

Editorial

Dr. Fathi Arafat

The human resources at Palestinian universities represent a major potential needed for developing and promoting directive scientific research. Most Palestinian universities have realized the need for utilizing this potential by establishing research centers. There are more than twenty such centers of diverse specialties and infrastructures affiliated with eleven universities. A survey study published by the Academy has revealed serious problems affecting the advancement of the centers and hence the research and development on the national level. Problems of funding, coordination and cooperation, lack of clear objectives, responsibilities and policies, etc could only be tackled by consorted efforts. A recognition of the value of research centers as important tools for national development is urgently needed and this should be reflected on national policies positively, first by allocating proper research funds with all associated clear guidelines, and second by adopting policies that encourage relevant information exchange and dissemination. As the process is reciprocal, scientific research centers should also adopt policies with prominent features among which is exerting efforts to link scientific research centers with industrial, agricultural, health, services, and other important sectors in addition to avoid overlapping and duplication, especially when raising international funds. Centers should seek proper connections between scientific research and its findings on application fields, and they should look at benefiting Palestinian society by improving the quality of life through scientific research. On a broader level, consorted efforts should be directed at developing a framework of international cooperation that is capable of bringing emerging technological solutions to Palestine. In all above mentioned requisites, the Palestine Academy for Science and Technology should also play its role, much like other academies of sciences in other countries, without interfering with the roles of other organizations. During the last five years, the Academy has proven its credibility and ability to play its role on the national level even during the ongoing tough times and when its facilities were deliberately stormed and looted.

SCIENCES ACADEMIES IN SEARCH OF A ROLE!

Moneef R Zou'bi

Director General

Islamic Academy of Sciences, Amman, Jordan.

Science and scientific activities are, in many countries, not looked upon as priority areas. Neither are they considered a platform for sustained socio-economic development. Science is viewed as an expensive pursuit indulged in by either a few academics or individuals who are fond of spending long hours in their laboratories or staring at the monitors of their PCs. In many developing countries, an attitude of "Do we really need this?" prevails or even the more disconcerting one of "We'd better spend our precious little resources on more visible manifestations of development!" i.e. more of the infrastructure line that has been springing up in our capital and major cities. In general, science has been only really prized by some political and community leaders, and it has some way to go before becoming part of the public's priority list. People, it seems, are indifferent to the fact that had it not been for science and technology, our lives would not be as they are today. Indeed science is still not considered to be a major component of the knowledge base of any country or community as with history, literature, the arts or music. But it should be.

This sad state of affairs is worthy of a closer look. Questions need to be asked as to why all the talk about the value and importance of science has not really filtered through to the grassroots.

Among the international scientific elite and those involved in North-South and South-South scientific and technological collaboration, science and science-based terminologies have become part of their thinking, and science for sustainable development has become a buzzword. To the pillars of the science and technology suprastructure of any country; to the scientific organizations, universities, academies of sciences, ministries of science and technology, the true value of scientific advancement has time and again more than manifested itself. People realize that the knowledge that science can generate is a qualification for a sustainable and bright future.

Of such pillars, academies of sciences stand out as organizations with multifaceted and multi-layered roles, not only as propagandists for science and technology among the

Continued on page 2

Continued from page 1

political decision making circles, but also as decision support/analysis units, especially on matters related to science and technology, education, health and the environment. Perhaps if we were to unglamorously or straightforwardly express the mission of an academy of sciences in terms of bridging the divide between the fans of science and its inimitable foes, we will be hitting the right note.

What is more striking is that the political leadership in several developing countries is ignorant of the role or the possible mandate of an academy of sciences as the science promoter in/for society. This is unfortunate, because they are the very people whose support is required to launch, nurture and provide political patronage as well as material support to national academies of sciences. Indeed for a national academy of sciences to be successful, it has to have the political support and patronage of the head of state as well as the financial aid of the government. Ideally, such a relationship would help the academy of sciences maintain a certain level of independence and provide objective and unbiased advice to the government. Needless to say that time is needed for a working relationship to develop between a national academy of sciences in a typical developing country, the country's supposedly 'apolitical' head of state, and the government, which is the body to be advised by the academy of sciences.

In Arab/Islamic culture, the concept of an academy of sciences is probably ten centuries old and may be traced back to the era of the Abbasids, when in the 11th Century the Al-Ghazali's Nizamiyah Academy in Baghdad was founded, and where scientific matters relating to the welfare of the Ummah were debated and discussed. That is some four centuries or so before the founding of the first European academy of sciences, Accademia Nazionale dei Lincei, in Italy. Today, there exists around 90 national, regional, international academies of sciences that are active in the world, some taking on the responsibility of catering to a region or a group of countries such as the Islamic Academy of Sciences (IAS), the Third World Academy of Sciences (TWAS), and the African Academy of Sciences (AAS). Most are prestigious bodies of international standing, and some are new but developing and finding their way fast despite numerous obstacles. The Palestine Academy of Sciences is a poignant example of this.

To fully realise their potential, academies of sciences must get their message across to politicians, academics, and the public at large. Their message needs to get across to the business community also, for it can provide support for their activities. By patiently cultivating a sense of appreciation for science in the hearts and minds of such audiences, an academy of sciences is able to fulfill its mandate.

