance the innovative role Fab Lab, and discussions of ideas supported by all partners as a regional facilitator.** In addition, a dedication ceremony for the Fab Lab will be held in the presence of elected officials, governors, university presidents, and will be followed by the symposium in Alexandria is a continuation of COP 27, which was held in November 2022.

A system for monitoring and evaluating the project will be developed by members of the steering committee with the support of specialists. The monitoring and evaluation system will include the quantitative, qualitative, and financial components of the project. It will make it possible to measure the effectiveness of this place of innovation as a driver of sustainable and inclusive development at the local and Mediterranean levels. Indicators for this monitoring and evaluation system will be identified and validated by the Steering Committee at the beginning of the project to verify throughout the implementation period whether the results are consistent expected meets set goals. Answers will need to be provided to the items specified in the reference system approved by the Steering Committee.

#### **Link for Fab Lab Project**

[https://www.instagram.com/ecofab\\_alexandria/](https://www.instagram.com/ecofab_alexandria/)

[https://www.facebook.com/people/Eco-Fab-Alexandria-PECA-project/61556741425944/?\\_rdr](https://www.facebook.com/people/Eco-Fab-Alexandria-PECA-project/61556741425944/?_rdr)

<http://alexu.edu.eg/index.php/%D8%A3%D8%AD%D8%AF%D8%AB-%D8%A7%D9%84%D8%A3%D8%AE%D8%A8%D8%A7%D8%B1/6840-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A7%D9%84%D8%A5%D8%B3%D9%83%D9%86%D8%AF%D8%B1%D9%8A%D8%A9-%D8%AA%D8%A8%D8%AD%D8%AB-%D8%A5%D9%86%D8%B4%D8%A7%D8%A1-%D9%85%D8%B9%D9%85%D9%84>

### **BLUE-ERA: Curriculum Development for the Sustainable Blue Economy Study toward the achievement of Ocean Decade in Tunisia, Egypt, and Jordan. ERASMUS-EDU-2023-CBHE-STRAND-2 (Erasmus+)**

#### **Participating Universities**

Egypt: Alexandria University

France: Université du Littoral

Greece: University of the Aegean

Italy: Università degli Studi di Palermo

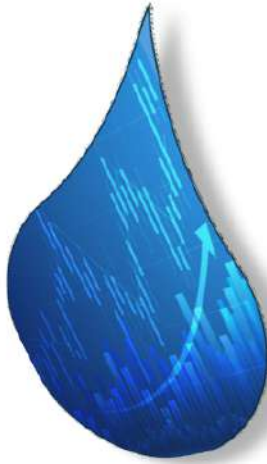
Egypt: Arab Academy for Science, Technology, and Maritime Transport

Tunisia: University of Sousse

Tunisia: University of Monastir

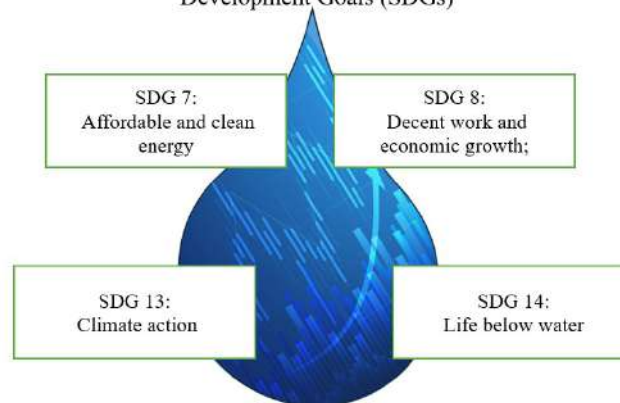
Jordan: University of Jordan

## Objectives:



- Establish a Master's program in sustainable management of coastal resources and the blue economy
- Hold workshops to enhance the skills and awareness of faculty members and postgraduate students on the topic of the blue economy.
- Create a laboratory for blue economy studies.
- Develop curricula on the blue economy.
- Arrange for some faculty members and postgraduate students to travel to the partner universities in the project for training and knowledge exchange.

**BLUE-ERA** expands on the background and guidance offered by the Sustainable Development Goals (SDGs)



## The funded research projects at Alexandria University, running from year 2019-2024

Research Projects 2019-2024					
	Project Title	Start Year	End Year	Funding Authorities	SDGs
1	Comparative study of the microbial community in colorectal cancer among Egyptian patients	2019	2021	National	Good health and well-being

2	targeting Toll like receptors in oral squamous cell carcinoma as a promising gene cancer therapy	2019	2023	National	Good health and well-being
3	Short-term and long-term trans-generational side effects of Sofosbuvir: Experimental study on female rats	2019	2022	National	
4	Establishment of familial high risk breast cancer screening program	2019	2021	National	Good health and well-being
5	Evaluation of the performance of an innovative microbial fuel cell and its applications in Water and industrial Waste Water desalination	2019	2020	National	Clean water and sanitation
6	The use of real Time PCR (qPCR) for the identification of Potato Viruses, PVY genotypes identification and PVY/host interaction in different Potato Varieties	2019	2021	National	
7	A pre-clinical study for safe sterilization of male stray dogs and field rats using gossypol	2019	2023	National	
8	Relationship between PGPR and plant metal homeostasis in west of Alexandria :A potential role to mop up the heavy metals contaminated sites	2019	2021	National	
9	Neurophysiological, biological and behavioral assessment of efficacy of shields behavioral intervention program in adolescents with ADHD	2019	2022	National	Good health and well-being
10	Childhood Epilepsy: Overcoming Challenges in Diagnosis and Treatment	2019	2023	National	Good health and well-being
11	Enhancing Resource Recovery and Improving Wastewater Reuse Through Synergistic Cooperation between Bioelectrochemical Systems and Forward Osmosis	2019	2024	Egyptian/American	Clean water and sanitation
12	An integrated system for sustainable water management in agriculture	2019	2022	European Union	Climate Action

