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Executive Director

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From the Executive Director's Desk

COMSATS is privileged to have the affiliation of sixteen renowned R&D establishments in developing countries as its Centres of Excellence (page 12). The Network of these Centres, which provides an excellent base for South-South cooperation in science and technology, is managed through COMSATS' Coordinating Council. During the 12th meeting of the Council held in Abuja (Nigeria) in April 2009, the Executive Director was advised to visit the Member States and conduct in-depth deliberations to enhance the role of Centres of Excellence in the programmes of

The Executive Director COMSATS presenting souvenirs to the Minister for Higher Education, Syria, and the Minister for Higher Education and the State for Scientific Research, Egypt, respectively

COMSATS. The visits to four member countries; Syria, Egypt, Iran and Jordan, were undertaken during January and February 2010 and meetings were held with the Heads of Centres of Excellence, as well as the Focal Points. A report in this connection is included in the present issue of the newsletter (page 3-7). A common denominator in the meetings with high officials of these countries was the expression of determination to make progress in S&T sector. The extent to which this objective is being achieved varied from country to country. Another common strand of these discussions was a strong realization that all countries, whatever their state of economic development, need partners and international cooperation for making advancements in their endeavours to build S&T capacity. To facilitate these cooperative efforts, a key role is played by international organizations having mandate to promote S&T sector in developing countries. COMSATS is one such platform that is best suited for regional scientific cooperation. The presence of other fora and bilateral channels, of course, provide a range of other options. Considering the immensity of the task to make S&T the driver of economic development, all possible channels are required to work in a synergetic mode. It is hoped that the commitment of COMSATS to play a role in national S&T development agendas was appreciated by the hosts and tangible responses will be offered from all the Member Countries. The Heads of Centres of Excellence are requested to kindly frame specific proposals in this connection for presentation in the upcoming 13th Coordinating Council meeting (12-13 May 2010) to be hosted by the Academy of Sciences for the Developing World (TWAS), in Trieste, Italy.

NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

NEW FEDERAL SECRETARY OF PAKISTAN'S MINISTRY OF SCIENCE AND TECHNOLOGY VISITS COMSATS SECRETARIAT

After assuming charge as the Federal Secretary, Ministry of Science and Technology, Government of Pakistan, Mr. K.B. Rind visited COMSATS Secretariat on the invitation of the Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, on January 7, 2010. Dr. Qureshi briefed Mr. Rind about the initiatives that COMSATS has taken over the last 15 years and discussed matters relating to its future activities. The current programmes and projects of COMSATS were reviewed, especially in the light of the mission and objectives of the Commission. Also, Mr. Rind was apprised about the efforts made by COMSATS for the Heads of States level Commission Meeting of COMSATS and the upcoming 13th meeting of the Coordinating Council. The Federal Secretary was appreciative of the role that COMSATS is playing since its establishment in 1994 for the socio-economic uplift of the developing countries using S & T resources, and pledged his full support to COMSATS Secretariat for its future programmes. Dr. Qureshi hoped to maintain the same level of support and cooperation with the Ministry of S&T, under Mr. Rind's patronage, as COMSATS has experienced during the tenure of his predecessor, Mr. M. Kashif Murtaza, who took the initiative to organize the first COMSATS Consultative Committee meeting in 2009.

Ambassador of Iran to Pakistan, Executive Director and other senior officials of COMSATS during a meeting at COMSATS Secretariat

EXECUTIVE DIRECTOR COMSATS MEETS THE AMBASSADOR OF IRAN TO PAKISTAN

As part of the preliminary consultations and meetings prior to his visits to the member countries, Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, held a meeting with the Ambassador of the Islamic Republic of Iran to Pakistan, H. E. Mr. Masha'allah Shakeri. The meeting took place on January 26, 2010, at COMSATS Secretariat on the invitation of the Executive Director. The meeting aimed to bring the Ambassador on board and seek his inputs about the engagements of Dr. Qureshi during his visit to Iran, scheduled for February 5-8, 2010. Dr. Qureshi informed the Ambassador that he would meet the Iranian focal point of COMSATS, the Minister for Science, Research and Technology, H.E. Dr. Kamran Danishjou, visit the Iranian Research Organization for Science and Technology (IROST) and participate in the 23rd Khwarizmi International Award. Director General (I.A) and Advisor (I.A) of COMSATS Secretariat were also present on the occasion. Dr. Qureshi also briefed the Ambassador about Iran's association with the programmes and activities of COMSATS, including its participation in the Coordinating Council and Consultative Committee meetings held in Abuja, Nigeria, in April 2009. A presentation was made to elucidate the scientific activities of COMSATS conducted in collaboration with IROST and the future plans for COMSATS–IROST cooperation.

FIRST MEETING OF THE INTER-MINISTERIAL COMMITTEE ON COMSATS INTERNET SERVICES

On 15th of February 2010, the Federal Minister for Science and Technology, Government of Pakistan, Mr. M. Azam Khan Swati, chaired the meeting of the Inter-ministerial Committee on COMSATS Internet Services (CIS) at COMSATS Secretariat. The Committee met for the first time to review the services and performance of CIS; deliberate on its future plans and activities; as well as to discuss the ways and means to overcome the strategic and operational difficulties faced by it. Besides some senior government officials from the Ministries of Science & Technology and Information Technology & Telecom, the meeting was attended by the Advisor to the Prime Minister on Information Technology; Federal Secretary, MoST; Federal Secretary, MoIT&T; Executive Director COMSATS; and Director General CIS .

