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Qatar University Research Magazine

issue no 10 - September 2018

Launch of QU Press

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Message from the VP

Prof. Mariam Al-Maadeed
Vice President for Research and Graduate Studies
Qatar University

Welcome to the 10th edition of Qatar University Research Magazine. The focus of this edition is to highlight the achievements and the pioneering multidisciplinary research projects of Qatar University's (QU) faculty, researchers and students.

In this issue, we feature collaborations between QU's entities, research partnerships between the University and various national and international institutions, as well as research-related activities, seminars, and workshops. We also highlight significant milestones such as the launch of QU Press, a non-profit publishing house committed to support QU's vision towards research and education excellence in Qatar and beyond. The ensuing pages also display the accomplishment of a Qatari graduate student, Lubna Al-Zaidan, from QU College of Health Sciences. Lubna accomplished an outstanding project in the field of biomedical sciences, which led to further developments towards finding a cure for breast cancer.

Additionally, an interview conducted with Dr. Habib Bouhouror, sheds the light on his win of a grant in 2017 for his research project titled "Cultural References in Contemporary Qatari Narrative Texts". We also present the proceeding of a workshop on the "State of the Art Behavioural and in Vivo Studies in Zebra Fish", presented by Dr. Albert Willemsen and hosted by QU Biomedical Research Center.

We are also delighted that QU research team achieved an impressive feat in the field of assisted reproductive technology. They discovered that recombinant phospholipase C zeta can successfully trigger development of the egg, up to the blastocyst embryo stage.

Last but not least, the issue contains pages on special events such as the Qatar University Annual Research Forum and Exhibition 2018 (QURF18), as well as articles and reports that review the work of researchers and students at the University such as the "Dar Al Maha" project realized by a group of engineering students.

I hope you enjoy browsing through this issue of our Qatar University Research Magazine and reading QU's research activities and news.

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Issue no 10, Sept 2018

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The Vice President for Research & Graduate Studies Sector acknowledges the contributions made in support of publishing this issue. Editorial contributions are also welcomed on the following email:

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All statements and opinions herein reflect the view points of the authors only and do not necessarily reflect the opinion of the Research & Graduate Studies at Qatar University.

Launch of QU Press

In support of its research sector, Qatar University (QU) launched in 2018 the QU Press, a non-profit publishing house aiming to support and develop research and education at the University through the dissemination of print and digital publications, in fields including social sciences, humanities, STEM, and more.

The Press, which will operate under the umbrella of the Office of QU Vice President (VP) for Research and Graduate Studies, will fulfill the needs of QU, and the libraries and research centers in Qatar and beyond in terms of scientific publishing. It will also contribute to preserving the University's intellectual property, rights, and patents.

In her remarks, Prof. Mariam Al-Maadeed, QU VP for Research and Graduate Studies and Chair of QU Press Advisory Board, said: "QU Press will promote dialogue on contemporary and critical issues that are of the interest of society in Qatar and the region. It will also offer QU students and professors the highest quality materials for teaching and learning, and will contribute to QU's efforts to prepare a generation capable

Prof. Mariam Al Maadeed:

«The Press will promote dialogue on contemporary issues of concern to the society in Qatar in particular and the region in general. It will provide Qatar University students and faculty with high-quality teaching and learning materials and will support Qatar University›s efforts to develop a generation capable of participating in national development and achieving national aspirations towards a knowledge-based economy»

to participate in the process of national development and fulfill the national aspirations towards a knowledge-based economy."

Prof. Talal Al Emadi, QU Press Director and Editorial Committee Chair, said: "The establishment of QU Press underlines QU's role as an incubator of ideas and reflects the organization's commitment to provide the community with quality education and research, to advance knowledge, and to contribute actively to the needs and aspirations of society. QU Press will invest heavily in ensuring the accuracy, originality, and design of scholarly manuscripts and peer-reviewed journals, as well as their readability. We will collaborate with international associations of university presses with the aim to ensure compliance with international publishing standards."

QU Press is the first of its kind in the region to fill the gaps in the publication of original Qatari and Arab academic works. It will publish the works of QU's faculty and researchers, as well as student dissertations, conference proceedings in addition to the translation of significant books and articles. The Press will also establish collaborations and partnerships with local ministries and institutions from the public and private sectors.

Prof. Talal Al Emadi:

QU Press was established to support role of the university as an incubator of ideas and innovation

QU Press' Advisory Board consists of members from local and international institutions. The Board will provide strategic recommendations and advice to strengthen the role of the Press and advance its global standing. The Press' Editorial Committee is responsible of studying the submitted proposals and identifying projects, among other related functions.

QU Press is currently establishing new applications for the transfer of the existing journals at QU. It is also developing a unified administrative and operational structure for its affiliated journals. The latter will be available on the Press' new website.

To contact QU Press, please send an email to:

qupress@qu.edu.qa

Annual Research Forum & Exhibition 2018 “Pioneering Research”

Qatar University (QU) Annual Research & Exhibition Forum 2018 is a remarkable yearly event, which brings together students researchers, academics, as well as local and international partners and stakeholders. It offers the University the opportunity to demonstrate its research effort and projects to face socio-economic needs of the community as declared through QU Research Roadmap, National Research Strategy and Qatar National Vision 2030. The Forum highlights, assesses and reviews QU research enterprises, international collaboration, funding, and develop strategies for future research and graduate studies programs.

The First Day, 1st May

The first day event was attended by QU president Dr Hassan Al-Derham, QU VP for Research and Graduate Studies Prof. Mariam Al-Maadeed, and the representatives of the sponsors of the event, Qatar Petroleum,(QP)Qatar Petrochemical Company (QAPCO), Total, Al Jazeera Media Network as well as by high delegate from six French universities (Ecole des Mines Paris, Université Bretagne Sud (UBS), Université Paris Est, Université Paris1 Pantheon-Sorbonne, Université d'Artois, and Université de Bordeaux) accompanied by Mr. Naser Bin Hamad El Hinzab, the legal consul responsible of universities cooperation, Qatar UNESCO delegation, France. It gathered researchers and experts from Qatar, France Turkey, and Romania. This year's theme "Pioneering Research" reflects the university's transition to

Dr. Mohammed Al Hammadi: The research Forum is scientific effectiveness distinct going forward and achieve consecutive successes

address new topics applying new methods that produce innovative and reliable outputs. Additionally, this year's edition marks another milestone in the implementation of contemporary research strategies and programs and the promotion of international partnerships. The Forum is also an opportunity to encourage and award distinguished researchers".

Welcome address was given by Dr. Ahmad Elzahtary, Dean of Graduate Studies at QU, who noted the role of the Forum in promoting QU research and graduate studies programs and services, while giving special attention to humanities and social sciences.

It started by a lecture on "Graduates Studies Strategies in Humanities and Social Sciences" given by Ahmad Al –Own, Associate Dean of Graduate

Studies for Academic Affairs at QU.

The first session on “Development of Graduate Programs on Humanities and Social Sciences”, The second session was on “Methodology of Dealing with Terms and Concepts in Humanities and Social Sciences”, and the third Session identified “Research Problems in Sociology”, and forth session was on “Methodology for Analysis in International Political Phenomena”. During these sessions, Dr. Ozum Uzun (Aydin University, Istanbul) discussed the importance of humanities and social sciences literature review. Dr. Ahmet Uysal, Director of Center for Middle Eastern Strategic Studies (ORSAM) and Sociologist at Istanbul University, discussed the problems in humanities and social sciences research and the difficulty to find and fund innovative research projects.

The Forum awarded the winners of Outstanding Thesis, Three Minutes Competition presentation, Visualization Challenges, and included a poster gallery visit.

The Graduate Students awards have been handed out on the first day, and the winners for Outstanding Thesis Award are: Ali Sehpar Shikoh (PhD in Electrical Engineering), Noora Al Naimi (PhD, Biological & environmental sciences), Myriam jihad (Msc in science of pharmacy), Fatima Alzahraa Ali (Master of Quranic Sciences and Exegesis), fareed unissa begum (Master of Science in Marketing), Reham Hassan Negm Eldin (master of public health), Shifa Mohammed (MSc. Environmental Engineering), Mohammad Nader (Msc in Private Law), Mais Monther (Master of Arts in Arabic Literature and Language), sameera shaikh (Master of science in environmental science), Ruba Samih Al Said (Master of Art in Curriculum, Instruction and Assessment).

In regards to the 3 minutes awards, the first place winner is Mais Monther (Master of Arts in Arabic Literature and Language). The second place winner is Haya Al-Dosari (Master of Arts in Arabic Literature and Language). The third winner is Aisha Mohamed Metwally (Msc-Pharmacy).

The Second Day, 2nd May

The second day was honored by the presence of HE the minister of Education and Higher Education, Dr. Mohammed Bin Abdul Wahed Al Hammadi, Dr Al Hammadi was joined by QU President Dr Hassan Al Derham, French Ambassador to Qatar, Eric Chevallier, QU VP for Research and Graduate Studies Prof. Mariam Al-Maadeed as well as delegates from the French universities and first day attendant companies.

In his remarks, Dr Al Hammadi said: “The Annual Research Forum & Exhibition is a distinguished event that is moving forward while achieving consecutive accomplishments due to the leadership and efforts of the research and graduate sector at Qatar University. The Forum’s theme “Pioneering Research” emphasizes the University’s ongoing endeavors to provide more opportunities to conduct quality research and apply modern approaches that produce innovative and authentic knowledge and provide effective solutions that meet the national priorities of the society and the country”.

Dr. Hassan Al-Derham said: “The Annual Research Forum & Exhibition is an opportunity to develop the future of QU’s research strategy, to showcase outstanding research projects, and to highlight the outcome of the successful partnerships between QU and institutions from industry. The Forum also underlines QU’s ongoing efforts to ensure the best practices within its graduate programs and research excellence.”

Prof. Mariam Al-Maadeed presented a summary of QU’s development since its establishment. She highlighted the University’s interest in international cooperation in various disciplines and cooperative research partnerships through the joint funding program showing that the launch of QU Press aimed to support and develop education and research at the University through digital and printed publications. Prof. Al-Maadeed added that the Office of Innovation and Intellectual Property at QU ensures the protection of the University’s intellectual property and contributes to enhancing the socio-economic welfare in the State of Qatar.”

Program featured three sessions. The first session was a panel discussion about “International Collaborations and Research Strategies”. The session was

moderated by Dr. Majed Al-Ansari, Manager of Policy Department, Social and Economic Survey Research Institute (SESRI) at Qatar University. The panel included Prof. Remus Pricopie, Rector of the National University of Political Studies and Public Administration (SNSPA) (Romania),Dr Al-Hareth Al-Khater, senior consultant medical oncologist, assistant chairman, Dept. of Hematology/Oncology at the National Center for Cancer Care and Research, Hamad Medical Corporation (Qatar),Prof. Jean Christophe Saint-Paul, Dean of the University of Bordeaux, Director of the Institute of Criminal Justice and Justice (France), Dr. Mashael Al Shafai, Assistant Professor of Biomedical Sciences College of Health Sciences at Qatar University and Ms. Noora Al-Romaihi, student from College of Law at Qatar University.

The second session was about "International Experience in Research and Graduate Studies: The French Experience as a Model". Dr. Yassin Elshazly, Assistant Professor of Private Law, College of Law at Qatar University, moderated the session. The panel discussion members were Mr. Nasser Hamad Al-Hinzab the Legal Consul Responsible of the university cooperation, UNESCO (France), Professors Pasquale Mammone, President, Université d'Artois, Yannick Vimont, Assistant Director in charge of Research Ecole des Mines, Maria Gravari- Barbas, Vice Provost For International Affairs, Paris 1 Pantheon-Sorbonne University, Cecile Delome, Vice Chair of Research, Paris Est University, France.

The third panel discussion in the program was about "Research Towards Innovation, Intellectual Property and Commercialization". It was moderated by Dr. Aiman Erbad, Director of Research Planning and Development at Qatar University. The Panel members were Dr. Ebrahim Al Romaihi, Head of Copy Rights and Related Rights Office, Ministry of Economy & Commerce Qatar, Prof. Jean Peeters, President of Bretagne Sud University , CPU in France, Dr. Eyad Mosaad, Texas A&M Qatar, Mr. Hareb Al Jabri, Acting Director of Sustainablen Development Center at Qatar University, Ms. Aysha Al Romaihi, Business Development Manager at Qatar Business Incubation Center (QBIC) and Mr. Abdullah Alsalemi, College of Engineering at Qatar University.

During the first session, H.E. the minister of education and higher education awarded the winners of the Research Excellence Awards: Dr. Adriaan Stephanus Luyt (Science & Engineering), Prof. Said Elbanna (Humanities & Social Sciences), and Dr. Hatem Zayed (Biomedical, Medical & Health Sciences). On the program was also a Poster Awards Ceremony.

The winners of best research poster of faculty and postdoc has been awarded to; Hassan Mehboob and Faris Tarlochan in the field of Sciences & Engineering, Maryam A. Al-Thani and Salma M. Khaled in the field of Humanities & Social Sciences, Nahla Eltai, Asmaa Al-Thani, Sara Hadid, Eman Wehedy, Anand Deshmukh, Khalid Alansari and Hadi Yassine in the field of Biomedical, Medical & Health Sciences. For the best research poster of a graduate student, the winners are; Mohammad Ashfaq, Mohammad Al-Ghouti, Nabil Zouari and Hazim Qiblawey in the field of Sciences & Engineering, Noora Hamad Al-Hajri in the field of Humanities & Social Sciences, Sara Taleb, Shilu Mathew, Maria Smatti, Khalid Alansari, Asmaa Althani and Hadi M. Yassine in the field of Biomedical, Medical & Health Sciences. Lastly, the winners for best research poster of an undergraduate student are; Minoli Doshi and Dr. Samir Jaoua in the field of Sciences & Engineering, Rana Abuakar in the field of Humanities & Social Sciences, Raghad AL-Ishaq and Pejman Hanifi-Moghaddam in the field of Biomedical, Medical & Health Sciences.

Meetings were held with the French delegation by the end of the Forum during which prof.Al-Maadeed highlighted the importance of cooperation with French universities in the fields of graduate studies and research, and introduced the Qatar University International Research Collaboration Co-Fund Program (QU-IRCC). The attendees expressed great interest in this new collaboration initiative.

Qatar University Hosts Graduate Open Day

The Office of Graduate Studies at Qatar University recently hosted Graduate Open Day event with the participation of different colleges and departments of QU, public and private companies and a number of QU officials.

The event was held on Thursday March 1st, present at the event were QU VP for Research and Graduate Studies Prof Mariam Al-Maadeed, Dean of Graduate Studies Dr. Ahmad Al-Zathary and Assistant Dean of Student Affairs at the Office of Graduate Studies Ms. Ghada Saif Al-Kuwari.

The event was held to respond to various questions and suggestions of prospective students and provide assistance for the challenges faced by students in the graduate application process. A number of representatives were present during the event to answer questions about different programs.

The event provided the students with the opportunity to explore the different programs offered by Qatar University to continue their graduate studies. The event also provided the students with an insight into the admission procedures of their desired programs.

A number of representatives from various research centers such as the Gas Processing Center (GPC), Environmental Science Center (ESC), KINDI Computing Research,

Central Lab Unit (CLU), Social and Economic Survey Research Institute (SESRI), QU library and the admissions department were present at the event. The admissions department conducted two workshops on “How to Fill the Admission Application”, additionally representatives from different colleges and departments were present to answer questions of prospective students during the event. In addition, a number of institutions were present such as Hamad Medical Corporation (HMC) and the Ministry of Administrative Development, Labour and Social Affairs (MADLSA). MADLSA provided a lecture about the conditions of enrollment in government scholarship, in cooperation with the Ministry of Education & Higher Education.

Besides, MADLSA also contributed to the event by providing Qatari students with an opportunity to know their chances of getting hired and helping them to achieve their higher education goals through graduate degrees from QU.

Ms. Ghada Al-Kuwari, Assistant Dean of Student Affairs, acknowledged the fact that “QU has received about 198 applications ,until 1st March, to join its graduate programs whether it was for the diploma, master’s degree, or a PhD in Fall 2018”, Noting that QU admission received about 1500 applications by the end of April 2018 through the QU online admission application website. Al-Kuwari also said that there are special benefits to high achieving students once they are accepted into the program, whereby they will be eligible to work and earn a salary that will be helpful for them in paying their graduate tuition.

Ms. Ghada Al-Kuwari: “the university has received about 1500 applications to join its graduate programs”

The university currently offers 41 graduate studies programs that include 27 Master’s degree program, 8 PhD programs, 4 diploma programs and 2 graduate certificates program. The first graduate certificate program is in pharmacy and the second program is offered in graduate studies. QU aims to add more flexibility in the admission procedure for the students who do not satisfy the required GPA (2.8) for acceptance in most graduate studies programs in QU. To be eligible for admission into their desired programs, these students will be required to enroll in the graduate certificate program where they will be enrolled in a set of courses for one academic year and achieve the required GPA (3.20).

Additionally, the career service center also held two special sessions on “how to prepare for a personal Interview”. The presenter of the workshop Mr. Majed Fathalla, Senior Career Consular applauded the presence of a number of undergraduate students who attended the discussion, saying that the audience shows that the university does indeed have a special set of ambitious students.

Mr. Fathalla stressed on the importance of the workshop for graduate applicants. He said that “students should practice before the personal interview and work on making a good impression since these are two important factors for graduate studies applicants”. He then added that “it is highly recommended that they practice on presenting themselves in the best way possible, they should be fully aware of the importance of criteria on which they will be assessed during the interview, such as professional efficiency, external image, and verbal and nonverbal communication”.

Women in Research: **Successes and Challenges**

In celebration of the International Women's Day on March 8, the Vice President for Research and Graduate Studies office hosted a panel discussion titled "Women in Research: Successes and Challenges".

The panel witnessed a strong participation of women in research, where they discussed and exchanged their thoughts on various topics. The leading women were Prof. Mariam Al-Maadeed, QU VP for Research and Graduate Studies, Dr. Hamda Al-Naimi, Director of Laboratory Animal Research Center (LARC), Dr. Siham Al-Qaradawi Professor of Chemistry, Dr. Mashael Alshafai, Assistant Professor of Biomedical Sciences, Dr. Alexendra Hamadou, Research Assistant Professor, and young research assistants Khadija Zadeh, Salma Habib and Hamda Aboujassoum.

