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Contributions from readers are welcome on any matter relevant to the mission of COMSATS, namely the promotion of South-South cooperation in science and technology for sustainable progress of the developing countries. The responsibility for the accuracy of any information rests with the original source. Views expressed in this publication do not necessarily reflect those of its editors, publisher or COMSATS.

The President of Republic of Ghana with the Executive Director COMSATS and the Senior Officials of MESTI

Inside this Issue

From the Executive Director's Desk

Experiences of the last fifty years show that the vicious circle of poverty and under-development has been too difficult to break for most of the countries of the South. The road-blocks on the path to development have been numerous, consisting of both 'natural' as well as 'man-made' elements. The tantalizing fact that some countries did exceptionally well in surmounting all obstacles under prevailing circumstances and joined the group of medium-to-high income countries, shows that a reasonably high level of economic progress is after all not impossible to achieve. The experts of development economics have delved deep into the issues involved and did hair-splitting analyses using the carefully crafted jargons of their trade, but the results of these labours have apparently not led to solutions that could change the situation on the ground. Two extreme views emerge with respect to development deficit: (i) 'everything wrong with poor countries is a result of colonial rule and its continuation in the form of economic imperialism'; and (ii) 'the leadership and populations of developing countries are themselves fully responsible for their poor socio-economic performance'.

The reality is somewhere in between. According to the 'survival of the fittest' principle, it is but natural that industrialized countries would protect their stranglehold of the world economy by using all possible means; including international laws, bilateral treaties, lobbying, and even arm-twisting and military aggression, if necessary. In the history of post-colonial era, there are numerous examples of all such measures taken by one or the other state or coalition of the 'willing' states. On the other hand, bad governance, corruption, political instability, dictatorial rules and lack of strong administrative, legal, and financial institutions in the developing world continue to mar their prospects for progress. Efforts should be directed at both types of threats, internal as well as external, to achieve a universal minimal quality of life required for decent living as a basic human right. As argued by many scholars from within the Western world, it is in the best interest of the industrialized countries if purchasing power of the billions of deprived people in underdeveloped countries were increased; not out of humanitarian concerns but simply as a good business plan. The countries which opposed the United Nations Human Rights Council (UNHRC) resolution*) on "Elaboration of an International Legally Binding Instrument on Transnational Corporations and other Business Enterprises with respect to Human Rights", should be aware that unbridled corporate power will eventually come to haunt their own societies. So far as the leaders of the South are concerned, there are quite a few individuals who are hard at work to build their societies so as to prepare them to meet the challenges of the New World Order.

COMSATS has the honour of having a Chairperson who is one of such leaders – the President of the Republic of Ghana, His Excellency Mr. John Dramani Mahama. During an audience

*) Resolution no. A/HRC/26/L.22 adopted on 26th June 2014 during the 26th session of the 37th UNHRC Meeting.

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NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

MEETING WITH THE CHAIRPERSON COMSATS HELD IN GHANA

The Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, undertook a visit to Accra, Ghana, and held a meeting with the President of Republic of Ghana, H.E Mr. John Dramani Mahama, in his capacity as the Chairperson of COMSATS. One of the objectives of the meeting was to acquaint the President with the ongoing international activities and capacity-building programmes of COMSATS in its Member States, and seek the incumbent Chairperson s support.

During the meeting that took place at the Flagstaff House, a number of important issues were discussed, which, inter alia, related to holding the 3rd Commission Meeting of COMSATS in 2015, scaling up the role of COMSATS focal ministry in Ghana to steer COMSATS activities, and the efforts being made to launch COMSATS Endowment fund.

Also present during the meeting were the Minister, H.E. Dr. Joe Oteng Adjei, and Deputy Minister, Dr. Musheibu Mohammed-Alfa, of the Ghana's Ministry of Environment, Science, Technology, and Innovation (MESTI), as well as the Director-General of COMSATS' Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR), Dr. Abdulai Baba Salifu. Other senior officials of MESTI present on the occasion were its Chief Director, Dr. Sylvester Anemana, and Director (Science, Technology and Innovation), Dr. Yahuza Mohammed Gomda.

Dr. Qureshi giving multimedia presentation to the honourable President of the Republic of Ghana

In a media briefing prior to the meeting, the Honourable Chairperson of COMSATS remarked that the role of COMSATS to help developing countries incorporate S&T in their development agenda and to pool their limited resources for achieving common objectives. Later speaking with Dr. Qureshi, Mr. Mahama recognized the efforts of COMSATS Secretariat in achieving the laudable objectives of this organization and assured him of Ghana s significant contributions towards COMSATS' activities aimed at promoting South-South cooperation in Africa and in other parts of the world.

A multimedia presentation was made by the Executive Director for the President, covering the history and mission of COMSATS, the composition and role of its statutory bodies, and its programmes and activities for S&T capacity-building through a Network of 19 Centres of Excellence (CoEs). The Chairperson was told that, in spite of its financial constraints and skeletal human resources at the Secretariat, COMSATS has successfully organized or substantially supported over 200 scientific events, for the benefit of scientific communities of its Member States during the last 18 years.

During the presentation, Dr. Qureshi made a special reference to the 2nd meeting of COMSATS Consultative Committee, held last year in conjunction with the 16th meeting of COMSATS Coordinating Council in Accra, in which it was proposed that the incumbent Chairperson of COMSATS should send personal letters to all Commission members seeking their support for strengthening the technical programmes and financial resources of the organization. The contents of such a letter were also discussed.

Among other benefits that Member Countries can draw from COMSATS mentioned during the presentation included: graduate study scholarships at COMSATS Institute of Information Technology (CIIT), Pakistan, training programmes at selected Centres of Excellence, participation in COMSATS International Thematic Research Groups (ITRG), lectures delivered by COMSATS Distinguished Professors, technical consultancy by a panel of experts on ST&I policy, and exchange visits of scientists for exploring bilateral cooperation avenues between institutes having common research interests.

The Chairperson s attention was also called towards the importance of allocation of funds for launching of the ITRG led by the Building and Road Research Institute (BRRI) of CSIR; encouragement of various research institutes working under the administration of CSIR for forming collaborations with their counterparts in other Member States; and the possibility of Ghanaian students to get scholarships at CIIT for graduate studies. A possibility was also explored for the placement of a representative of the Chairperson at COMSATS Secretariat in Islamabad.

The Chairperson expressed satisfaction over the performance and achievements of COMSATS despite its budgetary limitations. He mentioned the possibility of raising funds for COMSATS during the then upcoming meetings of ECOWAS and African Union. His Excellency agreed to: hold

the 3rd COMSATS Commission Meeting in Accra in April 2015; send letters to his counterparts in Member Countries seeking their political and financial support for COMSATS; and consider the placement of his representative at COMSATS Secretariat. The President also discussed the status of research at BRRI and gave instructions to the Minister, regarding low-cost construction projects under the supervision of BRRI.

Executive Director COMSATS presenting COMSATS' Annual Report to the honourable COMSATS Chairperson

The Chairperson concluded the meeting by reiterating his personal commitment to promotion of scientific cooperation among developing countries. He hoped that, apart from Pakistan which is the host country of COMSATS, other Member Countries would also come forward to provide financial assistance to COMSATS.