13	Innovative Sustainable Solutions for broomrapes: Prevention and integrated Pest... management approaches to overcome parasitism in Mediterranean cropping Systems	2019	2023	European Union	Climate Action
14	Agro-ecological genomics and molecular systematics of invasive drosophilid pests and frugivorous insects in Egypt	2019	2021	European Union	Climate Action
15	An Innovative method for producing ultra-high elastic piezoelectric nanofibrous layers using solution-blowing technique	2019	2021	National	Climate Action
16	Molecular epidemiology and antimicrobial resistance mechanisms in staphylococci from various geographic regions in Africa	2019	2023	European Union	Good health and well-being
17	Excellence in the educational process in the light of applications of technology	2020	2022	National	Quality Education
18	Utilization of Egyptian Flax fibre and Flax Cord for High Value Added Technical Applications	2020	2023	National	Responsible consumption and production
19	River and WasteWater Treatment Using Microbial Flocculants	2020	2022	National	Clean water and sanitation
20	Innovative solutions for the Development of Active Intelligent and Sustainable Food Packaging Materials	2020	2023	National	Affordable and Clean Energy
21	Milk and meat safety and greenhouse ags emissions from ruminants fed on organo modified nanoclays as feed additives	2020	2023	National	Climate Action
22	Microbial degradation of phenol containing petroleum effluents and its application in electricity generation	2020	2023	National	Affordable and Clean Energy
23	Development of Antimicrobial Electrospun Polymeric Nanofibers Composites Membrane for Municipal Water Safety : prototype Construction	2020	2022	National	Clean water and sanitation
24	Production and optimization of bio-based nano-graphene for innovative water treatment technology	2020	2021	National	Clean water and sanitation



25	Green Chemistry: Nano-implications from research to industry	2020	2020	National	
26	Radiation protection as a habit for Health Occupational radiation workers	2020	2021	National	Good health and well-being
27	The Safety & Efficacy of Imatinib a Tyrosine Kinase Inhibitor for the Treatment of SARS-COV-2 Induced Pneumonia: A Pilot Study	2020	2022	National	Good health and well-being
28	Synthesis of Antibody -targeted Drug-polymer Conjugates as Nanomedicine product for Cancer Therapy	2020	2023	National	Good health and well-being
29	Design , synthesis, nanoformulation and biological evaluation of novel multitarget anticancer agents	2020	2022	National	Good health and well-being
30	An exploratory survey of COVID-19 humoral immunity among Egyptian general population and healthcare workers	2020	2021	National	Good health and well-being
31	Ethyl Formate as Alternative to Methyl Bromide for Controlling storehouse pests on Dates	2020	2023	National	Climate Action
32	Powerful strategy for treating triple negative breast Cancer: Silencing miR-21 by small interfering RNA loaded-Chitosan Nanoparticles	2020	2022	National	Good health and well-being
33	Economical Production Line of Antimicrobial Nano- treated Face Masks	2020	2021	National	Good health and well-being
34	The potential role of microRNAs conjugated nanoparticles in enhancing cardiac regeneration. In vitro study	2020	2024	National	Good health and well-being
35	Design and Implementation of a Smart and Hybrid Multiport Solid-State Transformer for Marine Applications	2020	2022	National	Industry, Innovation and Infrastructure
36	Combination of Neuroplacement Therapy With PLGA Nanoparticles for Alzheimer's Disease Treatment	2020	2023	National	Good health and well-being
37	Increasing the main active substances in the Wonka plant using CRISPR/Cas9 technology	2020	2023	National	Climate Action
38	Design, Manufacture and Test a Ventilator for Corona Virus Patients in Egypt	2020	2020	National	Good health and well-being

39	Safe, rapid antimicrobial disinfectants for controlling of biofilms formation in diary industries	2020	2023	National	Decent work and Economic Growth
40	Towards Breeding of Promising Hybrids and Cultivars of some Strategic Vegetables Crops	2020	2023	National	Climate Action
41	Completion of the pre-clinical study file for nanoparticles loaded with berberine as a promising therapeutic route for liver and lung cancer.	2020	2022	National	Good health and well-being
42	Improvement of the Performance of Reverse Osmosis Membranes using Eco-friendly Materials	2020	2022	National	Affordable and Clean Energy
43	A Road Map for Investing Egyptian Research Outputs in The Field of Diagonostic Kits With Economic Values	2020	2020	National	Decent work and Economic Growth
44	Towards the Establishment of a Globally Complaint Egyptian Active Pharmaceutical Ingredient Facility for Critical Diseases	2020	2023	National	Good health and well-being
45	Design, synthesis and evaluation of novel anti- coronavirus agents	2020	2022	National	Good health and well-being
46	Establishing entrepreneurship clubs	2020	2021	National	Decent work and Economic Growth
47	Preclinical evaluation of some seri materials for microbial infections a	2020	2023	National	Good health and well-being
48	TICO	2020	2023	National	Partnership for the goals
49	Creating a unit for early diagnosis and follow-up of critical heart conditions	2020	2020	National	Good health and well-being
50	Enhancing the practical applications of some academic courses by producing short educational animated films	2020	2020	National	Quality Education
51	Exploring the desert through an unmanned ground vehicle	2020	2020	National	Climate Action
52	Manufacturing an environmentally friendly robotic submarine	2020	2020	National	Affordable and Clean Energy