The women discussed and exchanged their perspectives on different topics such as the subjective measures of women's success in academic sciences, the issue of gender inequality, challenges and opportunities for women in research, key determinants of success and well-being, the STEM Environment (Science, Technology, Engineering & Mathematics) for female scientists, the rewarding of women in science. Additionally, they also discussed the factors that causes low representation of women in academic sciences leadership positions.

Commenting on the occasion, Prof Mariam Al-Maadeed said that the main aim of the panel discussion is to "draw attention to the role of women in research and to highlight their successful contributions, in addition to finding effective solutions to overcome the challenges that they might face in this field.

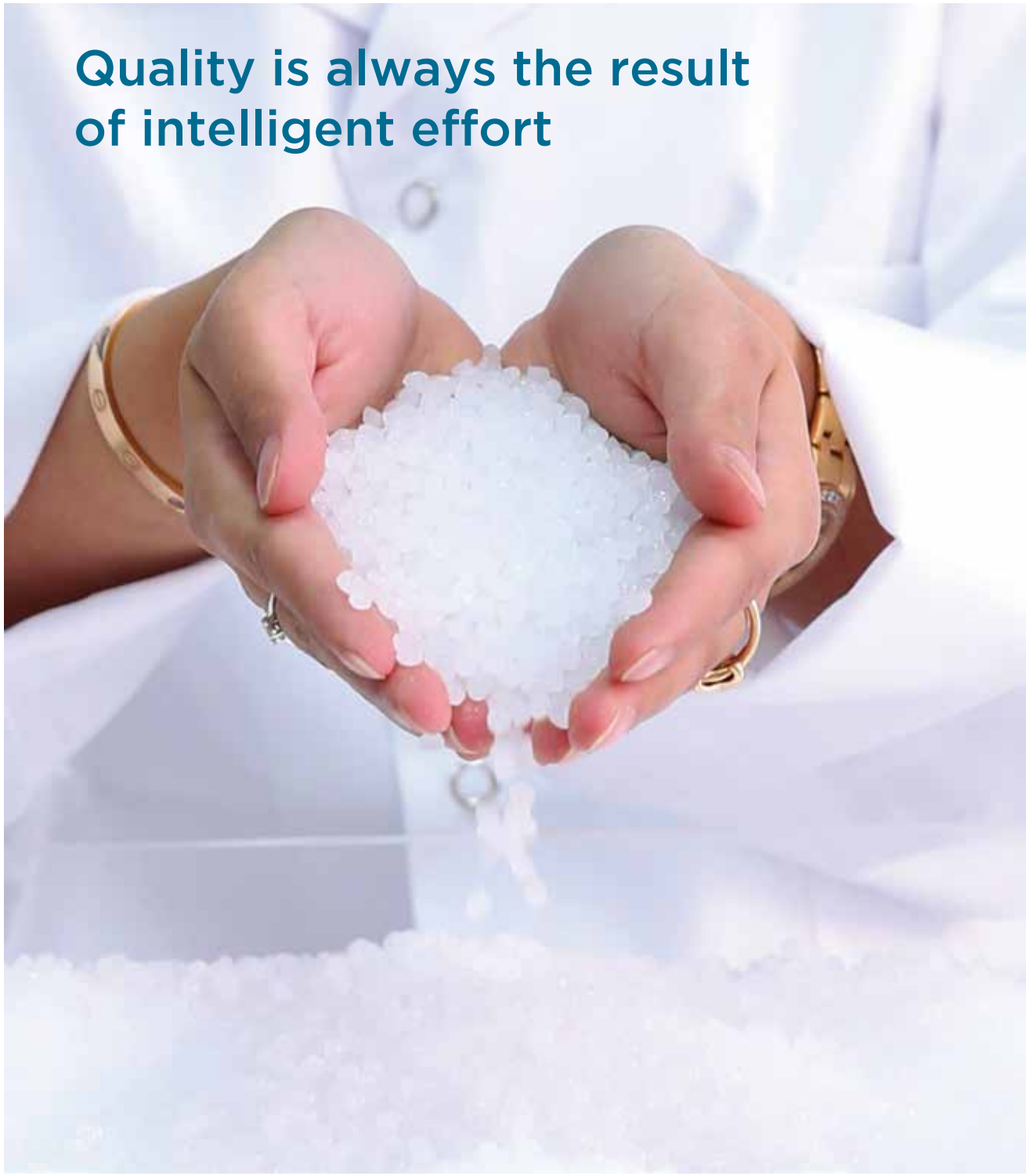
Prof. Mariam Al-Maadeed:

"the panel discussion aligns with the university's constant efforts that aims to empower young women in society, by providing them with the necessary knowledge and skills that shall help them attain their degree of involvement towards national development process."

She then added that the panel discussion aligns with the university's constant efforts that aims to empower young women in society, by providing them with the necessary knowledge and skills that shall help them attain leadership positions and increase their degree of involvement towards national development process.

In this context, the University also offers its female students with a wide range of opportunities such as workshops, trainings, and competitions that aims to empower them by building their own leadership capabilities, especially in the light of the changing path for women in Qatar and the highlighted objectives of Qatar National Vision 2030 and the developmental strategies.

Quality is always the result of intelligent effort



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QU Hosts Animal Ethics Awareness Day

Animal Ethics Awareness Day was hosted by the Office of Research Planning and Development at Qatar University (QU) Office of the Vice President for Research and Graduate Studies in collaboration with the Ministry of Public Health.

Present at the event were Prof. Mariam Al-Maadeed QU VP for Research and Graduate Studies , Dr Aiman Erbad QU Director of Research Planning and Development, Dr Hamda Al-Naemi QU Laboratory Animal Research Center (LARC) Founding Director, Dr Abdelbary Elhissi QU Manager of Research Excellence and Dr Iman Sadoun Ministry of Public Health Executive Manager, in addition to the presence of QU faculty, researchers and staff. The event also witnessed the participation of a number of experts and researchers from QU and other institutions like the Anti-Doping Lab Qatar, Hamad Bin Khalifa University (HBKU), Hamad Medical Corporation (HMC), the Ministry of Public Health, and Sidra Medical and Research Center.

The event was held to increase community awareness on research ethics. It also aimed to highlight the role of QU Institutional Animal Care and Use Committee (IACUC) following the latest ethical international standards within an Islamic framework.

Lectures were provided by Dr Hamda Al-Naemi, Dr Husam Younes Associate Professor at QU

College of Pharmacy (CPH) and IACUC Head, Dr Abdelali Agouni CPH Associate Professor, Dr Ala-Eddin Al Moustafa Professor at QU College of Medicine, and Dr Nasser Rizk.Associate Professor at QU College of Health Sciences. The lectures focused on discussing the implementation of ethical standards by QU.

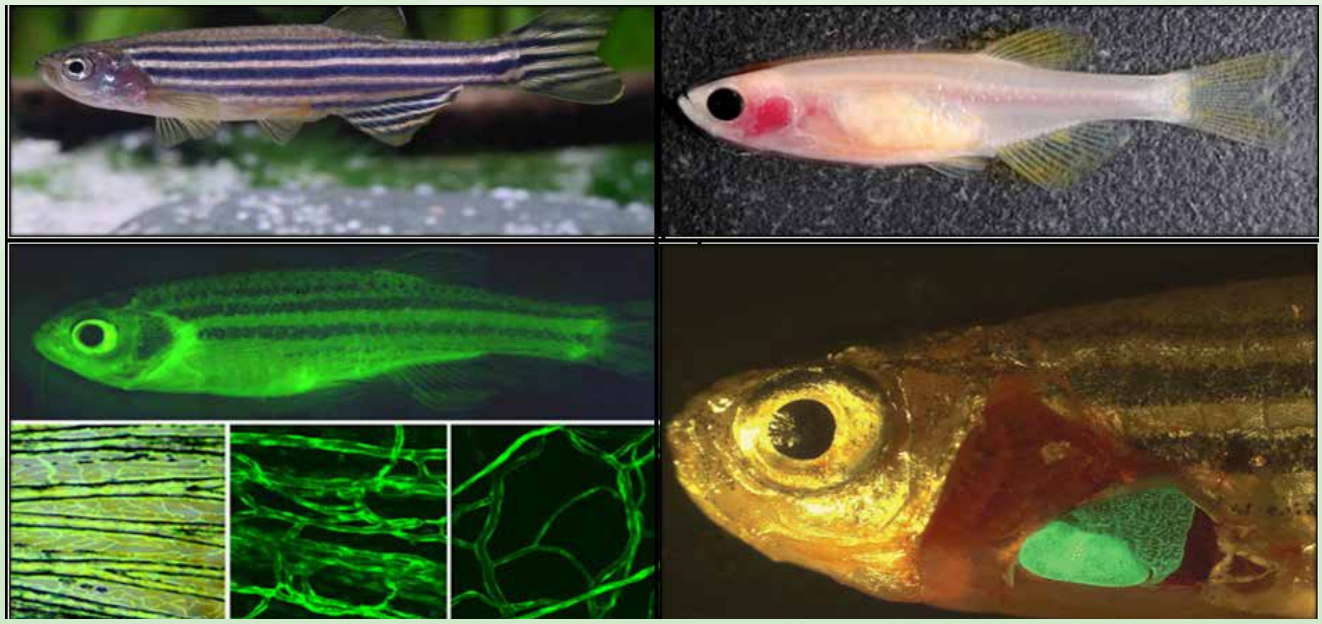
With regards to the importance of ethical consideration when using animals, Prof. Mariam Al-Maadeed pointed out the benefits of animals mentioned in the Holy Quran. She also stated that animals have numerous benefits for the society, especially in pharmacological experiments which contribute to the advancement of the society.

Dr Abdelbary Elhissi said: “The high level that QU reached with regard to paying attention to the ethics of dealing with experimental animals is a real indication of the level of civilization achieved by Qatar in recent years. The implementation of ethics in research is an integral part of research excellence.”

Dr. Iman Saadoun, emphasized the role of the Ministry in the supervision of ethical standards in the use of experimental animals in coordination with QU Institutional Animal Care and Use Committee (IACUC).

Dr Aiman Erbad said; the effectiveness of such event is being in line with Qatar University’s strategic plan to raise awareness about ethics research. the level of participation and interest in this awareness event not only at the faculties of health specialties at the university, but also at the level of leading institutions in the State such as the Ministry of Public Health, Hamad Bin Khalifa University, Hamad Medical Corporation, Sidra Medical Research Center and the Anti-Doping Lab Qatar.

BRC hosts a talk on state of the art behavioural and in vivo studies in zebrafish



The Biomedical Research Centre in Qatar University hosted a lecture titled “state of the art behavioural and in vivo studies in zebrafish”, on Sunday March 11, 2018.

The talk was presented by Dr. Albert Willemsen who is an expert in the field of biological sciences. Since 2003, he worked as an account manager, and trainer for Noldus Information Technology in the Netherlands since 2003.

A number of QU faculty members, students, researchers, and others who are interested in biomedical sciences were present at the talk, whereby Dr. Willemsen gave an overview of in vivo techniques and tools that are being used in in vivo

studies of zebrafish. Additionally, he discussed the use of high throughput activity screening for larvae, image analysis for cardiotoxicity, activity screening in embryos, and teratological assessment.

Some of the significant topics discussed at the talk were about how Zebrafish became such important models for studying human disease over the past decades, especially since early adopters used in vitro techniques, mostly in genetics and molecular biology.

The talk also discussed the most significant changes that happened in the recent years, in the light of the increased use of in vivo models, and the range of its applications that is still expanding. Additionally, the talk discussed the possibilities of conducting behavioral studies on adult fish based on a video tracking in 2D and 3D, and a detailed video analysis.

Towards the end of the talk, Dr. Albert opened the floor for questions and gave a summary of the most important points that he covered in the lecture.

The Office of Graduate Studies successfully hosts TAD Bootcamp

The Office of Graduate Studies, at the QU Office of Vice President for Research & Graduate Studies recently held the Tad Matters™ campaign. The Initiative is one of the most important campaigns for supporting graduate writing and research (thesis and dissertation).

The TAD initiative highlights the importance of supporting graduate writing and research and has been a fantastic opportunity for showcasing the different support services and events tailored specifically to meet graduate students' needs.

This fall, the Office of Graduate Studies successfully held the Tad Bootcamp in the Research Complex on campus from January 8th-9th. The two-day graduate thesis writing boot camp was the first of its kind ever to be offered in Qatar.

The boot camp gave students the opportunity to work on developing their own graduate thesis writing

in a prosperous and supportive environment. The event was organized in collaboration with the Office of Faculty and Instructional Development (OFID). The event's success was a result of its collaborative nature, which relied heavily on the high-caliber support available to grad students across campus. This support included a team of experts from the Social & Economic Survey Research Institute (SESRI), the Statistical Consulting Unit (SLC) under the College of Arts and Science, the Writing Lab, QU Library, and Graduate Academic Support under the Office of Graduate Studies.

The event was a positive illustration of Graduate Studies' commitment to supporting graduate research and facilitating a positive graduate student experience at QU.

It is important to note that nearly 1,300 graduate students in in more than 50 graduate programs are being supported by the Office of Graduate Studies at Qatar university. The Office of Graduate Studies at QU aims to promote excellence in education, foster a positive graduate student experience, support innovation in research, become a beacon of institutional excellence, and to produce individuals that contribute to the sustainable socio-economic development of Qatar.

Guided activities and fruitful results gained by TAD

The TAD Bootcamp aimed to provide the students with all the necessary information and resources that they need for writing their graduate thesis. The Bootcamp is essentially a culminating event where students are able to apply everything they have learned about thesis writing throughout the year to their individual research projects. Furthermore, the Bootcamp dedicated a time and space for students to get their ideas down on paper, so they have something in hand by the start of the following semester as they intensify their engagement with their thesis supervisors.

The Writing Lab provides support and consultation for graduate students

The Tad Bootcamp gave its students a golden opportunity by encompassing the different support services and resources specifically tailored to meet the needs of graduate students in one single event. The event helped in indicating that there are certain graduate students who are not aware of the resources available across campus to support graduate study. Still, others who are aware of these resources have difficulties with access as a result of busy work schedules and class schedules. The Bootcamp was an excellent opportunity for grad students because it centralized all these resources in a single event.

Prof. Mariam Al-Maadeed, Vice President for Research and Graduate Studies at Qatar University spoke about the event saying, "We are pleased with the event turnout as Research and Graduate Studies at QU is committed to supporting graduate students at all stages of the thesis/ dissertation writing process". The Dean of Graduate Studies, Dr. Ahmed El-Zatahry, added, "The Tad Bootcamp is just one example of the effort we are putting in to supporting graduate study at QU; we are dedicated to supporting graduate student research as well as the output of their efforts". OFID Director, Dr. Mohamed Arselene Ayari stated, "OFID was happy to collaborate with Graduate Studies on the event as we have a shared commitment to excellence in teaching and learning in all of its forms".

Additionally,there are a number of important graduate studies' initiatives that fall under the Tad Matters umbrella including Tad Works, Tad Days, Tad Talks, and Tad Bootcamp.

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BOOTCAMP

Tad Bootcamp is a thesis and dissertation writing event aimed at creating a comfortable, productive environment where grad students can replace procrastination with productivity. Tad Bootcamp centralizes the many available resources and support services available to grad students across campus.

DAYS

Tad Days is a collaboration event designed for graduate students. At Tad Days, students can explore different scholarship opportunities offered by industry partners as well as other sources of funding for research projects.

Tad Matters is a value statement about our priorities and core beliefs in graduate study at QU. It also encompasses the different support provided to grad students from admission to graduation.

WORKS

Tad Works incorporates the various graduate workshops, training sessions, seminars, and professional development programs offered through the Graduate Academic Support Unit. Each program is tailored to the specific needs of graduate students and steeped in the notion of continuous improvement and lifelong learning.

TALKS

Tad Talks is a unique platform for showcasing impactful interdisciplinary graduate research that addresses grand global challenges. Tad Talks invites international graduate researchers as well as top graduate researchers within Qatar and the region to coalesce in the spirit of inquiry.

BRC organizing a workshop on the Antimicrobial susceptibility testing and surveillance

The Biomedical Research Center at Qatar University in cooperation with the Department of Health Care and Safety of Patients at the Ministry of Public Health,the Department of Laboratory Medicine and Pathology at Hamad Medical Corporation, and Bristol Centre for -Antimicrobial Research and Evaluation Unit, UK, is organizing a workshop, on the "Antimicrobial susceptibility testing and surveillance" on January 22nd to January 25th 2018.

Dr Asma AlThani Director of Biomedical Research Center and the Dean of Collage of health sciences at QU has welcomed the guests in the opening ceremony.

Among the speakers at the workshop were Ms. Huda Al-Katheeri, Dr. Nahla Sharaf from the Ministry of Public Health, Prof. Alasdair MacGowan, Dr. Karen Bowker, Dr. Alan Noel of the Bristol Reference Unit in the United Kingdom, and Dr. Hadi Yassin and Dr. Nahla Eltai, a researcher from the Biomedical Research Center. In addition to four speakers from Hamad Medical Corporation.

The workshop was attended by a number of workers in the field of public health and environment furthermore, researchers from different universities also participated in the workshop resulting in approximately 30 participants from 20 institutions in Qatar.

The workshop focused on training the specialists and enhancing their abilities in conducting the antimicrobial susceptibility test using several internationally approved methods, in addition to their knowledge of the antibody resistance system and the coordinated methods for monitoring them, explaining the importance of developing a unified approach to test and control the resistance of these antibiotics and the types of microorganisms Diseases.

Dr. Asma Al-Thani, Director of the Biomedical Research Center and Dean of the College of Health Sciences, said the workshop comes in light of the Center's commitment to "create a healthier life for individuals in Qatar through research, training and services in the field of applied and theoretical biomedical researches."

It is worth mentioning that this workshop is in line with the National Program by the Ministry of Public Health from 2017-2022 for Combating Antimicrobial resistance and World Health Organization recommendations.

