As the academic year 2020-2021 is coming to an end, it is important to recognize all the efforts made in overcoming the unique circumstances the world had to face and highlight the successes attained despite the obstacles. This issue of the newsletter will feature the various research projects that were conducted throughout the year with a special focus on research related to COVID-19. This issue will also highlight achievements made by the university, its faculty, and students.
1- The University of Sharjah Ranked First in the UAE for Research related to COVID-19

According to one of the studies recently published in the global magazine “Globalization and Health”, which classifies universities and countries according to COVID-19 research, the University of Sharjah ranked first in the United Arab Emirates, and eighth at the level of Arab universities. The University also ranked 44th in the world for the number of publications on the COVID-19 pandemic.

2- Signing an Agreement Between Research Institute of the Humanities and Social Sciences (RIHSS) and Dubai Foundation for Women and Children (DFWC)

The Research Institute of the Humanities and Social Sciences (RIHSS) in coordination with the Research Outreach Department at the University of Sharjah signed an agreement with Dubai Foundation for Women and Children (DFWC). Through this agreement a team of researchers will be conducting a research study entitled “Behavioral Patterns of Parental Treatment during the Pandemic (COVID 19) in UAE Society”. This study seeks to identify patterns changes in communicating and interacting with parents to examine the repercussions COVID-19 has had on families and children.

3- University of Sharjah Signs a Memorandum of Understanding with Canon International

The College of Health Sciences at the University of Sharjah signs a memorandum of understanding with Canon International, a medical diagnostic imaging company. Signed by Dr. Amina Almarzooqi, Dean of the College of Health Sciences the MoU aims to provide the best training opportunities for diagnostic imaging students by introducing them to the latest scientific advances particularly in the field of artificial intelligence and its imaging and medical diagnosis applications in addition to using latest specialized hardware and software.

4- Most Cited Research in the United Arab Emirates

Dr. Basema Saddik, Associate Professor from the College of Medicine had the most cited research in the United Arab Emirates during the month of May 2021, according to the ResearchGate platform. With over 11,000 citations and 77 publications, Dr. Basema has always been dedicated to producing quality research. She has also shown great devotion for conducting timely research with over 10 publications on COVID-19 research. She is a great inspiration for women in research and we look forward to hearing about many more successes.

5- The Best Research Paper of 2021 from the 5th International Conference on Artificial Intelligence in Computer Linguistics

Prof. Ashraf Elnagar, Dr. Imad Afyouni and Imtinan Azhar from the College of Computing and Informatics received the 2021 Best Paper Award from the International Conference on Artificial Intelligence in Computational Linguistics for their research study titled “AraCap: A Hybrid Deep Learning Architecture for Arabic Image Captioning”. The Best Research Paper Award is awarded based on a solid contribution to specialization, suitability, originality, importance, and clarity.
6- A Strategic Partnership between the Kuwait Ministry of Higher Education and The University of Sharjah: Memorandum of Understanding to Enhance Cooperation in Scientific and Research Fields

University of Sharjah forms a strategic partnership with the Ministry of Higher Education in Kuwait through a memorandum of understanding signed between the two parties at the University of Sharjah in the presence of H.E. Ambassador Dhiab Falah Al-Rashidi, Consul General of the State of Kuwait in Dubai and the Northern Emirates, and H.E. Prof. Hamid Al Naimiy, Chancellor of the University of Sharjah. The MoU aims to carry out a range of cultural and awareness programs in addition to organizing several research studies in the fields of medicine and oral and dental surgery for Kuwaiti students at UoS.

7- Second Place in the “8th Session of the Virtual Research Competition for Undergraduate Students”

The graduation project entitled “Simulation Design of the Impact of Air on High Buildings to Maximize Natural Ventilation in the UAE” by students Shadi Sabouni and Nabil Nadim Al-Qadi, and under the supervision of Dr. Vittorino Pilpoliti, and lecturer Maryam Hassan from the Department of Architecture at the College of Engineering won second place in the “Eighth Session of the Virtual Research Competition for Undergraduate Students”, organized by Abu Dhabi University in the category of architecture and urban planning.

8- the 27th session Al-Owais Award for Creativity in the Humanities

Mr. Ahmed Adel Zidan, From The Library Department at the University of Sharjah, won the 27th Aweys Prize for Creativity in the Humanities for his research on “The Economics of Creative and Cultural Industries: Opportunities and Challenges.” as the best search for the UAE.

9- The University of Sharjah’s Engineering Students Design a 3D Habitat on Mars

In the presence of His Excellency Prof. Hamid M.K. Al Naimiy, Chancellor of the University of Sharjah, the students, Zain Lahham, Amani Nasser, and Ghosoun Madani from the Department of Architecture at the College of Engineering presented their graduation project entitled: “Beyond Earth”, which is a design and model of a three-dimensional habitat on Mars.

The Mohammed bin Rashid Space Center expressed interest in the project and hinted at the possibility of cooperating with the students and supporting their project.