INTERACADEMY PANEL MEETING OF THE NATIONAL SCIENCE ACADEMIES OF THE OIC MEMBER STATES

Palestine Academy, as a member of the InterAcademyPanel, has participated in IAP Meeting of the National Science Academies of the OIC Member States, which was held in Islamabad-Pakistan on 16-17 March, 2004. Dr. Ayman Haj Daoud, from PALAST, has presented the Palestine academy in the sessions held during the meeting. The meeting brought together prominent leaders of the S&T Academies in OIC Member States to discuss the initiative of forming a Network of Academies of Science in Countries of the Organization of Islamic Conference (NASIC). As a result of the meeting a decision to form a Network of Academies was taken.

The following constitutes the major decisions regarding the network:

- The statutes of the NASIC were discussed, finalized and approved by the participating Academies.
- Most of the Academies attending the meeting, including the Palestine Academy for Science and Technology, agreed to become the founding members of NASIC and to constitute the first general assembly.
- Pakistan Academy of Sciences was selected as the Secretariat of the Network. COMSTECH agreed to provide support to Pakistan Academy of Sciences.
- Prof. Atta-ur-Rahman, President of Pakistan Academy of Sciences was unanimously elected as the President of the Network.
- The following four were unanimously elected as Vice Presidents of the Network.
 - Prof. Murat Zhurinov President, National Academy of Sciences of the Republic of Kazakhstan
 - Prof. Adnan Badran, President, Arab Academy of Sciences, Jordan
 - Dr. Saleh Mohd. Nor, Vice President, Akademi Sains, Malaysia
 - Prof. G. Ogunmola, President, Nigerian Academy of Sciences
- Prof. Khalid Mahmood Khan, Secretary General of the Pakistan Academy of Sciences was appointed Secretary General of the Network.

In the first meeting of NASIC Executive Committee, it was decided that for the networking and strengthening of science education in the member states the following short-term and long-term programs may be initiated:

1. A website for the Network may be launched. All member academies will provide the information about their organization to Pakistan Academy of Sciences.
2. A Network newsletter, similar to the IAP newsletter, will be published electronically.
3. Young scientists from member academies will be encouraged in the form of travel grants. TWAS Travel Grant program shall be explored for help.
4. Remote lectures downloaded by the Higher Education Commission in Pakistan will be sent to all member academies in the form of CDs for duplication and distribution to their members.
5. Possibilities of Distant Learning shall be explored. Virtual/Open universities may be established.
6. Member academies will encourage their members to write books which can be published as e-Books. The Network shall pay an

COOPERATIVE INITIATIVES



honorarium to the authors.

7. Collaborative and bilateral research programs shall be initiated. In this regard, areas of strength and centers of excellence shall be identified and encouraged for collaboration.

8. Visiting teachers programs shall be initiated with travel grants from Network/TWAS and local hospitality by the inviting academies.

9. The Malaysian Academy of Sciences will help in providing a model for entrepreneurship, which can be adopted by network members.

10. With the advent of WTO, Regime Academies should help OIC countries in preparing for the necessary IPR & Patent Laws.

IMPROVING COMPETITIVENESS OF SMES. THROUGH IT-BASED ENVIRONMENT BUSINESS PLANNING

As the national core partner of the Euro-Mediterranean partnership funded program SMITE, the Academy has participated in the SMITE meeting and the 2nd Awareness Campaign. Dr. Ayman Al Haj Daoud attended the SMITE Workshop (2nd Awareness Campaign) on Environmental Management for Small & Medium Enterprises in the Food, Textile and Hotel sectors, which was held at Royal Scientific Society, Amman-Jordan on 16-17 June, 2004. Using SMITE project through the internet will improve environmental management by reducing operational material consumption. This project addresses the particular needs of SMEs in the field of environmental management. The scope of the project is the development of a Mediterranean network of SMEs, active in the field of Environmental Management. A web-based informational node for the three sectors will be created to assist interested firms in improving their environmental performance. SMITE Provides the means for on-line Environmental Management

- Assess the legislative and technological performance.
- Benchmark the environmental performance.
- Introduce new technologies and implement technical interventions.
- Adopt "good practice" guidelines for improving environmental performance.
- Estimate the potential cost or benefit of the suggested interventions.

For each environmental performance issue, the tool will help you to:

- Calculate the volume of key resources you are currently consuming.
- Compare your resource consumption with that of similar businesses worldwide.
- Implement programs to reduce resource consumption.
- Calculate the financial and resources savings you could make by improving environmental performance.

ENVIRONMENTAL AWARENESS PROJECT

On the 3rd of March, 2004, a meeting for teachers who had participated in the Environment Awareness Project was held in Al-Bardouni Restaurant- Ramallah. The UNDP representative, Mrs. Reem Abed-Alhadi, and the General Director for Palestine Academy, Dr. Imad Khatib, attended the meeting. Dr Khatib and Mrs. Abed-Alhadi thanked the teachers for their efforts in making this project successful, and the teachers asked for more such projects and explained how happy and active the students were while running this project. At the end, symbolic gifts were given to the teachers and a plaque award was given to the UNDP representative from Palestine Academy for Science and Technology.