CONSULTATIONS AT COMSATS' FOCAL MINISTRY AND CENTRE OF EXCELLENCE IN GHANA

Prior to the meeting with the President of Ghana, Dr. Qureshi undertook extensive consultations at the Ghanaian Focal Ministry for COMSATS, the Ministry of Environment, Science, Technology and Innovation (MESTI) to review the contents of his multimedia presentation prepared for the Chairperson of COMSATS. The consultations were made in a meeting with the Minister for MESTI, Dr. Joe Oteng-Adjei; the Deputy Minister, Dr. Musheibu Mohammed-Alfa; the Chief Director of MESTI, Dr. Sylvester Anemana; and the Director General of COMSATS Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR), Dr. Abdulai Baba Salifu. Particular attention was paid to the requests and proposals to be made for the Chairperson s consideration. It was agreed that the Chairperson should be apprised of the financial position of COMSATS by pointing out that Pakistan, being the host country of the organization s Secretariat, is the sole contributor towards meeting the expenses of the Secretariat based in Islamabad.

Later, on 10th June 2014, Dr. Qureshi held a discussion session with the Deputy Minister, and the Director (ST&I) MESTI, Dr. Yahuza Mohammed Gomda, to discuss the impact of the meeting with the President of Ghana. The participants of the meeting conceded that all objectives of the meeting with the Honourable President had been met.

Availing the opportunity of his presence in Accra, the Executive Director also visited the Head Office of CSIR and held a detailed meeting with a group of CSIR Directors, representing different Accra-based research institutes. CSIR is a major R&D organization of Ghana with 13 specialized Institutes relevant to a wide spectrum of S&T fields. The Director General CSIR, Dr. Salifu, and Deputy Director General CSIR, Dr. Rose E. M. Entsua-Mensah, were also present on the occasion. The Executive Director COMSATS specifically invited Dr. Issac O. A. Hodgson,

contd. from page 1 ... 'From the Executive Director's Desk'

with the President on 9th June (page 2), I made a PowerPoint presentation highlighting the importance of South-South Cooperation in Science and Technology for achieving common developmental targets and the role being played by COMSATS in this connection. The President was told about the real-time exchange of information and agreements of cooperation that take place between the member institutions of COMSATS' Network of Centres of Excellence during the meetings of COMSATS Coordinating Council, including the latest one held in Iran (page 5). While recalling the recent initiatives of the Government of Ghana, focusing on infrastructure development in his country, the President noted that the Ghanaian research institution, 'Buildings and Roads Research Institute', which is affiliated with COMSATS' Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR), can play a role in providing low-cost housing solutions to address the deficit of 1.7 million housing units in Ghana. It was a refreshing experience to meet a statesman, with high academic credentials and leadership qualities, who could lead his country towards political stability and economic progress based on indigenous human and natural resources. As President of Economic Community of West African States (ECOWAS) and the Chairperson of COMSATS, his vision and policy initiatives can positively influence Western African countries as well as twenty-one Member States of COMSATS spread across three continents.

The road to progress would be a long haul, full of anticipated as well as unexpected hurdles. However, the unwavering determination of the people at the helm of affairs in the developing countries and the help of humanitarian organizations, enlightened businesses, United Nations agencies and intergovernmental organizations, such as COMSATS, will hopefully make a difference. It will be appreciated if the readers could kindly send their feedback on the contents of this Newsletter.

Director Water Research Institute (WRI), to visit Water Research and Technologies Centre (CERTE) in Tunisia and negotiate a cooperation agreement between the two institutions that have similar mandates. Director Institute of Industrial Research (IIR), Mr. Herbert A. Obiri, showed interest to continuing close contacts with COMSATS for participation in COMSATS activities in its Member States, such as the repair and maintenance workshop held in Ghana last year.

On the invitation from the Director (ST&I) MESTI, Dr. Qureshi also visited the Ghana Atomic Energy Commission (GAEC) and observed the research activities in its different laboratories related to peaceful uses of nuclear technology in Industrial, Agricultural and Health sectors.

Dr. Qureshi s visit to Ghana concluded with an understanding that the Ghanaian Ministry will remain actively in touch with COMSATS Secretariat to coordinate follow-up of the meetings held in Ghana and for other matters of mutual cooperation.

IRANIAN DEPUTY MINISTER PLEDGES SUPPORT TO COMSATS

On May 20, 2014, a two-member delegation of COMSATS comprising of Executive Director COMSATS, Dr. I. E. Qureshi, and Advisor (Programmes) COMSATS, Mr. Tajammul Hussain, met H. E. Mr. H. Salar Amoli, Deputy Minister for International Cooperation, Ministry of Science, Research and Technology, Islamic Republic of Iran. The COMSATS delegation was in Iran in connection with the 17th Coordinating Council Meeting of COMSATS. Also present in the meeting was the Acting President for International Cooperation, IROST, Dr. Mahmoud Molanejad.

The Executive Director informed Mr. Amoli about the significance of the Council meeting as a means of exploring scientific cooperation opportunities among developing nations. The Advisor (Programmes) COMSATS requested the honorable Minister to help expedite the release of funds for the award of five scholarships earlier offered by IROST for the students from COMSATS Member States.

The Minister acknowledged the impact of COMSATS international activities aimed at S&T capacity-building through mutual cooperation and ensured the COMSATS officials that the Government of Iran would continue to provide financial and intellectual support for the commendable mission of COMSATS. Regarding the proposal of establishing an International Thematic Research Group in the field of Renewable Energy Technologies, the Minister directed the officials of IROST to appoint a senior expert of IROST in this field to act as the Group Leader, who could guide the research work of the relevant group comprising of researchers from different

COMSATS' Shield presented to H. E. Mr. H. Salar Amoli, Iranian Deputy Minister for International Cooperation

Member States of COMSATS.

Assuring the Minister of a thorough follow-up of his instructions, Dr. Molenejad informed that IROST plans to establish a Human Resource Centre in Advanced Technologies, for which COMSATS Headquarters would provide administrative support.

MEETING WITH THE AMBASSADOR OF IRAN TO PAKISTAN

On 8th May 2014, the Executive Director COMSATS called upon the Iranian Ambassador to Pakistan, H.E. Mr. Alireza Haghighian, at the Iranian Embassy in Islamabad, to brief him about the then forthcoming (17th) Meeting of COMSATS Coordinating Council to be hosted by COMSATS Centre of Excellence in Iran, the Iranian Research Organization for Science & Technology (IROST). Other matters related to enhancing COMSATS S&T cooperation with IROST were also discussed during the meeting.

The Ambassador was briefed about COMSATS Coordinating Council, its functions and role, as well as the meeting agenda and the preparations made for the meeting. Among other matters discussed was COMSATS International Thematic Research Groups, two of which have IROST as their members; one on Climate Change and Environmental Protection , and the other on Natural Products Sciences . The Ambassador was also informed about a proposal to be presented at the Council meeting regarding the establishment of a similar group on Renewable Energy that will be led by IROST. The honourable Ambassador appreciated COMSATS programmes for facilitating scientific capacity-building and South-South cooperation in science and technology. He pledged his full support towards COMSATS programmes that involve Iranian S&T organizations.

SPECIAL SECTION: 17TH MEETING OF COMSATS COORDINATING COUNCIL, TEHRAN, IRAN

As a regular international activity of COMSATS, the 17th Meeting of COMSATS Coordinating Council took place in Tehran, Iran, on May 19-20, 2014.

