

OVPR RESEARCH Newsletter



Kuwait University

Dec. 2016

Marking the Glorious Golden Jubilee Year



Kuwait University covers a distinct milestone, a 50 years profound journey of growth, expansion and advancement, as it heads towards a new era of opportunity and challenge amidst joyous celebrations across all Sectors and Faculties joining hands in observing the memorable occasion



RS New Executive Team

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Research (Sept. 1, 2015-
Aug. 31, 2016)



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OVPR Newsletter Dec., 2016

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VPR's MESSAGE

Vice President for Research highlights KU's role as an enlightening source of knowledge and science in various community related fields

This year, Kuwait University covers a significant milestone, having traversed a glorious 50 years profound and progressive journey of growth, expansion and advancement, heralding a new era of opportunity and challenge, amidst the euphoria of joy and celebrations. On this memorable occasion, sharing its pride and joy, the Research Sector (RS) participated in a series of events to mark Kuwait University's 50th

RS marks Kuwait University's 50th Golden Jubilee celebrations, with an assurance to carry forward the historic legacy to new levels of scientific growth and creative excellence



Prof. Taher A. Al-Sahhaf
Vice President for Research

Golden Jubilee year, with an assurance to carry forward the historic legacy to new levels of scientific growth and creative excellence. While displaying its key publications at the ceremonial occasion, tracing the growth and dynamics of scientific research at Kuwait University, RS participation primarily aimed at refreshing and unfolding KU's history during the past 50 years, highlighting institutional leading role and distinguished journey in enriching the academic and research processes, the critical pillars of higher education at KU.

Speaking on the occasion, Prof. Taher Al-Sahhaf, Vice President for Research, appreciated the significant role of Kuwait University, as an academic institution and scientific entity, in the development of Kuwait, and providing several generations of graduates of diverse specializations, with many having held leading positions in the country. He also pointed out that Kuwait University, having kept abreast of the development of Kuwait, established several new faculties in diverse and specialized disciplinary streams, opening the door for additional opportunities for higher education in different specialties and fields.

Continuing further, the Vice President added that Kuwait University was, and continues to be an enlightening source of knowledge and science in various community-related fields, and a profound institution for knowledge, creativity and research, contributing



Prof. Yousuf Garashi

KU a pioneer in scientific advancement and development

KU a source of pride and glory being home to knowledge



Prof. Haider Behbehani

KU a center of investment in creative and knowledgeable youth



Dr. Laila Marouf

GCC RESEARCH PROGRAM

“GRP opens a new window of opportunity for KU faculty members to address dominant regional concerns & strategic priorities by joining hands with researchers from GCC universities” ... Vice President for Research

In a strategic new initiative, collaborative research efforts were poised for significant development across the Gulf Cooperation Council (GCC) countries, with the launching of GCC Research Program (GRP), aimed at encouraging pursuit of advanced and innovative research in joint collaboration with researchers from GCC universities. Initiated in May 2016, the program’s founding members, representing the Universities of Kuwait, Bahrain, Qatar, Saudi Arabia and Oman,

In a strategic new initiative, the Gulf Cooperation Council countries launch GCC Research Program (GRP) for developing advanced & innovative research in collaboration with specialists and experts from GCC universities



▲ GCC Research Program Founding Members

GCC Research Program grounded in the principle of collaboration and shared expertise for spearheading scientific advancement as the basis for knowledge-based economy

joined hands to form a regional consortium, bringing together experts and researchers to address research priorities, discover new knowledge and generate high impact outputs as a strategic step towards enhancing the sphere of collaborative research. The program, widely announced by the Vice President for Research, Prof. Taher Al-Sahhaf, across facul-

ties in July 2016, was aimed at opening a *new window of opportunity* for Kuwait University faculty members to join hands with specialists and researchers from GCC universities and research institutions, for addressing dominant regional concerns in areas of strategic priorities, in addition to developing resources, and encouraging the spirit of entrepreneurship. The program seeks to instill the values of shared expertise and experiences, with researchers joining hands across the GCC universities, in the common pursuit of basic and applied sciences research through the principle of collaboration.

The program’s key objectives are primarily centered on developing potentialities and indigenous



▲ A line-up of GCC Universities Representatives joining hands to form a regional consortium

► *RS celebrates KU's 50th Golden Jubilee Anniversary ... (From P. 3)*

to advancement in diverse sciences and scientific fields.

Sharing similar thoughts on the occasion, Prof. Yousuf Garashi, Assistant Vice-President for Research and Director, Research Implementation & Finance, said that Kuwait University is a source of pride and glory being home to knowledge and a center for dissemination of sciences that serve humanity in Kuwait and the world. The in-

stitution is responsible for preparing generations, capable of carrying the responsibilities of leading the country's institutions towards success, and comprehensive development of the Kuwaiti society.

Marking the memorable event, Prof. Haider Behehni, Assistant Vice-President for Research and Director Research Analysis & Development, said that in celebrating the 50th anniversary of Kuwait University we remember institutional accomplishments on the academic and research fronts. There is no doubt that the development of the nation is measured by its distinguished research, as it offers scientific solutions to many outstanding issues and challenges that face communities. In this endeavor,



▲ *Celebrations across Sectors and faculties marking Kuwait University's Golden Jubilee Anniversary*

RS endeavoring towards unifying all efforts in elevating the academic and research processes to raise KU's regional & international standing

Kuwait University, represented by Research Sector, has consistently worked for years in supporting scientific and technological ventures, laying the foundation and roadmap of research development at the country level, by encouraging faculty members and harnessing all potentials and research capabilities, to facilitate redressal of issue-based research at KU. Hav-

ing established the foundation of scientific research, Kuwait University has become a pioneer in scientific advancement and development, and in this mission, the Research Sector is endeavoring towards unifying all efforts in elevating the academic and research processes to raise Kuwait University's regional and international standing.

Extending her gratitude to all

Dr. Laila Marouf, Assistant Vice President for Research and Director External Research Collaboration & Consultation, desired for greater success ahead over the next fifty years. She also warmly congratulated KU's family, administration and students, graduates and faculty members, administrative staff and workers, on their relentless efforts and gross achievements over the past fifty years. Dr. Laila also applauded the university youth, whom the institution counts on in carrying forward the developmental process in the years ahead, since youth is the key driver of the development process, who contributed towards Kuwait University's fifty-year endeavor, and KU is the center of investment in creative and knowledgeable youth. ■

MULTI AWARDS CEREMONY

RS honors academic year 2015/16 Distinguished and Best Young Researchers, Patent Recipients, and Scientific Posters Award winners

In a widely attended multi-awards ceremony, organized by the Office of the Vice President for Research (OVPR), a distinguished community of faculty researchers and graduate students were honored for their outstanding research accomplishments in basic and applied sciences, and in arts & humanities. Be-fitting honors were also accorded to the recipients of US registered patents, as well as 2015/16 winners of best posters in the humanities and scientific posters events, organized by the Research Sector (RS). The event's ceremonial highlight was the recognition of scientific excellence, creativity and inventive potential of researchers, a significant reflection of their research accomplishments, and a vital source for institutional scientific advancement, a mission integral to Kuwait University's developmental strategy. It is largely within the framework of these aspirations that the rewards event, held under the distinguished Presence and Patronage of Kuwait University President, Prof. Hussein Al-Ansari, was hosted by the Vice President for Research, Prof. Taher Al-Sahhaf, amidst the elite presence of Vice Presidents, Deans, Vice Deans of Research, and KU's top Executives, as well as winners in various awards categories.

Speaking on the occasion, Prof. Ansari, welcomed the distinguished gathering, and appreciated the outstanding accomplishments of researchers, which went beyond their

Under the Patronage of KU President, Research Sector felicitates a distinguished community of faculty researchers & graduate students in a multi-awards ceremony



▲ Distinguished gathering at RS Multi Awards ceremony

"RS driven towards enhancing the quality culture and steadily working towards attaining new levels of growth, quality and excellence in KU research"

respective scientific attainments in reflecting the prevailing scientific culture at Kuwait University, bringing prestige and laurels to institutional international standing. Continuing further he said, "Research undoubtedly is the critical foundation of development in communities, and the development of any community is measured on grounds of its knowledge and education. A fundamental element in this process is the care and support rendered to researchers, innovators and inventors, and Kuwait University is privileged and proud to have a rich history of scientific achievements and excellence in diverse scientific fields and research." He also added that KU's current strategic plan is driven towards enhancing quality in higher education, attaining excellence in research, and improving community service, and in this endeavor, the award winning researchers accomplishments are indeed a befitting attribute towards achieving this vision.

Elaborating further, Prof. Ansari said, "The goal that we seek to achieve is improving KU's academic and scientific level, attaining excellence and raising institutional international ranking. Achieving this goal would be one

(Contd. P.7... ►)

of the institutional top priorities, and would receive utmost executive attention and support.” Relaying a clear message to the elite community of deans, professors, distinguished researchers and students at the ceremonial platform, Prof. Ansari said that achieving excellence and raising KU’s international ranking remains a constitutional obligation, requiring collective effort with all institutional entities working together on the principle of close harmony and integrated efforts of all sectors.



▲ A line-up of Distinguished Research Awards Winners

Today’s event of honoring award recipients and patent winners, truly reflects on KU researchers distinguished performance, and marks the sustained efforts of institutional executive authorities, especially the Office of Vice President for Research, and Vice Deans for Research, endeavoring towards promoting scientific research and providing research funding, infrastructural facilities, equipment and resources to all researchers, in expediting the development of scientific research at KU. The President further stressed the importance of KU graduate students, as a valued reservoir of much-needed scientific assistance and support that the faculty members require in pursuing and implementing their research.

Complementing the winners of research awards and patent recipients, Prof. Ansari said that Kuwait University is proud of their research achievements and excellence, and wishes

“Achieving excellence and raising Kuwait University’s international ranking a top priority” ... Prof. Hussein Al-Ansari

them greater success in their future research endeavors.

Echoing similar thoughts at the awards inaugural ceremonial event, Prof. Taher Al-Sahhaf, Vice President for Research, extended a warm welcome and greetings to Prof. Hussein Al-Ansari, President, Kuwait University, and said that he was pleased and honored to welcome the distinguished gathering at the ceremonial occasion, hosted by Kuwait University under the umbrella of Research Sector at the onset of new academic year 2016/17, and hoped for a remarkable year of accomplishments ahead at all levels.

Congratulating the award winners, Prof. Taher wished them continued success and progress in their scientific and academic endeavors, reaffirming RS commitment to sustain and develop scientific research at KU, and steadily working towards achieving strategic research objectives by enhancing the research culture across all faculties to attain new levels of growth, quality and excellence in KU research.



▲ KU President with Award Winners

RS efforts and energies would increasingly be on creating a receptive environment that stimulates innovation and encourages researchers to achieve their scientific aspirations. Efforts would also be directed at rendering continuous support to researchers in pursuing collaborative and priority research through multidisciplinary

RIG SESSION 2016

Prof. Taher outlines research mission, types of grants, research support procedures, and facilities available for RIG grants

In-keeping with its developmental activities, the Research Sector (RS) organized an exclusive session on Research Initiation Grant (RIG) for introducing new Kuwaiti faculty members to the prevailing research environment at Kuwait University (KU), and facilities available for advanced and innovative research. The session, hosted by the Vice President for Research, Prof. Taher Al-Sahhaf, amidst the attendance of his assistants, Prof. Yousuf Garashi, Prof. Haider Behbehani and Dr. Layla Marouf, was aimed at 31 participating

Research Sector organizes *Research Initiation Grants (RIG)* orientation session for introducing new Kuwaiti faculty members to facilities and resources available at KU for advanced and innovative research



▲ RIG 2016 Presentation



▲ Vice President for Research

Vice President shares his thoughts on the significance of research in advancing knowledge, and as a basis for professional development

new Kuwaiti faculty members, at the Assistant Professor's level, who joined various scientific and humanities departments, over the last two years. Being on the threshold of their academic careers, RIG orientation session provided a befitting opportunity for

them to gain insight into the RS Research Support System, and facilities for availing grants in pursuing their respective research interests, with RIG grants marking a step towards developing their creative potentialities, and achieving their scientific goals through well-defined studies towards the realization of their scientific ambitions.

Addressing the RIG session, Prof. Taher welcomed the participating newly inducted Kuwaiti academic community, sharing his thoughts on the significance of scientific research in advancing knowledge, and as a basis for professional development. He then outlined the mission and policy of scientific research at Kuwait University through a presentation, explaining the types of grants available to faculty mem-



▲ RS Executive Panel responding to researchers queries

► **RIG Orientation Session 2016 ... (From P. 8)**

bers, including the provision of RIG grants, offered as an incentive for enabling new faculty members to launch their research initiatives and register their participation in KU's research activity by submitting proposals, and availing grant support. Prof. Taher also highlighted the conditions and key elements of RIG grants, details of which are available in the RS manual of Research Support *Rules and Regulations*, providing the legislative framework, governing the grants process at KU.

While looking forward to the active participation of new faculty members in scientific research, Prof. Taher introduced the research implementation, analysis and collaborative processes as RS critical executive domains, each headed by the respective Assistant Vice President for Research, who provided further elaborations on grant application procedures, funding process, and facility for collaborative research in partnership with external institutions. In addition, information was also provided on RS annual events and open forums, offering wide-ranging opportunities to faculty members for displaying their ongoing and accomplished research at the Poster's platform, with 2016/17 Scientific Poster Day events already announced, and scheduled respectively for humanities and scientific faculties during March 2017, details of which

RIG grants an opportunity for new Kuwaiti faculty members to pursue their scientific interests and ambitions



▲ **New Kuwaiti Participants at the RIG Session 2016**

RIG orientation session 2016 enlists participation of 31 new Kuwaiti faculty members from the Scientific and Humanities faculties

are accessible on the RS website.

Emphasis was also on high quality research that could generate outputs of international credibility, with RS efforts aimed at encouraging faculty members to aspire for scientific excellence in their research endeavors. All granted

projects must adhere to standard requirements, including submission of periodic progress report(s), followed by final report on project completion, with expectations of at least one published paper in high ranking JCR listed journals with an impact factor. RS also offered a series of awards and incentives to researchers and graduate students in recognition of their distinguished and meritorious research, as well as inventions and patents achieved.

The RIG session culminated with an interesting and interactive question/answer session, with Prof. Taher, Prof. Yousuf, Prof. Haider and Dr. Layla, responding to participants queries and concerns on various aspects of the grant support system, the privileges, services and facilities for research awards, RIG grants and associated mechanism and facilities.

RIG orientation session 2016 was held on Monday, October 31, 2016, at 12:30 PM., at the Conference Room # 119, Administration Building, Khaldiya campus, Kuwait University.