COMSATS SECRETARIAT RESUMES LIVE TELE-HEALTH CONSULTATIONS

After an unavoidable temporary halt of a year or so, COMSATS' Resource Centre operating from its Secretariat in Islamabad is resuming its live telehealth-consultations for its tele-health clinic at Abdullah Hospital in Skardu. Since 2005, COMSATS Telemedicine has been providing thousands of patients with specialist consultations in healthcare, largely in the field of Dermatology alongwith General Medicine, Gastroenterology and Cardiology. However, for the past one year the tele-dermatology services were being provided through store-and-forward mechanism due to technical issues of connectivity at the Skardu Tele-health clinic. Recently, with the support of Special Communications Organization (SCO) of the Northern Areas of Pakistan, connectivity has been restored at Abdullah Hospital that has made live tele-consultations possible. In future, COMSATS plans to introduce new specialties like rheumatology and consultative services for mentally handicapped, as well as a special clinic for the diabetics.

SPECIAL FEATURE: VISIT REPORT OF EXECUTIVE DIRECTOR COMSATS TO SYRIA, EGYPT, IRAN AND JORDAN

BACKGROUND

One of the recommendations made during the 12th Coordinating Council meeting of COMSATS, held in Abuja, Nigeria (April 28-29, 2009), mandated the Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, to visit members of COMSATS' Network of S&T Centres of Excellence and also to meet the focal points in the member countries. The advice was based on the expectation that by personally witnessing the existing R&D facilities and conferring with the scientists as well as the administrators, the E.D. would be in a better position to facilitate South-South cooperation in priority areas of S&T development. A number of other issues relevant to COMSATS' future activities also necessitated individual in-depth discussions with the relevant authorities in member countries. COMSATS is in the process of re-invigorating the role of Centres of Excellence by launching thematic research activities and is looking forward to technical and financial contributions from Network members. The focal points are also expected to play a bigger role in identifying the country's needs that can be met through cooperation among member countries and to allocate sufficient financial resources for COMSATS to help achieve this objective.

Dr. Qureshi with Dr. Wael Khansa and his colleagues at HIAST, Syria

In this connection, the Executive Director started his tour with the visits to the two Centres of Excellence of COMSATS based in Pakistan, the COMSATS Institute of Information Technology (CIIT) and the International Center for Chemical and Biological Sciences (ICCBS), that took place during the last quarter of the year 2009. However, the visits of Dr. Qureshi to four Network nodes outside Pakistan, in Syria, Egypt, Iran and Jordan, were scheduled for the first quarter of 2010 on their invitation. The special feature covered in this issue of COMSATS Newsletter presents the highlights of Executive Director's activities during visits to the four member countries, and the Network nodes in these countries, during the months of January and February 2010.

In the first leg of his visits, Dr. Qureshi toured Syria and Egypt from 10 to 14 January followed by a tour to Iran and Jordan from 5 to 11 February. A lot of effort for the preparations, both in-house and in Member States, was made to have meaningful and constructive dialogues during the meetings. Prior to the visits, the Executive Director held a number of meetings with the high officials of Government of Pakistan, especially from the Ministry of Science and Technology, and the representatives of the relevant diplomatic missions based in Pakistan, for consultations and coordination of his visits and meetings abroad. During his meeting with the Minister for Science and Technology, Government of Pakistan, Mr. Azam Khan Swati, Dr. Qureshi briefed him about the significance of his visits and the expected outcomes. As a mark of trust and understanding with the Executive Director COMSATS, Mr. Azam Khan Swati handed over his personal letters of goodwill addressed to the focal points of COMSATS to Dr. Qureshi that were to be presented during the meetings. In these letters, while regretting the postponement of the 2nd Commission Meeting, an expression of strong commitment of the Government of Pakistan to the initiatives of COMSATS for S&T led development was made by the Minister.

The update on the Commission Meeting, the participation of Network members in the upcoming 13th meeting of the Coordinating Council and the Annual Membership Contribution to COMSATS formed a portion of the agendas for the meetings apart from the major segment on assessing the potential of technology transfer available at each node. The visits of the Executive Director resulted in a first-hand assessment of the scientific and technological capacity and potential possessed by the four Network members, while reinvigorating the spirit of South-South cooperation and winning over the much needed support of the governments of the member countries. The details of these visits are given below in chronological order:

VISIT TO SYRIA (JANUARY 10-12, 2010)

The visit to Syria was made on the invitation of the Higher Institute of Applied Sciences and Technology (HIAST), which is a Centre of Excellence of COMSATS in Syria since 1994. There were three main components of the visit: (i) visit to Syrian-COMSATS-COMSTECH Information Technology Centre (SCCITC); (ii) meeting with the Minister of Higher Education of Syria; and (iii) visit to HIAST.

Visit to SCCITC

The Syrian-COMSATS-COMSTECH Information Technology Centre (SCCITC) was established in January 2001 as a result of an agreement between COMSATS, COMSTECH and the Government of Syria. A meeting of the Executive Director COMSATS was organized at the Centre with Director SCCITC, Dr. Bassel Al-Khatib, and his senior

colleagues. A brief presentation on the current status and activities of the Centre was made by Dr. Al-Khatib. The Centre is under the administrative control of COMSATS' focal point in Syria – the Ministry of Higher Education. Since COMSATS and COMSTECH are represented in the Management Board of the Institute, it was urged by Dr. Qureshi that the two organizations should be kept informed about the institution's on-going activities and future plans in order to facilitate the programme up-gradation and expansion of the Centre. Dr. Al-Khatib expressed his keen interest in sending the faculty members of SCCITC to Pakistan for "Tutors' Training Programme" in areas of special interest using COMSATS' platform. It was decided that a proposal will be submitted by SCCITC to COMSATS to specify the nature of training required.

