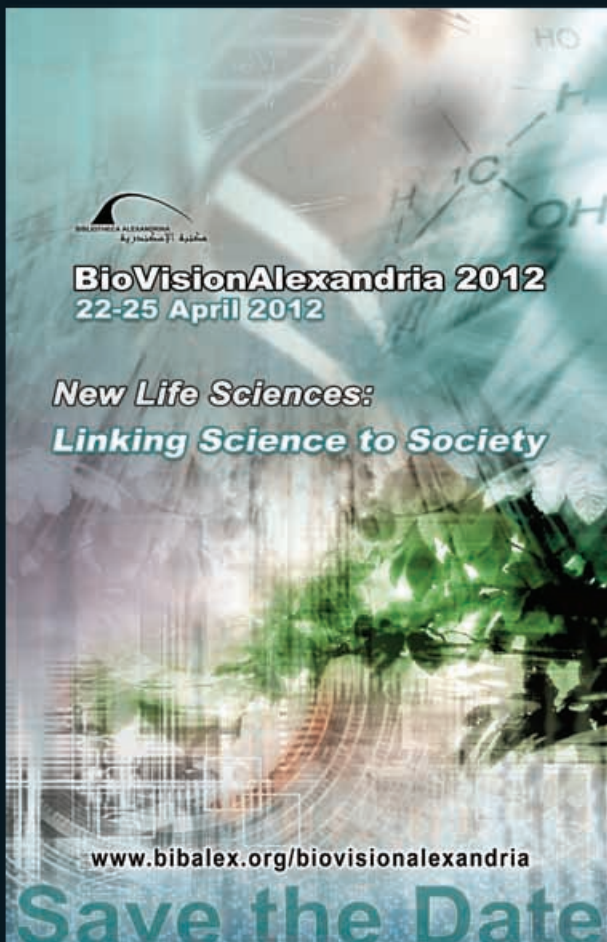



The Colors of BioVisionAlexandria 2012



The poster features a collage of scientific imagery: a DNA double helix, chemical structures including a carboxylic acid group ($\text{HO}-\text{C}(=\text{O})-\text{OH}$), and a globe with green foliage. The background is a light blue and green gradient.


BIBALEX ALEXANDRIA
الجمعية العلمية لجامعة الإسكندرية

BioVisionAlexandria 2012
22-25 April 2012

*New Life Sciences:
Linking Science to Society*

www.bibalex.org/biovisionalexandria

Save the Date

The Colors of BioVision Alexandria 2012

Concept

Mohamed El-Faham



Editing

BA Staff

Eman El-Shazly



Esraa Ragab



Israa El-Fayoumi



Lara El-Mallakh



Magdy Khalil



Marian Roushdy



Marwa El-Wakil



Volunteers

Alshaymaa Yusef



Magued Khouzam



Merihan Tarek



Passant Eid



Sara Zakarya



Salma Kamal



Walid Abdel-Aziz



Logistics Support

Marwa Amin



Yasmin Maamoun



Photographs

Hassan Mady



Mohamed Mounir



Mohamed Nafea



Graphic Design & Layout

Mary Youssef



Language Revision:

Bibliotheca Alexandrina Translation and Language Control Unit

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Preface

Some people claim we are living in the best of times. Science is offering solutions to many of our most pressing problems, and is revolutionizing our world. New findings and breakthroughs are achieved each day. Man is reaching new frontiers which we never imagined to reach. Yet, we still have a long way of head of us. The challenges are grand and complex. We still have one billion hungry people on this planet, living in the worst conditions, deprived of the basic rights of life. We also face economic crisis, threats of new and reemerging diseases, as well as problems of access to clean water, and access to medicine.

In the midst of all this, our world, especially developing countries, is undergoing radical changes. Entire countries are being changed, visions of a better tomorrow are being shaped, and societies are transformed. During these transformations, science can play a pivotal role in achieving a fair, equal and just society not only through scientific breakthroughs but through influencing decision making and policy adjustments.

We now need more than ever to identify and set our priorities to rebuild society. Policies of scientific research should be reformed towards serving society, especially the less fortunate, and to introduce change to the lives of those who truly need it.

In 2002, we laid the first foundation of the BioVisionAlexandria (BVA) initiative aiming to address all aspects of Life Sciences through organizing Biotechnology and Sustainable Development: Voices of the South and the North Conference. Now we celebrate ten years since that date where we organized our 6th International Biennial Conference, BioVisionAlexandria 2012, 22-25 April 2012, in Alexandria, Egypt.

It is considered as a continuation of the tradition that started in BioVision 1999 in Lyon, France; the Bibliotheca Alexandrina is honored to be an associate with BioVision, by holding the BioVisionAlexandria, every even year, alternating with the World Life Science Forum held in Lyon, every other odd year since 2004.

Under the theme “New Life Sciences: Linking Science to Society” BVA 2012 Conference was held at the Bibliotheca Alexandrina. The Conference focused on three main messages. One is that a vision for achieving health as a state of well-being, not just combating disease, is imperative, especially for developing countries. Another is that the negative impacts of human activities on the environment and consequently on the quality of human life needs serious attention. Similarly, food and agriculture, especially with countries struggling to meet the first Millennium Development Goal (MDG) of halving extreme hunger and poverty by the year 2015 is a major challenge. Special emphasis was on those marginalized within society, and how can new life sciences offer them a hand.

BioVisionAlexandria 2012 brought together 111 eminent speakers from the four corners of the globe, out of which four were Nobel Laureates. Besides many high caliber experts in different scientific fields, it also featured distinguished representatives of industry, policy-makers and civil society fields, who shared their knowledge and expertise with the BioVisionAlexandria 2012 huge Conference’s audience that exceeded 2000 attendees.

On 23 April 2012, BioVisionAlexandria 2012 commenced with a Science Celebration Day. The celebration included interventions from distinguished recipients of the Nobel Prize who shared their reflections and experiences with the Conference audience through live encounters and video conferences and messages. It included several plenary sessions addressing “The Many Wonders of Science”, “Understanding the Essentials of Life”, and “Access to Food: Access to Life”.

Moreover, the Conference featured several plenary sessions aiming to address various gripping global issues, such as Science and Policy Serving Society; Biorobotics: Making the Best of Man and Machine; Biotech: Waging War on Hunger; Science Supercourse; and Urban and Rural Development: Sustainability for All. It also incorporated 6 tracks which focused on numerous topics including EU-Egypt Science, Technology and Innovation Cooperation, Fostering Science and Technology in the Middle East and Africa, the Mysteries of the Brain and the Secrets of Ageing, and others.

Furthermore, it hosted a special exhibition entitled “BioFair@BioVisionAlexandria” which presented a unique platform for top biotechnology, agricultural, environmental, pharmaceutical and publishing companies to network key research and business development executives.

It also featured a Poster Session for young researchers and scientists, and an interactive event in collaboration with the Academy of Sciences for the Developing World (TWAS) for young researchers from the developing world entitled “TWAS/BVA. Nxt”. This event took place during the two days preceding the BioVisionAlexandria 2012 Conference. The young scientists were also invited to attend, and actively participate, in the BioVisionAlexandria 2012 Conference.

This publication aims to present an overview of the BioVisionAlexandria 2012 Conference.

For further information, please visit the BioVisionAlexandria website:
www.bibalex.org/biovisionalexandria

See you in BioVisionAlexandria 2014
April 2014
Save the Date

Sunday, 22 April 2012

Conference Opening Session



Welcome Note:

Ismail Serageldin, Director, Bibliotheca Alexandrina (**Egypt**)

Osama El-Fouly, Alexandria Governor (**Egypt**)

Didier Hoch, CEO, the World Life Sciences Forum, BioVision (**France**)

Koji Omi, Founder and Chairman, Science and Technology in Society (STS) Forum (**Japan**)

Romain Murenzi, Executive Director, the Academy of Sciences for the Developing World - TWAS (**Italy**)

Keynote Address:

Ismail Serageldin, Director, Bibliotheca Alexandrina (**Egypt**)



Osama El-Fouly, “Egypt is living now extraordinary times in its history, looking forward to a brighter future. It is such an honor for Alexandria to be hosting such a remarkable and distinguished gathering, thanks to the Library of Alexandria. Alexandria has always been the birth and cradle of civilization, and the Library of Alexandria has always been the lighthouse of science and technology. We are gathered here to share ideas and knowhow of linking science and technology to society. I hope this Conference will be as fruitful and successful as the previous BioVision Alexandria conferences. I am so happy to see this event gathering simultaneously distinguished representatives of the greatest minds in the realms of industry, science, policy-making, media and society, as well as this large number of our dear promising students.”



Didier Hoch, “What is important to understand in BioVision is that we are able to bring together policy-makers, civil society, academia, media and private sector, which is essential in a world where things are changing rapidly and quickly. We should assemble people together to anticipate and prepare the future of the world. What is important also is to benefit from this Biovision Conference, and its program, BVA.Nxt, and to grasp the opportunity to recognize some partnership with the world, and recognize some qualities already reached. Concerning BioVision, one of the strengths that we have today is that we continue to work on the quality of people from the academia side, from the private sector, from the civil society and from policy-makers, it is important to include these four sectors of population, working together for a better future.”



Koji Omi, “The fundamental concept of the STS Forum is as follows: the rapid progress of science and technology has brought economic growth and enriched our quality of life. However, on the other side, science and technology has brought about new environment security programs such as climate change, chemical weapons and privacy of information and communication technology. We call these the lights and the shadows of science and technology. We must strengthen the lights, and control the shadows of science and technology for the future of humanity from the long-term prospective. For this purpose, it is important for not only professional scientists, but also policy-makers, business executives, media and governmental officials to meet and exchange views on how to deal with science and technology issues from the viewpoint of the long-term future of mankind. These are not issues that should be left only to the science professionals, they concern all of us, and we must think of them as our own problem.”



Romain Murenzi, “Knowledge, and scientific knowledge in particular, is the single most important element that will enable developing countries to win their long-term battle against disease and poverty, and to respond more effectively to natural disasters. Science, and the life sciences in particular, through innovation can reduce cost, and increase productivity through newly-discovered and creative substances that prevent and cure diseases through survey, data mining that can identify patterns and changes, both globally and locally, and can make a massive difference, but these research findings crucially must be shared with decision-makers and converted into appropriate science national policies.”



Ismail Serageldin, “The world that we all know has been transformed profoundly, far more profoundly than anybody could imagine by the new information and communication technology ICT World. We are going through a transformation that is more profound than anything we have lived through in knowledge throughout human history. I consider it closer to the invention of writing. Invention of writing was essential to cumulate knowledge, and to transfer knowledge across space and time internationally. Today, the scale of the revolution is of that size and magnitude.”

BioVision Alexandria 2012 Science Celebration Day



Nobel Session: Science’s Quest for a Better Future



Chair:

Bruce Alberts, Former President, National Academy of Sciences and Editor-in-Chief, *Science Magazine* (USA)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Jean-Marie Lehn, Nobel Prize in Chemistry 1987 (France) – live video conference

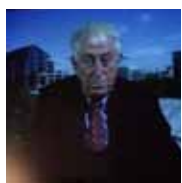
Peter Doherty, Nobel Prize in Physiology or Medicine 1996 (Australia) – Video message

Harold Kroto, Nobel Prize in Chemistry 1996 (UK) – Video message

Richard Ernst, Nobel Prize in Chemistry 1991 (Switzerland)



Jean-Marie Lehn, “Science is offering exciting prospectives for future generations. It promises more and more complete understanding of the universe, and greater knowledge to creative power of chemical science is over the structural transformations of the inanimate as well as the living world, and increasing ability to take account over controllable diseases of aging and even will be toward evolution of our species itself, a deeper penetration into the working of the brain—the nature of consciousness and the origin of thought. Science provides knowledge that technology transforms into means of actions, science and its implementation with technology have transformed, and will continue to transform our society in many ways, for instance for the extraordinary development in electronics and new materials, physical and chemical sciences have made it possible to advent of the age of information and communications as we are experiencing today, reducing time and abolishing distance, bringing people closer together.”



Peter Doherty, “The Bibliotheca Alexandrina, this wonderful venue, reminds us how after the Ancient Library was destroyed, the Islamic world kept a light of understanding and knowledge learning through the European Dark Age. Now as then, we face enormous challenges. Among these challenges are the issues dealing with global infectious diseases and the problem of feeding this ever-expanding population in the face of what unfortunately is substantial environmental degradation. The solutions to those issues are multifaceted. They include political and social approaches, and they also include the subject of this meeting “Science and Technology”. That is to find solutions based on modern molecular technology that will eliminate the difficulties that face our species and will ensure greater global equity.”



Harold Kroto, “What is science? There is a big misunderstanding and I want to address that aspect of science. The first thing is the body of knowledge, evidence-based knowledge, and the way the universe works; then there is the application of that knowledge, technology; and then significantly the ways in which that knowledge was gained, the scientific method. However, there is something even more important, because the continuation of science has been so valuable to society, people have forgotten the cultural aspects of science. In fact, people and in particularly politicians, do not really understand it. Before science became useful, it had another name, it was “Natural Philosophy” and the most important aspect by far is that natural philosophy is the only philosophical analysis we have devised to determine truth with any degree of reliability. The ethical purpose of education must involve the teaching of our youth, how they can decide if what they have been told is actually true, the teaching of spectacle evidence-based assessment of all plans without exception in an intellectual integrity issue; and all teachers should address it as much as they possibly can, without facts, anything goes, think about it.”



Richard Ernst, “In education, we have essentially two goals. The first goal is helping the poor and illiterate towards “help yourself”. They cannot rely on the rich people, they will not be of much help, but the poor have to do it themselves. The second goal is to educate the upper classes towards society responsibility, solidarity and compassion. The two groups have essentially different goals to achieve, leading finally of course together. We have to emphasize education of women, that is a very important issue, women are the most important and most valuable members of society, they deserve all consumable support.”

Plenary Session 1

The Many Wonders of Science



Chair:

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Bruce Alberts, Former President, National Academy of Sciences and Editor-in-Chief, *Science Magazine* (USA)

Mostafa El-Sayed, Julius Brown Chair and Director, Laser Dynamics Laboratory, Georgia Tech (USA)

Hannelore Daniel, Full Professor, Molecular Nutrition Unit, Technische Universität München (Germany)



Bruce Alberts, “In summary, where are biology and medicine going? We now know that the chemistry of life is incredibly complex, the most sophisticated chemistry known. Many of the most interesting attributes of life are due to emergent properties. Properties that stem from very complicated networks of chemical interactions, whose consequences cannot be deciphered from the details of a few individual parts alone. Some cannot work with that complexity, so we need innovative new methods and approaches before we can claim to “understand “even the simplest living cells.”



Mostafa El-Sayed, “So why does making material having Nanometer size especially interesting? Why does it give us new material on the Nanoscale? Well as the size of any material decreases to 1-100 nanometer (nm), different materials of course have different scales. The property completely changes and becomes a new material. If you cut the piece of wood or the piece of plastic into small pieces, each of them into Nanometer, it will have completely different properties, has nothing to do with microscopic material that you have. That is an easy way, rather than digging the mountain looking for new materials. Why between 1-100 nm is very characteristic important number. That is due to the fact that the electron in every material has a characteristic length scale that determines its property, its color, its conductivity, its everything.”



Hannelore Daniel, “The whole story of nutrition, “with or without a happy ending, cannot be told yet because it is still unfolding. Week by week, year by year, and decade by decade, new clues are coming to light in research labs of the world. It promises to be more thrilling a decade from now. Nutrition is at the threshold of new and revolutionary developments, and its potentialities for the improvement of health are vast, said Roger Williams, 50 years ago, and I can tell you it still holds true. It has been so bearing to be in science related to food, diet and health for the last 10, 15, 20 years. I would love to see many more young scientists step in and study this wonderful interplay of rather static genome with the goods here and the building blocks there.”

Track 1

EU-Egypt Science, Technology and Innovation Cooperation

Co-organized with Research Development and Innovation Programme-RDI and EU Year of Science

**Chair:**

Abdelhamid El-Zoheiry, Coordinator, the EU Cooperation and Executive Director, the RDI Programme, Ministry of Scientific Research (**Egypt**)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (**Egypt**)

Abdelhamid El-Zoheiry, Coordinator, the EU Cooperation and Executive Director, the RDI Programme, Ministry of Scientific Research (**Egypt**)

Roundtable Discussion on EU-Egypt STI Cooperation:

Maged El-Sherbiny, President, Academy of Scientific Research and Technology (**Egypt**)

Sherif Fakhry, Executive Director, the Science and Technology Development Fund (**Egypt**)

Georges Papageorgiou, Minister Counsellor, Science, Technology and Innovation (**Delegation of the European Union to Egypt**)

Michael Harms, Director, DAAD in Egypt (**Germany**)



Abdelhamid El-Zoheiry, “I believe Egypt has a long-standing cooperation with the European Union (EU); let alone long-standing history of cultural cooperation; but when it comes to scientific cooperation, the milestone here is the Science Technology Agreement that was signed in 2005. Through this Agreement we are more actively cooperating with the EU. When we say EU here it means the European Union as union, but of course we have also a long-standing cooperation with several EU Member States, among which I would like to highlight our cooperation with Germany; the DAAD Branch Office is in Cairo. I am also glad to state that Egypt was one of the first countries that DAAD opened an office in. We started in 2007, our science and technology cooperation with different international countries. We started in Germany during 2007, then moved to Japan in 2008, and then Italy in 2009, France 2010, USA 2011; and currently we are in the year of Science and Innovation Cooperation with EU as a whole.”



Georges Papageorgiou, “The EU is presenting a big program called “Framework Program”, where we fund collaborative projects at the European level. This program, which is a huge one around 52 billion Euros for 7 years, around 8-10 billion Euros per year, is that all projects are open to all known European partners and participants.”



Sherif Fakhry, “Egypt-EU Cooperation is already existing before this year because of the bilateral cooperation programs in the research funding and movement of scientists between Europe and Egypt. We have several cooperation programs. We are trying to benefit from this program because it gives opportunity of exchange knowledge between researchers and providing of facilities in our country. In Europe there are some facilities which are not available in Egypt, in some cases. At the same time, the reverse applies, for example if we are talking about solar energy, the best area to work on this is Egypt. Egypt is one of the best places to do this work.”



