



ROVPR RESEARCH NEWSLETTER October 2018

Towards new Horizons of Development and Distinction



Diversity of Activities and Programs reflects the Spirit of Creativity and innovation the Research Sector Seeks to Promote

RS Executive Team

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Research

OVPR Newsletter October 2018

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OVPR Research Newsletter, October 2018

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VPR's MESSAGE

RS mission ahead would be to oversee continuity of enhancing programs and services to accomplish high quality research

It is with immense appreciation and commitment that I assume the responsibilities of Kuwait University's Research Sector, as Vice President for Research, with a mission to improve the dynamics of scientific research at Kuwait University, by infusing greater energy, resources, quality of services and governance towards achieving new levels of growth, recognition and excellence in faculty research. With these core objectives, while I look forward to faculties greater involvement in pursuing high quality, original and innovative research, my efforts would be focused on providing the environment and resources that meet the researchers requirements for taking up challenging issues and generating high quality outputs of scientific and social value.

My strategy would be to improve the work culture, and strive hard towards ensuring that scientific research at KU thrives on budgetary adequacy, and well designed projects do not suffer due to fiscal constraints. The immediate challenge and priority would thus entail securing increased budget related to our sector, which is bound to reflect positively in improving scientific research activity and quality at Kuwait University. It is my belief that good research is well-recognized on grounds of scientific quality and excellence, and it is this area that I would endeavor to improve and strengthen, for within this are embedded the seeds of enhancing the international status and ranking of Kuwait University research, and attaining distinguished standard and standing at the global and regional platforms.

Presently, it is immensely reassuring that Faculties increased efforts are visible in significant growth in

New strategy to improve the work culture, and strive towards ensuring Scientific Research at KU thrives on budgetary adequacy



Prof. Jasem Yousuf Al-Kandari
Vice President for Research

funded research, reaching a record level of 672 projects in various stages of progress, completion and review. In enhancing faculties participation in research, and in improving the quality and world ranking of KU research, I would closely be working with my Assistants to steer institutional research towards the global pathways, and work hard to accomplish these objectives. The vision we nurture must reflect in our research, as research is critical for sustainable development and in the larger interest of our national needs, as well as in serving the Kuwaiti society, encompassing all its sectors, as a commitment and obligation.

As we proceed in carrying forward the faculties research momentum, our efforts would be to oversee the implementation and effectiveness of research programs and priorities, encourage creativity and benefit from new ideas to advance KU research towards new levels of scientific distinction. Our mission ahead would lay the grounds for engaging faculties in scientific ventures that explore international dimensions in research, address contemporary issues of scientific and social relevance, and results that benefit mankind. We would endeavor to boost the quality of faculty research, being a significant factor in elevating Kuwait University's ranking and standing among elite world-class universities known for their reputable and distinguished research. Our faculties have enormous potential, expertise and caliber, there is no dearth of talent, all we need is a team spirit so that together we could build a solid and sustainable foundation of research at Kuwait University at par with global standards, and being effective in raising Kuwait University international profile and presence. ■

HUMANITIES POSTER DAY

RS enlists participation of five colleges in joint display of 90 posters at the humanities & social sciences posters event 2018

On-keeping with its annual commitment of bringing together the humanities faculties on a common platform for joint display of their latest research activity and accomplishments, the Research Sector significantly marked year 2018 Humanities Posters Day event held under the Patronage of Kuwait University President, Prof. Hussein Al-Ansari, and hosted by the Vice President for Research, Prof. Jasem Al-Kandari, The event provided a dynamic outlook of most significant developments in the areas of humanities research, largely focused on faculties current areas of interest, and issues of scientific, social, economic and contemporary significance. Advocating the policy of scientific coordination across faculties, the event professed the ideology of discussions, dialogue and interaction among faculties, providing nurturing grounds for new ideas to emerge for potentially significant joint and interdisciplinary research.

It is largely within this progressive frame, the event held at the College of Business Administration, on March 7, 2018, exhibited as many as 90 posters, representative of latest research activity of five-faculty humanities cluster, with displayed posters distributed over the faculties of Arts (3), Business Admin-

Under the Patronage of KU President, RS hosts the Scientific Poster Day for Humanities & Social Sciences faculties, for the academic year 2017/18



▲ KU President inaugurates Humanities & Social Sciences Posters Day

RS annually grants awards for top-ranking posters in the categories of faculty members, teaching assistants and graduate students

istration (40), Education (18), Sharia & Islamic Studies (13), and Social Sciences (16). Providing revealing insights into humanities faculties creative pulse, the event significantly involved the participation of faculty members, teaching assistants and graduate students, highlighting their ongoing and accomplished research in the joint display of their latest research activity on the posters platform for scientific and public viewing.

In organizing the annual humanities posters event, RS sustained efforts are driven towards spearheading the culture of scientific openness among humanities faculties, and encouraging researchers to invest their talent and expertise in probing issues of national, scientific and social relevance through original, innovative and high quality ventures. Hence, apart from inculcating the values of scientific coordination and connectivity, the humanities poster event offers an ideal opportunity for researchers to ensure wide exposure of their scientific accomplishments, and draw benefit ►

▶ *Humanities poster day ... (From P. 4)*



▲ Interactive round with Participants for displayed Posters

from ensuing discussions and feedback for furthering their research activity through more refined and creative ventures of scientific, social, economic and human value.

This underlying purpose dominates Research Sector's ambitious drive for humanities faculties involvement in innovative research, reflecting creative dimensions of humanities and social sciences research, amply visible in their original, high quality and distinguished research. The research themes largely addressed contemporary issues and realities of human life and society, providing critical substance for participating researchers to discuss, debate and ex-

posters, as the event's winning entries on grounds of scientific merit and excellence of displayed research.

The event was widely attended, amidst the presence of Assistants Vice President for Research, Prof. Yousif Garashi, Prof. Haider Behbehani, and Prof. Laila Marouf, as well as an elite gathering of faculty Deans and Vice Deans, KU's executive, administrative and faculty community. The organizational arrangement of the event is attributable to the sustained efforts of Dr. Laila Marouf, and in enlisting the participation of researchers in the Humanities posters events.

All displayed posters were documented in the Humanities Posters Booklet, serving as a vital refer-



▲ A line-up of executives and participants at the Humanities & Social Sciences Posters event

ence resource for faculties and researchers, interested in expanding the realms of their scientific interests, and exploring challenging opportunities for more advanced and collaborative research, which is the core purpose of organizing the posters events every year. ■

SCIENCES POSTER DAY

A cumulative display of 138 Posters reflects the prevailing scientific dynamism across sciences colleges

The Research Sector (RS) covered a significant mileage in registering a much larger volume of scientific posters displayed at the 2018 Scientific Posters Day event, involving enhanced participation of sciences faculties, as well as enlisting Kuwait Institute of Scientific Research's (KISR) presence for the fifth consecutive year in an exclusive Kuwait University's posters event. Providing a dynamic outlook of the expanding realms of institutional research, this year's event scored a significant 7.8% (138) growth in posters displayed over 128 posters presented last year (2016/17), highlighting the disciplinary diversity with a far wider coverage of research themes explored and addressed. The event, held under the Patronage of Kuwait University President, Prof. Hussein Al-Ansari, and organized by the Vice President for Research, Prof. Jasem Al-Kandari, was widely attended, attracting an elite gathering of KU's top dignitaries, faculty researchers and key personalities from KISR, bringing together diverse creative minds from across the five scientific faculties, including KISR's researchers, unfolding a broad spectrum of latest institutional advances and attainments in the domain of scientific research at Kuwait University.

Apart from disciplinary diversity, a significant development in the displayed research was the element of multi-authorship in the posters credit-lines, indicating faculties increased predilection towards joint research, as a basis for implementing and achieving the stated objectives of research. This development is indeed reassuring, and complements RS strategy of encouraging researchers to move beyond their respective disciplinary con-

KU President inaugurates RS annual Poster Day for Scientific faculties, with 2017/18 event bringing together researchers from mainstream sciences colleges, alongside KISR's participants



▲ KU President inaugurates Sciences Faculties Poster Day

Displayed posters unveil a wealth of information for creative minds to develop new ideas, concepts and issues that continue to challenge science, society and mankind

fines to collaborate and pursue multidisciplinary dimensions in research for achieving high quality, internationally credible outputs, enhancing the institutional scientific visibility and presence.

The displayed research at this year's Scientific Poster Day is a significant attribute to this development, with the posters-display going beyond the strategic objective of involving faculties in presenting their latest research activity, towards those critical priorities that need to be explored and researched through empirical, investigative and collaborative research. It is this larger objective that RS is endeavoring to accomplish by bringing together faculty researchers, graduate students and external participants, on the posters platform to engage in interdisciplinary dialogue as an opportunity for creative and collaborative efforts signaling the emerging dynamics in institutional research. RS increased thrust is, therefore, on promoting the culture of scientific innovation in faculty research that spurs the faculties creative potential and expertise, translatable into distinguished and internationally credible outputs, with posters platform being instrumental in ensuring visibility and wide exposure to KU's scientific attainments. ►

► *Scientific poster day* ...*(From P. 6)*

RS policy geared towards quality, integrity and credibility in KU research

The displayed posters presented empirical work of an active community of sciences researchers, with faculty members, teaching assistants, graduate students, and KISR's researchers, joining hands in displaying 138 posters, as legitimate attribute of faculties innovative ventures, creating an interactive environment, and encouraging exchange of thoughts, ideas and interests. The event, held on March 14, 2018, at the Faculty of Science premises, provided a robust outlook of sciences faculties ongoing and accomplished research, with displayed posters distributed over the faculties of Architecture (2), Computing Sciences & Engineering (10), Engineering & Petroleum (33), Life Sciences (13) and Science (54), as well as KISR's (26) researchers as external participants. The concerned researchers provided a brief overview of their research objectives and outcomes, and in turn benefitted from discussions, ideas, and views expressed. RS believes such interactions are vital for energizing the institutional research process, generating new ideas and bridging the interdisciplinary divide. RS current policy advocates scientific collaboration for achieving high quality outputs that strengthens the institutional scientific foundations, and bolsters KU's international profile and presence. Given this wider purpose,



▲ *The inauguration of Scientific Poster Day*

Interactive discussions and dialogue imperative for energizing institutional research, creating scientific vibrancy across disciplines, and opening the door for joint & collaborative studies

the annual holding of Scientific Posters event marks RS sustained effort towards achieving this objective, with posters platform being an ideal move in that direction.

The sciences posters event, organized by the Research Sector, involved the attendance of Assistants Vice President for Research, Prof. Yousef Garashi, Prof. Haider Behbehani and Prof. Laila Marouf, the latter being responsible for coordinated networking of the event's activities across sciences colleges. The displayed posters were reviewed by an experts committee, constituted for evaluating the scientific content and merit of displayed research, and identifying top ranking posters for the posters awards, granted by RS annually in the categories of faculty members, teaching assistants and graduate students, as a stimulus for researchers to strive for scientific excellence in their research endeavors.

All displayed poster at the sciences faculties 2018 Scientific Poster Day were aggregated and documented in generating the Sciences Posters Booklet (2018), released by the RS as a comprehensive resource on institutional research activity. The document provides revealing insights into faculties current research interests and interdisciplinary dimensions, largely focused on priorities and emerging areas of contemporary significance, researched across sciences colleges and KISR. For the institutional scientific community, the document is a vital reference to innovate, explore and achieve newer heights of scientific and creative excellence.



▲ *The inauguration of Scientific Poster Day*

SPSS WORKSHOP

Dr. Nouriya Al-Kandari presents an overview of SPSS program, demonstrating its applications and implications in scientific research

Research Sector organizes a workshop on Statistical Analysis (SPSS) for faculty members and graduate students of Sciences faculties

Under the patronage of the Assistant Vice President for External Research Collaboration and Consultation, Prof. Laila Marouf, the Research Sector (RS) organized a workshop on Statistical Analysis (SPSS) for faculty members and graduate students of the sciences faculties. The workshop, held on February 11, 2018, at lab (5) of Prof. Faiza Al-Kharafi Building, Khaldiya campus, Kuwait University, was primarily aimed at demonstrating the versatility and applications of the SPSS program, and its implications in data management, analysis, test models and results in scientific research.

The workshop's key objective was to provide an overview of the SPSS program, orienting the participants to data management technicalities and variable analysis for generating results presented in tabular and graphical formats.

The program is a powerful tool in scientific research and methodology, strengthening the value and quality



▲ **SPSS workshop in progress**



of both proposed and published research, an objective the RS is endeavoring to promote in humanities and sciences research. The workshop was presented by Dr. Nouriya Al-Kandari and assistant professor Seham Ahmad, Dept. of Statistics and Operations Research, Faculty of Sciences, who gave a compact view of the program backed by rel-

evant modules, data requirements methodologies used in basic and empirical research. Many faculty members and graduate students attended the workshop, exhibiting interest in understanding and exploring diverse dimensions and usage of the SPSS program in scientific research.

Outlining the workshop's significance, Prof. Laila Marouf, Asst. Vice President for External Research Collaboration and Consultation, said that the holding of SPSS workshop essentially falls within the framework of RS mission of developing and enhancing faculty members and graduate students abilities in pursuing high quality research, and achieving outputs of scientific value and significance. Prof. Marouf also thanked Dr. Nouriya Al-Kandari for her efforts, and honored her with a memento. ■

RS executive team visits the College of Life Sciences

RS NEWS

OVPR officials participate in a seminar entitled : "Overview of Research Support at Kuwait University"

Under the patronage of Dr. Meshari Al-Harbi, acting dean, college of Life Sciences, the Academic Accreditation Unit, in cooperation with the Office of Vice Dean of Academic Affairs, organized a seminar on the importance and opportunities of scientific research at Kuwait University. The executive team of RS was invited to give comprehensive presentations on various aspects of scientific research and its mechanisms at Kuwait University. The visiting OVPR team consisted of Prof.