Dr. Bassel Al-Khatib, Director SCCITC and his colleagues, after a presentation for the Executive Director COMSATS

Meeting with the Minister for Higher Education of Syria

Dr. Qureshi called on the Minister for Higher Education of Arab Republic of Syria, Dr. Ghiath Barakat, at his office, on January 11, 2010. A number of high ranking officials, including the Deputy Minister of Higher Education for Scientific Research and Academic Affairs, Prof. Mohamed Najib Abdul Wahed and Director SCCITC, Prof. Dr. Bassel Al-Khatib were also present on the occasion. With a view to have effective interaction with COMSATS, the Minister was kind enough to designate Mr. Al-Khatib as the liaison officer at Ministry of Higher Education of Syria. Regarding the Annual Membership Contribution, the Minister acknowledged having received a request from COMSATS Secretariat and committed to look into the reasons for the discontinuation of Annual Membership Contributions since 2003. During the review of COMSATS' programmes in Syria, there appeared to be a consensus that SCCITC should be upgraded by introducing advanced courses and exchange of faculty between SCCITC and CIIT. As for the future programmes with COMSATS, Dr. Qureshi requested the Minister for his support to HIAST, being an important node of the COMSATS Network of S&T Centres of Excellence, for an active participation in COMSATS' scientific exchange programmes.

The Executive Director visiting one of the laboratories of NRC with Prof. Osama Shabrawy

Visit to HIAST

After the meeting with the Minister for Higher Education, Dr. Qureshi visited the Higher Institute of Applied Sciences and Technology (HIAST) where he met Dr. Wael Khansa, who has recently assumed charge as the Director of the Institute. The meeting was also attended by other senior faculty members of HIAST. Dr. Iyad Darwish, Director of Scientific Cooperation, Information and Publication, HIAST, made a presentation highlighting the academic programmes, activities and projects of the Institute. It was noted that HIAST is offering specialized training and education in Informatics Systems, Communications, Electronic Systems, Mechatronics and Aeronautics. It was learnt that HIAST has strong collaborative links with international organizations, like UNDP, ESCWA, UNESCO, ALESCO and AUF as well as European Union. Dr. Qureshi was also shown around a few laboratories that had a very well organized set-up, meeting the requirements of the high- quality, education and training.

On the subject of HIAST's participation in the 13th Coordinating Council meeting to be held in Trieste, Italy, Dr. Khansa expressed his willingness to attend the meeting. Dr. Iyad Darwish was designated by Dr. Khansa to keep close contact with COMSATS Secretariat and arrange news items and articles for its publications. Handing over the brochures of ICCBS and CIIT to the Director HIAST, Dr. Qureshi offered training opportunities at these Centres for the benefit of Syrian scientists and students. It was stressed by the Executive Director that the faculty members of HIAST should be encouraged to register in different groups of the Islamic World Science Net (IWSN) that is being maintained by COMSATS on behalf of ISESCO.

VISIT TO EGYPT (JANUARY 13-14, 2010)

The Ministry of Higher Education and State Ministry for

Dr. Qureshi in one of the labs at Mubarak City for Scientific Research and Technology Applications, Egypt

Scientific Research, responsible for the administration of National Research Centre (NRC), invited the Executive Director to visit Egypt. Apart from meeting the Minister and visit to NRC, the Executive Director visited the Mubarak City for Scientific Research and Technology Applications (MuCSAT), which is another high-tech scientific research centre under the control of the Ministry.

Meeting with the Minister for Higher Education and State Minister for Scientific Research of Egypt

The Executive Director called on the Minister for Higher Education and State of Scientific Research, Dr. Hany Helal, who is in-charge of two separate ministries, one for Higher Education and the other for Scientific Research. The Minister is assisted by the Deputy Minister, Prof. Maged Al-Sherbiny who is responsible for the State Ministry for Scientific Research. The Executive Director was informed that a policy of 'Scientific Diplomacy' is being pursued by the Ministry, whereby a calendar year is dedicated to a specific country of the North for developing scientific relationships, e.g. 2008 for Japan, 2009 for Italy and 2010 for France. During this one year, high-level visits from these countries are organized to generate political will for scientific cooperation.

While acknowledging the strong participation of Egypt in COMSATS Coordinating Council meetings over the years, as well as through organizing two of these meetings in Egypt, the Executive Director recounted a number of useful joint activities undertaken by COMSATS for the benefit of scientific community in Egypt. The Minister made a suggestion that some proposals on specific sectors of high-priority, such as energy, water resources or agriculture, may be chalked out by COMSATS with the support of its Member States. The Minister was pleased to appoint his Deputy Minister, Dr. Sherbiny, as the liaison officer for COMSATS.

Visit to NRC

During his visit to the National Research Centre (NRC), Dr. Qureshi met the Vice President of the Centre, Dr. Esmat Abdel Ghaffar, and Prof. Osama Shabrawy, Scientist Emeritus at NRC. The Centre has been COMSATS' Network member since 1997. Dr. Shabrawy informed Dr. Qureshi that a new section of NRC called 'Centre of Excellence in Advanced Sciences' (CEAS) was established four years ago, (originally called Nobel Centre). The purpose of this Centre is to provide bright and relatively young (~40 years of age) scientists with attractive incentives and research facilities so as to reduce brain-drain in the country. A presentation made by Dr. Mahmood Zawarah, the Head of CEAS, shed light on the research activities and scientific achievements of CEAS. It was noted that the number of patents has considerably increased for CEAS during the year 2009. With a staff of 66, CEAS now has 106 international publications and 33 international projects to its credit. NRC itself employs over 4300 research staff and consists of 13 divisions, including 106 departments that can be sub-grouped into 4 main divisions oriented towards: the industrial sector; the agriculture sector; health and environment; and natural and basic sciences.