Maged El-Sherbiny, “The benefit that come on Egypt from this cooperation highlighted by some projects like the big project concern the solar power with Italy, the Egypt-Japan University of Science and Technology (E-JUST), the Italian University, the program that we do with the Germany University. I believe that having a program with the EU Countries provide many opportunities to our researchers given that we are going to the new era of horizon 2020. Worth of billion euro out of the European commission is great opportunity for developing much more strong relationship with European countries. There is initiative for the mediterranean, initiative for applying the platform for the clinical trials. There a lot of opportunities that are going to be there and these opportunities will lead to many changes in the near future.”



Micheal Harms, “It is very good opportunity to pin point to the fact that the community in Germany have a lot of readiness to work with the Egyptian partners. When my people in my country tend to do a research they look at USA, India and possibly other European countries. Now possibly they have a quite number of disciplines. It is very much worth to cooperate with Egypt. Thinking of the medical field, for example, hepatitis C, Cancer research, urban planting, ...etc. if you are search in agriculture and planting , Egypt is very good for research in these fields. There is a lot of potentials that we have found in Egypt. In Egypt we found that we have a very reliable scientists.”

Plenary Session 2

New Life Sciences: Understanding the Essentials of Life



Chair:

Malak Kotb, Professor, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati (USA)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Gilbert Omenn, Professor of Medicine, Genetics, and Public Health, University of Michigan (USA)

Huanming Yang, Director, Beijing Genomics Institute, Chinese Academy of Sciences and Director, Huada Genomics Research Center (China)



Gilbert Omenn, “Lots of opportunities exist for young people in the new field of Bioinformatics. All these advances generate a flow of data, that would add a premium on those who can organize, mind, model, and you can realize the complex datasets. It is a new discipline. Another view of these that may be overly-focused on the genes, because genes are not attributed in isolation. We must understand the relationship between genes and gene actions, and the other genomic factors. This means to categorize the public health sciences into statistical and epidemiological methods, nutrition and metabolism, lifestyle behaviors such as cigarette smoking, alcoholic drinking, exercise, physical activity; all kinds of exposure to microbes, chemicals and physical agents; the remaining are used for tests and medicines in diseases; policies, bioethics and utilization of genomic signatures and other molecular medical information; every discipline of public health is needed.”



Huanming Yang, “I would like to quote one of our colleague’s statements “We could never know the complete base sequence of human genome, or at least we have to wait for three hundred years”, this quote now is inaccurate. We have had it done together. Of course there is still an issue we would feel sorry to know is that the complete conventional sequencing is a slow and expensive process; more than 600 people in 6 countries, then it took 13 years and billion dollars just to complete a single genome sequence. Now the situation is quite different. In the Center (BGI) where I work, for example, we hold more than 100 human genome sequences per day. Until the end of the last year, we had already, together with our colleagues, delivered more than 600 sold Gigabytes bases, which is equivalent to 2000 human genome size. This is an opportunity, sequencing is a tool to understand the essentials of life. Genome sequencing has provided a starting point for everything, and ultimately, genome sequencing is the digital foundation for all other studies.”

Track 2

Partners in Research – Partners in Transformation: How can Life Sciences and International Cooperation in Research Support the Transformation Process in Egypt

Co-organized with the German Academic Exchange Program - DAAD



Chair:

Micheal Harms, Director, DAAD in Egypt (**Germany**)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (**Egypt**)

Mark Bücking, Spokesman, Fraunhofer Food Chain Management Alliance, Fraunhofer Institute for Molecular Biology and Applied Ecology IME-AE (**Germany**)

Emad Flear Aziz, Professor of physics, Freie Universitaet Berlin, Head of the Structure and Dynamics of Functional Materials in Solution Department, Helmholtz- Zentrum, Berlin-HZB (**Germany**)

Hannelore Daniel, Full Professor, Molecular Nutrition Unit, Technische Universität München (**Germany**)

Lamis Ragab, Professor of Pediatrics, Consultant of Medial Education, Faculty of Medicine, Cairo University (**Egypt**)



Mark Bücking, “Food chain management is essential to guarantee healthy and nutritious food, and involvement of all stakeholders, which means not only the farm, not only the processing, not only supermarkets but also us as consumers have to take part to guarantee a good food chain management. Food security, on the other hand, is existent to all people and all times; physical and economic assets to sufficient, safe and of course nutritious food; we learned how important this is to meet and guarantee needs and food preferences.”



Emad Flear Aziz, “With international collaboration and network which you have to initiate yourself, you do not require the assistance your professor, you can do it, and sometimes it is hard to find the way but if you are patient enough you can it. International collaboration and network, and know-how, once you achieve this, discover you start to work with different professors, different groups worldwide so you are obligated to catch up with the rapid development in research and technology, the world around you advances very fast and if you are connected with this scientific society you are forced to connect with all these people, and this will include your main contribution because once you start to provide your grants I would have a stronger chance to join my grant with others, this is what I call the feedback of the networking, you find the proper partner, you experience in knowledge, and you can go further for collaboration and grant.”



Hannelore Daniel, “The upper half of the Planet has completely different problems, and the goal here is to promote healthy eating; we have to reduce calorie density, we have to work on reducing the fats, sugar content to decrease calories. Increase micronutrient density, and make healthy choices at the supermarkets and restaurants, is the ultimate choice. So promote healthy eating for the elderly. We know that sensory senses are needed here. Also improve sensor quality of products. Increase micronutrient density. Improve nutrition in institutionalized elderly homes because their nutrition is not of best quality. Provide health promoting environments through alternatives. Provide incentives for healthy lifestyles and emphasize that exercise is necessary.”



Lamis Ragab, “Science is international, it has been and always will be because science research and communities of scholars naturally interact across borders, but acquiring knowledge in this globalized world has become complex, and although increasing globalization of technology is tremendous, involvement of developing countries in producing new technologies and innovations is almost negligible. Globalization processes are increasingly affecting higher education systems, but there is always the disadvantages, or the doubt, or the suspicion of a commercial aim when the academic operation involves both developing and developed countries.”

Plenary Session 3

Access to Food: Access to Life

Chair:

Magdy Madkour, Professor, Faculty of Agriculture, Ain Shams University (Egypt)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Joachim Von Braun, Director, Center for Development Research - ZEF (Germany)

Teunis Van Rheenen, Senior Research Fellow, International Food Policy Research Institute - IFPRI (USA)

Mittur Jagadish, Independent Biotechnology Consultant (India)



Joachim Von Braun, “In the past 8 years or so, we have seen this development in the world food prices. We have seen increase in trends, increase in volatility and spikes as well. Actually, it is extreme prices development. Volatility is defined as the deviation of price series from the mean, and the spike is defined as the extremes which happened in short periods of times. We have to distinguish three developments: requirement, difference and actions, because they have different consequences for economy and poor people. Increased volatility is bad for agricultural investment. Increased price trends is good for investments because people can expect continued increase. Increase in spikes can be bad for poor people as they cannot adjust their food consumption.”



Teunis Van Rheenen, “Some of the food security challenges are population growth and demographic changes, rising energy prices and biofuel expansion, limited natural resources and effect of climate change, and high and volatile food prices. These challenges are not particularly new. However, what is new are a few things: firstly, that they all more or less (the challenges) are emerging simultaneously. What is also new is the magnitude at which they are emerging, and the enormous complexity with which they are coming. It is almost impossible for everyone to solve these challenges individually. A real global approach is absolutely necessary if we would like to face the global food security challenges.”



Mittur Jagadish, “India is going through rapid changes. We have a trillion dollar economy, the fourth largest Purchasing Power Parity (PPP), the growing development rate is 8.9% in comparison with China. We have an abundance of wealthy people. We are a very young country. We are not an ancient country like Egypt, which possess a rich cultural heritage, but in terms of actual number of young people, I think we are probably a country of 6.1 million that seem to be in the age whom are increasing rapidly to contribute to the development of the world. India is blasting with agro-climatic zones. So we can grow multiple crops in multiple seasons, and we have the potential to become a major food basket, and we can go on and on.”

Track 3

Fostering Science and Technology in the Middle East and Africa

Co-organized with the Alliance for Peace-building
(Professor Robert Berg)

Chair:

Walter Truett Anderson, Co-Chair, World Academy Program on Climate Stability Governance (USA)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (Egypt)

Hebatallah Gamal, Senior Manager, International Partnerships Europe/Middle East/Africa, TechSoup Global Network (Poland)

Susantha Goonatilake, President, Royal Asiatic Society (Sri Lanka)

Alberto Zucconi, President, Istituto dell'Approccio Centrato sulla Persona-IACP (Italy)



Hebatallah Gamal, “The Internet has driven innovation in a whole new direction, a whole new path. One of the things I believe the Internet has done is the democratization of innovation, the preserve of technocratic elites where people enter a room, start thinking about an idea, innovate behind closed doors, while the rest of us, the average persons who most likely actually are going to interact with that technology were not allowed in that process at all. The Internet has opened that to an extent to where you do not even have to be just a participant, you can be a leader in the process of innovation, which I think is huge, and is important for all of us to be aware and to take part in.”



Susantha Goonatilake, “Synthetic Biology would redesign our genomes and create new life forms. The Human Connectome Project could offer a big picture of the neural structure of the human brain, opening the door to changes in the very apparatus through which we perceive the world. We could, in theory, change the windows for our physical perceptions. We would protect brainstem cells and rewire ourselves, so that we could switch one frame of biological knowing the world to another world. Brain cells in Petri dishes have been connected to robotic devices to carry out some human-like tasks with some sense of what is going in themselves.”



Alberto Zucconi, “Empowerment and society, if combined synergistically, the community with non-profit organizations, with business interested to promote value not only money; and finance can as well as non-profit governmental academia create a way to satisfy “the moral hunger”. This is a challenge that I hope not only conferenced but projected in the everyday life can be realized because the odds are not small, and the need for enthusiasm, I guess, is always growing. Let us hope to nurture all the needs in this changing world.”

Tuesday, 24 April 2012

Plenary Session 4

Science and Policy Serving Society

Chair:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

David McConnell, Professor of Genetics, Smurfit Institute of Genetics, Trinity College Dublin (Ireland)

Sherif Kandil, Professor of Material Science, the Institute of Graduate Studies and Research, Alexandria University (Egypt)

Sir Peter Lachmann, Emeritus Professor of Immunology, University of Cambridge (UK)

Abdallah Daar, Chief Scientist, Grand Challenges Canada; Professor of Public Health Sciences, University of Toronto (Canada)



David McConnell, “Ireland was fully engaged in science, especially during the period 1800-1922, when Ireland was part of the United Kingdom. The UK introduced universal primary education in the 1830s; there were 4 universities, a college of science, then we became independent. We actually have, as some of you will know, a great scientific tradition where some extraordinary scientists have been Irish or worked in Ireland including Robert Boyle, Kelvin, George Boole worked in Ireland for many years and won a Nobel prize.”



Sherif Kandil, “Yesterday and even before, the common word which we heard all the time was education; the experience I am going to share is on science education, it has been carried out during the Egyptian education reform program, which took place during the years 2005–2009, and I was involved in this project. This project emphasized on changing the policies of education, and worked directly with the Ministry of Education at the time of Dr. Yousry El-Gamal, and went through a lot of reforms. Good ideas, however good, they are no good unless you work hard on making them work, so we had a lot of work in manuals, and translating of fables, and training the teachers, and actually we have been involved with the Library of Alexandria in carrying out that in Alexandria and in other libraries in several parts, in Cairo and Menia.”



Sir Peter Lachmann, “Science can be defined as the endeavor to offer general explanations based on experimental and observational evidence for sets of particular phenomena. As experimental evidence accrues over time as techniques get better and science expands, these general explanations will also develop and change. Important to realize that science is essentially an aspiration; it aspires to offer general explanations rather than dogmatic explanations, it is in the words of David Hand a process rather than a product.”



Abdallah Daar, “Integrated innovation is not just scientific and technological innovation, but also social and business innovation. So most likely to obtain funding from us you put forward a project that includes all these things together, the idea being that we are funding research to solve problems, and we want research to have an impact on society as rapidly as possible. So you need to think about how to get technology out of the lab, and we also need you to think about the social context in which that product is going to be used.”

Health Stream: Panel A-1

Global Issues on Healthcare

Chair:

Farha Abd El-Aziz, Professor of Clinical Immunology and Pathology, Faculty of Medicine, Mansoura University (**Egypt**)

Rapporteur:

Rafik Nakhla, Vice-President, Human Resources and Administration, Projacs International (**Bahrain**)

Alastair Kent, Director, Genetic Alliance (**UK**)

Werner Christie, Former Norwegian Minister of Health (**Norway**)

Anatole Krattiger, Director, Global Challenges Division, World Intellectual Property Organization – WIPO (**Switzerland**)



Alastair Kent, “Health for All” now for many people, poor health is not a choice. I know we have arisen with some certain lifestyle diseases as Type II diabetes, obesity and diseases that are brought on due to the way by which we live. The vast majority of people, if given a choice, would not choose to be sick, they would like to be well. They want to have good health. The availability of the opportunities to make choices about health are influenced whether or not we avoid preventable diseases. The vast majority of diseases are still not preventable. They arise from genetic causes, directly from interaction between genes and environment, but despite that, the hope of good health is universal.”



Werner Christie, “The IT Future of Medicine is to analyze patients all the way down to their proteins and chemicals and their own personal DNA sequences. So it is not human genome, but personal genome. On the basis of this data, the physician will be able to use a computer to quickly suggest individual advice or therapy, that is the goal. Then you can choose which drugs or which health risks to address, and the consequences of lifestyle changes, recommendations for diets or rehabilitation, and this is the goal too.”



Anatole Krattiger, “The key challenge of calls of WIPO research, initially in this moment, is to build consortium, to get the first license going, to enhance and enrich the database. All that is in fact linear thinking, it seems somebody has something of value, would put it in database, somebody else comes and looks at it, then receives a license and goes and runs with it. We heard a lot in the last period about this tremendous wealth of database. Some people in the company said We have libraries, we have about 2000 libraries, we have data, but the scientists are no longer working on it. We really do not know what the data is, the quality of accessing files, but it is very big, and we do not really possess the human resources to look into that database and make it available for you. If you find the way, by all means do it by yourself. So the challenge is not how to find tremendous amount of data that is of poor quality in many cases, if not in most cases.”

Food and Agriculture Stream: Panel B-1

MDG 1: A Roadmap to Agricultural Development

Chair:

Salah Soliman, Professor, Faculty of Agriculture, Alexandria University (Egypt)

Rapporteur:

Sami El-Rakshy, Assistant Professor, Faculty of Agriculture, Alexandria University (Egypt)

Adel El-Beltagy, President, Governing Board, International Centre for Advanced Mediterranean Agronomic Studies-CIHEAM (Egypt)

Norman Uphoff, Professor, Cornell International Institute for Food, Agriculture and Development (USA)

Amir Kassam, Visiting Professor, School of Agriculture, Policy and Development, University of Reading (UK)



Adel El-Beltagy, “The world is on the edge, but human being has to think, and has to find the light in a very dark tunnel, and this light in the dark tunnel if we will not find, will be the end: misery, desertification, and the loss of human values who are living on this Earth. This light, surfaces from research, from science, from knowledge, and it varies in different fields. I am not going to go through all these fields, remote sensing, genomics, simulation models, information technology, artificial intelligence, renewable energy, Nano technology and bioprocesses and so forth, all this intervention of science could offer us better knowledge-based agriculture, or even sustainable bio-economy.”



Norman Uphoff, “The central strategy for agriculture improvement has been based on the successes of the Green Revolution, and we did achieve dramatic increases in cereal grain productivity in the 1960s, 1970s, and 1980s, but the acceleration in food production achieved with the Green Revolution strategies has ended, as the strategy itself is encountering diminishing terms, as all phenomena has the problem of diminishing the terms. I think we may observe this with the current research strategy, world per capita. Cereal production peaked in 1984, and total cereal production has been roughly stagnant since mid-1990s. We had some ups and downs, but in fact we made very little progress in recent decades.”



Amir Kassam, “The custodian nature of farming is not decided by the market, it is decided by man’s values. It is decided by nurturing responsibility, rather than responding always just to the market. We have reduced what we were doing with crop diversity and rotating, until around World War II. Then we had explosives, which were nitrates, and they certainly had to be allocated a new home, and agriculture was the new home. We had big motors at that time. Big motors also build big tractors. Something changed following World War II, and I believe that a number of things in the agriculture sector happened.”

Environment Stream: Panel C-1

Genomes, Metagenomes, and Microbiomes: New Life Sciences for a New Millennium

Co-organized with Cairo University (Professor Ramy Aziz)



Chair:

Ramy Aziz, Assistant Professor, Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University (**Egypt**)

Rapporteur:

Ahmed Attia, Vice Dean, Institute of Graduate Studies and Research (IGSR), University of Alexandria (**Egypt**)

Ramy Aziz, Assistant Professor, Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University (**Egypt**)

Jack Gilbert, Senior Environmental Microbiologist, Argonne National Laboratory (**USA**)

Hamza El-Dorry, Chair, Department of Biology, the American University in Cairo (**Egypt**)

Bas Dutilh, Associate Faculty Member, Radboud University Nijmegen Medical Center (**The Netherlands**)



Ramy Aziz, “Genes from mobile elements such as transposases, capsid proteins and structural proteins, are abundant in nature, and this may suggest an evolutionary advantage, evolutionary success then, but also we need to think of transposases, that used to be called generators of junk DNA. We need to think about them, give them a little bit more respect because these enzymes may be doing some other role that is very important to the cell. Then there is the gene of the enzyme that is responsible for diversifying our immune system the RAG (Recombination Activating Gene). This enzyme has evolved from the transposes, kind of adapted transposases. My point is summarized into two analyses. First, is to analyze mobile elements in metagenomes, looking at individual genes, find most of the abundant gene transposases, and a lot of bacterial and virus genes are there. Second to analyze phages in metagenomics.”



