

For Immediate Release



## **Creativity abounds at IBDA 2015, where students propose sustainable solutions to common problems**

Beirut, Lebanon- 05/05/2015 - More than 215 students participating at the 2015 International Biodiversity Day at AUB (IBDA, an acronym that also means “innovation” in Arabic) set out to come up with creative and environmentally-friendly solutions to everyday problems by combining their imagination with the knowledge they had gained in the classroom. They shared their innovative ideas via poster presentations that were displayed on April 30, 2015 on the Charles Hostler terrace.

Every year since it was first created in 2007, IBDA, an initiative by the Nature Conservation Center (NCC), has been growing. First, it was only open to chemistry and science students; then it started attracting students from other disciplines. This year students from FAS, FEA, FAFS, and FHS participated, presenting more than 63 projects. First and second prizes, worth \$15,000 in total, were distributed to 10 projects in five categories.(attached)

Below are highlights of some of the projects that stood out:

### **VibTek**

*Hind Arab, Yasmine Baghdadi, Mohammad Koteish, Chaza Rammal, and Dr. Najat A. Saliba (CHEM 219 - Department of Chemistry, FAS)*

VibTek is a mechanically-designed staircase that converts the wasted kinetic energy of footsteps into usable electric energy. It uses the force generated by the stamping of feet to produce an electric current which can either be immediately used or stored in a battery.

### **E-Cube**

*Nour Hajjar, Maya Zeid, Noor El Jundi, and Dr. Wissam Melhem (LDEM 248 - Department of Landscape Design & Ecosystem Management, FAFS)*

E- Cubes are 40 x 40 cm cubes with photovoltaic sides that absorb light and transform it into electric or thermal energy. This project aims to use these sturdy cubes to enhance natural sceneries as well as provide outdoor electrical outlets and lighting for at least 8 hours a day, in order to encourage people to spend more time outside.

### **Vobot**

*Lama Miri, Amani Koubar, Vana Kassardjian, and Dr. Najat A. Saliba (CHEM 219 - Department of Chemistry, FAS)*

This project aims to reduce dust allergies by minimizing the quantity of dust present in a given household. The Vobot 1.0 is hence a robotic vacuum cleaner, equipped with sensors, that automatically and silently cleans an area until it is turned off. Among of the project's future goals are adding dust detectors and a UV sterilization feature to the robot.

### **ArtEdetector**

*Pierre Mecattaf, Nassim Mohtar, Cyril Nasr, Jana Trad, and Dr. Najat A. Saliba (CHEM 219 - Department of Chemistry, FAS)*

ArtEdetector is a pet collar which detects the presence of many poisons commonly used in Lebanon to exterminate unwanted animals. Upon detection, an electric discharge is released in the collar in order to repel the pet away from the toxin, hence reducing unfortunate accidents. In addition, the collar will be equipped with a GPS tracker that will pinpoint the location of the poison.

### **The Bee that Saved the World**

*Sakhr Munassar, Azza El Masri, Poliana Geha, Hani Katerji, and Dr. Rola Khishfe (EDUC 274 - Department of Education, FAS)*

This project aims to address colony collapse disorder (CCD), a syndrome defined as a dead colony with no adult bees except for a live queen. It will take the form of a children's pop-up book, to make it more accessible and engaging, in order to implant the importance of nature conservation into young minds early on.

### **Research: Is organic food really organic?**

*Sara Hatoum, Yara Zoghaib, Marilynne Papazian, Elsa Hallab, and Dr. Pierre Karam (CHEM 200/215 - Department of Chemistry, FAS)*

This project evaluates whether or not a food product is organic based on the levels of pesticides and nitrogen it contains.

### **SitTo Charger**

*Hassan Awada, Razan Badran, Mohammad Lameh, Ola Srour, and Dr. Najat A. Saliba (CHEM 219 - Department of Chemistry, FAS)*

This projects attempts to generate electricity from the temperature difference across the sides of a chair while someone is sitting on it for a considerable period of time. The team claims it will generate enough voltage to be able to charge a phone.

### **UV Light Towel Disinfectant in Towel Roll Dispensers**

*Lea Farah, Nadim Frenn, Reina Kasseem Youssef, Maria Khouri, and Dr. Najat A. Saliba (CHEM 219 - Department of Chemistry, FAS)*

This project aims to create a product that will disinfect cloth towels with a UV light, hence killing 99.9% of the bacteria residing on it. This machine will allow restaurants and other public bathrooms to have a sanitary alternative to wasteful paper towels.

### **3D Concrete Printing: A Sustainability Study**

*Nader El-Zarwi, Hussein Hachem, Toufic Maalouf, Zeina Malaeb, Adel Tourbah, and Dr. Muatassem Fadel (CIVE 501/502 - Department of Civil and Environmental Engineering, FEA)*

This ambitious project attempts to apply 3D-printing technology to the field of construction. The team will try to "print" concrete buildings as a gateway to possible future fast construction.

### **Charging Wheels**

*Rani Chamseddine, Hiba Dahcheh, Tala El-Aridi, and Dr. Wissam Melhem (LDEM 248 - Department of Landscape Design & Ecosystem Management, FAFS)*

This project's goal is to increase the number of available electrical outlets at AUB through an outdoor unit equipped with 2-3 bikes which will be used to generate electricity. The structure will provide an outdoor activity where AUB students can exercise and charge their electronic devices at the same time.

### **Smart Trash Unit (STU)**

*Karim Ramadan, Abdel Wahab Turkmani, Ibrahim Youssef, Khalil Fakh, and Dr. Imad El Hajj (EECE 461 - Department of Electrical and Computer Engineering, FEA )*

This product is a two-stage garbage bin that will automatically discern the type of trash thrown in it by evaluating its physical properties in order to place it in its appropriate chamber. Additionally, it will be

equipped with sensor circuits that only indicate that the waste chambers should be emptied when the amount of waste in them is maximal, so as to save on plastic bags. STU's aim is to make recycling a passive effort.

### **Geothermal Pavements**

*David Habib, Emile Daou, Hagop Harfoushian, Jawad Chukrallah, Joseph Ballouz, Lala Dakessian, Marwan Imad, Omar Kabbani, Sarah Saliby, William Saad and Dr. Ghassan Chehab (CIVE 501/502 - Department of Civil and Environmental Engineering, FEA)*

This research examines the topic of geothermal pavements which include a system of embedded pipes where circulating water gets heated while cooling the pavement. The system cools down the asphalt, thus increasing its lifespan and lowering its radiation of heat in the environment.

ENDS

### **For more information please contact:**

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### **Note to Editors**

#### **About AUB**

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 700 full-time faculty members and a student body of about 8,000 students. AUB currently offers more than 100 programs leading to the bachelor's, master's, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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