The Council meeting was hosted by COMSATS' Centre of Excellence in Iran, the Iranian Research Organization for Science and Technology (IROST), which provided excellent hospitality to participants, Council members or their representatives from 10 Centres of Excellence of COMSATS; BCSIR-Bangladesh, ICCES-China, CIF-Colombia, IROST-Iran, NMC-Nigeria, ICCBS-Pakistan, CIIT-Pakistan, UCAD-Senegal, ITI-Sri Lanka and TIRDO-Tanzania. Also participating in the meeting were the representatives of the Water Research and Technologies Centre of Borj-Cedria (CERTE), Tunisia, in connection with CERTE's request for induction in COMSATS' Network of International S&T Centres of Excellence, as well as the representatives of ISESCO and UNESCO.

Inauguration

The inauguration of the meeting was held in a state-of-the-art conference hall at the premises of IROST on May 19, 2014. H.E. Dr. Hussain Salar Amoli, Acting Minister for International Cooperation, Ministry of Science, Research and Technology, Government of Islamic Republic of Iran, presided over the ceremony.

In addition to the Council members and senior officials of the Iranian Ministry of Science, Research and Technology, the ceremony was attended by the representatives of the diplomatic missions of Bangladesh, Korea (DPR), Ghana, Pakistan and Tunisia in Tehran; as well as universities and R&D institutions in the country.

In his inaugural address, Dr. Amoli stressed the need for stronger cooperation among developing countries for scientific capacity-building. While sharing the current status of higher education in Iran, he called for provision of equal opportunities of higher education regardless of gender. Dr. Amoli also urged the governments of the developing countries to make sincere efforts for increasing their exports of high-technology products and finished goods rather than raw materials. He underscored Iran's efforts for enhancing public awareness regarding the benefits of science and technology for socio-economic development, as well as to transform its policies into effective strategies and action plans. Dr. Amoli also shared a message from the Iranian Minister for Science, Research and Technology, H.E. Prof. Reza Faraji-Dana.

H.E. Dr. Hussain Salar Amoli presiding over inauguration of the 17th meeting of COMSATS Coordinating Council

As a COMSATS member, I. R. Iran attaches great importance to COMSATS activities as a science and technology organization contributing to the promotion of cooperation in this field among the Member States.

H.E. Prof. Reza Faraji-Dana, Hon. Minster of Science, Research and Technology of I. R. Iran

Prof. Dr. Ahmad Akbari, President IROST, had delivered his welcome address earlier. The inaugural session also comprised speeches from Dr. Imtinan Elahi Qureshi, Executive Director COMSATS, and the Chairperson of COMSATS Coordinating Council, Prof. Eduardo Posada F., Director Centro Internacional de Física (CIF), Colombia.

The Islamic Republic of Iran highly regards science and technology in international level as main principle for development. Organizing such meetings is one of the advocacy approaches to implement this valuable goal.

Prof. Dr. Ahmad Akbari, President IROST, Iran

COMSATS Network of Centres of Excellence includes members from four continents. Our purpose for the near future must be to increase the number of affiliated centres, in particular from other Latin-American countries, and to strengthen the links with institutions that share similar purposes.

Prof. Eduardo Posada F., Chairperson COMSATS Coordinating Council

I am glad to say that COMSATS is fully geared towards helping Member States to achieve its objectives. The founding countries of COMSATS, including Islamic Republic of Iran, were convinced that S&T development is the most reliable path to economic progress and they were also sure that this path can be traversed more productively if the developing countries join hands and support each other in their individual national endeavours.

Dr. Imtinan Elahi Qureshi, Executive Director COMSATS

Summary of Technical Proceedings and Deliberations

Subsequent to the inauguration, the three technical sessions spread over two days were chaired by Dr. Posada. The 13-point agenda of the meeting covered a variety of matters, including presentations from the existing and prospective centres of excellence, observer organizations, and International Thematic Research Groups (ITRGs); discussion on draft statutes of COMSATS; reconstitution of COMSATS Technical Advisory Committee (TAC); and Approval of COMSATS' Panel of ST&I Policy; Future programmes and projects; as well as administrative and financial matters of COMSATS, also came under discussion. As per the standard format of the meeting, the Executive Director COMSATS presented COMSATS' Annual Activity Report (May 2013 – April 2014).

Dr. Posada presiding proceeding of the Council Meeting

H.E. Mr. Bawah Gilbert Ayembillah, Ambassador of the Republic of Ghana in Tehran, who was invited to participate in the meeting as representative of the Chairperson COMSATS, lauded the role being played by COMSATS for socio-economic uplift of the South. He encouraged the Network members to continue promoting international cooperation in the larger interest of mankind.

Some salient decisions made during the meeting are summarized below:

- The meeting accorded unanimous approval for the induction of CERTE-Tunisia in COMSATS' Network of International S&T Centres of Excellence in the light of the formal application received from CERTE (Page 13).
- Considering the desirability of harmonizing the 'International Agreement to Establish COMSATS' and the 'Charter of the Network' to be jointly considered as COMSATS' Statutes, the Coordinating Council approved the necessary revisions and amendments in the Charter of the Network; the consolidated Statutes would be submitted for the approval of COMSATS' Commission in its 3rd Meeting (2015).
- The Coordinating Council accorded approval to the replacement of five out of ten TAC members with the officials nominated by The World Academy of Sciences (TWAS), belonging to Brazil, Egypt, Ethiopia, Iran and Malaysia.
- Approval was granted for induction of senior officials of UNESCO, TWAS, CIF, COMSATS Secretariat, as well as Sri Lankan Government in COMSATS Panel of Experts on 'Science, Technology and Innovation Policy'.
- The Director/Chief Executive NMC-Nigeria announced launching of the ITRG on 'Mathematical Modeling' during the later half of 2014.
- Establishment of a new ITRG on 'Renewable Energy' to be led by IROST, Iran, was also approved, for which the lead institution was advised to submit a detailed proposal to COMSATS Headquarters.
- The Centres of Excellence pledged to regularly contribute towards COMSATS' publications, particularly the Newsletter and the journal, 'Science Vision', as well as facilitate in the process of payment of Annual Membership Contribution to COMSATS by their respective countries.
- COMSATS Headquarters would facilitate bilateral agreements among Centres of Excellence by providing travel grants to their scientists.
- COMSATS Headquarters was authorized to collaborate with TWAS in the field of Science Diplomacy.
- CIF-Colombia would explore the possibility of organizing a joint meeting/conference of countries belonging to the Forum for East Asia-Latin America Cooperation (FEALAC) and COMSATS, with support from the Colombian Government.

While discussing the future projects and programmes of COMSATS, the Council authorized the Executive Director COMSATS to sign an MoU between UNESCO and COMSATS. Moreover, IROST's proposal for establishing a

COMSATS 17th Coordinating Council Meeting in session

Participants taking round of the technical facilities at IROST

Centre on 'Human Resource Development in Advanced Science and Technology' was appreciated by the Council. It was agreed that the activities of this Centre at IROST will be supported by COMSATS. The Coordinating Council approved the organization's budget for 2014-15.

The meeting issued a Communiqué (Page 8) that, inter alia, encourages the Centres of Excellence to: undertake collaborative research programmes; make serious efforts for launching new ITRGs; make maximum utilization of scholarships offered by China, Pakistan and Iran, and consider the possibility of similar offers from their Centres; create hotlines with COMSATS Headquarters through modern Internet tools and information exchange channels; and consider placement of their officers at COMSATS Headquarters on secondment.