53	Precision measurements and digital tests laboratory	2020	2022	National	Good health and well-being
54	Developing the environmental pollutants analysis unit laboratory at the Higher Institute of Public Health	2020	2022	National	Good health and well-being
55	Design and construction of an integrated, smart, electronic irrigation system powered by solar energy	2020	2020	National	Affordable and Clean Energy
56	Design and create an electronic unit to monitor engine performance with the aim of detecting faults, diagnosing them, and offering solutions	2020	2020	National	Decent work and Economic Growth
57	Design and construction of a smart, solar-powered arm to identify and collect ripe agricultural fruits	2020	2020	National	Responsible consumption and production
58	Metabolic footprint of HDV mono- and HBV/HDV super-infections	2020	2020	National	Good health and well-being
59	Development of an Irrigation Management Information and Communication System (IMICS) for the humid tropical region of Kerala and for the dry climate of Egypt as a decision support systems (DSS) tool to improve crop productivity.	2020	2022	National	Climate Action
60	Feasibility Study for Developing Large Scale Narrow Band Gap Polymeric Solar Cell: Technical Challenges and Life Cycle Economic	2020	2023	National	Decent work and Economic Growth
61	Sustainable technologies and methodologies to improve quality and extend product shelf life in the Mediterranean agro-food supply chain	2020	2024	National	Decent work and Economic Growth
62	Sustainable Resource Management Programme to solve Desert-ed challenges	2020	2023	European Union	Climate Action
63	knowledge exchange in Sustainable Fisheries Management and Aquaculture in the Mediterranean region /FishAqu	2020	2023	European Union	Partnership for the goals
64	Spatial Data Infrastructures and Earth Observation Education and Training for North-Africa	2020	2023	European Union	

65	New Professional Diploma in Plant Clinic and Phytosanitary Technologies	2020	2023	European Union	Climate Action
66	Tracing Rice and Valorizing Side Streams along Mediterranean block chain	2020	2023	European Union	Decent work and Economic Growth
67	Reframing Heritage Education in Egypt / Re-HeED	2020	2023	European Union	Quality Education
68	Knowledge Triangle, Innova lion : Reinforcing of Education- Research II- Health & Medical Links	2021	2023	European Union	Quality Education
69	A novel combined approach for Poultry slaughterhouse wastewater treatment: prototype design and development	2021	2024	National	Clean water and sanitation
70	Safety and Therapeutic efficacy of Cyclosporine plus standard of care treatment on ARDS in COVID-19 patients at Alexandria university hospitals in 2020: A comparativey	2021	2022	National	Good health and well-being
71	Alexandria University Center of Excellence for Smart Urban Governance (AIXU-COE-SUG)	2021	2022	National	Decent work and Economic Growth
72	University Community Urban Lab for Interactive Learning and Innovative Societal Solutions ( UC-URBAN LAB)	2021	2024	National	Decent work and Economic Growth
73	Real time data monitoring system of Textile manufacturing processes	2021	2023	National	Decent work and Economic Growth
74	Agricultural sustainability and water reuse in Egypt : innovative wastewater treatment and soil health	2021	2024	National	Clean water and sanitation
75	Development of Herbal Extraction Unit for the Production of Standardized Herbal Products for Human Use	2021	2023	National	Good health and well-being
76	Pesticide Residues Unit Laboratory - Central Laboratory Environmental Pollutants Desalination Unit at the Higher Institute of Public Health	2021	2022	National	Good health and well-being
77	Developing a smart irrigation system to evaluate and monitor the quality of the green area and maximize the use of available water resources	2021	2021	National	Climate Action
78	Design and implementation of a self-propelled unit for landscaping maintenance (mowing and aeration)	2021	2021	National	Climate Action

79	Developing students' skills in using regenerative medicine and tissue engineering to treat some bone injuries in the veterinary field	2021	2021	National	
80	Creating pictorial paintings and products with healing powers inspired by Bach flowers to treat post-traumatic stress disorder associated with the Corona pandemic to serve small projects.	2021	2021	National	Responsible consumption and production
81	Sustainable Asphalt Mixtures Using Warm Asphalt Additives and Steel Slag for Egyptian Environmental Condition	2021	2023	National	Affordable and Clean Energy
82	Support and Qualifying of Educational Programs for International Accreditation in Higher Education Institutions	2021	2023	National	Quality Education
83	Using Mixed-mode ventilation System for improving Energy Efficiency in Office Buildings	2021	2023	National	Decent work and Economic Growth
84	Celecoxib-Based Fused Ring Derivatives: Therapeutic and Molecular Roles in Induced Liver Injury in Experimental Animals	2021	2023	National	
85	CRISPR/Cas-mediated Genetic Modulation of PDL-1 and KRAS in Cancer Cells	2021	2023	National	Good health and well-being
86	Autophagy and Kinase Inhibitors as a Potential Combined Therapy for Cancer	2021	2023	National	Good health and well-being
87	Detection of oral microbiota population differences' in oral squamous cell carcinoma versus premalignant lesions	2021	2023	National	Good health and well-being
88	Ex vivo expansion of human hematopoietic stem cells	2021	2023	National	Good health and well-being
89	Anti-obesity potential of Superparamagnetic iron oxide nanoparticles in experimental model of obesity	2021	2022	National	Good health and well-being
90	Growth Factor-Laden Hydrogel For Regenerative Endodontic Applications	2021	2024	National	
91	Insect-based natural compounds: An upcoming therapeutic approach to target human lung cancer	2021	2024	National	Good health and well-being