Jack Gilbert, “We are in the third golden age of microbiology, but also incredibly an exciting time for anybody who wants to study biology. Biology is really taking new leaps forward in its ability to interrogate this Planet we live on, and I am going to talk to you a little bit about the disparity in funding between astronomy and space exploration, and our own investigation of the Planet which we call home. As part of that, I have started basically placing Microbiome Project at the end of anything I am particularly interested in. So we start by Human Microbiome Project, and now we have Earth Microbiome project. I encourage anybody interested in bacteria and environment to try tissue microbiome project or the computer microbiome. Ways to survey environment because microbes exist everywhere around us.”



Hamza El-Dorry, “The outline and objective of our project is to establish a public Red Sea metagenomic database, and most probably it will be in the Earth Microbiome Project soon. Comprehensive description of the Red Sea Microbiome community through metagenomic approach, describing the metabolic pathways and physiological processes of the Red Sea microbial communities, novel biotechnological products such as enzymes, bioactive compound and anti-microbial agent, and establishing, this is most important, a world-recognized marine genomics search in the region.”



Bas Dutilh, “The Microbiome of the human body is very diverse and plays various roles, as emphasized at the beginning. They are known for their role in disease, bacteria making you sick. There are also numerous good bacteria, in fact, within our bodies. There are many bacteria that contribute to our health and give us substances we cannot synthesize ourselves. The bacteria in our gut can produce it for us, so it is also an important role for the human micro-biota in health. Due to this importance, several large-scale projects still focus on the micro-biota in humans. The two major ones from Europe and the United State are the MetaHIT project and Human Microbiome Project (HMP). Both have sequences of complete meta genomes, but also taxonomic analysis using 16S sequencing from different polycytes.”

Roundtable: Science and Policy Serving Society



From left: Mr. Masood, Prof. Chalita, Prof. El-Sherbiny and Mr. Hassan

Chair:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Philippe Deamarscaux, Chairman, The World Life Sciences Forum, BioVision (France)

Roundtable Discussion

Katia Chalita, President, ÁKBAR Produções Artísticas (Brazil)

Maged El-Sherbiny, President, Academy of Scientific Research and Technology (Egypt)

Mohamed Hassan, Co-Chair, IAP, the Global Network of Science Academies (Italy)



Philippe Deamarscaux, “We must concentrate on scientific and technological innovation, on the major challenges facing our society, and those affecting the poorest population should not be neglected. There are still 1.5 billion people in the world today who do not have access to drinking water. Even if the selected technology is sophisticated, implementation should be as simple as possible to enable it to benefit the greatest number of people. Developing new technologies, efficiency, cost and ecological impact must all be taken into account at the same time. Social marketing should be used when rolling out this technology, as well as use after sales services.”



Katia Chalita, “Knowledge and information that serve people immediately, is in most times overlooked; and for the society, this information can be an agent of transformation and improvement of lives. So if we have scientific community communicating to its peers, mass media communicating spectacular news, and the society needing practical science knowledge to its day-to-day problems, what do we propose? We propose that scientists, communication professionals and society hold their hands to build a strong and permanent bridge.”



Maged El-Sherbiny, “The commitment of the government, the commitment of the scientist and the society and the media, are all needed for an interaction between science and society. They are, from my point of view, the two sides of the same coin. We cannot separate between both of them. The government has a commitment, the government is in need to put the policy, needs to make the implementation, and then gain the benefit of improving the quality of life of people after this implementation is complete.”



Mohamed Hassan, “In any science, technology and innovation policy in a developing country, the main priority must be the training of a new generation of science and technology leaders, this is what we are lacking in many of our countries, leadership in science, technology and innovation, and this can only be done if we start to think seriously about training this new generation. It is important to know that we have critical challenges, and these challenges can only be addressed if we look at how we can apply and make use of cutting edge science and technology.”

Health Stream: Panel A-2

Fighting Infections: Vaccines in Focus

Chair:

Sir Peter Lachmann, Emeritus Professor of Immunology, University of Cambridge (UK)

Rapporteur:

Rafik Nakhla, Vice-President, Human Resources and Administration, Projacs International (Bahrain)

Philippe Kourilsky, Professor of Molecular Immunology, Collège de France (France)

Stephen Jarrett, Former Principal Adviser, UNICEF Supply Division (USA)

Malak Kotb, Professor, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati (USA)



Philippe Kourilsky, “Let us say that we face another problem in vaccines, and that is the mouse models are unpredictable in terms of human immunology. The number of vaccines that were effective in mice and were ineffective in humans are huge. Tens of vaccines for example were effective in mice for 15-20 years but still were unsuccessful in human at large, even creating some problems. So the idea now is that one should rather work on humans directly if possible. That requires taking measurements in order to find the immune-correlates of vaccines.”



Stephen Jarrett, “What I propose strongly is that we need an equity-focused strategy. Which needs to address societal factors, we need social norms behind these practices, behaviors; practices that impede access to services or create discrimination and deprivation. Services and systems that need to reach those who are most in need due to country barriers, and certainly the governance issues which are accountability, policy, legislative and budgetary, and I think we have to examine the complexity of an equity-focused strategy, as much as you examine the complexity of science behind the vaccine.”



Malak Kotb, “Better to understand, which better host factor we need to focus on. We realized that bacteria, in general, is amazing in understanding this. The only nature host for this bacteria is us. Bacteria has evolved so many specific things just through human enzymes or human immune system. It is amazing. So it has specific enzymes that break the human complex immune system. It possesses characteristics specific just for fibrinogen and fibronectin. It has also DNAase, to fight bacteria and break them down. It turns out that this bacteria, also produces a large variety of “super antigens” such as the two groups *Staphylococcus* and *Streptococcus aureus* group.”

Food and Agriculture Stream: Panel B-2

Towards Global Food Security: The 21st Century Challenge

Co-organized with the Norman Borlaug Institute for Global Food Security (Professor Malcolm Elliott) and BioMed Central

Chair:

Malcolm Elliott, Founding Director, the Norman Borlaug Institute for Global Food Security (UK)

Rapporteur:

Sami El-Rakshy, Assistant Professor, Faculty of Agriculture, Alexandria University (Egypt)

Nina Fedoroff, Evan Pugh Professor, Huck Institutes of the Life Sciences, Penn State University (USA)

Magdy Madkour, Professor, Faculty of Agriculture, Ain Shams University (Egypt)

Clive James, Chairman and Founder, ISAAA (Cayman Islands)



Nina Fedoroff, “Over the past half century, we have developed the knowledge and the technical toolkit to tackle these daunting challenges to expand food production in the face of a shifting climate and a growing population. The late 20th century witnessed a genetic revolution with the invention of recombinant DNA technology, the explosion of genome sequencing and the developing of the techniques for the introduction of individual genes into plants and animals. Today, it is possible to apply these techniques to modify plants and domestic animals, precisely through adding, removing or modifying genes to improve productivity, protect them from diseases, and improve their nutritional values.”



Magdy Madkour, “There are different scenarios for temperature change, most of them agree that global warming is taking place, and we are going to witness increases in temperature. Precipitation will change, some areas will become wetter, some will become even drier. We will face droughts combined with salinity. We have already a salinity problem in our soil, and some of our water as well. We are living actually in the arid parts of the world. The Arab region generally is classified as hyper-arid and arid. For the arid lands, the dry land comprise almost 41% of the global terrestrial areas. This percentage may increase leading to a large problem. This part of the land, almost have 34% of the inhabitants of the world living there.”



Clive James, “The most important pollutant in the world is poverty; pervasive poverty that pollutes the lives of a billion people, and the most important contribution that this technology can offer is a contribution to the alleviation of poverty. If you look at the four areas quickly between 1996 and 2010, the 15-year period, estimated that the productivity increased in terms of income to USD 578 billion. Forty percent of that is due to decrease in cost, and 60% due to increase in productivity, estimated around 275 million tons. If you have to produce 276 million tons with conventional technology, you would need 9.1 million hectares. So what we have here is the land-saving technology. The way forward is to increase productivity on 1.5 billion hectares of the land of crops we have today.”

Environment Stream: Panel C-2

Sustaining the Environment: Rights and Responsibilities

Chair:

Salah Hassouna, Professor, Institute of Graduate Studies and Research, Alexandria University (Egypt)

Rapporteur

Ahmed Attia, Vice Dean, Institute of Graduate Studies and Research, Alexandria University (Egypt)

Margaret Catley-Carlson, Chair, BOT, Crop Diversity Trust (Canada)

Klaus Ammann, Editor, New Biotechnology, University of Bern (Switzerland)

Hani El-Nokraschy, Vice Chairman, Supervisory Board, DESERTEC Foundation (Germany)

Fawzi Karajeh, Regional Coordinator, the Nile Valley and Sub-Saharan Regional Program, International Center for Agricultural Research in Dry Areas - ICARDA (Egypt)



Margaret Catley-Carlson, “When I fly out of Cairo and I see the Nile River disappear in the Delta, and in the Desert, it always gives me a very strange feeling that the Nile no longer reaches the Mediterranean except in a little bit of an outfall. There are seventy rivers around the world that do not reach the sea, or do not reach their previous outfall because of human use of that water, that is a very serious issue, because it means that the deltas, the ecological and the environment and the livelihoods of the delta system have been very much changed. There are quality and quantity problems that exist in Egypt. Egypt of course is unique in the water situation. Due to the population growth, the availability of water per person continues to decline even though we have the magnificent Nile flow almost all the way across Egypt. We have got the relations up and down now. As prosperity recedes we use more water; and as prosperity goes, more water is used.”



Klaus Ammann, “My concept of sustainable world is to have columns in agriculture, socio-economics and technology. That is another concept and it contains a lot of new innovative ideas. The Socio-Economic System (SES) is the dialogue including new creative capitalism. We need new ideas, we need desperately to change our economic system. It has been shown that the banks are not the only solution for everything. They also need to change. How can we overcome this kind of inertia and this kind of laziness in thinking, and lack of innovation.”



Hani El-Nokraschy, “In the MENA countries, they are still using a lot of oil to produce electricity, and they will continue to use it until 2030, but then it will be less and less. It is replaced mainly by concentrating solar power; but also the others: biomass, wind, hydro power are also used, and in addition 20% more for export, and 15% more for desalination. In 2050, we are aiming to have 85% renewables in the MENA region mainly from the Sun. Europe will have the same evolution, but in different terms. Numerous nuclear powers will be shut down by 2045, and the remaining will be from North Africa only, at least 17%.”



Fawzi Karajehm, “In Egypt, the average precipitation every year is about 0.7 cm^3 per hectare, the least amount a crop needs. The world crop requirements for a season is at least between 3 cm^3 and 12 cm^3 , the difference between the 0.7 which is an average and the demand which is about 6, 7, 8, 10 to 12 km^3 . The hectare comes from limited water resources that we have; and if we do not use that we will not have a good agricultural production system, which is known as dry land agriculture. Encarta’s task is a major one, because 40% of the world population live in these dry areas.”

Plenary Session 5

Biorobotics: Making the Best of Man and Machine I

Chair:

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Rapporteur:

Rafik Nakhla, Vice President, Human Resources and Administration, Projacs International (Bahrain)

Ronald Arkin, Regents’ Professor and Associate Dean, Research and Space Planning, Georgia Tech (USA)

Yoshihiko Nakamura, Professor, Department of Mechano-Informatics, University of Tokyo (Japan)

Edoardo Sinibaldi, Team leader, IIT Center for Micro Biorobotics (Italy)



Ronald Arkin, “I have been spending a lot of time dealing with the impact of robots on the future of mankind; much of it has to deal with the ethical issues associated with different potential applications of these systems. I could be talking about some of these issues, such as combating robots and robot soldiers, and a variety of different things where ethical issues are starting to come to the fore. Today, what I am talking about is military applications of the systems, and the ethical questions and issues surrounding them, and how they can potentially be addressed.”



Yoshihiko Nakamura, “I believe we possess this very convenient equipment in our brain where we understand humans very well. We can understand even animals the way we understand humans. So how can we use this very useful performance or gift to understand machines? If machines are butted in such a way humans can understand, then everybody, even children can communicate with machines or robots. So it is an appropriate human-machine interaction. Humanoid robotics is targeting to develop this technology to understand the humans and to establish the communication between machine and man. This is a huge challenge.”



Edoardo Sinibaldi, “Boron-Nitride NanoTube (BNNT) is another practical process that has been studied. It is a structural analogue of the most famous carbon nanotube; it presents much more improved chemical and physical properties. For instance, they are excellent piezoelectric properties, and very good compatibility with biological systems, and could use the particles in intercellular nanotransducers, nanovectors for drug delivery and also for regenerative Nano medicine.”

Track 4

The Mysteries of the Brain and the Secrets of Ageing



Chair:

Yehia Zaky, Head, Academic and Cultural Affairs Sector, Bibliotheca Alexandrina (Egypt)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (Egypt)

Richard Frackowiak, Head, Clinical Neurosciences Department, CHU Université de Lausanne (Switzerland)

José León-Carrión, Director, Human Neuropsychology Laboratory, Facultad de Psicología, University of Seville (Spain)



Richard Frackowiak, “Until now we still know little about how the brain works, so we are facing a serious difficulty: Where are we now? Let us just think about Alzheimer’s disease. A disease associated with age, “Neuro-degeneration” disease. For a while, pharmaceutical companies have been looking for treatments to deal with Alzheimer’s disease. They spend our money and we have to ask ourselves: Why? They did this also in treatment of the stroke 20 years ago, and the reasons are the same. When we look at the disease in the brain, and because we do not have a theory about how the brain works, the first abnormal act we see, we follow. We saw abnormal cholinergic neurons, so we produced anti-cholinesterase. However, they do not function very well, they have been sold, but do not work. Let me think, if I am an Amyloid. Amyloid is the cause of everything, so we have to get rid of amyloids and chelation and other things. The Amyloid disappears, but the brain does not improve. We are performing “lampus science”. We see something, and state this is the wrong thing, which is totally wrong.”



José León-Carrión, “Some genes have less expression after the age of 40 years, those have a major role, synaptic plasticity, vascular transportation and mitochondrial function. Genes that have damaged DNA resemble aging brains. DNA damage can reduce gene expression, invulnerable genes which are involved in learning, memory and neural survival, and thus initiating an aging process in the brain early on in life. These diseases affect DNA and affect our behavior as well. Loss of white matter increases after the sixth decade. The area of fronto-polar, promotes temporal association decrease between 12%-15%. The hippocampus and parts of amygdala decrease 20%-25%. The hippocampus is related to memory, and decreases in brain age, and the amygdala is related to motions and all these decrease as we age. Our memory and motions will be altered, and all of these changes reduce synaptic density.”

Plenary Session 6

Biorobotics: Making the Best of Man and Machine II



From left: Prof. Arkin, Prof. Sinibaldi, Prof. Serageldin, Prof. Nakamura, Prof. Warwick and Prof. Franceschini

Chair:

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Rapporteur:

Rafik Nakhla, Vice President, Human Resources and Administration, Projacs International (Bahrain)

Kevin Warwick, Professor of Cybernetics, School of Systems Engineering, University of Reading and **Irena Warwick (UK)**

Nicolas Franceschini, Director, Neurocybernetics Research, Centre National de la Recherche Scientifique - CNRS (France)



Kevin Warwick, “My main line of research is acquiring a direction or interface from the brain to wires, and then to robot hand. If we acquire a successful interface to transfer brain signals into wires, and pickup signals from hand, this will be great. We can replace an arm, we can replace a leg if the machines are functional. Above that, we are taking brain signals on wires, and once we obtain brain signals on wires we can clip-on to those wires and send those brain signals wherever we want.”



Nicolas Franceschini, “Biorobotics creates a salutary synergy between scientific disciplines addressed tightly to one another physiology, ethnology, ecology, optics, mechanics informatics, electronics, control theory, and this multifaceted science prevents narrow thinking, and fosters rational and critical thinking. So this is much in the spirit of the early scholars in Alexandria, and above all it is ideally suited to educate our young students.”

Evening Event

CEO Panel



From left: Dr. Fassotte, Dr. Hentschel, Dr. Serageldin, Mr. Martin and Dr. Kilama

Chair:

Ismail Serageldin, Director, Bibliotheca Alexandrina (**Egypt**)

Jacques-François Martin, President and CEO, Parteurop (**France**)

Christopher Hentschel, Former President and CEO, the Swiss Foundation Medicines for Malaria Venture - MMV (**Switzerland**)

John Kilama, Director, Kilama International Consulting Group (**USA**)

Christian Fassotte, VP Medical Affairs, Intercontinental Region Sanofi (**France**)



Ismail Serageldin, “I think we all agree that we have moved in a very impressive way globally. On average, life expectancy has increased dramatically in the last 40 years. I think we have also been reminded today that the gaps between the best and least levels of achievement have almost never been wider in history. It still remains a reminder that we cannot be proud about the achievements that have been attained; we have in fact thought beyond past models and invented new ones.”



Jacques-François Martin, “For a partnership to succeed you need a number of things. First, I think is the vision, and this is also very important for the private sector because you will be reluctant to invest if you do not have reasonable hope that you will be able to cover your cost over a certain period of time. If you are not certain that the prescribers go from the government to the medical doctors will in fact support your product, you will be very hesitant. So I think if you want to tackle diabetes seriously, we have to approach this issue globally, and make sure that all the efforts are being developed in a way which would optimize the corresponding investment.”



Christopher Hentschel, “I think it is essential when you talk about regulations in pharmaceutical industry to understand that it is one of contributors to the cost. You have to understand that the amount of data you have to achieve today to obtain stringent regulations to approve a drug is more than ever in history. The size of the clinical trials are larger, and it is more and more expensive. All are done obviously because you do not want to introduce a product to the market that is unsafe, with unsafe side effects. There is no risk strategy in research, so it is finding the right balance.”



John Kilama, “I believe that in the next 20 years the focus will be on Africa, where people will look to try to find business, and it is already beginning to happen; Why? In 2008, the GDP of Africa combined was USD 1.6 trillion, and the expectation is that by the year 2020 will be USD 1.4 trillion that would be spent on consumer goods. I think in the last 50 years or more, over 20 countries in Africa had a GDP 0.7%, and higher even much higher than when the Tiger of Asia was developing. Not only can you participate in the research development but you are very big consumers, and therefore I think the pharmaceutical companies need to realize that is the only way to expand, in terms of growth.”