VISIT TO IRAN (FEBRUARY 5-8, 2010)

The invitation to visit Iran was extended by the organizing committee of Khwarizmi International Award (KIA) in October 2009. Considering that COMSATS has been sponsoring these awards since 1999, it was considered desirable to participate in the ceremony and hand out awards personally in this important national scientific event of Iran, which is usually presided over by the President of Iran. Availing this opportunity, Dr. Qureshi also visited the COMSATS' focal point and Centre of Excellence in Iran, the Ministry of Science, Research and Technology, and the Iranian Research Organization for Science and Technology (IROST), respectively.

Director of the 'Institute of Advanced Technology' in IROST, Dr. Nasrin Moazmi, receiving COMSATS' shield

The Executive Director and Khwarizmi Laureates visiting Biotechnology Laboratory at IROST, Iran

Dr. Mohammad Mehdinejad Nouri, Deputy Minister for Science, Research and Technology of Iran receiving COMSATS' shield from Dr. Qureshi

Visit to IROST

The visit to Iranian Research Organization for Science & Technology (IROST) was arranged by the organizers of the Khwarizmi International Award for the Executive Director and other foreign delegates that attended the ceremony. During the visit, Dr. Qureshi met the Director International Cooperation of IROST, Dr. M. Molanejad. Apart from holding the Director's position at IROST, Dr. Molanejad is also the Head of the Regional Centre for Science and Technology Transfer (RCSTT) of the Indian Ocean Rim-Association for Regional Cooperation (IOR-ARC).

Regarding the role of Centre of Excellence, Dr. Molanejad was of the opinion that COMSATS should chalk out specific research proposals and arrange international funding for member countries to join the activity and make financial contribution with specific benefits in sight. Dr. Molanejad was informed by the Executive Director that the thematic research activity was proposed with the same objective in mind. However, the activity could not take off so far, since the Centres of Excellence in the 'lead' countries have not made any resources available for consultative meeting prior to designing a project and because of unavailability of money in 'Trust Funds'.

In view of his position as the Director of Regional Centre of IRO-ARC, Dr. Molanejad proposed that COMSATS may join hands with this organization to undertake projects of common interest for the Member States. In this connection, he mentioned the organization of a biotechnology exhibition to be held in Iran, in April 2010. Dr. Qureshi reiterated the offers of educational and training facilities at CIIT and ICCBS, which were appreciated and favourably reciprocated with an offer of training facilities in IROST in the field of green technologies, especially bio-fuels using micro-algae. This technology requires large coastal lands that are otherwise unusable. Both Iran and Pakistan have such areas.

A tour of the laboratories of IROST revealed, a well-organized set-up with dedicated scientific staff comprising of men and women in almost equal strength. Some of the important facilities and equipment of IROST include: satellite communication development and control laboratories; the 3rd generation haemo-dialysis machine and electronic drug disbursement system; appropriate engines for bio-fuel di-methyl ether pilot plant; biotechnology pilot plant, etc.

Meeting with the Deputy Minister for Science, Research and Technology of Iran

Dr. Qureshi met the Deputy Minister for Science, Research and Technology, Islamic Republic of Iran, Dr. Mohammad Mehdinejad Nouri, on February 6, 2010. Dr. Nouri was informed by Dr. Qureshi that COMSATS is a very useful forum for Iran to strengthen its scientific links in the region, especially with the African and Middle Eastern countries. Dr. Nouri expressed his country's intention to enhance the cooperative and strategic ties with COMSATS. He stressed that his country's policy is to maintain long-term close cooperation with developing countries, in general, and those in the OIC and ECO groups, in particular. The Deputy Minister was positive about Iran's participation in Commission Meeting. Dr. M. Molanejad was appointed the liaison officer on behalf of the focal point, apart from his role as a contact person at IROST.

Participation in the 23rd Khwarizmi International Award

On February 7, 2010, Dr. Qureshi attended the ceremony of 23rd Khwarizmi International Award, held at IROST. The first Vice President of Iran was the Chief Guest on the occasion. These awards are given to foreign as well as local scientists and technologists in various categories. COMSATS has been sponsoring the first and second prizes of US$1,000/- and US$500/-, respectively, in the category of young Iranian scientists.

VISIT TO JORDAN (FEBRUARY 9-11, 2010)

The invitation for the visit to Jordan was extended by the Royal Scientific Society (RSS), which has been acting as COMSATS' Centre of Excellence since 2007. Jordan itself has been a founding member of COMSATS since 1994. The visit to Jordan comprised high-level meetings with the officials of the Higher Council for Science and Technology (HCST) and the Royal Scientific Society (RSS), as well as visits to other scientific institutions/projects in Jordan, i.e., Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME), Metrology Centre and iPark.

One of the laboratories in Industrial Chemistry Centre (ICC) of Royal Scientific Society (RSS), Jordan

Meeting with the officials of Jordanian Higher Council for Science and Technology

Dr. Qureshi had a meeting with the officials of the Higher Council for Science and Technology (HCST) of Jordan. HCST has the objective of building S&T capacity and using S&T for economic development. Its functions and responsibilities include approval of S&T policy, allocation of funds for R&D projects, development of S&T institutions, drawing strategies to implement S&T policy objectives and undertaking international cooperation in S&T. The HCST is part of El-Hassan Science City complex, which also encompasses RSS, Princess Sumaya University of Technology and Queen Rania Centre for Entrepreneurship.

During the discussion at HCST, it was found necessary to re-designate COMSATS' focal point in Jordan in order to enhance its role as a COMSATS' member country. In this regard, COMSATS was requested to send a letter inviting HCST to become its focal point. The decision of the Council to become COMSATS' focal point in Jordan will be communicated to COMSATS. A letter in this respect was sent by the Executive Director to the Secretary General of HCST on 15th February 2010. HCST officials acknowledged the benefits of continuing Jordan's association with COMSATS and assured Dr. Qureshi of their full support for the re-designation of focal point.