PALESTINIAN ENVIRONMENTAL FIELD CENTER

As a new and unique step in the Environmental field at the national level in Palestine, the Palestine Academy for Science and Technology started the implementation and establishment of the Palestinian Environmental Field Center (EFC). The Environmental Field Center will be located on Waqf land in Jericho, which has, besides its historical value, biological diversity. The center aims to:

- Promote public awareness among people, principally Palestinians, with varied levels of knowledge about the ecological diversity and history of the region, with an emphasis on conservation of ecologically sensitive areas and archeological sites.
- Promote regional eco-tourism and stimulate the local economy.
- Promote regional cooperation between GOs and NGOs on the level of project implementation.
- Promote regional cooperation on environmental issues through teacher and scientist exchanges between schools and universities, joint projects between field study centers and universities, transfer of technology, and exchange of data.
- Link local, regional and international researchers in their struggle to find technical solutions to environmental problems.
- Conserve endangered species of flora and fauna.
- Promote models of large scale resource management including a composting model and recycling facilities, a water purification plant, solid waste landfill models, and an eco-farm for educational and research purposes.
- Promote models for household resource management including reusing, recycling, and composting of organic wastes.

The center will include the following facilities:

- Library
- Resource Management Models, including plants for composting, water purification, and solid waste landfills



- Seminar Hall
- Computer Center
- Migrating Bird Station
- Camping Site with nets
- Tools and Materials for indoor and outdoor environmental activities
- Fossil Exhibition
- Cafeteria, which will provide healthy food

The Environmental Field Center in Palestine targets a wide audience including school groups, teachers, and researchers who will conduct experiments, collect data and implement environmental projects using the Environmental center. This center will solve a lot of problems for Palestinian schools and teachers, because therein they will find a place to run their activities, and because it is a good site for summer camps. Therefore the Academy has organized the first summer environmental camp from 4-7 July 2004 with 22 students from both private and governmental schools from Ramallah and the Jericho district participating.

There were many environmental activities carried out under the supervision of Rana Al-Qimary and five other counselors, who were trained to deal with such activities. In the last day of the camp, a workshop was held in the Committee for the Promotion of Tourism in the Governorate of Jericho, where other camp activities were held. In the workshop, four different environmental issues were discussed. These issues were Paper Recycling, Air Pollution, Solid Waste Treatment, and Non-Desertification.

In the near future, the Academy will be organizing several environmental camps at a national level.

Finally, the academy will be pleased to cooperate with different organizations in the environmental field in order to reach its vision of establishing the first natural reserve in Palestine.

CONFERENCE ON WATER RIGHTS AT THE UNIVERSITY OF ROME - LA SAPIENZA

The Palestine Academy for Science and Technology participated in the International Conference on "The Value of Water: Knowledge and Rights" which was held during the period 18-20 March 2004 at the University of Rome - La Sapienza" in Italy. Dr. Imad Khatib from PALAST has presented a paper entitled: Research and Development in Water and Wastewater, the Constraints and Gaps, the Need for a proper International Cooperation. The conference came as a follow-up to the "Declaration of Water as Human Rights" meeting which was held in December 2003, and it devoted special attention to what is happening in the Mediterranean basin and the nearby areas. The academy's participation is the

second in a conference organized by the University of Rome, which indicates the good cooperative relations between the Academy and the University of Rome - La Sapienza.

GLOWA - JORDAN RIVER PART 2 CONFERENCE

Dr. Nabil Shahin from University of Karlsruhe has represented the Academy in the GLOWA - Jordan River Conference which was held on 19th-22nd April, 2004 at Potsdam University in Potsdam-Germany. During the conference, progress made in the four major working packages of the project was presented by partners from Jordan, Palestine, and Germany. The Academy and its German partner, Potsdam Institute of Climate Impact (PIK) in the Work Package I, Climate Change Scenarios, presented the results obtained so far using the multivariate statistical modeling approach in studying the climate change scenarios.

The project, which is funded by the German Ministry of Education and Research (BMBF) is part of the Global Change of Hydrology Cycle (GLOWA) program and has five large cluster projects. Two of these cluster projects are located in Germany (Danube, Elbe) and the others are investigating river catchment areas in North and West Africa (Draa, Queme, Volta) as well as in the Near East (Jordan). Each of these projects is tackling the following scientific core themes with an interdisciplinary and integrative research approach:

- Natural variability precipitation, variations caused by human activities and their effect on the hydrological cycle.
- Interactions between the hydrological cycle, the biosphere and land use.
- Water availability and conflicting water issues.

(Visit GLOWA - Jordan River

Web Site at: <http://www.glowa-jordan-river.de>).

PUBLICATIONS

In Cooperation with the Committee for the Promotion of Tourism in the Governorate of Jericho, the Academy has released two booklets in the Arabic language: "The Calendar Book," which defines all calendar types and their histories with short descriptions about their origins, and "Best Preparation for Written Exam (Advice and Guidelines)," which serves as a good guide to school and university students.

NEW RECRUITED PERSONNEL

The Academy has recently recruited Eng. Shiraz Nasr, who will be coordinating the GEF-funded project on Environmental Field Center in Jericho. The Academy will also host Dr. Nabil Shahin from Germany, who will be working on a wastewater management initiative. The Academy wishes both a pleasant stay and all success.