92	Synthesis, characterization, and computational studies on new synthesized azo-based ligands and their metal complexes	2021	2022	National	
93	TLR-4/Wnt correlation as a new immunotherapeutic strategy in Oral Squamous cell carcinoma	2021	2023	National	Good health and well-being
94	Comparing silver diamine fluoride, sodium fluoride varnish and behavior modification in the prevention of early childhood caries: a field trial	2021	2023	National	Good health and well-being
95	An Innovative formula of Rice Straw to Control Corrosion in Various Media	2021	2023	National	Industry, Innovation and Infrastructure
96	Beneficial role of insect-based therapy to target liver tumor	2021	2024	National	Good health and well-being
97	The Potential role of Nanoparticle-Based Delivery of microRNA for targeted Oral squamous cell carcinoma gene therapy	2021	2023	National	Good health and well-being
98	Evaluation the Role of Exosomes in Tumorigenic behavior of Triple Negative Breast Cancer: Chemoresistance, the Pre-Metastatic Niche and Metastasis	2021	2024	National	Good health and well-being
99	Towards a green Economy Farm: Innovative Solar Collector for Biochar Production from Agricultural & Food Industry Wastes, Power Generation, and Crops Drying	2021	2023	National	Affordable and Clean Energy
100	Reverse Engineering Lab for Spare Parts (RELSS)	2021	2024	National	
101	Wastewater Treatment by Integrated Green Coagulation And Membrane Technology for Reuse	2021	2024	National	Clean water and sanitation
102	Maternal and fetal programming in preeclamptic rats modulates cardiovascular and renal manifestations of endotoxemia	2021	2024	National	
103	Design and Manufacturing of Electric Car National Consortium	2021	2023	National	Affordable and Clean Energy
104	A project to develop systems for measuring and evaluating the Faculty of Tourism and Hotels	2021	2023	National	Quality Education

105	Digital transformation in measurement and evaluation systems	2021	2023	National	Quality Education
106	A project to develop measurement and evaluation systems in Egyptian universities	2021	2023	National	Quality Education
107	ImPUISe	2021	2024	European Union	
108	Integrating biomarkers and healthcare solutions to deliver personalized medicine and intervention in the home and community for the upper leg of children with stroke-related hemiplegia.	2021	2024	National	Good health and well-being
109	NEXUS-NESS	2022	2025	European Union	Climate Action
110	Use of immunopeptidomics to inform development of the next generation of tropical theileriosis vaccines	2021	2022	European Union	Good health and well-being
111	PiezoACT membranes : Piezo-Active Nanofibrous Self- decontamination Facemasks/ Filters using Solution Blow Spinning in Egypt	2022	2023	European Union	Climate Action
112	Documentation of Wild Egyptian Flora using DNA-Barcoding Technology	2022	2024	National	Climate Action
113	Accelerating the Impacts of Solar Driven MOF Adsorption System for Water Desalination and Cooling in Egypt	2022	2024	European Union	Climate Action
114	Engineering microbial cells as a platform for producing valuable terpenes	2022	2024	National	Responsible consumption and production
115	Internally synthesized rumen yeasts mixed with organically modified montmorillonite in nano form as new food additives for ruminants.	2022	2024	National	Good health and well-being
116	Designing an industrial prototype for innovating microbial -based feed additives using nano-encapsulation technology for improving performance and immunity of farm animals	2022	2024	National	Decent work and Economic Growth

117	EGYPTIAN CANCER RESEARCH NETWORK	2022	2024	National	Good health and well-being
118	Incubator for Pedagogical Innovation and applications serving Learning Objectives and Teaching- PILOT Incubator	2022	2025	National	Quality Education
119	Immune stimulation, gene expression and disease resistance in Nile tilapia, <i>Oreochromis niloticus</i> , by marine extremophilic bacteria	2022	2023	National	
120	Smart thermal and photo label for monitoring consumables Safety	2022	2025	National	Responsible consumption and production
121	Experimental Evaluation of PCM Melting using different tube arrangements in a shell and tube latent heat thermal storage unit	2022	2023	National	Affordable and Clean Energy
122	Topical Selenium Hydrogel as a Treatment for Oral Ulcerative lesions	2022	2023	National	Good health and well-being
123	Monitoring and Management of Harmful Algal Blooms in northern Coastal Waters of Egypt for ensuring food safety	2022	2024	National	
124	Inflammatory mechanisms underlying the comorbidity between at deficit/hyperactivity disorder(ADHD) and plain sensitization	2022	2024	National	Good health and well-being
125	The second part of the Egyptian Wild Plant Encyclopedia	2022	2024	National	Climate Action
126	Potential of Rice Husk and Sugarcane Bagasse Biochars Supplemented to Acacia and Leucaena Based Diet on Nutrients Digestibility and Greenhouse Gas Emission From Dairy Manure	2022	2027	European Union	Good health and well-being
127	The impact of gut microbiome-guided dietary intervention using Mediterranean gluten -free diet on clinical profile and quality of life among a sample of relapsing remitting multiple sclerosis: A prospective study	2022	2024	National	Good health and well-being
128	L'éco-Citoyenneté en Egypte : sensibilisation aux ODO, transmission	2022	2023	National	Sustainable Cities and Communities