Dr. Khaled Kahhaleh receiving COMSATS' shield from Dr. Qureshi

Visit to RSS

A meeting was held between the Vice President RSS, Dr. Khalid Kahhaleh and Dr. Qureshi in the former's office at the Royal Scientific Society. RSS, which is COMSATS' Network member since 2007, has ten technical centres for IT, building research, mechanical design, electronic services, environmental research, industrial chemistry, quality assurance, etc. Dr. Kahhaleh expressed his satisfaction over the relations of RSS and COMSATS. On learning the result of meeting with officials of HCST, Dr. Kahhaleh assured that President of RSS, HRH Princess Sumaya Bint El Hassan, will be informed about the new developments and her support will be sought for the re-designation of the Jordanian focal point of COMSATS from the Ministry of Energy and Mineral Resources to HCST. Dr. Kahhaleh was affirmative about RSS' participation in the upcoming 13th meeting of the Coordinating Council. The Executive Director appreciated the inputs provided for publication in the Newsletter through the RSS Liaison Officer for COMSATS, Ms. Abeer Arafat. Considering that a Jordanian scientist is the coordinator for nanotechnology group for the web-portal, IWSN, there was considerable interest shown in the operation of this portal. Dr. Kahhaleh assured the Executive Director about the strong interest of RSS in COMSATS' programmes. The visit to Industrial Chemistry Centre (ICC), which is the oldest and by far the biggest Centre of RSS, was undertaken to learn about its scientific and technical potentials. The Centre operates a number of specialized laboratories distributed under divisions on 'Applied Technology', 'Inorganic Materials' and 'Organic Materials'. The experienced manpower and high-tech equipments available in the Centre make it possible to undertake a wide-spectrum of research activities and technical services relevant to materials and processes having industrial applications.

On 22nd March 2010, Dr. Qureshi would visit another member country of COMSATS, China. These visits of the Executive Director are expected to strengthen the Secretariat's on-going efforts to create new synergies with COMSATS' Member States and Centres of Excellence.

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

AN INDONESIAN SCHOLAR AVAILS NAM S&T CENTRE-ICCBS FELLOWSHIP

Ms. Mudyawati Kamaruddin of Tahirah Al-Baeti Education Foundation, Makassar, Indonesia, has recently been affiliated with H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences (ICCBS), Karachi, Pakistan, as a Fellow under the joint NAM S&T Center-ICCBS Fellowship Scheme 2009. During her fellowship at ICCBS, she worked on 'Structure Elucidation of Acetylcholinesterase (AChE) Inhibitors from Marine-derived micro-organisms using NMR', under the guidance of Prof. Dr. M. Iqbal Choudhary, Director ICCBS.

Acetylcholinesterase Inhibitors (AChEIs) are the best available therapeutic agents for Alzheimer's patients. The present sources of currently available AChEIs are mostly plants. To date, only three AChEIs, namely donepezil, rivastigmine and galantamine, have been approved by US Food and Drug Administration for the treatment of Alzheimer's disease. However, some of these drugs are known to have limitations, such as a short half-life or side-effects, such as hepatotoxicity. Marine micro-organisms are a potential new source of enzyme inhibitors. Ms. Kamaruddin tried to screen AChEIs of marine micro-oganisms to be used as marine-natural product for acetylcholinesterase inhibition by spectroscopic techniques (NMR).

Participants of workshop on 'Science and Technology Journalism' at El Hassan Science City, Jordan

ICCBS-PAKISTAN AND UNIVERSITY OF HAMBURG-GERMANY JOIN HANDS FOR R&D COOPERATION

The International Center for Chemical and Biological Sciences (ICCBS), University of Karachi, Pakistan, has signed a Memorandum of Understanding (MoU) with the University of Hamburg, Germany, to further the research cooperation between the two institutions in the area of natural sciences and bioinformatics.

Another objective of this agreement is to initiate and promote scientific cooperation and academic exchange in the field of natural sciences and bioinformatics between the University of Hamburg and academic institutions of Pakistan, supported by ICCBS and the Ministry of Science and Technology, Government of Pakistan. Based on this MoU, the University of Hamburg will accept up to 10 MS and PhD students annually upon the availability of supervisors and teachers. These scholars will be admitted in the fields of bioinformatics, structural biology, biochemistry and molecular biology and will be supported by the ICCBS or other funding institutions of Pakistan.

RSS CO-ORGANIZES A TRAINING WORKSHOP ON 'SCIENCE AND TECHNOLOGY JOURNALISM'

Royal Scientific Society (RSS) of Jordan, in collaboration with the U.S. Embassy's Regional Environmental and Press Offices, organized a two-day training workshop on 'Science and Technology Journalism' at El-Hassan Science City, Amman. The goal of the workshop was to promote better journalistic coverage of science and technology.

The workshop hosted speakers from Jordan, Egypt, Lebanon and USA. These included: Advisor to the President of RSS, Dr. Khaled Kahhaleh; President of Princess Sumaya University of Technology, Prof. Hisham Ghassib; Director of the Public Programs Office at the American Association for the Advancement of Science, USA, Mrs. Ginger Pinholster; Director of the International Center for Journalists, Egypt, Mrs. Nadia El-Awady; and Co-founder of IndyACT, Lebanon, Mr. Wael Hmaidan. The participants included representatives from various local media agencies, universities and documentary filmmakers.

LANCASTER UNIVERSITY-CIIT DUAL-DEGREE PROGRAMME

Lancaster University of UK and COMSATS Institute of Information Technology (CIIT) of Pakistan have reached an agreement for the dual-degree programme. The programme was formally launched during a signing ceremony held in London, on February 18, 2010. The programme will enable Pakistani students to earn a highly regarded international degree in addition to a degree from CIIT at a fraction of the cost of study in UK.