GAZA BRANCH ACTIVITIES

With the knowledge of the Palestine Academy of Science and Technology's policies in different academic fields, the Gaza Branch of the Academy has created the following:

I. Palestine Academy Museum of Natural History

The museum is located at the Gaza-branch of PAST, at PRCS in Tal Alhawa. The museum is the first natural history museum in Palestine, where more than 100 exhibits are on display. According to the environmental criteria, the exhibits are divided into the following four categories: (1) Domesticated animals, including beasts of burden such as the camel; (2) Endangered species, such as the Stone-curlew bird (*Burhinus oedecnemus*), because of human activities, such as waste waters and constructions; (3) Other



endangered species, such as the Purple Heron (*Ardea purpurea*); and (4) Migrant species, such as the Bluethroat (*Luscinia svecica*). The museum maintains its



activities to reach the following objectives:

- 1) Create a data base for the fauna of Palestine.
- 2) Promote environmental public awareness.
- 3) Promote environmental education.
- 4) Keep vital specimens of the fauna of Palestine as a natural record for researchers and workers.
- 5) Promote environmental activities.

The museum is planning to establish a branch in the West-Bank at the Palestine Environmental Field Centre in Jericho.



II. The Aquaria

Palestine, as a new country in light of the present situation, does not have a field of oceanography, despite the fact that it is located at the eastern corner of the Mediterranean Sea as part of the regional marine ecosystem. Therefore the Academy successfully established three aquaria to preserve marine life and make it accessible to researchers and the public. After three years of maintaining 6 species of marine fish, the Gaza Branch planned to establish large aquaria in an attempt to keep different marine species of the fish available to achieve the following objectives:

1. Resource model for researchers and workers
2. Create an area in the fields of oceanography
3. Public awareness



III. Academic Club

In Palestine, academic clubs are not founded to maintain an academic atmosphere between various workers and different universities, including the Palestinian universities. The Gaza Branch was encouraged, after looking at other similar systems in the international community, and after studying a questionnaire among the staff of the universities in Gaza strip, to establish the academic club in order to achieve the following objectives:

1. Maintain a satisfactory atmosphere for the academics and their families
2. Encourage the academics' creativity and research developments
3. Create different types of activities, e.g. sports and hopes
4. Create a data base for the Palestinian academics.

THE ROLE OF SCIENTIFIC RESEARCH CENTERS IN SUSTAINABLE DEVELOPMENT AT AN-NAJAH NATIONAL UNIVERSITY

By Dr. Suleiman Al-Khalil

Coordinator For Scientific and Societal Research Centers (SSRC),
An-Najah National University, Nablus (ANNU) - Palestine.

The SSRC was established in 1994 to serve as a bridge between the University and the local community. These centers conduct applied research and projects in co-operation with concerned governmental and non-governmental institutions and municipalities for the purpose of laying down the foundations for the establishment of the Palestinian state. The SSRC has been able, through vital projects in the economy, the environment, etc., to lay the foundation for sustainable development and making contributions towards the local community in all possible areas.

THE MISSION AND OBJECTIVES:

Following is a quick preview of the centers:

The center for Urban and Regional Planning (GORP) was established in 1998 to help the role of ANNU in building Palestinian ministries and institutions. In general, the center aims at analyzing, supervising, linking, controlling and dealing with issues and problems pertinent to the present and future situation of local, regional and national planning in Palestine.

The Energy Research Center (ERC) was established in 1996. It is concerned with research, development, system design, feasibility studies and training in all conventional and renewable energy fields, energy management and energy conservation. Recently, the scope of the center was expanded to encompass the impact of energy on global environment, health and social development.

The Water and Environmental Studies Institute (WESI) was established in 2001 as a successor to the Water and Environmental Studies Center founded in 1994. The main objectives of WESI is to serve the Palestinian community's needs in terms of studying, monitoring, describing, controlling and following up all issues and aspects related to the present and future state of water and environment in Palestine. In addition the WESI oversees and manages two M.Sc. degree programs offered at ANNU. It also conducts all laboratory tests needed by the community on water, wastewater, soil, air pollution and plants. And thus acts as a technology and know-how transfer for water and environmental aspects. The Earth Sciences and Seismic Engineering Center (ESSEC) was established in 1996. It is the only specialist center in Palestine which represents the PNA in local and global conferences and workshops concerned with applied geophysics and seismic engineering. The role and objectives of (ESSEC) were highlighted in following up the last earthquake which took place in Feb 2004 by data analysis and increasing public awareness of earthquake hazard and preparedness through printed materials and special programs in coordination with the civil defense and other groups interested in safety in Palestine during earthquakes.

The Construction and Transportation Research Center (CTRC) was established in 2000 with several objectives to utilize the available resources at the Faculty of Engineering to support research projects in the area of construction and transportation engineering, in addition to supporting specifications appropriate for the local construction and traffic for the Palestinian traffic transport system.