▲ **Interactive question-answer session: A new Kuwaiti Faculty member query's the RIG Executive Panel on clarification concerning research-related matter**

SPSS WORKSHOP

Key Speaker demonstrates the value and effectiveness of SPSS for data management, analysis, application of models and interpretation of research results

In-keeping with its annual commitment, the Research Sector organized the SPSS Workshop 2016 for new faculty members and graduate students of the Humanities and Social Sciences Colleges to orient the participants to the effective utilization of methods of scientific research for achieving high quality outputs. Aimed at demonstrating the implications of data management, analysis and interpretation of results, the workshop provided an understanding of the techniques

Research Sector organizes SPSS workshop 2016 for new faculty members and graduate students of Humanities and Social Sciences Colleges



▲ Participants at the SPSS Workshop

of research, application of statistical tests and models, and scientific writing of reports and research papers for inclusion in distinguished journals of international repute, a standard which RS is endeavoring to promote across all faculties, including humanities and social sciences colleges.

The workshop's key speaker was Prof. Husni Hamdi, from the Department of Quantitative Methods and Information Systems, Faculty of Business Administration, an expert who critically demonstrated the significance, value and applications of SPSS in social sciences research, as well as effective utilization of scientific methodologies in basic and applied research, duly backed by valid illustrations and examples.

The workshop attracted significant participation, and generated a demand for a Second session of SPSS workshop for interested faculty members, keen to understand the implications of data management techniques, using Statistical Package for Social Sciences (SPSS). Consequently, closely following the success of its First SPSS Workshop, the Research Sector organized the



▲ SPSS Workshop Session in progress...!

(Contd. P.29...▶)

GRADUATE SYMPOSIUM

Prof. Taher unveils the dynamics of *“Scientific Research Development and Graduate Research at Kuwait University,”* at the College of Graduate Studies Symposium

In celebrating Kuwait University's 50th anniversary, the College of Graduate Studies organized a 3-days symposium on postgraduate education and research in the GCC, highlighting major expansion in postgraduate education with emphasis on applied sciences and humanities research. Primarily exploring the role of advanced studies in the GCC and their relationship to advances in the Western world, the symposium entitled, *“Challenges for Today and Aspirations for the Future,”* held from

Symposium marks KU's Golden Jubilee Celebrations

A 3-day symposium on *“Challenges for Today and Aspirations for the Future”* explores role of advanced studies in GCC, and their relationship to advances in the Western World



▲ A view of Graduate Symposium inaugural event

November 1-3, 2016, at Sheraton Hotel, involved a series of lectures and presentations by Deans of GCC universities graduate colleges, KU Vice President for Research, as well as internationally-recognized keynote speakers, specially invited as a mark of KU's golden jubilee celebrations.

The occasion particularly assumes

significance in view of rapid expansion in the domain of postgraduate studies and research at Kuwait University during the last two years, with several faculties and departments enhancing their academic expanse with the launching of new Master's and Doctoral programs in diverse specializations and disciplinary streams. It is largely within this progressive frame that KU's Vice President for Research (OVPR), Prof. Taher Al-Sahhaf unveiled the dynamics of *“Scientific Research Development and Graduate Research at Kuwait University,”* through a presentation, critically tracing the historic antecedents of scientific research at Kuwait University, and its expansion to include Graduate Research within the Research Sector's funding umbrella.

Briefly stating that higher education system at Kuwait University is centered on two strategic pillars

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Kuwait University

Challenges for Today and Aspirations for the Future
College of Graduate Symposium

Scientific Research Development and Graduate Research at Kuwait University

Prof. Taher Al-Sahhaf
Vice President for Research
Kuwait University
November 1-3, 2016

Office of Vice President for Research
<http://www.ovpr.kuniv.edu/>

▲ Vice President for Research presents outlook of Scientific Research Development and Graduate Research at KU

Office of Vice President Research
www.ovpr.kuniv.edu/research

► *Multi Awards Ceremony...(From P. 7)*

approach and expertise, involving collaboration between KU and other universities. Essentially, the intent is to enhance the quality culture in institutional research, and open additional corridors for researchers to achieve high quality outputs that are increasingly published in top ranking journals of impact, a critical factor in the advancement of science, society and community.

In accomplishing this mission, RS would welcome ideas and suggestions that effectively contribute in advancing institutional

research horizons, and merit inclusion in the general framework of RS goals and developmental priorities. He also encouraged the faculty Deans to unify efforts in cooperating with the Research Sector in strengthening the foundations of scientific research at Kuwait University in line with international standards.

Thanking the President for his Patronage of the honoring ceremony held in recognition of the distinguished accomplishments of researchers and inventors, Prof. Taher commended Prof. Ansari's continuous interest in encouraging research

excellence and providing an appropriate environment and platform for improving the quality of research, a significant factor in elevating KU's international ranking and prestige. Achieving this goal would remain one of the top priorities, and would involve deployment of scientific methods in identifying key performance indicators that optimize the implementation of KU's strategic plan.

With these concluding words, year 2015/16 winners in various categories were announced, applauded, awarded and honored. Listed below are the award recipients:

Winners of Researchers Awards, 2015/16

A. Distinguished Researcher Awards

Basic & Applied Sciences

- **Prof. Saad Makhseed** - Department of Chemistry, Faculty of Science

B. Best Young Researcher Awards

Basic & Applied Sciences

- **Dr. Suleiman Alsabab** - Department of Pharmacology, Faculty of Medicine

C. Graduate Students Project Prize

a) Ph.D. Degree

Basic & Applied Sciences

- **Dr. Samar S. Buswaihi** - Department of Microbiology, Faculty of Medicine

b) Master's Degree

Basic & Applied Sciences

- **Eman M. Fayed** - Department of Anatomy, Faculty of Medicine

B. Arts & Humanities

- **Dina A. Ouda** - Department of English Language & Literature, Faculty of Arts
- **Lulwa A. Al-Buaijan** - Department of Public Law, Faculty of Law
- **Najla G. Al-Azmi** - Department of Educational Foundation, Faculty of Education

D. US Registered Patent Awards (2015/16)

1. **Dr. Ahmed Z. El-Hashim, Dr. Ivan O. Edafiogho, Dr. Samuel B. Kombian & Dr. Mariam H. Yousif** - Faculty of Pharmacy
Patent awarded for following invention "*Antitussive and Bronchodilator uses for Enaminone Ester*" -
(Patent No.: US 9,238,019 B2 dated January 19, 2016)
2. **Dr. Tareq A. Al-Bahri** - Faculty of Engineering & Petroleum
Patent awarded for following invention - "*Method for Measuring the Properties of Petroleum Fuels by Distillation*" -
(Patent No.: US 9,201,053 B2 dated December 1, 2015)

(Contd. P.13...►)

► Multi Awards Ceremony ...(From P. 12)

3. **Prof. Esam M. Alawadhi** - Faculty of Engineering & Petroleum
Patent awarded for following invention - "*Thermal Barrier Panel, with selectable phase change materials*" -
(Patent No.: US 9,399,866 B2 dated January 26, 2016)
4. **Prof. Milad Bitar & Prof. Fahd Al-Mulla**
Faculty of Medicine
Patent awarded for following invention - "*Method of treating Diabetes-related impaired wound healing*"
(Patent No.: US 9,387,183 B2 dated July 12, 2016)

E. Scientific Posters Winners

I. Sciences Posters Winners, 2016

Category I: Faculty Members

1. **Dr. Mohammad Hassan, Prof. Saad Makseed, Mona Shalabi, Basma Ghazal & Ahmad Abdelnazeer**
Dept. of Chemistry
Faculty of Science
Title of research: "*Highly fluorinated copper phthalocyanine for potential use in dye-sensitized solar cells (DSCs)*."
2. **Prof. Ali Bumajdad & Tasneem Saleh**
Dept. of Chemistry
Faculty of Science
Title of research: "*The role of Carbon Black-supported Au and Ag nanoparticles as Electrocatalysts for the Reduction of CO₂ to CO*."
3. **Dr. Sohrab Zendehboud**
Dept. of Chemical Engineering
Faculty of Engineering & Petroleum
Title of research: "*CO₂ storage using ex-situ process: Energy and environmental applications*."

Category II: Teaching Assistants

1. **Eng. Danah Al-Rabiah, Eng. Hala Al-Fulaij & Dr. Hisham Ettouney** -
Dept. of Chemical Engineering
Faculty of Engineering & Petroleum
Title of research: "*Eulerian-Eulerian CFD modeling of MSF Demister*."
2. **Eng. Hala Al-Fulaij & Dr. Hisham Ettouney** -
Dept. of Chemical Engineering
Faculty of Engineering & Petroleum

Title of research: "*Stability and dynamics of MSF – gPROMS Simulation*."

3. **Sameera Al-Akhawand & Maryam Al-Asousi**
Dept. of Food Science & Nutrition
Faculty of Life Sciences
Title of research: "*The impact of nutrition education on the dietary habits of food science and Nutrition students in Kuwait University*."

Category III: Graduate Students

1. **Tasneem Al-Rashid** -
Dept. of Earth & Environmental Sciences
Faculty of Science
Title of research: "*Geostatistical analysis of reservoir parameters at drill-holes & Robust estimation for the entire Minagish oil field, Kuwait*."
2. **Nada Mohammad Salem**
Dept. of Earth & Environmental Sciences
Faculty of Science
Title of research: "*Antibacterial activity of the synthesized gold nanoparticles (GNP's)*."
- 3.a. **Ikhlas Mohammed & Jamillah Zamoon** - Dept. of Biological Sciences
Faculty of Science
Title of research: "*Conformational switch of the cytoplasmic domain of hRAGE upon self-association using fluorescence spectroscopy*."
- b. **Dalal Al-Bannai, Dr. Nedaa Al-Sarraf & Dr. Narjes Dashti**
Dept. of Biological Sciences -
Faculty of Science
Title of research: "*Isolation and characterization of plant promoting growth halophilic bacteria from the rizhosphere of Tamarix aucheriana in Kuwait salt marshes*."

II. Humanities Posters Winners, 2016

Category I: Faculty Members

1. **Dr. Abdullah Aldousari, Geraldine Henderson & Elizabeth Hirschman**

(Contd. P.24... ►)

Winners of Research
Rewards Incentives

The Distinguished Research Series -- XI carries forward the Research Sector's sustained efforts in highlighting the research accomplishments of faculty members, increasingly visible in their outstanding, internationally credible research outputs, published in renowned, refereed journals with an impact factor. These publications form the core of Distinguished Series, launched by RS in October 2011, with a permanent platform assigned in its periodic OVPR Research Newsletter, to ensure wide display of Kuwait University's distinguished research accomplishments, generated from funded and unfunded research for public exposure and global outreach. Over the last five years, the series has covered substantial ground, reaching 11th edition with this issue, and bringing 48 outstanding research accomplishments of faculty members to the forefront of public attention, entitling the researchers for Research Rewards incentives. The incentives stimulus for distinguished research, was launched by RS in 2010, as a move towards spreading the culture of quality in faculty research, and encouraging faculties to pursue high quality research that strengthens the institutional scientific foundations, and elevates KU's international profile and presence.

The research rewards stimulus impact is already being observed, with a growing volume of KU publications appearing in high ranking JCR listed journals, a universal assessment model, which RS is applying in rating the quality of KU's published research. Hence, publications, appearing in top 25% of the JCR listed journals, automatically figure on RS incentive rewards listings, a record continuously being updated with the inclusion of new reward recipients. As per latest statistics, the gross total of research reward winners has reached 428 over the last seven years (2010-2016), which include 138 (32.2%) reward recipients for distinguished research, generated from Funded projects, 198(46.3%) for Unfunded research, and 92(21.5%) for excellence in Project Final Report. In addition, 4 (1%) researchers received incentive rewards for Funded Research Projects, a new rewards category that RS instituted in 2014, for promoting distinguished research. These figures indicate a steadily improving quality graph in KU research, reflecting RS drive towards promoting the norms of innovation, originality and excellence in KU research, and involving faculties in creative pursuits that are nationally relevant, generate new knowledge and benefit mankind. Given this overriding purpose, the research rewards incentives offer an opportunity for faculty members to be internationally competitive in their scientific endeavors, and attain recognition through sheer merit and quality of their research. This purpose would continue to transpire faculties in improving and elevating the quality and integrity of KU research, a mission central to RS research rewards stimulus package.

For readers information, Research Rewards system is subject to standard regulations, outlined in RS Research Support manual, which specifies 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, an award of KD 1000/- 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) standard in the concerned scientific field. In addition, an award of KD 500/- is granted to the PI for each project Final Report of funded research that achieves "Excellent" rating from external referee for the scientific and humanities faculties. In addition, 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 rewards benefits, Distinguished Series (XI) draws readers attention to the next four research reward recipients, with summary reports of their distinguished research presented below:

1. **Prof. Haider Behbehani (Funded Project SCI14/13)**, Department of Chemistry, Faculty of Science. Reward awarded for the paper entitled, "An efficient ultrasonic-mediated one-pot synthesis of 2,3,6,7,9-pentaazabicyclo [3.3.1] nonanes via a N,N-dimethylformamide dimethylacetal catalyzed Mannich-like reaction," published in RSC Advances Journal, 2016, 6: 52700 -52709.
2. **Dr. Yaser Abdurraheem (Funded Project 2012150801/EE02/13)**, Department of Electrical Engineering, Faculty of Engineering & Petroleum. Reward awarded for the paper entitled, "Interpretation of the degradation of silicon HIT solar cells due to inadequate front contact TCO work function," published in Journal of Solar Energy Materials & Solar Cells, 2016, 145: 423-431.
3. **Dr. Mohammad Al-Marzouq (Unfunded Research)**, Quantitative Methods & Information Systems, Faculty of Business Administration. Reward awarded for the paper entitled "Taxing the development structure of open source communities: An information processing view," published in Decision Support Systems Journal, 2015, 80: 27-41.
4. **Dr. Abdulrahman Alsulaili (Project Final Report - RE04/14)**, Department of Civil Engineering, Faculty of Engineering & Petroleum. Reward awarded for the Project Final Report entitled, "Potential of greywater collection and reuse in schools in the State of Kuwait."

FUNDED RESEARCH

Objectives:

- Conversion of 3-oxo-2-arylhydrazonopropanals to the target 2,3,6,7,9-pentaazabicyclo[3.3.1]nonane derivatives molecules with expected value as human therapeutic agents *via* green methodologies.
- Utilization of ultrasound as green energy source and ethanol as green solvent in the 1,3-dipolar cycloadditions.