The signing ceremony was attended by the Federal Minister for Science & Technology, Government of Pakistan, Dr. Azam Khan Swati, in his capacity as the incumbent Chancellor of CIIT; Sir Christian Bonington, Chancellor of Lancaster University; and Dr. S. M. Junaid Zaidi, Rector CIIT, as well as Prof. Paul Wellings, Vice-Chancellor and Prof. Bob McKinlay, Deputy Vice Chancellor of Lancaster University. The two universities have been undertaking consultations for the last couple of years, to arrive at this agreement. The dual-degree programme formed one-point agenda that was extensively deliberated upon in the 16th meeting of CIIT's Board of Governors, held under the

Signing Ceremony of CIIT's Dual-Degree Programme held at Lancaster University, UK

chairmanship of Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, on 29th October 2009.

RESEARCH ACTIVITIES AT CIIT

In view of the exacerbating energy situation in Pakistan, Dr. Mohamed Afzal Ebrahim, Professor of Architecture working with CIIT as a foreign faculty member, has made the insulating and thermal lag characteristics of adobe (mud) houses the subject matter of his research. Dr. Ebrahim plans to compare the thermal characteristics and construction costs of an adobe building to those of a brick building in Islamabad, Pakistan. His study will attempt to establish that the adobe houses could retain comfortable temperature levels for humans without the use of substantial amounts of energy in summer and winter seasons, thus providing economically viable energy solutions. The research is expected to extend benefits and technology that could be replicated on a national scale and provide solutions for the current energy-conservation concerns of the developing world.

In another research Dr. Ebrahim will explore the possibilities for incorporating and integrating natural systems in the building designs, such as passive solar heating and cooling, sunrooms and energy-storage systems, evaporative cooling, wind towers, ventilation, insulated-building envelope, courtyard, earth sheltering, landscaping, earth cooling and green roof. This research involves constructing a dwelling in Islamabad that would incorporate a judicious use of safe and non-toxic building materials available locally.

MRC PROMOTES CONCEPTS OF SUSTAINABILITY FOR A ZERO-OUTFLOW MUNICIPALITY

Marmara Research Centre (MRC) of Turkey has recently implemented its EU-MEDA project, Zer0-M. The project is aimed at employing concepts and technologies to achieve optimized close-loop usage of all water-flows in small municipalities or settlements (e.g. tourism facilities) that are

EU-MEDA project, Zer0-M, of MRC, Turkey

not connected to central wastewater treatment. Zer0-M includes: sanitation systems with low water-consumption; separation of grey, black and yellow water; biological treatment of segregated wastewater; and reuse for non-drinking purposes (e.g. irrigation, toilet flush).

IRCC BECOMES REGIONAL FOCAL POINT OF SS-GATE OF UNDP

Industrial Research and Consultancy Centre (IRCC) of Sudan has signed a Memorandum of Understanding with the South-South Global Assets & Technology Exchange (SS-GATE) to be its national workstation and the sole focal point in Sudan. Administered by the Special Unit for South-South Cooperation (SU/SSC) of United Nations Development Programme (UNDP), SS-GATE is dedicated to increasing trade of assets and technology among Southern countries and global markets. As a workstation of SS-GATE, IRCC would be a regional focal point serving the neighbouring countries. A delegation of SS-GATE visited Sudan from January 11-15, 2010, for the finalization of the work arrangements. The Minister for Science & Technology of Sudan, H.E. Mr. Ibrahim Ahmed Omer witnessed the signing ceremony.

'NATIONAL INDUSTRY CONFERENCE' OF IRCC EXPLORES MEANS TO THRIVE THE SUDANESE INDUSTRIAL SECTOR

Sudanese Chamber of Industries Association and the Industrial Research and Consultancy Centre (IRCC) of Sudan, under the auspices of President of Sudan, H.E. Omar Hassan Al-Bashir, organized the 'National Industry Conference' on February 17, 2010. The Conference aimed at reaching certain policy recommendations and measures necessary for the development of local industry and to encourage investment in Sudan. The Conference was attended by a number of stakeholders, industrialists, executives, scientists and other individuals from the private sector.

SCIENCE, TECHNOLOGY AND DEVELOPMENT

SOLAR-POWERED IRRIGATION FOR ENHANCING AGRICULTURAL PRODUCTIVITY

Significant increases in food production have become essential for the poor developing countries to survive in the rapidly changing economic, social, political and environmental world scenarios of the 21st century. Researchers have found (*SciDev.Net,* January 6, 2010) that solar-powered irrigation systems can boost food-crop production and income levels in rural Sub-Saharan Africa. A lead on this study can be taken by other developing agricultural societies for their own national benefits.

A team of scientists from Stanford University, U.S.A., installed and analyzed solar-powered drip-irrigation systems, utilizing photovoltaic pumps to deliver groundwater to the surface in arid Benin, where most farmers rely on a 3 to 6 months of rainy season and irrigate by hand. The solar pumps led to more vegetables being produced, as compared to those produced as a result of hand irrigation. In addition to enabling the farmers to earn more money, the intake of vegetables in the village-communities also increased. The study indicates that solar-powered drip irrigation can provide substantial economic, nutritional and environmental benefits. Vast arid lands across Africa and Asia, having plenty of sunshine, would be at a great advantage to make use of this technique for increasing agricultural productivity and reducing poverty.

CHEMICAL POLLUTANTS LINKED WITH CARDIOVASCULAR AND LUNG DISEASES

Fatalities due to heart diseases are a significant cause of socio-economic burden on poor societies of the world. Since long, the researchers have been busy trying to find out the causes of and remedies for heart ailments. As a well known axiom states, “prevention is better than cure”, a large bulk of medical research is focused on the preventive treatment. However, the poor societies lack awareness about the benefits of preventive medical culture and are susceptible to greater risks associated with environmental pollution compared to the affluent societies. One such significant study has been reported by *Science News* in its web edition of January 12, 2010. The study provides strong evidence of the link between cardiovascular problems and a chemical called bisphenol A, commonly found in plastics that are frequently used in everyday life. Bisphenol A also interferes with biological development and tissue functions. An earlier study in 2008 showed that bisphenol A suppresses the production of a hormone that protects people from heart-attack and type-2 diabetes.