The idea of the project was inspired by the future vision of the United Arab Emirates towards space exploration and conquest, by sending the first Arab and Islamic probe to Mars – the Mars Hope Probe. It is one of nine countries around the world aspiring to explore this planet, so this project would be one of the first around the world that worked on designing a final home for astronauts and scientists who are expected to stay on Mars to study its surface and the possibility of habitation and life on it.

During the meeting, the three students presented the research they carried out in cooperation with several university colleges with the aim of linking the different fields of architecture and astrophysics. They prepared extensive research on the extreme environmental conditions of Mars, material availability, and site selection. As a result of this research, an adaptive, self-learning system for building using reconfigurable robotic robots was designed as a future building tool that supports data analysis to solve problems related to construction and environmental conditions on Mars.
Research Events and Workshops

1- The University of Sharjah Engineering Students Present Innovative Designs for the Sharjah Oasis for Technology and Innovation

The University of Sharjah’s College of Engineering organized an exhibition of proposed designs for the headquarters and general plan of the Sharjah Oasis for Technology and Innovation (SOTI) project. The Sharjah Chamber of Commerce and Industry sponsored the exhibition and will provide 50 thousand dirhams in total prizes for the three best designs. During the exhibition, students of the Department of Architectural Engineering presented 17 innovative architectural designs for the general plan of SOTI, which is set to act as a center of excellence in research, technology, and innovation to further advance Sharjah’s economy. The architectural designs presented by students were characterized by an Islamic architectural style mixed with contemporary architectural solutions. The students relied in their designs on the developments made in the Umayyad and Abbasid dynasties mixed with the Emirati heritage with its distinction of sustainable technical solutions.

2- 4th Technical Workshop: Unmanned Aviation Scenarios Development

Under the patronage of H.E. Prof. Hamid Al Naimiy, Chancellor of the University of Sharjah and in the presence of H.E. Henrik Landerholm, Ambassador of the Kingdom of Sweden in UAE the 4th Technical Workshop was held virtually under the theme “Unmanned Aviation Scenarios Development”. The workshop was organized by the Sustainable Engineering Asset Management Research Group of the Research Institute of Science and Engineering (RISE).

3- Computing and Informatics Annual Symposium - CIAS 2021

The College of Computing and Informatics at the University of Sharjah held the “Computing and Informatics Annual Symposium - CIAS 2021” in its second edition, with the participation of speakers from international companies in the IT sector, faculty members and students. The symposium took place in the presence of Prof. Qutayba Hamid, Vice Chancellor & Dean of College of Medicine, Office of Vice Chancellor for Medical & Health Sciences Colleges, Prof. Mohammed Obeidat, Dean of the College of Computing and Informatics, and members of the Advisory Board of the College of Computing and Informatics.

4- Sustainability Research in the Humanities, Social Sciences and Law Seminar

The Sustainability Studies Department of the Office of Sustainability organized a seminar entitled “Sustainability Research in the Humanities, Social Sciences and Law.” The seminar aimed to raise awareness about how research can be linked to the concept of sustainability. Prof. Imad Alsyouf, introduced the achievements and activities of the Sustainability Office, followed Prof. Faker Gharaibeh who addressed the concept of sustainability in the social, psychological, and administrative fields. Finally, Dr. Muhammad Sadat spoke about sustainability in legal research.
5- The Third Edition of the Emirates Internet of Things and Artificial Intelligence Challenge

Prof. Maamar Bettayeb, Vice Chancellor for Research and Graduate Studies participated in the opening ceremony of the 3rd Edition of the Emirates Internet of Things and Artificial Intelligence Challenge held virtually. Through his speech, Prof. Maamar explained the strategy of the University of Sharjah, which is in line with the country’s future direction. He added that the university has founded the College of Computing and Informatics and constantly works to support outstanding Emirati students in teaching and research. He also mentioned the establishment of an innovation center to support students in different fields.

6- Medical Image Processing and Analysis: Challenges and Solutions

The College of Computing and Informatics organized a seminar entitled “Medical Image Processing and Analysis: Challenges and Solutions” delivered by Dr. Mohammad Alsmirat, Associate Professor from the Department of Computer Science. Training medical doctors to read medical images is a time and resource-consuming process. Even with specialists, it is very well known that after considering a medical image, two specialists may come to different diagnosis of the case. Computer Aided diagnosis (CAD) systems are attractive to solve these problems as CAD systems process and analyze medical efficiently. In this seminar, the process of using a computer to diagnose an illness was explained in details and the main challenges faced throughout the different parts of the process were highlighted along with their possible solutions.

7- Communication Theories: How to Use Them Effectively in Your Research

Dr. Bouziane Zaid from the College of Communication presented a workshop entitled “Communication theories: how to use them effectively in your research” as part of the series of workshops organized by the Graduate Studies Program of the College of Communication. This workshop focused on the importance of theories in the research design. Graduate students use theories to help explain the phenomena they are investigating and to help answer their research questions, but most of the time the use of the theories does not translate into efficient use and application of the theories’ key concepts in their data collection processes and their data analysis. The workshop aimed to give students clear guidelines on how to efficiently employ the theories’ key concepts into their research design from the articulation of the research question to the final data analysis and discussion of the findings.