Dr. Karen Bowker,

Prof. Alasdair MacGowan

Qatar University hosts its first research workshop on Collaborative Partnership in Sustainable Development

The Center for Sustainable Development at the College of Arts and Sciences held its first ever research workshop on Collaborative Partnership in Sustainable Development on February 20, 2018. The workshop is a result of fruitful collaboration between Qatar University and Cardiff Metropolitan University, based at Wales-United Kingdom.

Present at the workshop were Mr. Hareb Al Jabri, Director of Center for Sustainable Development , with Assistant Research Professors, Dr. Mohamed Al Saidi and Dr. Imen Saadaoui, Cardiff Metropolitan University Professors, Prof George Karani, Prof Keith Morris, and Dr. John Littlewood.In addition Mr. Ali Al Naimi, Qatari PhD Student at the School of Sport and Health Sciences and a number of CAS faculty, students, and staff were also present at the event.

The workshop aligns with the 17 Sustainable Development Goals of the United Nations , which aims to discuss the collaborative work between research teams from Wales-UK and Qatar in order to achieve a number of sustainable development goals, such as good health and wellbeing, climate change, life below water, life on land, and sustainable cities and communities.

The workshop included a set of important discussions that are highly relevant to the field such as CO2 sequestration to mitigate Climate Change, Environmental Public Health and Sustainable Development Research Case Studies, Simulations Treatment of Wastewater and Production of Microalgae Biomass, Water-Energy-Food Nexus and Sustainable Development, and Building Engineering and Environmental Sustainable Development Case Studies'.

In this regard, Dr. Hareb Al Jabri, said "Our center aims to provide sustainable solutions to the various challenges caused by the rapid growth and development of the State of Qatar. We are currently conducting many researches that focus on food and water security, environmental conservation, waste management, biotechnologies and natural resources governance".

Mr. Aljabri acknowledged that the center is committed towards conducting researches that tackle the most significant challenges of sustainable development in Qatar. He also added that "We strive to makes these researches relevant to Qatari society, while creating interdisciplinary research opportunities, that aligns with the objectives of Qatar National Vision 2030. To achieve this, the center will continue in its efforts to collaborate with local and international partners to promote sustainability."

Furthermore, PhD student Mr. Ali Al-Naimi from the School of Sports and Health Sciences at Cardiff metropolitan university said "As a Qatari citizen, I am delighted that these research teams from Wales and Qatar have organized a workshop to discuss such important issues related to sustainable development. I believe that this workshop will lead to more fruitful collaboration between the two institutions".

Cultural References in Qatari Narrative Texts

Interview with Dr. Habib Bouhouror

The idea of the research project in the culture references is an important part of the mechanisms of detecting the methods of culture employment

professor of Arabic criticism at the Department of Arabic Language, Faculty of Arts and Sciences, won the research project grant of 2017 for his research titled: Cultural References in Contemporary Qatari Narrative Texts.

To know more about the research, its prospects and academic outputs, we conducted this interview with the researcher, who summarized his research project saying: "The narrative texts in each country represent an added literary value; by diversity and multiplicity of their cultural and intellectual references which constitute the structure of the society ... This does not deviate from what is perceived in the State of Qatar of cultural mobility that touched the various types and genres of literature since the eighties of the last century to the present day".

Our magazine has highlighted the academic research work presented by Dr. Habib Bouhouror through an interview to discuss the research content, its importance, objectives and practical outputs, and the value of literary, cultural and intellectual narrative texts in the society. So, this dialogue was with the researcher.

How did the idea of research in culture references and their link to the contemporary Qatari narrative texts come?

The idea of the research project in cultural references came as an important mechanism of the detection of cultural employment methods and its artistic and aesthetic characteristics before, during and after the writing of the Qatari modern and contemporary novelistic or fictional narrative text, through research and study in their text bodies about these references that reinforce our cultural affiliations and explore the origins and vocabulary of our intellectual and constructional structures, and looks forward to the horizons of expectation by revealing the cultural, existential and customary questions contained in the Qatari narrative text.

Does this mean that you are looking for the level of presence of the cultural reference in the

structure of the Qatari narrative text?

Yes! Absolutely, I have realized this sense of research as a result of my coexistence as a witness to a conscious cultural movement at the level of contemporary Qatari narrative composition, and this will touch the results that establish veracity and future of Qatari narrative text within the regional, Arab and global cultural scene.

What is the nature of the research, and on what basis have you chosen for this subject in the humanities?

This research is a difficult practical research, starting with the exploration of the foundations of the references of the Qatari narrator as an effective creator within the network of social, linguistic, artistic, intellectual and philosophical references, and linking all those cultural components, in which the narrator intersects, with the contents of his narrative text, whether in the story, short story or novel since the eighties of the last century to the present day. These references, in our estimation, will control product paths (literary work) of the contemporary Qatari creator, and open to him unlimited possibilities that strengthen his knowledge formation and reflect his culture by monitoring, analyzing and exploring artistic sensitivity in the contemporary heritage, and other culture perceptions as a brainstorming and a long way of difficult questions. The references contained in the general creative product (literary work) put it in regional, Arab and perhaps global competitive footsteps within a conscious cultural movement.

Can you tell us in details about the research objectives?

These references will govern the product paths (literary work) of the contemporary Qatari creator

Research objectives varied systematically. It started with a scientific study of cultural references network within Qatari narrative text (story and novel), in which we adopt different systematic mechanisms to reach to practical results, in addition to exploring the cultural functions of Qatari narrative texts across various narrative stages and in different cultural practices, and to link this to the dynamics of systematic criticism, as well as to the cultural reading of the Qatari narrative text, as a system characterized by systematics, which contains unlimited series of relationships and codes that generate intellectual themes within the narrative texts. The work also aims at writing a new applied scientific research in its space and field, and contributes to support the contemporary Qatari creative text and place it within the regional, Arab and global cultural context, in line with general cultural strategy of the State and its scientific institutions such as Qatar University.

Do you think that your research project is important at the level of Qatar, and what are its practical outputs?

The importance of our project is laying in the study of the network of cultural references within the Qatari narrative text (story, short story and novel), a scientific study in which we adopt different systematic mechanisms to reach practical results. This will contribute directly to support Qatari literary production academically and scientifically, and present it thematically to the regional, Arab and international recipient in order to be placed within the global cultural scene by revealing the cultural functions of the Qatari narrative texts through various creative stages and in different cultural practices, as well as to approach the Qatari narrative text (story and novel) in the light of its historical and cultural contexts, where the texts contain different contexts in its deep structure, and can not reveal their developing implications in the literary product only by achieving a comprehensive perception about the nature of the cultural structures of the Qatari society, and the formation of a cognitive system at the cultural interpreter to decipher the systematic possibilities within the Qatari narrative structure and link them with the regional and Arab environment and developing variables, as well as to write a new applied scientific research in its space and field, which contributes to support the contemporary Qatari creative text and place it within the regional, Arab and global cultural context, in line with general cultural strategy of the State and its scientific institutions. There is another importance that can be realized from the research, which is to enable the Qatari creator to follow the levels of criticism and acceptance by the other, by shedding light on his narrative writings objectively, using modern and contemporary systematic mechanisms.

Did you adopt a special approach or multiple systematic approaches or mechanisms in approaching the cultural references?

The approach is the basis of the sober scientific research, and in this research we relied on an accurate, variable and sophisticated systematic network during the development of research stages. We adopted the analytic descriptive approach in humanities to summarize, document, review, analyze and approach Qatari narrative text. The research also relied on another set of systematic mechanisms according to the levels of progress in the research process. We used systematic approach mechanisms such as historical, social and psychological approaches. On the other hand, in accurate stages of the research, we resorted to the mechanisms of textual approaches (structural, formative and seismic). I belief that the approach and analysis focused on the narrative texts at various stages of the research needs also to borrow other systematic media such as reception and interpretation.

If the research had multiple systematic mechanisms, what are the limits of the research topic and on what it does depend?

The applied research in the issue of cultural references, as mentioned above in this research, is a difficult practical research begins first with the exploration of the foundations that form the self-references of the Qatari narrator as an effective creator within the network of social, linguistic, aesthetic, artistic, intellectual and philosophical references, and to link all of these culture topics, in which the narrator is in line with the contents of his narrative text, whether in the story, short story or novel since the eighties of the last century to the present day. These references will then control product paths (literary work) of the contemporary Qatari creator, and open to him unlimited possibilities that strengthen his knowledge formation. The references, included in the product, will also determine the overall creation of the contemporary Qatari narrative scene, and put it in regional, Arab and perhaps global competitive footsteps within a conscious cultural movement. Therefore, this project concerns with the study of cultural references as an important mechanisms of the detection of the methods of cultural employment and its artistic and aesthetic characteristics before, during and after the writing of the modern and contemporary Qatari novelistic or fictional narrative text, through research and study in their text bodies about these references that reinforce our cultural affiliations and explore the origins and vocabulary of our intellectual and constructional structures, and looks forward to the horizons of expectation by revealing the cultural, existential and customary questions contained in the Qatari narrative text resulting from a conscious cultural mobility at the level of composition of the contemporary Qatari narrator or novelist. In the second stage, we stand at the borders of time and place. The survey includes the narrative code in the State of Qatar from the beginning of the eighties until 2016. This period was determined because we believe that it is the fertile stage of the Qatari narrative code. While the third limit is the language limit, and the study is limited to the narrative code that is composed of: the story, short story, very short story and novel, which is published in classical Arabic. Then, in the fourth stage, the genre limit comes. The research includes the narrative literary genres in the State of Qatar, whether written by Qataris or Non-Qataris, in order to expand the scope of research, where we put this literary discourse in a geographical space by virtue of the cultural and social references that contribute to the formation of the structural space of the produced literary genre. Therefore we proposed to expand the boundaries of the survey on the basis of literary genre to contain every text written in the State of Qatar.

We relied on an accurate, variable and sophisticated systematic network during the development of research stages such as analytic descriptive approach in humanities to summarize

In conclusion, what do you aspire to deliver through this research?

I believe that the consistency with philosophy and strategy of Qatar University is to establish the effective research profile in the academic character of faculty member and to work as a researcher and academic to support Qatar National Vision 2030 in the field of scientific research in all of its branches through achieving Qatar's ambitious research strategy. I think that the topic of this research, which is the humanities, is one of the ambitious researches that contribute in the area of its fine competence in covering a branch of this cultural strategic project of the State of Qatar.

Internal Grants 2019

Prof. Mohamad Alsalem Research Support office director

Qatar University's vision of becoming a model national university in the region places equal emphasis on high quality of both teaching and research. To nurture a research excellence environment, the university offers five competitive types of funding opportunities. QU Internal grants are developmental by nature and designed to assist faculty members in advancing their research agendas and refining their research skills in an effort to enhance their chances for securing external grants, which are more competitive and often require preliminary data.

What are the different grants offered by the University?

High Impact Grant
High Impact grants have high expectation in terms of team qualifications, and project potential impact. This includes scientific outcomes, capacity building, commercialization, and partnership with industry/government. Only exceptional projects with strong teams and high impact will be funded.

Collaborative Grant
Collaborative Grants funding program will enable research activities through working in

collaborative research groups with members from different disciplines. Research groups will facilitate collaboration by building mixed teams of qualified researchers along with junior researchers and students to ensure capacity building and training of researchers while conducting cutting-edge research.

National Research Capacity Building Grant
Which is designed to assist Qatari faculty to develop their research portfolio, boost research productivity and conduct research that leads to peer-reviewed publications and large extramurally funded projects. The grant consists of two stages.

Concept Development Grant
QUCD grant aims to enable researchers to take their idea to the next step and to show commercial potential. We aim to support research ideas to be developed further at Qatar University in order to reach a concept stage where it is ready for sharing with industrial and business partners. QU-Concept offers students and faculty members' opportunities to increase the impact of their research ideas.

Student Grant
QUST grant aims to foster research culture and develop research capacity at Qatar University by enhancing the research experience of our undergraduate and graduate students through different research projects. Students will gain experience in research with faculty members, research staff, and other students through their involvement in the QU-Student grant. QUST offers students and faculty members' opportunities to build their research experience and portfolio by working on innovative research, aligned with Qatar University research priorities.

Who will benefit from these grants?

Qatar University faculty and students.

Who is responsible for administering and organizing the grants?

These grants are managed and organized by the Research Support Office, which plays a leading role in creating the right environment and tools to encourage collaboration and motivate faculty members at Qatar University to participate in research activities that comply with Qatar University's research road map.

Recognizing the importance of research, which is a way to build a knowledge-based economy and meet the aspirations of Qatar's 2030 National Vision, are there related grants to promote research?

Yes, Qatar University offers multiple research programs such as: High Impact, Collaborative Grants, Concept Development Grants and International Research collaboration Co-Funding Program to finance faculty members to support research activities that makes significant contributions to the Knowledge Authority and further strengthening Qatar University global ranking. These funding programs will have a significant impact on researchers activities by working in collaborative research groups with members of different disciplines. These groups will facilitate capacity-building and the production of highly efficient and influential research produced by Qatar University.

What is the purpose of the concept development grant?

This grant aims to enable researchers to take their idea to the next step and demonstrate business potential. We aim to support the research ideas that will be developed at Qatar University in order to reach a stage of concepts that are ready to be shared with industrial and commercial partners. The Concept Grant offers opportunities for students and faculty to increase the impact of their research ideas.

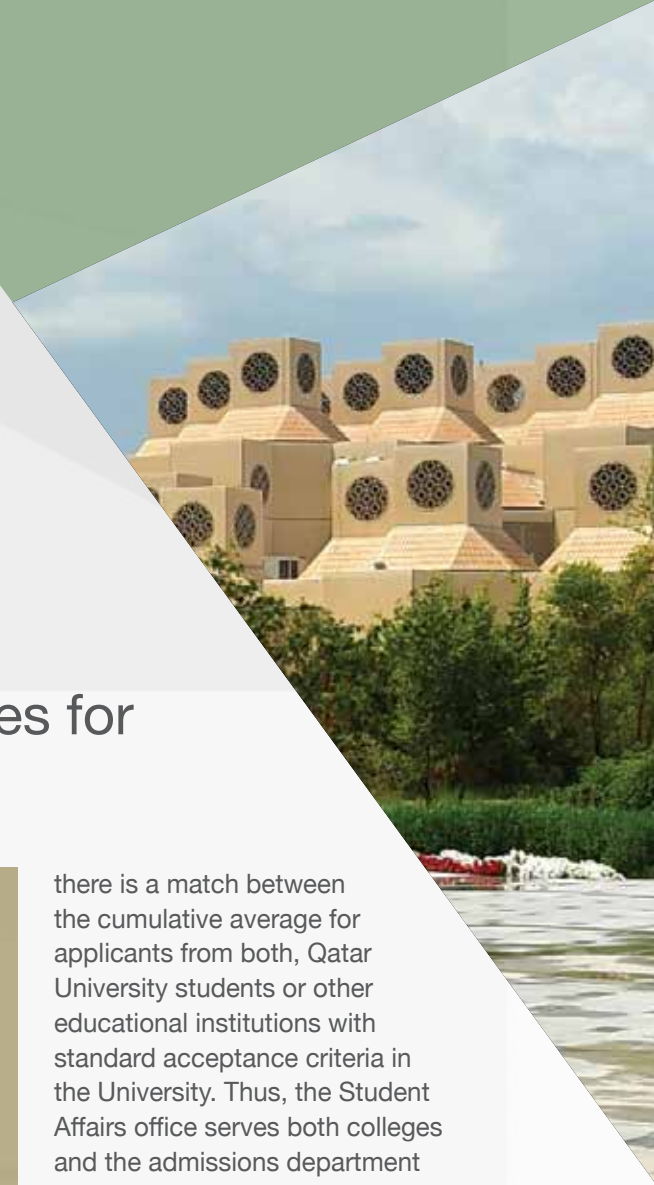
What are the stages of the National Research Capacity Building Grant?

The first stage Provides funding to enable Qatari faculty to develop research capacity or start a new direction to build their research profile. The second stage enables the Qatari researchers to build research teams in the field of research in line with the priorities of university research. The grant is available to Qatari faculty members with the rank of Assistant Professors and Professors, giving priority to new and beginning faculty members, encouraging them to apply at the beginning of their enrollment in the teaching course during their first semester.

What will students gain from the student grant program?

The Qatar University Student Grant aims to promote the research culture and research capacity of Qatar University by enhancing the research experience of our undergraduate and graduate students through various research projects. Students will gain experience in research with faculty, research staff and other students through their participation in the grant offered to students. Qatar University Student Grant offers students opportunities for faculty members and students to build their expertise and research resources by undertaking innovative research in line with Qatar University's research priorities.

Student Affairs of Graduate Studies: Developing and Supporting



Ms. Ghada Alkuwari
Assistant Dean of Graduate Studies for Student Affairs

Ms. Ghada Al-Kuwari what is the Student Affairs Office? When was it created?

Student Affairs Office is part of the new structure of the Office of Graduate Studies, which started in 2017, the focus of Student Affairs Office concerns all services needed by graduate students, from admission until graduation. Student Affairs Office is divided into three units:

Admissions Unit

Registration unit

Student support unit.

What is the role of these units? Are there any collaborative efforts between these units and the colleges in the university?

Admissions Unit: The admissions unit in the Office of Student Affairs at the Office of Graduate Studies cooperates with the Admissions Department in the Student Affairs section through insuring quality in admission process by ensuring there is a match between the cumulative average for applicants from both, Qatar University students or other educational institutions with standard acceptance criteria in the University. Thus, the Student Affairs office serves both colleges and the admissions department by providing information about the number of applicants, their GPAs', and other information. The admissions department provides the office with a list of accepted and rejected applicants after the admission period closure. The department also sends letters of admission to students who have accepted into graduate programs.

Registration Unit: The registration unit provides services to all graduate students, which that include services like course registration, raise the ceilings of closed courses, requests to change the "In progress grade -IP" status. The unit also follows up on cases concerning tuition fees, networking with colleges about students expected to graduate, analysing and reviewing study

plans for all students expected to graduate and connecting with the colleges to make adjustments as required. Additionally, the unit also handles changes in tracks, equivalent and alternatives requests and coordinates with the Student Affairs regarding the final list of graduate students expected to graduate each semester.