Conclusion

The meeting concluded on a note of appreciation for the efforts made by COMSATS Secretariat to fulfill the objectives of the organization, and encouraged to continue its devoted efforts towards the implementation of COMSATS' five-year strategy. In their votes of thanks, Dr. Akbari, Dr. Qureshi and Dr. Posada expressed satisfaction with the ongoing activities of the organization, deliberations and the outcomes of the meeting, and hoped for stronger collaborations among the Network members. Dr. Qureshi considered initiation of collaboration among Centres of Excellence the very essence of the Council Meetings. Three such agreements were formalized during the 17th Coordinating Council Meeting through MoUs between (i) IROST-Iran and CIF-Colombia; (ii) IROST-Iran and CIIT-Pakistan; and (iii) IROST-Iran, ICCES-China and Soil Conservation and Watershed Management Research Institute (SCWMRI), Iran.

The Council for its eighteenth annual session is expected to meet in Sri Lanka next year.

FEEDBACK FROM COMSATS NETWORK

I really appreciate the work that you and your team are doing for fostering the role of science and technology in our countries and I am very pleased to contribute to this purpose. I want to congratulate you for the excellent preparation of the meeting and for all the activities that you are developing all year long.

Dr. Eduardo Posada F., Executive Director CIF, Colombia writing to ED COMSATS

We enjoyed our sessions not only because of their content and deliberations made, but also for the way things were managed to make it a successful meeting The Hospitality of IROST was exceptional.

Mr. Jalaluddin Al-Quaderi, BCSIR, Bangladesh

We appreciate all your diligence and that of your team.

Prof. A. R. T. Solarin, Director NMC, Nigeria

Communiqué
of the 17th Coordinating Council Meeting of COMSATS
(19 20 May , 2014, Tehran, Islamic Republic of Iran)

The Members of the Coordinating Council of COMSATS participating in the 17th meeting of the Council organized by the COMSATS' Centre of Excellence in Iran, the Iranian Research Organization for Science and Technology (IROST), after deliberating upon the agenda of the meeting on 19th and 20th of May 2014 in Tehran, wish to express their common views as under:

1. The Members of COMSATS Coordinating Council highly appreciate the excellent arrangements made by IROST administration for holding the 17th Council meeting in Tehran.
2. The patronage of the parent Ministry of IROST, the Ministry of Science, Research and Technology, and the Government of Islamic Republic of Iran, for the hospitality provided to Council Members is acknowledged with gratitude.
3. The administrative support provided to IROST by COMSATS Secretariat and the preparation of necessary documentations required for the successful organization of the meeting is noted with satisfaction.
4. The Council Members are pleased to learn about the high quality of multi-disciplinary research work being undertaken in IROST and thank the administration for arranging visits to its various laboratories.
5. The Council welcomes the induction of the Water Research and Technologies Centre, Centre de Recherches et des Technologies des Eaux (CERTE) , as a new Member of the Network of Centres of Excellence and hope that this Centre will be able to make research partnerships with similar Centres in Member States.
6. Appreciating the dedicated efforts of COMSATS Secretariat to fulfil the objectives of the organization, the Council takes note of the following major developments:

    i) continued expansion of the Network of Centres of Excellence;
    ii) persistence of International Thematic Research Groups activities;
    iii) steady stream of capacity-building events in Member States, with the participation of other international organizations;
    iv) consolidation of COMSATS Statutes;
    v) relative increase in the Annual Membership Contributions;
    vi) launching of Distinguished Professorship Scheme;
    vii) utilization of graduate study scholarships for Member countries at COMSATS Institute of Information Technology;
    viii) constitution of a Panel of Experts to advise on S&T policy issues;
    ix) concerted efforts for the regular publication of COMSATS Newsletter and other information material about the organization.
    x) continuation of the publication of Science Vision and support to TWAS for the publication profiles of Centres of Excellence.

7. The Council gratefully acknowledges the support of partner organizations, especially ISESCO, for the implementation of COMSATS programmes in Member States.
8. The council records with gratitude the financial and in-kind contributions by Member Countries towards the promotion of South-South cooperation through joint S&T activities and stresses the need to increase the number of contributing countries.
9. The Council recognizes the need and necessity of the following actions on the part of Network Member organizations:

    i) to proactively engage Network partners for undertaking collaborative research programmes;
    ii) to make serious efforts for launching new Thematic Research Groups;
    iii) to make maximum utilization of scholarships offered by China, Pakistan and Iran and consider the possibility of similar offers from their Centres;
    iv) to create hotlines with COMSATS Headquarters through Skype or other information exchange channels for prompt communications;
    v) to keep the COMSATS Headquarters aware of new developments or major achievements of their organizations for appropriate projection at international level through COMSATS Newsletter;
    vi) to encourage their researchers to submit scholarly scientific articles for publication in COMSATS bi-annual journal, the Science Vision ;
    vii) to consider placement of their officers at COMSATS Headquarters on secondment.

10. The participation of the Executive Director in meetings organized by international organizations such as UNESCO and World Science Forum, and his visits to Centres of Excellence, are in line with COMSATS interactive approach in support of its mission. He is encouraged to continue his devoted efforts towards the implementation of COMSATS five-year strategy.
11. COMSATS Coordinating Council stands by its observation that the public spending on R&D in developing countries is below the desired level. It calls upon Member States to increase their level of GERD component to a level of 2% of GDP and enhance financial support for international bodies that provide S&T capacity-building opportunities.

S&T INDICATORS OF MEMBER STATES

In Spectrum: People's Republic of Bangladesh

An Overview of Socio-economic Indicators

The People's Republic of Bangladesh is the world's eighth most populous country with over 160 million people and an area of 144,000 sq. km. Bangladesh is a developing country of South-Asia with a rapidly growing market-based economy. It is ranked 146th on the Human Development Index (2013 est.), falling in the low development category . The country is one of the world's leading exporters of textiles and garments, as well as fish, seafood and jute, and has globally competitive emerging industries in ship-building, life sciences and technology. The country also has a strong social enterprise sector and is the birthplace of microfinance.

In the last decade, Bangladesh economy has shown progress in terms of GDP per capita. The figure has reached the mark of US$ 2100 (2013 est.) from mere US$ 335 (2000). According to the World Science Report 2010, a number of countries not generally considered to be R&D-intensive, such as Bangladesh, are making progress in certain sectors, like light engineering, as a strategy for import substitution.

The South Asian region has generally been suffering from a lack of investment in Science, Technology and Innovation (ST&I), and there is a considerable lack of linkages between public and private actors and insignificant university-industry collaboration. However, according to the UNESCO World Science Report (2010), it was seen that in the Asian region, Pakistan, Bangladesh, and Sri Lanka, seem better at producing basic knowledge than commercializing it.

Bangladesh is aware of the low literacy level and the government faces the dual challenge of improving the gross picture while also building quality tailored to the national economy. Fortunately, Bangladesh can count on several high-quality academic institutions in the region to improve its own capacity in Science and Technology. The recognition of the importance of knowledge acquisition is a common thread running through all the economies in the region as all countries are at various stages of Higher Education reforms. In Bangladesh, light engineering is producing import-substitution products that are creating employment opportunities and alleviating poverty. Indigenous technologies in the country relate to ferries, power plants, machinery and spare parts, but Bangladesh is also progressing in the high-tech sector of pharmaceuticals. It is now 97% self-sufficient in pharmaceuticals and even exports them to Europe , says the World Science Report 2010.