	d'expérience et perspectives de développement				
<b>129</b>	Online Pharmacogenomics and Personalized Medicine Postgraduate Program-oppm	2022	2025	European Union	Good health and well-being
<b>130</b>	Hybrid reporter nanoconjugates as next generation cancer theranostics	2022	2025	National	Good health and well-being
<b>131</b>	Advancing non -conventional Water management for innovative climate-resilient water governance in the Mediterranean Area (AG-WaMED)	2022	2025	National	Clean water and sanitation
<b>132</b>	Downscaling atmospheric components over Egypt under different future climate change scenarios (2065-2100)	2022	2024	National	Climate Action
<b>133</b>	Construction of a Self-Charging Unit for Collecting Wasted Mechanical Energy from Basic Human Motion	2023	2025	National	Affordable and Clean Energy
<b>134</b>	Preparation of NP-nucleic acid insecticides and its application in pest control	2023	2025	National	Climate Action
<b>135</b>	Electronic Dental Systems for detection and surveillance of oral diseases in Egypt (EDS-EGY)	2023	2025	National	Good health and well-being
<b>136</b>	Universities resilient to climate change: Public awareness, sustainable education and technology development as principal strategies towards net Zero Carbon Campus	2023	2024	European Union	Climate Action
<b>137</b>	AI-Based Tool for Automatic Segmentation of Dental Pulp after Therapy and Tissue Regeneration	2023	2023	National	Good health and well-being
<b>138</b>	Microbial-augmented biochar to control soil-borne plant diseases and mitigate climate change	2023	2023	National	Climate Action
<b>139</b>	Water desalination and food processing techniques at Alexandria University	2023	2024	National	Clean water and sanitation
<b>140</b>	Selection and production of starter cultures for the manufacture of Ras, Talaga and Domiatti cheeses and acceleration of Ras cheese ripening	2023	2025	National	

141	Manufacture of Ras Cheese using starter culture With the best salting method	2023	2023	National	Industry, Innovation and Infrastructure
142	Production of a natural preservative for milk and study of its effect on milk components	2023	2025	National	Industry, Innovation and Infrastructure
143	The future vision of green hydrogen in Egypt: a technical and economic study	2023	2024	National	Decent work and Economic Growth
144	Unraveling the possible mechanisms of muscle regeneration in statin-induced-myopathy in rats: in-vivo and in-vitro studies aided with artificial intelligence	2023	2025	National	Good health and well-being
145	Minimal Residual Disease Assessment in Multiple Myeloma by Next-Generation Sequencing	2023	2025	National	Good health and well-being
146	Study of the neuroprotective effects of stereostatic transplanted non-tumorigenic MUSE cells in a rat model of insecticides induced Parkinson disease	2023	2025	National	Good health and well-being
147	Novel PPAR-based molecular platforms for the treatment of cognitive dysfunction and metabolic impairment: When Alzheimer's constitutes type 3 diabetes	2023	2025	National	Good health and well-being
148	Tumor-educated platelet RNAs as potential biomarkers for diagnosis of oral squamous cell carcinoma	2023	2025	National	Good health and well-being
149	Digital Twin Based Information Systems in Education 4.0: The Case of Alexandria University New Abis Campus (DTE4)	2023	2025	National	Quality Education
150	Design and Fabrication of Biodiesel Burner test rig	2023	2025	National	Industry, Innovation and Infrastructure
151	New Framework for Damage detection in new Egyptian smart cities based on self-powered structural health monitoring technique integrated with the developer	2023	2025	National	Affordable and Clean Energy

152	Agronomic characterization and genetic diversity of Quinoa genotypes under heat and drought stresses in North-West Egypt	2023	2025	National	Climate Action
153	Effect of some bio fertilizers, virmi compost and Salicylic acid on citrus rootstock salinity tolerance	2023	2025	National	Climate Action
154	Rivaroxaban, Enoxaparin and clopidogrel ameliorate metabolic and structural manifestations of NASH in anti- rats via anti-coagulation and inflammatory mechanisms	2023	2025	National	
155	The Neuroprotective Effects of Novel Diabetes: Antidiabetics in Type 2 Possible Mechanism for Halting Cognitive Deterioration	2023	2025	National	Good health and well-being
156	Clinical Evaluation and Antimicrobial Chemo- Effect of Papain Based Mechanical Caries Removal Agents in Young Permanent Molars (A (Randomized Controlled Clinical Trial	2023	2026	National	Good health and well-being
157	Targeted Multi-functioning RNA-based nanoparticles as a new approach for treatment of chronic kidney disease	2023	2026	National	Good health and well-being
158	IN Vitro Meat Production Utilizing and Stem Cells as a Sustainable Climate-Friendly Alternative Source of Protein	2023	2025	National	Zero Hunger
159	sulfolobus solfataricus L-Asparaginase: expression in Escherichia coli, purification, biochemical characterization and assessment cytotoxicity	2023	2025	National	Good health and well-being
160	Environmentally friendly methods for termite detecting and controlling and wood borer infestations in Alexandria Governorate	2023	2026	National	Decent work and Economic Growth
161	Preparation of prototype of Saccharomyces cerevisiae nano bentonite composite as a novel feed supplement to mitigate enteric gases greenhouse	2023	2025	National	Climate Action