Christian Fassotte, “Pharmaceutical companies are part of the network that should be able today to make advances in public health. Public health today tackles the medical needs that are huge. Secondly, we should together in a responsible way think in a sense of social responsibility, and also in the sense of actually tackling the topics on developing issues that make sense. Making sense does not mean only that the drugs are available on the market, registered according to the guidelines or the regulations, but more importantly make a difference to the patient, and in order to reach that they need to be affordable.”

Track 5

Atlas of Islamic World Science and Innovation Project: Egypt Case Study Report Launch

Co-organized with the Royal Society



From left: Prof. El-Sherbiny, Mr. Bond, Mr. Masood, Prof. Azzazy and Mr. Yahia

Chair:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (Egypt)

Michael Bond, Freelance Science Writer and Editor, and Consultant to the New Scientist Magazine (UK)

Maged El-Sherbiny, President, Academy of Scientific Research and Technology (Egypt)

Hassan Azzazy, Professor of Chemistry and Leader of Novel Diagnostics and Therapeutics, the American University in Cairo (Egypt)



Michael Bond, “ATLAS of Islamic World Science and Innovation Project, initiated 2009, by the Organization of the Islamic Conference (OIC) and Royal Society in London. The idea is to provide an overview of the state of science and innovation across the Islamic world via series of detailed reports, country by country. The project is sponsored by several partners of organizations including: Qatar Foundation, Islamic Development Bank, the International Development Center of Canada and British Council. The organizers select a group of countries representing the Islamic world in terms of economy, society, culture and scientific progress. These are Egypt, Indonesia, Jordan, Kazakhstan, Malaysia, Nigeria, Pakistan, Qatar, and Senegal. The Malaysia report has been published. Egypt Jordan, Pakistan and Qatar are emanated.”



Maged El-Sherbiny, “Critical thinking in schools is deteriorating, and we really have to do something about, and we will never feel the effect of that unless we invest now. We started recently what is called “the stem schools”, and the first school is in 6th October. We provided them with magnificent facilities, lots of equipment and a very good way of how to approach critical thinking. This has to be applied in the schools of 40 million we have. Egypt has 4.7 million students in schools; therefore, it is a big task.”



Hassan Azzazy, “Our students need to be encouraged to innovate. Do not be afraid, whoever innovates in Europe or USA is somebody like you, your age and with your education. You need to innovate and be strong about it. Move forward and “Push the Envelope” and try to innovate. The other function that they need to learn is “entrepreneurship”, meaning once we have developed innovation in the lab, we need to work keenly with people in the market, and business consultant, and lawyer consultant in order to develop this into prototype and introducing it to the market in the form of a company. This is where universities and research centers can play the ultimate role and become engaged in societies. We need to solve the problem of society, we need to solve the problem of unemployment, and we need to strengthen the Egyptian economy with the high-tech and innovation products.”

Wednesday, 25 April 2012

Plenary Session 7

Biotech: Waging War on Hunger

Chair:

Magdy Madkour, Professor, Faculty of Agriculture, Ain Shams University (Egypt)

Rapporteur:

Rafik Nakhla, Vice President, Human Resources and Administration, Projacs International (Bahrain)

Marc Van Montagu, President, European Federation of Biotechnology (Belgium)

Ingo Potrykus, Professor Emeritus, Institute of Plant Sciences of the ETH Zurich (Switzerland)



Marc Van Montagu, “The threats exist, we have these microorganisms that destroy our agriculture, we have plants that are not nutritious enough, we have so much starvation in the world, so much empty stomachs that are the basis of damage to our society to what mankind has done. So it is important that we apply science, we have to realize that we can do it, and we will do it. It is important to our planet that we do it now instead of in 50 years because by then we will have led to more and much more damages. So, it is our task if we know that we can improve environment to do it.”



Ingo Potrykus, “Rice is the major staple food for almost half mankind. It is fantastic storage for calories, but it is very poor in micronutrients. One of those micronutrients which it lacks is Provitamin A. So we started off to try to develop not Golden Rice but the rice containing Provitamin A, because we were concerned with the problem of vitamin A deficiency, which is a major public rice problem worldwide.”

Health Stream: Panel A-3

Breakthroughs in Life Sciences: Making a Difference in Society

Chair:

Rafik Nakhla, Vice President, Human Resources and Administration, Projacs International (Bahrain)

Mona Marei, Head, Tissue Engineering Laboratories, and Professor, Faculty of Dentistry, Alexandria University (Egypt)

Hassan Azzazy, Professor of Chemistry and Leader of Novel Diagnostics and Therapeutics, the American University in Cairo (Egypt)

Patrick Couvreur, Full Professor of Pharmacy, Paris-Sud University (France)

Moustapha Kassem, Director, Molecular Endocrinology Lab (KMEB), University Hospital of Odense (Denmark)



Mona Marei, “During the past decade, the field of regenerative medicine and tissue engineering was introduced. Now in this field, we have the promise of stem cell therapy, where we can isolate stem cell from the body seeded on the scaffold, return it to the patient to have what is known as “living tissue for patient”. The future is promising.”



Hassan Azzazy, “Current HCV testing in the market takes place in two stages. The first is antibody testing; secondly, HCV RNA testing. The reason we carry out antibody test is because it is cheaper, between EGP 22-40 but if the result is positive this is not conclusive that the patient is actively infected with the virus, then we need to carry out molecular testing in order to detect the presence of HCV RNA. If the result is negative, this does not necessarily mean that the patient does not have HCV because he maybe immuno-compromised or maybe recently infected and the immune system did not have enough time to develop antibodies. As mentioned, we have offered our HCV Nanogold solution that can detect HCV RNA. It costs around EGP 50, which is almost one-tenth the cost of the current technology.”



Patrick Couvreur, “Indeed if you summarized an anticancer drug in a Nano-device of around 100 nanometers, and if the encapsulation is well done, you will be able to protect the drug from degradation. If you are able to construct a nanotechnology which is in fact surrounded by specific ligands, able to recognize some receptors or some marker levels of cancer cells you will obtain an efficient targeting to our cancer tissues and cancer cells. In conclusion, I hope that I have convinced you that the field of nano-medicine has grown very fast and quite importantly. So, what are the future challenges? The future challenges are certainly to develop multifunctional nanodevice with high drug loading and without burst release to be more efficient.”



Moustapha Kassem, “Where do we stand regarding the use of stem cells in therapy? I would like to start by saying that currently there is no standard therapy using the stem cell for these chronic degenerative diseases. So all therapies that are carried out are kind of clinical trials, most of them phase 1 or phase 2 clinical trials. I know that there are some people who agree we can use the stem cells for treatment right now, but this is incorrect and usually there are numerous commercial organizations trying to tell the patients that they can treat them by using stem cells and usually we advise the patient to avoid these companies. Stem cell therapy should be carried out within academic institutions interested in clinic trials.”

Food and Agriculture Stream: Panel B-3

World's Seed Banks: Future Threats and Challenges

Co-organized with World Academy Program on Climate Stability Governance (Professor Walter Truett Anderson)



Chair:

Walter Truett Anderson, Co-Chair, World Academy Program on Climate Stability Governance (USA)

Rapporteur:

Sami El-Rakshy, Assistant Professor, Faculty of Agriculture, Alexandria University (Egypt)

Walter Truett Anderson, Co-Chair, World Academy Program on Climate Stability Governance (USA)

Jeffrey McNeely, Senior Science Advisor, International Union for the Conservation of Nature - IUCN (Switzerland)

Norman Uphoff, Professor, Cornell International Institute for Food, Agriculture and Development (USA)



Walter Truett Anderson, “For a long time, farmers would preserve seeds, then gradually it became institutionalized, and in practice some of the seeds turned from one trend to another, as agriculture became, in many cases, better. It became necessary in different places for societies to find why it should be institutional preservation of the fundamental seeds and what was once of local kind of procedure and non-institutional gradually turn into one. One part of impact of this was the practice of major countries in particular to send their females around the world, and grant them the secondary mission to go and get trees, and then bring back some seeds. Their outcome was the initiation of what became now large seed banks, the biggest one of all I believe is the Millennium Seed Bank in London, UK.”



Jeffrey McNeely, “This Seed Bank stores what is known as “Heirloom Varieties”. These varieties that farmers have developed themselves. They are not commercial varieties, they are the ones farmers have developed and made available for others. Here is a small survival seed bank, as you know as the world goes round, small seed banks in vacuum-packed envelopes grow their own food. So people do not worry about their endurance. In the Millennium Seed Bank (in KEW Gardian, and the UK is the host) what they are trying to do is to store samples of all wild plants. In 2009, they reached 10% and they continue growing. All of these seeds are for free, if somebody wants to have these seeds, he can have them; if someone wants to donate, they come for free.”



Norman Uphoff, “Conservation of native varieties is a very important issue and it is not just to provide gene for future improvement, these varieties are preserved for long periods of time. It contains many qualities that we could benefit from, but we have to look at the management. If it is managed improperly “unnaturally” as the conditions of today evolve, you cannot see these benefits, but the possibility exists. Our SRI is to make the use of native varieties, make them profitable for farmers and good for consumers.”

Environment Stream: Panel C-3

Education for Sustainable Development Beyond the Campus-EduCamp

Co-organized with Education for Sustainable Development Beyond the Campus-EduCamp Project

Chair:

Hani Sewilam, Academic Director, Department of Engineering Hydrology, RWTH Aachen University (**Germany**)

Rapporteur:

Ahmed Attia, Vice Dean, Institute of Graduate Studies and Research-IGSR, University of Alexandria (**Egypt**)

Hani Sewilam, Academic Director, Department of Engineering Hydrology, RWTH Aachen University (**Germany**)

Orla McCormack, Lecturer, Department of Education and Professional Studies, Faculty of Education and Health Sciences, University of Limerick (**Ireland**)

Suhita Osório-Peters, Scientific Coordinator, CEIFA ambiente, Lda (**Portugal**)

Marlene Mader, Regional Centre of Expertise on Education for Sustainable Development (RCE) Graz -Styria University of Graz (**Austria**)



Hani Sewilam, “From my point of view, there are two problems in Egypt that should be solved: education and slums in the country. I think if we solve the education problem in Egypt then this country will be very fast in reaching many other advanced countries or industrial countries in the near future. I will describe some of the education problems in Egypt, we have overcrowded classrooms, so we are talking about classrooms in a normal size like the ones known in Europe with a capacity of 70+ children in one class. I am talking about content, books that are full of text and information. I am also talking about teaching method which is quite boring. The teachers stand and explain all the time and the kids should memorize all what is in the book, to sit for an exam at the end. So these are some of the educational problems that we face in Egypt.”



Orla McCormack, “Teaching approaches that attempt to distance from teacher-centered didactic approach and try to place the student at the core of the learning process and I thought that their learning approaches were within the classrooms by the student, not the teacher; and most of the thinking is also by the student, therefore the teacher is the guide and the facilitator of learning rather than the source of knowledge in the classroom. A UNESCO report in 2010, identifies that there were five pillars of learning in terms of sustainable development. Learning to know in terms of respecting, understanding and searching for knowledge; learning re-do again in terms of active engagement within your community; learning to live together in terms of international, intercultural, intergenerational and cooperation and living in peace; learning to be on good terms with family, and community wellbeing, and also learning to transform oneself and society.”



Suhita Osório-Peters, “We understood that speaking about water, biodiversity, agriculture, as if they were separate issues, would not reflect the need of interdisciplinary and holistic approaches, so we discussed how can we do that, and we realized that Egyptian school curriculum provides good basic knowledge in many fields as mathematics, geography, history and more. However, it does not provide the utility of this knowledge to children, students and the community, is not feasible; so it was another challenge on how to make it useful and that people believe it is beneficial to work with these kits and with our activities. We have to work on values. We have to promote critical thinking. We have to apply mathematical approaches because the relation with people is a very complicated issue. We can communicate through words, pictures, films, and there are a lot of new possibilities but they are not available for school students. We have to work on how we could make it better.”



Marlene Mader, “Education for sustainable development should encourage learners to ask critical and reflective questions, to clarify values and to envision a more positive future. It is not only about the hope for a better future, it is also to gain the skills and the competences to act and to change. It is about thinking systemically, responding through applied learning, and also explore the dialectic between tradition and innovation. As we heard about the ancient Egyptians who knew how to live sustainably and I think we can learn a lot also from traditional knowledge and try to adapt it to our needs.”

Track 6

From Science to Business

Plenum 1

Fostering Innovation in Biotechnology

Co-organized with Global Tech Transfer Initiative - TTS Ltd
(Mr. Christian Suojanen)

Chair:

Christian Suojanen, Co-Chairman, TTS Ltd, and Director Life Sciences, Valor Management (Switzerland)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (Egypt)

Christian Suojanen, Co-Chairman, TTS Ltd, and Director Life Sciences, Valor Management (Switzerland)

Morris Berrie, Co-Chairman, TTS Ltd and Managing Director, Tech Investor Ltd (UK)

Christian Fassotte, VP Medical Affairs, Intercontinental Region Sanofi (France)



Christian Suojanen, “We are going to try to locate innovation in biotechnology from our own perspectives and to focus on changing paradigms and lessons learned. I think lessons learned is a good one because there is resistance in our sector to Science. There seems to be a real resistance to learn from the mistakes of others, unfortunately. More importantly, what are the key challenges and how can this be addressed. First, and I do not need to know the details but it is true in most places in the world is the absence of correct innovation Eco-System. Consider benchmarking implementing best practices, and learn from the mistakes of others.”



Morris Berrie, “Nothing is going to happen unless you have a solid foundation to build your science. Big farmers are not interested, venture Capitals will not invest if it is not built up. So what I am talking about is from the public financing perspective in Biotechnology. Now fostering or funding both contain what I am saying. What I am talking about here is that public finance really starts the whole process because without public money, academic research will not exist. Without Academic Research you cannot; in the world of Biotechnology; perform this on your own right. You simply cannot it is not possible. Just estimate the (loan) you require to prove your results, you need an Academic Institution, you need that facility.”



Christian Fassotte, “I am optimistic, and I think we are witnessing good times, we are in an exciting revolutionary period in R&D. There are a lot of opportunities for creativity and invention. We are refocusing on Science, which is basically our job, and our patients too. We focus on the Applied Science, science as a translation to human biology and human therapies. It is a complex job we have, and human diseases are complex as well. So we have to tackle different approaches to solve the complexity of the task we have. Open innovation is the key, as I tried to explain or to propose to you. Excellency in strategy and execution is also important. Sense of urgency is probably a mission needed and there are other many needs and those need, to be addressed as soon as possible.”

Plenary Session 8

Science Supercourse (SSC)

Chair:

Ronald LaPorte, Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh (USA)

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Noha Adly, Senior Consultant, Information Communication Technology Sector, Bibliotheca Alexandrina (Egypt)

Ronald LaPorte, Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh (USA)

Francois Sauer, Founder and CEO, Trans Am Group (USA)

Faina Linkov, Research Assistant Professor, University of Pittsburgh (USA)

Eugene Shubnikov, Research Scientist, Institute of Internal Medicine, Novosibirsk (Russia)

Nicolas Padilla, Professor, School of Nursing and Obstetrics, Celaya University of Guanajuato (Mexico)

Gilbert Omenn, Professor of Medicine, Genetics, and Public Health, University of Michigan (USA)

Magdy Nagi, Senior Consultant, Information Communication Technology Sector, Bibliotheca Alexandrina (Egypt)



Noha Adly, “The Science Supercourse is about a repository of thousand of lectures, and these lectures are basically PowerPoint lectures, but we have taken these lectures and we have messaged PowerPoint to offer easier capabilities. So you can have more added value you can use for your own use. Mainly it is available for free, anybody can use and download them. Currently, the Science Supercourse does have more than 167,000 lectures, in four areas, where we have started. In public health we have more than 44,000 lectures; in computer engineering there is more than 51,000 lectures; in agriculture we have more than 78,000 lectures; and environment we have more than 26,000 lectures.”



Ronald LaPorte, “Education is the most powerful weapon which can be used to change the world. We have an opportunity now with the Internet and cell phones to have incredible impact on science and education, and cost is basically obviously sustainable cost, and this is a phenomena that we never had in the history of mankind. We invite you to join us to be a part of this revolution of understanding, the revolution of education.”

SSC Discussion:



Gilbert Omenn, “I would like to seize this opportunity to stress the value added by the BA. A lot of materials are available on the Internet. It is something else when you have a system in which you are guided for efficient and effective access and in a user-friendly manner. The invitation to provide feedback and to work like a Wikipedia mechanism is real. The notion of building your own basket and facilities, compiling lectures and combination of PowerPoint graphics that we really found attractive and effective for explanation. Creating new lectures that capture your own ideas enhanced by using the Science Supercourse, I think is splendid.”



Eugene Shubnikov, “The Science Supercourse offers everybody in this auditorium to upload, after certain formalities, lectures by yourself or by your teachers. Or just lectures which you like and you would like to share with people around the world. I think this is a very good feeling if you share good knowledge with the world through SSC. I invite you to access the Website, it is easy, just go to the Website of the Library and you will find SSC, then you can contribute and inform others.”



Faina Linkov, “Our goal is to reach the unreachable, the homeless, other people, and in the past two years we realized that there was one region where the SSC is not being used and that is “Central Asia”. In the past two years, we have been working with countries of Central Asia Kazakhstan, Kyrgyzstan and several others, to bring Supercourse into that region. Part of that project is developing a scientific online open access journal which will be accessible to everybody. People from other disciplines will be able to finally publish their research, because so far they haven’t had the opportunity to do so.”



Francois Sauer, “I would like to stress that the Library creates a quantum leap in the management of knowledge, it is not an improvement, it is a quantum leap. As a consequence of the talent, they are able to concentrate in one single point an incredible amount of knowledge. Therefore, they create a completely different context for scientists to access that knowledge, and for teachers to benefit from that knowledge.”