According to the latest estimates (CIA World Factbook, 2013), the GDP composition of Bangladesh is highly reliant on Services (53.9%), followed by Industry (28.9%) and Agriculture sector (17.2%). The country s major exports are garments, knitwear, agricultural products, frozen food (fish and seafood), jute and jute products, and leather. Like other

Socio-economic Indicators for Bangladesh

	Population (Million)		GDP (US$ billions)		GDP per capita (current US$)		Merchandise Exports		High-tech Exports	
Year	2000	2013	2000	2013	2000	2013	2000	2008	2000	2006
	140.8	163.65	47.1	324.6	335	2100	6.39	15.37	0.2	0.8
***Source**: World Bank's World Development Indicators Database, March 2014; CIA's World Fact book, March 2014.*										

Bangladesh's HDI Trends based on Consistent Time Series Data

Years	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2005 PPP$)	HDI value
1980	55.2	4.4	2	0.649	0.312
1990	59.5	5	2.9	0,762	0.361
2000	64.7	7	3.7	1,003	0.433
2010	68.6	8.1	4.8	1.631	0.508
2012	69.2	8.1	4.8	1.785	0.515
***Source**: UNDP Human Development Report, 2013*					

Priorities of Public Spending of Bangladesh

Public Expenditure on education as % of GDP		Military Expenditure as % of GDP		Total Debt Service as % of GDP		Present Value of external debt as % of GNI	
1990	2008	1990	2012	1990	2008	1990	2012
1.6	2.4	1.1	1.34	2.4	1.2	26	14.8
Source: *World Science Report 2010, WB's 'World Development Indicators' 2013*							

developing countries, Bangladesh relies on technologically advanced countries for engineering products; however, the developments in the light-engineering sector are promising to reduce its import burden if the upward trend in engineering goods were maintained.

Similarly, Bangladesh s total export of US $26.91 billion (CIA World Factbook, 2013) out of its US $324.6 billion GDP (2013 est.), places it at number 44 on a country comparison. The garment industry seems to be the backbone of country s industry, earning nearly US $21 billion, which is around 18 % of its GDP. In this context, the garment industry is followed by the human resource abroad, remitting US $15 billion accounting for around 13 % of the GDP.

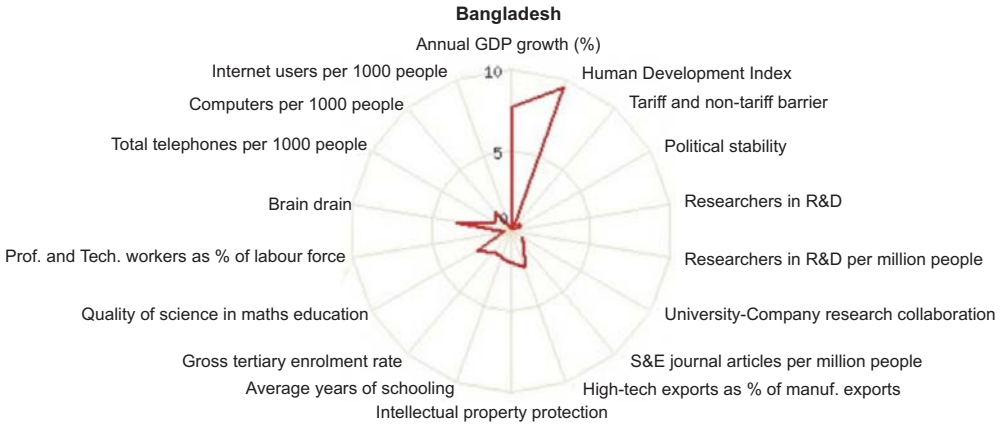
Bangladesh, like other South Asian economies, continues to suffer from low human development, high level of gender discrimination and social inequalities. However, according to the UNDP Human Development Report (2013), Bangladesh has seen an upward trend in Human Development; the Report reviews HDI trends in Bangladesh along with important development indicators and shows marked improvement in life expectancy at birth; expected years of schooling; and mean years of schooling owing to a 3-fold shift in GNI per capita over the years. These can be attributed to the relevant reforms and focus in the country.

In Bangladesh, the private sector use of public R&D expenditure is low as is in the rest of South Asian countries. This is due to the fact that these countries have followed a linear S&T policy model encouraging research in public institutions, based on the assumption that local industry would use this knowledge. There have been no incentives for university industry collaboration or for the promotion of contract research by industry, even though the promotion of R&D in private enterprises is vital for innovation and consequently for economic development (World Science Report, 2010).

General Trends in Education

Enrollment in secondary-level education in Bangladesh is at 51% (UNESCO Institute of Statistics, 2011), which needs significant improvement; however gender parity is encouraging since this enrollment for females (54%) is slightly higher than the males (47%). The priorities of public spending are encouraging but there is a need for an increase in public funding for education, higher education in particular.

The Bangladesh Bureau of Migration, Employment and Training reports that 6.57 million skilled and semi-skilled workers moved abroad from Bangladesh for employment between 1976 and 2008, 4% of whom were highly qualified professionals. The number of researchers per million population in the Bangladesh is 46, which is alarmingly low. This may partly be owing to the fact that statistics on R&D personnel in the private sector are not well-documented, although they show a significant measure of innovation activity. However, it calls for significant investments to improve the R&D capacity of the country by improving the highly skilled workforce.



Plot of selected variables of economic performance, economic regime, governance, innovation system, education, labour and ICTs *(Source: K4D World Bank)*

The Thomson Reuters Web of Science database reported that almost 87% of research articles by Bangladeshi scientists came from just seven institutions: Bangladesh University of Engineering and Technology; University of Dhaka; International Centre for Diarrheal Diseases; Rajshahi University of Engineering and Technology; Bangladesh Agriculture University; Jahangirnagar University; and the Chittagong University of Engineering and Technology.

An analysis of the research output of these universities reveals priority areas predominantly in the realms of agriculture and engineering. The total number of publications for Bangladesh has also been steadily increasing over the years but the growth is not sufficient for the country with a huge human resource. The Thomson Reuters Web of Science (Science citation index expanded) in May 2010 reported 335 publications from Bangladesh in 2000 against its 729 publication in 2008. This, along with a low patent application trend, indicates a need for investment in higher education and research. Despite its limitations, Bangladesh led the region s Knowledge Economy Index at a steady 138 from 1995 to 2009 among 146 countries. However, in the recent year this too has seen a slump as South Asia reforms to improve their overall education and competitiveness for innovation.

Information and communication technologies (ICTs) are playing an increasingly important role in development. ICTs help stimulate innovation and increase economic productivity through e-governance, e-commerce and e-education. Bangladeshi population has extremely low Internet access, but this may change with the adoption of an ambitious Information and Communication Technology Policy, according to the World Science Report 2010.

According to the World Bank Knowledge for Development (K4D), Knowledge Assessment Methodology (KAM) 2012, Bangladesh needs to improve ICTs access. Although its GDP and HDI are on the rise, the brain drain that the economy is facing is badly affecting its professional and technical workforce. The positive trends are steadiness in quality of science and math education and an improving tertiary enrollment rate. Bangladesh needs to boost university-industry collaboration, which is in turn dependent on the number of researchers in R&D.

