

BioVisionAlexandria 2012

"New Life Sciences: Linking Science to Society"

22-25 April 2012

1. About BioVisionAlexandria 2012

The Bibliotheca Alexandrina is organizing its Sixth International Biennial Conference, BioVisionAlexandria 2012, 22-25 April 2012, in Alexandria, Egypt.

Currently the 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. The theme of the upcoming BioVisionAlexandria Conference is *"New Life Sciences: Linking Science to Society"* which aims at addressing the role science can play in achieving a fair, equal and just society, not just through scientific research but also policy adjustment.

A vision for achieving health as a state of well-being, not just combating disease, is imperative especially for developing countries. Furthermore, human activities have taken a tremendous toll on the environment and have destroyed many elements of nature. Consequently, the impact this has on the quality of human life needs serious attention. Similarly, food and agriculture, especially with countries struggling to meet the first Millennium Development Goal of halving extreme hunger and poverty by the year 2015. Special emphasis will also be placed on those marginalized within society and what can the new life sciences do about that.

At the conference, we aim at gathering representatives and leaders in science, industry and society to identify and set the priorities needed to rebuild society and discuss how the policies of scientific research need to be revolutionized towards serving society, especially the less fortunate, and to transform the lives of those who truly need it. In general, to help society reach its full potential.

2. Program at a glance (attached)

The Program is oriented towards the advancement and progress of society through science

- **23 April 2012**

- Science Celebration Day**

- It will feature Nobel Laureates and renowned scientists who will talk about the beauty and wonder of science including nanotechnology, genomics, agricultural development.

- Nobel Session: Science's Quest for a Better Future

- Track: Research Development and Innovation Programme-RDI
- Track: Fostering Science and Technology in the Middle East and Africa
- **24 April 2012**
 - Plenary Session: Biorobotics: Making the Best of Man and Machine
 - Track: The Atlas of Islamic-World Science and Innovation
 - Evening Event: CEO Panel
- **25 April 2012**
 - Panel: Breakthroughs in Life Sciences: Making a Difference in Society
 - Panel: Education for Sustainable Development Beyond the Campus- EduCamp
 - Tracks: From Science to Business
 - Plenary Session: Science Supercourse

3. Speakers

- **2 Nobel Laureates**
 - Richard Ernst, Chemistry1991 (Switzerland)
 - Harold Kroto, Chemistry1996 (United Kingdom)- video message
- **105 Confirmed Speakers**
 Link to list of speakers and their biographies and abstracts
<http://www.bibalex.org/bva2012/speakers/speakers.aspx?m=1>
 - **Bruce Alberts**, *Former President, National Academy of Sciences, Editor in Chief, Science Magazine and Barak Obama Science Envoy (USA)*

Bruce Alberts, a prominent biochemist with a strong commitment to the improvement of science and mathematics education, serves as Editor-in-Chief of Science and as one of President Obama’s first three Science Envoys. Alberts is also Professor Emeritus in the Department of Biochemistry and Biophysics at the University of California, San Francisco, to which he returned after serving two six-year terms as the president of the National Academy of Sciences (NAS). During his tenure at the NAS, Alberts was instrumental in developing the landmark National Science Education standards that have been implemented in school systems nationwide. The type of “science as inquiry” teaching we need, says Alberts, emphasizes “logical, hands-on problem solving, and it insists on having evidence for claims that can be confirmed by others. It requires work in cooperative groups, where those with different types of talents can discover them – developing self confidence and an ability to communicate effectively with others.” Alberts is also noted as one of the original authors of *The Molecular Biology of the Cell*, a preeminent textbook in the field now in its fifth edition. For the period 2000 to 2009, he served as the co-chair of the InterAcademy Council, a new organization in Amsterdam governed by the presidents of 15 national academies of sciences and that was established to provide scientific advice to the world. Committed in his international work to the

promotion of the “creativity, openness and tolerance that are inherent to science,” Alberts believes that “scientists all around the world must now band together to help create more rational, scientifically-based societies that find dogmatism intolerable.” Alberts has earned many honors and awards, including 16 honorary degrees.