One of the striking and promising centers is the Community Service

Center (CSC) which was established in 1999, in cooperation with McGill University - Montreal, Canada, to provide community services in the fields of social work and housing for limited income families. The CSC philosophy is based on helping the local community become organized and capable of participating in problem solving and finding a working mechanism that enables it to serve itself. The center works with disadvantaged individuals and groups with special needs to defend their courses and empower them so they can help themselves. Also, (CSC) is expanding the university's role in the Palestinian local community - raising the standard of volunteer work and promoting it amongst various community institutions.

The Chemical, Biological and Drug Analysis Center (CBDA) was established in 1999 to assist the field of food analysis and shelf life. The center feels that it is its duty to protect Palestinian society by conducting studies on narcotics, and illegal drugs used in Palestinian society leading to addiction, physical dependence and loss of lives. Also, the (CBDA) conducts quality control tests on the pharmaceuticals and cosmetics available in the Palestinian market to make sure that the products are manufactured in accordance to Palestinian standards and specifications. Human rights and democracy are two other fields in which An-Najah is involved in. For that end, a 1997 agreement between UNESCO and ANNU set up a UNESCO Chair on Human Rights and Democracy with the main objective of promoting an integrated system of research, training, information and documentation in the fields of human rights and democracy in Palestine, and to serve as a focal point for promoting these activities at the other Palestinian universities. Also, the chair aims at facilitating cooperation between the research and teaching staff at An-Najah and other Palestinian universities and their counterparts abroad.

Recently, and due to the strategic planning set by An-Najah to maintain Sustainable Development, a Continuing Education Center (CEC) was established enabling the Department of Training and Continuing Education to meet all of the educational objectives of the center. These include assisting in the development of curricula to be used in both local and private schools at all levels, to increase standards, and ensure the most effective teaching methods are used. The center organizes seminars, conferences, and training courses to develop capabilities and provide vocational rehabilitation. In addition, the center organizes and conducts training courses both in the form of topic specific workshops, and vocational diplomas. Through this members of the wider community can enroll in courses on topics relevant to their needs, and receive training on a set of skills, as well as an accredited certificate of participation. The Center has implemented courses in bank credits, administration assistance, and psychological guidance for those working in social and pedagogical fields, as well as in planning and financial supervising. Furthermore, the Center offers vocational diplomas that specialize in money market, marketing, insurance taxes, secretarial work, and accounting.

Another center established recently in 2003 is the Center for Opinion Polls and Survey Studies with the main objective of conducting an opinion poll on a bimonthly basis and of carrying out field surveys in health, psychological, social, economical, and infrastructure for the Palestinian community. The opinion polls became well known on the national, Pan-Arab and International level.

To summarize, one can say that these centers fulfill their mission by bridging the gap and by helping in building and reaching-out to the local community, the centers mission would be impossible to be fulfilled without the support of the ANNU Board of Trustees, University President, Prof. Rami Hamdallah, and the University administration and the joint efforts of the Directors and staff working nights and days.



NEWS FROM PALESTINIAN UNIVERSITIES

ISLAMIC UNIVERSITY OF GAZA

The Office of the Dean of Scientific Research at the Islamic University of Gaza (IUG) organized a ceremony to honor several IUG faculty members who were recently promoted to a higher academic rank - associate or full professor. While fourteen faculty members were promoted to associate professors, another six were promoted to full professors of engineering, science or the arts. Among the attendees were Eng. Jamal El-Khudary, the head of the Board of Trustees and Prof. Mohammad Shubair the President, and they were the speakers of the ceremony as well as Dr. Adel Awadalla. The Dean of Scientific Research, Mr. El-Khudary, congratulated the honored academicians and showed his willingness and commitment to support any step toward furthering IUG's progress.

The Office of the Dean of Scientific Research has also nominated the winners of the IUG awards for scientific research for the first semester of the academic year 2003/2004. The nominees are faculty members who had presented promising research proposals. The Dean will reconsider other proposals for approval in the second semester of the year.

In other news, the Faculty of Science at IUG is working to organize the international conference of sciences and development in March 2005. The conference will take place at IUG, for two days to discuss various aspects of applied sciences and environmental issues. The main goal of the conference is to promote researchers primarily in Palestinian institutions to introduce applicable approaches to cope with the issues confronting research resources and environmental problems in Palestine.

Recently several academicians of the IUG participated in scientific conferences, either regional or international. Among them were Prof. Nabeel Abu-Ali, Prof. Adnan Enshassi, Dr. Sanna Abu-Dagga, Dr. Basam abu-Thaher, Dr. Mohammad

Zeyyara, Dr. Sallah al- Agha, and Dr. Mohammad R. Al- Agha.

New issues of the refereed biannual IUG journal were published by the Office of the Dean of Scientific Research. The three series of the journal, Islamic, Humanities, and Natural Studies, were edited by a professional editorial board.

HEBRON UNIVERSITY

The faculty of Nursing at Hebron University held a workshop on nursing cancer patients. Several issues were tackled: early detection of cancer, cancer spread and statistics, treatment plan and types of cancers, such as leukemia, breast cancer, lung cancer, bladder cancer, and prostate cancer.

In other news, the faculty of Finance and Management held a seminar to review and discuss the UN's 2003 Arab Human Development Report, in cooperation with the Center for Developmental Studies of Birzeit University.