Magdy Nagi, “The usage of the SSC electronic system is not as we have expected. We would like at least Egyptian students and researchers to participate in using this system, give us their comments, adding value to the system which is actually the evaluation, putting the metadata and perhaps suggestion of other lectures to be captured in SSC electronic system.”



Nicolas Padilla, “The key of Supercourse on epidemiology, the Internet and global health is the communication, collaboration and solidarity. If you apply these factors to SSC in the system of the Library of Alexandria, the SSC will be a great success globally.”



Ismail Serageldin, “The most powerful phenomena on the Internet in the past five or ten years has been the Social Connectivity Media, starting with the Facebook; the point that has been mentioned before about the “Friendship”. Friends, from here, I would like to invite everybody here today, I would like to ask you as a gift to yourself and others to go online, look up in SSC in the Bibliotheca Alexandrina System, and then write about it on Facebook. Everyone writes on Facebook, everyone connects with friends on Facebook. Please use Facebook, use Twitter and tell your friends.”

Food and Agriculture Stream: Panel B-4

The Art of Manipulating Genes

Chair:

Ingo Potrykus, Professor Emeritus, Institute of Plant Sciences of the ETH Zurich (Switzerland)

Rapporteur:

Sami El-Rakshy, Assistant Professor, Faculty of Agriculture, Alexandria University (Egypt)

Eric Huttner, General Manager, Diversity Arrays Technology (Australia)

Constantin Canavas, Prof. Dr.-Ing, Faculty Life Sciences, Hamburg University of Applied Sciences (Germany)

Marc Van Montagu, President, European Federation of Biotechnology (Belgium)



Eric Huttner, “Improved plant varieties are made of a combination of genes. It is important to understand that the value of the variety of the plants, their performance are made through a combination of these genes. It is also important to realize that breeding operates for the benefit of ranges of different stakeholders so the farmer wants the yield and wants profit, he wants to make money by growing the plants, and also wants a constant progress to raise the future. So all these parameters are critical to address. In the same time, the consumer of the product wants good quality food, the price they can afford, and we also need to make sustainability so we can have a suitable environment to operate in the future. Now to combine these genes you can use “classical” breeding and of course “genetic modifications” in many ways.”



Constantin Canavas, “It is a pity to have such impressive scientific technological achievements as those presented during the Conference, and at the same time so many conflicts at the interface between technoscience, life sciences and politics of society on the other hand. These conflicts arise on the background of uncertainties in scientific knowledge, uncertainties in assessment, impact of technological scientific developments and in the genemizing political decisions. Precisely, it is this interface that my presentation will focus on. My point of view is that of technology assessment, not of biotechnology and not of genetic engineering. Debates on genetically-modified plants, especially for food use, are characterized by contravention presentation assessments. Repeated arguments in introducing genetically-modified plants, for food use, especially in the developing countries, is the claim according to that developed countries need genetically-modified food to supply their populations. The other argument claims that food shortage is due to unequal distribution of existing food crops. The inaccurate results from the unequal possibilities of the dominant production and distribution system.”



Marc Van Montagu, “I believe you would like to hear what is the latest in genetic engineering, and where is the science heading to, and like always in science, it is very interesting how many things have emerged. Since the 1970s, we started agrobacterium technology, and unfortunately many groups did not work on agrobacterium, but it is fascinating how this bacteria makes certain program. This program sensing that you have a film pronto plant cell. At the attack moment, genes are reduced in bacteria then transfer can happen. How this transfer really happens, the details are not known. It is of course difficult to follow a single molecule. Molecular biology is interesting. What we have to know, and what we want to know if we perform genetic engineering with the agrobacterium is that you need to have hundreds and hundreds of transformants, and that you have to have an efficient transformation. That is why we cannot use the market genes because banning market genes in transformation makes most crops in the world unqualified for transformation because the efficiency of transforming the agrobacterium is extremely low.”

Environment Stream: Panel C-4

The Psychology of Climate Change

Co-organized with World Academy Program on Climate Stability Governance (Professor Walter Truett Anderson)

Chair:

Walter Truett Anderson, Co-Chair, World Academy Program on Climate Stability Governance (USA)

Rapporteur:

Ahmed Attia, Vice Dean, Institute of Graduate Studies and Research - IGSR, University of Alexandria (Egypt)

Alberto Zucconi, President, Istituto dell'Approccio Centrato sulla Persona-IACP (Italy)

Aftab Omer, President, Meridian University (USA)

Salah Soliman, Professor, Faculty of Agriculture, Alexandria University (Egypt)



Alberto Zucconi, "I would like to underline basic principles that are common to all living things. All the living organisms, human, animals and plants, have a fundamental survival mechanism. Self-awareness generates self-regulation. If you are a sunflower, a frog, a human, and you are healthy, you can develop your potentiality by having this fundamental mechanism. When this mechanism is impaired, a problem results. In psychotherapy, denial is a defense mechanism when a human being cannot face reality because anxiety and troubles are generated, this is then, but at a cost it becomes unaware of the threat, and this can be actually with consequences. Denial in literature is well-known as a defense mechanism that we use in a way not to face reality, so is a refusal to admit or recognize something, and typically drug addicts who deny they have problems, alcoholics and more."



Aftab Omer, "Whatever the type of learning that allows information to move into action, that learning will have to bring down this wall some way. What is this wall made of? One answer that sums up the different aspects is to imagine the wall as a wall of "identity" and here the term "identity" holds different dimensions, such as belief systems about ourselves, deep assumptions about the communities, the organizations, and the nations we are part of, and these core beliefs and deep assumptions give us our individual identity, and give us our collective identity, and somehow identity itself becomes a barrier to action. So, I know that cigarettes lead to lung cancer, but somehow my image of myself as a smoker and what it means, to be a person who smokes, somehow just that becomes a barrier to my taking the action to stop smoking."



Salah Soliman, "Speculated and other identified causes of climate changes prior to the Industrial Revolution before 1780; change in the Earth's orbit led to some climate change in the history of the universe, and on our planet as well. Change in the Sun intensity, volcanic eruptions, all of these could be a source of climate change, but they are not happening now, they did before man carried out what is currently being done. All volcanoes around the world that occurred on the planet can emit only 1/100 of carbon dioxide into the atmosphere as our human activity does right now; so we emit nearly 36 billion metric tons of carbon dioxide into the atmosphere. Should we punish the user of those things? If we are referring to coal, oil, cars, whatever, it is the user, not the items, which we should refer to."

Track 6

From Science to Business

Plenum 2

Marketing Science

Chair:

Joao Paes de Carvalho, Principal, BiznessBrazil (**Brazil**)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (**Egypt**)

Daniel Pagliano, Director, Latin American Federation of National Biotechnology Companies Association (**Uruguay**)



Daniel Pagliano, “These biotechnology companies are part of the society. They are not only working in labs and carrying out trials but also participating in sports. As in the example, this Company is one of the most Rhizobia Inoculant companies that we have, and they are in car and basketball competitions. So society is observing that the companies that are applying technology are friendly, they are co-partners in all activities performed. Heading for the medical area, MERCOSUR has now available broad-spectrum biotechnology. Biotechnology is part of the society.”

Plenary Session 9

Urban and Rural Development: Sustainability for All

Chair:

Yousry El-Gamal, Chairman and BOT, Egypt-Japan University of Science and Technology, and Former Minister of Education (**Egypt**)

Kanayo Nwanze, President, International Fund for Agricultural Development - IFAD (**Italy**)

Jeffrey McNeely, Senior Science Advisor, International Union for Conservation of Nature - IUCN (**Switzerland**)

Helmy Abouleish, Managing Director, SEKEM (**Egypt**)



Kanayo Nwanze, “In addition to improving rural economies, we must change the perception of farming so that youth stop trying to leave the farm and look for something more attractive elsewhere; must consider the farm as attractive as high tech, in fashion or industry. This means affording dignifying occupation. It is waged-generating work. As good as any other business, agriculture is an economic income generating activity. It is business. It is not just the end of the road for the poor. We must consider the impact of our work on the physical environment. Agriculture research successfully drove the first Green Revolution in Asia.”



Jeffrey McNeely, “So how are we going to green our cities? Here are a few suggestions, rising from what I am saying. First, we should mimic circular metabolism of nature. We are going to ensure a sustainable water supply. Produce food within the city. Energy efficient buildings are also very important; climate change and climate mitigation are major issues. Planting trees are important in urban planning and promoting resources efficiently. Behavior among the public, encourage city people to visit rural areas. People like to get out of the cities, they like to see nature and are inspired by nature. I think if we approach these steps and think about greening our cities, it will make cities more sustainable; the people who live in cities are happier.”



Helmy Abouleish, “What has been achieved? First of all, about 20,000 acres of desert land have been reclaimed in an organic way, without chemicals, without pesticides and they are organic certified. Today, 2000 people work in Sekem, from farming to final distribution centers. In our region and all of Egypt, 400 small-holder farmers produce organic products from Sekem and for others. They are all organic certified and they all have FIA-Trade certification, and they all receive a dignified income which enables them to live a dignified life. We have been able to sequester in our soils in the desert through organic farming and composting one million tons of CO2 in our soils. We could prove that on our fields in the desert, we use 20%-40% less water than the area of our conventional neighbors, where water as I said is one of the biggest problems Egypt faces today and in the future. Using less water for agriculture where 80% of all water of Egypt goes, I think is a major achievement. We can prove that we have continuously increasing yield in our field in the desert, and our costs every year decrease, and we have been able to contribute to reduce the pesticide usage all over Egypt nearly 90%. By the year 1991, in a joint project with the Ministry of Agriculture, we stopped airplane spraying of cotton all over Egypt.”

Track 6

From Science to Business

Plenum 3

Humanizing Science: Beyond Mere Profit

Chair:

Morris Berrie, Co-Chairman, TTS Ltd and Managing Director, Tech Investor Ltd (**UK**)

Rapporteur:

Mohammed Yahia, Editor, Nature Middle East (**Egypt**)

Claudio Carlone, Advisor, Italian Agency for Technology and Innovation (**Italy**)

Joao Paes de Carvalho, Principal, BiznessBrazil (**Brazil**)

Biljana Papazov, Dr. phil. nat., University of Bern (**Germany**)



Claudio Carlone, “How can Corporate Social Responsibility contribute to sustainable development? Through Environmental Protection, Human Rights, Education Development and Human Disaster Relief sometimes. Unfortunately, there are some disadvantages, because if partners with a bad reputation are chosen, this will affect the name of your organization and it could be that costs will be passed on to customers. Normally it does not happen but it could be because CSR has a cost in terms of choices, in terms of investments and in terms of many other issues. It could reduce economic efficiency and profit.”



Joao Paes de Carvalho, “We have, of course, a lot of recycling benefits as you know. In steel you have 97% reduction in the material induced, then you have to think about the whole chain from the iron ore mine to becoming steel; and that consumes energy, oil and another type of input. It is a very long chain that has to be rebuilt if you discard it and if that trust is you have to return to the mine. If you use it in the final form you can have it in a much more efficient way. Regarding energy, aluminum which is energy-intensive saves 95%, copper saves 85%, lead 60%, zinc 60% and glass 34%. These are inputs that you do not need in many countries. As in my country, most products of energy are hydrolytic, but in many countries it is oil or coal that are very pollutant.”



Biljana Papazov, “I think instead of asking the question: Why catastrophes happen? We should ask ourselves, why societal progress seems impossible? If we do not practice a questioning attitude, then the available knowledge will never be in accordance with the people concerned.”

Plenary Session 10

Reporting Session

Plenary Sessions and Health Stream:

Rafik Nakhla, Vice President, Human Resources and Administration, Projacs International (**Bahrain**)

TWAS.BVA.Nxt 2012 and Science Celebration Day:

Zoe Quan, Founder, Qingchu Thinking, LLC (**USA**)

Food and Agriculture Stream:

Sami El-Rakshy, Assistant Professor, Faculty of Agriculture, Alexandria University (**Egypt**)

Environment Stream:

Ahmed Attia, Vice Dean, Institute of Graduate Studies and Research-IGSR, University of Alexandria (**Egypt**)

Tracks:

Mohammed Yahia, Editor, Nature Middle East (**Egypt**)



Rafik Nakhla, “On the issue of vaccines, vaccines are a success because vaccines saved 2.5 million children annually. The crippling disease of polio is almost eradicated except in three countries: Afghanistan, Pakistan and Nigeria, that are still not declared free. India has declared eradication of polio recently. However, there are a few new vaccines that are online, and according to one of the lectures there is a bottleneck for vaccine development, it is the human trial, it is using large correlates of humans to test the vaccine which is faced in any drug assessment. The problem of vaccine is that you cannot correlate mice models to humans. What you get from the mouse as response cannot be extrapolating into humans, and you need to test it on humans.”



Zoe Quan, “The potential to apply new advances in science to improve health, nutrition, water and various benefits to society has grown dramatically. Advances in new research tools have dramatically increased our ability to observe and measure, yet we need to move tools on a greater scale to be able to expand. There is a new appreciation of complexity of life process. Things are now more complicated than we thought, and it is our critical role to simply be capable of understanding that. Information and emergent properties when observing the gathered information at different levels system. Approach offers greater context to look at interrelationship of how they work together or are related, and perhaps you can sort some through their complexity.”



Sami El-Rakshy, “The Millennium Development Goals that are identified by the international organizations were eight goals that agreed to achieve by the year 2015: end poverty and hunger, universal education, gender equality, child health, maternal health, combat HIV/AIDS, environmental sustainability and global partnership. The first goal: End Poverty and Hunger, sheds light that some countries achieved a progress in ending poverty and hunger by 2015. Others are not that advanced and still face problems. If we examine the main reasons of hunger we will observe that poor harvest and low yield, high food prices and economic crisis affect hunger and increase its level. Success of agricultural development was a key factor in progress of fighting poverty and hunger.”



Ahmed Attia, “Another track was “The Psychology of Climate Change”. The Psychology of Denial: Forms of Self-inflicted Blindness in the Anthropocene Era. Denial is a defense mechanism to suppress awareness of reality that generates anxiety. Denial is a significant refusal to learn facts, distort information, lying to friends and family, selective memory, wishful thinking and avoiding conversation. With the question: Who denies the climate change? Leading us to the fact that neither the public deny this fact they feel, nor the scientists deny the fact they know, only politicians do.”



Mohammed Yahia, “The fourth track was the Brain, specially the enigma of the brain. What do we know about the brain, how do we understand it? Mainly, it was looking at aging and aging problems. Can we stop, or at least slow down, these changes taking place? We understand the brain at the molecular level and on its behavioral level. The problem arises when we try to put these together and observe how they work. We have no idea. That makes the research for the cure of age-accumulated disease limited. When you are looking at Alzheimer’s disease, for example, you are completely blind, you look for anything abnormal, and approaching that, but you do not know if that is the correct approach or not.”

Plenary Session 11

Closing Session

Mohamed El-Faham, Director, Center for Special Studies and Programs, Bibliotheca Alexandrina (Egypt)

Keynote Address:

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)



Mohamed El-Faham, “We exceeded 2000 participants this time, 84% are new graduates, undergraduates and postgraduate students, 15% are faculty members academia paying fees, and 1% others. For the participants, as usual, 37% males and 63% females, 97% Egyptians and 3% non-Egyptians. For the speakers, we have 115 speakers from almost 30 countries, 82% males and 18% females. Some comparisons between BVA 2004 and 2012. Participants joined in 2004 with 900 unpaid participants; this year we reached more than twice our initiating total; and for the speakers they are a little bit less than before, and this is because we have squeezed the program and instead of four speakers we had three speakers per session. The Nobel laureates were three to five every time in 2004, and in 2012 is the first time we had video messages from two Nobel laureates and live video conference.”



Ismail Serageldin, “The ethics in the application of science are important, today they become more important because of the role of intellectual property rights and the legal environmental and social issues that arise. So these issues require regimes for the application of regulations to science and technology. From the patterned regime to the trade regime of the world must be, in my opinion science-based, evidenced-base. It is incorrect to have separations of perspectives because it leads to some indefensible activities. For example, the USA Government was leading a war against smoking, and at the same time another part of that Government joined international discussions bearing on trade and arguing that the developing countries should lower the taxes to allow the tobacco companies to sell in the name of free trade. There are some inconsistencies here because of different parts, one negating in economic agreement and one negotiating something based on public health.”

BioVision Alexandria 2012 Conference: BioFair

BioVision Alexandria 2012 Conference: BioFair

Alongside the Sixth Biennial International Conference “BioVision Alexandria 2012”, the Bibliotheca Alexandrina (BA) organized an Exhibition entitled *BioFair@BioVision Alexandria 2012*. The BioFair offered a unique platform for top biotechnology, agricultural, environmental, pharmaceutical and publishing companies to connect main research and business development executives. It was an excellent opportunity to present their programs to more than 2000 Egyptians, Arabs and other international students and academics from all over the world, either by direct contact in their booths, or in organized sessions that took place in the Exhibition meeting areas. The BioFair featured twenty-six booths of exhibitors from different disciplines who displayed their goods. These Exhibitors were: Research, Development and Innovation (RDI), EU Egypt Year of Science, San Giovanni, EGYPTAIR, British Council, Sanofi, The German Academic Exchange Service (DAAD), Egyptian Academy of Scientific Research and Technology (ASRT), Novo Nordisk, PHARCO Corporation, ELSEVIER, Sedico, World Health Organization (WHO), Springer, Food and Agriculture Organization (FAO), LYM & YESBU, World Bank (WB), Education for Sustainable Development beyond the Campus (EduCamp), BA Planetarium, BA Center for Special Studies and Programs (CSSP), BA Francophone Library, BioVision Alexandria Volunteers, BA Supercomputer, World Food Programme (WFP), BA Library Resources, and BA Depository Library.