8- Bio-Plex Technology Overview of Multiplex Immunoassay Systems, Cytokine and Immune response monitoring

The Research Institute for Medical and Health Sciences organized a training session as part of the SIMR Continuous Practical Education Series entitled “Bio-Plex Technology Overview of Multiplex Immunoassay Systems, Cytokine and Immune response monitoring”. Invited to deliver the session was Mr. Arda Akalin, Business Development Manager at BIO-RAD. In this session, Mr. Arda introduced the Bio-Plex technology and the solutions it offers as well as the Bio-Plex assays applications.
9- SAASST Galaxies Workshop

Aiming to enrich awareness and public knowledge of the developments, importance, and impact of astronomy, space sciences, and technology, SAASST organized a “Galaxies Workshop”. The Workshop’s program included an introduction into the formation of galaxies and the extragalactic zoo by Prof. Ilias Fernini, SAASST Deputy General Director for Research Laboratories and Scientific Projects. Prof. Mashhoor Al Wardat, SAASST Deputy General Director for Academic Programs and the Sharjah Astronomical Observatory, introduced the Milky Way Galaxy. The program also included lectures by Dr. Antonios Manousakis, SAASST High Energy Astrophysics Laboratory, on “Multiwavelength Observation of Galaxies,” and Mr. Mohammed Rihan, SAASST Radio Astronomy Laboratory, on the “Classification of Galaxies.”

10- Workshop on Measuring Impact of Sustainable Development Goals Research on UoS Times Higher Education Rankings

The Office of International Relations organized their first International Workshop on UoS Global Milestones entitled “Measuring Impact of SDGs’ Research on UoS THE Rankings”. The Times Higher Education (THE) Impact Rankings measures universities’ initiatives and impacts towards the 17 United Nations Sustainable Development Goals (SDGs). Since the impact of research on sustainability accounts for 27% of the University of Sharjah’s total score, this workshop presented the different ways UoS faculty across all disciplines can contribute and ensure that each research paper or project has impactful outcomes toward UoS rankings. The workshop began with a welcoming note by Prof. Hamid Al Naimiy, Chancellor of the University of Sharjah, followed by opening remarks delivered by Prof. Maamar Bettayeb, Vice Chancellor for Research and Graduate Studies. The first session was by Dr. Tarek Merabtene, Director of Office of International Relations, who delivered a presentation on the Times Higher Education (THE) Impact Rankings. In the second session, guest speaker M’hamed El Aisati, Vice President of Elsevier, Product Management, Funding and Content Analytics presented the Elsevier THE-SDGs platform on Scival and displayed showcases on UoS global impact toward selected UN-SDGs. The workshop ended with an informative question and answer session.

11- “Moving Forward” Research Workshop

The Office of the Vice Chancellor for Research and Graduate Studies organized a workshop for faculty members to discuss matters related to conducting research at the University of Sharjah. The workshop consisted of three panel discussions, the first titled “Funding and Priority Areas; Should we Direct Funding into Fewer Priority Areas?”, was moderated by Prof. Taleb Al Tel, Director of the Research Institute of Medical and Health Sciences and Prof. Nouar Tabet, Dean of the College of Sciences and consisted of the panelists: Prof. Rafat El-Awady, Dean of the College of Graduate Studies, Prof. Hussain Al Othman, Dean of the College of Arts and Humanities and Social Sciences and Prof. Manal Awad, A/Dean, College of Dentistry. The second panel discussion titled “Projection of our Present and Future Research Contributions to Sharjah Oasis for Technology & Innovation (SOTI)”, was moderated by Prof. Abdallah Shanableh, Director of the Research Institute of Sciences & Engineering and Prof. Karim El-Zu’bi, Dean of the College of Pharmacy and consisted of the panelists: Dr. Amina Al-Marzouqui, A/Dean of the College of Health Sciences, Prof. Imad Abdul-Hai, Dean of the College of Law and Prof. Dima Jamali, Dean of the College of Business. The final panel discussion titled “Can We Afford Implementing Teaching and Research Tracks, Full-Time Researchers, Teaching Load Reduction at a Larger Scale?”, was moderated by Prof. Faker Al Gharailbeh, Director of the Research Institute of Humanities and Social Sciences and Prof. Ahmed Al-Shammah, Dean of the College of Engineering and the consisted of the panelists: Prof. Awad Al-Khalaf, Dean of the College of Sharia’a and Islamic Studies, Dr. Essam Selim, A/Dean of the College of Communication and Prof. Nadia Alhasani, Dean of the College of Fine Arts.
Researchers’ Activities and Participations

1- Participation in the International Webinar on Microbiology Evolution

Dr. Nelson Soares, Assistant Professor from the College of Pharmacy participated as a speaker in the International Webinar on Microbiology Evolution organized by the America Society for Microbiology and the Spanish society for infectious diseases and clinical microbiology, where. He delivered a talk about the application of LC-MS/MS based proteomics in medical microbiology.