Haider Behbehani, Assistant Vice President for Research Analysis and Development, who spoke about research projects, types of grants offered by RS to researchers, in addition to matters of budget and research awards, Prof. Yousuf Garashi, Assistant Vice President for Research Implementation and Finance, who tackled funding research projects, manpower, scientific missions, and other aspects of research implementation, and Prof. Laila Marouf, Assistant Vice President for External Research Collaboration and Consultation, who spoke about aspects of developing collaborations with external

institutions, industry, public/private sectors to advance joint and applied research, facilitate patents registration, and safeguard intellectual property rights.

After the presentations, the executive team had an interactive question/answer session with the faculty members, re-

sponding to queries on various aspects of the grant support system in Kuwait University.

The seminar concluded with the OVPR executive team expressing appreciation for the initiative taken by the college of Life Sciences in holding such meetings, aiming at orienting the scientific and research community and wider audience with the mechanisms of scientific research at Kuwait University, besides providing the appropriate opportunity to introduce all aspects of research support system in RS. □

RIG WORKSHOP

RS organizes a workshop on Research Initiation Grant (RIG), orienting new faculty members to the facility of grant awards at KU

Within the framework of Research Sector's key programs, the Office of the Vice President for Research organized an orientation workshop for new faculty members to familiarize them with the prevailing scientific environment at Kuwait Univer-

RS administrative staff presented detailed presentations on rules and regulations governing research grants

sity, and opportunities for initiating their research activity under the privilege of Research Initiation Grant (RIG), an integral part of the Research Support System.

The workshop, held in keeping with RS commitment to induct new faculty members within the mainstream of scientific research, was hosted by the heads of RS departments, where they outlined the mission and policy of scientific research at Kuwait University, and the facility for availing research grants under RS research support system, key elements of which were documented in the manual of research support Rules and Regulations, governing the grants



process at KU.

The heads of the departments of Researchers Affairs, Accounting and Budget, Purchase and stores, and Research Services and Consultations gave a detailed presentation on different aspects of RIG, and received various queries concerning the grant support system, the privileges, services and facilities for RIG.

In all, 18 new faculty members participated in the RIG workshop, which was held on Wednesday, April 18, 2018, at the RS meeting room. □

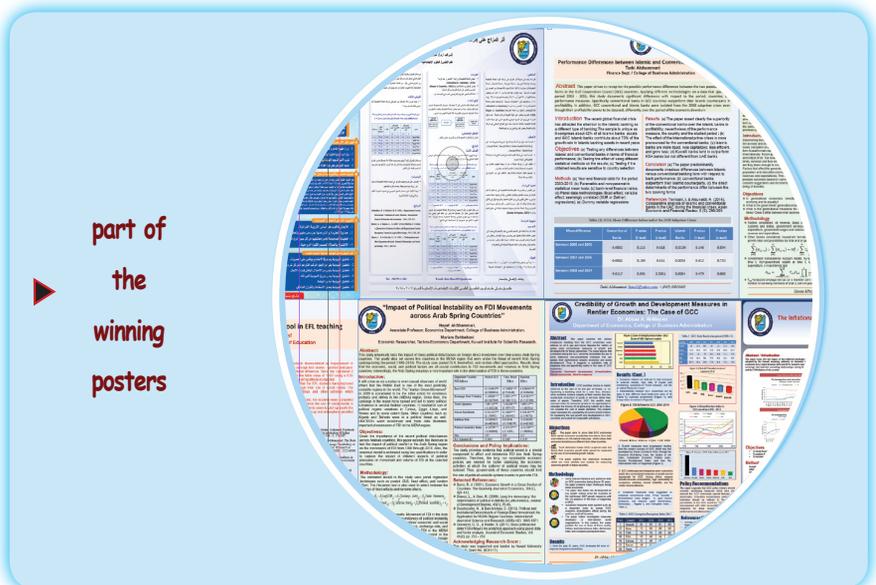
Poster day
WINNERS

The Vice President for Research announces the winners of the best posters

The Vice President for Research Prof. Jasem Y. Al-Kandari announced the winners of the Scientific Poster competition for both Scientific and Humanities sections for the academic year 2017/2018. The V.P. congratulated the winners, and wished the researchers that did not win a better luck in the upcoming years.

In this regard, the Assistant Vice President for External Research Collaboration and Consultation Prof. Laila N. Marouf explained that scientific research is one of the main pillars at Kuwait University. Moreover, the University pays great attention to encouraging researchers and motivating them to provide research and studies to enrich science and knowledge to serve the society in various fields.

RS announces winners of top ranking posters displayed at the scientific poster day events for Humanities and Sciences faculties for the academic year 2017/2018



She noted that the Research Sector organized the Scientific Poster competition for Humanities colleges on Wednesday March, 7th, 2018 with the participation of 5 faculties, where 90 posters were presented reflecting the diversity of subjects and fields of research. As for the Scientific colleges, the event was held on Wednesday March, 14th, 2018 with the participation of 5 faculties in addition to participants from the Kuwait Institution for Scientific Research, who presented 136 posters.

The V.P. for Research hosted the Scientific Poster event with attendance of his assistants Prof. Laila N. Marouf, Prof. Yousuf Garashi, and Prof. Haider Behbahani, also with attendance of Vice Deans of the participating colleges. Prof. Marouf clarified that the evaluating committees have reviewed and completed the evaluation of the scientific posters, and accordingly nominated the winners as follows: **First: Faculty Members**

Winners of the Humanities colleges:

Category:

First prize: Dr. Abbas A. AlMijren- Economics Dept.- College of Business Administration.

Second prize: Dr. Turkey AlShammari- Finance and Financial Institutions Dept.- College of

Business Administration.

Third prize: Dr. Nayef AlShammari+ Maryam Behbehani- Economics Dept.- College of Business Administration.

Second: Academic Support Members Category: (Contd. P.25...)

RESEARCHERS AWARDS

Research Sector announces winners of Researchers Awards for academic year 2017/2018



In continuing its policy of recognizing outstanding accomplishments of faculty members for their distin-

guished research, the Research Sector carried forward its annual cycle of identifying the distinguished community of researchers for the academic year 2017/18, for having achieved scientific distinction based on excellence of their research outputs. The process, which started with inviting faculty-wide nominations, went through standard review

and evaluation at the faculty and university levels, leading to shortlisting of top-ranking nominees for the Researchers Awards in the categories of Distinguished Researchers and Best Young Researchers.

The winners of the Researchers Awards for the academic year 2017/2018 are as follows:

I. Basic and Applied Sciences:

- **Prof. Ali Rakshani-** Department of Physics - College of Science- Distinguished Researcher Award for the Academic Year 2017/2018.
- **Prof. Manuel J. Albert-** Department of Microbiology- College of Medicine- Distinguished Researcher Award for the Academic Year 2017/2018.
- **Dr. Fawaz Al-Zubi-** Department of Dentistry- College of Dentistry - Best Young Researcher Award for the Academic Year 2017/2018.

- **Dr. Abdullah Al-Dousari -** Department of Management and Marketing- College of Business Administration-Best Young Researcher Award for the Academic Year 2017/2018.
- **Dr. Hussain Buroki-** Department of Penal Code- College of Law - Best Young Researcher Award for the Academic Year 2017/2018.

These annual awards reflect RS intent and seriousness in promoting the culture of scientific excellence in institutional research, and enhancing faculty members potential and capabilities in achieving scientific competence through their research that receives international recognition and acclaim. Given this purpose, RS annually accords due recognition to the award winning researchers in a special honoring ceremony, to be scheduled ahead. □

II. Literature and Humanities:

FUTURE OF OIL COUNTRIES SEMINAR

RS organizes a seminar on “The Future of the Oil Countries: Challenges, Risks, and pportunities” in collaboration with the Energy Unit of the Center for Excellence at CBA

Under the patronage and with the presence of Kuwait University President, Prof. Hussein Ahmed Al-Ansari, the Research Sector held a seminar entitled “*The Future of the Oil Countries: Challenges, Risks and Opportunities*” in collaboration with the Energy Unit at the Center of Excellence. The main speaker was Dr. Majid Abdullah Al-Munif, professor of Economics at King Saud University- Riyadh, OPEC Governor, former Secretary-General of the Supreme Economic Council- Saudi Arabia, and an oil expert. The seminar was held on Monday, November 27, 2017, at the Conference Hall 119 - Khalidiya campus.

KU President, Prof. Al-Ansari, welcomed the guests of the seminar,

The Key speaker is oil expert Dr. Majid Al-Munif, Prof. of Economics at King Saud University- Riyadh, OPEC Governor, former secretary General of the Supreme Economic Council- Saudi Arabia



▲ KU President with the KeySpeaker, RS officials and the guests



which title bears a great amount of concern for the future of the oil countries whose income is dependent on one major non-renewable and unstable source.

Prof. Al-Ansari said that seven decades have passed since the beginning of oil production and export in Kuwait, and the country’s income is still dependent almost entirely on

the revenues of oil and its derivatives, despite all the plans, policies and efforts aimed at diversifying the base of local economic activity. He pointed that every time the oil demand declines or witnesses price decrease, the market swiftly and certainly regains balance. However, the recent decrease of oil prices, which started three years ago, has established a new phase that calls for concern for the future and requires increased efforts to search for solutions and ways out.

He further said that there are many solutions and positive signs that call for optimism: the vision of HH the Amir to transform Kuwait into a regional financial and commercial center, in addition to the numerous strategic projects such as the development of the Kuwaiti islands and the Silk City project, Mubarak Al-Kabeer Port project in Boubyan Island, and many youth

(Contd. P.17...▶▶)

KU - PATENT

The President of Kuwait University, Prof. Hussein Ahmed Al-Ansari, received in his office a team of inventors from the Faculty of Computer Science and Engineering. The team included **Prof. Imtiaz Ahmed** of Computer Science Department, **Dr. Mohammed Al-Failakawi** and graduate student **Areej Helmy Hamouda** who received a patent for their invention entitled:

“Odd/ Evert Coding for Phase Change Memory with Thermal Crosstalk”

The meeting was held in the presence of the Vice President for Research, Prof. Jasem Al-Kandari, and his Assistant for External Research Collaboration & Consultation, Prof. Laila Marouf.

On this occasion, Prof. Al-Ansari congratulated the team of inventors on their distinguished accomplishment and expressed KU’s pride of this achievement, encouraging them to continue producing more distinguished scientific inventions and regis-

KU President Receives Patent Recipients from Faculty of Computing Science and Engineering and Faculty of Engineering and Petroleum



▲ President of KU receiving students patent recipients

tering them as patents.

Prof. Al-Ansari, along with Prof. Yousuf Garashi, acting Vice President for Research and his assistant, Prof. Laila Marouf, also met with student inventors **Eng. Alhussein Ali Othman**, **Eng. Mohammed Ahmed Hussein**, **Eng. Abduljalil Khaled** and **Eng. Abdullah Al-Enizi** along with their supervisor, Dr.

Khaled Al-Hazzaa of the Department of Mechanical Engineering – Faculty of Engineering and Petroleum to congratulate them on their achievement. The inventors received their patent during the academic year 2017/2018, which was announced by the United States Patent Office for their invention entitled:

“Positionable Towing Hitch”.

Prof. Al-Ansari emphasized KU’s pride in harboring such distinguished group of highly qualified and ambitious people who have put their efforts into accomplishing honorable achievements in the field of Scientific Research and receiving awards for their accomplishments, thus realizing the vision of Kuwait University to be a leading and distinguished university in the field of higher education and scientific research in light of technological development.



▲ President of KU receiving faculty members patent recipients

DISTINGUISHED
SERIES - 14

Research Reward Recipients

The Distinguished Research Series - XIV adds yet another dimension to the Research Sector's ambitious drive towards transmitting vital information on faculty members outstanding accomplishments, and spreading awareness as regards to the quality and vibrancy of research at Kuwait University. The series is focused on highlighting institutional research advances and outputs that achieve international recognition and find placement in high-ranking JCR-indexed journals of impact, known for their reputation and universal standing. Such publications bring laurels to Kuwait University, as well as recognition to concerned researchers for achieving distinguished outputs from their funded and unfunded research, and excellence in project final report.

The initiation of Distinguished Series in 2011 marked RS strategic step towards channelizing KU's research accomplishments to the wider society through exposure of KU's scientific discoveries and landmark research, transmitting new knowledge and benefits of research for global outreach. This initiative has been instrumental in dispersing key findings of as many as 60 distinguished research outputs of successfully completed research activity of KU faculty members, published so far in OVPR's Research Newsletter editions. This purpose designates the Distinguished Series with a special platform and a gateway for transferring KU's distinguished attainments for public attention and awareness. The series, currently in its 14th edition, has reported key findings of 60 research studies from 2011 until July 2018, covering highly acclaimed findings based on funded research, unfunded research, and project final reports attaining excellence.