Student Support unit:

The unit provide thesis and dissertation format review services or what is called “TAD format review ‘’ after receiving it from students. It also offers many training workshops for students (divided by speciality and language), where students are trained on how to format thesis and are introduced to the most common errors to avoid. Additionally, individual sessions are held which allow for more practical format work with the students. In addition, the unit is responsible for student events, such as orientation, discussion forum and open day.

You mentioned special events for students, can you tell us more about these events and how will these events help graduate students?

Student Events:

Student support unit in the Student Affairs Office conducts several events aimed at students inside or outside the University and they are as follows:

Orientation Day: This event is targeted at new students admitted into graduate programs. This event is held in the fall semester usually on a Saturday morning to accommodate students’ job conditions and obligations, in the morning to allow them to attend. The orientation day provides students with valuable information that students should know so that they can help them

The Student Affairs Office of Graduate Studies plays a pivotal role in the lives of graduate students, as a bridge between colleges and the rest of the sections and departments within the University

to progress smoothly during their period of study at the University, on important policies related to students like the academic load, academic warning and withdrawal rules and other policies that may have a profound impact on a student’s life. Besides, it introduces the Office of Graduate Studies and services provided to students, individuals who can offer advice and assistance, and how to communicate with them as well as a look at the Graduate Studies website. Other service providers in the university are also invited such as the university ID cards or car permits section or information technology section to deliver services to students with support from the Office of Graduate Studies.

Open day: This event is directed to all students inside or outside the university who wish to join in any one of the graduate programs (graduate certificate, diploma, master, or PhD). This opportunity allows students to learn about programs, admission requirements and services offered by the University for graduate students. In addition to the admissions department and library, some ministries such as Ministry of Administration Development and Labour and Social Affairs is invited to talk about the opportunities provided to support Qatari students during their studies. The event is held for only for one day from 9:00 a.m. to 6:00 p.m., for everyone could to attend and benefit from the event.

Discussion forum: This event is directed to all graduate students in the University. It aims to hold discussions directly between the student and the decision maker, whether in colleges or research and graduate studies. Specific topics are raised for discussion in each meeting and jot down all the questions, answers are jotted down and notes are taken to take advantage of them later and take them into account when formulating policies for these group of students in the next phases.

Thesis format review sessions:

Student support team offers a range of workshops for graduate students who are expected to graduate and are in the final stages of writing their research thesis. The university provides students workshops on formatting. These research theses are collected in the library (electronic form), to be used as reference for other students and scholars, to help them maintain a consistent theme with Qatar University.

Ms. Ghada do you have any extra comments to add?

The Student Affairs- Office of Graduate Studies plays a pivotal role in the lives of graduate students, it is a bridge between colleges and the rest of the sections and departments within the University. Student Affairs office strives to provide excellent services to help students overcome difficulties as much as possible.

Dr Alla El-Awaisi

Assistant Dean for Student Affairs at College of Pharmacy and Chair of QU Health Interprofessional Education Committee

Research Summary

Dr Alla El-Awaisi has completed an investigative study that aimed at exploring the pharmacy perspectives towards Interprofessional Education (IPE) and collaborative practice from a Middle Eastern perspective and to determine pharmacy's key stakeholders' readiness to IPE and IPC.

Pharmacy's Perspectives of Interprofessional Education and Collaborative Practice:

An Investigative Study in Qatar & the Middle East

Pharmacy's Perspective in Interprofessional Education

The need to incorporate IPE as part of any healthcare profession curricula is growing as an approach to prepare a collaborative practice-ready workforce. Pharmacy students should be equipped with the necessary competencies and skills needed for them to practise interprofessionally and commensurate with the expanding and evolving role of the pharmacist. In 2014, the Qatar University College of Pharmacy has decided in 2014 to incorporate IPE initiatives formally into the pharmacy curriculum in collaboration with

other healthcare institutions in Qatar to meet the accreditation standards set by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) and fulfil the recommendations set in the World Health Organization (WHO) framework. To implement effective IPE strategies, it is important to consider the prior attitudes and expectations of various stakeholders in the process -- particularly students, faculty, and practising pharmacists. The research was conducted in four phases: a systematic review and three mixed methods studies, one each for pharmacy faculty, students and practising pharmacists.

The research started with a comprehensive systematic review of the literature focusing on the perspectives of pharmacy students, pharmacy faculty, and practising pharmacists on IPE and collaborative practice. Five themes have been identified from the systematic review: Five main findings have been identified from this review: heterogeneity in reporting IPE research, traditional professional image of the pharmacist, lack of longitudinal follow-up, lack of IPE research on faculty and paucity in mixed method studies in terms of quality and numbers. This was followed by three sequential explanatory mixed method designs, to explore the perception of faculty, students, and practising pharmacists, individually. This was undertaken to gain an in depth understanding of the strengths and challenges of each group that can affect the implementation and perspectives toward IPE and collaborative practice. Two data collection methods were used: quantitative surveys and qualitative focus groups. Quantitative data were imported into SPSS® version 22 and analysed using both descriptive and inferential statistics. Qualitative

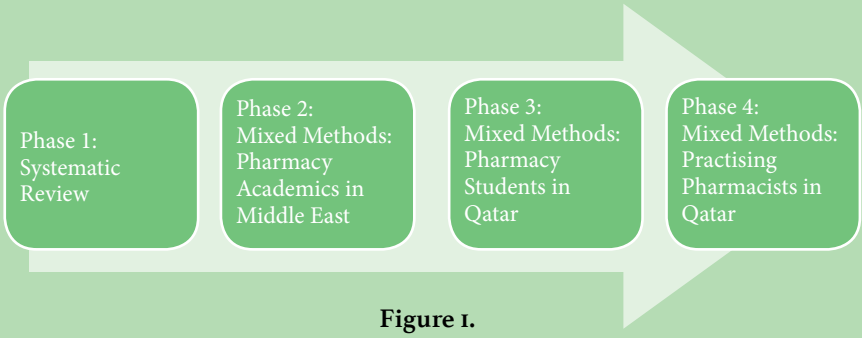


Figure 1.

data from the focus groups were analysed using thematic analysis.

For the quantitative surveys, the overall response rate was 117 out of 334 (35%) for pharmacy faculty in the Middle East, 102/132 (77%) for pharmacy students in Qatar and 178/285 (63%) for practising pharmacists in Qatar. This was followed by seven focus groups with a total of 51 participants. Findings, from both the survey and focus groups, support that students, faculty and practising pharmacists are ready to engage in IPE and collaborative practice. The findings further identified positive attitudes that reinforced the need to incorporate IPE into healthcare curricula. They realized the anticipated benefits for them as professionals and for the patients.

However, a large number of challenges have been highlighted, including the existence of a hierarchical culture, pharmacists' role and image, a weak sense of professional identity among pharmacists, their marginalised contribution, resistance from the healthcare teams to the evolving role of the pharmacists, and the heterogeneous background of healthcare professionals.

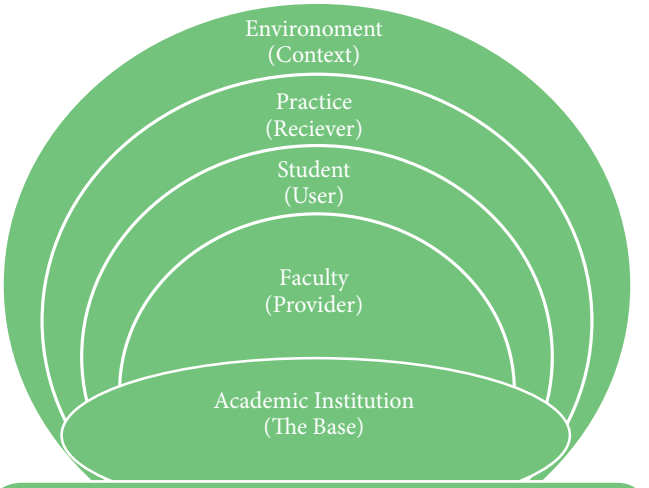
Promisingly, the education and healthcare system in Qatar is undergoing significant changes with some positive influences noted within educational and practical settings. It is worth noting that the data collection for this research took place prior to formal introduction of IPE into the pharmacy curriculum at the College of Pharmacy and the findings from this research played a significant role in the development of IPE. They have been very valuable in advancing IPE in Qatar and the region. As an example, the College of Pharmacy established an interprofessional education committee (IPEC), in April 2014, to provide guidance and support in implementing IPE. The committee is dedicated to facilitating awareness and understanding of IPE for IPC for students and faculty member.

The committee includes representatives from all the healthcare schools in Qatar including QU Health: College of Health Sciences, College of Medicine and College of Health Sciences; Weill Cornell Medicine - Qatar (WCMC-Q); the University of Calgary – Qatar; and College of North Atlantic Qatar (CNA-Q). The committee adheres to UK Center for Advancement of Interprofessional Education definition of IPE which is: "Interprofessional Education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (2002). It is worth noting that IPEC was moved to QU Health level in September 2017.

A new model:

The research presents a new model based on collective input, efforts, and readiness in five key stages: academic institution, faculty, student, practice, and environment. The model moves beyond focusing on the individual stages separately and expands

Figure 2.



A Stacked Venn Model of the Five Areas Needed for Successful Implementation of IPE (El-Awaisi 2017)

to consider the complexity of linking and aligning the stages together. Coordinated efforts, between the stages, focused on a more comprehensive and holistic implementation, is essential for successful implementation of IPE and collaborative practice.

The model is illustrated as a stacked Venn diagram to emphasise the close interlinks between the different components with the academic institution as the base and the outer layers dependent on the base. Additionally, each layer is dependent on the layer inside it. Within each component, physiological and structural factors need to be taken into consideration as these may promote or inhibit the implementation process.

Vision & Application

The model moves beyond the individual components associated with single changes and expands to consider the complexity of linking the components together to focus on a more comprehensive and holistic implementation. Successful implementation of IPE is a complex process that require readiness and changes aligned to the same vision in all the different components for it to be effective. The change need to be adopted in all components from academic institution to the environment to ensure alignment and cohesiveness during the implementation process. These components are closely interlinked to ensure any change is adopted, implemented, and sustained. The components can overlap, but each has its own unique emphasis. Within every component, individuals need to exhibit readiness to change as changes cannot occur if the recipients are not ready (3). Readiness to change results in a positive attitude toward the change, which is translated into willingness to actively participate and support the change initiative (3).

Promoting a culture of collaborative and interprofessional practice

This is the first study investigating pharmacy perspectives of IPE in Qatar, the Middle East, and worldwide. The findings from This research generated a number of important findings regarding the pharmacy perspectives of IPE and provided a better understanding of what shapes this perspective from a Middle Eastern context. Sustained efforts are required not just in undergraduate curricula but also in healthcare settings to improve and promote an interprofessional culture at individual and organisational level.

For more information, you may refer to the following articles published based on this research:

El Awaisi A, El Hajj M, Joseph S, Diack H. Interprofessional education in the Arabic-speaking Middle East: Perspectives of pharmacy academics. Journal of Interprofessional Care (2016), 30:6, 769-776. Link: https://www.ncbi.nlm.nih.gov/pubmed/27705033

El Awaisi A, Joseph S, El Hajj M, Diack L. A comprehensive systematic review of pharmacy perspectives on interprofessional education and collaborative practice. Research in Social and Administrative Pharmacy (in press 2018). Link: https://www.ncbi.nlm.nih.gov/pubmed/29132909

El-Awaisi, El Hajj M, Joseph S, Diack H. Perspectives of pharmacy students in Qatar toward interprofessional education and collaborative practice: a mixed methods study. Journal of Interprofessional Care (Accepted and in press 2018)

El-Awaisi, El Hajj M, Joseph S, Diack H. Perspectives of practising pharmacists towards interprofessional education and collaborative practice in Qatar. International Journal of Clinical Pharmacy (Accepted and in press 2018)

For more information about the Interprofessional Education program in Qatar University, please check the following link:

http://www.qu.edu.qa/health/ipe

http://www.qu.edu.qa/health/ipe/ipec-newsletter

(SESRI) surveys the Qatari street during the siege crisis

The unfair and sudden siege against Qatar is the most important event in the modern and contemporary Qatar history, in terms of its impact on all political, economic and social aspects, which are fundamental aspects of Qatar's future and present, especially in light of the challenges and opportunities for the Qatari street caused by the crisis.

In this context, our magazine reviews the study of the siege crisis prepared by the team of researchers at QU Social and Economic Survey Research Institute (SESRI), which is a comprehensive national study that employed the highest scientific research methodologies to accurately identify the attitudes of the Qatari street socio-economic policy towards the consequences resulting from the crisis of the siege against Qatar and extract the most important results in order to develop them into recommendations that benefit decision-makers in Qatar.

Study team

The study was supervised by a team of Qatari researchers led by Dr. Hassan Abdul Rahim Al Sayed, Director of SESRI and the general supervisor of the study, Dr. Majid Al Ansari, Director of Policy Department at SESRI and Director of the study project, Dr. Khalid Shams Al Abd Al Qader, Dean of the College of Business and Economics, Dr. Fatima Al Kubaisi Head of Department of Sociology, College of Arts and Science and HE Ms. Lulwa Al Khater, spokeswoman for the Ministry of Foreign Affairs of Qatar, as supervisors of study sections, in addition to a team of assistant researchers at SESRI, Hadi Al Rakeb, Mohammad Hassan

Al Subaie, Maryam Bint Ali Al Thani and Sara Mohammed Al Ansari.

Study procedures

The study concerned with revealing the results of a set of carefully selected indicators and then comparing them with the results of previous studies (if any) to identify the impact of the crisis and its legal, political, economic, social and human development implications on the visions and perceptions of Qataris.

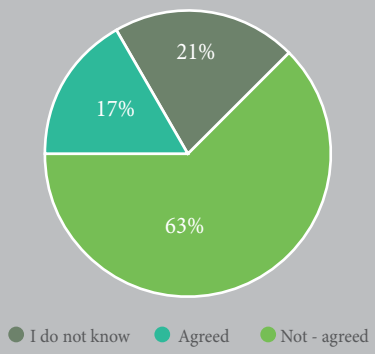
The survey study was implemented by conducting several interviews (by telephone) in November 2017. The study sample contained 889 adult Qatari citizens (random sample). The sample frame was formed after communication with local mobile service providers. As the percentage of adult Qataris with a mobile phone is 98%, the selection of sample from this framework is expected to be the best representation of the targeted study population. The response rate in this survey was 53%. The sampling error was +/- 3.4%, and the effects of the sample design (weight and class) were taken into account when calculating the error ratio.

Results

Legal Implications: Regarding the legal results of the study, the results indicated that the percentage of citizens who believe that "the participation of the peoples of the region through elected councils does not lead to the rapid deterioration of political differences between countries" is close to 62%, while the percentage of those who in contrary is 17% (Figure 1), indicating a high level of political awareness among Qataris as a result of accelerated events.

Political Implications: For the political aspect, the results indicated a significant rise in the interest percentage in following up political news from only half

Figure1 - The extent to which citizens agree on a phrase on popular participation

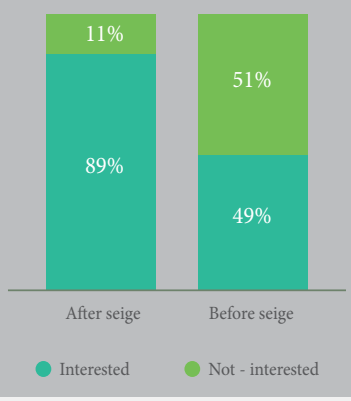


Pharse: Political difference do not deteriorate quickly when there is popular particioation through elected councils in countries where differences arise

to nearly 90% of citizens. This is normal in light of the daily repercussions of the crisis and the rapid pace of the news. This also indicates that there is a high level of interest among most citizens in following up the developments of the crisis and its daily activities.

The results also indicated that he majority of Qatari citizens (62%) believe that Qatar should achieve complete independence from regional alliances, indicating a lack of confidence in the regional environment. Therefore, a larger percentage of citizens (86%) agreed that Qatar should seek new alliances with regional forces in the area, and the search for new alliances is another sign of distrust of the existing alliances.

Figure 2 - The extent to which citizens interest in local and regional politics



For the Qatari soft power, the results indicated that 79% of the Qataris consider that Al Jazeera Channel serves Qatari interests. This is undoubtedly related to the great role played by Al Jazeera in combating the media war that targeted Qatar through the media of the siege countries, which indicates the general acceptance of the official support of the Al Jazeera network and faith in its centrality in the achievement of Qatari interests.

When asking citizens about the country's biggest ally, Turkey came first with more than 72% of the citizens, while Kuwait was the second with percentage of 16%, and 12% of the citizens of other countries. In terms of government performance in dealing with the siege crisis, 98% of Qataris reported that they were satisfied with government performance during the crisis, and 88% said that they believe that Qatar would be able to live under this siege if it continued for many years to come.

Economic implications: For the economic aspect, the results indicated that the perceptions of the majority of citizens (more than 80%) were positive towards the Qatari economy. In addition, citizens' perceptions of these indicators have improved compared with the results of a previous study conducted before the siege crisis in January 2016. The perceptions about current business and trade conditions were positive for almost half of the citizens (55%), while this percentage increased after the siege crisis to reach 84% of the citizens (Figure 3). The positive expectations of citizens regarding the future business and trade conditions also improved to reach 96% of the citizens after the siege crisis compared to 72% of the citizens before the siege crisis (Figure 3).