2- University of Sharjah Participates in the 11th Emirates Diabetes & Endocrine Virtual Congress

Dr. Bashair Mohammed Mussa from the College of Medicine was invited to speak at the 11th Emirates Diabetes & Endocrine Virtual Congress organized by Emirates Diabetes Society. During her session, Dr. Bashair delivered a presentation entitled “Complications Associated with type 1 Diabetes: Can Genetics Studies Tell Us More?” where she discussed the importance of studying diabetes for a genetics perspective.

3- University of Sharjah Partners with Arab Blockchain Week

Arab Blockchain Week is a decentralized community-organized initiative for sharing passion about blockchain technology, education, business, and the importance of empowering the Arab community in blockchain for a better future.

4- University of Sharjah Partners with Arab Youth Center

The Research Outreach Department delivered a research seminar to 40+ youth researchers through a partnership with the Arab Youth Center. The seminar discussed the different aspects related to conducting a research study beginning with the importance of conducting research to writing a research paper and finally tips on publishing ethically.
Research Meetings & Visits

1- Field Visit to the Main Wastewater Treatment Plant
The Sustainable Engineering Asset Management Group at the Research Institute of Science and Engineering - Office of the Vice-Chancellor for Research and Graduate Studies organized a field visit to the main wastewater treatment plant in aims of activating the memorandum of understanding signed between the University of Sharjah and the Municipality of Sharjah. During the visit, several ideas were discussed such as opportunities for training university students in Sharjah Municipality in addition to the formation of specialized teams to identify project ideas of common interest between the two parties.

2- Research cooperation between the University of Sharjah and the University of Technology in Baghdad
H.E. Prof. Hamid Al Naimiy, Chancellor of University of Sharjah, received a delegation from the University of Technology in Baghdad, headed by Prof. Ahmed Muhammad Hassan Al-Ghabban, Chancellor of the University of Technology in Baghdad. During the meeting, several areas of cooperation between the two universities were discussed, in particular, cooperation in organizing the Fifth International Scientific Conference for Construction and Environmental Engineering as well as the Second International Conference on Sustainability in Building Materials and Civil Engineering Systems.

3- The University of Sharjah Discusses its Strategy for the Sharjah Research, Technology, and Innovation Park (SRTI)
During a Workshop for the Board of Trustees, the University of Sharjah discussed the general features of the strategic plan for the Sharjah Research, Technology, and Innovation Park (SRTI). His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, Member of the Supreme Council, Ruler of Sharjah, and President of the University laid the foundation stone for it on an area of more than 93 hectares on the outskirts of Sharjah and Khorfakkan with the aim of becoming a convenient center that attracts pioneering scientific research activities, the production of technological innovations, the development of knowledge-based economic projects, and the establishment of partnerships with universities, institutions, and related sectors. The members of the University’s Board of Trustees presented a set of proposals and recommendations that would contribute to developing an integrated vision for work within SRTI.

4- Sharjah Islamic Forum Round Table Thesis Discussion
Three students from the College of Shari’a and Islamic Studies defended their master and PhD theses during a round table discussion organized by the Islamic Forum, an institution concerned with Islamic culture based in the Emirate of Sharjah. On the first day the thesis titled “The Origins of Dealing with the Apparent Meaning of the Text” was defended by Dr. Marwan Al Naqbi, on the second day of round table discussions the thesis titled “the Secrets of the Quranic Composition in Surat Yusuf” was defended by Ilham bin Halima. Discussions concluded on the third day with the thesis titled “Justice in Financial Compensation Contracts” defended by Jafar Al Naqbi.
5- Meeting with Bee’ah to Discuss Collaborative Research Camp Program

With the aim of finalizing the collaborative research camp program and planning the next steps needed, the Research Outreach Department organized an online meeting with Bee’ah via MS Teams. The meeting included Mr. Sami Mohammed Handley, Mr. Mohamed Alhosani, Mr. Hashem Stietiya, Ms. Haya Al Ali from Bee’ah, and Dr. Mohamed Abdallah from the College of Engineering as well as the Research Outreach team consisting of Dr. Manar Abu Talib and Bayan Mahfood.

6- Meeting on Enhancing Methods for Seeking External Research Collaborations

The Office of Vice Chancellor for Research and Graduate Studies met with the Research Outreach, Research Funding and Technology Transfer Departments to discuss potential plans for approaching external organizations for research collaboration.

7- Meeting with General Civil Aviation Authority

The Office of Vice Chancellor for Research and Graduate Studies received a delegation from the General Civil Aviation Authority to follow up on several ongoing collaborative research projects and to plan new research activities for the academic year 2021/2022.

8- Delegation from Huawei Visits the University of Sharjah Facilities to Discuss Several Collaboration Potentials

Dr. Ali Moursy, Chair of the Department of Computer Engineering - College of Computing and Informatics, and Dr. Manar Abu Talib, Chair of the Research Outreach Department, received a delegation from Huawei to follow up on several collaboration projects. The delegation was given a tour of the University’s laboratories and facilities.
9- The University of Sharjah Conducts a Series of Meetings with Nvidia to Discuss Research Collaborations Opportunities

Dr. Qassim Nasir, College of Engineering, Dr. Mohamed Al Hemairy, Head of Office of Technology Transfer, and Dr. Manar Abu Talib, Chair of Research Outreach Department, conducted several meetings with experts from the company Nvidia to explore research collaborations opportunities in the field of artificial intelligence.