Selected Indicators on Economy, Trade, Education and ICTs

Variable	Bangladesh (World Wide)	
	Actual	Normalized
Annual GDP Growth (%), 2005-2009	6.2	7.71
Human Development Index, 2010	0.89	9.51
Tariff & Nontariff Barriers, 2011	58	0.28
Political Stability, 2009	-1.55	0.68
University-Company Research Collaboration (1-7), 2010	2.7	0.76
S&E Journal Articles / Mil. People, 2007	1.49	1.17
High-Tech Exports as % of Manuf. Exports, 2009	1	2.44
Intellectual Property Protection (1-7), 2010	2.6	1.98
Average Years of Schooling, 2010	5.79	1.81
Gross Tertiary Enrollment rate, 2009	7.86	1.7
Quality of Science and Math Education (1-7), 2010	3.2	2.52
Prof. and Tech. Workers as % of Labor Force, 2008	2.61	0.49
Brain Drain (1-7), 2010	2.8	3.51
Total Telephones per 1000 People, 2009	320	1.17
Computers per 1000 People, 2008	20	1.64
Internet Users per 1000 People, 2009	0	0.21
Source: *World Bank Knowledge Assessment Methodology 2012, 2014*		

Bangladesh is identified as a Next Eleven economy. It has made significant strides in human and social development since independence, particularly in terms of the progress made in gender equity, universal primary education, food production, and health and population control. Given a political stability, Bangladesh has immense potential for development in Higher Education, ICTs and Health sectors. Adequate measures need to be taken by the country on developing an IP regime and retaining specialized workforce based on other regional models.

According to the MDG Bangladesh Progress Report 2012, it is noted that Bangladesh has already met several targets of the Millennium Development Goals like reducing poverty gap ratio, attaining gender parity at primary and secondary education, under-five mortality rate reduction, containing HIV infection with access to antiretroviral drugs, children under five sleeping under insecticide treated bed nets, detection and cure rate of TB under DOTS and others.

On the other hand, areas in need of greater attention are hunger-poverty reduction and employment generation, increases in primary school completion and adult literacy rates, creation of decent wage employment for women, increase in the presence of skilled health professionals at delivery, increase in correct and comprehensive knowledge on HIV/AIDS, increase in forest coverage, and coverage of Information and Communication Technology.

Disclaimer: *The S&T profile of Bangladesh has been prepared in-house based on latest facts and figures available from the cited sources.*

ACTIVITIES/NEWS OF COMSATS CENTRES OF EXCELLENCE

TWAS-ICCES COOPERATION STRENGTHENED

On May 29, 2014, TWAS Programme Officer, Dr. Lucilla Spini, visited International Center for Climate and Environment Sciences (ICCES), China, which is also the CAS-TWAS Centre of Excellence for Climate and Environment Sciences. Dr. Spini was accompanied by Ms. Kai Feng, Division of International Organization Programme, Bureau of International Cooperation, Chinese Academy of Sciences (CAS). Dr. Spini was given a lab tour and necessary orientation on ICCES history, research activities, achievements, ongoing international collaboration programmes and international visits of scientists from developing and developed countries. Prof. Xiaodong Zeng and Prof. Bueh Cholaw, Deputy Directors of ICCES, and Ms. Ting Tong, Manager of Foreign Affairs, assisted the visiting delegate through the orientation.

Later, Dr. Spini had extensive discussion on further cooperation between TWAS and ICCES, with Prof. Zhaohui Lin, Director ICCES; Prof. Lu Zhang, Director of the Department of Science Planning and Chief of international Cooperation Office; and other research scientists of the Center. Dr. Spini noted that collaboration between ICCES and TWAS could be further strengthened and broadened using TWAS network. Prof. Lin proposed extensive collaboration plans based on the research achievements and international collaboration activities of ICCES. The two parties reached a consensus to further strengthen the collaboration through:

Dr. Spini alongwith Prof. Zeng and Prof. Cholaw taking round of the Technical Facilities at ICCES-China

- joint training workshops on climate and environment sciences in Italy or China, in collaboration with ICTP and other research institutions from TWAS member countries;
- assistance from TWAS Public Information Office to help broaden the outreach of ICCES; and to promote the role of the Center on the newly launched CAS-TWAS President s fellowship, and WMO-TWAS Ph.D fellowship programme on weather, climate and water, with ICCES serving as the candidate host institute of these two programmes;
- creation of linkages between ICCES and TWAS regional offices, and to have the latter recommend scientists for participation in the ICCES activities;
- ICCES to possibly serve as the hub for TWAS regional and international projects on climate and environment sciences, and ICCES potential participation in disaster reduction sponsored by the African Development Bank; and
- ICCES to serve as the node to integrate the research activities on climate sciences and disseminate research achievements by TWAS member countries.

ICCBS-PAKISTAN SCIENTISTS DECLARED MOST PRODUCTIVE SCIENTISTS OF PAKISTAN

The Pakistan Council for Science and Technology (PCST) in its recent publication titled Productive Scientists of Pakistan 2013-14 , has ranked Prof. Dr. Muhammad Iqbal Choudhary, Director International Center for Chemical and Biological Sciences (ICCBS) the top-most among the 1,700 productive scientists of Pakistan. These scientists are employed in public/private sector universities, colleges and R&D organizations, and the ranking has been based on their contributions in research, supervision of students and any other productive work during the period 1960-2014. Under the umbrella of ICCBS, Dr. Iqbal Choudhary also heads HEJ Research Institute of Chemistry and Dr. Panjwani Center for Molecular Medicine and Drug Research.

Six more scientists of ICCBS are included in the list of leading productive scientists of the country in the field of chemistry. The names of these scientists are: Dr. Syed Ghulam Musharraf (17th rank), Prof. Dr. Atta-ur-Rahman, former Chairman of the Higher Education Commission Pakistan (20th), Dr. Zaheer-ul-Haq (24th), Prof. Dr. Khalid Muhammad Khan (28th), Dr. Muhammad Raza Shah (52nd) and Prof. Wiqar Uddin Ahmed (92nd).

The scoring system takes into account different factors, including research publications at national and international levels; books written or edited; supervision of PhD, MPhil or MSc students; international awards; research grants won; impact factor of the journals in which the research papers were published; and citation figures for the papers that were published in science citation index.

ACTIVITIES AT IRCC-SUDAN

The Industrial Research and Consultancy Centre (IRCC), Sudan, brought out the first volume (2014) of its refereed Industrial Research Journal containing 9 articles, out of which eight have been contributed by IRCC scientists. The

Scientific Instruments at IRCC-Sudan

Centre also held a number of capacity-building activities that covered the fundamentals of computer, secretarial work management, and research writing.

The major research activities at the Centre during the recent months included:

utilization of groundnut milk in manufacturing of yoghurt;
study of the effect of processing and storage on the properties of Sudanese fruits and vegetables;
mineral extraction (Production of magnesium chloride from magnesite);
production of biodegradable polymers;
extraction (Moringaoleifera oil) and evaluation of antimicrobial properties of some local essential oils; and
extraction of bioactive substance from Hibiscus sabdariffa.

CIIT-PAKISTAN HOSTS WORKSHOP ON STRENGTHENING RESEARCH, EDUCATION AND ADVOCACY

On May 11-15, 2014, the Department of Development Studies at COMSATS Institute of Information Technology (CIIT), Abbottabad, Pakistan, organized a four-day international workshop on Strengthening Research, Education and Advocacy in Conflict, Peace and Development Studies in Nepal, Sri Lanka and Pakistan . High level delegations from partner institutions and countries attended the workshop. These included Tribhuvan University (TU), Nepal; Ruhuna University (RU), Sri Lanka; and Norwegian University of Life Sciences (NMBU), Norway. In addition to the relevant public-sector national institutions, delegations from Norwegian Church Aid, Islamabad, Pakistan, and University of Mainz, Germany, also participated in the workshop that had regional political significance.