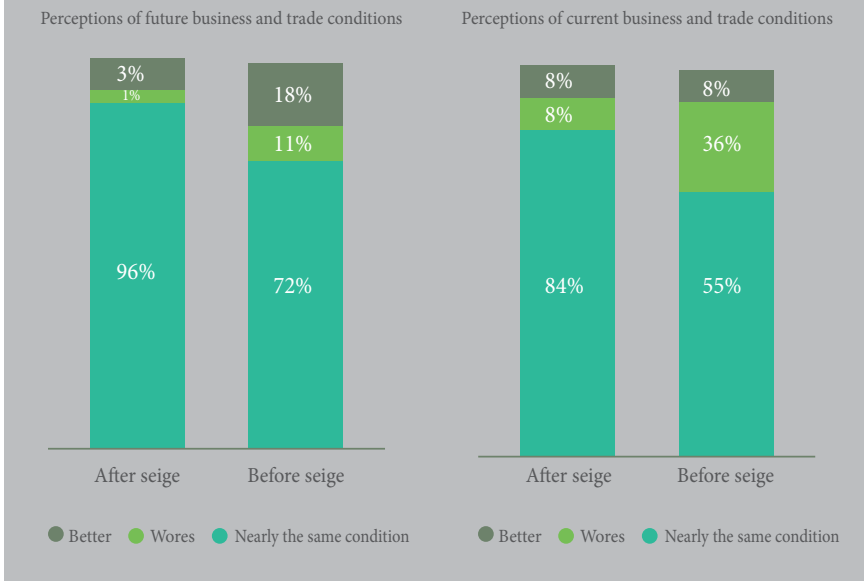
For the quality of products, their prices and availability in the local market, about one-third of the citizens (31%) indicated that the prices were not high, compared to 27% who believed prices were high, while 33% said that the prices of some products were high, and some were not high, and in terms of product quality and its availability, the majority of citizens indicated that the quality of products were high and available completely in the market (88% and 71%, respectively).

Social Implications: For the social aspect, results indicated that more than three-quarters of the citizens (75%) have relatives in the siege countries and 70% of them have not been able to see their relatives from the siege countries since the crisis began. In addition, 69% of the citizens answered that they met their relatives from the countries of siege in the State of Qatar, which shows that Qatar still welcomes the citizens of the countries of siege, and did not follow the path favored by the siege countries (Figure 4).

It also showed that 47% of the citizens reported that their relations with their relatives in the siege countries have not changed, and this indicates that there are still people who did not confuse between political matters and loyalty to the leadership and the state social ties. While about one-quarter (26%) of the citizens indicated that their relations with their relatives in the siege countries had worsened. This was due to the measures taken by the countries of the blockade against Qatar; which are the breakdown of the total social relations that formed the basis for the convergence of countries, which played a role in destroying the social fabric and destabilizing relations.

Human development implications: The study concluded the importance of moving from Qatarization to empowering Qatari employees in specific jobs. The study also discussed the negative aspects to get help from the consulting companies and showed citizens' views on this issue. It also stressed the importance of activating national capacities in the labor market in a way that ensures their sustainability and effectiveness and the development of new competencies and skills strategically.

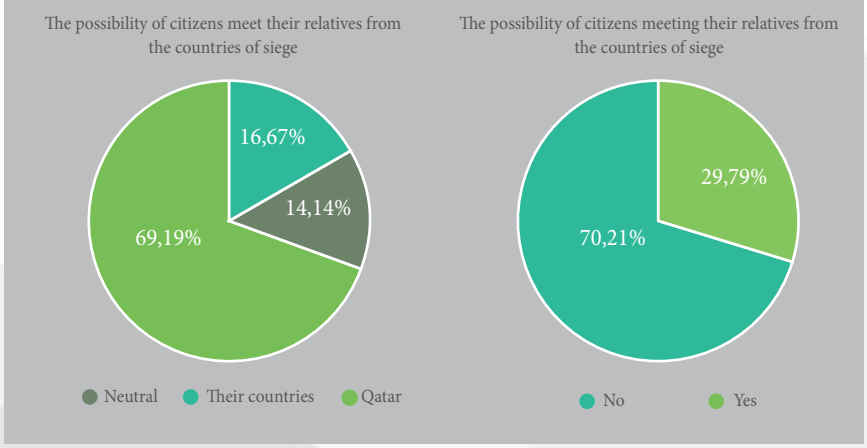
Figure 3- Citizens› perceptions of current and future business and trade conditions



Conclusion

After examining the most important results in the study of the siege, the Institute prepared a special report for decision makers at a high level of accuracy and intends to prepare a set of scientific papers conducted by researchers specialized in the various fields of social science in order to provide a solid scientific reading of events and document the social and economic transformations resulting from the siege crisis. The Institute also intends to implement this study or parts thereof again in the coming period to include citizens and residents.

Figure 4- Citizens› response to the possibility of meeting their relatives from the countries of the siege and where the meeting took place



The Second Edition of Text Book Science of Gymnastics

Professor Monèm Jemni

Professor Monèm Jemni (Sport Science Program at CAS) has recently published the second edition of his bestseller textbook "The Science of Gymnastics", 2nd Edition proudly affiliated to Qatar University (QU). A success that is worth publicizing on the light of the 48th Artistic Gymnastics World Championship that will be hosted by the State of Qatar at the end of October 2018 (first time ever to take place in an Arab country). Professor Jemni is also planning to organize a World summit during the World Championship.

Professor Monèm Jemni has previously organized long series of seminars and conferences in partnership with Qatar Gymnastics Federation, the Asian Gymnastics Union and also the International Gymnastics Federation that he acted as one of the very few high-level coaching tutors. These have started in Doha back in 2008 during the Asian Gymnastics Championships, but also in Uzbekistan and China, and here we are 10 years later in the same place yet again but with a World scale event that will attract the best teams and scientists specialized in gymnastics.

As a scientist, he undertook several applied researches related to this sport and provided practical solutions to coaching paradigms. His double professional career (scientist/academic and also coach) is up-most beneficial for the end-users, as I know the "business" from inside-out. His research and publications are disseminated in many scientific reports, journals, books and Doctoral thesis.

Professor Monèm Jemni is not an unknown figure within the gymnastics world, he was himself a gymnast and practiced this sport for 18 years. He naturally and progressively continued his career to become a high-level coach in parallel to his academic career; Benoit Caranobe (bronze medallist at the Olympic Games in China 2008 in gymnastics) was indeed one of his former gymnasts that he coached in Paris and continued to monitor as a scientist at the

National Institute of Sport (INSEP, Paris) alongside the national coaches. He then moved to the USA Olympic Training Centre in Colorado Springs for a short period where he worked directly with different elite athletes providing applied sport science. Professor Jemni was then appointed at the Yorkshire centre of excellence, based in Leeds Metropolitan University, UK where he coached and lectured until 2005.

This success would immensely contribute to shed some lights on the scientists who work in the back stage and contributing in the make-off champions. The Science of Gymnastics provides the most comprehensive and accessible introduction available to the fundamental physiological, biomechanical, psychological, applied coaching sciences, motor learning and Injuries prevention and safety principles underpinning performance in artistic gymnastics. A full dedicated chapter provides the interaction between the major sciences on gymnastic performance.

The book examines every key aspect of gymnastic training and performance, including:

- physiological assessment
- diet and nutrition
- energetics
- kinetics and kinematics
- spatial orientation and motor control
- career transitions
- mental skills training and perception
- injury assessment and prevention, with clinical cases
- advanced case studies in rotations, vault approach and elastic technologies in gymnastics.

It includes case studies and review questions in each chapter.

The Science of Gymnastics is essential reading for any student, researcher or coach with an interest in gymnastics

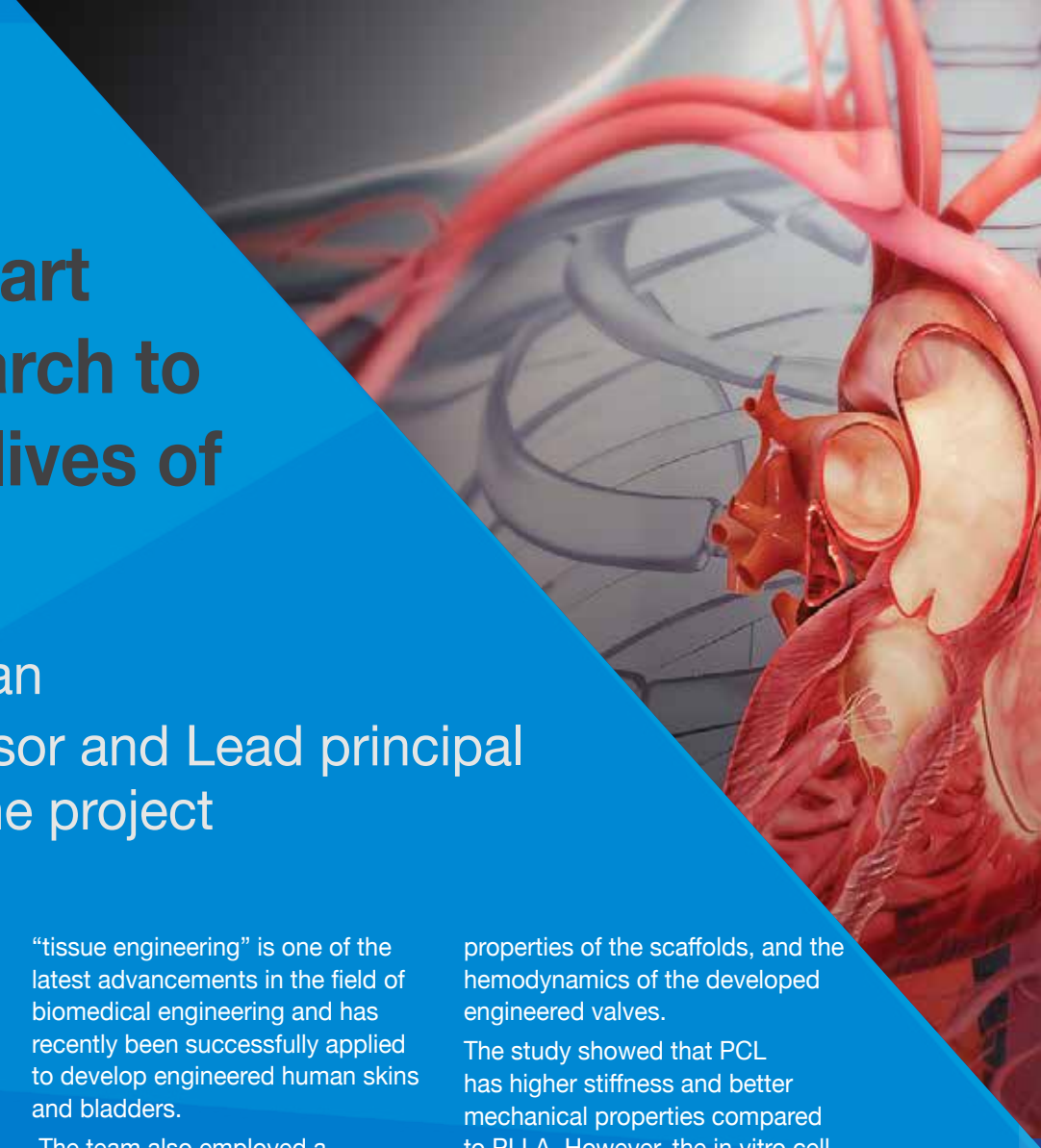
The cherry on the tart is a fully dedicated website that contains a complete set of lecture material, including ready-to-use animated slides related to each chapter, and the answers to all review questions in the book.

The book represents an important link between scientific theory and performance. As such, The Science of Gymnastics is essential reading for any student, researcher or coach with an interest in gymnastics, and useful applied reading for any student of sport science or sports coaching. It features a neat preface edited by Mr Morinari Watanabe, the current President of the International Gymnastics Federation with the following list of authors who contributed with chapters:

Professor William A. Sands (USA Ski and Snowboard Association, Colorado, USA); Professor John H. Salmela, (University of Ottawa, Canada); Dr. Flavio Bessi (Institute of Sport and Sport Science, Freiburg, Germany); Dr Marco Antonio Coelho Bortoleto, (University of Campinas, Campinas, Brazil); Dr Elizabeth J. Bradshaw (School of Exercise Science, Australian Catholic University, Melbourne, Australia. And Sport Performance Research Institute New Zealand, Auckland University of Technology, Auckland, New Zealand); Dr Patrice Holvoet (Université de Lille 2, France); Professor Michel Marina (INEFC Barcelona, Spain); Dr Bessem Mkaouer (Higher Institute of Sport and Physical Education of Ksar Said, Manouba University, Tunisia); Dr Alexandra Pizzera (German Sport University Cologne, Germany); Dr Brooke Lemmen (former team physician for USA Gymnastics Trampoline and Tumbling).

325 universities have already adopted the book as one of their main reference text, mainly in the USA and Canada and Europe. It is expected that the new edition will even attract new markets, essentially in Australia, New Zealand, Brazil, Germany and Spain seeing Professor Jemni has invited renown authors from these countries to contribute with small chapters.

This is considered as a major success for QU, which indirectly means that one of our faculty members is contributing in the education of generations of coaches worldwide.



QU living heart valves research to change the lives of millions

Dr. Anwarul Hasan
Assistant Professor and Lead principal Investigator of the project

Researchers at Qatar University (QU) in collaboration with researchers from Imperial College London, Biostage, Inc. (USA), and American University of Beirut (Lebanon) have made a leap forward in developing engineered living heart valves that can work like the natural heart valves and grow bigger after implantation in human heart.

The team generated the valve using a combination of nanotechnology, 3D printing and newly developed tissue engineering techniques. They made a 3D shape of heart valve using a special type of nanofiber-based biomaterial which was then injected with living human cells and grown inside a tissue incubator before being ready to go through the testing and implantation in heart. The injected cells create and deposit their own natural matrix over the time while the initial supporting material used to make the valve slowly degrades and gets replaced by the matrix deposited by the cells. This technique called "tissue engineering" is one of the latest advancements in the field of biomedical engineering and has recently been successfully applied to develop engineered human skins and bladders.

The team also employed a series of new testing procedures for engineered heart valves to ensure the highest quality of the developed valves before their implantation in living body, using tests involving a pulse duplicator and echocardiography machine that have enormous potential for routine application in engineered tissue testing before their implantation.

The engineered tri-leaflet heart valve structure was developed using electrospun polycaprolactone (PCL) and poly L-lactic acid (PLLA) scaffolds, and a set of in vitro testing protocol were developed and demonstrated for in vitro performance study of tissue engineered heart valves. The in vitro testing protocol aimed at understanding the microstructure, mechanical and biological properties of the scaffolds, and the hemodynamics of the developed engineered valves.

The study showed that PCL has higher stiffness and better mechanical properties compared to PLLA. However, the in vitro cell culture studies revealed that cells adhere preferentially on PLLA rather than on PCL. Thus, PCL can be used as stiffening and strengthening agent to improve the mechanical properties of scaffolds while PLLA can be used to improve their biological properties. Therefore, in the case of blends and mixtures of PCL and PLLA, the proliferation was improved with the increase in the percentage of PLLA. An evident boost in proliferation was noticed for 30:70 PCL: PLLA blend composition. Briefly, the blend or the mixture of PCL and PLLA retains the mechanical properties of PCL and the biological properties of PLLA. Therefore, the combination of the stiff PCL and the more compliant and cell friendly PLLA resulted in a scaffold with

strength, pliability and biological properties suitable for applications in heart valve tissue engineering. The tri-leaflet heart valve structure engineered by incorporating a specially crafted PCL-PLLA scaffold onto a 3D printed stent were durable, rigid and sturdy, proving the simple technique to be very effective.

The three-dimensional cell seeding using the rotary dynamic seeding technique resulted in better penetration of valvular interstitial cells inside the pores of the scaffolds across its thickness resulting in improved cell colonization. The static surface seeding of cardiac stem cells on both sides helped in the formation of a monolayer of CSCs, which led the stem cell to colonize between the pores and to adhere functionally to the valve structure. Also, a flow loop pulsed duplicator system in combination with an ultrasound based experimental flow system was developed to enable evaluation of the hemodynamic performance of the engineered tri-leaflet heart valve

in vitro in a biomimetic cardiac environment.

The pulse duplicator system was used to expose heart valves to clinically relevant hemodynamic environment valves. The bioreactor platform was equipped with a holder system that enabled testing different scaffolds as heart valve leaflets. The holder was built out of transparent PDMS to enhance optical visibility. Geometry of the sinuses and leaflets could be freely chosen/designed to optimize the engineered heart valve. Systolic and diastolic pressures were generated by the bottom membrane of the bioreactor. The heart rate was selected 70 bpm, and systolic pressure was selected 20 mmHg in the control panel for the Aptus Pulse Duplicator System for all the

tested valves. The system enables simultaneous monitoring of pressure value upstream of the valve (upper pressure) and downstream of the valve (lower pressure) as well as the flow rate. The pressure difference across the valves was calculated to define their function.

The doppler echocardiography was developed by integrating vivid-q ultrasonic medical imaging system with pulsed duplicator system for functional analysis of the tested valves. The imaging system was used to visualize leaflet movements of the tested valves using the B-mode, and to measure the flow velocities through the valves at each pulse using the Doppler mode. Flow velocities indicated fluid shear stress levels on valve leaflets. Maximum and average values of both positive and negative velocities were calculated to characterize valve function. Positive velocity values indicated shear stress levels whereas negative velocity values indicated amount of regurgitation. Valve orifice size indicated the opening characteristics of the leaflets

The research was funded by Qatar National Research Fund and published in the Scientific Reports journal by Nature publications, a leading scientific publisher worldwide.

QU College of Engineering Assistant Professor and Lead principal Investigator of the project Dr. Anwarul Hasan said: “These viable, biocompatible and durable engineered tissue valves offer numerous advantages in comparison to currently available metal valves and animal valves which often create complications with the body’s natural defense system or last only few years. The engineered tissue valves will last longer, be adopted by the body without rejection and grow with patient’s growth.”

QU College of Health Sciences Dean and Biomedical Research Center Director Dr. Asma Al Thani said: “This is a remarkable achievement and a clear indication of how our talented researchers at QU are leading cutting-edge research using the latest technologies to serve the humanity.”

Hamad General Hospital’s Medical Director Dr. Yousuf Maslamani said: “This achievement is the result of QU’s collaboration with prestigious international institutions and is a milestone in the development of human implantable engineered tissues and organs, especially given the enormous shortage of organ donors and the great need for such biologically engineered organs and tissues.”

Qatar University team wins the 1st prize at the 10th UREP Annual Competition

A student research team led by Dr. Mohammed Abu-Dieyeh from the Department of Biological and Environmental Sciences - College of Arts & Sciences, won the 1st prize at the 10th annual competition of the undergraduate research experience program (UREP) organized by Qatar Foundation's Qatar National Research Fund (QNRF).