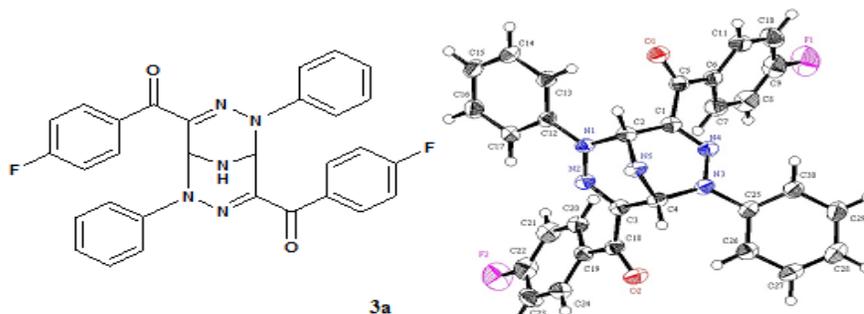
Major Results

A novel and straightforward one-pot synthesis protocol has been developed for the synthesis of functionalized 2,3,6,7,9-pentaazabicyclo[3.3.1]nonane derivatives through Mannich reaction utilizing *N,N*-dimethylformamide dimethylacetal (DMF-DMA) as organocatalyst, and ultrasonic irradiation as efficient green energy source. The entire strategy consist of just one step, reaction between

An efficient ultrasonic-mediated one-pot synthesis of 2,3,6,7,9-pentaazabicyclo[3.3.1] nonanes *via* a *N,N*-dimethylformamide dimethylacetal catalyzed Mannich-like reaction

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(Project No. SC14/13)*



3-oxo-2-arylhydrazonopropanals with ammonia generated from ammonium acetate in acetic acid giving the targeted compounds in an overall yield of 80-93 %. The reaction is carried out under ultrasonic irradiation as well as under conventional heating. The factors affecting the optimization of the reaction are examined in details. X-ray crystallographic analysis was used in the establishment of

structures and regioselectivity of the reaction.

Importance

The newly synthesized pentaazabicyclo[3.3.1]nonane derivatives heterocycles are expected to attract attention of chemists in academia and industry. Moreover contribution to green methodologies in this area would be of great value. ■

“Interpretation of the degradation of silicon HIT solar cells due to inadequate front contact TCO work function”

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(Project No. EE02/13)*

This research deals with the theory of operation of Hetero-junction silicon solar

cells (HIT) with a transparent conduction oxide (TCO) at the front contact. Device

simulations using AFORS-HET shows that, if the work function of such an oxide is

(Contd. P.16... ▶)

UNFUNDED RESEARCH

Committers in Free/Libre and Open Source Software (FLOSS) projects shoulder responsibility for evaluating contributions and coordinating the broader community development effort. Given committers' central role in development processes, we examine whether how they are organized influences FLOSS community performance. Specifically, drawing on the lens of Organizational Information Processing Theory (OIPT), we develop a model that explains how committal a structure's ability to manage information impacts FLOSS community performance. Based on archival data drawn from 237 active FLOSS communities, we found that the performance of centralized and decentralized FLOSS communities, we found that the performance of centralized and decentralized FLOSS communities varied with three conditions tied to information flows: task routineness, uncertainty and task interdependence. Our empirical results support the idea that FLOSS

communities performing development tasks that are generally routine, highly interdependent, and generate little contributor uncertainty will perform better under a centralized committal structure. On the other hand, decentralized committal structures thrive under the conditions of task non-routineness, low task interdependence, and high contributor uncertainty.

We conclude with a discussion of results, limitations, and directions for future research.

Keywords

Free/Libre and Open Source Software; FLOSS; Organizational Information Processing Theory; Software development; Modularity; Brooks' law. ■

Taxing the development structure of open source communities : An information processing view

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- We examine committal structure in Open Source Software development.
- Based on archival data from 237 active open source projects, we lost a model of committal structure and performance.
- Our results indicate that development tasks that are routine, interdependent and have low uncertainly are better under centralized structure.



Interpretation of the degradation of silicon...(From P. 15)

significantly smaller than that of the a-Si:H, an electric field is created at the front surface which interacts with the electric field at the hetero-interface leading to a strong shift in the Fermi energy away from et the valence band edge. Such a shift cause the free carriers to be small in the bulk of a-Si:H and hence to a strong reduction in the peak

hole concentration of the inversion layer. It is also shown that the inversion layer can totally disappear when the TCO work function is significantly smaller than that of the a-Si:H which leads to complete cell failure. In such a case the I-V characteristics of the cell under illumination collapses. In general, with a small TCO work function the

Fill Factor of the I-V characteristics under illumination becomes strongly degraded and the characteristics shows an S-shape with current saturation at the level of the front Schottky diode reverse current. In conclusion, proper operation of the HIT can only be ensured if the active doping in the p-type a-Si:H layer is high enough. ■

FINAL REPORT

Research Highlights

Kuwait is one of the top countries in the world in the consumption of water where the rate of water consumption is almost 500 liters per person per day, where the global average does not exceed 200 liters per person per day. Recycling of water is one of the most important solutions that must be thought out. Especially recycling of greywater. Greywater is that portion of untreated household wastewater that has not come into contact with toilet water. It is much less polluted and can be treated and reused for landscape irrigation and /or toilet flushing within the premises. Recycling of household greywater safely, economically, efficiently and conveniently not only helps conserving water resources in Kuwait but also lead to sustainable buildings. The potential for use of greywater is much higher in institutions such as schools, colleges and universities as well as worship places where it is expected that the quantity and quality of water are adequate to support green areas surrounding the buildings.

This study provides important information on greywater generated at schools to fill a gap in the lit-

Potential of Greywater Collection and Reuse in Schools in the State of Kuwait

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(Project No. RE04/12)

eratures. Such information include the generation rate of greywater as L/p/d and variations in greywater generation rates with different school levels. In addition, this study shows the characteristics of greywater generated from schools in Kuwait. Table 1 shows flow rate generated at schools surveyed in this study.

Greywater generation in the surveyed schools ranged between 2.9–16 L/p/d, with an average of 7.3 L/p/d, and reflected the school level of education (i.e. student age). The highest rates were observed in primary schools while the lowest rates were observed in secondary schools where students are older and use the water more wisely. The school greywater characteristics differ from those of residential greywater but lie within the range of light greywater quality. They indicate a waste with low BOD₅ and COD values and have

Table 2: Characteristics of untreated greywater

| Parameter | Unit | Schools greywater in Kuwait (This Study) | |
|-------------------------|---------------------------|--|-------|
| | | Range | Mean |
| pH | | 5.95 - 8.69 | 7.14 |
| Total Solids | mg/L | 110 - 466 | 165 |
| Suspended solids | mg/L | 2 - 146 | 16.1 |
| Dissolved solids | mg/L | 90 - 300 | 140 |
| Turbidity | NTU | 0.07 - 36.4 | 10.9 |
| BOD ₅ | mg/L | 0 - 65 | 15.8 |
| COD | mg/L | 6.4 - 170 | 50 |
| DO | mg/L | 5.8 - 7.8 | 6.6 |
| Nitrite | mg/L | < 0.02 - 2.6 | 0.4 |
| Nitrate | mg/L | < 0.3 - 31.1 | 5.04 |
| Ammonia | mg/L | < .05 - 6.4 | 2.9 |
| Total Kjeldahl Nitrogen | mg/L | | |
| Total Phosphorus | mg/L | < 0.05 - 2.6 | 0.218 |
| Sulphate | mg/L | | |
| Conductivity | mS/cm | 177 - 1446 | 443 |
| Hardness (Ca & Mg) | mg/L as CaCO ₃ | < 1 - 178 | 27.7 |
| Sodium | mg/L | 4.4 - 135 | 32 |
| Alkalinity | mg/L as CaCO ₃ | 31 - 145 | 67.5 |
| chloride | mg/L | 5 - 115 | 42.3 |
| Total coliforms | MPN | 89 - 352 | 196 |
| Faecal Coliforms | MPN | 0 | 0 |

relatively high solids, conductivity, and sodium content due to excessive use of hand soap. Table 2 summarizes the characteristics of the greywater in the school studied.

The greywater is suitable for non-potable reuse but requires a minimum degree of treatment before reuse in various applications within the schools. Such treatment was proposed comprising screening, sand filtration and disinfection comparing UV and chlorination. A pilot plant was tested at different flow rates according to a comprehensive experimental program. A filtration rate in the range of 15 to

(Contd. P.24... ▶)

Table1: Greywater flow rates generated at schools surveyed in this study

| No | School name | School level | Student Gender | No. of students | Greywater generation rate (L/p/d) | Greywater generation rate (L/d) |
|----|-----------------------|--------------|----------------|-----------------|-----------------------------------|---------------------------------|
| 1 | Al-Khalil Bin Ahmed | intermediate | boys | 500 | 4.0 | 2000 |
| 2 | Ashbilia | primary | girls | 424 | 10.6 | 4494.4 |
| 3 | Al-Ma'amoon | primary | boys | 317 | 16 | 5072 |
| 4 | Naela | intermediate | girls | 377 | 4.8 | 1809.6 |
| 5 | Hamad essa Al-regaveb | secondary | boys | 397 | 2.9 | 1151.3 |
| 6 | Al-Jazair | secondary | girls | 416 | 3.2 | 1331.2 |
| 7 | Gurnata | intermediate | girls | 258 | 9.6 | 2476.8 |

OVPR'S LATEST PUBLICATIONS

Centered on the principle of *preserving, documenting and transmitting* strategic information on Kuwait University's (KU) research mission, policy and programs for global outreach, OVPR's publications program dynamically moved into the academic year 2016/17, with new commitments and priorities, as a tribute to institutional 50th Golden Jubilee year. Of special significance was a fundamental document, presenting an analytical profile on KU's next more advanced, comprehensive and updated edition of "*Kuwait University at a Glance 2017/18*," a strategic document claiming Research Sector's (RS) attention, the process for which was initiated to re-conceptualize and present latest academic, research and executive developments in institutional diverse scientific and administrative sectors. The document was currently in preparatory phase, with source information being gathered directly from all faculties, sectors, centers and units, to generate an integrated document presenting a summarized view of Kuwait University at a glance.

Alongside progressed a line-up of RS key documents, significantly including the eighth edition of *Guide to Subject Areas (2017)*, the data for which was integrated for generating print-and-electronic formats of the Guide, the 23rd & 24th edition of the *Sponsored Research* series, providing a comprehensive outlook and trends in faculty research during the academic years 2013/14 and 2014/15, currently under advanced production, while RS major events and happenings provided

OVPR's publications program dynamically moved into the academic year 2016/17 with new commitments and priorities as a tribute to KU's 50th Golden Jubilee year



RS publications centered on the principle of preserving, documenting and transmitting strategic information on KU's research mission, policy and programs for global outreach

Publications an enduring channel for keeping institutional scientific developments in the global eye

critical substance for the next edition of *OVPR's Research Newsletter*, scheduled for December 2016. Focus was also on the requirements of RS key scientific events and activities, which necessitated preparation of an entirely *new package* of publicity material for *humanities* and *scientific posters* events (2017), posters announcing *RIG orientation session* (2016), as well as the scheduling of *SPSS workshop* (2016), as part of RS annual commitment to faculties and researchers. The package included sample posters with guidelines for faculty

researchers, invitation, banners, information guide, badges, note pads and file folders, involving RS in a rapid *start-to-finish* schedule, prior to the oncoming intense scheduling of the posters flow from faculties to be readied for March 2017 humanities and scientific faculties posters events. Statistical data was also being integrated in preparation for the *RS Annual Report 2015/16*, analytical profiling of which is currently underway.

Forming the core of RS well-defined strategy, OVPR's publications provide latest advances in faculty research at Kuwait University, keeping the scientific community, public and vast readership updated and informed on institutional research activities and opportunities for coordination and collaboration. Continuous preparation and release of source publications is, therefore, an enduring RS commitment towards spreading awareness, enhancing visibility and attracting global community to the vibrancy and dynamics of scientific research at KU, opening

► OVPR Latest Publications...(From P. 18)

viable corridors for inter-institutional and inter-regional communication, connectivity and partnerships.

Apart from the RS scheduled documents, OVPR's publications sphere simultaneously involved preparation of a series of scientific journals, released under the umbrella of *Academic Publication Council* (APC), key journal editions of which were released from mid-June 2016 onwards until December 2016. The *Center for Gulf and Arabian Peninsula Studies* (CGAPS) likewise released select books, abstracts and reports, as part of its publications agenda, concerning latest developments in the Arabian Gulf region. Overall, a summarized view of all publications, generated and released mid-2016 onwards by OVPR's integral components (RS, APC & CGAPS), from July 2016 until December 2016, is presented below:



Focus on generating documents of substance that transpire connectivity, bringing together scientists across continents and cultures, driven by common urge to explore new and creative dimensions through research

1. Research Sector (RS) Publications (July 2016 to December 2016)

- a. Prepared
- b. Under preparation

● OVPR Research Quarterly Newsletter, June/July/2016

-- Presenting an entirely new image and format, the July 2016 edition of the OVPR's Research Quarterly Newsletter carried the Vice President's message, updating the faculty members on new developments in scientific research at KU, progress in the sphere of grant awards, new partnerships with external institutions, and incentives and rewards for scientific excellence, while introducing the premier issue of the OVPR Research Newsletter with a new and refreshing outlook. The issue intro-



duced RS new Assistants Vice President, the Newsletter's Chief Editor, and the Editorial Board. On the features front, the highlights were on major events, activities and happenings during the period *February through June 2016*, which included signing of KU-PAAET research collaboration agreement, RS annual scientific posters events for Humanities and Sciences faculties held in March 2016, the declaration of posters award winners, as well as Graduate Student Project Prize and Patents winners. Also featured were visiting delegations received by OVPR, which included a delegation from Cranfield University, UK, keynote Speaker at HSC Posters Conference from UK, IMEC delegation, and the Malaysian University visitors. RS Executive team visited Science faculty for

an interactive session with faculty members on research-related matters, and the Vice President visited KISR, as well as attended a symposium at KFAS. The 10th consignment of the Distinguished series outlined research summary reports of the next four research reward recipients, and an analytical feature provided mid-year statistical outlook on faculty research from Sept. 2015 to January 2016, as well as a summarized account of key publications released up to June 2016, including advanced information gathering phase of *Guide to Subject Areas, 2017*. Also included was research-related announcements, and a line-up of upcoming events for the new academic year 2016/17, providing a progressive and insightful view of scientific research activities at KU. For readers' information, *Research Quarterly Newsletter*, July 2016 edition, was widely released, distributed, and displayed on OVPR website: (<http://www.ovpr.kuniv.edu>). Published & Released (*English and Arabic*).