PHARCO Corporation booth at BVA 2012 BioFair



The BA Library Resources booth at BVA 2012 BioFair



The BA Francophone booth at BVA 2012 BioFair



Food and Agriculture Organization (FAO) booth at BVA 2012 BioFair



EgyptAir booth at BVA 2012 BioFair



The German Academic Exchange Service (DAAD) booth at BVA 2012 BioFair



BA Depository Library booth at BVA 2012 BioFair

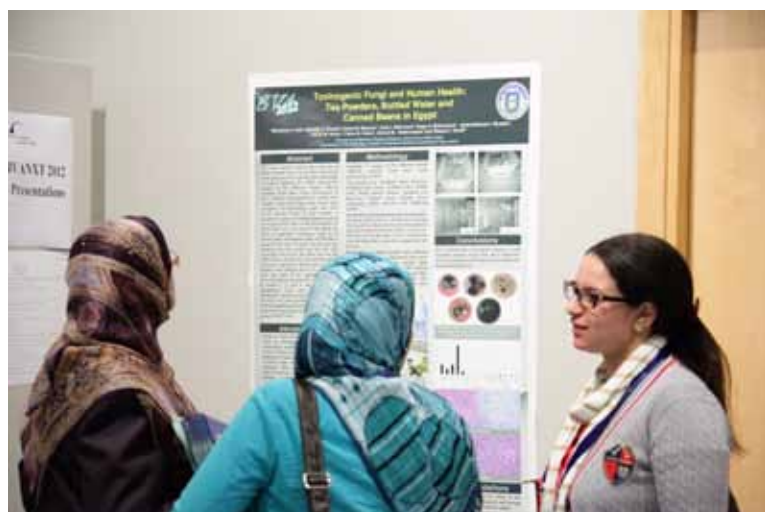
BioVision Alexandria 2012 Conference: Poster Session



BA CSSP booth at BVA 2012 BioFair

BioVisionAlexandria 2012 Conference: Poster Session

In an age when technology advancement is increasing and the scientific world is continuously changing, interaction between worldwide scientific communities is vital. For this purpose, the BioVisionAlexandria 2012 held a Poster Session which aimed at providing opportunities for scientists, especially young ones, to meet with life sciences professionals, and present their work in a professional atmosphere of discussion and interchange. The theme of the BioVisionAlexandria 2012 conference was New Life Sciences: Linking Science to Society, which aimed at addressing the role science can play in achieving a fair, equal and just society, not just through scientific research but also policy adjustment. Forty-nine posters were displayed representing the three main themes of the Conference: Health, Food and Agriculture, and Environment.



Poster Session in the East Exhibition Hall

TWAS/BioVisionAlexandria.Nxt 2012

*Organized in Partnership with
The Academy of Sciences for the Developing World (TWAS)*

21-22 April 2012

Bibliotheca Alexandrina
Alexandria, Egypt

TWAS/BioVisionAlexandria.Nxt 2012

Preface

No country will be developed unless it has a developed scientific research program, which requires innovation. More effort is needed to support outstanding young researchers in different branches of science; to help them understand how to transform marginal innovative activities into sustainable innovations that could improve livelihoods and contribute to inclusive development.

To address this issue, the TWAS/BioVisionAlexandria.Nxt 2012, which was held 21–22 April 2012, within the framework of the Sixth International Biennial Conference BioVisionAlexandria 2012, in Alexandria, Egypt, under the theme: “Scientific Innovation in the Developing World: From Theory to Practice”. It was intended to explore scientific innovation in the developing world, and highlight its importance for sustainable development. It also identified innovative solutions to overcome different problems in developing countries. Eighty-three outstanding young scientists were selected, after a careful selection process, from 148 applicants.

During the third BioVisionAlexandria.Nxt Conference organized in Alexandria, speakers discussed the status, obstacles and future of innovative scientific research in developing countries and its impact on the quality of human life, which helped give the participants a better understanding of how to transform marginal innovative activities into sustainable innovations that have wider impact on the society. They discussed the means of promoting creativity and innovation.

The importance and ethics of innovation was a dominant topic in this Conference. As innovation is one of the main drivers of competitive economy and a powerful tool for creating new jobs, a nation’s innovation status has become a subject of thorough evaluation.

All of the talks given by the eminent speakers led to a very important point, which is how innovation drives the economic growth. The proper management of technological innovation is what creates wealth for nations, companies and individuals. It provides the foundation for economic growth and promotes national and organizational competitiveness. Multinational corporations and all successful enterprises realize that business competitiveness is driven by innovation and is no longer a matter of luxury, but a matter of survival in an increasingly global, fiercely competitive marketplace. Moreover, the speakers also provided the researchers with the strategies needed to facilitate the creation and marketing of new innovative products and services in promising areas.

Alongside the Conference, the young researchers were offered the opportunity to meet Nobel Laureates, renowned speakers and other young scientists from all over the world. Moreover, the event featured “Coffee With” sessions, and the best 10 applicants were selected to present their innovative ideas and analyze their impact on the development

of societies. The young scientists were also invited to participate in BioVisionAlexandria 2012 Conference.

The Academy of Sciences for the Developing World (TWAS), the Islamic Development Bank (IDB), and the International Development Research Centre (IDRC), offered financial support to cover travel expenses for the accepted participants from developing countries.

For additional information on the TWAS/BVA.Nxt program, please visit: <http://www.bibalex.com/bva2012>

Saturday, 21 April 2012

Opening Session and Keynote Speeches

Chair:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Yehia Zaky, Head, Academic and Cultural Affairs Sector, Bibliotheca Alexandrina (Egypt)

Romain Murenzi, Executive Director, The Academy of Sciences for the Developing World - TWAS (Italy)



Yehia Zaky, “The event of TWAS/BVA.Nxt was organized under different themes. The first, the Library of Alexandria, hosted 99 young scientists from seven developing countries to discuss the problems scientists face when conducting research in their respective countries. It was held under the theme “Funding Research in the Developing World”. The second conference was held in 2010 under the theme “Publishing Scientific Papers in the Developing World” where 97 young researchers under the age of 35 years, and holding a Master or PhD degree were selected to participate in the event, from both developed and developing countries, to promote networking. This year the theme is “Scientific Innovation in the Developing World: From Theory to Practice”. It intends to explore scientific innovation in the developing world and highlight its importance for sustainable development, 90 young researchers, from 23 countries, were selected to participate in this event.”



Romain Murenzi, “We, in the developing countries, should be able to steer the table towards seriously what we really want. There are so many things we can do, but if we do not build the brain it will not work. One brain can make a huge difference. Excellence is the key. Working very hard but not only hard, working very smart; but putting excellence at the table, not politics. If you do that then you will make a huge difference. The young scientists in the country can make a huge difference. Those who have witnessed the nineties, examine the transition from the 1980s, then look at the 1990s, and look at the 2000s for the US. When I was a student everybody was directed towards Asia because of the electronics and other devices. In the 1990s, these IT companies, these youth came to the USA and produced innovations, three or four as Bill Gates, these individuals made a huge difference bridging the US from the 1990s to the 2000s, becoming again that giant in science, technology and innovation.”

Session 1

Status, Obstacles and Future of Innovative Scientific Research in Developing Countries

Chair:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Daniel Pagliano, Director, Latin American Federation of National Biotechnology Companies Association (Uruguay)

Maged El Sherbiny, President, The Academy of Scientific Research and Technology (Egypt)

Susantha Goonatilake, President, Royal Asiatic Society (Sri Lanka)



Daniel Pagliano, “Let me share with you some challenges that I consider essential terms to innovate in all these fields. One of the most important points is the evolution that we need from more academic to business-oriented approaches, mainly human resources and bioscience skills, not only to facilitate competitiveness at any level, but also to increase the number of biotechnology-oriented startups.”



Maged El Sherbiny, “Talking about our vision here in Egypt in terms of strategy for science and technology trying to develop the economy, I agree that it is very important to put science and technology in force to get the acknowledging development; that is why you will note the term economic in our vision, mission and also in our objective. We are working on what is called the “four Ps” concept (Perspective, Polemical, Permanent and Problematical); and we produce science, and technology produces papers, publications and patents and then prototypes, and eventually products that help the economy and help the society. We are capable of publishing, but rising is tough and takes a lot of considerable effort. To be able to do so, you will not only rely on yourself but also you have to work with international cooperation. That is the basic concept, we need to mount it up to reach the knowledge economy by performing this “four P” concept.”



Susantha Goonatilake, “The new technologies, such as IT, nanotech and nanotechnology, are more generic than earlier technologies. Their products would penetrate many fields in the economy, the workplace, the home and the body. For many developing countries, the new generic technologies have the scope for the society. I believe the new technology allows us, the world, to be very creative. I also believe imagination limits us, and I suggest that all of us, including myself, would imagine that we are living in the original creative Alexandria, I think we should open the gates and feel the moment.”

Session 2

How to Promote Creativity and Innovation



From left: Prof. Assadi, Prof. Quan and Prof. Aziz

Chair:

Ramy Aziz, Assistant Professor, Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University (**Egypt**)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (**USA**)

Abdelhamid El-Zoheiry, Coordinator, the EU Cooperation and Executive Director, the RDI Programme, Ministry of Scientific Research (**Egypt**)

Amir Assadi, Professor, University of Wisconsin, Madison (**USA**)

Ramy Aziz, Assistant Professor, Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University (**Egypt**)



Abdelhamid El-Zoheiry, “The term “Corporate Social Innovation” was introduced in 1999, by Harvard Business School. This argues that firms should use social issues as learning laboratories to identify unmet needs and to develop solutions that create new markets. One of the new applications of the Corporate Social Innovation by “Unilever”, which is a large company, is “Shakti Project”. This is a good example of Win-Win scenario. Unilever was not able to reach the very remote areas in India, because simply there are no distribution networks. So what did they do? They actually recruited the women as distributors. This was by providing funds for women for better living, and also providing opportunities for the products to reach these remote areas. This is Corporate Social Innovation and this is Win-Win.”



Amir Assadi, “We need to have policies to recognize this foreseen nature. This natural history is the Human Genomes. When you study how stem cells become recognized you can observe this program that exchanges this proton cell and produce new cells on the basis of intelligent behavior. They are very close. Hundreds of years of finding had created some of the finest programs where nothing could be changed until the first diversity comes. With diversity many different brands appear.”



Ramy Aziz, “Basically, there is a tight balance between innovation and between establishing something interesting. We should not go to the extremes, but the innovation is somewhere in-between, and there is no method for promoting innovation, but there are some good ways to help innovators grow and discover their potential. Again I will return to the question “Why innovation?”. Here are some of your answers: to make money, to advance one’s career, to save lives, help others, to solve problems. I cannot give you a final answer, but I can inform you that many established scientists, who are high in their careers, think that making a lot of money is very important; advancing one’s career is also important, but the key element in innovation is to have a passion for what you do. This might be an unscientific answer, but that is what they always say.”

Roundtable Discussion

Sharing Experiences

Moderator:

Representatives of BioVision Alexandria.Nxt 2012 participants

Speakers:

BioVision Alexandria Nxt.2012 Participants

Roundtable One



What are the basic challenges for the developing countries?

The first challenge is the lack of resources, and we mean funding and facilities to carry out researches. The second is the issue of brain drain, where professors and scientists move from the developing countries to other parts of the world, and leave us yearning for knowledge, ideas and mentorship. We also look for corruption, lack of democracy, and accountability. We touch on poor policies and implantation strategies in the developing countries. We do not have clear-cut policies that relate to science and technology.

Roundtable Two



What is the role of science, technology and innovation in meeting them? How could we put our ideas into practice?

We feel that the role of science technology and innovation is to address the problems that society faces. First of all, the role for people who are involved in science technology and innovation is to encourage, initiate and support collaboration between social and environmental scientists. Encourage scientists to carry out science relevant to policy and social problems. To put these ideas into practice it will be useful for us to improve our compilation of survey data and sharing of such data. Computer databases in sharing information generated by social scientists may be an approach we need to emphasize. The possible use of GIS across fields to address the problem is emerging more and more within the scientific arena. We have to stop looking at how we are going to identify, review, accept and reject scientific proposals. It seems as though every proposal is a good proposal.

Roundtable Three



How do you define Innovation?

Innovation is everything. In football training there is innovation, compare Barcelona and Rayal Madrid teams with African teams, what is the difference? I mean are they the same level? No. The same training? No. The environment may affect everything. When we discuss the innovation definition, each one has his own definition of innovation, but we realized that each one has an innovation idea in his work and this is important for me. I mean each one here has a different subject, different branch of science; and each one has an innovation in his field. So innovation for me has no limited definition, I mean it is not in science, it is an ongoing process.

Roundtable Four

Sunday, 22 April 2012

**What are the obstacles facing young researchers?**

Basically lack of facilities, and also lack of flexibility within the educational system. We are not allowed to ask questions, and to have freedom to actually answer them. This structure attitude is due to the rigidity in the system. The lack of collaborative opportunities. There is very little cooperation among international young researchers. Furthermore, the improper and selfish attitude of the mentors. When mentors become competitors, then they view you as a threat. Discrimination, and also psychological dependence created by the mentors. The dependency created by mentors makes you feel you cannot generate new ideas, new goals without their input.

Session 3

Importance and Ethics of Innovation**Chair:**

Sherif Kandil, Professor of Material Science, Institute of Graduate Studies and Research, Alexandria University (Egypt)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Hebatallah Gamal, Senior Manager, International Partnerships Europe/Middle East/Africa, TechSoup Global Network (Poland)

Hassan Azzazy, Professor of Chemistry and Leader of Novel Diagnostics and Therapeutics, the American University in Cairo (Egypt)

Tarek Khalil, President and Provost, Nile University (Egypt)



Hebatallah Gamal, “The Internet has transformed the way we, as normal average users, understand technology. It has basically shifted what has historically been a very distant relationship between an average user and technology, to a day-to-day interaction. Even if you do not identify yourself as techno, or even if you do not understand technology to a certain extent, everyone now has a very close relationship with technology, everyone who ever sits at a computer or searches for something online, or writes a simple email, or uploads a photo, has now broken a barrier that used to exist in the past.”



Hassan Azzazy, “Innovation is a very serious business, it is not a luxury. Innovation is not an option, innovation in my opinion is a necessity. It is a serious business, if you do not innovate, and innovate quickly, and bring this innovation to life as a country or as a community, you will be at the end or at the bottom of the pyramid with regard to everything. So what are the parameters that countries are being evaluated with regard to the innovation potential? First parameter is the quality of STEM education. What is STEM education? Science, Technology, Engineering and Mathematics. The American University in Cairo (AUC) embraces a project now to develop STEM education for school teachers to increase the quality of STEM education in Egypt. I believe we should have a national project to enhance STEM education in Egypt.”



Tarek Khalil, “If we look at the world today, we find that there are three distinct characteristics that characterize the world we live in. One of them, which is the most important in my opinion, is the rapid pace of technological innovation. The speed of change and the scale of change of technology has been unprecedented in history. The other issue which is very important is that the world has been highly competitive, that essentially appeared in the second half of the 20th century following World War II. The third characteristic is the creation of trade blocks which also emerged as a result of the change on the technology scene in the world with the emergence of satellite technology, transportation, communication, information technology, Internet and so on, that forced the change in the world to a great extent, and countries started focusing on creating trading blocks.”

Closing Session:

Strategies to Facilitate the Creation and Marketing of New Innovative Products and Services in Promising Areas

Moderator:

Ehsan Masood, Editor-in-Chief, Research Fortnight and Research Europe (UK)

Rapporteur:

Zoe Quan, Founder, Qingchu Thinking, LLC (USA)

Abdallah Daar, Chief Scientist, Grand Challenges Canada; Professor of Public Health Sciences, University of Toronto (Canada)

Sherif Kandil, Professor of Material Science, Institute of Graduate Studies and Research, Alexandria University (Egypt)

Zoe Quan, Founder Qingchu Thinking, LLC (USA)



Abdallah Daar, “I want to address a problem, the issue of introducing well known technology from the lab to the village in poor countries. For example, we had hepatitis B vaccine at the end of 1960s but it did not reach the developing countries 10 years ago because it was unaffordable. Then an Indian company developed the same vaccine using different types of methodology and lowered its price from USD 15 to 50 cents. Suddenly it was available to millions and this Company supplies about 40% of the hepatitis B vaccine supply all over the world.”



Sherif Kandil, “The first thing that comes to our mind is that we carry out research for the sake of research, we do publish for the sake of publishing and we are missing a lot. At times we work very hard to create or invent a problem, work very hard to solve that piteous problem, and then we become very happy when we reach the solution and at the end of the day nobody needs this, as one of the industrialists stated earlier, if any one gives me a research work which proves to be useful and gets me profit, I’ll be crazy to use it and that is true, so where is the link? We need to get mission-oriented research. The research needs to focus in specific directions.”



Zoe Quan, “The questions that science tend to ask; How does it work? what is this? Why does it work in that way?. Nowadays, there are other examples, because we became more cross disciplinary How might it be used? Why it works on that and not in other systems? For business, the first question is “So what?” Who can buy it?, Who can sell it? It is a different sort of thinking. Science is more contact independent. In science you are not interested in the beauty of the thing, just that it is right. The fundamentals are the main concern. Business on the other hand, is totally contact dependent because it ultimately seeks public performance that will be bought.”

“Coffee With” Sessions

“Coffee With” Sessions

The idea of the “Coffee With” Session was first carried out in BioVision Lyon 2009, and was implemented at the Bibliotheca Alexandrina for the first time in BVA 2010. During the four days of the BVA 2012 Conference, the TWAS/BVA.Nxt 2012 participants were invited to spend their coffee breaks conversing with some of the eminent BVA speakers in a spontaneous, laid back setting. The sessions were moderated by the TWAS-ARO young affiliates. Eminent Speakers; Joachim Von Braun, Director, the Center for Development Research (ZEF); Richard Ernst, Nobel Laureate, Chemistry 1991; Ingo Potrykus, Professor Emeritus, Institute of Plant Sciences of the ETH Zurich; and Kanayo Nwanze, President, The International Fund for Agricultural Development (IFAD) participated in the sessions.



Prof. Bruce Alberts, Editor-in-Chief, *Science Magazine*, with the TWAS/BVA.Nxt 2012 Participants during the “Coffee With” in the Multipurpose Hall.



Prof. Richard Ernst, Nobel Laureate, Chemistry 1991, with the TWAS/BVA.Nxt 2012 Participants during the “Coffee With” in the Multipurpose Hall.