The research team consisted of the two supervisors, Dr. Mohammed Abu-Dieyeh, Associate Professor in Applied Plant Ecology, Dr. Fatima Al Naimi, Assistant Professor in Mycology, and six undergraduate students studying at the Department of Biological and Environmental Sciences: Nada Sadeq, Nada Kafour, Sabah Akhtar, Sabah Nisar, Fatemah Saadat, & Widad Al-Asmar.

The winning research was titled: "Antifungal activities of Prosopis juliflora on postharvest fungal pathogens of fruits in Qatar".

The idea of the research was based on the management of the invasive plant Prosopis juliflora on the Qatari environment and preserving the extract from its leaves that produces effective materials promising to kill fungi that grows on fruits during storage.

In the future, it might be possible to prepare biological fungicides for killing fungi, that causes various plant diseases and thereby reducing the effects of chemical pesticides on the health of humans and the environment.

The Qatar University team won the first place in the 10th annual competition of the Undergraduate Research Experience Program (UREP). The competition was organized by Qatar Foundation's Qatar National Research Fund (QNRF). The ceremony was held on April 5, 2018, at the Qatar National Convention Center (QNCC).

The winning research project was titled "Antifungal activities of Prosopis juliflora on postharvest fungal pathogens of fruits in Qatar".

The project explored the negative effects of the Ghwaif plant on the biodiversity of Qatari Flora, it also presented the results of using Ghwaif leaf extract in inhibiting or stopping the growth of fungi that grows on fruits during storage.

The student Sabah Akhtar

"The project was very carefully planned and organized by the supervisor Dr. Abu-Dieyeh. We were guided by our supervisor at each step of the project, starting from collecting fruits from the market to analyzing the results."

The student Nada Kafour

"Throughout the year, I not only learned technical skills, but I also learnt how to manage my time, work efficiently, and most importantly how to work in a team.

The student Nada Sadeq

"I am proud to have been a part of this award-winning research project, because it not only focuses on biocontrol mechanisms to minimize the use of chemical pesticides and fertilizers, but it also sheds light on the conservation of native Qatari plants.

The winning team included six undergraduate students studying at the Department of Biological and Environmental Sciences: Nada Sadeq, Nada Kafour, Sabah Akhtar, Sabah Nisar, Fatemah Saadat, & Widad Al-Asmar.

The research was supervised by Dr. Mohammed Abu-Dieyeh, Associate Professor in Applied Plant Ecology, and Graduate Program Coordinator, in addition to Dr. Fatema Al-Naimi Assistant Professor in Mycology.

The Undergraduate Research Experience Program was launched in 2006, offering undergraduate students an opportunity to gain skills in practical training and providing them with the necessary expertise and research skills that will enable them to complete their academic and practical careers in the field of scientific research, all under the supervision of professors from specialized fields.

Our magazine sheds light on this important achievement for the Department of Biological and Environmental Sciences at Qatar University, through this exclusive interview with Dr. Mohammed Abu-Dieyeh, who talked about the student's participation and what they have learned throughout the various steps of the project.

First of all, how do you feel towards your students winning this project?

Dr. Mohammed: I am very proud of my students win and their valuable research accomplishment, because this is a research that can be further developed & improved. It can be transformed into a commercial project in Qatar whereby it will become beneficial for humans and their environment in the future.

What is the nature of this competition? and how do research projects get selected to participate in the final stage?

This year, the 10th annual UREP competition included 937 projects. Only 25% of the best completed projects in 2017 were selected for the competition, and only seven projects covering a variety of areas such as health, energy and the environment, computer science, information technology, social sciences, literature and humanities were selected to participate in the final stage; which is an oral presentation in front of a panel of competent judges. The final list of eligible projects included 7 projects in total, four of them were from Qatar University, two were from Texas A & M University in Qatar, and one project was from Northwestern University in Qatar.

What were the key roles of the students in this competition?

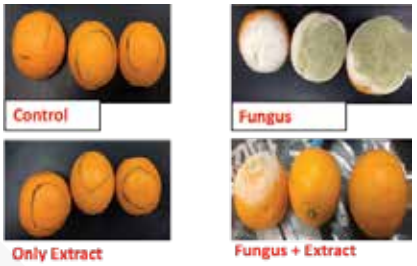
The students were active participants throughout all the required tasks of the project, which began with developing literature review, writing mini research plans, collecting fruit samples, setting up and conducting experiments, collecting, analysing, and reporting data in the lab notebook, and finally writing the scientific reports.

The student Sabah Nisar Ahmed

"This project has opened new gateways to further research on the use of natural extracts as bio-pesticides so that in the future after further research it might be commercialized and can be used as an efficient pesticide without harming human health and our natural environment" .

The student Fatemah Saadat

'I had the pleasure of working on this project with amazing team members as the first research project in my career. I found the research topic very interesting as it tackled a normal everyday life issue. To be able to work on a topic that will benefit people around me and all over the world, people with scarce resources was an important element in wanting to join this team".



Can you tell us about the criteria for evaluating the student's performances in the competition?

Well, the competition was based on the level of scientific and technological content, the extent of research experience gained by the student team, as well as the quality and value of the projects where oral presentations play a key role. The research supervisors nominated the student Nada Sadeq to present the research project on behalf of the entire team; where she gave an innovative presentation.

What skills do you think the students have gained from working on this project?

The students were properly trained in this project for safety procedures. They gained several technical and research skills such as: autoclaving and media preparation, preparation of plant extracts, sampling of fruits, isolation and purifications of fungi, koch's postulate, sterilization techniques, setting up and designing experiments, microscopic examination and knowledge of fungal identification, data analysis and writing scientific reports.

What are the most significant results of this project?

The leaf extracts of P. juliflora showed strong inhibition of growth of several

fungal pathogens like Fusarium oxysporum, Aspergillus sp., Alternaria alternata., Fusarium chlamydosporum, Cladosporium spp. and Botrytis cinerea. Additionally, fruit protection bioassays indicated significant effects on supressing or preventing fungal infection on several fruits, such as lemon, orange, tomato, and cucumber.

After further investigations, it was concluded that this bioproduct or biopesticide, if properly formulated and applied can reduce the 30% loss of fruits because of decay during storage. Positive economic impact is expected in addition to improving food security by increasing the age of stored fruits.

Could there be any damaging effects from overusing the Ghwaif leaf extract on other plants?

No, mass production of the biopesticide is not going to harm the plant due to over exploitation because the plant is invasive with negative impacts on Qatari flora and this kind of utilization may limit its spread and reduce its negative impact.

Who would you like to thank for winning this award?

I would like to thank QF & QNRF that provided us full financial support in order to conduct this research and awarding us the 1st Prize. We are indebted to the Department of Biological and Environmental Sciences for providing us with lab facilities and support. My thanks also extend to Qatar University, the College of Arts & Sciences & the dean Dr. Rashid Al-Kuwari, for honoring us on our achievement during the CAS annual ceremony".

Qatari Researcher discovers new technique for curing breast cancer

Lubna Al-Zaidan, a graduate student from the College of Health Sciences at Qatar university achieved an outstanding achievement in the field of biomedical sciences, as she won the award of Outstanding thesis award at the Qatar University Annual Research Forum & Exhibition 2017.

She conducted a valuable master's thesis research project titled: ''Screening novel molecular targets of metformin in breast cancer by proteomic approach" which was published in in Vol. 6 of Frontiers in Public Health journal October 2017.

Lubna conducted her two-year research at the Proteomics Core in Weill Cornell Medical College-Qatar. Her research was conducted under the supervision of Dr Ahmed Malki, Associate Dean for Academic Affairs at the College of Health Sciences, Qatar University.

Metformin: a neoadjuvant drug that can treat breast cancer

Lubna's research showed that the use of metformin as a neoadjuvant drug induced Apoptosis (programmed cells death) in both breast adenocarcinoma and breast normal cell lines with "minimal toxicity" in normal breast cells.

Al-Zaidan mentions that the use of metformin resulted in "cell cycle arrest at G1 phase in breast adenocarcinoma cell line via decreasing Cyclin Dependent Kinases (CDKs) and the

upregulation of Retinoblastoma (Rb) related proteins (p107 and p130)".

Additionally, she conducted a "proteomics analysis" which revealed that the induction of apoptosis by metformin in breast adenocarcinoma cell line was via the intrinsic caspase independent signaling pathway through upregulation of Endonuclease G (ENDO-G) and Apoptosis-inducing factor (AIF).

She explained that ''Metformin induced endoplasmic reticulum stress and subsequent apoptotic cell death via the activation of the proapoptotic family members, which upregulated activated protein kinase (AMPK) in breast adenocarcinoma resulting in subsequent inhibition of the mammalian target of rapamycin (mTOR)".

Lubna stated that mTOR was downregulated in breast adenocarcinoma treated cells which consequently decreases protein synthesis. Several potential therapeutic targets were revealed such as Growth Regulation by Estrogen in Breast Cancer1 (GREB1), MAP kinase interacting serine/threonineprotein kinase 1 (MKNK1) and Emopamil Binding Protein (EBP) that can be utilized in the development of new therapies.

Furthermore, Lubna concluded that "metformin exerts its effect on several cellular processes inducing apoptotic cell death and cell cycle arrest, therefore metformin may indeed offer a supportive role in cancer therapeutic regimens as a neoadjuvant drug for treatment of breast cancer."

Presently, Lubna works as an Academic Research participant at the National Center for Cancer Care and Research- Hamad Medical Corporation. She is also a member of the Cancer Research team at the Translational Research Institute In at Hamad Bin Khalifa Medical City. Her contribution is an addition to Qatar's many achievements that always strives for continuous development and prosperity in all health and science fields.

Students from the College of Engineering

launched an Independent project to build solar-powered hoses

The Dar Al Maha team, consisting of 24 students and 6 faculty members from four different departments at the College of Engineering, came up with an independently engineered and fully developed sustainable zero-net energy house, giving rise to newer standards acting as an ideal model for eco-friendly habitat ,to ensure that the best final product achieves the vision of the team and college. The Dar Al Maha project won the Visualization Challenge award at the 2018 Annual Research Forum and Exhibition under the 3d virtual reality category.

A Pioneer project to develop the student's potential in the field of renewable energy

The team includes the students Anas Rasras, Mohammad Alam, Mohammed Ahmed, Mohammed Al Kubaisi, Saoud Al Mesallam, Abdulla Al-Abdulla, Mohammed Al Katheri, Mohamed Radwan, Shada Bennbaia and Mariam Mohammad all under the supervision of Dr. Ahmad Sleiti from the Mechanical and Industrial Engineering. While Dr. Adel Gastli from the Department of Electrical Engineering supervises the students Abdulrhman Ramadan, Majid Al-Kuwari, Yousef Ismael,

Laith Al-Sughair, and Maymouna Ezeddin.

Furthermore, Dr. Djamel Ouahrani and Dr. Salim Ferwati fro the department of Architecture and Urban Planning supervise the students Nancy Makhoul, Fatima Shaker, Noor Al-Humaidi, Shimaa Abdelkarim, Sara AL-Muhsin and Aisha Al-Sulaiti.

At the department of Civil and Architectural Engineering Dr. Wael Alnahhal & Dr. Alaa AlHawari supervise the students Ahmed Elrahmani, Jaber Abu-Humaid, Mostafa Sallam, Mohamad Alnagm, &Ahmed Mustafa Elsherbini .

An independent project that will benefit solar homeowners

Dar Al Maha offers students the opportunity to advance their skills, enrich their knowledge, and come up with new standards that will become the ideal model for eco-friendly homes.

The project offers an intensive learning experience that benefits both consumers and homeowners, as they experience the latest technologies and materials in energy-efficient design, clean energy technologies, smart home solutions, water conservation measures, electric vehicles, and sustainable buildings.

To achieve the vision of the project, Dar Al Maha team has set up a number of goals to build a fully solar-powered house at an affordable price to the public, and in an advanced manner that contributes to the research and development of energy efficiency and clean energy production techniques, To Challenge the students to think in new ways about energy and how it impacts their everyday lives, and raise awareness of the existing renewable energy solutions, disseminate more

responsible actions between the home owners when making energy related choices, and encourage local people and administration to increase the use of solar energy system and to build more sustainable houses.

The project's interest in sustainable energy helps achieve Qatar National Vision 2030

The project states that the residential energy demand per capita in the Gulf Region is significantly greater than in the OECD (Organisation for Economic Co-operation and Development) economies and China, and greater than the world average. In addition, QNV 2030 aims to direct Qatar towards a balance between developmental needs and the protection of the environment, because currently, majority of the population rely entirely on the non-sustainable energy resources, not paying enough attention to the existing clean energy solutions.

That is why different local organizations like TARSHEED have been established to raise awareness and responsibility inside the Qatari community of the pre-mentioned issue, in attempt to direct consumers' behaviors in using energy and water resources, aiming for a sustainable future

DAR ALMAHA

Dar Almaha Team Logo

with less energy consumption, achieving the Human and Economic Developments in Qatar National Vision 2030.

Dar Al Maha believes that universities have always been considered the principle drivers of the communities, and thus, awareness most efficient starting point is from inside the higher educational institutions. Solar Decathlon challenge universities students to build a fully solar powered house that is affordable to the public to prove to the local and regional communities the effectiveness of this clean energy solution.

In addition, by building this eco-friendly house, students get the chance to apply the theory they have learned throughout their university years in a multi-disciplinary real-life project, where integration and cooperation between the different teams are significant.

QU Research Team

at QU'S CMED unravel the sperm factors triggering egg development into an embryo

A team of researchers at the College of Medicine -Qatar University have been working on a ground-breaking research project in collaboration with Cardiff University in the UK. The research assessed the veracity of PAWP (Post Acrosomal WW domain-binding Protein) versus PLC-zeta (PLCz), as the major sperm-derived protein candidates for initiating Ca2+ oscillations in the unfertilized egg. The research seeks to understand this vital Ca2+ signaling mechanism which will contribute to major therapeutic developments in the field of assisted reproductive technology.

The Research team was led by Dr Michail Nomikos, Assistant

Professor of Biochemistry at QU College of Medicine (CMED). The team also included CMED Professor of Molecular and Cellular Biology Dr. Anthony Lai & Cardiff University research collaborator Prof Karl Swann(UK).

Most notably, the research team has won the "Outstanding Paper Award 2017" which is an accolade given by the Asian Journal of Andrology (AJA) in recognition of the most influential publications in reproductive medicine, the winning research was titled: "Is PAWP the "real" sperm factor?"

At fertilization, the primary event following the fusion of the sperm and egg (oocyte), is a series of transient rises in the intracellular free Ca2+ concentration, termed Ca2+ oscillations.

Over the past decade, mounting experimental and clinical evidence has agreed with the hypothesis that the sperm factor responsible for the initiation of Ca2+ oscillations during mammalian fertilization is a testis-specific isoform of PLC-zeta (PLCz). Based on this hypothesis the researchers studied and compared PLCz with PAWP, a sperm head protein that exclusively resides in the post acrosomal sheath region of the perinuclear theca.

In this context ,Dr Michail Nomikos said the following: "To date, no research groups have independently verified PAWP's ability to activate oocytes and/or cause Ca2+ oscillations, we investigated whether PAWP can initiate Ca2+ oscillations and oocyte activation in the mouse. We microinjected into mouse oocytes the recombinant mouse PAWP protein, but we consistently failed to observe any Ca2+ increases. Additionally, PAWP was unable to hydrolyze PIP2 in vitro and did not act as a generic activator of PLCz activity".

Prof. Egon Toft: This research is an excellent example of the important biomedical projects taking place at CMED and demonstrates the highest level of competency and excellence in research

As for Prof Anthony Lai he noted that this research has provided an immense development in the field of fertilization and assisted reproduction technology by revealing major technical issues in the debate regarding the identity of the "sperm factor" – which proves that PLCz is the critical protein responsible for initiating the physiological process of human fertilization.

Commenting on this research, QU Vice President for Medical and Health Sciences and CMED Dean Prof. Egon Toft said: "This research is an excellent example of the important biomedical projects taking place at CMED and demonstrates the highest level of competency and excellence in research".

"International recognition of this research success positively reflects the College's collaborative efforts with local and international institutions to advance the health care sector in Qatar and beyond and will further promote biomedical research on health care issues of great interest and benefit to society. Importantly, it also demonstrates QU's firm commitment to offering high-quality research to serve the community in line with Qatar National Health Strategy." He added.

Our Exclusive

Research vessel “Janan”

Dr. Jassim A. Al-Khayat
Research vessel “Janan” Manager

Research staff of Qatar University undertakes marine scientific studies and research to ensure the preservation of marine environments and their components from the living and non-living resources of Qatar’s territorial waters. These marine environments and their various components are of nutritional, economic and strategic importance.

Qatar University has given special attention to the conservation and protection of the components of the marine environment, including the risks of various pollutants, overfishing and others.

Qatar University has established a center for environmental science. Among its main tasks is to carry out marine field studies and encourage students and researchers to carry out these studies by providing specialized scientific staff and technical support in laboratories and laboratories equipped with all kinds of materials and advanced technical devices to support technical projects in the fields of environmental sciences.

For the fieldwork survey, the research vessel “Janan” is agenerous donation presented to QU by H H Amir of the State of Qatar Sheikh Tamim bin Hamad Al-Thani to replaced old research vessel “Muktabar Albihar”. It was built according to international standards and standards adopted in the construction of scientific research vessels, to meet the requirements of research in the international and specifically the territorial waters of Qatar (QNEZ).

Scientific projects in which the research vessel “Janan” is currently contributing:

Qatar Islands Study Project (internal project at the Environmental Science Center).

2. Follow-up and control of sea turtles in the Qatari Islands (an internal task of the Environmental Science Center).

Supporting research on postgraduate projects for doctorate and master’s degrees.

Support research of NPRP projects.

Supporting the research of faculty members, researchers and students at Qatar University.

Hair to ESC stock holder.