162	Screening for some mutations in the Egyptian PAH gene in a group of phenylketonuria patients attending Alexandria University Hospital	2023	2025	National	Good health and well-being
163	Potential regenerative capacity of non-tumorigenic muse cells on invitro model of cardiac ischemic reperfusion injury	2023	2026	National	Good health and well-being
164	Cell-free DNA genetic variants in using triple-negative breast cancer next-generation sequencing	2023	2026	National	Good health and well-being
165	Production, modification and new from prospects of biochar derived biomass waste	2023	2026	National	Affordable and Clean Energy
166	The prospective ameliorative effect and of zinc oxide nanoparticles melatonin against cadmium oxide nanoparticles-induced toxicity: an integrated biomarker-based approach for ecotoxicological model organism evaluation in a Blaps polycresta	2023	2026	National	Climate Action
167	Microbial technology as a bioremediation tool for heavy metals removal from industrial wastewater through proteomic and approaches nanotechnological	2023	2025	National	Clean water and sanitation
168	The potential of using some Mint and effective beta Rosemary extracts as lactamase inhibitors	2023	2025	National	Good health and well-being
169	Epigenetic alterations of enhancer of Stem zeste homolog Mesenchymal Cell-Derived Small Extracellular Vesicles: A Novel Approach for Pyroptosis signature in Liver Cancer	2023	2025	National	Good health and well-being
170	Impact of Silicon Nanoparticles on Physiological Performance and Molecular Characterization of Two Cotton Cultivars Under Different Soil Moisture Levels	2023	2026	National	Decent work and Economic Growth
171	Studies on human placental extract against as a therapeutic promise diabetes-mediated neurodegeneration in experimental rats	2023	2026	National	
172	Triazoles conjugates -1,2,3 nanoformulae for multidrug resistant bacteria treatment	2023	2025	National	Good health and well-being

173	The potential effect of <i>Persea americana</i> peel extract on the modulation of Tryptophan dioxygenase signaling pathway in Liver-induced Non Alcoholic Fatty rats	2023	2025	National	
174	Actinomycetes cell mass as a non-traditional feed ingredient in aquaculture fish diets	2023	2025	National	Decent work and Economic Growth
175	Avocado peel methanolic extract PI3K/AKT/SIRT- could modulate the 1/HIF1 signaling pathway and treat fibrosis in high-fat diet-induced liver rats	2023	2026	National	
176	Experimental tailoring of MOF/BiOX nanocomposite of improved photocatalytic water decontamination supported with DFT computations	2023	2026	National	Clean water and sanitation
177	Applied Coordination Chemistry of Biologically Active Ligands Containing Chalcogenide Atoms	2023	2026	National	
178	Complete preclinical profile of characterized nanoformulation of <i>Salix mucronata</i> active fraction as anti-hepatocellular carcinoma	2023	2026	National	Good health and well-being
179	Effect of <i>Momordica Charantia</i> Seeds Hepatotoxicity in on Lead Induced Male Albino Rats	2023	2026	National	
180	Marine Microbioll - asparaginqse Chara Molecular and Biochemistry characterization and Possible applications as an anti- Cancer dryg	2023	2025	National	Good health and well-being
181	Water- Development of Novel Energy -Food - Ecosystem (WEFE) Standalone Mini -complex Based on a	2023	2026	National	Affordable and Clean Energy
182	Knowledge Exchange in Aquatic Animals Medicine and Ecosystem Health in the Mediterranean and sub-Saharan Regions.	2024	2027	European union Erasmus+	Good health and well-being
183	Regenerating Deserts - The Habiba & Moghra Pilot Cases	2024	2027	European union DESCA (Horizon Europe)	Life on land
184	Modernization of Land and Urban Management Education in Southern Mediterranean (MLUMSE)	2024	2027	European union Erasmus+	Life on land

185	Localization and Egyptianization of foreign cow breeds with high meat and milk production	2024	2027	Academy of Scientific Research	Zero Hunger
186	Evaluation of some in vitro embryo production protocols to accelerate genetic improvement in cows in Egypt	2024	2027	Academy of Scientific Research	Good health and well-being
187	Maximizing the productivity of farm animals by using non-conventional, salt-tolerant feed materials	2024	2027	Academy of Scientific Research	Zero Hunger
188	Addition of metformin to neoadjuvant chemotherapy in ovarian cancer patients with the use of circulating tumor DNA and circulating tumor cells as predictive biomarkers	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
189	EXPRESSION OF SELECTED INHIBITORY IMMUNE CHECKPOINT MOLECULES IN A COHORT OF CHILDHOOD B-CELL ACUTE LYMPHOBLASTIC LEUKEMIA	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
190	Potential Biomarkers Associated with Autism: Developing A Comprehensive Screening Panel for Autistic Spectrum Disorder	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
191	Optimizing multi-kinase inhibitors for augmenting immunotherapeutic agents in breast cancer: Synthesis, nanoformulation and biological evaluation	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
192	Removal of microbiological contaminants from wastewater using innovative pyroelectric nanocomposite	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
193	Establishing and Integrating Electronic Cancer Registry at Medical Research Institute, Alexandria University, Egypt.	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being