Due to the devastating effects of cardiovascular diseases on the people in general and the marginalized societies in particular, it is essential that people must remain vigilant about this commonly occurring source of trouble. While it is known that the chemical leaches from food and beverage containers, recent studies have shown that other sources of non-food exposures, such as household dust is also a cause. Several other diverse sources like carbonless cash-register receipts used for credit card purchases are also under investigation. So it is not only the poor segment of the society that has to be on the look out, but also the rich who may be at risk to the exposure of this rogue chemical. In a related report linking air pollution with two fatal diseases, i.e., venous thrombosis and pulmonary embolism (Hurtado, February 19, 2010), based on a research conducted by Canadian and Chilean scientists, it has been concluded that sulphur dioxide, carbon monoxide and particulate matter present in the air due to burning of fossil fuels, increases the risk of hospitalization for venous thrombosis with a relatively greater risk for those who exceed 64 years of age. Although it was known that air pollution is a risk-factor for stroke and myocardial infarction (possibly because they alter blood clotting), this is the first time it is found that it affects the formation of clots in veins or the lungs.

PAPER NANO-SENSOR: A CHEAP AND FAST DETECTOR OF WATER TOXINS

Nanotechnology is expected to create a huge impact on the socio-economic development of the world in this century. A wide variety of innovative research is being conducted by the interested countries and a large amount of data is being constantly made available for the benefit of those who cannot invest heavily in the research on this technology. The poor and developing nations are generally more interested in cost-effective industrial procedures. A recent study published in this category of procedures and products describes a cheap nano-sensor usable for detection of toxins in drinking water (*SciDev.Net,* January 2010).

The simple technique developed by Chinese and American scientists involves dipping a normal filter paper into a solution containing carbon nanotubes, which can conduct electricity and antibodies to microcystin-LR, a common and dangerous toxin. When the dried filter paper is dipped in contaminated water, the toxin binds to the antibodies and affects the conductivity of the nanotubes in the paper by separating them from each other. This change in conductivity is detected by a current-measuring device. The test is fast, sensitive and simple. It can be engineered into a match box sized device for on-the-spot testing of water. The sensitivity of the test meets WHO standards for detecting toxins in drinking water. The simplicity of the test and its cost makes it quite attractive to be adopted by the developing countries. The test can enable rapid detection of toxins not only when they enter drinking-water systems but also at the points of use. The test, after its appropriate modification, can enable the governments and citizens to monitor and remedy any disturbances in water quality and pre-empt potential health hazards associated with water contamination. It may not be forgotten that water-borne diseases are major causes of fatalities in the poor developing countries.

PROFILE OF COMSATS' INTERNATIONAL S&T CENTRE OF EXCELLENCE

HIGHER INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY (HIAST), SYRIA

Introduction

The Higher Institute of Applied Sciences and Technology (HIAST), Damascus, Syria, was established in 1983. The Institute aims to develop human resource that is appropriately equipped to conduct scientific and technological research in all fields of applied science and technology so that it can actively contribute in the scientific and economic progress of Syria. HIAST offers specialized education, e.g. License in Engineering, Diploma, as well as Masters and Doctorate degrees, to prepare a specialized cadre of human resource in the field of engineering. The training and educational services provided by HIAST are need-oriented and planned to serve various sections of academia and industry of Syria. The Institute coordinates and conducts its services in collaboration with several public and private sector organizations of Syria. HIAST being a 'learning organization' has a broad focus and executes joint projects at regional and international levels to enable technology transfer and experience sharing.

Research and Development

The research and development activities at HIAST are aimed at: contributing to the development of technological environment, both locally and nationally; improving the knowledge and abilities of researchers and teaching staff and keeping them abreast of the scientific and technological developments taking place around the world; maintaining highest levels of scientific excellence and extending its benefits to others; encouraging, facilitating and promoting the local industry by introducing and equipping them with modern techniques, tools and skill sets. HIAST has more than 55 professors with Ph.Ds, a technical and administrative staff of 145 and 118 technicians working at the departments of Electromechanic Systems; Communications; Mathematics; Informatics; Physics; Electronic systems. Every department carries out the research activities through specialized work-teams, and every team has two researchers, an engineer and two technicians to conduct applied research. These activities are classified into:

Projects of Engineering Development: Some of the engineering projects for the public establishments and the private-sector companies are focused at: designing softwares for managing administrative and financial matters, designing software for decision-support systems; setting up information networks, and, improving educational laboratory equipment in various fields.

Engineering Research: Engineering projects of HIAST have a higher scientific and research scope. These are developed, initiated and financed by HIAST, and at times undertaken with the assistance and cooperation of foreign partners, such as European Union. Some of the projects under this category include projects on: the computer processing of Arabic; renewable energy; sensors and measurement devices; and various substances, compounds and materials with special properties.

Implementation of R&D Projects

HIAST creates links with academic and scientific research establishments within Syria and abroad by participating in local and international symposia and forums. The local industrial enterprises are constantly kept in touch with in order to effectively facilitate them in their development. The implementation of such projects is kept under supervision for the whole project-life. In case of short- and long-term engineering research projects, the work-teams regularly prepare interim reports on the accomplished task, consequences and hurdles. Besides, regular lectures and seminars are held to discuss the aims and appraise the outcomes.