● Inventions from Kuwait University, Volume – I, 2016

– A strategic document on Kuwait University's scientific inventions, and products of research, is a prestigious RS publications establishing a fundamental basis on patents and intellectual property as a distinguished marker of scientific research at KU. Reflecting on faculty members outstanding research that won US registered patents, the document is a befitting recognition for their distinguished research and inventions, with the first Volume of Inventions, integrates vital data on all patent recipients from year 2010 onwards until 2016. The document profiles a summary description of each scien-



► **OVPR Latest Publications...(From P. 19)**

tific invention, the US Registered Patent No., and the date of patent's grant. In all, Vol. I includes a total of 34 inventions, with the winning research team, and their respective faculty affiliations. Cumulatively, the inventions were distributed over the faculties of Education, Pharmacy, Engineering & Petroleum, Medicine, Life Sciences, Science, and Business Administration, interspersed with concerned faculties images and visuals. The document carries inspiring message from KU President centered on the pivotal role of academics and scientific research in inducing the *culture of innovation, creativity and excellence* at Kuwait University.

Establishing a fundamental basis on Kuwait University's Inventions, the document mirrors sustained growth of research in terms of quality, impact and international credibility of KU research, with the scientific value of inventions providing an opportunity to benefit from the potential applications of inventions through appropriate mechanism and legislative framework, while raising awareness as regards the utility value of new discoveries for science, society and mankind.

In introducing the inventions document, the Vice President highlighted the innovative outcomes and inventions of scientific research, with due recognition of the Inventions document as a product of the efforts of RS Patents Office, facilitating registration of researchers inventions. In releasing the Inventions document, RS aims at introducing KU's scientific inventions to the wider public, including their marketability, and conversion into industrial products and materials that serve society. Prepared in Arabic/English, the document is currently under print, and targeted for 2016 release. In Press (*Arabic/English*).

● **Guide to Subject Areas, 2016/17**

– Marking the next, eighth more comprehensive edition of Guide to Subject Areas, **2016/17**, the document is currently under advanced production, with the inclusion of extensive listings of new areas received from KU faculties and departments, placed alongside existing subjects, within the broad scientific fields. Intended to offer far wider choice of subject areas to researchers in the selection of area-specific codes applicable to their research interests and activities, the Guide's periodic updating is in-keeping with the institutional developmental requirements, establishment of new faculties and departments, and launching of new programs, opening new creative corridors and opportunities for advanced and innovative research. These areas required appropriate identification, classification, and placement within the new Guide, with specific codes assigned, resulting in extensive updating of the Subjects Guide, while signifying faculties widening and diversified research interests, enriching the existing subjects database pool that RS maintains.



The updating process was initiated in April 2016, with RS inviting all faculties to provide an updated listing of subjects areas that needed inclusion in the new Guide, apart from review of terminologies in Arabic and English to ensure scientific accuracy of subjects areas, to be logically reflected in the updated Guide 2016/17. Providing universal outlook of existing and new scientific fields, the Guide is fast shaping up as two documents, a hardcopy format to serve as handy reference document, and an electronic version as e-Guide to facilitate online access to the vast pool of Subjects Ar-

reas for researchers needs. Initial data has been integrated for the Guide's hardcopy and e-formats, and integrated subjects information is being reviewed for any duplications. Currently, the coding process is ongoing, and the document is under advanced production (*Arabic/English*).

● **Kuwait University at a Glance 2017/18 -- RS initiated the process of Updating the existing 2013/14**

edition of Kuwait University at a Glance, to present an integrated, inclusive and latest institutional profile, a periodic responsibility, delegated to the Research Sector on approval of the President's Office. Enlisting the participation of all top Executive Offices, Sectors, faculties, resources, facilities, support services, centers and units, the document is intended as a developmental, strategic and organizational profile, on the entire ramifications of institutional programs, priorities, resources, facilities, students, activities and goals ahead, within the scope of a single document, based on empirical information received from all institutional sectors.



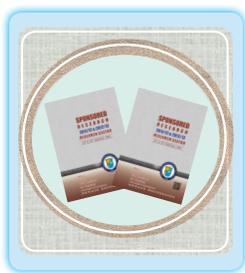
The document's preparation was announced, and the information gathering process was initiated in June 2016, with RS issuing specific letters to all institutional sectors for soliciting updated information on their developmental activities, programs, resources and mission ahead. Simultaneously a checklist was prepared for recording responses received, and follow-up letters issued in October 2016 for alerting non-responsive sectors for submission of relevant information. While the information aggregation process is going on, critical data

► *OVPR Latest Publications...(From P. 20)*

continues to be awaited from several respondents, in preparation of a summarized two-publications package, in English and in Arabic, to serve as a handy profile and Guide on Kuwait University for global outreach. As the missing data continues to be awaited, the process has been initiated for reviewing and standardizing the information in hand, for appropriate placement within the document. Currently, the Glance 2017/18 updating process is in progress (*Arabic/English*).

● **Sponsored Research 2013/14 & 2014/15 (23rd & 24th Edition)**

– Continuing the Sponsored Research series through two academic cycles 2013/14 and 2014/15, the combined 23rd & 24th edition of the document is fast progressing to completion, having reached the final production phase. The document consolidates explicit information on all ongoing and completed projects during the academic years 2013/14 and 2014/15, by faculties and departments, reflecting broad areas of faculty research, including collaborative projects, and graduate students research. Presenting comprehensive view of faculty research activity, the document is organized by types of grants, funding source and projects granted to faculty members, graduate students, and jointly funded projects. Within the document, all projects are arranged by Grant No., research title, project team, starting date, duration, completion date (where applicable), and the budget allocated.



All KU funded projects are presented in Section I of the document, jointly funded projects in collaboration with external institutions, are aggregated in Section II, and graduate students research is presented in Section III of the report. A statistical outlook of projects

by faculties, ongoing and completion status, humanities research, external grants, newly awarded projects by faculties, are appended to the document in the form of Tables & Graphs. In addition, all researchers, whose projects appear anywhere within the document, are integrated and classified alphabetically under the Researchers Index, with page Nos. indicating the placement of their respective project within the document, to facilitate accessing any specific project listed in the document. The document unfolds the vastness of faculty research activity at KU, adding new data to the existing sponsored research database, spanning 29 years of institutional funded research. The document is fast shaping up and is currently under advanced production (*English/Arabic*).

● **Miscellaneous RS Requirements Package, 2016**

– Advanced preparations for the upcoming Scientific Posters events (Humanities & Sciences) were initiated in September 2016, resulting in the generation of Sample Posters & Publicity Material for the humanities and scientific faculties posters events earmarked for March 2017. The events were announced by the Research Sector during October 2016, packaged with announcements, events posters and publicity material. Also, sample layout of posters was prepared and released on website, along with technical specifications to facilitate researchers in preparing the posters in con-

formity to defined standards and format. With the preparation, release and web-display of this preliminary material, RS is all set for an intense posters production phase ahead, involving the printing of all posters received from the participating faculties, as well as KISR, in a tight and rigorous schedule. Also, scheduled is the preparation of Scientific Posters booklet, 2017, integrating faculty-wise posters displayed at the two posters events, in miniature format, as a record and repository of vital information on latest research activity of faculty members, teaching assistants and graduate students. All preliminary announcements, sample posters and publicity material were duly prepared and displayed. Also, prepared were posters for the **RIG and SPSS** events, including invitations and flyers, with the events publicity package prepared and widely displayed. Printed and Released (*English and Arabic*).

II. Academic Publication Council (APC) Publications (Latest Issues released during the period June 2016 to December 2016)

The Academic Publications Council (APC) continued to release latest editions of the whole range of Journals, as part of the Kuwait University scientific journals, periodically released by APC, providing the researchers a whole new series of articles and studies accomplished in diverse scientific fields.



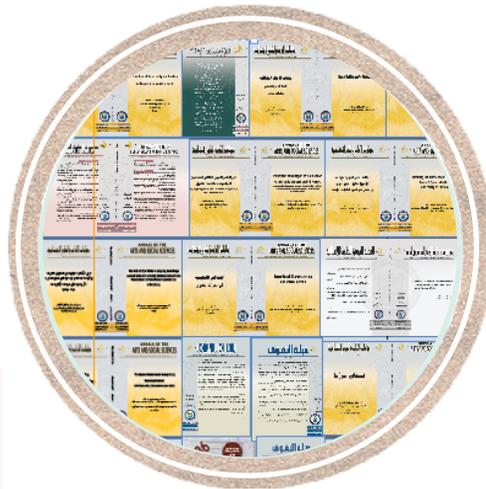
▶ *OVPR Latest Publications...(From P. 21)*

The following new issues and editions of various Journals were released by the Academic Publication Council during the period June 2016 through December 2016:

Journals released (Latest Issues released during the period June 2016 to December 2016).

- *Journal of Gulf & Arabian Peninsula Studies*, Vol. 42, No. 161, April 2016.
- *Journal of Gulf & Arabian Peninsula Studies*, Vol. 42, No. 162, July 2016.
- *Journal of Gulf & Arabian Peninsula Studies*, Vol. 42, No. 163, October 2016.
- *Annals of Arts and Social Sciences*, Vol. 36, June 2016.
- *Annals of Arts and Social Sciences*, Vol. 37, September 2016.
- *Journal of Sharia and Islamic Studies*, Vol. 31, Issue 105, June 2016.
- *Journal of Sharia and Islamic Studies*, Vol. 31, Issue 106, September 2016.
- *Journal of Law*, Vol. 40, No. 2, June 2016.
- *Journal of Law*, Vol. 40, No. 3, September 2016.
- *Arab Journal for the Humanities*, Vol. 34, No. 135, Summer 2016.
- *Arab Journal for the Humanities*, Vol. 34, No. 136, Autumn 2016.

III. Center for Gulf & Arabian Peninsula Studies (CGAPS) Publications



▲ **latest APC Journal editions released (2016)**

The Center for Gulf and Arabian Peninsula Studies (CGAPS) continued to carry forward its programs and information resources, releasing latest source documents and publications, 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 has released No. 5 of the Dictation Issues Series, entitled, "Four Kuwaiti Pillars" (*Ahmed Al-adwani, Ahmed Al-sqaf, Abdulrazaq Al-baseer and Abdullatif Al-nesef*), by Mohamed Hassan Abdallah, from the Dept. of Literature and Curriculum, Faculty of Dar Al-Aloum, Cairo University, Egypt. The latest edition of the Series is released in 2016.

B. Special Scientific Series: A refereed scientific series, the document is based on specialized research, with CGAPS releasing the outcomes of two latest studies, as follows:

- "*Assess the Conditions of Social Welfare in the State of Kuwait with a Field Study to Measure the Views*

of the Beneficiaries of the Social Assistance Program," by Dr. Faisal Hamad Almonawer, from Arab Planning Institute, State of Kuwait. The study analyzes efficiency and effectiveness of Social Welfare programs, with positive implications on low-income group, and proposes establishment of a Supreme Council of Social Welfare, enhancing social welfare situation in the State of Kuwait. The study is released as part of the CGAPS Scientific Series, Issue No. 42, September 2015.

- "*Academic problems among the students of Kuwait University,"* a descriptive study by Prof. AbdulRhman Ahmed Al-Ahmed, from the Dept. of Curriculum and Teaching Methods, Faculty of Education. The study highlights most important academic problems faced by Kuwait University students, analyzing the response pattern by gender, specialization and college, and recommends procedural proposals to university authorities for addressing students problems. The study is released by CGAPS as part of the Scientific Series, Issue No. 43, 2016.

C. Series of Conference & Symposium Proceedings:

This series documents CGAPS seminars and conferences, under which two recently released documents, as part of the Seminar Series, include:

Seminar – I

"Getting out of the Oil Era—Socio Economic and Political Implication." Released: May 15, 2016.

Seminar – 2

"The Impact of the UIS Election Results on the Arabian Gulf Region: Expectations and Conse-

▶ OVPR Latest Publications ... (From P. 22)

quences." Released: September 21, 2016.

D. Volumes of Selected Documents of the Gulf & Arabian Peninsula Region and its Vicinity:

These volumes aggregate important documents issued by formal bodies in the Gulf Region, and highlight the Region's current political, economic, social and cultural events. A recent document released under this series is entitled:

"Inter-regional Relations between the Gulf Cooperation Council and the Association for Southeast Asian Nations," by Prof. Mohammad El-Sayed Selim, from the Dept. of Political Science, College of Social Sciences, Kuwait University, released as part of the Strategic and Future Studies Series, Issue **No. 1, 2016.**

E. M.A. and Ph.D. Dissertation Abstracts: M.A. and Ph.D. Dissertation Abstracts: These documents present abstracts of Master's and Ph.D. dissertations, with CGAPS releasing the following Abstracts of M.A. Dissertations during 2016:

- *"Educational Implications of the Speeches of His Highness Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah, Amir of Kuwait: An Analytical Study,"* by Fatma Naser Ali Bin Rajab, **No. 24, 2016.**
- *"Determinants and Mechanisms for decision Making in Iranian Foreign policy: An Empirical Study From 2005 to Present,"* by Dalal Abdullah Al-Nassar, **No. 25, 2016.**



▲ A Collection of Latest CGAPS Publications released

- *"The Degree of Availability of Moral Values in the Content of the Arabic Language Books Assessed on the Intermediate Stage in Kuwait,"* by Mohammad Hadi Al-Ajmi, **No. 26, 2016.**
- *"Differences among Intellectually Gifted, Academically Talented and Ordinary Students in Personal and Social Adjustments,"* by Abeer Rashed Al-Rashdan, **No. 27, 2016.**

Overall, the vastness of the publications domain reflects OVPR's vitality in creating an enduring and ever-growing reservoir of scientific information, with publications providing a dependable channel for organized transfer of strategic information to reach the scientific community worldwide, and keeping institutional scientific developments in the global eye. Being ideal vehicle for spreading awareness, enhancing visibility and raising KU's international presence and profile, publications form an enduring part of the OVPR's strategy, aimed at assembling vast pools of scientific information in generating key documents for global audiences. Har-

boring authentic and reliable information, the publications are envisioned, authored and prepared in-keeping with divergent needs of experts, researchers, executives and policy-makers, keeping pace with institutional scientific advances, while exploring opportunities for interaction, collaboration and scientific coordination.

Essentially, this purpose invigorates the publications domain in generating compelling, visually attractive documents of substance and scientific value that could draw users attention, transpire connectivity, and bring together researchers, institutions and scientists across continents and cultures, driven by common urge to explore new ideas and creative dimensions through joint and interdisciplinary research. RS publications, therefore, serve a vital purpose of channelizing institutional scientific information for global readership, and attracting attention to institutional scientific developments and opportunities for collaboration. Given this purpose, RS publications domain remains intensely involved in the preparation and production of a series of analytical, policy, and trend reports, manuals and bulletins, assembling latest information for generating key documents that could strengthen institutional scientific foundations, and enlist Kuwait University's scientific posture and presence on the global platform.