Also, the Agricultural Guidance Center and Community Service held a workshop entitled "Biological Pest Control in Greenhouses" in cooperation with the UNDP, PAPP, the Small Project Program, and the International Environment. This training workshop was carried out through the project of "Isolation of the Fungus Trichoderma from Palestinian Agricultural Soils and Using the Most Effective Isolators to Bio-Control Soil Fungus Pathogens."

For postgraduate studies, the following master's theses were defended: "Impact of Israeli Rules on the [Islamic] Judiciary in 1948-Israel-Occupied Palestine," "Widow Judgments in Fiqh (Islamic Jurisprudence)," and "Actions between Fiqh (Islamic Jurisprudence) and Law."

In other news, a training course entitled "Project Proposals and Institutional Developments" was held at Hebron University from Feb.28-Mar.16, 2004, which was funded by the Arab Student Aid International (ASAI).

Scientific Research Centers Affiliated with Palestinian Universities

Name of SRC	Contact Person	Number of Available Staff	Year of Establishment	Briefly Description on		Constrains
				Main Objectives	Currently and Ongoing Activities	
ARAB AMERICAN UNIVERSITY JENIN						
Department of Scientific Research	Dr. Samira Barghouthi	1	2003	<ul style="list-style-type: none"> * Establish a Research Center * Conduct Research in collaboration with other Universities at national and international levels * Publish Research findings and results 	<ul style="list-style-type: none"> * Natural Product * Allied Health * Physics (using electron microscope) * Biotechnology including cell culture and molecular biology 	<ul style="list-style-type: none"> * Lack of Equipment and funds for purchases of consumables * Lack of time for faculty to allocate for research
AL QUDS UNIVERSITY						
Center for Chemical and Biological Analysis	Dr. Saleh Abulafi	4	1999	<ul style="list-style-type: none"> * Supporting scientific research to meet the University's vision and policies * Helping the Palestinian community in the areas of Chemical and Biological analysis 	<ul style="list-style-type: none"> * Research in the area of: Agriculture, Industry, Environment, Food, Natural products * Training Palestinians in different instrumentation such as ICP, AA, IC, GCMS, VV / vis, etc. 	<ul style="list-style-type: none"> * Funding to keep up with running cost, chemicals, etc. * Need an LCMS instrument to analyze and characterize polar compound, including drug analysis
Research Department	Dr. Taisir Abdallah	2	1996	<ul style="list-style-type: none"> * To develop and to promote research in the University * To attract different faculties to research * To develop Facilities to teach writing proposals and getting funding sources * To conduct research that is related to the community 	<ul style="list-style-type: none"> * Health * Education * Science * Environment 	<ul style="list-style-type: none"> * Lack of funds * Lack of instruments and equipment for research. * Lack of training for researchers
PALESTINE POLYTECHNIC UNIVERSITY						
Renewable Energy and Environment Research Unit (REERU)	Dr. Imad Khatib	5	1999	<ul style="list-style-type: none"> * To conduct basic and applied Scientific Research in the field of Energy and Environment * To provide proper services in both environment and energy fields to national institutions and society * To work in cooperation with relevant national and international institutions * To work on issues related to sustainable energy and environment 	<ul style="list-style-type: none"> * Enhancing Energy Efficiency and Environment protection- Funded by US-citizen Exchange program, in cooperation with AUB in Lebanon, JUST in Jordan and UCF in USA * Social Mobilization in the field of Environmental Awareness-Funded by UNDP * Integrating solar thermal Energy with a bladeless turbine system for producing electrical energy- Funded by Arab Fund for Palestinian Universities 	<ul style="list-style-type: none"> * Lack of proper national funding * Occupation and restriction imposed * Coordination and cooperation on the national level