CIIT-PAKISTAN SCHOLARS BESTOWED NATIONAL TERADATA I.T EXCELLENCE AWARD

Two scholars of CIIT have won two prestigious Teradata National I.T Excellence awards. Launched in 2000, Teradata National I.T Excellence Awards are the most prestigious I.T awards of their kind in Pakistan.

The award in the category of Excellence in I.T Education has been conferred upon Dr. Sajjad A. Madani, Chairman, Department of Computer Science of the Institute. While, Dr. Bilal Zaka, Interim Director, CIIT s Virtual Campus,has won the award in category of Excellence in I.T Enabled Service Offering for his contributions in architecting applied I.T-enabled services.

DR. A. SHAALAN RE-ELECTED AS PRESIDENT NRC-EGYPT

During the month of May 2014, elections were held for the position of President National Research Centre (NRC), Egypt. Prof. Dr. Ashraf Shaalan, who completed his four year term as the President NRC in 2014, was re-elected and given the position for another four-year term.

DIRECTOR NMC-NIGERIA BECOMES FELLOW OF ASI

Prof. A.R.T Solarin, Director National Mathematical Centre (NMC), Nigeria, has been inducted into the elite Fellowship of the African Scientific Institute (ASI) an international honorary association of accomplished individuals in the area of Science and Technology. ASI now has 764 fellows from 48 countries.

COMSATS WELCOMES CERTE-TUNISIA TO ITS NETWORK

The Water Research and Technologies Centre (CERTE), Tunisia, has become the nineteenth member of COMSATS Network of Centres of Excellence. The decision to this affect was taken during the 17th COMSATS Coordinating Council meeting, based on the report of the Executive Director COMSATS evaluating the technical facilities and infrastructure of the Centre on the basis of his personal visit to CERTE in December 2013; and a detailed presentation by the Director General CERTE.

CERTE has three well-equipped laboratories for research on Geo-resources, Wastewater Treatment, and Natural Water Treatment, and has separate units of pilot plants, valorization of research results and information and documentation. The Centre is capable of providing facilities for conducting water related research at MS and PhD levels. The Centre has more than 300 staff members, including 78 researchers with excellent laboratory equipment.

SCIENCE, TECHNOLOGY AND DEVELOPMENT

COLLOIDAL QUANTUM DOTS ENABLE NEW COST EFFECTIVE AND FLEXIBLE SOLAR CELLS

According to a report published in the *Science Daily* on June 9, 2014, a new class of solar-sensitive nanoparticles that outshine the current state-of-the-art technologies has been developed and tested by researchers.

Researchers in the University of Toronto's Department of Electrical & Computer Engineering have designed a new form of solid, stable light-sensitive nanoparticles called colloidal quantum dots , which could lead to cheaper and more flexible solar cells, as well as better gas sensors, infrared lasers, infrared light emitting diodes and more. Led by post-doctoral researcher, Zhijun Ning, and Professor Ted Sargent, the work was recently published in *Nature Materials*.

Collecting sunlight using these tiny colloidal quantum dots depends on two types of semiconductors: n-type, which are rich in electrons; and p-type, which are poor in electrons. The problem, however, is that when exposed to the air, n-type materials bind to oxygen atoms, give up their electrons, and turn into p-type. Ning and colleagues modelled and demonstrated a new colloidal quantum dot n-type material that does not bind oxygen when exposed to air. Ning's new hybrid n- and p-type material achieved solar power conversion efficiency up to eight per cent, among the best results reported to date.

The powerful little dots could be mixed into inks and painted or printed onto thin flexible surfaces, such as roofing shingles, dramatically lowering the cost and accessibility of solar power for millions of people.

NANOFILTERS USING DENDRIMERS OFFER EFFICIENT WASTEWATER TREATMENT

The methods traditionally used to remove heavy metals from wastewater have limitations because they only withdraw a certain percentage and the remaining amount is very difficult to remove. A new technology, reported in the June 3rd edition of *Science Daily* is capable of removing such contaminants at low cost and with a greater efficiency.

Gabriel Ramirez Monter, a young graduate researcher at the National Polytechnic Institute (IPN) in Mexico, created in his project some structures called dendrimers , which are highly branched molecules with shape similar to a shrub or a tree with multiple branches. Dendrimers adhere and spread on a microfiltration membrane; i.e, thin sheets of porous material that are not normally capable of retaining heavy metals due to their pore size. Once placed, it achieves total removal of heavy metal ions in the same way a marine anemone would act, using tentacles to concentrate and catch food; in this case, the branches of the dendrimers capture pollutants , says the researcher. He explains that through dendrimers the team converted a microfiltration membrane into a nanofiltration one. "Another advantage of these structures is that they can be washed and reused, plus the captured metals are removed without problem."

TURING TEST SUCCESS MARKS MILESTONE IN COMPUTING HISTORY

A historic milestone in artificial intelligence set by Alan Turing, the father of modern computer science, has been achieved. The 65 year old iconic Turing Test was passed for the very first time by supercomputer Eugene Goostman during Turing Test 2014 held at the Royal Society in London on June 7, 2014. 'Eugene', a computer programme that simulates a 13-year-old boy, managed to convince 33% of the human judges that it was human.

This historic event was organised by the University of Reading's School of Systems Engineering in partnership with RoboLaw, an EU-funded organisation examining the regulation of emerging robotic technologies.

Professor Kevin Warwick, a Visiting Professor at the University of Reading and Deputy Vice-Chancellor for Research at Coventry University, said: "In the field of Artificial Intelligence there is no more iconic and controversial milestone than the Turing Test, when a computer convinces a sufficient number of interrogators into believing that it is not a machine but rather is a human, says a report published in the June 9th edition of *Science Daily*.

NANODAISIES DELIVER DRUG COCKTAIL TO CANCER CELLS

Daisy-shaped nanoscale structures that are made predominantly of anti-cancer drugs and are capable of introducing a 'cocktail' of multiple drugs into cancer cells were reported by biomedical engineering researchers from North Carolina in the 28th May edition of *Science Daily*. Once injected, the nanodaisies float through the bloodstream until they are absorbed by cancer cells. Once in a cancer cell, the drugs are released. To make the nanodaisies ,the researchers begin with a solution that contains a polymer called polyethylene glycol (PEG), which makes long strands that have much shorter strands branching off to either side. Researchers directly link the anti-cancer drug camptothecin (CPT) onto the shorter strands and introduce the anti-cancer drug doxorubicin (Dox) into the solution.

PEG is hydrophilic, meaning it likes water. CPT and Dox are hydrophobic, meaning they do not like water. As a result, the CPT and Dox cluster together in the solution, wrapping the PEG around themselves. This results in a daisy-shaped drug cocktail, only 50 nanometers in diameter, which can be injected into a cancer patient.

Once injected, the nanodaisies float through the bloodstream until they are absorbed by cancer cells. One of the reasons the researchers chose to use PEG is because it has chemical properties that prolong the life of the drugs in the bloodstream. Once in a cancer cell, the drugs are released. "Both drugs attack the cell's nucleus, but through different mechanisms", says Dr. Wanyi Tai, the lead author and former postdoctoral researcher.