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

He Received his B.Sc. at Ain Shams U. Cairo, Egypt; Ph.D., at Florida State University; Postdoctoral Fellow at Yale, Harvard and the California Institute of Technology. He was a Chemistry Faculty member at (1961-94) and Julius Brown Chair and Regents’ Professor at Georgia Institute of Technology (1994-present). El-Sayed published over 600 publications in the fields of molecular dynamics, energy conversion, photobiology, laser spectroscopy and lately Nano-technology. The citations to his work in the last decade placed him fourth in the field of Academic Chemistry World-wide. El-Sayed is an Elected Member of the US National Academy of Sciences , an Elected Fellow of the American Academy of Arts and Sciences , an Elected Associate Member of TWAS; an Inaugural Fellow of the ACS, the APS and an Elected Fellow of the AAAs. He is an Honorary Fellow of the Indian and of the Chinese Chemical Societies. El-Sayed was an Alexander von Humboldt Senior Fellow, Germany, a Visiting Professor at the University of Paris, an Alfred P. Sloan as well as a Guggenheim Foundation Fellow, a Fairchild Fellow at the California Institute of Technology and a Miller Visiting Professor at U.C. Berkley He received the King Faisal International Prize in the Sciences; an honorary Doctor Degrees from the Colleges of Medicine of both Mansoura and Alexandria Universities in Egypt and recently from the American University of Beirut. He has received a number of national awards such as the Fresenius, the Tolman, the Richard’s medal, the Lindeman’s medal, the Seaborg’s medal as well as other numerous local sectional awards. In 2002, he received the ACS-APS Langmuir National Award in Chemical Physics and in 2007 was the Georgia Tech’s distinguished Professor of the year. Professor El-Sayed received the 2007 USA National Medal of Science in Chemistry from the President of the United States (2008) and the Medal of the Egyptian Republic of the First Class (2009).

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

Kanayo F. Nwanze began his term as IFAD’s fifth President on 1 April 2009. A Nigerian national, Nwanze has a strong record as an advocate and leader of change and a keen understanding of the complexity of development issues. He brings to the job over 30 years of experience across three continents in poverty reduction through agriculture, rural development and research. Under Nwanze’s leadership, IFAD has stepped up its

advocacy efforts to ensure that agriculture is a central part of the international development agenda, and that the concerns and needs of smallholders and other poor rural people are recognized by governments around the world. During Nwanze's tenure, IFAD has increased the number of out-posted country programme managers and expanded the number of country offices. This increased country presence, and the direct supervision by IFAD of its projects, will help make them more effective. Nwanze served as IFAD's Vice-President for two years before taking the organization's helm. Prior to that, he was Director-General of the Africa Rice Center for a decade. Nwanze was instrumental in introducing and promoting New Rice for Africa (NERICA), a high-yield, drought- and pest-resistant rice variety developed specifically for the African landscape. He also transformed the Center from a West African association to an Africa-wide organization with an international reputation for excellence. In addition, Nwanze has held senior positions at a number of research centres affiliated with the Consultative Group on International Agricultural Research (CGIAR) in Africa and Asia, and he was instrumental in the establishment of the Alliance of CGIAR Centers. Nwanze earned a Bachelor of Science degree in Agricultural Science from the University of Ibadan, Nigeria, in 1971, and a Doctorate in Agricultural Entomology from Kansas State University, United States, in 1975.

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

Sir Peter Julius Lachmann MBBChir PhD ScD (Cantab) FRCP FRCPath FRS FMedSci Emeritus Sheila Joan Smith Professor of Immunology, University of Cambridge. Peter Lachmann trained in biochemistry and medicine at Cambridge and University College Hospital graduating MBBChir in 1956. He was a postgraduate student in immunology with Robin Coombs in Cambridge and with Henry Kunkel at Rockefeller University and obtained his PhD in 1962 for a thesis on the pathogenesis of Systemic Lupus Erythematosus. He was an assistant director of research in the Department of Pathology in Cambridge (1964-1971) and foundation professor of immunology at the Royal Postgraduate Medical School (1971-1975) Since 1976 he has worked in Cambridge as Director of the MRC Molecular Immunopathology Unit and professor of Immunology. He retired in 1999 but ran a laboratory till 2005 and will reopen a small lab in 2011. He is a fellow of Christ's College and an honorary fellow of Trinity College. His principal research interests have been in the immunochemistry, biology and genetics of the complement system. He is currently trying to bring to clinical application a method of down-regulating the complement feedback loop, over activity of which is the main predisposing factor to age related macular degeneration. He was the founder President of the UK Academy of Medical Sciences (1998-2002), Biological secretary of the Royal Society (1993 -98) and President of the Royal College of Pathologists (1990-93); and

served on UNESCO's international bioethics committee from 1993-98. In these capacities he has become involved with the ethical and policy aspects of medical science. He has kept bees for over thirty years and this hobby has played a large part in stimulating the interest in genetic and cultural evolution.

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

Kevin Warwick is Professor of Cybernetics at the University of Reading, England, where he carries out research in artificial intelligence, control, robotics and cyborgs. Kevin took his first degree at Aston University, followed by a PhD and research post at Imperial College, London. He has published over 500 research papers and been featured as the cover story on the US magazine, 'Wired'. He has been awarded higher doctorates (DSc) both by Imperial College and the Czech Academy of Sciences, Prague. He was presented with The Future of Health Technology Award in MIT, was made an Honorary Member of the Academy of Sciences, St. Petersburg, and received The IEE Senior Achievement Medal, the Mountbatten Medal and in 2011 the Ellison-Cliffe Medal from the Royal Society of Medicine. In 2000 Kevin presented the Royal Institution Christmas Lectures, entitled "The Rise of the Robots".