Essentially the parameters of quality, credibility and impact of KU research fall within the framework of RS supportive policy, with clear requirements and opportunities for faculty members to reap the benefits of research excellence

and winning Research Rewards on grounds of exceptional and scientifically acclaimed research outputs. RS introduced the rewards incentive in 2010 to encourage faculty members to target quality and excellence in their research endeavors, in a dynamic shift to enhance the quality of institutional research and registering KU's scientific presence on the global platform. Quite significantly, RS reward incentive is resulting in a remarkable surge in the quality index of KU research as observed in a rapidly multiplying list of research reward winners for publishing their research outputs in JCR listed journals, an international yardstick for assessing scientific quality and impact of published research. RS is applying this yardstick in ranking faculty members published research, qualifying those researchers whose publications appear in top 25% of the JCR listed Q1 journals. The growing reward winners list clearly demonstrates the effectiveness of incentives in stimulating faculty members to be internationally competitive in their scientific endeavors through the dynamics of quality and excellence in research.

For readers information, RS Research Support regulations outline Research Rewards requirements, earmarking a reward of KD 1000/- for funded research to author(s) of distinguished research, published in top 25% of the international journals with impact factor evaluated as per the Journal Citation Report (JCR) in the concerned scientific field. For unfunded research, a KD 1000/- reward is given to the researcher or all researchers (in multi-authorship paper) for each published research in top 25% of the international journals with impact factor evaluated as per the Journal Citation Report (JCR) in the concerned scientific field. In addition, a KD 500/- reward is granted to the PI for each project Final Report of funded research that achieves "excellent" rating from external referee for scientific and humanities faculties. A financial reward of KD 4000/- is awarded to a faculty member once per project, provided the project's scientific output is published in top 25% (Q1) journals, rated as per the Journal Citation Report (JCR) in the scientific field of the candidate. Given the regulations and reward benefits, Distinguished Series XIV presents summary reports of the following four research reward recipients, outlining key findings of their distinguished research, as follows:

(For Readers information, the inclusion of research summaries is presented here exactly the way it was received from the reward winning researchers, highlighting their research objectives, and key findings.)

1. **Dr. Abeer Al-Abdalla (Funded Project MG02/13)**, Department of Pathology, faculty of Medicine. Reward awarded for the paper entitled, "Discriminatory miRNAs for the Management of Papillary Thyroid Carcinoma and Noninvasive Follicular Thyroid Neoplasms with Papillary-Like Nuclear Features", published in *THYROID Journal*, 2018,28,(3),319-327.
2. **Dr. Abrar Al-Hassan (Unfunded Project)**, Department of Quantitative Methods and Information Systems, Faculty of Business Administration. Reward awarded for the paper entitled "Online Social Stock Picking: An Empirical Examination", published in *International Journal of Electronic Commerce*, 2018, 22:1, 66-97.
3. **Prof. Haider Behbehani (Project Final Report- SC14/13)**, Department of Chemistry, Faculty of Science. Reward awarded for the Project Final Report entitled, "Green Atom Economical Routes to Biologically Interesting Diazoloazines".
4. **Dr. Khalid Al-Fadhala (Research Project - EM01/14)**, Department of Mechanical Engineering, Faculty of Engineering and Petroleum. Reward awarded as Research Project Incentive Reward.

FUNDED RESEARCH

Introduction

Papillary thyroid cancer (PTC) is the most common type of endocrine cancer and ranks within the five most common cancers in many countries including Kuwait. The increased incidence of PTC observed worldwide and the limitations facing the current diagnostic and therapeutic procedures justify the need to search for new biomarkers with diagnostic, prognostic and therapeutic potential. MicroRNAs (miRNA) are endogenous, small, noncoding RNAs that negatively regulate gene expression by degrading the target mRNAs or blocking their translation. MiRNAs play important roles in almost every biological process, including cell proliferation, and

Discriminatory miRNAs for the Management of Papillary Thyroid Carcinoma and Noninvasive Follicular Thyroid Neoplasms with Papillary-Like Nuclear Features

Prof. Iman Jahanbani, Dr. Abeer Al-Abdallah, Rola H. Ali, Nabeel Al-Brahim, and Olusegun Mojiminiyi

*Dept. of Pathology, Faculty of Medicine,
Kuwait University
(Project No. MG02/13)*

cell death. Aberrant miRNA expression is frequently observed in human cancers and has been associated with tumor development. Therefore, differential expression of miRNAs is considered a tumor specific event that reflects tumor type, behavior, and molecular alteration driving its development. Accordingly, specific miRNAs can have clinical utility as diagnostic and prognostic markers or targets to

manipulate the progression of the disease. Moreover, miRNA-gene regulatory pathways controlling various pathophysiologic processes open a new perspective in the understanding of cancer biology. Papillary thyroid carcinoma (PTC) variants have several overlapping clinical and pathological features. The World Health Organization recently published a new classification of thyroid *(Contd. P.17...▶)*

INCENTIVE REWARD

Thermomechanical processing (TMP) has been utilized in recent years for the production of ultra-fine grain microstructure in austenitic stainless steels. The process is commonly made by repetitive cycles of heavy cold rolling at room temperature to induce phase transformation from austenite γ to α' -martensite, followed by short annealing for reverse transformation to γ . This allows the production of austenite microstructure containing ultra-fine grains of 1 μm and less in size. In this project proposal, an attempt will be made to produce ultra-fine grained austenitic microstructure in 304 stainless steel. This will be achieved by applying repetitive TMP using two different routes: i) 4 cycles of moderate deformation of strain of 0.2 and annealing at 900°C for 5 min, ii) 2 cycles of large deforma-

Production of ultra-fine grained microstructure of austenitic stainless steel by repetitive thermomechanical processing

Dr. KHALED J. H.M. AL-FADHALAH

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(Project No. EM01/14)*

tion of strain of 0.4 and annealing at 800°C for 5 min. Imposing different amounts of deformation during tensile testing at -100 °C will be used to examine the effect of formation different amount of α' -martensite on reversion annealing, and thus on grain refinement. The short-time annealing in the range of 800-900°C is expected to produce ultra-fine grained austenitic microstructure via reversion mechanism.

The study will compare the development of austenite phase via reversion mechanism for the two routes. Besides that, recrystallization and grain growth are expected to have some contribution in the microstructural development. Optical microscopy and Electron Backscattered Diffraction (EBSD) will be used to assess the effect of thermomechanical processing on microstructural development. 

UNFUNDED
RESEARCH**Abstract**

This study examines the online market for social stock investing where individuals follow other investors in the community for their investment decisions. Using data from one of the largest social stock-picking marketplaces, this study explores whether and how various aspects of an individual's social networks affect his or her investment performance. Using social network methodologies and theory of social learning, this study explores the outcomes of such networks and herding behavior on investors' per-

formance. In particular, this study examines how different types of social learning—direct and indirect—impact investment performance. The results show that the network structure of a user's network (indirect social learning) has an impact on performance; in particular, following people with structural holes contributes to improved investment performance. This study also analyzes two different modes of herding (direct social learning), and finds that while information-based herding leads to

improved performance, reputation-based herding negatively affects performance. This study extends the theoretical implications regarding the role of different types of social learning in the investment realm. Platform providers should thus consider the various types of information provided to investors in the marketplace to facilitate social learning behavior that improves investment outcomes. Investors should also distinguish the type of social learning that improves their own investment outcomes. ■

FINAL REPORT

The arylhydrazonals, are considered as useful versatile reagents for many heterocyclic syntheses and their chemistry is attracting considerable recent interest. In this work, and depending on the above precursors we prepare a variety of new functionally substituted fused azines such as benzo[4,5]imidazo[1,2-b]pyridazines derivatives through one-pot method for constructing via the exocyclic intramolecular cyclization of pyridazin-5-imine. This strategy offers a simple and promising method for accessing complex structures.

These synthesized compounds we expected for them promising biological importance as reported in the literature like anti-inflammatory, anti-HIV, antiplasmodial, anti-tubercular, anti-bacterial, anticonvulsant, antidiabetic, antihypertensive, anticancer, antidepressant, antioxidant and antifungal. Also, our study was extended to use

these arylhydrazonals as precursors to synthesis a variety of bicyclo compounds such as pentaazabicyclo[3.3.1]nonanes derivatives utilizing dimethylformamide dimethylacetal (DMF-DMA) as efficient organocatalyst, since these ring systems have been the focus of numerous studies owing to their importance in industrially interesting materials, in addition to their diverse range of biological and pharmacological properties such as anticancer, antitumor, antimicrobial, antitubercular, antiarrhythmic activity, analgesic, anti-inflammatory and antifungal.

In addition, members of this fam-

ily have been shown to have human serotonin 5-HT₃ receptor and calcium antagonistic activities. Moreover the arylhydrazonals was used also to synthesis a variety of azines such as 5-arylazonicotinate and pyridazinone derivatives in addition of some azoles like pyrazolodiazines. And due to the importance of using an alternative green energy sources and other green approaches like solvents we apply in our study different green energy sources like microwave irradiation and ultrasonic irradiation in addition to using the water as solvent possessing some features such as environmentally benign, providing opportunities for clean processing and pollution prevention. ■

**“Online Social Stock Picking:
An Empirical Examination”****Dr. Abrar Al-Hassan***Dept. of Quantitative Methods and Information Systems,
Faculty of Business Administration,
Kuwait University***Green Atom Economical Routes to
Biologically Interesting
Diazoloazines****Prof. Haider Behbehani***Dept. of Chemistry, Faculty of Science,
Kuwait University
(Project No. SC14/13)*

► *Discriminatory miRNAs for ... (From P. 15)*

tumors containing significant revisions which posed the need for an updated molecular characterization. The objective of this study was to explore the miRNA expression patterns specific for the different PTC subtypes and benign tumours in order to identify biomarkers of diagnostic and prognostic utility aiming for better clinical decisions.

The expression of 84 miRNAs was studied in tissue samples and in pre- and postoperative whole-blood samples. Expression profile

of miRNAs in the tissues and in the circulation revealed differential expression in the different groups. In summary, downregulation of miR-7-5p discriminates benign tumours from hyperplasia. Upregulation of miR-222-3p discriminates follicular variant of PTC from benign tumours. High levels of miR-146b-5p distinctively characterize cPTC. Circulating miR-146b-5p, miR-222-3p, miR-155-5p, and miR-378a-3p are potential diagnostic and follow up biomarkers for PTC. These miRNAs are useful biomark-

ers in the diagnosis of PTC and benign tumours which help to avoid unnecessary thyroidectomy and improve clinical management.

I- Iman Jahanbani, Abeer Al-Abdallah, Rola H. Ali, Nabeel Al-Brahim, and Olusegun Mojiminiyi, 2018. Discriminatory miRNAs for the Management of Papillary Thyroid Carcinoma and Noninvasive Follicular Thyroid Neoplasms with Papillary-Like Nuclear Features. *Thyroid*: 28(3), 319-327. 

► *Oil Countries seminar ... (From P. 12)*

projects supported by the National Fund for Small and Medium Enterprises Development. He noted that Kuwait University also initiated a number of conferences, seminars, workshops, exhibitions for students' projects. It also supports and promotes innovation and entrepreneurship (Start-up Kuwait). All of those projects aim at empowering students and developing their skills in preparation for their involvement in the labor market.

He also pointed that the Kuwaiti economy needs tremendous dedication and effort to diversify sources of income in order to promote competition and ensure its stability and growth. These efforts include, for example, the focus on industrial development, financial services, asset management, as well as knowledge economy, and privatization of public sectors such as postal services, transport and health. They also include strengthening the active partnership between the government and the private sectors in projects like electricity, Kuwait Metro, labor cities, as well as investing in the tourism and entertainment sector and

other promising opportunities in other sectors.

Al-Ansari said that Kuwait University is honored to host Dr. Majid Al-Munif, an expert in the field of oil and energy who is also a member of the Board of Governors at OPEC and the Secretary-General of the Supreme Economic Council of Saudi Arabia. He chaired several delegations and forums specialized in this field, in addition to his academic and scientific contributions that include his recently published book entitled "Oil between the Legacy of History and the Challenges of the Twenty-First Century".

During the seminar on the challenges, risks and opportunities faced by the oil countries in light of the energy expectations during the next two decades, Dr. Majid Al-Munif discussed the impact of technology developments on oil demand and production for the coming years and its impact on the Gulf Countries, pointing that the growth of future demand for oil will be modest due to the requirements of energy and oil rationalization, especially

in all consuming sectors and in most countries of the world, except the Gulf countries which are considered the weakest in that area because of the consumption patterns and low energy prices compared to their counterparts in the rest of the world.

Dr. Al-Munif further discussed that technology developments, low costs and enabling government policies are all factors that will contribute in increasing the share of renewable energies (solar and wind energy) in the gross world energy consumption. He also added that about 40% of electricity generation capacity, which will be added along the upcoming 20 years, will be a renewable source of energy, and developing countries, especially China, will have the biggest share of these generating capacities. The increase in renewable energy will be at the expense of coal and oil, while the oil's share of the energy mix will continue to decline significantly and will be mainly used in power generation in the Middle East.