AN NAJAH NATIONAL UNIVERSITY

Construction and Transportation Research	Dr. khaled al- Alsahils	3	2000	<ul style="list-style-type: none"> * Conduct studies and research in the area of construction. And transportation engineering. * Establish Palestinian standards. * Provide capacity building in the fields of interest. 	<ul style="list-style-type: none"> * Evaluation of paved streets in Nablus. * Quantity control for construction material (several projects) * Impact of transportation on food consumption emission. * Establishment of calibration units for instruments. 	<ul style="list-style-type: none"> * Establishing instrument calibration units. * Active in quality control of construction materials. * Establishing a name in the Palestinian market. 	<ul style="list-style-type: none"> * Financial/lack of financial support. * Limited interest in development activities under the current political conditions * Political condition.
Chemical, Biological and Drug Analysis Center	Dr. Nidal zatar	7	1999	<ul style="list-style-type: none"> * Food, pharmaceutical formulation, detergents and analysis of drugs of abuse. * Research activities concerning food, environmental field. * Training program in chemical and biological analyze 	<ul style="list-style-type: none"> * Monitoring and quantitative determination of textile, drugs in ground water, sewage water and soil test studies using (GCMS) * Analysis of trace elements and organic pollutants in Wadi Alfarea and Wadi Abaden / Nablus 	<ul style="list-style-type: none"> * Improved quality management in European and Mediterranean fruit and vegetable processing industry project. * Establishment of poison center. 	<ul style="list-style-type: none"> * The shortage in financial support. * Nablus closure and the unstable political situation.
Energy Research Center (ERC)	Dr. Imad H. Ibrik	4	1996	<ul style="list-style-type: none"> * To promote the energy efficiency methods and the utilization of Renewable energy in the feasible projects. * To increase public awareness on the best use of energy, energy conservation and on the feasible R.E. application. * To provide professional consultations to local institutions and to conduct projects in the various energy sectors. 	<ul style="list-style-type: none"> * Providing consultancy services for the EIGR -project implemented by the PEA with support of GEF and university. * Efficiency improvement of the electric power methods of the city of Jenin. * Renewable energy assessment for Palestine (solar and wind). * Training course on efficiency improvement of electric power distribution networks using modern software. 	<ul style="list-style-type: none"> * Establishment of Meteorological Stations in the West Bank * Establishment of a Biogas Digester * Provided Energy Consultancy Services for the Project: Energy Efficiency * Improvement and Green House Gas Reduction which is implemented by the PEA with support of GEF and UNDP. * Improvement of the Electric Power Network Jenin 	<ul style="list-style-type: none"> * Due to the unusual circumstances in Palestine to travel allocations are extremely limited. * The problem usually to find the funding for the research projects.
The Academic Programme for the Study of Involuntary Migration (APSH)	Dr. Wael Ennab	3	1994	<ul style="list-style-type: none"> * To promote academic knowledge in the field of Forced Migration. * To promote the understanding of appropriate and effective practice concerning Forced Migration. * To disseminate academic and practical information concerning Forced Migration. * To build better communication with those involved in refugees and Forced Migration Programs. 	<ul style="list-style-type: none"> * Peace and the future of the Palestinian refugee population. * Teach and increase visibility on the issue. * Collect documents. * Holding seminars and workshop. 	<ul style="list-style-type: none"> * Built-up series of seminars, workshops and conferences in the field of forced migration. * Introduced courses on forced migration and published its own journal on forced migration 	<ul style="list-style-type: none"> * Lack of fund required to conducting field studies.



Scientific Research Centers Affiliated with Palestinian Universities

Name of SRC	Contact Person	Number of Available Staff	Year of Establishment	Briefly Description on			Constrains
				Main Objectives	Currently and Ongoing Activities	Achievement	
AN NAJAH NATIONAL UNIVERSITY							
Center for Urban and Regional Planning	Dr. Ali Abdelhamid	4	1998	<ul style="list-style-type: none"> * Providing services (guidance, assistance and technical consultancies) for institutions involved in planning in Palestine. * Improving and supporting planning practice in Palestine. * Cooperating with local and international counterpart institutions for experience exchange to joint research projects. 	<ul style="list-style-type: none"> * Preparation of master plans for various Palestinian settlements. * Applications of GIS certain areas related to planning (health services, communication networks) * Training courses to the staff of related institutions (municipalities, ministries, local, authorities, etc.) 	<ul style="list-style-type: none"> * A number of master plans for cities and towns (Tulkarem, Aqraba, Qabalan, Iltar, Sida). * Various Studies and research related to planning issues * Signing different cooperation agreements with counterpart centers (in Germany, Italy, Norway) 	<ul style="list-style-type: none"> * Budget limitations to undertake research and studies. * Current conditions in the Palestinian territories. * Technical equipment (computer hardware and software and related devices).
Earth Sciences and Seismic Engineering Center	Dr.Eng Jalal Al-Dabbeek	6	1996	<ul style="list-style-type: none"> * Exchanging experience consultations and information in the field of earth seismic and earthquake engineering. * Prevailing Consultation in the design and evaluation of seismic resistant structure * Carrying out geological experiments in the field of applied geophysics. 	<ul style="list-style-type: none"> * Conducting training courses for engineers in the design of earthquake resistant structures. * Publishing bulletins and public awareness materials. * Offering academic courses for different faculties in the university. * Participating in national and international conferences, meetings, and workshops. * Conducting geophysical experiments 	<ul style="list-style-type: none"> * Conducting the first earthquake scenarios in Palestine * Providing most Palestinian cities with seismic monitoring situation. * Providing some seismic maps. 	
Continuing Education Center (CFE)	Dr. Suleiman Khalil	4	1992	<ul style="list-style-type: none"> * To promote the capability in H.R by training. * Provides vocational and reliability. * Organize and conduct training course and vocational Diploma 	<ul style="list-style-type: none"> * Training workshops, seminars in computers. * A genetic, medicine, health, language. * Marketing and accounting, GIS and Strategic management. 	<ul style="list-style-type: none"> * Number of training courses in computers TOEFL, German, GIS, accounting. * Vocational education was carried out. 	
Water and Environment Studies Institute	Anan Janyousi	7	1994	<ul style="list-style-type: none"> * Quality Monitoring of water, waste water and soil * Research projects in water and Environment * Training courses, seminars and workshops 	<ul style="list-style-type: none"> * Waste water treatment and re-use * Biodiversity * Water Demand management aspects * Salinity 	<ul style="list-style-type: none"> * Three international conferences * More than 20 workshops, seminars * More than 15 research projects (regional and international) 	<ul style="list-style-type: none"> * Funding * Israeli practices and inaccessibility to research areas