Prof. Joachim Von Braun, Director, the Center for Development Research (ZEF); with the TWAS/BVA.Nxt 2012 Participants during the “Coffee With” in the Multipurpose Hall.

TWAS/BioVision Alexandria.Nxt 2012: Group Photo

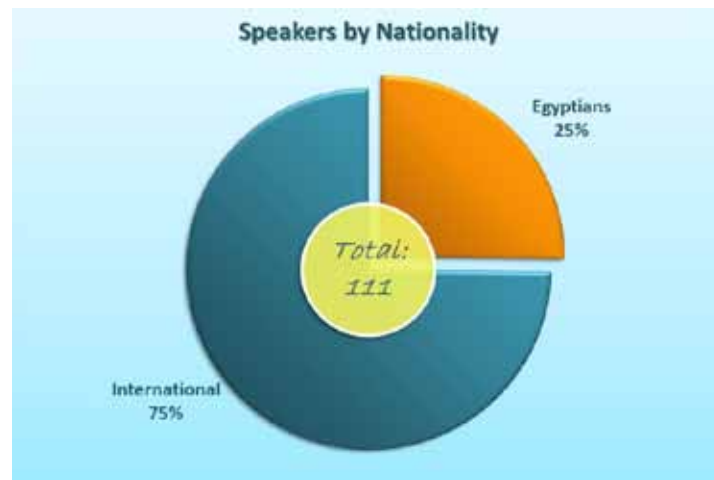
TWAS/BioVisionAlexandria.Nxt 2012: Group Photo

**Statistical Data of BioVisionAlexandria 2012 and
TWAS/BioVisionAlexandria.Nxt 2012**

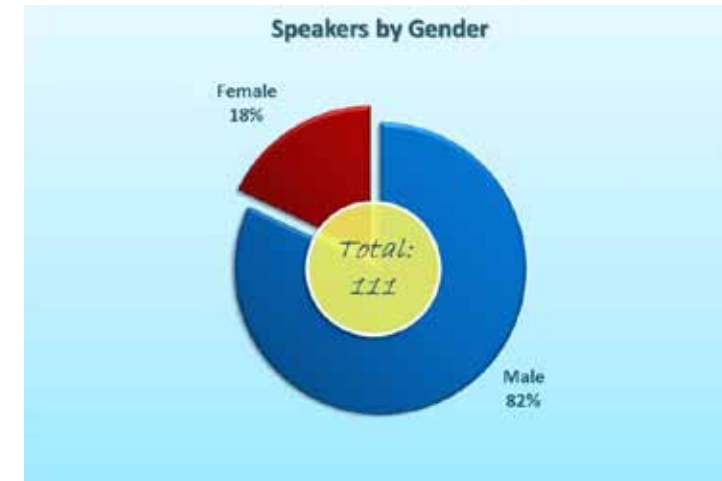
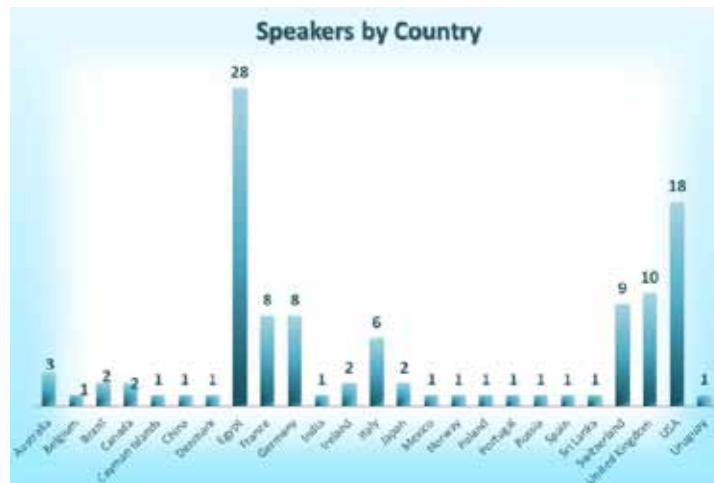
BioVision Alexandria 2012 Demographics

1. Speakers Demographics

Number of	Total
Nobel Laureate	4
Speakers	107

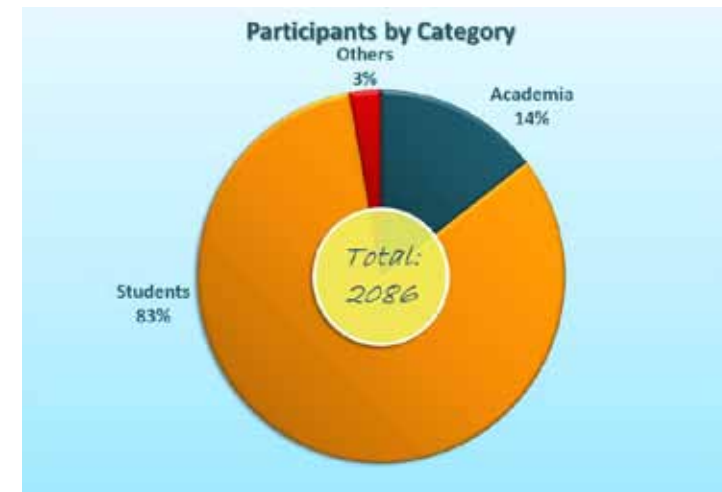


A total number of 4 Nobel Laureates and 107 distinguished speakers attended the Conference. It is worth mentioning that almost 75% of the speakers were non-Egyptians and that was to serve the main objective of the Conference.

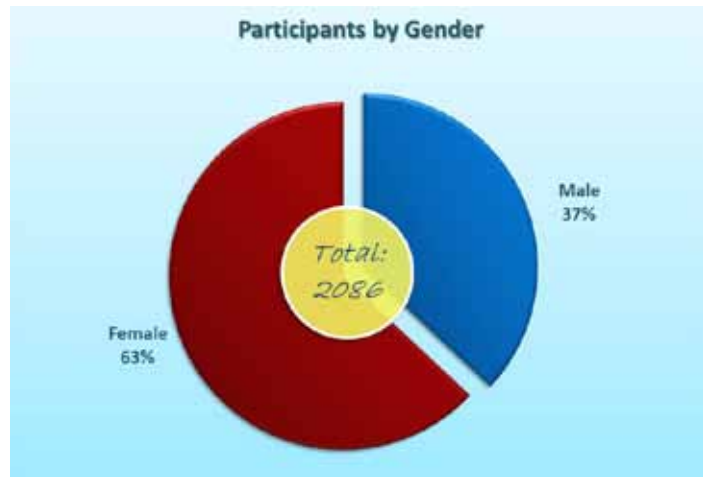


82% of the speakers were males, and 18% were females.

2. Participants Demographics

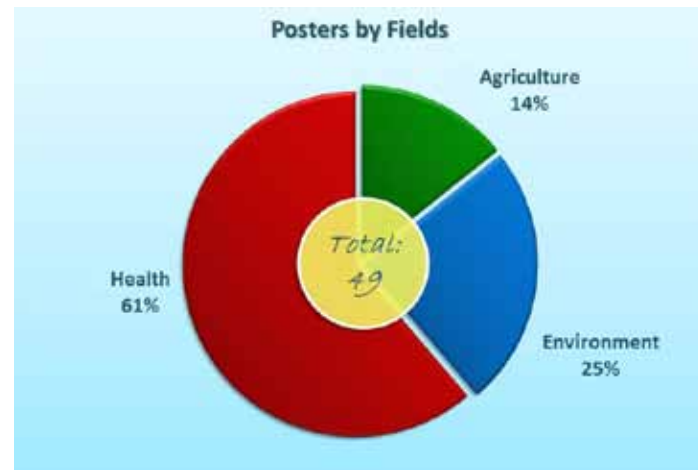


A total number of 2086 participants attended the Conference: 14% were Academia; 83% were students; and Others formed around 3%.

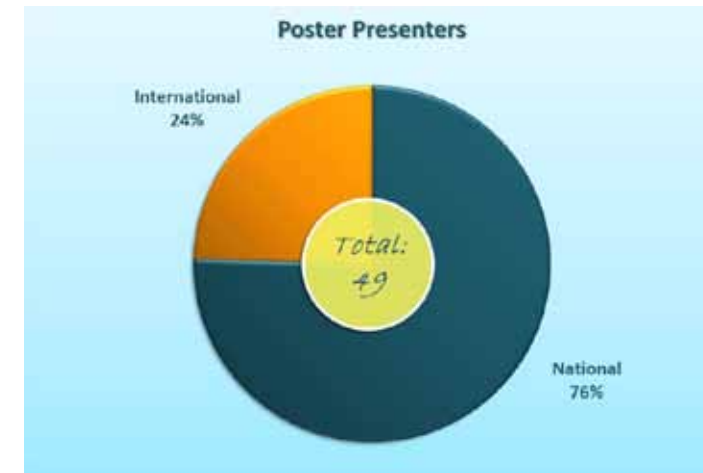


It is worth mentioning that female participants were 63%, and the male participants were 37%.

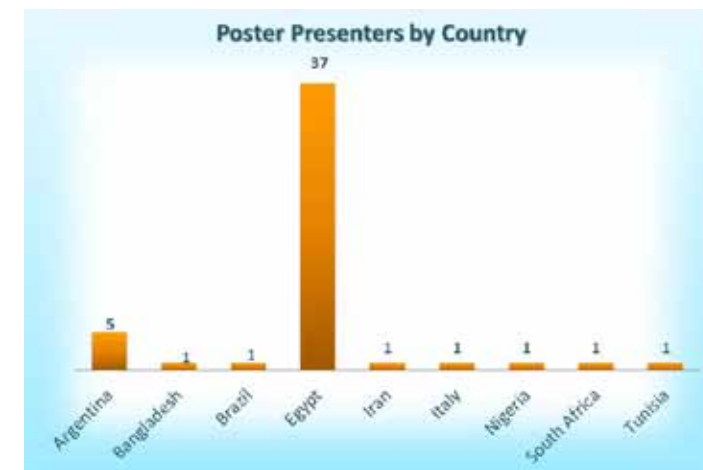
3. Poster Session Demographics



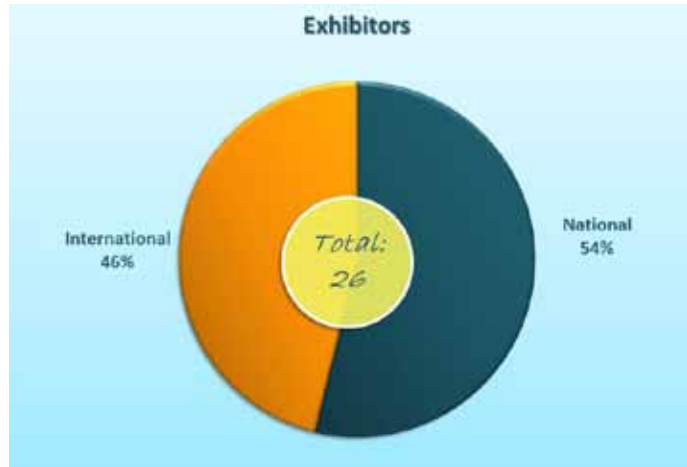
A total number of 49 researchers presented posters in 3 main fields: 30 in Health, 7 in Food and Agriculture, and 12 in Environment.



The poster presenters were from various countries: 37 national and 12 international presenters.



4. BioFair Demographics



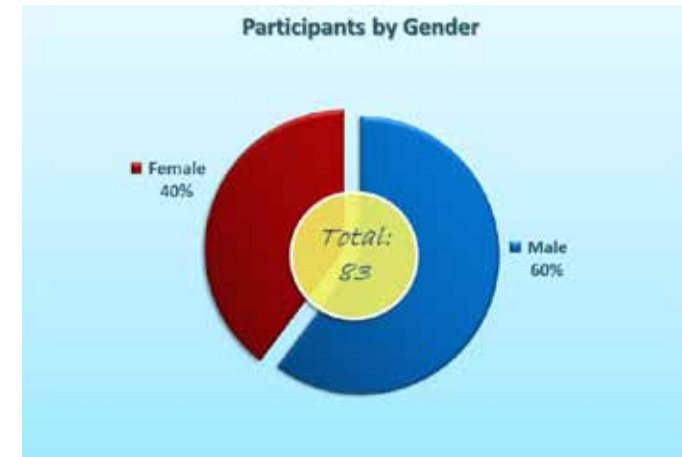
A total number of 26 exhibitors: 15 National and 11 International.

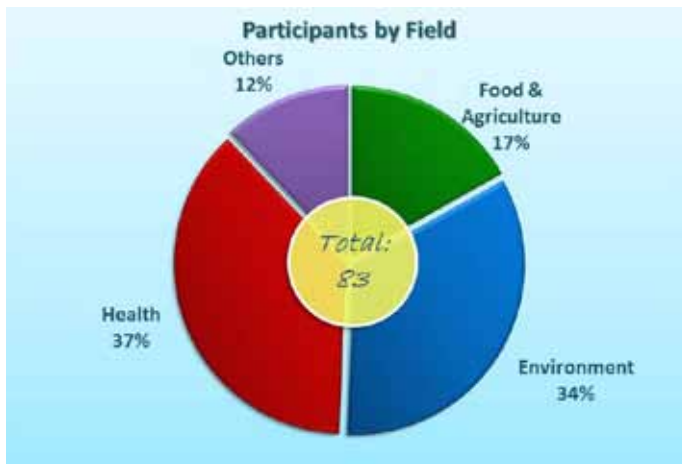
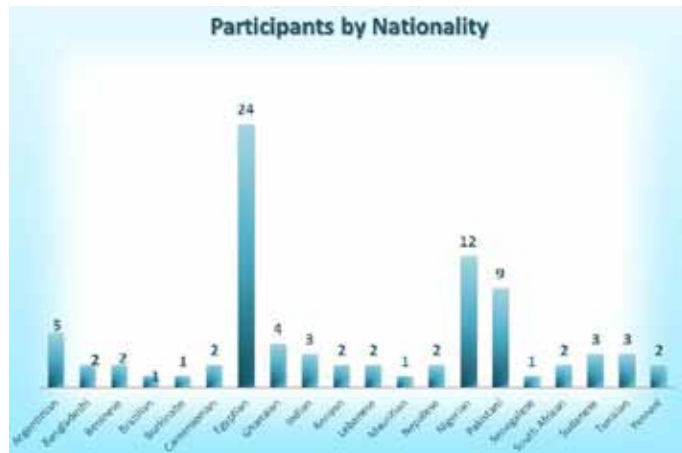
5. Partners and Sponsors Demographics



BVA 2012 was supported and sponsored by 43 organizations and individuals: 8 Partners, 10 Sponsors and 25 Supporters. Five out of the 25 Supporters were Conference Speakers, and VIPs who paid for their own flight ticket.

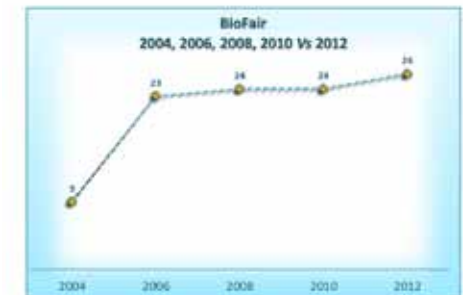
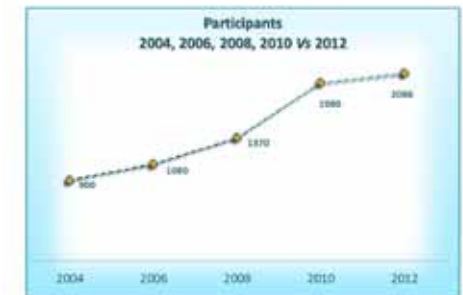
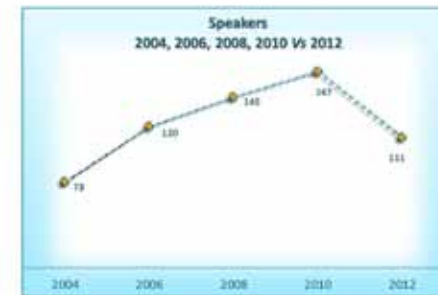
TWAS/BioVision Alexandria.Nxt 2012 Demographics





Comparison between BioVisionAlexandria 2004, 2006, 2008, 2010 and 2012 Conferences

Comparing BioVisionAlexandria (BVA) 2012 Conference with 2010, 2008, 2006 and 2004 Conferences, the remarkable progress in all aspects of the Conference is noticeable.



Number of BVA 2012 speakers is 111 *versus* 167 in BVA 2010 since BVA 2012 was for 3 days *versus* 4 days in the previous editions.

Number of participants in BVA 2012 is 2086 *versus* 1980 in BVA 2010.

Number of partners and sponsors in BVA 2012 is 24 *versus* 23 in BVA 2010.

Number of exhibitors in BVA 2012 is 26 *versus* 24 in BVA 2010.