194	Boosting Second Harmonic Generation in Integrated Photonic Platforms	2024	2026	Alexandria University initiative to support research RSI 2	Climate Action
195	Millet potential as a sustainable nutrient in the development of some innovative dairy products	2024	2026	Alexandria University initiative to support research RSI 2	Zero Hunger
196	Developing A new ACTinobacteria-based Biocontrol Product Against Plant Viral Diseases (zucchini yellow mosaic virus) – ACTVBiocontrol	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
197	Employing psychodrama for Psychological support using therapeutic dolls with children with cancer and their families	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
198	Novel co-delivery of doxorubicin and phycocyanin extract loaded Klebsiella pneumoniae ghost to induce pyroptosis signature and overcome drug resistance in non- small cell lung cell lines	2024	2026	Alexandria University initiative to support research RSI 2	Good health and well-being
199	Interferon Y enriched Extracellular Vesicles as a novel therapeutic modality for multiple sclerosis	2024	2026	Minactrams (European Union)	Good health and well-being
200	Alexandria Innoversity Challenge (IVC)	21/4/2024	30/6/2024	Fund for Innovators and Geniuses - Ministry of Higher Education and Scientific Research	Industry, Innovation and Infrastructure
201	Thermoelasticity in semiconductors and its applications	2024	2026	Science, Technology and Innovation Funding	Affordable and Clean Energy



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### Graduate Student Projects Funded by the Science, Technology, and Innovation Funding Authority (STDF)

No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
1	Faculty of Fine Arts	Using a Mixed Ventilation System to Improve Energy Efficiency in Administrative Buildings	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
2	Institute of Graduate Studies and Research	Integrated Motion Derivatives Based on Celecoxib: Therapeutic and Molecular Roles in Experimentally Induced Liver Injury in Animals	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
3	Institute of Graduate Studies and Research	Genetic Modification of KRAS and PDL-1 Using CRISPR Technology in Cancer Cells	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
4	Institute of Graduate Studies and Research	Autophagy and Kinase Inhibitors as an Effective Combination Therapy for Cancer	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
5	Faculty of Dentistry	Detection of Oral Microbial Differences in Squamous Cell Carcinoma Versus Pre-cancerous Changes	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
6	Faculty of Medicine	Ex Vivo Expansion of Human Hematopoietic Stem Cells	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
7	Medical Research Institute	Potential Role of Superparamagnetic Iron Oxide Particles in Combating Obesity in an Experimental Obesity Model	2021	2022	Science, Technology, and Innovation Funding Authority (STDF)
8	Faculty of Dentistry	Hydrogel Loaded with Growth Factors for Regenerative Pulpal Applications	2021	2024	Science, Technology, and Innovation Funding Authority (STDF)



No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
9	Faculty of Science	Preparation, Characterization, and Computational Studies of Azo-based Ligands and Their Metal Complexes	2021	2022	Science, Technology, and Innovation Funding Authority (STDF)
10	Faculty of Science	Beneficial Role of Insect-based Therapy in Targeting Liver Tumors	2021	2024	Science, Technology, and Innovation Funding Authority (STDF)
11	Faculty of Science	Innovative Formulation of Rice Straw for Corrosion Control in Various Environments	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
12	Faculty of Dentistry	TLR-4/WNT Linkage as a New Immunotherapy Strategy in Oral Squamous Cell Carcinoma	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)
13	Faculty of Dentistry	Potential Role of Nanoparticle-based Delivery of microRNA in Targeted Gene Therapy for Oral Squamous Cell Carcinoma	2021	2023	Science, Technology, and Innovation Funding Authority (STDF)

This table summarizes the graduate student projects across different faculties at Alexandria University, funded by the Science, Technology, and Innovation Funding Authority (STDF).



### Graduate Student Projects Funded by the Science, Technology, and Innovation Funding Authority (STDF)

No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
1	Faculty of Science	Colchicine and Rosiglitazone Loaded on Bacterial Outer Membrane-Based Vesicles Targeting Cytokine Storm-Associated Nanovaccines in COVID-19 and Stat3 in Non-Small Cell Lung Cancer	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
2	Faculty of Pharmacy	Investigation of Rivaroxaban, Enoxaparin, and Clopidogrel in Improving Metabolic and Structural Aspects of Non-Alcoholic Steatohepatitis in Rats Through Anticoagulant and Anti-inflammatory Mechanisms	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
3	Faculty of Dentistry	Clinical Evaluation and Antimicrobial Effect of Papain-Based Chemical Caries Removal Agents in Young Permanent Molars (A Randomized Clinical Trial)	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
4	Medical Research Institute	Multi-functional RNA-based Nanomolecules Targeting Chronic Kidney Disease: A Novel Therapeutic Approach in an Experimental Rat Model	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
5	Institute of Graduate Studies and Research	In-Lab Meat Production Using Stem Cells as a Sustainable, Climate-Friendly Alternative Protein Source	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
6	Faculty of Agriculture	Eco-Friendly Methods for Detecting and Combating Termite and Wood Borer Infestations in Alexandria Governorate	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
7	Faculty of Agriculture	Prototype Development of a Bentonite-Yeast Mixture as a Feed Additive to Reduce Greenhouse Gas Emissions	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
8	Faculty of Medicine	Survey of PAH Gene Mutations in Egyptian Patients with Phenylketonuria at Alexandria University Hospital	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)