PROFILE OF HEAD OF COMSATS S&T CENTRE OF EXCELLENCE

DR. GUSTAVO RIBEIRO XAVIER, DIRECTOR GENERAL EMBRAP A AGROBIOLOGIA, BRAZIL

Dr. Gustavo Ribeiro Xavier succeeded Dr. Eduardo Carneiro Campello Francia, as the Director General of the National Centre for Research in Agrobiology (EMBRAPA Agrobiologia) on November 13, 2013, which is one of the 47 decentralized units of the Brazilian Agricultural Research Corporation (Embrapa), under the Brazilian Ministry of Agriculture, Livestock and Supply (MAPA). The Centre which is also COMSATS Centre of Excellence is nationally and internationally known for its technologies generated in biological nitrogen fixation (BNF) and organic agriculture as well as excellence in technical and scientific contributions.

Dr. Xavier has been associated with the Brazilian Agricultural Research Corporation as researcher since 2002. His areas of scientific interest are Biosafety of GM crops, Microbial Ecology, and Biological Nitrogen Fixation. He has dedicatedly contributed to Embrapa Agrobiologia in different scientific and administrative positions. Now as the administrative head of Embrapa Agrobiologia, he is leading a team of 150 employees, comprising 43 researchers and 40 analysts. Dr. Xavier provides leadership to national and international collaborative projects with Embrapa; Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ); National Council for Scientific and Technological Development (CNPq); and CAPES a department under the Brazilian Ministry of Education, devoted to funding and evaluation of graduate education in the country.

Gustavo Ribeiro Xavier graduated in Agronomy in 1996 from the Federal Rural University of Rio de Janeiro (UFRRJ), Seropédica, Brazil. He did his Masters and Ph.D from the same institution in Agronomy (Soil sciences) in 2000 and 2003, respectively. His Ph.D research focused on analysis of the bacterial community of soil associated with the oleraceous cultivated by organic production by Single Strand Conformation Polymorphism (SSCP). He received specialized training in Molecular Techniques in 2002, which was patronized by German Federal Ministry of Education and Research (BMBF).

Dr. Xavier is a soil microbiologist for projects related to research, development and innovation & technology transfer. As a researcher, he has actively contributed to R&D work in the areas of soil microbiology and biochemistry; molecular microbial ecology; and molecular genetics of plants. Dr. Xavier was part of the testing of environmental impact assessment project that supported the evaluation of Brazilian National Biosafety Technical Commission (CTNBio) in relation to Embrapa s transgenic beans, resistant to the golden mosaic virus (2011).

He has been the Executive Secretary to the Working Group for Planning Portfolio Projects in Biological Nitrogen Fixation (since 2013), which is a thrust area of the Centre; Investigator for the Technical Cooperation Programme with Agriculture Research Cooperation of the State of Rio de Janeiro (Pesagro-Rio) since 2006; Member of Intellectual Property Committee since 2003; Deputy Head of Technology Transfer from April 2011 to June 2013; Executive Secretary to the External Advisory Committee (2011-2013). Moreover, he undertook short international assignments in Mexico (2010) to explore cooperation between Brazil and Maxico; Argentina (2007) to deliver lectures at the University of Buenos Aires; and Germany (2003) to conduct short training in Dr. Christoph C. Tebbe laboratory in Braunschweig.

As an academician, he is currently supervising five PhD students and one post-doctoral fellow, while in the past he has supervised 10 Masters and 6 PhD students, as well as 3 Post-doctoral fellows. Dr. Xavier has to his credit 51 scientific publications with a citation of 54 on the Web of Science . He has contributed several book chapters, newspaper articles, and presented papers in numerous scientific conferences at international fora. Dr. Xavier has also co-authored several scientific literatures, technical product manuals, curriculum contributions, and wrote on scientific processes and techniques pertinent to his work.

Dr. Xavier is the recipient of a number of institutional awards and titles in recognition of his scientific contributions and excellence, mostly by his principle institution and its parent body. Some of these include: National Awards for projects on Scientific and Technological Development of Organic Agriculture in Brazil (2011) and Processing organic waste through management of soil fauna (2011) by Embrapa; Four of Johanna Döbereiner Awards for highlighted scientific work under different categories in 2011; Title of Young Scientist (Agricultural sciences) in 2008 by the Brazilian Academy of Sciences, as well as UFRRJ Award for Scientific Initiation by Federal Rural University of Rio de Janeiro.

Contact details:

Dr. Gustavo Ribeiro Xavier
Director General
Embrapa Agrobiologia
Rod. Br 465, Km 47 - CEP 23851-970 Caixa
Postal 74.505 Seropedica, Rio de Janerio, Brazil.
Tel: (+55-21) 26821166; Fax: (+55-21) 26821230
URL: www.cnpab.embrapa.br
Email: gustavo@cnpab.embrapa.br

COMSATS BRIEF AND ANNOUNCEMENTS

SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

11-13 August 2014	National Workshop on Classical Protein Chemistry, Karachi, Pakistan ***www.iccs.edu***
15-16 August 2014	International Workshop on Computer Tools and Programming for Bioinformatics, Karachi, Pakistan ***www.iccs.edu***
09-11 September 2014	REM-2014 15th International Workshop on Research and Education in Mechatronics, El Gouna, Egypt ***www.zu.edu.eg/rem2014/***
22-23 October 2014	Asia Waste to Energy Congress 2014, Beijing, China ***www.broadersinc.com/awtec2014***
02 - 05 November 2014	TCM4-2014 4th Tunisian Crystallographic Meeting, Djerba, Tunisia ***http://tcm4.org/***

National Training Workshop on Repair and Maintenance of Scientific Engineering Equipment in Universities, Research Institutions, and Small Scale Industries, Tehran, Iran
September 28 - October 2, 2014

A national training workshop entitled Repair and Maintenance of Scientific Engineering Equipment in Universities, Research Institutions and Small Scale Industries , is being organized by COMSATS, in cooperation with the Islamic Educational, Scientific and Cultural Organization (ISESCO) and COMSATS Centre of Excellence in Iran, the Iranian Research Organization for Science & Technology (IROST). The workshop will take place in Tehran, Iran, from 28th September to 2nd October 2014, and would provide hands-on training to the relevant engineers, researchers, technicians, teachers and students for upgrading their skills and enhancing their capacities for repairing, maintaining and troubleshooting important scientific engineering equipment used in universities, research institutions and small scale industries. For more information, please write to husseint@comsats.net.pk, or comsats@comsats.org.

CALL FOR PAPERS FOR COMSATS' JOURNAL – SCIENCE VISION: VOL. 20

Science Vision is a biannual scientific journal of COMSATS. It primarily aims at highlighting the important scientific and technological developments that have a bearing on socio-economic conditions of the people by publishing research as well as review articles. Scientists, researchers, policy-makers and young scholars from S&T organizations and R&D institutions are encouraged to contribute articles on any scientific field of interest relevant to the focus of the journal.

COMSATS invites scholarly contributions for the Volume 20, Issue 1 (January to June 2014) of its journal. In view of 2014 being celebrated as the International Year of Crystallography, scholars are encouraged to send papers highlighting the potential and applications of the field. As per the policy of the journal, contributors are compensated for their time and efforts with a modest amount of honorarium. Contributions may be sent to the Managing Editor at: comsats@comsats.org. For more details, please visit the journal s website: www.sciencevision.org.pk.

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A BRIEF ON COMSATS

COMSATS is an inter-governmental organization, with its Secretariat located in Islamabad, Pakistan. Currently it has 21 countries as its Member States and an affiliated Network of 19 scientific institutions.

COMSATS NETWORK

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