For readers' information, RS publications are widely distributed, hardcopies are available on request, 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>).

► **Distinguished Series-11 -- Potential of greywater ... (From P. 17)**

20 m³/d.m² is recommended to achieve SS removal of 60%, COD removal of 30% and BOD removal of 15 %. Additional COD and BOD removal efficiency of up to 70% and considerable reduction of total coliform could be achieved by UV or chlorination (chlorine dosage 10 mg/L). Fig-

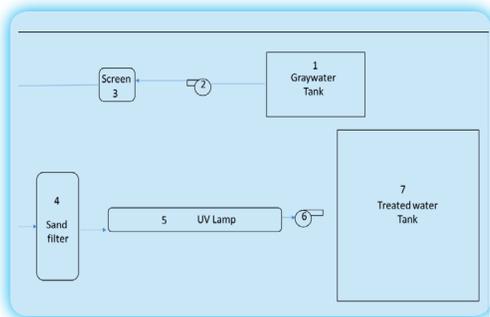


Figure 1: Scheme of proposed greywater treatment plant

ure 1 & 2 shows the scheme and picture of the proposed treatment system. **Table 3** shows the estimat-

Table 3: Estimated capital cost of the proposed treatment system

| Part/job | Cost (KWD) |
|--|-------------|
| Steel frame | 200 |
| Screen filter | 125 |
| Sand filter | 300 |
| UV unit | 265 |
| Tanks | 350 |
| Pumps & flowrate controller | 200 |
| Motor driven mixer | 50 |
| Control panel + electrical works | 200 |
| Manpower for system assembly + pipes and | 400 |
| Total | 2090 |

ed capital cost of the proposed treatment system. The system cost about 2000 KD.

The treated effluent satisfies the water quality requirements for reuse in irrigation and/or toilet flushing which provides a good opportunity for reuse at schools. Greywater could be easily collected from wash sinks and fountains, as major sources,



Figure 2: Photograph of the proposed pilot scale greywater treatment plant for schools.

and treated effluent would be recycled for landscape irrigation and toilet flushing at schools. ■

► **Multi Awards Ceremony ... (From P. 13)**

Dept. of Management & Marketing
Faculty of Business Administration

Title of research: “*Perceived threat and its impact on consumer behavior.*”

2. **Dr. Suha Al-Awadhi & Dr. Malak Al-Rushaid**

Dept. of Library & Information Science
College of Social Sciences

Title of research: “*The use of social network in government for building social capital, social inclusion and social equality.*”

3. **Dr. Bader Al-Hashil & Dr. Mohammad Al-Marzouq**

Dept. of Finance & Financial Institutions
College of Business Administration

Title of research: “*Republican managers and innovation.*”

Category II: Teaching Assistants

There were no Winners in this category, there being no

applicants.

Category III: Graduate Students

1. Huda Haidar Al-Rasheed & Dr. Naif Al-Shammeri -
Dept. of Economics

Faculty of Business Administration

Title of research “*FDI and economic growth in the Arab Region: The case of knowledge spillover effects.*”

2. **Khadija Al-Rasheedi & Dr. Abdulmuhsin Al-Qahtani**

Dept. of Educational Planning & Management
Faculty of Education

Title of research “*Politeness and power in school board meetings: A qualitative study of selected public schools in Kuwait.*”

3. **Hissa Al-Furaih** Dept. of Private Law
College of Law

Title of research “*What makes regulation “good regulation?”*”

► GCC Research Program ...(From P. 4)



▲ A view of GCC Research Program (GRP) Session in Progress...!

human resource, enhance collaboration, create research networks, optimize infrastructural and resource utilization, encourage postgraduate scholarship, as well as students and researchers exchange. Grounded in the principle of *collaboration* and *shared expertise*, the program professes effective utilization of available resources for scientific advancement as the basis for developing a knowledge-based economy that benefits the GCC region. The participation of GCC institutions in GRP is, therefore, strongly encouraged, with the annual approval of *four projects* granted under the GCC joint umbrella. These projects are co-funded by concerned GCC institutions, with a maximum duration of three years, and *budgetary range* oscillating between *US\$ 80,000 - 240,000*.

All projects undergo a standard review process prior to grant approval, with the proposals evaluation based on assessing the significance and originality of proposed research, methodology, scien-

tific impact of research, training, as well as research team's credentials. These parameters define the scientific merit, significance and value of proposed research, based on which a project is granted, clearing the way for research implementation.

Once the project is granted, its progress is monitored through the system of progress report(s), annual submission of which is a mandatory requirement for releasing next year's budget. Equally significant are the project's outputs, the impact and value of which is determinable in terms of the *quality of publications* generated, and their inclusion in high *ranking journals* with an impact factor. The terms of the GCC Research Program significantly specify joint ownership of research outputs and Intellectual Property (IP) by the participating institutions within the framework of GCC Co-Funding agreement that also includes revenue sharing.

Relevant details concerning the GRP, including research application forms, eligibility requirements, submission deadlines, review process and research ap-

provals are accessible at the following link:

http://www.qu.edu.qa/gcc_research_council/index.php

Interested researchers are strongly encouraged to benefit from this opportunity, and be effective participants in enhancing the culture of scientific research at Kuwait University.

For Researchers Information, abstracts of two projects, granted under the GCC Joint umbrella, include:

1. "Rock Art of the Arabian Peninsula"

A collaborative project in partnership with *Qatar University, King Saud University, Kuwait University, Sultan Qaboos University and Bahrain Kingdom University*.

2. Medical Wild Herbs in Qatar and the Gulf: A Historical-Pharmacological Approach"

Involving collaboration of *Qatar University, Sultan Qaboos University and Al-Qasim University*.

PLANNING WORKSHOP

Planning Sector organizes a special workshop for RS strategic goals over the next five years (2018-2022)

Under the Patronage and presence of Kuwait University President, Prof. Hussain Al-Ansari, the Office of Vice President for Planning (OVPP), headed by Dr. Adel Al-Hussainan, Vice President for Planning, along with a team of planning engineers, organized a special workshop on Thursday, Dec. 15, 2016, at the Presidential building lobby, for the Office of Vice President for Research (OVPR) executive team and staff.

The Vice President for Research, Prof. Taher Al-Sahhaf, attended the workshop with his assistants, Prof. Haider Behbehani, Prof. Yousuf Garashi, and Dr. Laila Marouf.

KU's Planning and Research Sectors cooperation a basic factor for achieving institutional strategic vision



▲ **KU President addressing the Planning Workshop**

The workshop, reflecting the cooperation between KU's two sectors – Planning and Research, was aimed at developing the Research Sector's strategic plan, priorities and programs to be implemented over the next five years (2018 – 2022).

Speaking on the occasion, KU President emphasized the significance of

teamwork as the basic factor in KU's work environment. He also appreciated the Planning Sector's initiative in organizing such meetings, and the value of cooperation with RS and different KU administrations as a significant step, hoping for continuity of such meetings in future. He also thanked KU staff for their accomplishments during the current academic year,

encouraging them for greater creativity and innovation in implementing the operational plan for achieving the goals of KU's strategic plan. ■



▲ **Research Sector staff attending the Workshop Session**

▶ Graduate Symposium...(From P. 11)

-- academic education and scientific research, for transmitting knowledge and engaging faculties in high quality research, Prof. Taher said that KU's scientific programs assume immense significance in the 50th Golden Jubilee year, spearheading a sustained scientific movement towards institutional global aspirations through quality, distinction and excellence. Outlining the development of scientific research, he said that the organized system of research at Kuwait University started in 1979, with the establishment of Office of the Vice President for Research (OVPR), to promote, support and sustain faculty research in basic and applied sciences, and in arts and humanities. Today, 36 years later, 14,482 projects have been awarded to faculties, 28.8% (4,175) Science, 18.7% (2,708) Engineering & Petroleum, 29.4%(4,254) Health Sciences, and 23.1%(3,345) Arts & Humanities.

Continuing further, Prof. Taher said that KU's policy advocates equality in awarding grants to all faculty members in diverse disciplines and specializations, with grants provided under 10 distinct categories, including graduate research. Since RS mission is integrated to KU's vision of globalizing research, RS efforts are directed at encouraging faculty members and graduate students towards original, innovative, high quality research. Recognizing that postgraduate studies require research as part of their Master's and Ph.D. programs, which need funding support, the Research Sector (RS), in a major policy step in 2003/04, opened the door for awarding research grants to Graduate students to facilitate postgraduate research at Kuwait University, in its ambitious drive towards developing the future researchers and scientists for national developmental needs. This

RS efforts driven towards encouraging faculty members and developing competitive graduate cadres for contemporary and future challenges



▲ Vice President for Research receiving a Memento at the Graduate Symposium event

move led to the establishment of an exclusive Graduate grants category for supporting graduate students research initiatives, pursuing Master's and Ph.D. programs. RS granted the first graduate awards in 2004/05 to 17 students -- 12 Master's and 5 Ph.D. In 2015/16, postgraduate beneficiaries reached 50 graduate students, in addition to 11 potential graduate applications under-process, registering a steady increase in graduate research at Kuwait University.

Looking at 2015/16 statistics, faculty research activity at KU recorded a total of 682 projects, of which 7.3% (50) were graduate research grants -- awarded to students pursuing Master's and Ph.D. studies, a figure which RS is endeavoring to promote, enhancing institutional drive towards developing competitive graduate programs. Also, RS postdoctoral fellowship program is another step that facilitates hiring of newly graduated doctoral students on research projects, further developing their creative instincts and effectively promoting the employability aspects for new Ph.D. holders by encouraging their participation in scientific research for gaining requisite research exposure and experience. In addition, RS also annually awards Graduate Students Project Prize, an incentive for

outstanding research accomplishments of graduate studies students based on their meritorious thesis work. A total of six prizes are instituted for this purpose, which includes four prizes for Master's, and two for Ph.D. students pursuing postgraduate research in sciences and humanities fields.

Since RS mission is integrated to KU's vision of globalizing research, Prof. Taher said that our current efforts are directed at encouraging faculty members and developing competitive graduate cadres for contemporary and future challenges. For this purpose, RS is driven towards encouraging faculty members and graduate students to pursue original, innovative, high quality research that generates outstanding results of international credibility and impact, discovers new knowledge, improves quality of life, and benefits humanity. He also said that RS priorities and long-term strategy is geared to steering KU's scientific processes towards global dimensions, international recognition, improving institutional ranking, and attaining world-class stature through the culture of quality, creativity and excellence -- a vision rooted in KU's principles, programs, potential and competence of KU faculty and graduate community.

ANNOUNCEMENT

Poster Day for Humanities and Social Sciences faculties to be held on Wednesday, March 15, 2017

RS announces the Scientific Poster Day event for the Academic year 2016/17

Faculty Members, Teaching Assistants & Graduate Students invited to participate



Poster Day for Scientific Faculties Scheduled for Wednesday, March 22, 2017

The Research Sector announced the scheduling of its annual scientific Poster Day event for the academic year 2016/17 for scientific, and humanities & social sciences faculties. The event to be held under the patronage and presence of Kuwait University President, Prof. Hussein Al-Ansari, is to be hosted by the Vice President for Research, Prof. Taher Al-Sahhaf, as an annual commitment for organized display of faculties latest research accomplishments on the posters platform. The purpose is to create an interactive environment for shared interests and ideas that could lead to new concepts, scientific innovation and multi-disciplinary research, as well as ensure visibility and exposure of latest advances in faculty research at Kuwait University.

This rationale is the guiding principle for the annual holding of the scientific Poster Day event, the dates for which have been set. Accordingly, the Poster day for the

Humanities and Social Sciences faculties would be held on Wednesday, March 15, 2017, at 9:30 am. at the Fountain area of the College of Social Sciences, Shuwaikh Campus. For the Scientific Faculties, Posters event is scheduled for Wednesday, March 22, 2017 at 9:30 am. at Farouk Barghash Almutairi Hall, faculty of Engineering and Petroleum, Khaldiya Campus.

The Research Sector invites, and looks forward to, active participation of faculty members, teaching assistants and graduate students in the Poster Day event. RS will start accepting applications for participation, and a committee will be formed by faculties' representatives, for evaluation and short-listing of best posters. Winners of top three posters in each category will receive monetary incentive awards, as outlined below:

Category I -- Faculty Members

A total amount of KD. 1000/- is earmarked for top three winners in the Faculty Members category, with the amount distributed as follows:

- KD. 500/- for the First top ranking poster
- KD. 300/- for the Second winning poster
- KD. 200/- for the Third Poster winner

Category – II -- Teaching Assistants

An amount of KD. 800 is allocated for the top three posters in the Teaching Assistants category, with following entitlements:

- KD. 350/- for the First best poster

► *SPSS workshop 2016 ... (From P. 10)*

Second workshop, held under the Patronage of Prof. Taher Al-Sahhaf, Vice President for Research, to meet the popular demand of new faculty members and graduate students of humanities and sciences colleges. The Workshop, held on Tuesday, Nov. 22, 2016, at the Seminar hall, Abdulla Al-Jaber theater, Shuwaikh campus, attracted a representative participation of faculty members and graduate students. The key speaker, Prof. Husni Hamdi, yet again, generously presented an overview of the Statistical Package for Social Sciences (SPSS), an analytical tool for data analysis and interpretation of results, along with empirical examples.

Elaborating the effectiveness of SPSS, Prof. Hamdi said that Statistical science is an integral part of research methodology, and essentially used in conducting all types of research and data analysis in diverse scientific fields, such as medicine, engineering, science, politics, social sciences, and agriculture, with the specific application tailored to the nature of research and disciplinary field.



▲ *SPSS workshop in Progress...!*

Explaining that statistics is the science that facilitates the process of inference for political and economic decisions, Prof. Hamdi said that with rapid technological advances in the field of computers, complex calculations could be performed readily, making it easier to apply statistics through programs and statistical packages, facilitating analysis and generation of results that could be interpreted for valid decisions. Although, several programs are available in the market, SPSS program is the best suited for

soliciting responses based on questionnaires, determining trends, and undertaking opinion analysis, as well as developing models of causal relation between various concepts.

For the Research Sector, the annual organization of SPSS Workshop marks its sustained efforts towards improving the institutional research quality by facilitating researchers, and in achieving the goals and vision of KU's suggested strategic plan for elevating the institutional scientific processes and status of research. ■

► *RS announces Poster Day events ... (From P. 28)*

- KD. 250/- for the Second best poster
- KD. 200/- for the Third award-winning poster

● **Category III - Graduate Students:**

KD 600/- is allocated for the first three award winning posters in the Graduate Students category, with following entitlements:

- KD. 250/- for the First best poster
- KD. 200/- for the Second best poster
- KD. 150/- for the Third winning poster.