No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
9	Faculty of Medicine	Potential Regenerative Capacity of Non-Cancerous "Muse" Cells in an External Mouse Model of Ischemic Heart Injury	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
10	Faculty of Medicine	Genetic Alterations in Cell-Free DNA of Triple-Negative Breast Cancer Patients Using Next-Generation Sequencing	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
11	Faculty of Science	Production, Modification, and New Applications of Biochar Derived from Biomass Waste	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
12	Faculty of Science	Potential Enhancing Effects of Zinc Oxide Nanoparticles and Melatonin Against Cadmium Oxide Nanoparticle-Induced Toxicity: An Integrated Biomarker Approach for Environmental Toxicity Assessment in Lablab Polystachyus	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
13	Faculty of Science	Microbial Technology as a Tool for Bioremediation of Heavy Metals from Industrial Wastewater Using Advanced Technologies	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
14	Faculty of Science	Potential Use of Peppermint and Rosemary Extracts as Effective Beta-Lactamase Inhibitors	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
15	Faculty of Science	Epigenetic Modifications of Enhancer of Zeste Homolog 2 by Stem Cell-Derived Exosomes: Pyroptosis as a Hallmark in Hepatocellular Carcinoma	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
16	Faculty of Science	Effects of Silicon Nanoparticles on Physiological Performance and Molecular Characterization of Two Cotton Varieties Under Different Water Levels	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)



No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
17	Faculty of Science	Studies on Human Placenta Extract as a Promising Therapy for Neurodegeneration Caused by Diabetes in Rats	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
18	Faculty of Science	Nanocomposites of 1,2,3-Triazoles for the Treatment of Multi-Drug Resistant Bacteria	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
19	Faculty of Science	Potential Effects of Persea Americana Peel Extract on Modulating the Tryptophan Dioxygenase Pathway in Non-Alcoholic Fatty Liver Disease-Induced Mice	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
20	Faculty of Science	Use of Actinomycete Biomass as an Unconventional Feed Component in Fish Farms	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)
21	Faculty of Science	Evaluation of the Therapeutic Effects of Avocado Peel Alcoholic Extract on Rat Liver Fibrosis	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
22	Faculty of Science	Laboratory Design of MOF/BiOX Nanocomposite for the Degradation of Water Pollutants by Enhanced Photocatalysis Supported by DFT Calculations	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
23	Faculty of Science	Applied Coordination Chemistry of Biologically Active Chelating Agents Containing Chalcogen Atoms	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
24	Faculty of Science	Full Preclinical Profile of Nanomolecules from Willow Plant Active Ingredients in Liver Cancer Treatment	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)
25	Faculty of Science	Effect of Citrullus Colocynthis Seeds on Lead-Induced Hepatotoxicity in Male Albino Rats	2023	2026	Science, Technology, and Innovation Funding Authority (STDF)



No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
26	Faculty of Medicine	Characterization and Potential Cancer Therapy Applications of Marine Microbial L-asparaginase	2023	2025	Science, Technology, and Innovation Funding Authority (STDF)

This table showcases a range of cutting-edge research projects being undertaken by graduate students at Alexandria University, funded by the STDF. These projects span multiple disciplines, including science, medicine, and agriculture, and contribute to advancements in fields like biotechnology, nanotechnology, environmental science, and medical research.

### Graduate student projects funded by the Project Management Unit

No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
1	Agriculture	Development of a smart irrigation system to assess and monitor the quality of green areas and maximize the use of available water resources	2021	2021	Project Management Unit
2	Agriculture	Design and implementation of a self-propelled unit for green area maintenance (mowing and aeration)	2021	2021	Project Management Unit
3	Veterinary Medicine	Developing students' skills in using regenerative medicine and tissue engineering to treat certain bone injuries in the veterinary field	2021	2021	Project Management Unit
4	Specific Education	Creating healing paintings and products inspired by Bach flowers to treat post-traumatic stress disorders following the COVID-19 pandemic, serving small projects	2021	2021	Project Management Unit
5	Tourism and Hotels	Project for developing measurement and assessment systems at the Faculty of Tourism and Hotels	2021	2023	Project Management Unit
6	Physical Education (Boys)	Project for developing measurement and assessment systems at the Faculty of Physical Education for Boys	2021	2023	Project Management Unit



No.	Faculty/Faculties	Project Name	Start Year	End Year	Funding Agency
7	Physical Education (Girls)	Project for developing measurement and assessment systems at Egyptian universities	2021	2023	Project Management Unit
8	Medicine	Innovation of a unit for early diagnosis and monitoring of critical heart conditions	2020	2020	Project Management Unit
9	Early Childhood Education	Enhancing practical applications of some courses through producing short educational animated films	2020	2020	Project Management Unit
10	Engineering	Desert exploration through an unmanned ground vehicle	2020	2020	Project Management Unit
11	Engineering	Manufacturing an environmentally friendly autonomous submarine	2020	2020	Project Management Unit
12	Agriculture	Design and creation of a smart, integrated electronic irrigation system powered by solar energy	2020	2020	Project Management Unit
13	Agriculture	Design and creation of an electronic unit to monitor engine performance for fault detection, diagnosis, and solutions	2020	2020	Project Management Unit
14	Agriculture	Design and creation of a solar-powered intelligent robotic arm to identify and collect ripe agricultural produce	2020	2020	Project Management Unit