Scientific projects under consideration and discussion:

• A pilot project that includes the periodic survey and monitoring of the territorial waters of the State of Qatar. One of the most important priorities of this project is to collect periodic or monthly data for the different components of the physical, chemical, geological and biological characteristics of Qatari waters. These data will form a bank of information that will benefit researchers in the publication of several scientific studies, as well as a repository of information that will contribute to addressing local environmental issues and meeting the urgent scientific needs and requirements that may be affecting regional waters and their various environmental components. These data can also be used in studies or scientific consultations related to environmental assessment to government institutions in the country or private scientific institutions.

Al-Bairaq

Department of Advanced Materials, Qatar University, has launched Al- Bairaq Program, a project that supports Qatar National Vision 2030 for Qatar' commitment to promote innovation, entrepreneurship and applied research to develop its knowledge-based economy, enrich its human capital and improve its competitiveness. The program emphasizes multidisciplinary research that can cover the topics of Science, Technology, Engineering and Mathematics (STEM), which is named for its English names.

Al-Bairaq works to motivate students and encourage them to think and innovate based on a scientific background, skills and information acquired by the student through attending a series of workshops organized by Al-Bairaq, which results in creative ideas and scientific solutions invented by students and applied in projects supervised by specialized professors and experts in the Advanced Materials Center, Qatar University, and students also conduct innovative scientific studies in a variety of scientific fields.

We held an exclusive meeting with Dr. Noora Jabor Al-Thani, Founder and President of Al-Bairaq Project and Director of Foreign Affairs in the Advanced Materials Center, Qatar University, as follows:

What is Al-Bairaq Project and its objectives?

Al-Bairaq is an ambitious, non-traditional educational project based on innovation in education, striving to make science and self-learning a community culture. The idea of Al-Bairaq came after many recent scientific studies showed that Qatari students demonstrated a lack of interest in joining the fields of science and mathematics during secondary school, leading to lower academic performance of students according to curriculum international standards. So we thought that the solution is to involve high school students in scientific and practical activities and training in order to deepen their understanding and appreciation of the importance of work done by scientists and researchers and give them new and distinct opportunities

to gain confidence in themselves along with leadership skills that help them solve problems, by working with researchers who analyze and interpret information, as well as developing new products, which is the most important aspect for students.

How was the student turnout at the beginning?

At the beginning of the Al-Bairaq project in 2010, it was directed to high school students, through 4 main tracks. The number of participants was less than 250 students from seven schools. In 2013/2014, the number of schools and students participating in the program increased to 946 boy and girl students representing 38 schools.

During this period, primary schools were included in the project, and in 2016 middle schools were added. Research data indicated that the program was able to achieve its objectives of encouraging students to think about joining the scientific professions. Where, in 2017/2018, we were able to cover the participation of all Qatari independent secondary schools and the number of students in Al-Bairaq project reached 5,891 students.

What is the target group?

There is no target group or specific criteria, i.e., any student in the school is eligible to participate regardless of sex, nationality, social and economic status or special needs.

If the program does not depend on specific criteria in the selection of students or a specific group of them, how do you explain if these students excelled after their involvement in the project and received distinguished awards?

Al-Bairaq changes the relationship between the student and the teacher, so that it moves from the typical traditional way of teaching, to an interactive way in

which the student has an effective role in creating knowledge and adopts an innovative approach to inquiry-based education. This novel approach leads to creative attitudes by encouraging creative thinking, exploration, questioning, testing solutions and ideas and their modification, as well as respecting new and unusual ideas, encouraging and motivating students to produce innovative ideas and courageously communicating them to others.

Do these projects work throughout the year or have specific periods?

Al Bairaq is the only program in Qatar that works all year round, where the first part of the school year is allocated to high school students and the second part of the year focuses on the primary and preparatory stages, while we allocate the last part of the school year, which coincides with the summer vacation, to train Al Bairaq team and develop its tools and plans for the next cycle.

What are the achievements of Al Bairaq?

Since its beginning, Al Bairaq has distinguished itself with outstanding achievements in innovative education in the field of science, technology, engineering and mathematics. It won World Innovation Summit for Education award “WISE 2015”, which honors educational programs and initiatives that offer innovative creative solutions to problems. Al Bairaq also participated in many international competitions and reached twice to the list of honored in “QS and Wharton for Excellence in Higher Education Awards” in 2017 and 2018, one of the world’s largest awards concerning innovative higher education methods, where Al Bairaq was ranked in the second place in the category of “2017 Middle East Regional Awards” and the third place for the same category in 2018. Al Bairaq was honored twice in Philadelphia, USA, in a ceremony organized by “QS Stars” Institution, in partnership with the Wharton School of Business, University of Pennsylvania.

I was also invited as the president and founder of Al Bairaq Project to participate in the UNESCO International Symposium and its International Forum on Educational Policy 2017. The Symposium was held under the title “Deciphering: The Way to Promote Science, Technology, Engineering and Mathematics Education for Girls”. Al-Bairaq participated in the UNESCO Symposium on the role of Al Bairaq and its positive impact on the education of girls in science, technology, engineering and mathematics.”

The latest achievement is the winning of four outstanding scientific researches in the tenth version of Student Research Exhibition held by the Ministry of Education and Higher Education in cooperation with the Qatar National Research Fund among 210 research projects, and Al Bairaq won 7 valuable awards out of more than 42 awards (special and categories), and it won the Grand Prix and qualified to participate in (Intel ISEF 2018) Fair in the United States.

Researches participated by Al-Bairaq project students are one of the most powerful researches conducted at Qatar University, where these researches were conducted by the students with researchers from Al-Bairaq Project Team.

What are the future plans of the project?

In the respect of the success of the program, partners, including the UNESCO Office in Doha and the Qatar National Commission for Education, Culture and Science, have pledged to provide further support to ensure the continuity and expansion of the Al Bairaq program.

Al-Bairaq team also seeks to continuously develop its plans. It assesses itself at the end of each cycle according to near-term alternative plans. We deal with our mistakes and correct them ASAP and aware of the reality of ourselves defects and features, so we avoid falling into the redo error and seek to reach solutions through which we can deal with the intellectual level of different ages of students

While in the long-term, we emphasize the continuation of our efforts to encourage and help young people to spread and promote the culture of scientific research, which is a knowledge-based economy on which nations are based, flourished and developed. We hope that there will be a basic curriculum for all students as a part of student's evaluation, in addition

to all the materials they study, and we hope that students' projects will be adopted and implemented and researches will be published. We also aspire to universality so that the countries of the world adopt this program and apply it.

Alongside of the meeting with Dr. Noora Jabor Al-Thani, we contacted a group of girl and boy students who participated in Al-Bairaq program. A girl student at the Faculty of Engineering, Dana Alyafei, participated in the UNESCO seminar on "the role of Al Bairaq and its positive impact on the education of girls in science, technology, engineering and mathematics" said: "Al-Bairaq program has been instrumental in determining my scientific tendencies in the field of chemical engineering and I have prepared to this specialization since I participated in the program in the secondary school."

While, Abdulrahman Al Kuwari, a student from Jassim Bin Hamad Secondary School for Boys, said: "I learned from Al-Bairaq confidence and self-reliance, how to formulate scientific research and critical thinking to solve problems, and through working with Al-Bairaq team, I realized the importance of teamwork as well as engaging in honest competitions with friends."

For her part, Fatima Al-Maadeed, a student from Al Arqam Academy for girls said: "I did not expect much from myself, but without exaggeration, this research left a great impact on my life and I realized the importance of scientific research and it turned out that in order to reach something new you do not have to be a scientist at all, and this was proved to me by Al-Bairaq. Now I want to continue to explore the fields of scientific research, because they have shown me new aspects of science that I did not know before and may help me in my university life."

Student Mariam Al Mohannadi said: "Our trip, me and my friend, Shahd Samir Al-Mughni, with Al-Bairaq was very helpful, as we won the second place in the Scientific Research Exhibition, engineering category, and we are very proud of this win, where we have made a great effort to work on our project with al-Bairaq. The work on the project took nearly a year. We were attending workshops at the university, and at the same time, the supervisor was following us every week at school; Shahd praised the effectiveness of the program, saying: I have learned the basics of research and how to deal with research topics and acquired new skills and every day passed us was a true addition to our path of innovation and learning."

Our Exclusive

Office of Innovation and Intellectual Property

Her Excellency Sheikha Hind bint Hamad Al Thani Vice Chairperson and CEO of Qatar Foundation, visiting QU Inventors' on the World Intellectual Property Day at Qatar Foundation.

The Office of Innovation and Intellectual Property is part of the Office of Research Planning and Development under the Vice President for Research and Graduate Studies. The Office facilitates the management and transfer of technology at Qatar University. The Office cooperates with many governmental and private entities including: Ministry of Economy and Trade, Qatar Foundation, and Qatar Scientific Club. The Office's mission is to protect the intellectual property rights of all researchers and innovators of Qatar University and to contribute to the development and enhancement of the economic and social well-being of the State of Qatar. The Office has three main roles: firstly, raising awareness of the importance of intellectual property through seminars, workshops and lectures, and responding to queries; secondly ,protecting intellectual property: legal and administrative issues, development of intellectual property policies, development of relevant documents, support for the committees concerned with intellectual property issues, and finally support for knowledge transfer to the industrial sector in Qatar.

Innovation and Intellectual Property QU Office aims to create a strong infrastructure and procedures for intellectual property at QU. We promote modern innovation requirements to develop the culture of innovation into the fabric of QU, and promote an increase in community engagement with research outcome for knowledge transfer purposes. The Office also works on a number of services and functions, including: raising awareness of intellectual property rights within the university and in the Qatari society as a whole (through workshops, seminars, lectures, conferences, etc.), supporting the registration of intellectual property rights of the QU community in cooperation and coordination with other stakeholders, communicating with researchers in order to identify their problems and provide solutions in relation to property rights Intellectual property and patents, building and maintaining database of intellectual property rights registered with the University of Qatar, and finally the commercialization of intellectual property rights and the negotiation of intellectual property licensing agreements between the University and the parties concerned .

The Office of Innovation and Intellectual Property Rights represented a representative of the QU in many activities related to innovations and intellectual property rights. The most recent was the World Intellectual Property Day. In this celebration, renowned schoalrs and innovators from Qatar University joined, such as Dr. Somaya Al-Maadeed: A Device for Colon Cancer detection, Dr. Shahen Al-Muhtaseb and Dr. Ahmed Awadallah: Sol-Gel templates formed with infusion of gas bubbles, Dr. Tamer Khattab: Method for generating a secret key for encrypted wireless communications, Dr. Ibrahim Al-Maslamani: Marine Clutch and Dr. Ahmed Massoud, Dr. Ahmed Elserogi, Dr. Shehab Ahmed, Ms. Asmaa Elekhtiar, Ms. Lobna Eltagy and Tassneem Zamzam: A T-shape Inductive-Capacitive network for Capacitive Power Transfer Applications with Enhanced Power Capability. Dr. Aiman Erbad, the Director of Research Planning and Development explained how the office has a strategic importance in the University strategy 201802022 in expanding Qatar University IP portfolio and accelerating the pace of knowledge transfer to help QU play its role in catalyzing the economic diversification in Qatar.

جامعة قطر
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Research Collaboration Symposium

18 - 20 November 2018

For more information and inquiries

VPRGS.ECO@qu.edu.qa

International Research Collaboration Co-Fund Program (IRCC) at QU

The Office of Research Support (ORS) has launched a new International Research Collaboration Co-Fund Program (IRCC) on 1st of April 2018. According to Qatar University (QU) 2018-2022 transformation strategy, QU is striving to become a world recognized research institution that drives multi- and interdisciplinary programs and maximizes research impact. IRCC brings together Qatar University and researchers from international universities, to collaborate on topics of mutual interest and develop high-quality and high-impact research partnerships. It paves the way for sustainable cooperation and helps in a concerted manner to fulfill the knowledge-based economic aspirations of Qatar.

Over the past two decades, Qatar has experienced economic, social and environmental changes at a considerable rate. This has led to the emergence of issues such as air pollution, pollution of water and land resources; food and water security, identity and other socio-economic challenges. As these issues are considered as international challenges, a new funding scheme like IRCC is the best way to promote innovative solutions through strong international collaborations. The objective of IRCC is to bring together QU and international researchers and innovators to collaborate on topics of mutual interest. There is a strong demand from the research and innovation community for a multilateral scheme, which would address these societal challenges.

QU VP for Research and Graduate Studies Prof Mariam Al-Maadeed said that the International Collaboration was launched as a movement to support researchers locally and internationally to work together in finding solutions for current issues in all fields. Researchers from Qatar and worldwide institutions are encouraged to submit proposals

that align with the commonly identified grand challenges and research priorities, including basic and applied research. The four categories of research thematic areas in research and grand challenges tentatively suggested for this first call of collaborative proposals are “Energy, Environment and Resources Sustainability”, “Social Change and Identity”, “Population, Health and Wellness” and “Information and Communication Technology (ICT)”.

The IRCC call will have one submission cycle per year, with a maximum allocated funding per university of US $80,000 per year – US $160,000 over 2 years (cash/in-kind). The funding for the second year will be subject to satisfactory performance of the first year, assessed through submission of an annual report and a peer-review process. Proposals will go through peer review process using evaluation criteria. The selection of the proposals will be based on the reviewers’ evaluations and scoring, and to the validation of the IRCC Joint Reviewing Committee (IRCC-JRC) which is composed of one representative from the partnering institution’s Research Office and one from QU Research Office for each submitted proposal.

The Lead Principal Investigator (LPI) from each partner institution must be a full-time faculty member at the time of call for application. The LPI must have a record of successful grants in one of the major research thematic areas in research, as evidenced through prior funding and published articles in indexed journals. The engagement of more than one institution in the same project is possible. The letter of commitment from partner institution(s) is required together with the proposal at the time of submission. The IRCC proposal submitted in response to this call should have not been successfully funded proposals for by another funding program.

The Scientific Council is composed of one eminent scientist and a representative from the office of VP for Research and Graduate Studies each from each of QU and the collaborating institutions. The IRCC Scientific Council is the governing body of the co-funding program, which directs the scientific strategy and research priorities, themes and topic of the different cycles of the IRCC Program. It acts on behalf of the scientific community in Qatar/QU and the participating countries/universities to prioritize the themes and areas of research that is of importance to Qatar and the collaborating countries.

The IRCC is a way of Implementing joint research and innovation activities. It helps in Building national human capital in Qatar University and the participating universities, Establishing and enhancing research collaboration between Qatar University and international universities and institutions, and fostering collaboration between researchers and developing research networks between Qatar University and different universities. The purpose of IRCC is developing new partnerships and strengthening existing ones, optimally utilizing resources, infrastructure and expertise to the joint advantage of the region and the globe. The reasons to launch such program is Building trust, developing relationships across the countries’ institutions, learning from each other’s experiences, and helping the advancing scientifically in a concerted manner to fulfill the knowledge-based economic aspirations of Qatar. Also providing a vibrant cross-pollination research platform to students and researchers by creating exchange opportunities

To promote the IRCC’s new funding program, the program it was introduced during the second day of the Qatar University Annual Research Forum and Exhibition 2018 (QURF’18) and attended by a French delegation from six prestigious universities, who expressed a great interest in this new collaboration initiative. The host of the event, Dr. Mariam Al-Maadeed, Vice-President of Research and Graduate Studies, highlighted the importance of such cooperation with the European institutions and particularly France and expressed her wishes for Qatar University students, faculty and staff, to build a sustainable collaboration with these institutions.

An awareness session was conducted later that afternoon by the Pre-Award Department, focusing on the collaboration mechanisms and the proposed research areas. Several areas of mutual interest have been identified as a first base for setting a platform for a future research collaboration between both countries, such as Law studies (Bordeaux), Tourism/Cultural Heritage (Pantheon-Sorbonne), Linguistics Arabic for non-speakers and sport management (Artois), Cybersecurity (Bretagne Sud), Smart Cities (Paris Est), Science & Engineering (Mines ParisTech). Memorandum of Understanding with Qatar University are under discussion. Dr. Mariam Al-Maadeed and Dr. Mohammed Al-Salem (Director of the Office of Research Support) thanked the delegates for their fruitful participation and expressed their willingness to see great success around such collaboration.

The submission and communication with the external reviewers will be through a new online tool (ConfTool) which is used for the first time to maximize effectives and efficiency in the submission and review process. For any inquiry related to IRCC please contact: igrants@qu.edu.qa.

Article

5 Tips for Thesis & Dissertations Success

Writing a thesis may be one of the most anxiety-ridden tasks a graduate student has to take on during their graduate study. The lengthy nature of thesis research is itself a cause of concern for many graduate students who become overwhelmed trying to conceptualize the ideal organizational structure of the thesis. However, with careful planning and proper use of time, thesis writing is more than manageable. This article presents a few key tips to successful thesis writing based on the nearly six years I have been involved in supporting graduate writing at QU.

Tip 1: Do Not Procrastinate

Procrastination has been an issue for nearly every graduate student working on a thesis at one time or another. Luckily, this is something that can be easily resolved. Procrastination is essentially nothing more than a bad habit, and it rarely yields students' best work…despite their insisting otherwise! Students procrastinate for a number of reasons. For example, they may feel the task is too complicated to complete, they may miscalculate the time needed to complete all or part of the assignment, or they may be too busy with friends, family, and other social obligations. Regardless, understanding that writing is a process is key to the success of the thesis project. A well-written thesis will undoubtedly require extensive reading, planning, outlining, drafts, editing and

Dr. Mary Newsome
Graduate Academic Support
The Office of Graduate Studies

proofreading, and this only addresses the finished product. The time involved in obtaining ethical approvals, data collection, and data analysis is as much if not more than required for actually writing up the thesis. That being said, prepare a thesis timeline in collaboration with your thesis supervisor and identify clear milestones along the way. Meet regularly with your supervisor and prepare a list of specific questions that will help you before each meeting. Following each meeting, do some work on your thesis as soon as possible; the more time that elapses between meetings and working on the thesis, the harder it will be to recall what was agreed upon with your supervisor. Getting social and having time away from the thesis project is important; however, try to set mini "thesis goals" on a regular basis, and reward yourself once they have been accomplished.