Poster award winning researchers, achieving the top three slots in each category, will also receive letters of acknowledgement, and their names published on the Re-

search Sector's website, along with the abstract of their award winning research.

For information/inquiry contact: 24985005, 2498783,

Fax: 24841709

Please fill the Application Form, and send it by email to the Research Sector goo.gl/PYXJnK ■

**HEADING
GLOBAL 2016**

Dr. Laila Marouf presents a dynamic view of "Creative Leadership in the Emerging Knowledge Society"

Under the Patronage of H.E. Dr. Bader Al-Essa, Minister of Education and Higher Education, and amidst a huge gathering of experts, scientists and researchers, the Public Authority for Applied Education and Training (PAAET) inaugurated a conference entitled "Heading Global 2016," at the Kuwait Regency Palace. The three-day conference, hosted by PAAET, from November 14-16, 2016, is aimed at a series of presentations addressing diverse aspects of knowledge economy, sustainability and inclusive growth.

It is within the framework of

Under the Patronage H.E. Dr. Bader Al-Essa, Minister of Education & Higher Education, PAAET Inaugurates a three-day conference on "Heading Global 2016"



Harnessing knowledge, expertise and experiences critical to scientific, social and economic advancement

Heading Global's vision that Dr. Laila Marouf, Assistant Vice President for Research, Office of Vice President for Research, Kuwait University, presented a dynamic view of "Creative Leadership in the Emerging Knowledge Society," as a mission towards innovation, creativity and excellence, through strategies, policies and practice geared towards sustainability and inclusive growth.

Focusing on knowledge economy,

the conference highlighted the need for developing human and intellectual capital for cultural and social transformations, and harnessing knowledge, expertise and experiences as key elements of scientific, social and economic advancement in the State of Kuwait. The overriding objective, however, was to foresee the development of Kuwait as a regional financial and economic hub, in realizing the vision of His Highness The Amir Shaikh Sabah Al-Ahmad Al-Sabah.



PRESS CONFERENCE

Scientific Posters Day involves participation of Faculty Members, Teaching Assistants and Graduate Students

Within the framework of ongoing preparations and activities concerning the annual Scientific Poster Day events, the Research Sector (RS), in a recent press conference, briefed the press and media community on the significance of organizing the upcoming Poster events as RS annual commitment towards providing the faculty members an opportunity for organized display of their latest research accomplishments on the Posters platform for wide exposure of recent advances and research developments at Kuwait University (KU). Essentially, the purpose is to create an interactive environment for discussions and dialogue among researchers and experts as grounds for shared interests across disciplines for new ideas and concepts to emerge for interdisciplinary and collaborative research, bringing faculty research advances to the forefront of public attention and keeping the scientific community and wider society informed and updated on emerging trends in institutional research.

Addressing the press conference, Prof. Taher Al-Sahhaf, Vice President for Research, welcomed the participants and press attendees, thanking them for their continuous support and presence at all RS events. Introducing the upcoming 2016/17 Scientific Poster Day

RS organizes Press conference for outlining the significance and purpose of annual Scientific Poster Day events

events, Prof. Taher said that research is one of the critical foundations of scientific advancement at KU, and RS is continuously endeavoring to oversee development of research at KU by encouraging researchers to pursue and accomplish high quality research that achieves international credibility, enriching science and knowledge and serving the society in diverse fields and specializations.

The press conference, held on December 22, 2016, at 9 AM, at the Meeting Hall of Office of Vice President for Research(OVPR), was chaired by the Vice President, Prof. Taher Al-Sahhaf, in attendance of his assistants, Prof. Yousuf Garashi, Prof. Haider Behbehani, and Dr. Laila Marouf. Outlining planned scheduling of RS Poster Day events, Dr. Laila said that these events are organized under the Patronage of KU President, Prof. Hussain Al-Ansari, and hosted by the Vice President for Research, Prof. Taher Al-Sahhaf. The two-day events are scheduled to be held for the Humanities and Social sciences faculties, as well as for Sciences faculties, as follows:

■ **Humanities and social Sciences Poster Day:** Scheduled for Wednesday, March 15, 2017, at 9:30 AM, at the Fountain Court, College of Social Sciences, Shuwaikh Campus, involves participation of the faculties of Arts, Business Administration, Education, Law, Sharia & Islamic Studies, and Social Sciences.

■ **Sciences Poster Day:** Scheduled for Wednesday, March 22, 2017, at 9:30 AM, at the Farouk Barghash Almutairi Hall, College of En-



▲ Vice President, Prof. Taher Al-Sahhaf Addressing the Press Conference...!

Conference participants & press briefed on upcoming 2016/17 Poster events

gineering & Petroleum, Khaldiya Campus, involves participation of the faculties of Architecture, Computing Sciences & Engineering, Engineering & Petroleum, Life Sciences, and Science, as well as researchers from Kuwait Institute for Scientific Research (KISR).

RS has already started receiving researchers requests for participation in the Poster Day events, and several posters have been received. To ensure wider participation, the posters submission deadline has been extended for 10 days with effect from Dec. 22, 2016. Dr. Laila also affirmed RS efforts towards facilitating the participation process through a package of poster samples, and facility is being provided to participants for on-line submission of Poster Participation Forms by accessing following links:

- Participation Form In Arabic for Humanities faculties: <http://goo.gl/PYXlnK>
- Participation Form In English for Science faculties: <http://goo.gl/Sr8mmC>

Additionally, RS Research Services Department will also be available for assistance to any researcher facing difficulties in the design process.

An open invitation has been sent to all faculty members, teaching assistants and

KUWAIT CAPITAL OF ISLAMIC CULTURE

Prof. Taher highlights the primacy of Arab scientists and scholars in the history of Islamic Civilization throughout eras

Under the Patronage of Prof. Hussain Al-Ansari, President, Kuwait University, the faculty of Arts recently organized a symposium entitled "Islamic culture and its arts and manifestations," to mark the occasion of State of Kuwait's selection as the capital of Islamic culture by the Islamic Organization for Education, Sciences, and Culture (ISESCO) for the year 2016.

At the symposium's inaugural, Prof. Suad Abdulwahab, Dean, faculty of Arts, welcomed Prof. Taher Al-Sahhaf, Vice President for Research's presence as representative of the symposium's patron, as well as the Ambassador of the Arab Republic of Egypt in Kuwait. Highlighting the faculty's mission and message, Prof. Suad said that the faculty of Arts is driven towards the principles of care and comprehensiveness of the humanity and civilization, and is endeavoring to activate university's role in

Under the Patronage of KU President

Faculty of Arts organizes a symposium on "Islamic culture and its arts and manifestations," to mark Kuwait's selection as the capital of Islamic culture for 2016

Symposium aimed at accomplishing KU's goal of nurturing students cultural characteristics



▲ Kuwait Capital of Islamic Culture - Press Conference in Progress...!

society. The faculty's organization of the a symposium is focused on aspects of the Islamic civilization, coinciding with the celebrations marking the selection of Kuwait as the capital of Islamic culture for 2016, with the aim of enriching the scientific culture at Kuwait University based on science and students diversity.

Sharing his thoughts on the occasion, Prof. Taher said that the symposium accomplishes Kuwait University's goal as regards taking care of the students cultural characteristics, enlisting the participation of researchers and professors from various departments of the faculty of Arts, including History,

Philosophy, French and English language departments.

Continuing further, Prof. Taher said that the symposium addressed several aspects concerning the image of Arab and Muslims, characterized in the British literature during the 18th century, the Islamic heritage in French literature, as well as science of navigation and primacy of Arab scholars in diverse sciences and scientific fields.

Expressing hope that the symposium achieves its goals in enriching students knowledge, Prof. Taher emphasized the role of Arab scientists and scholars in the history of Islamic civilization throughout eras. ■

IMEC DELEGATION

KU-IMEC sustained cooperation in current and future nano-electronics technology applications in life sciences, medical field and photovoltaics discussed

A high profile delegation of scientists and researchers from the Belgium based IMEC's Nano-electronics Research Center, recently visited Kuwait University's Presidential Office, and was received by the President, Prof. Hussein Al-Ansari, amidst the presence of Prof. Taher Al-Sahhaf, Vice President for Research, Dr. Ali Almutairi Vice Dean for Research, College of Engineering & Petroleum, and a group of faculty members from Engineering & Petroleum and Science faculties. Within the framework of KU's ongoing collaboration with IMEC on scientific research,

Prof. Taher joins KU President in receiving a high profile IMEC's delegation of researchers & scientists



▲ RS receives Delegation from the Belgium based IMEC's Nano-electronics Research Center

the discussions primarily centered on current KU-IMEC partnership agreement for advancing research in areas of medical applications and photovoltaics, the potentially significant fields with far reaching implications for human life and in serving communities.

The meeting also discussed ways of continued and sustained cooperation between the two institutions as regards significant current and future applications of nano-electronics technology in such important fields as life sciences, health

care and photovoltaics. Prof. Hussein appreciated the efforts and results achieved in accomplishing the first phase of KU-IMEC joint research project that received financial support from Kuwait Foundation for the Advancement of Science (KFAS). The project, accomplished over a period of three years, involved several visits of distinguished Kuwaiti researchers to IMEC for advanced experimentation and research, resulting in innumerable publications, with a series of scientific papers published in prestigious international journals, including registered patents. ■

▶ Press Conference ...(From P. 31)

graduate students to participate in the Poster Day events, with RS providing posters printing service to researchers. Dr. Laila also outlined the provision of cash incentives, awarded to top three posters winners in following categories:

■ Faculty Members: Total of KD 1000/- earmarked for top three ranking posters, as follows:

(KD. 500/- for the poster winning first place, KD. 300/- for second place, and KD. 200/- for third place).

■ Teaching Assistants: KD. 800/- for the first three places, as follows:

(KD. 350/- for the poster winning first place, KD. 250/- for second place, and KD. 200/- for third place).

■ Graduate Students: KD 600/- for top three ranking posters, as follows:

(KD. 250/- for the poster winning first place, KD. 200/- for second place, and KD. 150/- for third place).

This year, RS would also be awarding for the first time, Certificates of Appreciation and trophies to winners of top three posters in each category.

The Press briefing closed with Prof. Taher

inviting all researchers not to hesitate in contacting and communicating with the Research Sector at the following link, assuring RS availability in assisting them. Prof. Taher also thanked all participants and press attendees, wishing them the Season's best for a happy new year, together with greater research dynamism and accomplishments that serve Kuwaiti community needs and the wider society.

RS Contact: Tel. 24987832, 24985005
Fax: 24841709

Email: <http://www.ovpr.kuniv.edu>

Instagram and Twitter: kuresearch ■

STATISTICS ON FACULTY RESEARCH

RS driven towards placing KU's research firmly on the global scientific map

Faculty research activity reached a gross total of 682 projects during the academic year 2015/16

RS endeavoring to engage faculties in high quality, interdisciplinary and collaborative studies that could yield potentially significant outputs of scientific, social, economic and human value

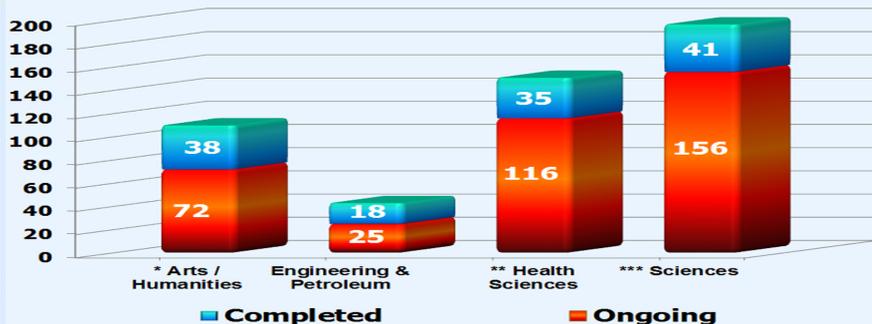
During the academic year 2015/16, faculty research activity retained its momentum, with funded research reaching a gross total of 682 projects. This figure reflected the faculties vibrancy in availing grants for the pursuit of scientific research, in-keeping with the Research Sector's (RS) policy of supporting advanced and innovative research of strategic significance to national needs and priorities, discovery of new knowledge, and generating high quality outputs of international credibility. It is within this policy frame that the faculties cumulative participation and performance in funded research, during the period September 1, 2015 to August 31, 2016, was measureable in terms of a net total of 682 projects, with all faculties being the grant recipients, despite varying levels of their research participation. Forming the core of research activity during the span of a single academic year, these projects were in various stages of

Table 1. TOTAL RESEARCH ACTIVITY*
Academic Year (2015/16) (Sept. 1, 2015 to Aug. 31, 2016)

| Project Status | Funding ** Levels | | | Total |
|----------------|-----------------------|---------------------|-----------------------|-----------------------|
| | less than 4001 | 4001 - 10,000 | more than 10,000 | |
| Ongoing | 199 | 23 | 157 | 379 (55.6%) |
| Completed | 87 | 13 | 32 | 132 (19.4%) |
| Under-process | 50 | 29 | 92 | 171 (25%) |
| TOTAL | 336 (49.3%) | 65 (9.5%) | 281 (41.2%) | 682 (50.7%) |

* Source KURS, Data upto August 31, 2016 (Includes ongoing/completed projects from previous year).

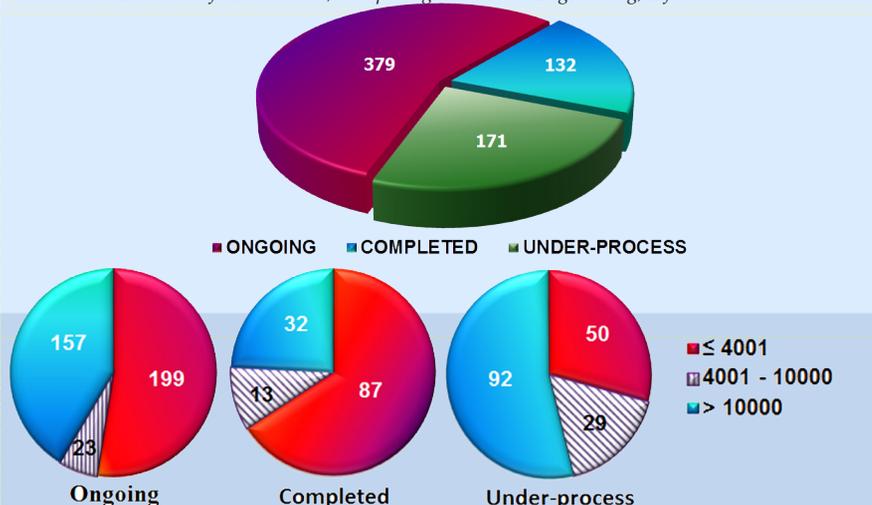
** Values in KD



* 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. 34)*

progress, completion, and line-up of newly submitted proposals for grant awards. In numerical terms, faculties cumulative research accounted for 379(55.6%) ongoing projects, 132 (19.4%) completed projects, and 171(25%) new proposals undergoing the standard review process (Table I).