(Contd. P.24...►)

OVPR'S LATEST PUBLICATIONS

OVPR publications reflect the extent and vibrancy of scientific developments at Kuwait University

OVPR publications a vital reservoir of Strategic Information on institutional research mission, policy and programs



RS publications deliver authentic and reliable scientific information worldwide, keeping the wider community informed and updated on latest advances in scientific research at KU

OVPR's publications constitute a vital reservoir of strategic information on institutional research mission, policy, and programs, keeping the scientific and wider community informed and updated on latest advances and developments in the domain of scientific research at Kuwait University (KU). Encompassing critical information on the research support system, legislative principles, procedures and regulations governing the award of grants to faculty members for pursuing advanced and innovative research, OVPR publications constitute dependable and enduring channels for relaying and transmitting strategic information for global outreach. In-keeping with research developments, the publications sphere consistently remains in the sway of intense activity, assembling newly generated scientific information for preparing key documents, analytical reports and updates required throughout the year. During the academic year 2017/18, the developmental momentum progressed well into a new academic cycle, requiring a whole series of OVPR's publications, including its integral components (RS, APC & CGAPS). A descriptive account

of these publications (generated from November 2017 to September 2018) is summarized below:

I. Research Sector's (RS) Publications:

- **OVPR Research Newsletter, November 2017--** Released by the OVPR in November 2017,



the Research Newsletter featured the most significant research achievements that took place following the Golden Jubilee celebrations phase, with Kuwait University heading towards a new era of opportunity and challenges for achieving research excellence and sustainable growth, developing creative thinking, enhancing scientific innovation, and establishing a knowledge-based economy. The Newsletter started with the VPR's message, infusing greater vitality in faculty research for attaining new levels of scientific growth, improving research quality and achieving outputs of interna-

tional credibility and impact, as well as enhancing postgraduate research and harnessing their creative pulse in materializing and investing innovative ideas into entrepreneurial culture. The Bulletin also featured a comprehensive coverage of the Scientific Posters events for Humanities and Scientific faculties, the joint KU-KPI seminar on "Current Challenges and Future Prospects for the Oil Industry", RIG orientation session, RS multi-awards ceremony for felicitating the distinguished researchers and graduate project prize winners, and recipients of US registered patents. Also featured in this edition was the 13th consignment of the Distinguished Series featuring summary reports of the research reward incentive winners for their distinguished accomplishments from funded and unfunded research, as well as excellence in project final report. The Bulletin also covered the SPSS workshop, the inauguration of Equate's Innovation Center, several visiting delegations from various academic and research institutions, OVPR's

(Contd. P.19...▶)

► *RS Publications released ... (From P. 18)*

publications, a statistical outlook of faculty research from 1/9/2016 to 31/8/2017. For readers' information, Research Newsletter, November 2017 edition, can be accessed online on OVPR website: (<http://www.ovpr.kuniv.edu>). Published & Released (Arabic and English).



• **Kuwait University at a Glance 2017/18**-- Released in September 2018, the document

is one of KU's vital publications, presenting a distinct dimension of institutional vision and ideology, as well as academic, administrative and research processes in different sectors of Kuwait University, in an inclusive document that dynamically reflects KU's strategic development and distinguished profile for global outreach. Glance 2017-18 unfolds an empirical outlook of the programs quality and competence, and procedural mechanism efficiency, forming a dynamic and distinguished academic entity. The document's periodic responsibility is consistently being delegated to RS with the President's approval since the launching of premier issue of Glance in 2005, followed by the second issue in 2009 and the third issue in 2014. Recently, RS mobilized its resources for an intense information gathering for the fourth issue of Glance, seeking critical information directly from all faculties and institutional sectors, units and centers, for generating a strategic and integrated document encompassing the entire ramifications of institutional programs, resources, facilities, students, and activities, within the scope of a single document. The information gathering and updating phase was initiated in



June 2016, followed by the content envisioning and reviewing process, starting with the president's vision, organization, strategic plan, and academic & research procedures of various faculties and sectors, in addition to institutional goals and aspirations ahead. Published & Released (Arabic and English).

• **Priority Research Areas 2018**--

Released in 2018, the booklet featured the priority research areas recently identified in 15 major fields with various sub-fields. The document is a handy reference for researchers, covering the most critical scientific areas currently being addressed in faculty research. Faculties are constantly encouraged to submit research proposals within these areas as Priority Research is packaged with additional privileges provided for both project and researchers, full details of which are available in this document released in July 2018. For readers' information, Priority Research Areas booklet can be accessed online on OVPR website. Published & Released (Arabic and English).



• **Scientific Posters Booklets, 2018 (Humanities and Sciences)**-- RS regularly documents the scientific posters displayed at its annual Scien-

tific Posters Day events, held this year on March 7th, 2018 for Humanities faculties and on March 14th, 2018 for



Sciences. The displayed posters reflected latest research and scientific creativity of faculties based on their ongoing and accomplished research, which resulted in generating two separate booklets. The first booklet encompasses 90 posters displayed at the Humanities Posters event from five faculties (Arts, Education, Business Administration, Sharia & Islamic Studies, and Social Sciences), while the second features 138 posters displayed at the Sciences Posters event collectively highlighting the research activity of five faculties (Architecture, Engineering & Petroleum, Science, Computing Sciences & Engineering, Life Sciences) in addition to KISR. The documents included faculty-wise posters, in miniature format, constituting a record of vital information on latest research activity of faculty members, teaching assistants and graduate students. For readers' information, Scientific Posters Booklets, 2018 can be accessed online on OVPR website. Published & Released (Arabic and English).

• **Miscellaneous RS Publications**--

Advanced preparations for the upcoming Scientific Posters events (Humanities & Sciences) were initiated, involving the generation of publicity materials such as ads, invitations and booklets, as well as the printing of all posters received from the participating faculties. Also being prepared are the publicity materials required for the upcoming SPSS workshop, RIG orientation session and other RS events.

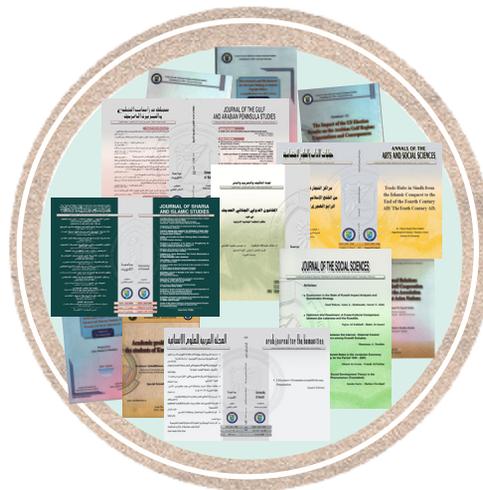
(Contd. P.20...►)

▶ *RS Publications released ... (From P. 19)*

2. Academic Publication Council (APC) Publications (Oct. 2017 – Aug. 2018):

The Academic Publications Council (APC) continued to generate latest editions of the whole range of Journals, issued periodically by Kuwait University. The journals invariably presented latest research articles and studies included in as many as 10 scientific journals released by the Academic Publication Council as follows:

- **Annals of Arts and Social Sciences**, Vol. 38, September 2017.
- **Annals of Arts and Social Sciences**, Vol. 38, December 2017.
- **Journal of Gulf & Arabian Peninsula Studies**, Vol. 43, No. 166, July 2017.
- **Journal of Gulf & Arabian Peninsula Studies**, Vol. 43, No. 167, October 2017.
- **Journal of Gulf & Arabian Peninsula Studies**, Vol. 44, No. 168, January 2018.
- **Journal of Sharia and Islamic Studies**, Vol. 32, Issue 111, December 2017.
- **Arab Journal for the Humanities**, Vol. 35, No. 140, Autumn 2017.
- **Arab Journal for the Humanities**, Vol. 36, No. 141, 2018.
- **Arab Journal for the Humanities**, Vol. 36, No. 142, 2018.
- **Journal of Engineering Research**, Year 6, No. 2, March 2018.



▲ latest APC Journal editions released (2018)

- **Journal of Sharia and Islamic Studies**, Vol. 33, Issue 112, March 2018.
- **Journal of Law**, Vol. 42, No. 2, June 2018.
- **Arab Journal for the Humanities**, Vol. 36, No. 143, Summer 2018.
- **Journal of Gulf & Arabian Peninsula Studies**, Vol. 44, No. 169.
- APC's Authorship, Translation and Publications Committee released a new book entitled "Modern International Criminal Law in the Light of the International Criminal Court Regime", Text Books Series 23, by Dr. Khaled Al-Yaqout and Dr. Eisa Al-Enezy.



3. Center for Gulf & Arabian Peninsula Studies (CGAPS) Publications: (Oct. 2017 – Aug. 2018):

The Center for Gulf and Arabian Peninsula Studies (CGAPS) released and published a series of new and latest studies and reports on issues of significance to the Arabian Peninsula region. These are as follows:

A. Registry of Current Events in the Gulf & Arabian Peninsula Region:

The document monitors and registers current events in the Gulf and Arabian Peninsula region, and recently released two editions, No. 84 (Oct.-Nov.-Dec. 2017) and No. 85 (Jan.-Feb.-Mar. 2018) detailing events that occurred in the region. The current events record is a periodical, published four times a year by CGAPS.

B. Strategic Reports Series:

The latest documents in the Strategic Reports Series are based on specialized research studies, and bridge the gap between knowledge and decision-makers. The series recently released:

- (i) **Report entitled:** "Limitations of the Components of Integrated Construction", a comparative study between the GCC and the Arab Maghreb Union on the level of participation in the integration of parliaments. The report is authored by Dr. Imad Sadok Marzouki. Released in 2018.

C. Special Scientific Series: A refereed scientific series, the

(Contd. P.21...▶)

► *RS Publications released...(From P. 20)*

document is based on specialized research, with CGAPS releasing the outcomes of a study on “*The Local Administration in the GCC Countries*,” by Dr. Fuad Aldeeb. Released in 2018.



“*Students*” M.A. Dissertation Abstract prepared by Abrar Eid Alshareedah. Released in 2018.

- Abstracts Series Issue No. 41, entitled “The Impact of the Internal, Regional, and International Factors on the Yemeni Crisis: 1962-2016” M.A. Dissertation Abstract prepared by Bader Abdullah Almhaileb. Released in 2018.

D. Abstracts Series on M.A. and Ph.D. Dissertations: The Abstracts series documents summary of Master’s and Ph.D. dissertations, with CGAPS releasing 8 abstracts issues as follows:

- Abstracts Series Issue No. 33, entitled “*The Security Dimensions to the Gulf-American Alliances at remain of Shale Gas & Oil*” M.A. Dissertation Abstract prepared by Amira Abdulhadi Matakhi, and released in 2017.
- Abstracts Series Issue No. 34, entitled “The Role of Legislative and Executive Authorities in the State of Kuwait in Counter Terrorism within the Period (2010 till 2014),” M.A. Dissertation Abstract prepared by Abdulrahman Bader Alsaed. Released in 2017.
- Abstracts Series Issue No. 35, entitled “Violence Among Public Primary Schools Pupils from Teachers’ Perspective in the State of Kuwait: Aspects and Causes” M.A. Dissertation Abstract prepared by Manal S. Alhameideh. Released in 2017.
- Abstracts Series Issue No.

36, entitled “Some Demographic Variables Related to Psychological Stress and Coping Methods Kuwait University Students” Ph.D. Dissertation Abstract prepared by Ghannam Saleh Alghanam. Released in 2018.

- Abstracts Series Issue No. 37, entitled “The Relationship between Organizational Justice Working Pressure and Mental Health Among a Sample From Kuwait Public Sector” M.A. Dissertation Abstract prepared by Latifah Khaled Abushaihab. Released in 2018.
- Abstracts Series Issue No. 38, entitled “Workaholic, Work Engagement and their Relationship with the Well-being of a Sample from Kuwait Private Sector Employees” M.A. Dissertation Abstract prepared by Fajer H. Aladwani. Released in 2018.
- Abstracts Series Issue No. 39, entitled “Loneliness and Depression in a Sample of Adolescents with Cerebral Palsy” M.A. Dissertation Abstract prepared by Nouf Akam Almutairi. Released in 2018.
- Abstracts Series Issue No. 40, entitled “Career Maturity and the Relationship between Self-esteem and Achievement Motivation in a Sample of Kuwait University Stu-

Overall, OVPR’s publications, an integral part of RS strategy for globalizing institutional research, rely on rapid production of multiple documents for meeting extensive needs of the faculty research community, and transmitting critical information on KU’s scientific advances and attainments. Publications constitute an enduring and ever-growing reservoir of scientific information, documenting latest developments in the domain of scientific research at KU, enhancing global communication for exchanging strategic information on institutional research and collaborative possibilities for joint studies, in addition to information and reports needed by policy-makers. Therefore, the Publications program essentially aims at enhancing institutional visibility and attracting global community to the vibrancy and dynamics of scientific research at KU, opening viable corridors for R & D in creative high-quality research, leading to outstanding and internationally credible outcomes and enhancing KU’s international profile. For readers’ information, RS publications are widely distributed, hardcopies are available on request, and web-users may access publications electronically on OVPR/RS websites, with browsing and downloading options (<http://www.ovpr.kuniv.edu>) & (<http://www.ovpr.kuniv.edu/research>).

GLANCE-2018

Glance 2018 unfolds Kuwait University's vision, ideology and developmental strategy towards acquiring an elite status and competitive world ranking

Glance 2018 outlines KU president's aspirations and views on developing the institution as a hub of scientific creativity and excellence

Released in September 2018, Kuwait University at a Glance is widely accessible on RS and OVPR websites

community of postgraduate students, strengthening its internal foundations, expanding its external horizons, and nurturing its global aspirations. The entire institutional framework is centered on the ideology of this strategic mission, presented throughout the entire scope of Glance 2018, traversing the institutional journey of growth and advancement, highlighting key milestones and accomplishments over periods and developmental phases.



and visually compelling publication presenting latest view of Kuwait University.