10- Follow Up Meeting with SUSE on Collaborative Program

Dr. Manar Abu Talib, Chair of Research Outreach Department, organized a follow up meeting with Mr. Brendan Bulmer to discuss the next steps in the collaborative student pilot program in the field of Cloud Computing.

11- Meeting between the Office of the Vice Chancellor for Research and Graduate Studies and RISC-V

The Office of the Vice Chancellor for Research and Graduate Studies organized a meeting to discuss the logistics for establishing community membership between the University of Sharjah and RISC-V. This membership will create many collaborative research and academic opportunities and will provide useful resources for faculty and students in both academia and research fields. The meeting included Dr. Antonios Manousakis, Dr. Sohaib Majzoub, Prof. Qassim Nasir, and Dr. Manar Abu Talib.

12- Collaborative Research Project between the University of Sharjah and Tadweer

A team of researchers lead by Dr. Mohamed Abdallah, Assistant Professor from the College of Engineering, met with Mr. Mohamed Al Dehhi, Mr. Boney Mathew, and Ms. Maha Khalil Al Hossani from Tadweer - the Center of Waste Management in AbuDhabi. This for a progress meeting discussing the collaborative research project entitled “Smart autonomous Waste Collection System”. During the meeting, the research team shared the overall system description and highlighted the advantages as well as the challenges of their solution.
1- Master’s Thesis: Parental Treatment Methods and Their Relationship to Female Students’ Use of Social Media Platforms

Researcher Faiza Ahmed Jassim specialized in applied sociology, family guidance, and social work defended her master’s thesis defended titled “Parental Treatment Methods and their Relationship to Female Students’ Use of Social Media Platforms” under the supervision of Dr. Makia Juma Hammet, Associate Professor of the College of Arts, Humanities, and Social Sciences at the University of Sharjah. The study aimed to identify the relationship between parental treatment methods and the use of social media platforms by female students from the perspective of high school students in Sharjah. The examination committee recommended that the letter be accepted, and that the student be awarded a master’s degree.

2- Master’s Thesis Entitled “The Criteria for Marital Selection Among Omani Youth, and their Impact on Achieving Marital Compatibility: A Field Study

In the presence of His Excellency Prof. Hamid M.K. Al Naimiy, Chancellor of the University of Sharjah, the master thesis entitled “The criteria for marital selection among Omani youth, and their impact on achieving marital compatibility: a field study” was successfully defended by researcher Aisha Bint Rashid bin Saud al-Alawi. This project was the supervised by Prof. Faker Al Gharaiiba, Director of the Institute for Human and Social Research.

3- Master’s Thesis Entitled “A Look at the Mechanism of Self Devouring in Drug Resistant Hepatic Cell Carcinoma”

The master’s thesis entitled “A look at the mechanism of self-devouring in drug-resistant hepatic cell carcinoma” was successfully defended by researcher Dima Walid Al-Hamad from the College of Pharmacy at the University of Sharjah. Supervised by Prof. Hani Omar and Prof. Talib Al-Tal, this study aimed to understand the mechanisms of resistance to chemotherapy and the strategies to overcome them. Additionally, new ways of managing liver cancer and further treatment options for patients were developed.

4- PhD: The Role of Youth Empowerment Programs in Promoting Public Participation in Abu Dhabi

Researcher Fatima Abdullah Ahmed al-Hammadi from the College of Arts, Humanities and Social Sciences successfully defended her PhD thesis titled “The role of youth empowerment programs in promoting public participation in Abu Dhabi” Under the supervision of Prof. Faker AL Gharaibeh, Director, Research Institute of Humanities & Social Sciences (RIHSS), the study aimed to identify the programs, areas, and content of empowerment and the mechanism for designing, implementing and evaluating empowerment programs for young people in Abu Dhabi.
5- PhD: Entitled “A New Therapeutic Method for Mice with Experimental Encephalitis and Self-Immune Marrow”

The University of Sharjah awarded a Ph.D. in Molecular Medicine and Translational Research to researcher Mina Rabie Al-Ani for her thesis entitled “A New Therapeutic Method for Mice with Experimental Encephalitis and Self-Immune Marrow”. Under the supervision of Prof. Azzam Maghazji and Prof. Riad Bin Dardaf, this study aimed to find the drugs used to treat MS patients and their impact on immune cells in the human body.

6- PhD Entitled “Studying the Role of Heston Acetyl Transverazate CBP and GCN5 in the Response of Cancer and Natural Breast Cells to Cellular Stress”

Researcher Wafa Ramadan successfully defended her PhD thesis defense in Molecular Medicine and Translational Research, entitled “Studying the role of Heston Acetyl Transverazate CBP and GCN5 in the response of cancer and natural breast cells to cellular stress”. Under the supervision of Prof. Rifat Al-Awadhi, Dean of the Graduate studies, the study aimed to find a solution to the resistance of cancerous breast cells to cellular stress resulting from chemotherapy.