Center for Opinion Poll and Survey Studies	Dr. Hussein Ahmad	2	2003	<ul style="list-style-type: none"> * Conducting an opinion poll on a bimonthly basis * Carrying out field surveys on different topics 	<ul style="list-style-type: none"> * An opinion Poll in Mid-March * Nutrition survey for female student at An-Najah National University 	* 4 opinion polls	<ul style="list-style-type: none"> * The lacking of funds to support the center social programs
Community Service Center.	Bilal Salamah	6	1999	<ul style="list-style-type: none"> * Providing assistance and support in a framework of community spirit based on the right of every citizen to have a decent living. * Expanding the university's role in the Palestinian local community. * Identifying the concerns and needs of disadvantaged peoples and those with special needs in the Palestinian community, and providing them with social and psychological support. * Raising the standard of volunteer work and promoting it amongst various community insitutions. * Providing volunteer efforts 	<ul style="list-style-type: none"> * Community Supported education. This program aims at assisting pupils who have learning difficulties due to the socio-economical circumstances of their families * Rehabilitation of housing for limited income families * Coordination and cooperation with other institutions in joint initiatives to start programs and activities in mutual fields 	<ul style="list-style-type: none"> * Through four years of work, the center was able to provide the community with several distinguished social programs dealing with problems that the local community faces. These programs serve as a model for other community organizations 	
UNESCO Chair on Human Rights & Democracy	Sami Al-Kilani	2 + team of Volunteers	1997	<ul style="list-style-type: none"> * Teaching: specific courses in human rights, conflict resolution & advancement of democracy are offered through the chair as part of the regular program of An-Najah National University. * Training: Training activities are aimed in particular at continuing education for teachers, with the potential of expanding the knowledge gained to the high school, college and university classroom. 	<ul style="list-style-type: none"> * Training * Teacher conference * Workshops * Lectures * A number of TV interviews * Publications, Information, Documentation 		

Muslim Scholars



THABIT IBN QURRA

(836-901 AD)

Thabit Ibn Qurra Ibn Marwan al-Sabi' al-Harrani was born in the year 836 AD at Harran (present Turkey). As the name indicates he was basically a member of the Sabian sect, but the great Muslim mathematician Muhammad Ibn Musa Ibn Shakir, impressed by his knowledge of languages, and realizing his potential for a scientific career, selected him to join the scientific group at Baghdad that was being funded by the Abbasid Caliphs. There, he studied under the famous Banu Musa brothers. It was in this setting that Thabit contributed to several branches of science, notably mathematics, astronomy and mechanics, in addition to translating a large number of works from Greek to Arabic. Later, he was funded by the Abbasid Caliph al-Mu'tadid. After a

long career of scholarship, Thabit died in Baghdad in 901 AD.

Thabit's major contribution lies in mathematics and astronomy. He was instrumental in extending the concept of traditional geometry to geometrical algebra and proposed several theories that led to the development of non-Euclidean geometry, spherical trigonometry, integral calculus and real numbers. He criticized a number of theorems of Euclid's elements and proposed important improvements. He applied arithmetical terminology to geometrical quantities, and studied several aspects of conic sections, notably those of the parabola and the ellipse. A number of his computations aimed at determining the surfaces and volumes of different types of bodies and constituted, in fact, the processes of integral calculus, as developed later.

In astronomy, he was one of the early reformers of Ptolemaic views. He analyzed several problems related to the movements of the sun and the moon, and wrote treatises on sundials.

In the fields of mechanics and physics, he is recognized as the founder of statics. He examined conditions of equilibrium of bodies, beams and levers.

In addition to translating a large number of books himself, he founded a School of Translation and supervised the translation of a large number of books from Greek to Arabic. Among Thabit's writings, a large number have survived, but several are no longer found. Most of the books are on mathematics, astronomy and medicine. The books have been written in Arabic but some are in Syriac. In the Middle Ages, some of his books were translated into Latin by Gherard of Cremona. In recent centuries, a number of his books have been translated into European languages and published.

He carried further the work of the Banu Musa brothers and later his son and grandson continued in this tradition, together with the other members of the group. His original books, as well as his translations completed in the ninth century had a positive influence on the development of subsequent scientific research.

*(Taken from: Personalities Noble, National Science Council of Pakistan, edited by Hakim Mohammad Said).
Second Revised Edition (English and Arabic). Published by the Islamic Academy of Sciences (2000).*

DIRECT ALL CONTACTS TO:

PALESTINE ACADEMY FOR SCIENCE AND TECHNOLOGY

P.O.BOX 66839 JERUSALEM, 95908

P.O.BOX 4577 Al- Bireh, PNA.

RAMALLAH OFFICE:

JERUSALEM-RAMALLAH ROAD

TEL: +972 (0)2-2960524/6

FAX: +972(0)2-2960525

E-MAIL: INFO@PALESTINEACADEMY.ORG

GAZA OFFICE

TAL-ALHAWA, PRCS BUILDINGS

TEL: +972(0)8-2835594/98

FAX: +972(0)8-2835578

WEB: [HTTP://WWW.PALESTINEACADEMY.ORG](http://WWW.PALESTINEACADEMY.ORG)