The Research Sector's consistent efforts towards dynamic portrayal of Kuwait University for global readership, crystallized into a compelling document, Kuwait University at a Glance 2018, unfolding the institutional vision for achieving competitive world standing on grounds of quality and excellence of its academic and research programs, distinguished faculty, and graduate caliber. Presenting an explicit outlook of KU President's aspirations and views on developing the institution as a hub of scientific creativity and excellence, the document provides analytical insights into the dynamics of higher education at Kuwait University, with opportunities for growth and scientific advancement. The document, widely accessible on RS and OVPR websites, was released in September 2018, presenting a concise, analytical, and empirical outlook of the institution in the cross-currents of scientific evolution, with its strong academics, distinguished research, and a driven

Conceptualized as the vision document, Glance 2018 initiative was backed by KU President's approval for an inclusive document, bringing together key elements within the framework of institutional priorities, developmental strategy, and goals ahead. This responsibility led RS to mobilize its efforts and energies towards gathering source information directly from all institutional sectors, faculty Deans, Vice Presidents, General Secretary, Graduate Affairs, Centers and Unit Heads, providing latest scientific developments and updates on their respective domains, an activity initiated and continued throughout the academic year. By the close of the year, fundamental information and updates were received from faculties and different centers and units, and the document took final shape as a scientifically

Prepared as two distinct Arabic/English documents, Glance 2018 outlines KU's mission, aspirations, developmental plan, and expanding realms of academic and scientific processes, nurturing future generations of well informed, knowledgeable and intellectually driven graduates, scholars and leaders of tomorrow, effectively registering their presence and space in the competitive world, and bringing recognition and laurels to Kuwait University. These aspirations are setting the strategic directions for the institution to acquire global dimensions, attain international credibility and find placement among the league of world-class institutions, known for their distinguished scientific and scholarly programs, quality standards, and reputable ranking. These aspirations are precisely reflected in Glance 2018, presenting an empirical outlook of Kuwait Uni-

(Contd. P.23...)

R SOFTWARE WORKSHOP

The workshop aims at training participants on analysing and presenting data by using the R Software

The Department of Research Services and Consultation at the Research Sector organized a workshop on *"Data Handling, Analysis and Visualization Using R Software"*. The workshop was dedicated to faculty members and graduate students in scientific faculties, and held on Wednesday, 21st of February 2018, in Lab (6) at Prof. Fayza Al-Kharafi Building, Faculty of Science in Khaldiya campus.

The Workshop which was conducted by Dr. Hussein Behbehani from the Biological Sciences Department at the Faculty of Sci-

ence, aimed to educate participants on managing large data in order to analyze and present it in a scientific



method with the use of the R Software. The workshop also aimed at developing researchers' data analy-

sis skills which will eventually lead to enhancing their research quality.

Stressing on the importance of this workshop, Prof. Laila Marouf, Assistant Vice President for External Research Collaboration and Consultation said that organizing this workshop lies within the framework of Research Sectors' mission to develop and enhance the skills of faculty members and graduate students in the field of high-quality scientific research, in order to achieve outputs of scientific value. At the end of the workshop, Prof. Laila Marouf honored Dr. Hussein Behbehani and thanked him for his efforts in presenting this workshop.



▲ Prof. Laila Marouf honoring Dr. Hussein Behbehani at the end of the workshop

► *Glance-2018* ... (From P. 22)

iversity's vision, ideology, and developmental strategy, the ground realities of institutional academic and scientific processes, growth and expansions, assets and acquisitions, faculty, students and scholars, opportunities and challenges, partnerships and collaborations, accreditation and visibility, and achievements and ambitions.

Encompassing the entire institutional universe within the confines of a single document, Glance 2018 is intended as a prime reference source on Kuwait University's 17 faculties, scholarly programs, research priorities, strategic plan (2018-2022), the shaping of KU's new campus site at Shadadiya as Sabah Al-Salem University City, including insti-

tutional governance, resources, centers and units, widely relaying institutional message and mission, for the scientific community, institutions, scholars and global readership. This visibility will allow wide collaboration and bonding with Kuwait University, which will certainly lead to strengthening and elevating its world standing.

► *Oil Countries seminar ... (From P. 17)*

He explained that the most important technical challenge and the most affecting on long-term oil demand is the passenger transport sector, which requires constant improvement of the efficiency of gasoline and diesel-powered vehicles, as well as the dramatic developments in electric vehicles that are known for their low cost rechargeable batteries and the extent to which the vehicle can run with a single charge. This is in addition to developments in transport patterns across cities using smart applications, sharing means of transport, such as Uber and others.

Dr. Al-Munif further elaborated that China will lead technology development, and renewable energies and electric vehicles will dominate worldwide, while the demand in developing countries will cover for the decline in the demand of industrial countries, thus making the gross increase in demand worldwide until 2040 from those countries. He also ruled out that the global demand for oil will reach its peak during the first half of the 21st century. This will lead to a reduction in carbon dioxide emissions to meet the commitments of the Paris-21 Climate Change Conference, resulting in global demand reaching its peak and then decreasing before 2040.

In addition to production, Dr. Al-Munif discussed the technical developments and the low cost of developing unconventional oil (especially shale oil), as well as the expected increases in the production of gas liquids from the development of shale gas in the United States and traditional gas in the Middle East. He also speculated that the production of unconventional oil would cover for the decrease in conventional oil production from non-OPEC coun-



▲ Seminar in progress



▲ KU President honoring Dr. Al-Munif

tries due to fields' obsolescence. He further expected that the Middle East region will cover more than 70% increase in conventional oil production worldwide.

He concluded that these expectations on both supply and demand would result in changing the direction of world oil trade, which will be dominated by the trade between the Gulf region on one side and East Asia on the other. The United States and Russia would play roles in the oil trade as oil exporters, affecting business alliances and geopolitical relations.

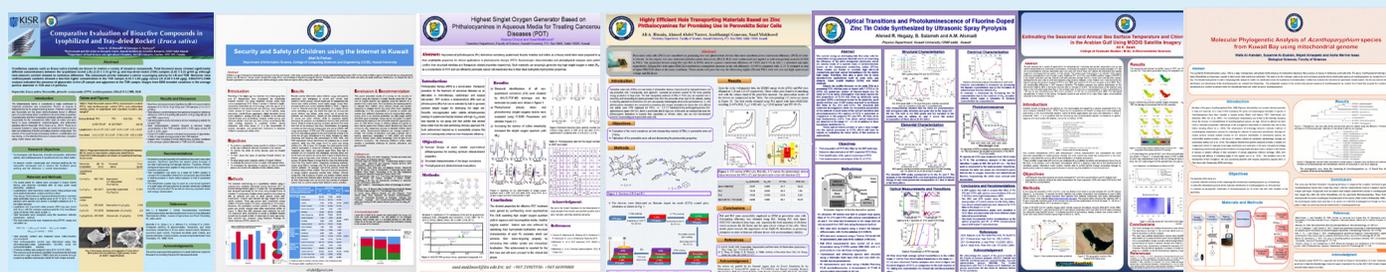
In light of these expectations' impact on the Gulf countries, Dr. Al-Munif stated that the current cycle of the oil market and the prices resulting from it may continue for a long time, requiring these countries to reconsider the development model adopted in the past decades, which is based on high oil prices expectations, the government's dominant role in the economy, a private sector dependent on government spending, low energy prices as an income redistributive or a diversification tool, a labor market with many dualities (citizen and expatriate, public and private employment, etc.), unsustainable patterns of consumption and production, and on the mindset of a private

sector and governments that tend to delay structural reforms.

He stressed that oil expectations seem relatively pessimistic, but the Gulf countries should take those expectations seriously and adopt economic, financial, commercial and employment policies that seek to diversify sources of revenues and components of GDP and energy mix. This can only be achieved by changing the development model and mindset, and understanding these global energy markets' changes, as well as the demographic changes in their countries.

On her behalf, Prof. Laila Marouf, Assistant Vice President for External Research Collaboration and Consultation, said that this event is organized by the Research Sector in cooperation with the Energy Unit at the Center of Excellence to contribute in increasing the activities related to enhancing scientific research efficiency and effectiveness in the oil sector, given its strategic importance in supporting the national economy, while taking into account the local and global environmental, economic and political changes that we are witnessing. She also indicated that this seminar is a result of the cooperation and openness policy implemented across national and regional institutions. □

► *Winners of Poster day ... (From P. 10)*



▲ The winning posters

First prize: Mr. Hashem M. Al-Mahmeed- Finance and Financial Institutions Dept.- College of Business Administration.

Second prize: Ms. Haifaa Al-Sarraf- English Language Unit- College of Education.

Third prize: Mr. Dhari O. Al-Zahameel+ Prof. Jamal A. AlEnezi- Department of Belief, Invocation and Preaching Islam- College of Sharia and Islamic Studies.

Third: Graduate Studies Category:

First prize: student Ms. Sarah Al-Fouzan- Economics Dept.- College of Business Administration, supervisor: Dr. Abbas Al-Mijren.

Second prize: student Hasan Al-Sayegh- Economics Dept.- College of Business Administration, supervisor: Dr. Nayef Al-Shammari.

Third prize: equally between student Ms. Alaa B. Al-Enezi- Psychology Dept. College of Social Sciences- supervisor: Prof. Othman AlKhidher, and student Ms. Rana Al-Jallal- Economics Dept.- College of Business Administration, supervisor: Dr. Nayef Al-Shammari.

Winners of the Scientific colleges:

First: Faculty Members Category:

First prize: Prof. Saad Makhseed+ Basma Ghazal- Chemistry Dept.- College of Science.

Second prize: Dr. Ali AbdulRasoul Hasan+ Ahmad AbdulNazeer+ Prof. Saad Makhseed+ Asaithampi Ganesan- Chemistry Dept.- College of Science

Third prize: Dr Wafaa Al-Kandari+ Dr. Suzan

Al-Bustan+ Dr. Majed Al-Naqeeb+ Asha Merine Isaac- Biological Sciences Dept.- College of Science.

Second: Academic Support Members Category:

First prize: Ms. Nour Al-Ruwaih+ Varoujan A. Yaylayan- Environment & Life Sciences Research Center- Kuwait Institution for Scientific Research.

Second prize: Ms. Asmaa M. Saleh+ Kholoud Al-Hajeri+ Maryam Al-Oud+ Dalal Ameen+ Danah Abdullah+ Dr. Dalal Al-Kazimi- Food Science and Nutrition Dept.- College of Life Sciences.

Third prize: equally between Ms. Altaf Al-Farhan- Information Science Dept.- College of Computing Sciences & Engineering, **Mr. Abdullah AlKandari+ Feras Al-Zebi-** Energy & Building Research Center- Kuwait Institution for Scientific Research, and **Mr. Benson M. Thomas+ M. Albaho+ D. Ghloum+ K. Sugumaran+ A. Al-Roumi+ J. Jacob-** Environment & Life Sciences Research Center- Kuwait Institution for Scientific Research.

Third: Graduate Studies Category:

First prize: student Ms. Rehab Masmoudy- Chemistry Dept.- College of Science, supervisor: Dr. Ali Bu Mijdad.

Second prize: student Mr. Ahmad Hejazy- Physics Dept. College of Science, supervisor: Dr. Abdul Khaleq Al-Samadi and Dr. Bilal Salama.

Third prize: equally between student Mr. Ali K. Saleh- Civil Engineering Dept. College of Engineering and Petroleum, and **Mr. Fahad Aseeri+ Ms. Ruba Al-Kandari+ Mustafa AlSammali-** Environment & Life Sciences Research Center- Kuwait Institution for Scientific Research.

OXENTIA WORKSHOP

Transformative Technology Commercialization at Kuwait University in collaboration with Oxentia

Within the framework of the Research Sector's interest in the commercialization of Kuwait University research, Prof. Jasem Al-Kandari received Mr. Pete Moores, the Commercial Director at Oxentia - Oxford's Global Innovation Consultancy. The meeting was attended by Prof. Laila Marouf, Assistant Vice President for External Research Collaboration and Consultation, Prof. Yousuf Garashi, Assistant Vice President for Research Implementation & Finance. Kuwait University is currently working with expert commercialization partner, Oxentia Ltd, to provide greater support to KU academic staff in the commercialization of their research.

Oxentia are working with Prof. Laila Marouf to develop the Knowledge Exchange and Commercialization Office at the Research Sector. The office will provide seamless, high-quality innovation support to KU



▲ RS officials with Mr. Pete Moores

researchers who wish to commercialize their research, drawing on Oxentia's worldwide knowledge of commercialization.

Universities are increasingly under pressure to maximize the impact of publicly funded research through better commercialization outcomes. Resources available for commercialization are often stretched, with universities increasingly looking to external expert support to maximize opportunities to create impact. Oxentia provides hands-on knowledge exchange and commercialization services for clients, developing their internal capability to commercialize technologies. Kuwait University has sought Oxentia's independent advice in assessing the portfolio of patents that are currently owned by the university to identify the priority projects which align with the needs of the global market. This will realize savings for the university in patent renewal fees and identify opportunities to provide tailored support to achieve commercialization outcomes.