Researcher Sarah Musa Hamouda successfully defended her PhD thesis defense in Molecular Medicine and Translational Research, entitled “The Role of Intracellular Heterogeneity in Breast Cancer, Lung Cancer and Causing Covid Virus-19: Strategies for Early Detection and Management of Diseases”. Under the supervision of Prof. Qutayba Hamid, Prof. Rifat Hamoudi and Prof. Mohamed Rahmani, the study aimed to use cellular heterogeneity to understand the molecular basis of complex chronic diseases.

8- PhD Entitled “The Role of Metabolic Reprogramming in Breast Cancer Response to Chemotherapy and Immunotherapy”

Researcher Dana Mazen Zahir successfully defended her PhD thesis defense in Molecular Medicine and Translational Research, entitled “The Role of Metabolic Reprogramming in Breast Cancer Response to Chemotherapy and Immunotherapy”. Under the supervision of Prof. Talib Al-Tal and Prof. Hani Omar, the study aimed to provide therapeutic compounds that attack cancerous breast cells, achieving the highest effectiveness and safety on normal cells, and improving patients’ response to chemotherapy.

9- Master’s Thesis Entitled “Designing and Constructing Inhibitors of Kinase Enzymes as Anti-Cancer”

Researcher Rowan Muwaffaq Spinati successfully defended her master’s thesis in Pharmaceutical Sciences entitled “Designing and Constructing Inhibitors of Kinase Enzymes as Anti-Cancer”. Under the supervision of Dr. Mohammed Ibrahim Al-Jamal, Associate Professor in the Department of Medical Chemistry at the College of Pharmacy, the study included promising results that won the praise of the examination panel.
Workshop on: University of Sharjah (UoS) & Sharjah Electricity, Water and Gas Authority (SEWA) Collaboration Projects

With the aim of serving the emirate of Sharjah and the Country in the fields of energy, water, environment and sustainability, the University of Sharjah held a virtual joint research forum with Sharjah Electricity, Water and Gas Authority (SEWA) to review the progress and highlight the achievements made in the collaborative research projects between the two sides in the fields of energy, water, environment, and sustainability.

The forum took place in the presence of H.E. Prof. Hamid Al Naimiy, Chancellor of the University of Sharjah, H.E. Saeed Sultan Al Suwaidi, Chairman of the Sharjah Electricity, Water and gas Authority (SEWA), Prof. Maamar Bettayeb, Vice Chancellor for Research Graduate Studies, Prof. Abdallah Shanableh, Director of RISE, and Eng. Mayyada AlBardan, Manager of Research & Studies Department (SEWA), as well as a large number of the university’s faculty members and (SEWA) employees.

The many collaborative research projects between the university and the authority are the result of a long-standing cooperation as well as the professorship chair in the name of “SEWA” established year 2016 at the University of Sharjah, with the aim of supporting scientific research and development activities in the areas of water, energy and environment.

The University of Sharjah and the Authority have had a significant impact on community service and development by providing practical solutions and developing policies and technologies in the field of water and energy, in addition to publishing 25 research articles in reliable international journals and presenting a number of these research articles in international conferences. This cooperation also contributed to the training of many of the Authority’s employees as well as university bachelor and graduate studies students, by involving them in such research.

During the forum, researchers presented several distinguished collaborative research projects aimed at finding solutions and proposing innovative approaches for problems facing the community. One of the many notable research projects was entitled: “Circulation Modeling near Al-Hamriyah Lagoon”. This project focused on the Hamriyah Lagoon which is connected to the Arabian Gulf where water is exchanged between the two. A joint team from the University of Sharjah and SEWA was established to develop a comprehensive two-dimensional hydrodynamic model using Delft3D software to understand the hydrodynamics and water quality of Hamriyah Lagoon, and recommendations were made on improving the operation of the plant.

Another research related project was titled “Spatiotemporal Analysis of Groundwater in Sharjah”, where a joint team collected data from the available wells spread in different areas of Sharjah, this data was then analyzed and prepared in the form of maps showing the spatiotemporal distribution of water levels and quality of groundwater. This project will contribute to the sustainable management of water resources in Sharjah. The last project in the field of water research was titled “Grey-water Reuse Policies and Practices in Sharjah”, which studied the development of gray water reuse policies and practices in Sharjah, as gray water recycling leads to reducing the demand for water desalination and reducing groundwater consumption. A joint team is currently working to assess and develop a water recycling system and propose appropriate modifications and improvements, in addition to studying gray water treatment methods and techniques and suggesting the most appropriate ones for use in Sharjah.

In the field of energy research, there are also several ongoing research projects being studied by the university’s research teams, including the study titled “Solar Absorption Air Conditioning System in Sharjah” which aims to design a solar thermal absorption cooling system with a capacity of 10 tons in the Emirate of Sharjah. This is being studied through simulation and modeling analysis to improve the solar cooling system, as well as preparing and testing system performance under weather conditions in the Emirate.