Scientific Facilities

Research Laboratories: The organizational structure of HIAST allows the establishment of independent laboratories specialized in technological research and development in specific areas. At present, there are 34 such laboratories. A dedicated team of professionals work in these labs that further contain complementary sub-labs.

Environmental-studies laboratory: Since its establishment, HIAST has environmental-studies laboratory that is considered one of the pioneering laboratories in Syria in the field. A team of researchers, specialists and technicians specialized in the domain of environmental studies and pollution is deputed at this laboratory. This laboratory works in line with Environmental Studies Centre, the Ministry of Environment and the Ministry of Local Administration Housing and other bodies in Syria. Periodical environment surveys/studies at specific sites in Syria are conducted in this laboratory in response to some demands and contracts signed by different Syrian organizations. Moreover, the lab undertakes special research assignments and conducts technical studies to facilitate the enforcement of environmental code in Syria. Some of the functions of this lab include measuring the concentration of air and water pollutants for the treatment of water and waste disposal; measuring pollutants in the work-place and industrial emissions; and, estimating the environmental impact and the danger imposed by the industrial projects.

Scientific Cooperation

HIAST develops and maintains its scientific relations with international academic institutions to enrich the experience of its faculty members by enabling their participation in the joint projects of common interest. Activities of HIAST in terms of scientific cooperation comprise: participating in collaborative projects having international sponsorship; publishing project results and studies in international events and implementing projects that reflect on education sector in Syria by winning grants from donor agencies such as UNESCO, UN-ESCWA and UNDP.

HIAST has signed a number of protocols and agreements with several national and international academic institutions. The Institute takes part in several national and international events and plays an important role in regularly organizing and sponsoring events, such as: Arab School for Science and Technology, jointly sponsored by HIAST and other Arab institutions; Sham Informatics Conference; Palmyra School of Physics; International Conference for Communications Technologies and Applications; and Science Week, held annually by the Ministry of Higher Education, Syria.

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SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

11 - 12 April 2010	Nanotech Aqua Conference, Cairo, Egypt ***(www.nanoaqua.sabrycorp.com)***
12 - 23 April 2010	ICPAM-UNESCO-MICINN-IRD-LU School on Probabilistic models in population genetics, Saint-Louis, Senegal ***(www.cmi.univ-mrs.fr/%7Epardoux/Ecole_CIMPA/CIMPA2010.htm)***
8 - 10 May 2010	Connect 2010 — 5th Information & Communications Technology Exhibition & Conference, Karachi, Pakistan ***(www.connectit.com.pk)***
10 - 14 May 2010	CALOR 2010 — 14th International Conference on Calorimetry in High Energy Physics, Beijing, China ***(www.bes3.ihep.ac.cn/conference/calor2010)***
11 - 13 June 2010	ICCSS 2010 — 2010 The International Conference on Computational and Statistical Science, Manila, Philippines ***(www.iccss.org)***

13TH COORDINATING COUNCIL MEETING May 12-13, 2010, Trieste, Italy

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is pleased to announce the convening of its 13th Coordinating Council meeting in Trieste, Italy, on May 12-13, 2010. The meeting will be hosted by the Academy of Sciences for the Developing World (TWAS). The Coordinating Council meets every year to review the activities of COMSATS Network to follow up on the decisions and recommendations made in the last meeting and to outline the future course of action.

COMSATS Secretariat is coordinating closely with the local organizing committee of the event to ensure smooth arrangements before and during the course of event. The working paper and other pertinent documents are in the process of being finalized and will soon be circulated to all the network members.

CALL FOR PAPERS FOR THE JOURNAL – SCIENCE VISION

COMSATS is in the process of resuming the publication of its scientific journal – Science Vision. The journal will now have a thematic character comprising high-quality review and research articles, highlighting the impact of latest developments in S&T on economy and the society as a whole.

COMSATS invites contributions for the Volumes 15(1) and 15(2) of Science Vision, particularly dedicated to the themes of "Environmental Challenges for the Developing Countries" and "Renewable Energies – Cleaner and Cheaper Source for World Energy Needs for Development", respectively. Scientists, researchers, policy-makers and young scholars from S&T organizations and R&D institutions are encouraged to contribute. The contributors whose articles are selected for publication, would be compensated for their time and efforts with honorarium.

Please visit COMSATS' official website: **www.comsats.org** for more details. Contributions may be sent at **comsats@comsats.org.pk.**

A BRIEF ON COMSATS

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is an inter-governmental organization, with its Secretariat located in Islamabad.

COMSATS, currently, has 21 countries as its members, spread across three continents, i.e., Latin America, Africa and Asia. A network, of 16 International Science and Technology Centres of Excellence, is also affiliated with COMSATS to contribute to scientific development of its Member States. For detailed information, please visit COMSATS' website: www.comsats.org.

LIST OF COMSATS NETWORK OF INTERNATIONAL S&T CENTRES OF EXCELLENCE

- The Biosphere Reserve – Beni Biology Station (BBS), Bolivia
- Embrapa Agrobiologia, Brazil
- International Centre for Climate & Environmental Sciences (ICCES), China
- Centro Internacional de Fisica (CIF), Colombia
- National Research Centre (NRC), Egypt
- International Centre for Material Science and Technology (ICMST), Ghana
- Iranian Research Organization for Science and Technology (IROST), Iran
- International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica
- Royal Scientific Society (RSS), Jordan
- National Mathematical Centre (NMC), Nigeria
- International Centre for Chemical and Biological Sciences (ICCBS), Pakistan
- COMSATS Institute of Information Technology (CIIT), Pakistan
- Industrial Research and Consultancy Centre (IRCC), Sudan
- Higher Institute for Applied Sciences and Technology (HIAST), Syria
- Tanzania Industrial Research and Development Organization (TIRDO), Tanzania
- Marmara Research Centre (MRC), Turkey