In the sustenance of faculty research activity, RS Research Support System sets the principles and procedures for grant awards, with budgetary allocation being the single crucial factor, responsible for facilitating research implementation, once a project clears the review process and receives grant approval. RS funding process provides grant support under three distinct budgetary levels for small, medium and big-budgeted projects, the requirements of which are specified in the manual of research support rules and regulations (2013 edition). During 2015/16, faculties total projects activity by funding levels, exhibited a higher concentration of 336(49.3%) projects in the lowest budgetary category of up to KD 4,000/-, followed by 281 (41.2%) projects in the highest budgetary range of KD 10,000/- and above, while the lowest number of 65(9.5%) projects figured under the medium range budgetary category (KD 400I- 10,000/). Collectively, the highest and medium range projects, accounting for 346 (50.7%) projects, indicated that faculties were as much driven towards smaller, limited-objectives projects, as larger well-defined, big-budgeted comprehensive studies. In RS grants system, smaller budgeted projects are largely associated

Research Support System sets the principles and procedures for grant awards, with budgetary allocation being the single crucial factor, facilitating research implementation

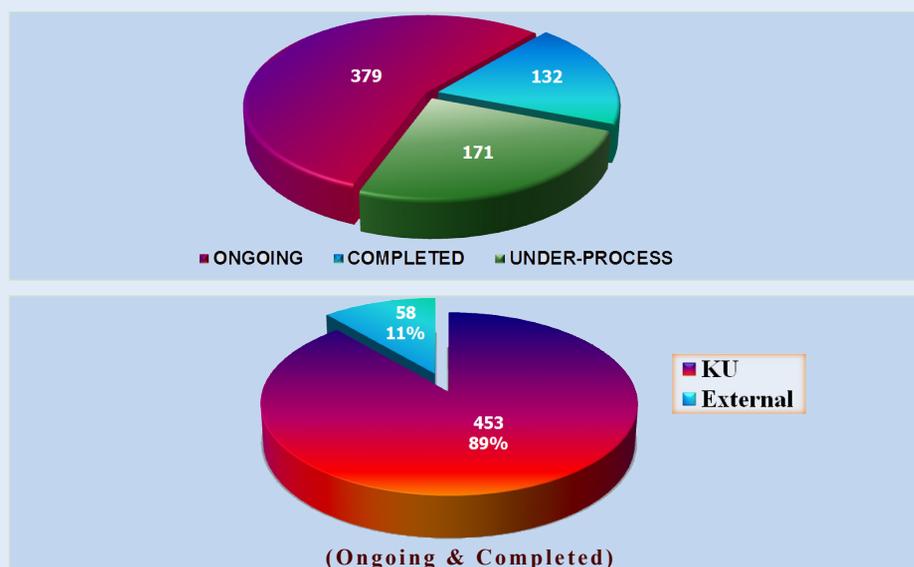
with Research Initiation Grants and Graduate Students research, tied with budgetary limitations, however, some faculty members preferentially opt for smaller, limited-objectives projects, the net impact of which is observable in higher numerical count of smaller grants. RS is observing this develop-

Table 2. TOTAL ONGOING, COMPLETED & UNDER-PROCESS PROJECTS by FACULTY & FUNDING SOURCE, Academic Year (2015/16) (Sept. 1, 2015 to Aug. 31, 2016)*

| FACULTY | ONGOING | | COMPLETED | | UNDER-PROCESS | | TOTAL | | GRAND TOTAL |
|---------------------------|------------|-----------|------------|----------|---------------|-----------|------------|-----------|-------------|
| | KU | EXT** | KU | EXT | KU | EXT | KU | EXT | |
| Allied Health Sciences | 10 | 1 | 3 | - | 8 | 3 | 21 | 4 | 25 |
| Architecture | 2 | 1 | - | - | 1 | - | 3 | 1 | 4 |
| Arts | 17 | 1 | 6 | - | 3 | - | 26 | 1 | 27 |
| Business Admn. | 12 | 1 | 10 | - | 8 | 3 | 30 | 4 | 34 |
| Computing Sciences & Eng. | 14 | 3 | 4 | 1 | 10 | 2 | 28 | 6 | 34 |
| Dentistry | 14 | 1 | 6 | - | 5 | 1 | 25 | 2 | 27 |
| Education | 9 | - | 8 | 1 | 3 | 1 | 20 | 2 | 22 |
| Engg. & Petroleum | 26 | 9 | 17 | 1 | 17 | 7 | 60 | 17 | 77 |
| Law | 1 | - | 1 | - | - | - | 2 | - | 2 |
| Life Sciences | 15 | 2 | 2 | - | 4 | 1 | 21 | 3 | 24 |
| Medicine | 65 | 12 | 17 | 1 | 23 | 12 | 105 | 25 | 130 |
| Pharmacy | 13 | - | 8 | - | 8 | 1 | 29 | 1 | 30 |
| Science | 101 | 18 | 30 | 4 | 27 | 7 | 158 | 29 | 187 |
| Sharia | 10 | - | 6 | - | 5 | - | 21 | - | 21 |
| Social Sciences | 21 | - | 5 | 1 | 11 | - | 37 | 1 | 38 |
| TOTAL | 330 | 49 | 123 | 9 | 133 | 38 | 586 | 96 | 682 |

Summary: Ongoing (379), Completed (132), Under-Process (171). Grand Total: 682.

* Source KURS, Data upto August 31, 2016.
** External Institutions.



► *Statistics on faculty research ... (From P. 35)*

ment at a time, when it is strategically inclined towards promoting collaborative and interdisciplinary studies of potential significance to national needs and priorities and imperative to emerging regional and global realities. The thrust is to relate research to social, industrial and economic realities of contemporary significance in search of practical solutions for complex and challenging issues through the scientific route. Facilities and resources are, therefore, being allocated to engage faculties in high quality interdisciplinary studies of relevance that could yield potentially significant outputs of scientific, social and human value.

Given the scientific value of research, faculties research performance assumes significance in providing empirically applicable solutions and effectively strengthening the knowledge base through high quality internationally credible research outputs. The performance angle is, therefore, significant in measuring faculties yearly record of ongoing and completed projects, as well as the productivity aspects concerning the publications generated from successfully completed projects. During 2015/16, the

KU's entire research activity tied to the principle of productivity as a marker of a project's performance in terms of research publications

domain of faculties active research included 511 projects -- 379 ongoing and 132 completed projects. Analytically, faculty-wise measure of research performance showed Sci-

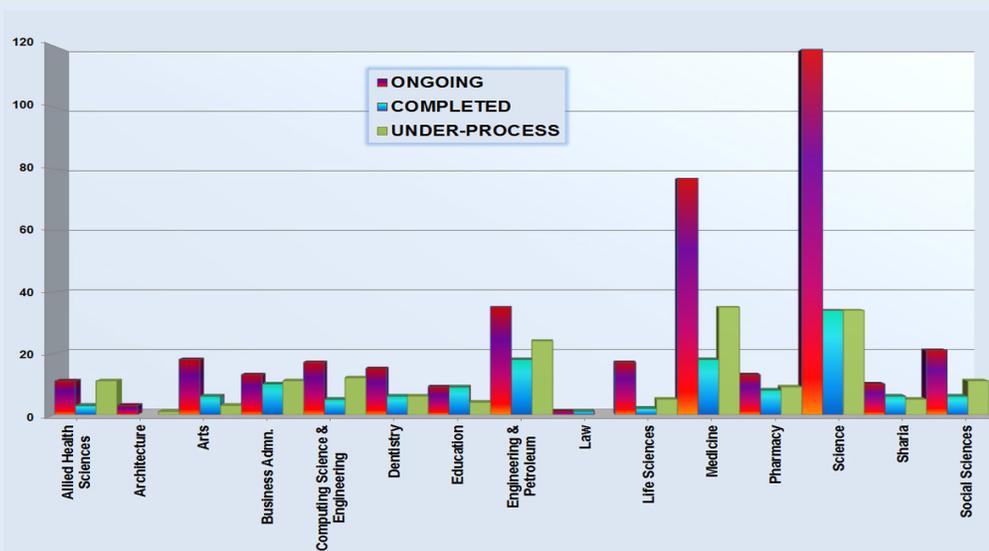
ences colleges' (*Architecture, Computing Sciences & Engineering, Life Sciences, and Science*) collective performance superseding all other colleges with a total of 197(38.6%)

Table 3. PROJECT STATUS by FACULTY & FUNDING LEVELS Academic Year 2015/16 (Sept. 1, 2015 to Aug. 31, 2016)***

| 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 | 4 | - | 7 | 1 | 1 | 1 | - | 3 | 8 | 25 |
| Architecture | 2 | - | 1 | - | - | - | 1 | - | - | 4 |
| Arts | 18 | - | - | 6 | - | - | 1 | 1 | 1 | 27 |
| Business Admn. | 12 | 1 | - | 10 | - | - | 4 | 4 | 3 | 34 |
| Computing Sciences & Eng. | 9 | 1 | 7 | 2 | 2 | 1 | 6 | 1 | 5 | 34 |
| Dentistry | 7 | 2 | 6 | 5 | 1 | - | 2 | 1 | 3 | 27 |
| Education | 6 | 1 | 2 | 6 | 3 | - | 2 | 2 | - | 22 |
| Engineering & Petroleum | 8 | 2 | 25 | 10 | 3 | 5 | 3 | 4 | 17 | 77 |
| Law | 1 | - | - | 1 | - | - | - | - | - | 2 |
| Life Sciences | 7 | 6 | 4 | 2 | - | - | 4 | - | 1 | 24 |
| Medicine | 39 | 1 | 37 | 10 | - | 8 | 3 | 4 | 28 | 130 |
| Pharmacy | 7 | - | 6 | 4 | - | 4 | 3 | 2 | 4 | 30 |
| Science | 48 | 9 | 62 | 20 | 2 | 12 | 10 | 3 | 21 | 187 |
| Sharia | 10 | - | - | 6 | - | - | 5 | - | - | 21 |
| Social Sciences | 21 | - | - | 4 | 1 | 1 | 6 | 4 | 1 | 38 |
| TOTAL | 199 | 23 | 157 | 87 | 13 | 32 | 50 | 29 | 92 | 682 |

* Source KURS, Data upto August 31, 2016.

** Values in KD.



► *Statistics on faculty research ... (From P. 36)*

ongoing and completed projects, followed by Health Sciences Center colleges (*Medicine, Dentistry, Pharmacy & Allied Health Sciences*) with 151 (29.5%) ongoing and completed projects, Arts & Humanities colleges (*Arts, Business Administration, Education, Law, Sharia & Social Sciences*) combined performance accounted for 110 (21.5%) ongoing and completed projects, and Engineering & Petroleum college performance recorded 53 (10.4%) ongoing and completed projects (Table 2). As regards 171 under-process projects, maximum 61 (35.7%) projects were submitted by the Health Sciences faculties for grant support, closely followed by 52 (30.4%) projects by Sciences colleges, 34 (19.9%) projects by Arts & Humanities colleges, and 24 (14%) projects by Engineering & Petroleum college.

Focusing on 379 ongoing projects, statistics showed science colleges to be the largest recipients of grants, enlisting 156 (41.2%) ongoing projects, followed by Health Sciences colleges with 116 (30.6%) projects, Arts & Humanities pursuing 72 (19%) projects, and Engineering & Petroleum college enlisting 35 (9.2%) grants (Table 2).

Analyzing 379 ongoing projects by funding-levels, a higher concentration of 199 (52.5%) ongoing projects was

enlisted in the lowest budgetary level of less than KD 4001/-, followed by 157 (41.4%) projects in the highest budgetary category of more than KD 10,000/- category, while least number of 23 (6.1%) projects were in the medium-range budgetary category of KD 4001-10,000/- (Table 3). A similar pattern was also observable in 132 completed projects, which included 87 (66%) completed projects in the less than KD 4,001/- budgetary category, 32 (24.2%) completed projects in the highest budgetary

category of more than KD 10,000/-, while medium range budgetary category of KD 4001 – 10,000/-, enlisted the lowest number 13 (9.8%) completed projects. Faculty-wise listing of completed projects showed a relatively higher completion rate (41, 31.1%) achieved by Sciences colleges, closely followed by Arts & Humanities (38, 28.8%) colleges, (35, 26.5%) projects completed by Health Sciences colleges, while Engineering & Petroleum college registered the least number (18, 13.6%) of completed

Table 4. TOTAL ONGOING & COMPLETED RESEARCH PROJECTS by FUNDING SOURCE Academic Year 2015/16 (Sept. 1, 2015 to Aug. 31, 2016)*

| FACULTY | KU | KFAS | KMIT | ASTRA-ZENECA | SHOFU | TOTAL |
|---------------------------|------------|-----------|----------|--------------|----------|------------|
| Allied Health Sciences | 13 | 1 | - | - | - | 14 |
| Architecture | 2 | 1 | - | - | - | 3 |
| Arts | 23 | 1 | - | - | - | 24 |
| Business Administration | 22 | 1 | - | - | - | 23 |
| Computing Sciences & Eng. | 18 | 4 | - | - | - | 22 |
| Dentistry | 20 | - | - | - | 1 | 21 |
| Education | 17 | 1 | - | - | - | 18 |
| Engineering & Petroleum | 43 | 6 | 4 | - | - | 53 |
| Law | 2 | - | - | - | - | 2 |
| Life Sciences | 17 | 1 | 1 | - | - | 19 |
| Medicine | 82 | 11 | 1 | 1 | - | 95 |
| Pharmacy | 21 | - | - | - | - | 21 |
| Science | 131 | 20 | 2 | - | - | 153 |
| Sharia | 16 | - | - | - | - | 16 |
| Social Sciences | 26 | 1 | - | - | - | 27 |
| TOTAL | 453 | 48 | 8 | 1 | 1 | 511 |

* Source KURS, Data upto August 31, 2016 (Include ongoing/completed projects from previous year).