Additionally, a study titled “Hybrid PV-thermal collector” also discussed in accordance with the state’s strategic vision towards implementing alternative sources of energy. The hybrid thermal photovoltaic complexes will help increase the penetration of renewable energy, employ more solar energy for water heating and electricity applications, and explore the maximum potential of these benefits. Another study was also working on converting solar energy into thermal energy or electrical energy, as in the case of solar heater, solar cooler, concentrated solar power plant (CSP) and photovoltaic energy.

The final project in the field of energy research was titled “Techno-Economic and Environmental Analysis of Drinkable Air Systems Under Hot and Humid Weather Conditions in Sharjah” this project focuses on the technical economic and environmental analysis of drinking water extraction systems from air. Based on a previous collaborative research project on the performance and improvement of potable air units under weather and humid conditions in Sharjah, this project aims to develop a sustainable system to produce fresh and clean drinking water from moist air using a clean and renewable energy system.
Progress of COVID-19 UoS Funded Research Projects

Under the patronage of H.E. Prof. Hamid Al Naimiy, Chancellor of the University of Sharjah, Prof. Maamar Bettayeb, Vice Chancellor for Research and Graduate Studies, and Prof. Qutayba Hamid, Vice Chancellor & Dean of College of Medicine and Vice Chancellor for Health Sciences Colleges and in accordance with the university’s work plan for confronting the Covid-19 pandemic and contributing scientific results that serve the Emirati, regional and global community, the Office of the Vice Chancellor for Research and Graduate Studies in collaboration with the three research institutes, organized a workshop on the progress of COVID-19 research projects funded by the University.

Attending the workshop were Prof. Abdallah Shanableh, Director of RISE, Prof. Taleb Al Tal, Director of RIMSH, Prof. Faker Al Gharaibeh, Director of RIHSS and several faculty members, researchers, and graduate students.

The workshop began with a speech by H.E. Prof. Hamid Al Naimiy where he extended appreciation and gratitude to His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, Member of the Supreme Council, Ruler of Sharjah, and President of the University (may God Almighty protect him) for his continuous support especially in the field of research. He also praised the efforts made in the field of research under the supervision of Prof. Maamar Bettayeb, Vice Chancellor for Research and Graduate Studies, and the directors of research centers and institutes at the university.

He also added that the University of Sharjah is one of the first universities in the country to developed plans for overcoming the effects of this pandemic and implemented the distance education system with efficiency and success by relying on its advanced technological infrastructure. The university has also taken many other successful steps in aims of controlling the pandemic including the opening of a testing center at the university to conduct periodic COVID-19 test for all members of the university family and its students, providing the necessary vaccinations, and organizing many awareness and guidance workshops and seminars related to COVID-19. Additionally, the university has focused on conducting quality research on COVID-19 related issues in collaboration with many universities, hospitals, and research centers locally and internationally, and participated in various local and international conferences related to the pandemic.

In his speech, Prof. Dr. Maamar Bettayeb expressed his appreciation to the directors of the three research institutes for organizing this workshop and following up on the COVID-19 related project. These projects received over 3.6 million dirhams of funding and whose results aim to benefit the university and society in general. He also thanked all the researchers for their efforts, noting that the University of Sharjah, is the first in the country for research related to the (Covid 19) pandemic with more than 190 publications in the Scopus database.

Prof. Dr. Qutaiba Hamid, praised the level of the research conducted at the university and its diversity in various disciplines, adding that the availability of the necessary funding to conduct such research, will have the greatest impact on the completion of the research projects at the required speed and in high quality as well as quantity.

The workshop consisted of three main sessions, one for each research institute to present its COVID-19 related research projects.
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<th>COVID-19 Research Projects</th>
<th>Speaker</th>
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<tr>
<td><strong>Session Moderators:</strong> Prof. Abdul Ghani Olabi and Prof. Abderrahmane Azzi</td>
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<td><strong>Sessions Moderator:</strong> Prof. Rifat Hamoudi &amp; Prof. Mawiah Hamad</td>
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<tr>
<td>RISE: Impact Assessment of the COVID-19 Lockdown on Air Pollution in the UAE Using Satellite and Ground Monitoring and Potential Impacts on Human Health</td>
<td>Prof. Abdallah Shanableh</td>
<td>RIMHS: Design and Synthesis of Novel Compounds for the Treatment of COVID-19 by targeting the S-Spike Protein, Main Protease and RNA-Dependent RNA Polymerase of SARS-CoV2</td>
<td>Dr. Mohamad Ahmad Hamad</td>
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<td>RISE: Wearable Biosensors Intelligent System for Early Detection of COVID-19 Using Data Science Techniques</td>
<td>Prof. Qassim Nasir</td>
<td>RIMHS: Screening for HLA haplotype and immune function-related gene variants as host-related factors that predispose to cytokine storm syndrome in Emirati COVID-19 patients</td>
<td>Prof. Mawieh Hamad</td>
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<tr>
<td>RISE: A Novel Non-invasive, Rapid, and Economic Diagnostic for Covid-19 Using Magnetic Particle Spectroscopy Technology</td>
<td>Dr. Hafsa Khurshid</td>
<td>RIMHS: Understanding the genetic and immunological background for resistance to SARS CoV-2 infection</td>
<td>Prof. Rabih Halwani</td>
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<tr>
<td>RIHSS: Pandemic risk and corporate technical efficiency during COVID-19 Crisis</td>
<td>Dr. Walaa Wahid Ekelish</td>
<td>RIMHS: The use of bioinformatics and engineering mathematics followed by biological in vitro and vivo validation to decipher the molecular mechanism of COVID-19 infection of respiratory tract</td>
<td>Prof. Rifat Hamoudi</td>
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<tr>
<td>RIHSS: Covid-19: the impact and consequence on tourism industry for UAE</td>
<td>Dr. Asad Hammad Mousa</td>
<td>RIMHS: Epidemiological and clinical characteristics associated with COVID-19 severity in hospitalized patients in the UAE – a multicenter retrospective cohort study</td>
<td>Dr. Basema Saddik</td>
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AlfoL Award UoS-Skoltech Joint Workshop