Tip 2: Read

Telling students to read to improve their writing is almost never welcome advice; however, it is, at least in my opinion, the single most important component of a successful thesis. Extensive reading offers so much to the thesis writing process. It is, for example, where we go to identify the gaps in the literature; it is how we keep abreast of current trends and cutting-edge developments; and it is an ideal way to locate other relevant research. Despite all of this, students' lack of reading is still a common complaint, and even among those who are reading enough, many are not understanding what they have read well enough to write about it in their own words. While there is no single remedy to these kinds of issues, I generally advise keeping a journal log as a way to encourage more reading and to help improve understanding. After every article read, put it away and try to summarize it in your own words. The typical approach used by most students is quite different from this. Most students read and summarize at the same time. In other words, they read or maybe even scan a paragraph or two and try to embed a paraphrased version of that somewhere into their thesis. Trying to paraphrase while looking at the original source is like trying to sing the melody of a song while listening to another song at the same time…quite challenging.

Instead, try putting the article out of site and very simply try to answer the following questions in your own words: What is it about? Why are they doing it? How are they doing it? What did they find? This journaling exercise facilitates understanding and becomes easier with practice. Additionally, successful journaling of this nature feeds the motivation to read more, which is essentially the ultimate goal.

Tip 3: Perfect the Research Question

Perfecting the research question is a significant challenge for graduate students and is often not given proper time and attention. The research question guides the entire thesis project; it focuses the study, determines the methodology, and guides all stages of inquiry, analysis, and reporting. Good research questions do not just happen; they must be carefully crafted. Writing a good research question demands the student to be well read on the topic, and it often involves the help of an experienced mentor to ensure the focus is neither too broad nor too narrow and, above all, is doable. A poorly written research question, on the other hand, leads to an unorganized literature review and a data collection and analysis procedure that is either unmanageable or unrealistic. For example, a research question concerned with the effect of global warming on the environment is so broad that the research methodology would be very difficult and the findings would likely be too broad to discuss in a single paper. However, a research question concerned with how glacial melting affects penguins in Antarctica is much more focused and manageable. Simply put, when writing your research question, make sure you have access to the required data and participants and that you have the time, resources, and skills needed to complete the study. Remember, the research question can, and usually needs to be, revised and refined as the researcher develops a more sophisticated understanding of the topic.

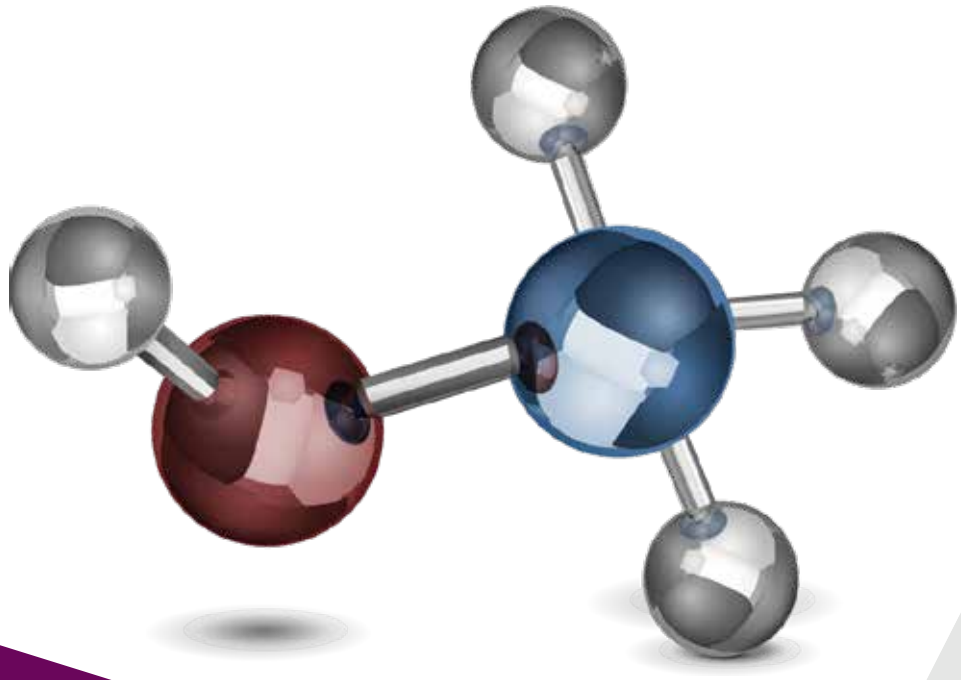
Tip 4: Synthesize the Literature

Graduate students often report that writing the literature review is the most challenging component of the thesis project. This is largely due to the fact that many students have not explicitly learned how to synthesize the literature. Instead, most students approach their literature review by simply summarizing the individual articles they have read related to their research topic. The literature review, however, is much more than a summary of research articles; it provides the context for the research question. A well-written literature review requires the writer to look for existing patterns and trends in the literature regarding theoretical frameworks, concepts, assumptions, methods, results, interpretations, etc. These patterns and trends, then, are used to provide the context for our own research question/problem. In other words, the literature review is strategically tailored according to a critical and thematic evaluation of the literature to support an argument. A good way to easily identify patterns in the literature is to create a table where the rows represent the individual articles you have read and the columns represent patterns (i.e. theories, concepts, methods, results, etc.). After reading each article, very concisely fill out the table. Step back periodically to check for existing patterns and trends to shape your literature review.

Tip 5: Edit and Proofread

Editing and proofreading is a tedious but necessary part of producing a good thesis project. In fact, it is part of the writing process, and even native speakers must do it. In an ESL/EFL environment, it may be tempting to justify language and grammatical errors by claiming that English is not the native language; however, regardless of the language you are writing in, there will likely be a number of language mistakes present in your work that require careful proofreading. Proofreading issues can easily be addressed by using the Spelling and Grammar check built in to Word or by asking your supervisor to read small, manageable sections of your thesis at a time rather than whole chapters. Similarly, ask a friend or colleague to read small sections and make corrections, or seek out the help of a paid professional proofreader in cases where language is a serious concern. Editing involves reorganizing, adding, and omitting material to enhance the thesis project and is often done at different stages. A lot of times the order in which we think of things is not the most suitable place to situate them in our written work. Good editing should involve stepping back from a “finished” product and asking yourself, have I clarified all of my ideas? Have I linked my thoughts together appropriately? Have I included unnecessary information or details, or am I missing any important information? Asking these kinds of questions, by default, requires us to reorganize the material and make important additions and/or omissions with the end result being a better written thesis.

These are just a few helpful tips to support TAD writing. The Office of Graduate Studies is proud to provide dedicated thesis and dissertation writing support to the graduate student body through various tad events including workshops, online courses, writing groups, and the tad bootcamp. For a complete schedule of tad events, visit the Office of Graduate Studies website at http://www.qu.edu.qa/research/offices/graduate-studies



Methanol Economy

Prof. Syed Javaid Zaidi
Center for Advanced Materials

Methanol is used worldwide in a number of innovative applications to meet the growing demand for energy. It is a clean energy option that can be produced from natural gas, coal, and a number of renewable resources. Methanol is comprised of four parts of hydrogen, one part of carbon and one part of oxygen. The most promising and efficient method to produce methanol is through syngas produced from natural gas due to the abundance of natural gas reserves. This includes the reforming of natural gas with steam and then putting the produced synthesized gas mixture through conversion and distillation processes in order to create pure methanol. Nowadays, methanol is an essential ingredient used to produce hundreds of consumer and industrial products such as plastics and building materials. Therefore, methanol can be used directly as fuel for heat engines, fuel cells, and flex-fuel cars (including hybrid and plug-in hybrid vehicles) due to its high-octane rating. Furthermore, it is already used worldwide on a large scale to produce different chemicals and products. The global demand of using methanol as a chemical feedstock reached around 42 million metric tonnes per year as of 2015. For example, methanol will be transformed into gasoline via Methanol-To-Gasoline (MTG) process. In addition, using

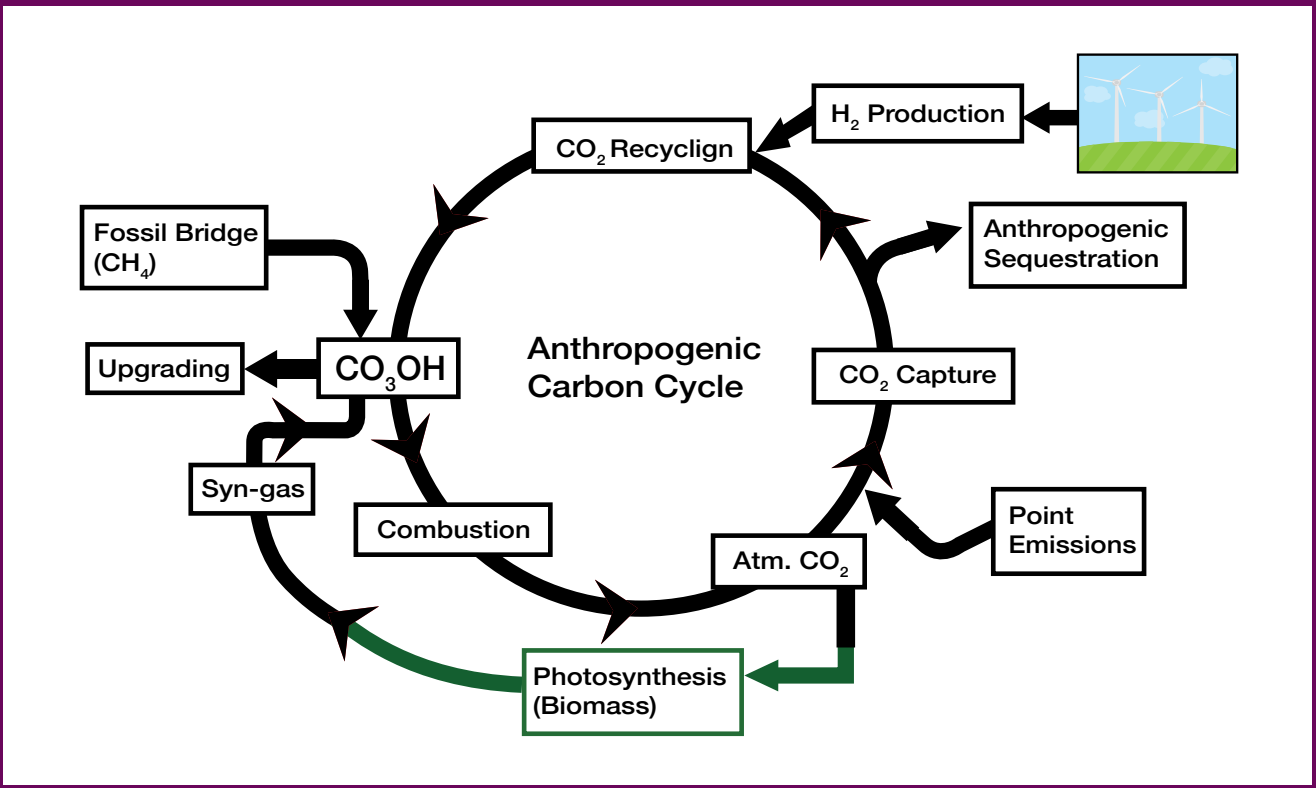


Figure 1: Anthropogenic carbon cycle for methanol production.

the Methanol-To-Olefin (MTO) process, ethylene and propylene can be produced successfully from methanol. Therefore, these two chemicals are the main products from the petrochemical industry. “Methanol Economy” term includes an anthropogenic carbon cycle for methanol production as shown in Fig. 1, which can be used as a renewable fuel or to produce nearly all products that are derived from fossil fuels. The world’s largest CO2 to methanol plant is operated in Iceland by Carbon Recycling International with a capacity of 5 million litres of methanol per year. The plant now recycles 5.5 thousand tons of CO2 a year. All energy used in the plant comes from the Icelandic grid that is generated from geothermal and hydro energy. As shown in Fig. 2, the plant uses electricity to make H2 which reacts with CO2 in a catalytic reaction for methanol production. Methanol Economy will eventually solve many of the tacit issues of climate change and oil shortage due to different reasons. In addition, methanol can solve the global warming problem in which it can be formed via reductive hydrogenation by utilizing CO2 which will consume a huge amount of emitted CO2 from the industries activities. Furthermore, it has a higher “flame speed” which leads for faster and more complete fuel combustion in the cylinders. Hence, it is strongly suggested to focus on methanol economy to serve as an energy carrier, a non-polluting fuel, and the initiator of industry important chemical products.

Methanol is used as a key component in the development of different types of fuel cells – which are quickly expanding to play a larger role in our energy economy. From large-scale fuel cells to power vehicles or provide back-up power to remote equipment, to portable fuel cells for electronics and personal use, methanol is an ideal hydrogen carrier. Direct methanol fuel cells (DMFC), have potential as green power source and suitable alternative to rechargeable battery technology, due to their advantages, such as high specific energy and environment friendly nature. A 20% efficient DMFC is three times more efficient than advanced lithium ion batteries. The end products of DMFC are CO2 and water. CO2 can be further sequestered to produce methanol. It is a challenging task to store hydrogen in present-day vehicles for onboard electricity generation and hence, hydrogen FC is not a viable solution. On the contrary, methanol

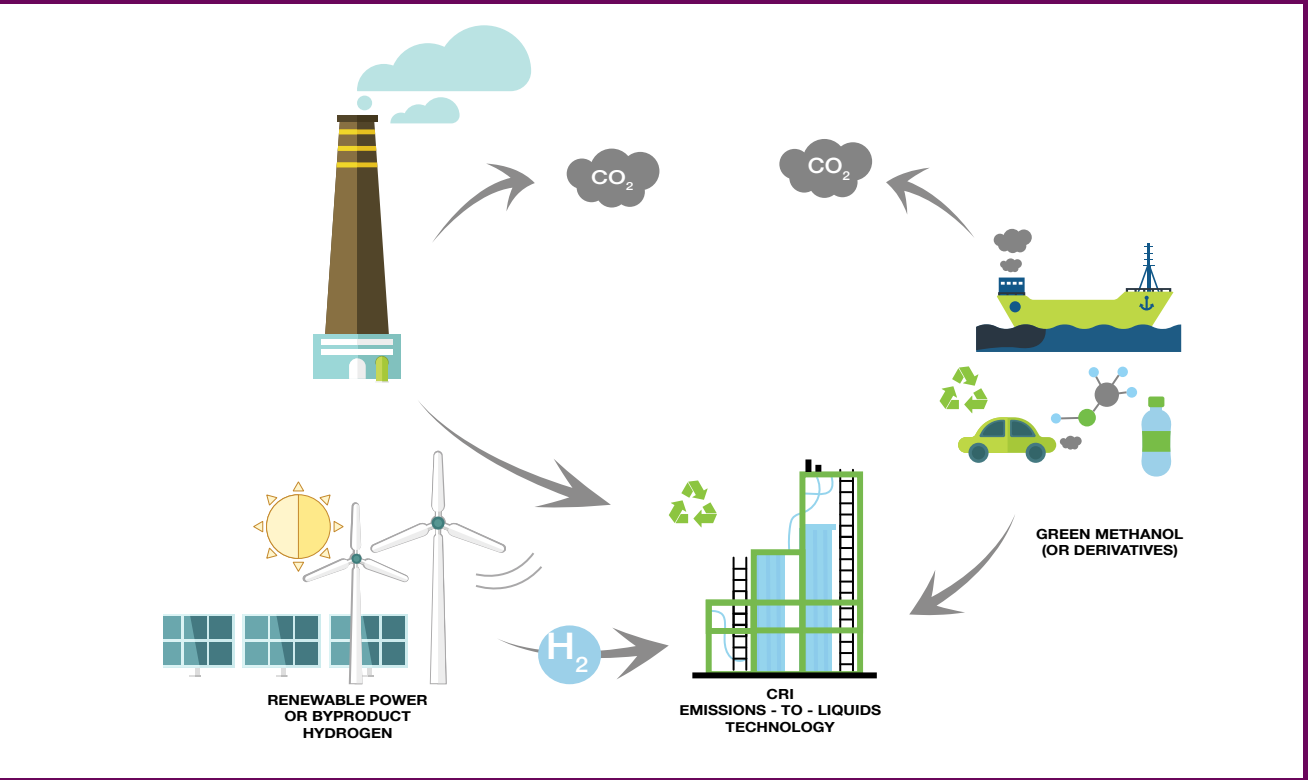


Figure 2: Green methanol production by Carbon Recycling International.

is a liquid and can occupy the conventional gasoline tanks in vehicles with minor modifications.

In Canada, Blue Fuel Energy company is planning to use concentrated CO2 and hydroelectricity emissions from the processes of natural gas to produce preferably methanol. Therefore, Sunfire company in Germany is also working on converting CO2 and H2 from water and renewable electricity sources to liquid fuels including methanol, gasoline, and diesel.

In Qatar methanol is abundantly available and is produced by Qatar Fuel Additive Company (QAFAC), which is the major producer of methanol. The methanol produced locally can be used as energy carrier in the DMFC and as clean fuel. QAFAC also successfully reduced the CO2 emission from its plant by recycling it by converting it into methanol production, thereby increasing its production as well as reducing GHG emissions. QAFAC's Carbon Dioxide Recovery (CDR) plant is the first plant to recover carbon dioxide from a methanol plant and re-inject it into methanol production.

It was a green initiative to show the tremendous potential of methanol as the fuel of the future, that started the cooperation between innogy and SerEnergy. A year ago, the companies developed a plan in order to turn a diesel-powered vessel into an electric vessel powered by environment friendly methanol fuel cells. The SerEnergy methanol fuel cell system is a modular solution making it easy to adjust according to the individual energy requirements of the customer. This is a unique feature within the fuel cell industry where the other systems may require more development work and adjustments for each project. The energy system is considered to be a hybrid system that consists of a fuel cell system and a battery pack, where the fuel cells work as a range extender allowing the vessel to sail for an entire day without fuelling. Therefore, usage of waste heat from the fuel cell to drive the methanol reformation process leads to achieve high electrical efficiency between 40-50%.

At the Center for Advanced Materials (CAM), a research team led by Prof. Zaidi is working on the development of electrode materials for direct methanol fuel cells, which can be used for the back-up power in the remote areas as well as for transportation applications using the locally produced methanol in Qatar.