In the course of the project, Ox-

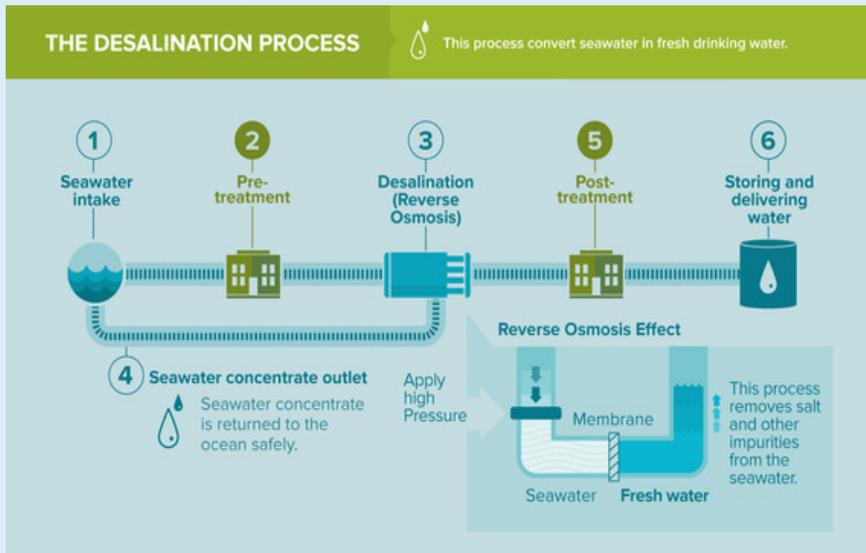
entia has assessed nearly 40 projects, developed a new process for the identification and prioritization of commercialization opportunities, reviewed and updated the Intellectual Property (IP) policy, and developed a training course to encourage researchers to participate in commercialization. Oxentia and the Patent's Office team are working closely to provide training and development support to up-skill members of the team and ensure that the Patents Office provides high-quality services to KU academics to increase commercialization activities, engagement with industry and examples of where its research projects deliver social and economic impact for Kuwait.

Oxentia has built up a global reputation, assisting over 140 universities and research institutes. They provide Intellectual Property (IP) management and commercialization consultancy expertise; support impact assessments; deliver technology and market evaluations; facilitate licensing; support translational funding acquisition and the creation of spin-out companies.

DESALINATION SEMINAR

RS organized a seminar on “Next Generation Brine Desalination” Project

The Research Sector at Kuwait University organized a scientific seminar on “*Electrodialysis Systems for Desalination*” to discuss “Next Generation Brine Desalination and Management for Efficiency, Reliability, and Sustainability” project. The key speakers were Dr. Bader Al-Anzi, Head of Environmental Technology Department at the Faculty of Life Sciences, and Dr. Patrick Altmeier, PCCell GmbH, Germany.



▲ The Desalination process

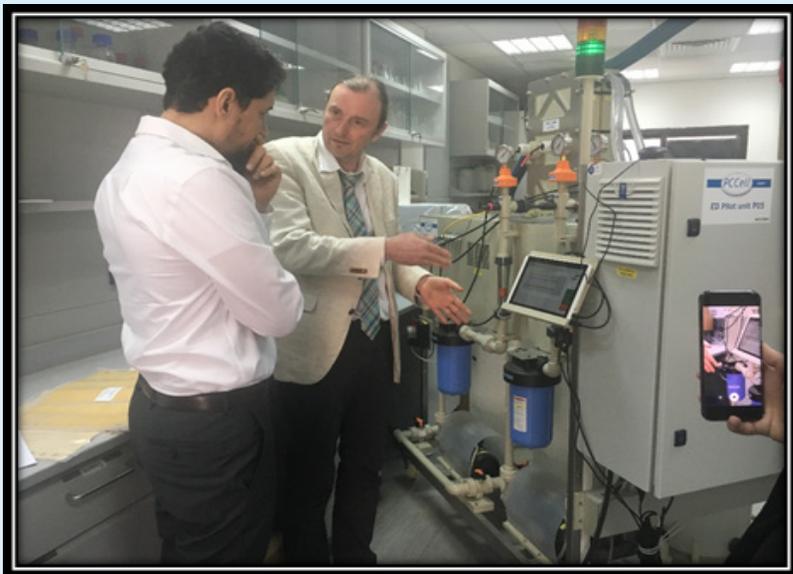
Dr. Al-Anzi said that this study is a part of highly saline water management using novel methods, which is discussed in the major project titled “*Next Generation Brine Desalination and Management for Efficiency, Reliability, and Sustainability*”, accomplished in collaboration with the prestigious MIT, United States, and funded by KFAS.

Dr Al-Anzi explained that the seminar focused on the use of electrolysis in order to address and mini-

mize the environmental impact of the continuous discharge of high salinity brines from desalination plants into our territorial waters. He further emphasized that these environmental impacts are a result of salt pollution, thermal pollution and residues of chemicals added to enhance the distillates efficiency. In addition, the nature of our coastal line does not help mitigate these impacts, given its shallowness and distant location from the Strait of Hormuz, the only source of clean water coming from the Indian Ocean, not to mention the increasingly low water flow from Shatt al-Arab.

Dr. Al-Anzi said that the study is based on desalination of brine flowing from desalination plants by using two kinds of water. The first kind is highly saline water that can be transformed into salt, while the second kind is low saline water that can be discharged into seawater or used for other purposes.

At the end of the seminar, Dr. Al-Anzi thanked KFAS for their generous funding of the project.



STATISTICS ON FACULTY RESEARCH

RS vigorously promoting the quality culture in KU research

Engaging faculties in advance creative research, improving quality, and strengthening institutional foundations, key imperatives in elevating KU's international ranking

RS dynamically inclined towards enhancing its partnership base through new alliances with private and public industrial sectors for addressing complex and challenging concerns through collaborative research

RS records a gross total of 672 projects, reflecting faculties cumulative participation in funded research midway through the academic year 2017/18

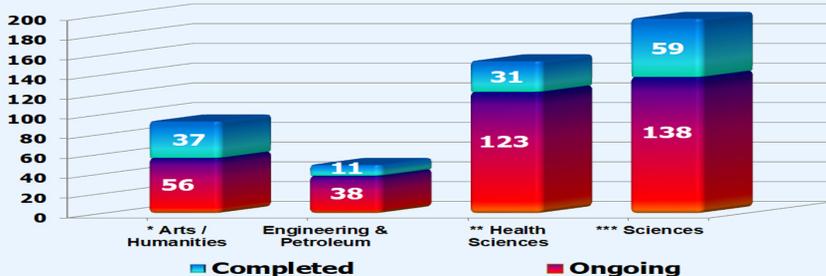
Midway through the academic year 2017/18, the faculty research dynamics exhibited growth, with 672 projects defining institutional research vibrancy and signaling further momentum ahead. Keeping track of all awarded, accomplished and newly submitted projects for grant awards; the Research Sector (RS) closely monitored the status of 672 projects in various stages of progress, completion and review reflecting the faculties' research activity until August 2018. The gross volume of research exhibited the faculties' increased reliance on facilities and resources available under the RS grant support system in pursuing their research interests in basic and applied sciences and in arts and humanities. RS offers funding support under ten types of grants, extending three levels

(Contd. P.29)▶▶

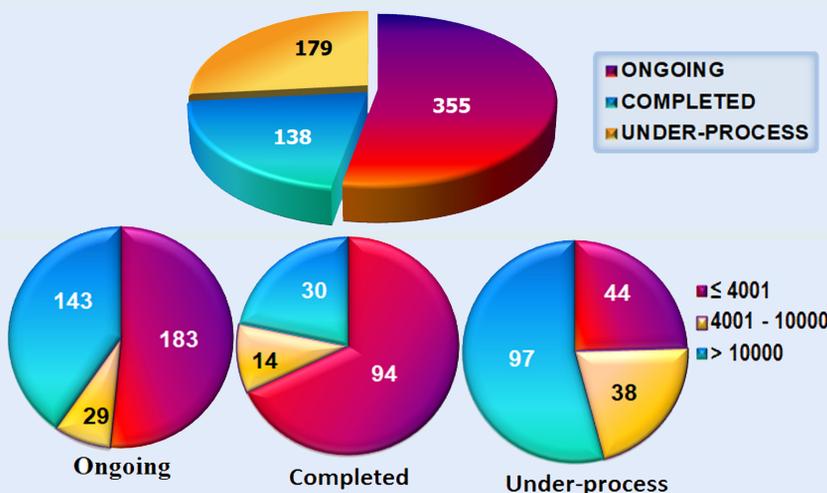
Table 1. TOTAL RESEARCH ACTIVITY*
Academic Year (2017/18) (Sept. 1, 2017 to Aug. 31, 2018)

Project Status	Funding ** Levels			Total
	less than 4001	4001 - 10,000	more than 10,000	
Ongoing	183	29	143	355 (52.8%)
Completed	94	14	30	138 (20.6%)
Under-process	44	38	97	179 (26.6%)
TOTAL	321 (47.8%)	81 (12%)	270 (40.2%)	672 (52.2%)

* Source KURS, Data from Sept. 1, 2017 to August 31, 2018. (Includes ongoing/completed projects from previous year).
** Values in KD.



* Includes the Faculties of Arts, Business Admn., Education, Law, Sharia and Social Sciences.
** Health Sciences Center Includes Faculties of Allied Health Sciences, Dentistry, Medicine and Pharmacy).
*** Includes Faculties of Architecture, Computing Sciences & Engineering, Life Sciences and Science.



► **Statistics on Faculty Research ... (From P.28)**

of funding support for meeting resource requirements of small, medium and big-budgeted projects. Specific rules and regulations govern the allocation of grants, with RS research support manual defining the principles and by-laws for awarding grants to enable researchers in planning, developing and implementing their projects in-keeping with the regulations and resource requirements. With RS thrust being on enlarging faculties' participation base in funded research, the current regulations and procedures are being reviewed to make the system more facilitative, flexible and attractive for researchers to avail the benefits of grants for pursuing their research interests and realizing their scientific ambitions. RS strategy is, therefore, driven towards enhancing researchers' confidence in the grant support system, building communication bridges across faculties, developing alliances with external institutions, and creating a researcher-friendly environment that encourages faculties towards innovative and advanced research.

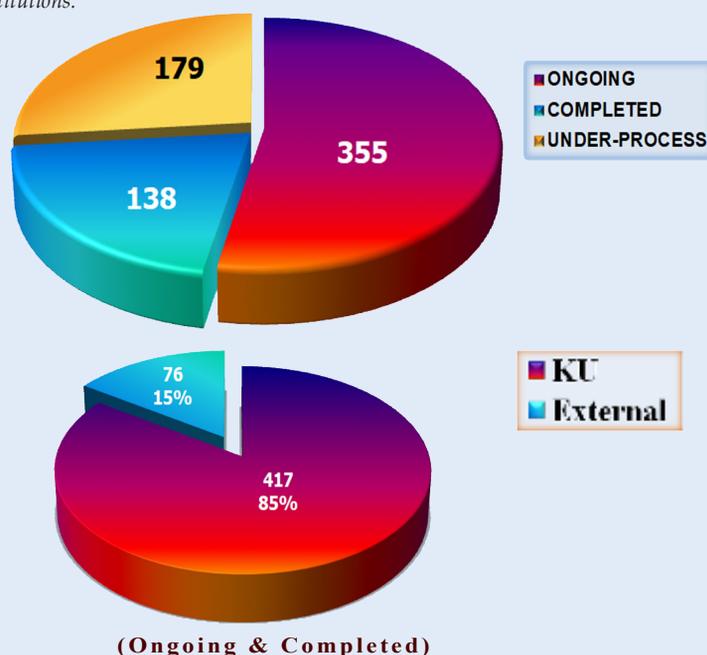
The fundamentals of this strategy are observable in the quantum of faculty research within a given time frame, the current outlook of which is presented in terms of the statistical profile of institutional research activity until August 2018. As per available, RS recorded a total of 672 projects, of which 355 (52.8%) were ongoing, 138 (20.6%) completed, and 179 (26.6%) under-process (Table 1). Distribution of these projects by funding levels showed

Table 2(a). TOTAL ONGOING, COMPLETED & UNDER-PROCESS PROJECTS by FACULTY & FUNDING SOURCE, Academic Year (2017/18) (Sept. 1, 2017 to Aug., 31, 2018)*

FACULTY	ONGOING		COMPLETED		UNDER-PROCESS		TOTAL		GRAND TOTAL
	KU	EXT**	KU	EXT	KU	EXT	KU	EXT	
Allied Health Sciences	6	2	2	-	9	3	17	5	22
Architecture	2	-	-	1	1	-	3	1	4
Arts	5	-	6	-	4	2	15	2	17
Business Admn.	14	3	7	1	8	4	29	8	37
Computing Sciences & Engineering	18	4	9	1	3	2	30	7	37
Dentistry	11	1	1	-	4	1	16	2	18
Education	3	1	-	4	3	-	7	4	11
Engineering & Petroleum	30	8	8	3	16	30	54	41	95
Law	-	-	1	-	-	-	1	-	1
Life Sciences	9	2	6	-	1	5	16	7	23
Medicine	63	16	21	3	12	9	96	28	124
Pharmacy	22	2	4	-	4	2	30	4	34
Science	79	24	38	4	27	18	144	46	190
Sharia	11	-	12	-	8	-	31	-	31
Social Sciences	19	-	6	-	3	-	28	-	28
TOTAL	292	63	125	13	103	76	517	155	672
	└─┬─┘		└─┬─┘		└─┬─┘		└─┬─┘		
	355		138		179		672		
	└─┬─┘		└─┬─┘		└─┬─┘		└─┬─┘		
	493		138		179		672		
	(73.3%)				(26.7%)				

* Source KURS, Data from Sept. 1, 2017 to August 31, 2018.

** External Institutions.



maximum 321 (47.8%) projects figuring under the lowest budgetary category of less than KD 4001/-, followed by 270 (40.2%) projects in highest budgetary cat-

egory of more than KD 10,000/-, while 81 (12%) projects were in the medium budgetary category (KD 4001-10,000/-).