The Office of Vice Chancellor for Research and Graduate Studies in collaboration with Skolkovo Institute of Science and Technology organized a workshop for discussing proposed collaborative research project in the field of Artificial Intelligence.

Shown below are the proposed projects titles with the corresponding P.I.’s from both the University of Sharjah and the Skolkovo Institute of Science and Technology:

<table>
<thead>
<tr>
<th>A.I. Proposal</th>
<th>PI-UoS</th>
<th>PI-Skoltech</th>
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<tr>
<td>Construction of Interpretable Artificial Intelligence and Deep Learning models based on integrative neuroimaging and genetic data for predicting abnormal emotional and cognitive development</td>
<td>Professor Rifat Hamoudi, College of Medicine, Department of Clinical Sciences, Sharjah University</td>
<td>Dr Maxim Sharaev, Center for Computational and Data-Intensive Science and Engineering, Skoltech</td>
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<tr>
<td>Computational models applied to multi-omics data for assessing treatment response in breast cancer patients</td>
<td>Dr. Nelson Alexandre Da Cruz Soares, College of Pharmacy and Sharjah Institute for Medical Research, Sharjah University</td>
<td>Professor Christoph Borchers, Skolkovo Institute of Science and Technology</td>
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<tr>
<td>Protecting copyrights for artificial neural networks via digital fingerprinting codes techniques</td>
<td>Professor Ibrahim Kamel, Professor of Electrical and Computer Engineering, Director of the Institute of Leadership in Higher Education</td>
<td>Professor Grigory Kabatiansky, VP for academic relations, Skoltech</td>
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<tr>
<td>Towards the precise control of ions dynamics in nano-ionic transistors for energy efficient artificial intelligence hardware</td>
<td>Dr. Ahmed El-Wakil, Professor, College of Engineering, department of electrical and computer engineering, Sharjah University</td>
<td>Dr. Dmitry Yudin, Skoltech</td>
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<tr>
<td>Advanced SLAM with DNN for outdoor delivery robots navigating in harsh weather conditions</td>
<td>Professor Tamer Rabie, Department of Computer Engineering</td>
<td>Associate Professor Dzmitry Tsetserukou, Space CREI</td>
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<tr>
<td>Artificial Intelligence for Secure and Optimal Operation of Distributed Energy Resources</td>
<td>Professor Ramesh Bansal, Department of Electrical Engineering, University of Sharjah</td>
<td>Professor Vladimir Terzija, Center for Energy Science and Technology, Skoltech</td>
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<tr>
<td>Lightweight Deep Neural Networks for Data-Intensive IoT Applications</td>
<td>Zaher Al Aghbari, Professor of Department of Computer Science, University of Sharjah</td>
<td>Dr. Anh-Huy Phan, Data-Intensive Science and Engineering</td>
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<td>Application Of Artificial Intelligence Algorithm To Assess The Prevalence And Severity of The Periodontal Disease In Sharjah, UAE Population</td>
<td>Dr. Sunaina Shetty Yadadi, College of Dental Medicine, University of Sharjah</td>
<td>Professor Andrzej Cichocki, Center for Computational and Data-Intensive Science and Engineering</td>
</tr>
<tr>
<td>Application of deep convolutional neural network in CBCT imaging for detection of condylar morphological abnormalities</td>
<td>Dr. Shishir Shetty, Department of Oral and Craniofacial Health Sciences, University of Sharjah</td>
<td>Professor Ivan Oseledets, Center for Computational and Data-Intensive Science and Engineering</td>
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</table>
Editorial Team

Editorial’s Team Note:
We are delighted to introduce you to UOS Research Newsletter, which keeps you and the society posted with up-to-date research news and activities of our prominent Faculty Members and Students at the University of Sharjah. Therefore, we invite you to share your research achievements and contributions to be posted in our future periodical issues and highlight them to our colleagues and the society.

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Salah Shanableh - Marketing and Student Recruitment

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