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## **Al Ain University participates in the "Sustainable Development Forum" with outstanding researches.**

Al Ain University participated in the Joint Sustainable Development Research Forum held by the University of the Emirates at its campus in Al Ain. The students presented their research findings followed by discussions and questions. The participating projects supported the goals of sustainable development related to life on land, quality education, clean water and sanitation, decent work, and economic growth, as well as other projects supporting common objectives.

As part of the joint research collaboration initiative between Al Ain University and the University of the Emirates, aligned with the UAE's strategy in serving the goals of sustainable development and the path towards COP28, research teams comprising students and faculty members from both universities collaborated to accomplish five joint research projects.

In the first project, Dr. Sumaya Dawood from Al Ain University and Dr. Ghada Al-Murshidi from the University of the Emirates collaborated with a group of students from both universities to

conduct research addressing the fourth sustainable development goal, "Quality Education." The project aimed to study the new role undertaken by parents after the COVID-19 crisis in enhancing their children's performance in English language skills at the elementary level. The research addressed the challenges, solutions, and recommendations related to this topic.

As for the second team, a group of students from Al Ain University and the United Arab Emirates University, under the supervision of Dr. Sanaa Ashour and Maxwell Oboko, presented two research projects contributing to the achievement of the fourth goal of sustainable development, which is Quality Education. The first study aims to identify the experiences and challenges faced by working mothers with children with special needs. The second study aims to examine the effectiveness of parental involvement and their evaluation of government and private schools attended by their children with special needs, to propose social policies that address the needs of this category of working mothers in society.

The third team has innovated a project related to the fifteenth goal of sustainable development (Life on Land). This project aims to design a precise electronic sensor for detecting propane and butane gases, which are flammable. This project represents an initial step toward long-term research collaboration between Dr. Mawahib Hussain Suleiman from the College of Engineering at Al Ain University and Dr. Falah Awad from the College of Engineering at the University of the Emirates.

The fourth project was a result of collaborative efforts between Dr. Manjid Marqa from the University of the Emirates and Dr. Omar Najm from Al Ain University. This project focused on the sixth goal (Ensuring availability and sustainable management of water and sanitation for all) and aimed to investigate the possibility of using locally generated waste materials from manufacturing for the production of geopolymer mortars capable of purifying industrial wastewater. The initial stage of the project involved experiments to explore the potential of extracting methylene blue substance from heavy water through the chemical absorption property on the surface of manufactured geopolymer particles. The research findings were impressive, demonstrating the feasibility of water purification using geopolymer mortar particles derived from industrial waste.

The fifth project is a collaborative research effort involving Professor Mohammed Mitani from the University of the Emirates and Dr. Tarek Abu Azneid. Its objective is to detect pharmaceutical residues in sewage water, even at low concentrations, as they pose an emerging environmental problem due to their potential risks to human health, water, and food. The research involves collecting samples from various sources of sewage water and analyzing them using advanced techniques to detect the presence of pharmaceuticals. The research aims to understand the impact of pharmaceutical presence in sewage water on the environment and public health. The results and recommendations will be presented to improve the management and treatment of sewage water and reduce the negative impact of pharmaceuticals on the environment. Additionally, this study will contribute to supporting future research in developing advanced techniques for pharmaceutical removal from sewage water, thus contributing to achieving sustainable development goals and enhancing environmental sustainability, and human health.

Prof. Ghaleb Al-Refae, the President of Al Ain University, emphasized that the collaborative

partnership with the University of the Emirates reflects Al Ain University's commitment to enhancing its connection and interaction with the community, promoting the concept of sustainability across sectors, and increasing student awareness of sustainable development goals through a focus on scientific research and enhancing their community engagement.

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