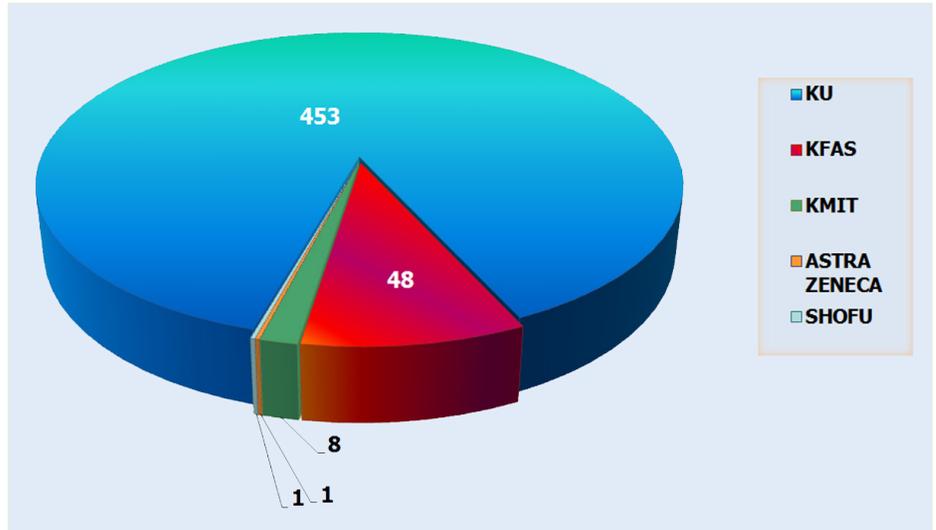
KU Kuwait University
 KFAS Kuwait Foundation for the Advancement of Sciences
 KNPC Kuwait National Petroleum Corporation
 KMIT Kuwait Massachusetts Institute of Technology
 SHOFU
 ASTRAZENECA
 CARGIL

► *Statistics on faculty research ... (From P. 37)*

projects (Table 3).

In the context of external grants, RS recorded 58 projects (ongoing & completed) jointly being pursued in collaboration with four external institutions, alongside KU sponsored 453 projects. In comparative terms, KU consistently remained the major grant provider in the sustenance of 453 (88.6%) projects during 2015/16, while external sources rendered funding support to 58 (11.4%) projects. The external fund providers included Kuwait Foundation for the Advancement of Sciences (KFAS) for funding the maximum number of 48 (82.8%) projects, Kuwait Massachusetts Institute of Technology (KMIT) rendering support to 8 (13.8%) projects, while AstraZeneca and Shofu Company were responsible for funding 1 (1.7%) project each (Table 4). As regards 171 under-process projects, 133 (77.8%) newly submitted proposals were lined-up for KU's grant support, while remaining 38 (22.2%) projects were seeking external funding support (Ref. Table 2).

The dynamics of Faculties research activity is further analyzed in terms of the Types of Grants during 2015/16, with Table 5 presenting faculty-wise distribution of 511 ongoing and completed projects by Grant categories. Numerically, maximum 304 (59.5%) ongoing and completed pro-



jects were listed under the University grants category, with remaining ongoing and completed projects distributed over the categories of 46 (9%) RIG projects, 28 (5.5%) Priority research projects, 50 (9.8%) Graduate research projects, 1 (0.2%) University Service project, 19 (3.7%) General

Facility projects, 58 (11.3%) External research projects, 3 (0.6%) SRUL projects, 1 (0.2%) National research projects and 1 (0.2%) GCC joint project. These figures exhibit the prevailing research vibrancy at KU, with faculty members pursuing research under all ten Types of

Table 5. ONGOING & COMPLETED RESEARCH PROJECTS by TYPES of GRANTS Academic Year 2015/16 (Sept. 1, 2015 to Aug. 31, 2016)*

| Faculty | Types of Grants | | | | | | | | | | Grand Total |
|-------------------------|-----------------|-----------|-----------|-----------|----------|-----------|-----------|----------|----------|----------|-------------|
| | URP | RIG | PRP | GRP | USP | GFP | ERP | SRUL | NRP | GCC | |
| Allied Health Sciences | 10 | 1 | 1 | 1 | - | - | 1 | - | - | - | 14 |
| Architecture | - | 1 | 1 | - | - | - | 1 | - | - | - | 3 |
| Arts | 17 | 6 | - | - | - | - | 1 | - | - | - | 24 |
| Business Admn. | 18 | 3 | 1 | - | - | - | 1 | - | - | - | 23 |
| Computing Sc. & Eng. | 12 | 2 | 3 | - | 1 | - | 4 | - | - | - | 22 |
| Dentistry | 19 | - | - | - | - | - | 1 | 1 | - | - | 21 |
| Education | 10 | 4 | 2 | - | - | 1 | 1 | - | - | - | 18 |
| Engineering & Petroleum | 29 | 3 | 7 | 1 | - | 3 | 10 | - | - | - | 53 |
| Law | 1 | - | 1 | - | - | - | - | - | - | - | 2 |
| Life Sciences | 9 | 2 | 2 | 4 | - | 2 | - | - | - | - | 19 |
| Medicine | 40 | 9 | 4 | 25 | - | 1 | 13 | 1 | 1 | 1 | 95 |
| Pharmacy | 12 | 3 | 1 | 5 | - | - | - | - | - | - | 21 |
| Science | 94 | 3 | 5 | 14 | - | 14 | 22 | 1 | - | - | 153 |
| Sharia | 15 | 1 | - | - | - | - | - | - | - | - | 16 |
| Social Sciences | 18 | 8 | - | - | - | - | 1 | - | - | - | 27 |
| TOTAL | 304 | 46 | 28 | 50 | 1 | 19 | 58 | 3 | 1 | 1 | 511 |

* Source KURS, Data upto August 31, 2016.

URP -- University Research Projects

PRP -- Priority Research Projects

USP -- University Service Projects

ERP -- External Research Projects

GCC -- Joint Research Project with GCC

RIG -- Research Initiation Grants

GRP -- Graduate Research Projects

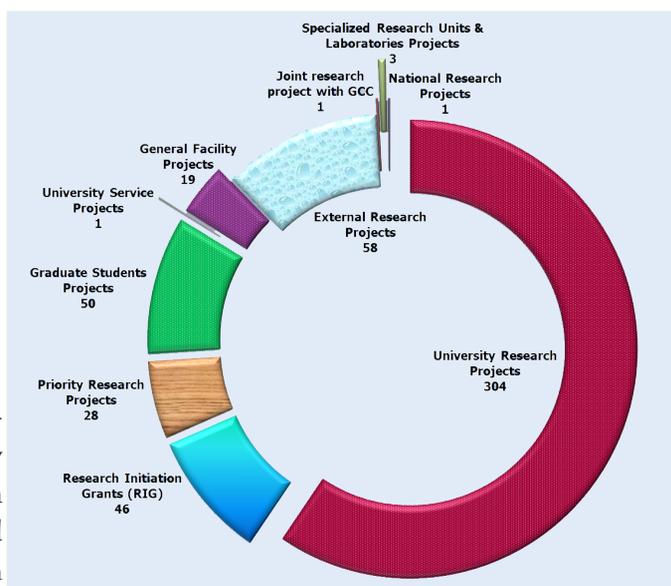
GFP -- General Facility Projects

SRUL -- Specialized Research Units & Laboratories Projects

► *Statistics on faculty research ... (From P. 38)*

grants that RS offers. During 2015/16, the University Research Grants was the most preferred grants support category, with largest volume of research awarded, university research grants category emerged as the most popular Type of research awards, essentially forming the core of RS grant support system. As regards 171 under-process projects, once again University grants category enlisted maximum 96 (56.1%) proposals, followed by 38 (22.2%) External Research projects, 22 (13%) Priority Research projects, 11 (6.4%) Graduate Research projects, and 4 (2.3%) General facility projects. Overall, these figures indicate the volume of faculty members research proposals lined up for grant support under various categories, with highest newly submitted proposals seeking funding support under the University Grants category (Table 5).

Going beyond the system of grant awards, KU's entire research activity is tied to the principle of productivity, as a marker of a project's performance in terms of research publications, appearing in high ranking journals of international repute. It is, therefore, imperative that all projects granted by KU and external sources must logically culminate in publishable outputs, the scientific impact of which is measurable on the JCR (Journal Citation Report) index, a universal standard for quality assurance in scientific research. In RS scheme of quality assessment, a project's overall performance is crucially linked to the quality factor, with inclusion of research outputs in top ranking JCR listed journals, a key indicator of the scientific merit, quality



RS committed to enhancing the quality culture in institutional research, and encouraging faculties to invest

and excellence of KU research. A dire need for quality is setting new parameters of research at KU, with their expertise, caliber and potential in pursuing high value, interdisciplinary, and collaborative research, of potential significance in addressing national, regional and global priorities.

These efforts are increasingly finding expression in a growing volume of KU research appearing in reputable international journals of impact that are instrumental in elevating KU's scientific visibility and presence worldwide. RS thrust is now to build on KU's research strengths, consolidate its resource culture, and create an environment conducive to scientific innovation, creativity and knowledge generation, as critical steps towards attaining scientific distinction and enhancing

KU's global image and ranking, on grounds of distinguished, high quality and internationally credible research.

It is within this progressive frame that the faculty members' research productivity assumes immense significance in demonstrating the value and importance of

KU research through publications, appearing in high ranking international journals, reflecting on the scientific quality, impact and credibility of institutional research. Since publications form the core of research productivity, and the critical channel of institutional scientific visibility, RS closely monitors the yearly productivity and publications record of KU research, with Table 6 providing a six-year outlook of faculties publications over the calendar years (2010, 2011, 2012, 2013, 2014 and 2015), with advanced indications of year 2016 published research.

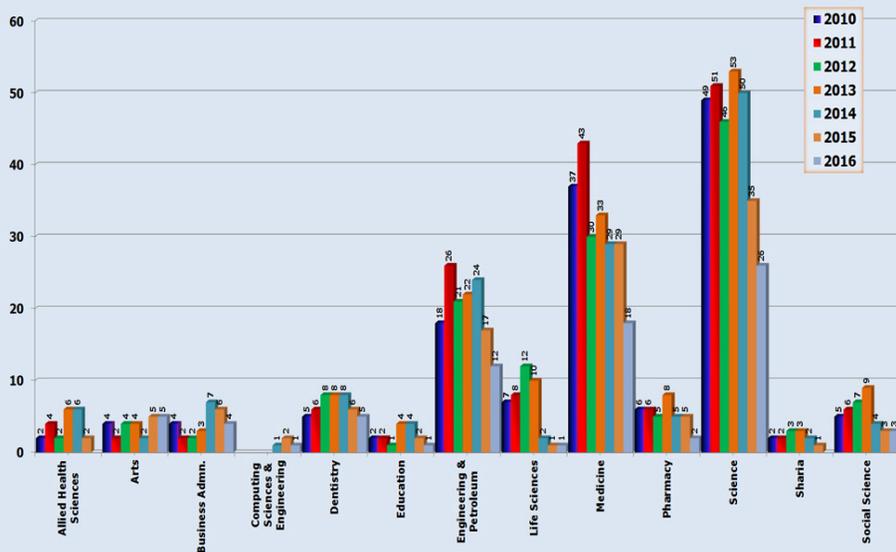
Year-wise, the faculties cumulative productivity totaled 141 publications during 2010, 158 during 2011, 141 during 2012, 163 during 2013, 144 during 2014, 114 during 2015, and 78 published papers as tentative productivity count for 2016, a figure prone to increase with the appearance of newly published journal papers, tied with the concerned journal's release date (Table 6). In fact, research productivity levels keep fluctuating due to time-variations between manuscript submission, modification, acceptance and eventual inclusion as print-

► *Statistics on faculty research ... (From P. 39)*

Table 6. Published Papers from Funded Research, Comparative Seven Calendar Years* (2010 - 2016)**

| FACULTY | Calendar Years | | | | | | |
|---------------------------|----------------|------------|------------|------------|------------|------------|-----------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016** |
| Allied Health Sciences | 2 | 4 | 2 | 5 | 6 | 2 | - |
| Arts | 4 | 2 | 4 | 4 | 2 | 5 | 5 |
| Business Admn. | 4 | 2 | 1 | 3 | 6 | 6 | 4 |
| Computing Sciences & Eng. | - | - | - | - | 1 | 2 | 1 |
| Dentistry | 5 | 6 | 8 | 8 | 7 | 6 | 5 |
| Education | 1 | 2 | 1 | 3 | 3 | 1 | 1 |
| Engineering & Petroleum | 19 | 24 | 21 | 23 | 22 | 17 | 12 |
| Life Sciences | 7 | 8 | 12 | 9 | 2 | 1 | 1 |
| Medicine | 38 | 42 | 28 | 33 | 29 | 18 | 18 |
| Pharmacy | 6 | 6 | 6 | 7 | 5 | 4 | 2 |
| Science | 49 | 53 | 46 | 54 | 49 | 28 | 26 |
| Sharia | 2 | 2 | 3 | 1 | 2 | 1 | - |
| Social Sciences | 5 | 6 | 7 | 9 | 3 | 1 | 3 |
| TOTAL | 141 | 158 | 141 | 163 | 144 | 114 | 78 |

* Figures for Published papers coordinate with calendar year (Jan. 1 to Dec. 31).
 ** Data likely to change with inflow of more published papers for 2016.



of funded research at KU, defining the policy, principles and procedures for grant awards to faculties, including resource support facilities, manpower deployment and implementation process. The provision of incentives, awards and rewards makes the system more attractive for faculties to avail grants, be partners in advancing institutional scientific research, as well as be competitors and contenders for international recognition and visibility on the global platform, while internally be recipients of KU honors and awards for their outstanding research and scientific excellence.

At this juncture, RS energy and efforts are driven towards placing KU's research firmly on the global scientific map, and faculties are being encouraged to pursue meaningful, innovative, interdisciplinary and collaborative ventures that lead to scientific breakthroughs, inventions, spinoff technologies and products of discovery, achieving international recognition and attention, while advancing the realms of scientific knowledge, and raising Kuwait University's international scientific profile and stature. Nurturing this vision, RS is steadily moving towards this ambitious goal.

ed journal articles. Hence, faculties performance levels undergo yearly adjustments, yet provide a useful indicator of faculty members' annual research performance, as a measure of productivity, publications and scientific growth.

The above statistics present a robust outlook of scientific research at Kuwait University, with faculty research activity rapidly moving closer

to the record 700 figure, having already reached 682 projects during the academic year 2015/16. Backed by grants, resources, and facilities, RS foresees a surge in faculties involvement in funded research, with encouraging opportunity available to faculty members in pursuing advanced and innovative research in a facilitative, congenial and supportive environment. RS grant support system is the scientific foundation

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