What They said about BioVisionAlexandria 2012

BioVision Alexandria 2012 Speakers

“It is a privilege to be part of Biovision Alexandria. I will look forward to the next event with great pleasure.” —**Alastair Kent, Director, Genetic Alliance (UK)**

“It was an honor and a pleasure to be invited to such an interesting and skillfully organized conference and to such a splendid Institution. The Bibliotheca Alexandrina is an Institution of excellence that represents eloquently the past, the present and future of your wonderful country. All the people and nations of the world benefit from such an excellent Institution, a living monument to humankind knowledge and wisdom. Heartfelt thanks to the impeccable management; from the bottom to the top I could witness how your human capital is more than excellent.” —**Alberto Zucconi, President, Istituto dell’Approccio Centrato sulla Persona-IACP (Italy)**

“Please accept my sincere and grateful thanks for all your help and assistance which you so willingly provided me in relation to the BioVision 2012. I very much enjoyed attending the meeting and appreciated all the hard work you were doing to run the show efficiently.” —**Amir Kassem, Visiting Professor, School of Agriculture, Policy and Development, University of Reading (UK)**

“We thank you all for the hard work to make the meeting successful in rough times. God bless you all, bless the Library and bless Egypt.” —**Mostafa El-Sayed, Director, Laser Dynamics Laboratory, Georgia Tech (USA)**

“I wanted to thank you all again for your hard work on the organization and planning side. I thought the organization of the Conference was truly impressive, and the staff and volunteers were a pleasure to work and interact with.” —**Hebatallah Gamal, Senior Manager, International Partnerships Europe/Middle East/Africa, TechSoup Global Network (Poland)**

“Just wanted to express our thanks filled with gratitude for providing such a nice forum in the beautiful Alexandria for interaction. We enjoyed every minute of our stay in Alexandria. It was really exciting for us to be in Cairo as well and experience many wonderful impressions of the great history of your country. We have returned with excellent memories in all respects. Also, the sort of common challenges prevalent in Egypt, India and similar countries continue to trigger us to do more work for the benefit of many. Thanks very much again for inviting me to be part of BioVision Alexandria 2012.” —**Mittur Jagadish, Independent Biotechnology Consultant (India)**

“I am delighted to be here in this wonderful Institution, in the New Library of Alexandria. I respect enormously the huge culture and the scientific achievements of the people who have lived in this part of the world, and we can all remember Euclid, Archimedes and so forth. I see in that great tradition in Egypt an opportunity for you here in Egypt and for similar countries in other parts of the world to learn lessons.” —**David McConnell, Professor of Genetics, Smurfit Institute of Genetics, Trinity College Dublin (Ireland)**

“This place, the Bibliotheca Alexandrina, is a major international Institution. Its symbolism, its architecture, its leadership and its role here in Egypt, and most of the world internationally, is of great importance. So I have the pleasure to be here with you in this active event.” —**Gilbert Omenn, Professor of Medicine, Genetics, and Public Health, University of Michigan (USA)**

“I am honored to be here alongside these distinguished speakers. In particular, I would like to thank the organizers for hosting and sharing this important event in such a magnificent setting.” —**Romain Murenzi, Executive Director, the Academy of Sciences for the Developing World-TWAS (Italy)**

“It is nice to be here at BVA 2012. It is my first time. It is a special experience. As economist, I never read much about biogenomics and genetics. At BVA, I discovered that this is a very interesting area and I want to learn more about it.” —**Teunis Van Rheenen, Senior Research Staff, Director General’s Office, International Food Policy Research Institute-IFPRI (USA)**

TWAS/BioVisionAlexandria.Nxt 2012 Participants:

“I want to thank you and your organization for making the TWAS/BVA.Nxt fellows meeting and the BVA 2012 Conference a worthwhile one for me. I am also grateful for my selection, participation and the entire organization of the program. I will surely ensure that the impacts influence my subsequent and ongoing research works. I will also love to be a part of BioVisionAlexandria again.” —**Mayokun Okelola, Federal University of Technology, Minna (Nigeria)**

“Many congratulations for arranging such a wonderful conference by gathering people from different countries in a single platform, interacting participants with Noble Laureates and other eminent speakers. I have learned a lot from this and will never ever forget such memorable moments of Egypt. Thank you once again and keep continuing these efforts. Hopefully we will meet again in BioVisionAlexandria 2014.” —**Zeeshan Feroz, Associate Professor, Ziauddin University Karachi (Pakistan)**

BioVisionAlexandria 2012 Participants:

“Thank you for your efforts, you and your team. The Conference was extremely well organized, hopefully will see you next BioVisionAlexandria 2014 Conference.” —**Hadil Hisham (Egypt)**

“I would like to thank you for your great efforts during the whole Conference. It was a great honor to be with such an outstanding group of professors to discuss the important issues.” —**Hala Nada, R&D Director, EEPI (Egypt)**

“Thank you for your efforts and good organization. It is my pleasure to attend and be one of the participants.” —**Galila Habashy (Egypt)**

BioVisionAlexandria 2012: Guest Book

• It is always my pleasure to come to Alexandria and to the Bishopia. Alexandria, it is inspiring the work that he is doing for culture and science all over the world. I support its activity. Hope to participate and contribute again next time.

Frederic-Casimir
Center for Brain Injury Rehabilitation (CIBIR) - Lille, France
Leonor Casimir



Wait for me in BioVision 2024
not as a participant, but
definitely a

Speaker

waiting for your invitation 😊

Nesreen Goman Khater

2034 Nobel prize holder

Traî fier de contribuer,
le développement des organisations
à l'événement.
Quelle réussite !
Somme fier !

Florentin C.
Boukina Fatou

I am so happy to participate in this
Great Event and I hope someday to be
one of BioVision speaker. *الحمد لله*

Scream
Research



Dear Organizers,
Thanks so much
for your hard work
to get BioVision this
year to life. Thanks
to CSSP, thanks
Dr. Rham Khatib



* لبارة بقرانك على لنتي
لكم جزيل الشكر والتقدير
لانه بجد عمل مشرف
لكم وصرى
مفيدة لبيوتنا
وعلما بمرتكب كبريا لحوار
لنا كالتى
٢٠١٤/٤/٢٤

!شكرانك على تنظيمك لبارة بقرانك على لنتي

وكلنا ننتظره
في انتظاركم
في انتظاركم
في انتظاركم

Mohamed Wajdy Zidan
20-4
2014

Dear BioVision Alex. team,
From TWAS-NET to BioVision
to poster sessions and Biofair, we feel
like you bring the most amazing
things in the science world in our hands.
Thank you for all your care and
help - Thank you for smiling all the
time and bearing with us.

Maricam Rizko
Faculty of Pharmacy
American University

I just want
to thank everyone
for this great opportunity
to join this great conference
especially the CSSP Members.
Shada Sha Hoot
for you all...!!

Dear Guest book,
I just want to thank everybody especially the people
who helped me to get into the BV.
This is my GREATEST EXPERIENCE in 2012.
I really hope the memories last as long I'm living.
Meeting new people and discover very talented and ambitious souls
is a very great effect left within and kept in to my personality.
Thank you, thanks to the good people *BVA. *
Amr Eldars.

I am so glad to be here. That's the really meaning of science is to share it. Thanks
BVA

Biovision Alexandria 2012
Thanks for everything you all are awesome we had a wonderful time

PhD. Abeer Ahmed
Yemen

I feel more than honored to have been given the opportunity to be part of these events. Keep moving but please balance that with at least one hour of speaking from West Africa

Dr. In. Zolan main FANJONAN
Ph.D.

Among a Crowd of the Proud
+ humble yet Proud
You stand humbled midgeted
you proud wide eyed
learning from young and small
from speaker and sweeper alike

Thank you all for the effort
Ahmed Avon.

From: Amir H. Assadi (amir.h.assadi@gmail.com)
Dear Organizers, hosts & hostesses,
BIOVISION 2012 & TWAS.NEXT have been excellent events from all points of view.

I am grateful for your hospitality, friendliness & generosity. I admire the amazing sense of dedication & organization by everyone. It is rare that a conference of this size & complexity would run so smoothly. I would say you have done a magical job in organizing this meeting. I hope the great nation of Egypt, BA & all of you be safe & on the way to greatness that is well-d.

To all BioVision 2012 organizers and participants it gives me great pleasure to participate in such great event- organization, some that present in Japan and Germany. I met in a friendly atmosphere. I would like to thank you all for your success in this event. Hopfully to participate with you every year

Best Regards
Ahmed Hosen Hamdan
Postdoc Fellow in Max. Planck Institute for Biophysical Chemistry
Göttingen, Germany
24.4.2012

On the last day of this conference, I would like to thank all of those who made it possible during the time of the impossible. Great effort everyone. Thanks.

Nada Afifi
CSSP
25/4/2012
Zadaff

Biovision ♥
thnx 4 giving us this amazing experience
B.A u r really and honor for Egypt
we really enjoyed 😊

Bassant Haggdy Kamal
Student a Faculty
of Pharmacy ASU
20 years

As Always
BVA congress is very interesting and lively session of the young blood that we find in the sessions.
Viva the new Egypt

Joad

I agree with Joad and I thank you a lot for the opportunity of being among your energy and faith! Congratulations!
flw

I'd like to thank everyone
Give me the chance to join this great team of great conference & special thanks for CSSP members. Thank you all

Rehana Emam
Pana Emam
Sahar Camelat

♥ you all.

BioVisionAlexandria 2012 in the Press

”بيوفيجن الإسكندرية ٢٠١٢“: جسور إلى المجتمع

البحوث المتصلة بخلايا المنشأ Stem Cells، وخصوصاً تلك التي تأتي من الأجنة المستولدة من التلقيح الاصطناعي، ويصعب الاستماع في هذا الكلام من دون التفكير في الشيفوخة المتسارعة للمجتمع الياباني.

وحث الفرنسي يديده موش، مدير ”بيوفيجن ليون“ على تعزيز العلاقات بين ممثلي المجتمع وممثلي العلوم وتقنياتها، وركز روميان موريتزي، مدير ”تواس“، على البعد البشري في التعامل العلمي لسبل العالم الثالث، معتبراً الزيادة في أعداد أصحاب الكفاءات الأكاديمية مؤشراً أساسياً في إرتكاز التنمية على العلم، خصوصاً في دول العالم الثالث.

وتناول إسماعيل سراج الدين، مدير مكتبة الإسكندرية، موضوع ”الشورة الثالثة، Third Revolution“، وهي شورة المعلوماتية والاتصالات التي جاءت بعد ثورتَي الزراعة والصناعة، مع تركيز قوي على الآثار السلبية للبيئة التي خلفتها الصناعة ومجتمعها، خصوصاً أن الحضارة البشرية لا تزال تعيش تحت التهديد المخيف للتلوث والتصحر وتآكل جبال اللوج في القطبين المتجمدين، والارتفاع المكرد في حرارة الأرض، والزيادة المستمرة في هجوم البحر على الشواطئ، وتفاقم ظاهرة التصحر، وتغول ماضي الأحياء المتنازع، والحروب التي باتت تلوح في الأفق بأثر من شح المياه والصراع المتصاعد على مواردها، ثم سارت حوارات ”بيوفيجن ٢٠١٢“، متمركزة حول عناوين كبرى هي: الصحة، البيئة، الغذاء والزراعة، وتتسم هذه العناوين مع الشعار الرئيسي للمؤتمر: ”العلوم الجديدة للحياة: لتربط العلم مع المجتمع، New Life Sciences: Linking Science to Society“.

الإسكندرية - أحمد مغربي

ربما لم تلاحظ سوى فئة إن نقاشاً لم يبل من الحدة إندلج بين إحدى الإعلاميات وطالبة في كلية طب الإسكندرية، قبيل افتتاح مؤتمر ”بيوفيجن الإسكندرية ٢٠١٢“، Biovision Alexandria، عن الجنسية الأميركية للوالدة الراحلة لحازم صلاح أبو إسماعيل، زعيم حزب ”التنوير“ السلفي، أيدت الطالبة تحجراً في موقفها الرافض تصديق الإثباتات عن جنسية الراحلة، على رغم أدلة متطابقة من مصر وأميركا والسعودية، وزاد حزن النقاش أن الطب هو في القلب من علوم الحياة التي تأسس ”بيوفيجن“ لرصد تطوراتها، وملاحظة علاقاتها مع حياة الناس، أي رابط بين هذا التحجر وبين الألق الواسع للعقل في إنجازات مثل استنساخ النعجة، ووللي والتعرف إلى شيفرة الجينوم البشري وبحث خلايا المنشأ Stem Cell وغيرها؟



الموت اللذي مع تنالي الكلمات، أضحي السؤال، بل التناقض، أشد تسوة، إذ تحدث كرجي أومي، الوزير الياباني السابق، فآثار قضايا شائكة، باعتباره دعا إلى الاستمرار في الاتكال على طاقة العلاقات الذرية، على رغم مسأسة مفاعلات ”فوكوشيما“ في ٢٠١٠، ترى ماذا يحتاج هذا الياباني ليحتج على الذرة، بعد قنبلة هيروشيما وناغازاكي وانجار مفاعلات داتشي بعد التسونامي؟ بل لعله يصغر على أن يخفي العلم في تحديه النووي، على رغم تراكم الموت الذري ومأسسه، لم يفت أومي الإشارة إلى تصدير بلاده في

Al-Hayat, 4 May 2012 (Lebanon)

1900 مشارك في مؤتمر ”بيوفيجن“ لعلوم الحياة بالإسكندرية

الإسكندرية - أحمد مغربي

تظم مكتب الإسكندرية المؤتمر الدولي السادس بيوفيجن الإسكندرية 2012، في الفترة من 22 إلى 25 أبريل 2012.

يعد المؤتمر تحت شعار ”العلوم الحياتية الجديدة: الرابطة بين العلوم والمجتمع“، وسوف يناقش المؤتمر أهمية العلوم في تحقيق التنمية الشاملة نحو مجتمع أفضل.

ويشارك في المؤتمر هذا العام أكثر من 1900 مشارك من العلماء والحائزين على جائزة نوبل، وتحدثت عن الابتكارات والإبداعات العلمية.

ويقدم المؤتمر هذا العام العديد من المحطات التي سوف تتكلم مواضيع عدة مثل تعزيز العلوم في الشرق الأوسط، كما يحتفل المؤتمر بيوم العلم، وذلك يوم 23 أبريل.

ويشهد المؤتمر مشاركة ثلاثة من الحائزين على جائزة نوبل؛ وهم: ريتشارد أرنست (الكيمياء 1991)، وول سويتكا (الأب 1986)، وهارولد كروتو (الكيمياء 1996). ويضم المؤتمر أيضاً نحو 105 من المتحدثين البارزين؛ منهم: بروس بيرنيس، الرئيس السابق للأكاديمية الوطنية للعلوم ورئيس تحرير مجلة العلوم، والمختار مصطفى السيد، رئيس جوليوس براون ومدير معمل ديناميات الليزر ومعهد ريجا للتكنولوجيا.

ويعد مؤتمر ”بيوفيجن الإسكندرية“ مؤتمر دولي تنظمه مكتبة الإسكندرية بالتعاون مع المنتدى العالمي لعلوم الحياة ويقام هذا المؤتمر في الأجرام الزوجية، بالاشتراك مع المنتدى العالمي لعلوم الحياة الذي يعقد في مدينة ليون بفرنسا في الأجرام القرينة منذ عام 2004. وقد نجح المؤتمر منذ سنوات في جذب العديد من الحائزين على جائزة نوبل، والمتحدثين البارزين، والعلماء، ورجال السياسة، بالإضافة إلى عدد كبير من المشاركين من جميع أنحاء العالم.

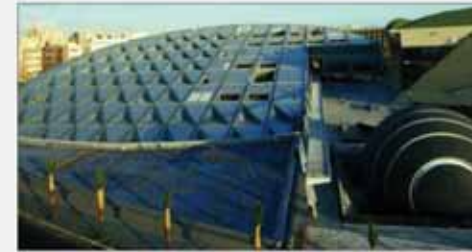
وسيقام على هامش المؤتمر معرض بعنوان ”BioVision 2012“، و الذي يقدم فرصة للعارضين لعرض منتجاتهم وخدماتهم للمشاركين في المؤتمر، والمتحدثين البارزين، ومن أبرز المشاركين في المعرض؛ البنك الدولي، ومنظمة الصحة العالمية، وأكاديمية العلوم للعلم الليبي، والبحث العلمي.

Al-Ahram Gate, 3 April 2012 (Egypt)

مكتبة الإسكندرية تستضيف المؤتمر السنوي لأكاديمية العلوم للعالم النامي

السنوي عن دعمها لحوالي ١٠ باحثين من مختلف الدول العربية لتقديم أبحاثهم ومشروعاتهم المتعلقة بالمياه، كذلك سيتم الاعلان عن الفائز بالجائزة الإقليمية.

كتب أشرف منير تستضيف مكتبة الاسكندرية يومى ٢٨ و ٢٩ من ديسمبر المقبل المؤتمر السنوي السابع لأكاديمية العلوم للعالم النامي، وسوف يقام على هامش المؤتمر ندوة يشارك فيها عدد من الخبراء البارزين في مجال الطاقة لمناقشة التحديات التي تواجه قطاع المياه، وكذلك الطاقة المتجددة والتحديات التي تواجه العالم النامي في ذلك الشأن.. ويعد هذا المؤتمر فرصة لإجراء المناقشات وتبادل الاقتراحات التي من المتوقع أن تطرح خلاله حول مستقبل أزمة المياه والطاقة النووية المتجددة في العالم العربي، ومن المنتظر أن تعلن الأكاديمية خلال مؤتمرها



مكتبة الإسكندرية

Al-Masaeya, 1 December 2011 (Kuwait)

الإسكندرية - جائلين منير

تنظم مكتبة الإسكندرية المؤتمر الدولي السادس ”بيوفيجن الإسكندرية 2012“، في الفترة من 22 إلى 25 أبريل 2012.

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Al-Youm Al-Sabéa, 3 April 2012 (Egypt)

علماء نوبل في مكتبة الاسكندرية

تنظم مكتبة الإسكندرية في الفترة من ٢٢ إلى ٢٥ أبريل المقبل مؤتمر بيوفيجن الإسكندرية ٢٠١٢ بمشاركة علماء وباحثين بارزين، من بينهم ثلاثة حاصلون على جوائز نوبل، وعدد من الطلاب والمهتمين بهذا المجال.

يقول حسام عبد القادر محرر أكتوبر إن المؤتمر سيشهد حضور كل من بول كروتيسين، الحاصل على جائزة نوبل في الكيمياء عام ١٩٩٥، وريتشارد أرنست، الحاصل على نوبل في الكيمياء عام ١٩٩١، وول سويتكا الحاصل على نوبل في الأدب عام ١٩٨٦.

ويقام المؤتمر هذا العام بعنوان ”العلوم الحياتية الجديدة: ربط العلم بالمجتمع“، بهدف مناقشة دور العلم في الوصول إلى مجتمع عادل ينعم بالساواة، وذلك من خلال وضع السياسات التي تخدم هذا الغرض، بالإضافة إلى تطورات البحث العلمي.

October, 4 December 2011 (Egypt)

BioVisionAlexandria 2012 on Facebook



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Conference Speakers/Supporters



Ingo Potrykus



Francois Sauer



Amir Kassam



Ehsan Masood



Constantin Canavas

BioVisionAlexandria 2012: Group Photo





BioVisionAlexandria 2014

April 2014

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