(Contd. P.30... ►)

► **Statistics on Faculty Research ... (From P.29)**

Cumulatively, 351 (52.2%) projects accounted for a consolidated total of faculty research activity in the medium and highest budgetary categories, somewhat exceeding the small-budgeted projects. These figures indicate faculties' preferences of big-budgeted and multi-objective studies. With larger count of big-budgeted under-process projects, an improvement in the dynamics of large-scale studies is expected ahead, considering that such studies are increasingly becoming more relevant in addressing contemporary challenges, concerns and realities of modern times, essentially falling within the framework of RS mission and goals, and reflecting RS committed efforts towards realizing the institutional aspirations and improving KU's scientific standing and world ranking.

An analytical outlook of all projects by funding levels showed the predominance of 321 (47.8%) projects falling in the lowest budgetary category, while maximum 270 (40.2%) projects were enlisted in the highest budgetary. This development signals faculties increased momentum towards small projects with limited-objectives and shorter-duration

in times ahead (Table 1).

Latest statistics also showed all faculties to be the grant recipients and beneficiaries of RS funding support, despite varying levels of their respective research participation. Analyzing faculty-wise research activity in terms of ongoing and completed projects which included 355 (52.8%) ongoing and 138 (20.6%) completed projects, statistics show the

top grant recipients were the faculties of Science (190), Medicine (124), and Engineering & Petroleum (95), collectively accounting for 409 ongoing and completed projects, while remaining 263 grants were distributed over the other faculties (Table 2a). The under-process projects are excluded from this analysis, with a line-up of 179 (26.7%) proposals pending grant approval for
(Contd. P.31)►

Table 2(b). Eight - Years of ONGOING & COMPLETED Research by Faculty Groupings (2010/11, 2011/12, 2012/13 , 2013/14, 2014/15, 2015/16, 2016/17 & 2017/18)

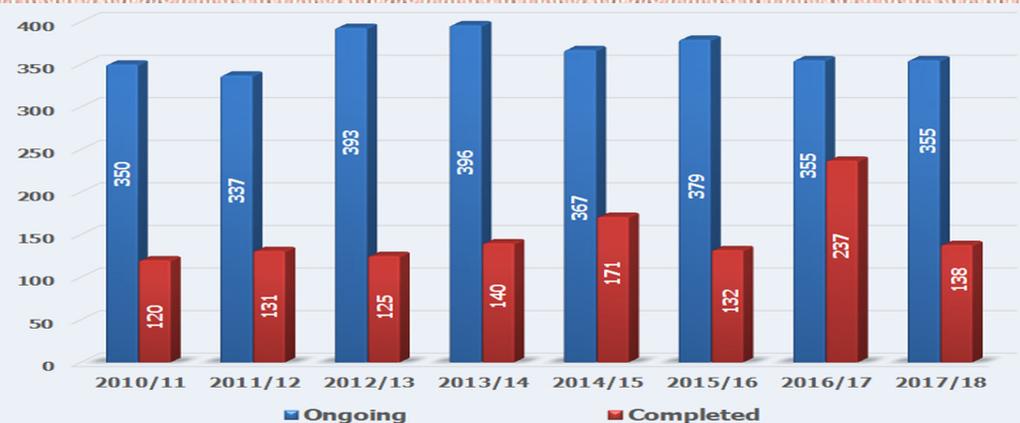
Years	Faculty Groupings										GRAND TOTAL
	Arts/ Humanities*		Engineering & Petroleum		Health Sciences**		Sciences***		TOTAL		
	Ongoing	Completed	Ongoing	Completed	Ongoing	Completed	Ongoing	Completed	Ongoing	Completed	
2010/11	37	22	62	18	129	39	122	41	350	120	470
2011/12	51	24	51	26	114	52	121	29	337	131	468
2012/13	64	30	63	20	129	32	137	43	393	125	518
2013/14	56	39	54	20	135	39	151	42	396	140	536
2014/15	58	39	49	20	114	53	146	59	367	171	538
2015/16	72	38	35	18	116	35	156	41	379	132	511
2016/17	72	71	33	26	110	61	140	79	355	237	592
2017/18	56	37	38	11	123	31	138	59	355	138	493
TOTAL	466	300	385	159	970	342	1,111	393	2,932	1,194	4,126

* Includes the Faculties of Arts, Business Admn., Education, Law, Sharia and Social Sciences.

** Health Sciences Center Includes Faculties of Allied Health Sciences, Dentistry, Medicine and Pharmacy).

*** Includes Faculties of Architecture, Computing Sciences & Engineering, Life Sciences and Science.

Source RS Annual Reports 2009/10 , 2010/11 , 2011/12 , 2012/13 , 2013/14, 2014/15 & 2015/16



► **Statistics on Faculty Research ... (From P.30)**

acquiring the active status. The maximum proposals were received from the faculties of Engineering & Petroleum (46), Science (45), Medicine (21), whereas (12) proposals each submitted by the faculties of Business Administration and Allied Health equally, (8) proposals submitted by the faculty of Sharia & Islamic Studies, (6) proposals each submitted by the faculties of Arts, Life Sciences and Pharmacy, (5) proposals each submitted by the faculties of Dentistry and Computing Sciences & Engineering, (3) proposals each submitted by the faculties of Education and Social Sciences and a single proposal was submitted by the Faculty of Architecture. As the year progresses, participation levels of faculties are bound to change, with continuous addition of newly approved projects, increasing the faculties' respective projects count and eventually reflecting on their performance and research outputs.

Analytically, faculties' collective participation in ongoing research accounted for 355 (52.8%) projects, actively being pursued through the academic year 2017/18. Faculty-wise distribution of these projects showed maximum of 138 ongoing projects being pursued across the sciences faculties (Architecture, Computing Sciences & Engineering, Life sciences and Science), followed by 123 ongoing projects in progress at the Health Sciences Center faculties

(Medicine, Dentistry, Pharmacy and Allied Health Sciences), 56 ongoing projects were credited to Arts & Humanities faculties (Arts, Business Administration, Education, Law, Sharia and Social Sciences), and 38 projects reflected Engineering & Petroleum faculty's ongoing research (Table 2b). A further analysis by funding-levels

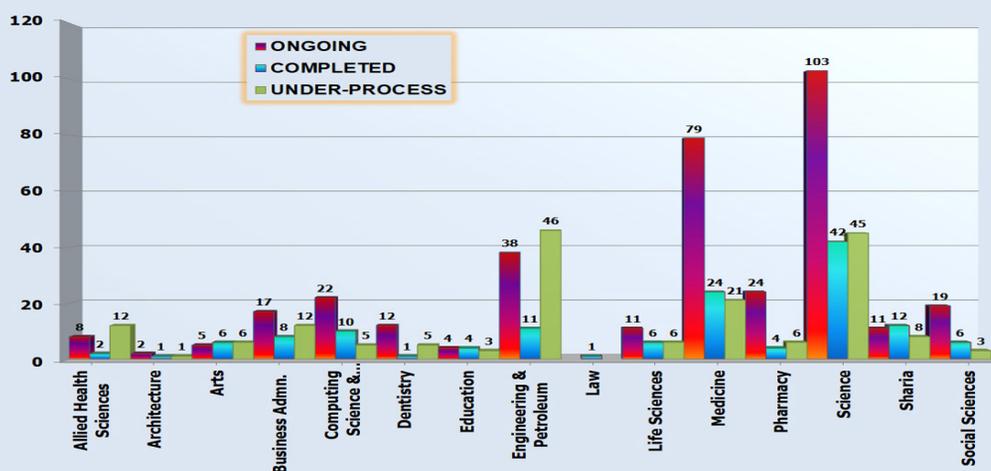
showed a higher concentration of 183 ongoing projects and 94 completed projects in the lowest budgetary category (Table 3). Faculty-wise, Scientific faculties achieved higher completion rate with 59 projects, followed by Arts & Humanities faculties with

(Contd. P.32)..►►

Table 3. PROJECTS STATUS by FACULTY & FUNDING LEVELS**
Academic Year 2017/18 (Sept. 1, 2017 to Aug. 31, 2018)*

FACULTY	ONGOING			COMPLETED			UNDER-PROCESS			TOTAL
	less than 4001	4001 - 10,000	more than 10,000	less than 4001	4001 - 10,000	more than 10,000	less than 4001	4001 - 10,000	more than 10,000	
Allied Health Sciences	1	2	5	1	-	1	2	2	8	22
Architecture	2	-	-	-	-	1	1	-	-	4
Arts	5	-	-	6	-	-	3	3	-	17
Business Admn.	14	3	-	7	1	-	6	5	1	37
Computing Sciences & Engineering	11	3	8	6	-	4	1	2	2	37
Dentistry	6	1	5	1	-	-	3	1	1	18
Education	3	-	1	2	1	1	2	1	-	11
Engineering & Petroleum	15	5	18	4	2	5	7	8	31	95
Law	-	-	-	1	-	-	-	-	-	1
Life Sciences	7	1	3	1	4	1	-	1	5	23
Medicine	36	3	40	17	1	6	1	2	18	124
Pharmacy	17	1	6	4	-	-	-	2	4	34
Science	40	6	57	26	5	11	9	10	26	190
Sharia	11	-	-	12	-	-	8	-	-	31
Social Sciences	15	4	-	6	-	-	1	1	1	28
TOTAL	183	29	143	94	14	30	44	38	97	672
	355			138			179			
	(52.8 %)			(20.6 %)			(26.6 %)			

* Source KURS, Data from Sept. 1, 2017 to August 31, 2018.
** Values in KD.



► **Statistics on Faculty Research ... (From P.32)**

boosting its partnership process through new understandings and agreements with external institutions.

RS research support system has provision for ten Types of Grants, and researchers have the option of submitting proposals under any grant support category as per their research needs. A collective outlook of ongoing and completed projects by Types of Grants is presented in Table 5a. Numerically, maximum 253 (51.4%) projects were listed under the University Research grants category, 76 (15.4%) were External Research projects, 68 (13.8%) Graduate Students Research projects, 47 (9.5%) RIG

projects, 26 (5.3%) Priority Research projects, 17 (3.4%) General Facility projects, 4 (0.8%) SRUL projects and 2 (0.4%) projects were enlisted under the GCC joint grants category, while midyear statistics did not register any project in the University Service grant's category.

Overall, the University Research projects category was the most favored type of grant enlisting maximum projects, and forming the proverbial backbone of the RS grant support system. In comparison, the projects under other grant support categories were aimed at specific purposes, such as the RIG initiative, post-graduate research, analytical and specialized research, each focused on a specific need. For instance,

RIG grants are reserved only for newly appointed Kuwaiti faculty members at the Assistant Professor's level, Graduate research grants are directed at students pursuing Master's and Ph.D. level studies, while general facility grants are aimed at enhancing institutional infrastructural and equipment resources for analytical, experimental and in-depth studies.

Table 5b shows the distribution

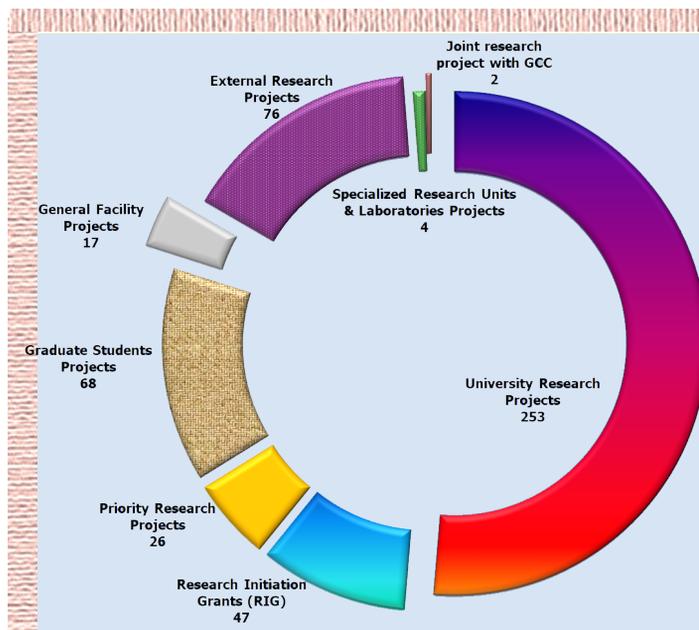
Table 5(a). ONGOING & COMPLETED RESEARCH PROJECTS by TYPES of GRANTS Academic Year 2017/18 (Sept. 1, 2017 to Aug. 31, 2018)*

Faculty	Types of Grants								Grand Total
	URP	RIG	PRP	GRP	GFP	ERP	SRUL	GCC	
Allied Health Sciences	5	1	1	1	-	2	-	-	10
Architecture	-	2	-	-	-	1	-	-	3
Arts	6	5	-	-	-	-	-	-	11
Business Admn.	17	4	-	-	-	4	-	-	25
Computing Sciences & Engineering	20	2	2	1	1	5	1	-	32
Dentistry	11	-	-	-	-	1	1	-	13
Education	5	1	1	-	-	1	-	-	8
Engineering & Petroleum	21	6	7	-	4	11	-	-	49
Law	-	1	-	-	-	-	-	-	1
Life Sciences	9	-	2	4	-	2	-	-	17
Medicine	34	8	4	35	1	19	1	1	103
Pharmacy	11	1	2	12	-	2	-	-	28
Science	75	9	-	11	11	28	1	1	145
Sharia	16	7	-	-	-	-	-	-	23
Social Sciences	23	-	2	-	-	-	-	-	25
TOTAL	253 (51.4%)	47 (9.5%)	26 (5.3%)	68 (13.8%)	17 (3.4%)	76 (15.4%)	4 (0.8%)	2 (0.4%)	493

* Source KURS, Data upto August 31, 2018.

