Here and Now, There and Then: Prince Mohammad Bin Fahd University Drives Innovation and Invention, Locally and Globally

PMU is embracing how local and global collaborative engagement can synergistically reinforce each other to improve lives in the here-and-now

Accelerating innovation locally & Globally

AL-KHOBAR, EASTERN PROVINCE, SAUDI ARABIA, August 10, 2022 /EINPresswire.com/ -- Starting several years ago with Vision 2030, the Kingdom of Saudi Arabia set forth a bold agenda of economic and social transformation to open up the nation to the world. Prince Mohammad Bin Fahd University (PMU), a prestigious institute of higher learning in Saudi Arabia, is continuing to do its part in progressing Vision 2030 and the agenda's themes of an Ambitious Nation, a Thriving Economy, and a Vibrant Society. In accordance with these far-reaching themes, PMU is also helping advance the goals of partnership, prosperity, peace, and understanding worldwide.

Among PMU's many relevant activities has been the funding of special projects for university researchers and the securing of patents for new inventions. Through the Prince Turki bin Muhammad bin Fahd Center for Creativity and Entrepreneurship (PTCCE) at PMU, the university is supporting the projects and research of both male and female students. In particular, PMU is ensuring funding allocations for women researchers and students as they make key contributions to Vision 2030 in the area of sustainability via the development of clean, renewable energy sources and applications.

In these endeavors, PMU has also partnered with the National Academy of Inventors (NAI). A United States-based non-profit organization, NAI plays a pivotal role in recognizing and promulgating inventions made by its members for the benefit of global society.

Furthermore, to proactively envision and move toward achieving an equitably prosperous future,

the Prince Mohammad Bin Fahd Center for Futuristic Studies (PMFCFS) and the World Futures Studies Federation (WFSF) have announced a continuation of their futures research grant through this year. PMU has accordingly put out a new, third call for research proposals on "Thinking about alternative futures...", a widely ranging scholarly project aligning with Vision 2030 by exploring sustainability, wellbeing, and adaptability to unpredicted events.

Prince Mohammad Bind Fahd University

Overall, through these efforts and more, PMU is managing to maintain a broad focus encompassing both home and abroad. The university is embracing how local positive change and global collaborative engagement can synergistically reinforce each other to improve lives in the here-and-now, as well as the there-and-then.

"All of us at PMU are very proud of what we are accomplishing in supporting research, innovation, and engagement within our community in the Kingdom of Saudi Arabia and across the full community of nations worldwide," said Dr. Issa Al Ansari, President of PMU. "We truly believe that tremendous opportunity exists for global citizens to cooperatively forge a future where prosperity is shared and accessible to all."

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>
> *Dr. Issa Alansari (President)*

Powering Innovation

A prime example of diligent individual effort cumulatively benefiting the world's population—and the health of the planet itself—is the electric vehicle. While fossil fuels have powered humanity's technological rise since the Industrial Revolution began more than two centuries ago, while also historically serving as a key source of wealth for Saudi Arabia, these fuels do not represent the future of energy generation by our global species.

PMU members are thus working on developing electric vehicles that can run on renewable

sources of energy. In this vein, ten female students from PMU's College of Engineering and the Department of Mechanical Engineering recently succeeded in designing and manufacturing an environmentally friendly electric car. The three-wheeled, joystick-controlled vehicle utilizes a solar-power charging station and performed admirably in test runs. The vehicle represents the culmination of an important hands-on, skills-building exercise that will empower PMU students to continue innovating and developing the modes of transportation humankind will progressively adopt in the coming decades. The distinguished graduation project was honored at a ceremony held by the university administration and attended by Dr. Al Ansari.

"At PMU, we encourage women to pursue careers in STEM—science, technology, engineering, and mathematics—and have made it a point to ensure funding allocation for both men and women," said Dr. Al Ansari. "The electric vehicle demonstration is evidence of how a balanced approach broadens innovation—innovation which will be critical in meeting the challenges of the 21st century."

Protecting Inventions

The PTCCE is a catalyst for electric vehicle and other Vision 2030-aligned research and development. Beyond supporting and enriching the ideas of young people, the Center for Creativity and Entrepreneurship assists in turning these ideas into economically viable and attractive projects and applications at both the local and the global level.

Also playing a critical role is the Patent Center, established under the Deanship of Research at PMU. The Patent Center supports the protection of creative scholarly activities, innovation, and discoveries involving faculty, staff, students, and others participating in PMU programs, with a major element of this support being the assistance with securing patents through coordination with NAI.

Five patents were recently awarded by the United States Patent and Trademark Office (USPTO) to inventions by PMU community members. The patents represent a range of disciplines, from health and medicine to electrical and mechanical engineering and materials science. One of the patented inventions uses artificial intelligence (AI) for early diagnosis of Parkinson's disease, a neurodegenerative condition, as well as cardiovascular diseases by searching for telltale physiological, voice, and handwritten patterns displayed by patients. A second invention has applications in the power transmission industry and involves the fabrication of copper wire with enhanced electrical conductivity plus the desirable properties of high strength and ductility. The third invention is a novel kind of separator that can more effectively dehumidify air, with applications in the HVAC, aerospace, and natural gas industries. The fourth invention is a highly practical and versatile bento-style lunch box. The fifth invention describes the preparation of a polyolefin-carbon nanomaterial composite that offers excellent thermal and electrical conductivity along with flexibility, toughness, and degradation resistance.

"Through our dedicated Centers and partnerships, we are finding extraordinary success in

promoting and protecting innovation and invention at PMU," said Al Ansari.

Reflecting the quality education that PMU offers to its students as well as its sustained support for academic staff, the university was recently rated highly in the QS World University Rankings, an annual publication of university rankings by Quacquarelli Symonds, a United Kingdom-based higher education analysis company. Overall, PMU was ranked in the top 651 to 700 universities around the world in the QS University World Rankings 2023, published in June. The university has also been recognized as one of the world's top universities for performance in the subjects of mechanical engineering (401-450) and computer science (601-650) by the QS World University Rankings by Subject 2022.

The growing number of accolades for PMU's members, as well as the university's growing global reputation, collectively speak to the fruition of the themes of progress and prosperity in Saudi Arabia's Vision 2030.

"Although we have achieved great things at PMU, our work upon the local and global stages is far from finished," said Dr. Al Ansari. "We will continue to move forward with enthusiasm and determination."

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