URP -- University Research Projects
PRP -- Priority Research Projects
GCC -- Joint Research Project with GCC
ERP -- External Research Projects

RIG -- Research Initiation Grants
GRP -- Graduate Research Projects
GFP -- General Facility Projects
SRUL -- Specialized Research Units & Laboratories Projects



of under-process projects in each type of grant, with the maximum line-up of 75 (41.9%) proposals under the University Grants category, followed by 76 (42.4%)

(Contd.P.34... ►)

► **Statistics on Faculty Research ... (From P.33)**

proposals under the category of External Research projects, 14 (7.9%) proposals under the Priority Research grant category, 8 (4.5%) proposals under the Graduate Students Research category, 5 (2.8%) proposals under the category of General Facility projects, and 1 (0.5%) proposal awaits grant approval under the category of National Research projects.

The fundamental requirement of all types of grants is a project's productivity, and it is imperative that all awarded projects must generate potentially significant outputs that result in research papers, published in refereed journals of international repute with an impact factor as per the JCR index. Such publications are indicative of the quality and impact of results obtained, enhancing the scientific value of an accomplished research. Therefore, RS is vigorously promoting the dynamics of quality in KU research through a well-defined evaluation mechanism ascertaining the quality of accomplished research, and reflecting on a project's overall performance based on the appearance of research publications in high ranking JCR listed journals.

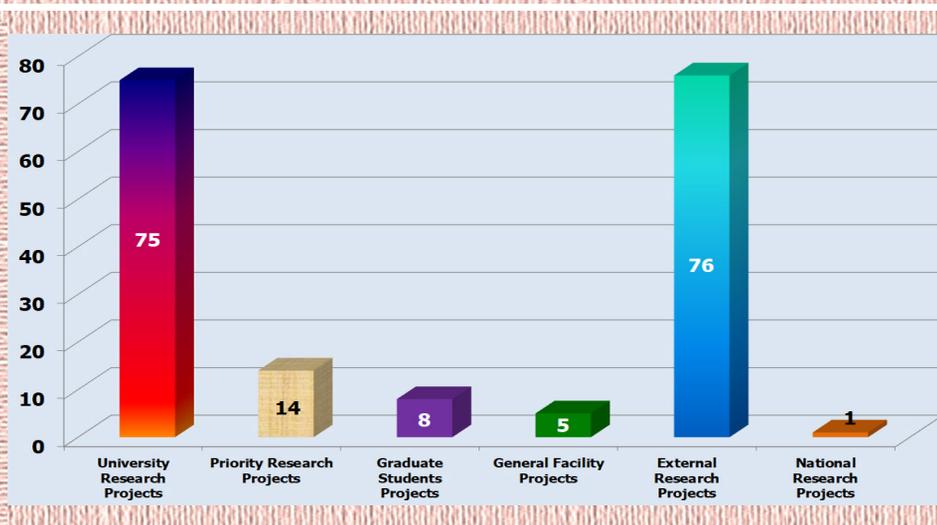
A comparative outlook of faculties publications generated from funded research over the last seven calendar years (2012 – 2018)

Table 5(b). Under-process RESEARCH PROJECTS by TYPES of GRANTS Academic Year 2017/18 (Sept. 1, 2017 to Aug. 31, 2018)*

Faculty	Types of Grants						Grand Total
	URP	PRP	GRP	GFP	ERP	NRP	
Allied Health Sciences	8	1	-	-	3	-	12
Architecture	-	1	-	-	-	-	1
Arts	4	-	-	-	2	-	6
Business Admn.	7	-	-	1	4	-	12
Computing Sc. & Engineering	3	-	-	-	2	-	5
Dentistry	4	-	-	-	1	-	5
Education	1	1	-	-	-	1	3
Engineering & Petroleum	10	6	-	-	30	-	46
Law	-	-	-	-	-	-	-
Life Sciences	1	-	-	-	5	-	6
Medicine	6	1	2	3	9	-	21
Pharmacy	1	1	2	-	2	-	6
Science	20	2	4	1	18	-	45
Sharia	8	-	-	-	-	-	8
Social Sciences	2	1	-	-	-	-	3
TOTAL	75 (41.9%)	14 (7.9%)	8 (4.5%)	5 (2.8%)	76 (42.4%)	1 (0.5%)	179

* Source KURS, Data from Sept. 1, 2017 to Aug. 31, 2018.

URP -- University Research Projects PRP -- Priority Research Projects
 GRP -- Graduate Research Projects GFP -- General Facility Projects
 ERP -- External Research Projects NRP -- National Research Projects



is presented in Table 6a, showing the performance levels achieved by respective faculties in terms of the yearly count of their published papers. Starting with 2012 as the base year, faculties cumulative productivity enlisted 141 published papers during the calendar

year 2012, 163 during 2013, 144 during 2014, 114 papers during 2015, 144 during 2016, 121 papers during 2017, and 46 publications in 2018. The volume of publication during the current year, however, continues to be in the state of flux, based

(Contd.P.35...►)

► **Statistics on Faculty Research ... (From P.34)**

as it is on the timing of concerned journal's actual release. Faculty-wise, all colleges enlisted high quality publications, yet faculties of Science, Medicine, and Engineering & Petroleum outperformed other faculties with a much larger volume of published papers in international refereed journals with an impact factor.

While quality index in KU funded research is continuing to improve, RS initiative of offering rewards incentive for pro-

moting the quality norm in faculty research, is simultaneously benefitting a huge segment of researchers for publishing their unfunded research outputs in high-ranking JCR indexed journals with an impact factor, significantly enhancing the quality and global visibility of KU research. The statistical aggregate of faculty members' publications from funded research over the past eight calendar years (2011 – 2018), is presented in Table 6b, cumulatively accounting for a total of 1,042 publications, of which 864 (83%) papers were published in high-ranking Q1 to Q4 journals with an impact factor, and 178 (17%) papers appeared in un-refereed "no impact" journals. In terms of the quality index, 333 (32%) publications from funded research appeared in Q1 (top

1- 25%) journals with an impact factor, 235 (22.6%) publications appeared in Q2 (26-50%) top to good journals, 189 (18.8%) publications were included in Q3 (51-75%) good to medium ranked

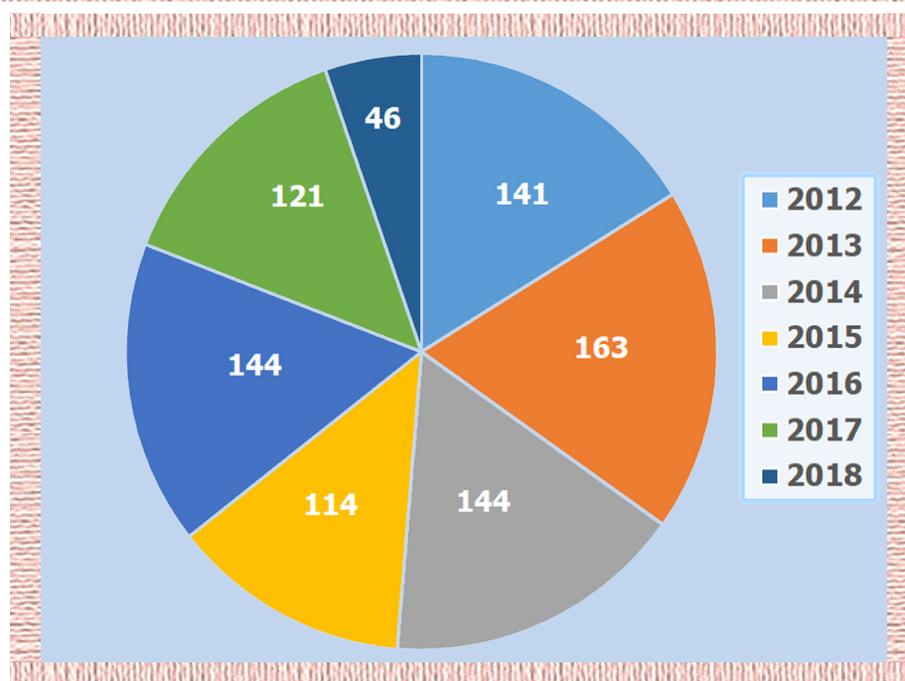
journals, and 107 (10.3%) publications appeared in Q4 (76-100%) medium to low ranked journals. These figures reflect the quality curve in faculty research, with researchers

(Contd.P.36... ►)

Table 6(a). Published Papers from Funded Research, Comparative Seven Calendar Years (2012 - 2018)

FACULTY	F U N D E D							TOTAL
	2012	2013	2014	2015	2016	2017	2018*	
Allied Health Sciences	2	6	6	2	4	1	1	22
Architecture	-	-	-	-	-	-	-	-
Arts	4	4	2	5	6	3	-	24
Business Admn.	2	3	7	6	7	5	4	34
Computing Sciences & Eng.	-	-	1	2	5	7	1	16
Dentistry	8	8	8	6	12	6	2	50
Education	1	4	4	2	4	3	-	18
Engineering & Petroleum	21	22	24	17	21	10	7	122
Life Sciences	12	10	2	1	2	3	3	33
Medicine	30	33	29	29	29	31	6	187
Pharmacy	5	8	5	5	5	5	1	34
Science	46	53	50	35	41	41	20	286
Sharia	3	3	2	1	1	3	1	14
Social Sciences	7	9	4	3	7	3	-	33
TOTAL	141	163	144	114	144	121	46	873

*2018 Publication Count upto July 1, 2018.

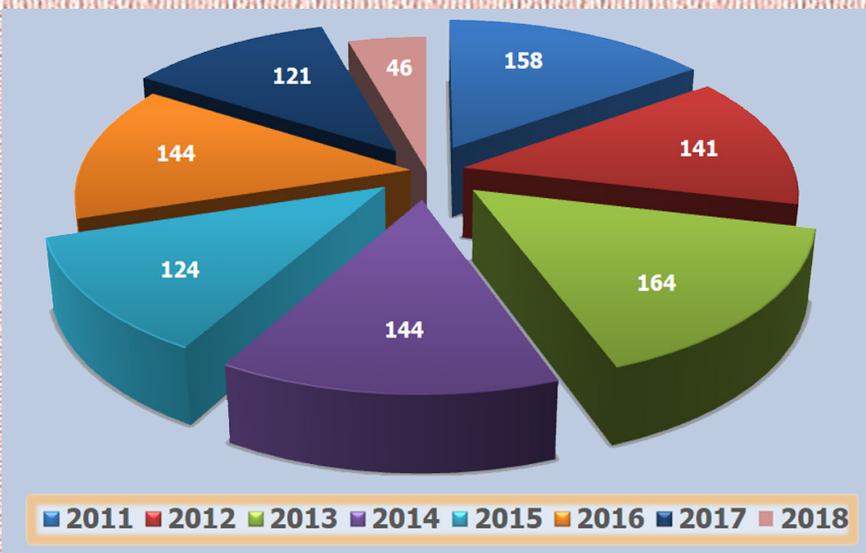


► **Statistics on Faculty Research ... (From P.35)**

Table 6(b). Total Publications from Funded research in JCR indexed Journals with an Impact Factor, Eight Calendar years record (2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018)*

Journals	Publications (Funded Research)								Total
	2011	2012	2013	2014	2015	2016	2017	2018	
Q1	26	37	43	53	35	56	59	24	(32%) 333
Q2	36	33	32	32	38	30	23	11	(22.6%) 235
Q3	37	29	43	20	25	15	15	5	(18.1%) 189
Q4	22	18	17	19	9	17	4	1	(10.3%) 107
T	121	117	135	124	107	118	101	41	(83%) 864
NIF*	37	24	29	20	17	26	20	5	(17%) 178
Grand Total	158	141	164	144	124	144	121	46	1,042

Q1: Top 1 - 25% of the journals with impact factor ranked in accordance to JCR** by Specific Subject Area of Research.
 Q2: Top 26 - 50% of the journals with impact factor ranked in accordance to JCR** by Specific Subject Area of Research.
 Q3: Top 51 - 75% of the journals with impact factor ranked in accordance to JCR** by Specific Subject Area of Research.
 Q4: Top 76 - 100% of the journals with impact factor ranked in accordance to JCR** by Specific Subject Area of Research.
 *NIF - No Impact Factor
 **2017 data upto September 2017.



of research and enhancing international visibility of KU research, a mission central to RS strategy. With faculties growing preference for high-quality JCR indexed journals to publish their research outputs; RS is steadily moving towards achieving an upward incline in the quality of faculty research, an essential prerequisite for the realization of institutional mission and global aspirations.

Currently, RS grant support system is under review

for valid reformations and inclusions to make the system more facilitative and attractive for researchers. The system's regulations and procedural mechanism are also being simplified to expedite grant clearance and research implementation. Towards this ultimate objective, RS is enhancing direct contact and communication with faculties and researchers, addressing their research-related concerns, and creating a vibrant and congenial environment that stimulates creativity and leads to discovery, while spreading the research culture, improving research quality and strengthening the institutional scientific foundations, the key imperatives in elevating Kuwait University's international profile and presence.

increasingly inclined towards high ranking journals for publishing their research outputs, as visible in the inclusion of 864 (83%) publications in high quality journals with an impact factor. Also, a significant decline is simultaneously

observed in 178 (17%) papers published in journals of "no impact." This development in faculty research signals the effectiveness of RS research assessment methodology, as well as research rewards stimulus in improving the quality