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

Career: PhD in Plant Genetics 1968 at Max-Planck-Institute for Plant Breeding Research, Cologne, Germany; Ass. Professor, Institute of Plant Physiology, Stuttgart-Hohenheim 1970-74. Research Group Leader, Max-Planck-Institute for Genetics, Ladenburg-Heidelberg 1974-76; Research Group Leader, Friedrich Miescher-Institute, Basel, Switzerland 1976-86; Full Professor in Plant Sciences, Swiss Federal Institute of Technology (ETH), Zuerich 1986-99. Science: Contributions to food security in developing countries. Focusing on development and application of genetic engineering technology for and to "food security" crops such as rice (*Oryza sativa*), wheat (*Triticum aestivum*), sorghum (*Sorghum bicolor*), and cassava (*Manihot esculenta*). Focusing on problems areas of disease- and pest resistance, improved food quality, improved yield, improved exploitation of natural resources, and improved bio-safety. Inventor of "Golden Rice" and chairman of Humanitarian Golden Rice Board and Network. Ca 340 publications in peer-reviewed journals; 30 patents. Distinctions: KUMHO (ISPMB) Science International Award in Plant Molecular Biology and Biotechnology 2000. American Society of Plant Biologists (ASPB) Leadership in Science Public Service Award 2001. Crop Science of America (CSSA) Klepper Endowment Lectureship 2001, CSSA President's Award 2002, European Culture Award in Science 2002, Honorary Doctor, Swedish University of Agricultural Sciences 2002, University of Freiburg, Germany 2007. "Top100 living contributor to biotechnology", elected by the peers of the

journal “Scientist” in 2005. “The most influential scientist” in the area of Agricultural, Industrial, and Environmental Biotechnology for the decade 1995-2005, elected by the peers of Nature Biotechnology 2006. Cover TIME Magazine July 31, 2000. Elected to Academia Europaea, Pontifical Academy of Sciences, Hungarian Academy of Sciences, Swiss Academy of Technical Sciences

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

Patrick COUVREUR is Full Professor of Pharmacy at the Paris-Sud University and holder of the chair of “Innovation Technologique” (2009-2010) at the prestigious « Collège de France ». He was recently appointed as a Senior Member of the “Institut Universitaire de France”. He is the recipient of an “ERC Advanced Grant” (2010-2015). Pr Patrick COUVREUR’s contributions in the field of drug delivery and targeting are highly recognized around the world through 430 research articles, 250 invited lectures, 59 patents and the main author/editor of 7 books (H-index 66 and 14,000 citations) . His research is interdisciplinary and focuses on the conception of nanomedicines for the treatment of severe diseases (cancer, infectious diseases and neurological disorders). Methodologies are at the interface between Physico-Chemistry of Colloids, Polymer Chemistry, Material Science and Pharmacology/Cancerology. Patrick COUVREUR’s research has led to the funding of two start-up companies (Bioalliance, 70 employees and Medsqual). The major scientific contribution of Patrick COUVREUR to the Pharmaceutical Sciences is also recognized by numerous international awards among which, the «1990 Young Investigator Award for Excellence in Research» of the «Controlled Release Society» (USA), the «Pharmaceutical Scientist of the Year 1996 Award» of the International Federation of Pharmacy (FIP), the “2004 Pharmaceutical Sciences World Congress Award” (Kyoto, Japon), the prestigious “Host Madsen Medal” (Beijin, 2007), the “Marie-Maurice Janot Award Lecture” (2008), the Prix Galien 2009 and the European Pharmaceutical Scientist Award 2011. His appointment as a member of four academies (Académie des Technologies, Académie de Médecine and Académie de Pharmacie in France as well as Académie Royale de Médecine in Belgium) is another recognition of major scientific and scholarly contributions of Patrick COUVREUR.

4. Participants

Registration was closed on 29 February 2012

- No. of Participants: **1915**
 - Males: **37%** & Females: **63%**
 - Academia: **264**, Students: **1630** & other: **21**
 - Non-Egyptian participants: **47**

5. Poster Session

Aims 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

- Poster Session Presenters: **51**
- Fields:
 - Agriculture: **18**
 - Environment: **4**
 - Health: **29**
- Countries:
 - Argentina, Bangladesh, Brazil, Egypt, Iran, Italy, Nigeria, South Africa & Tunisia

6. List of Partners, Sponsors and Exhibitors and their Profiles (attached)

- Our official airline is the national carrier: **Egyptair**
- **Partners:**
 - Academy of Sciences for the developing world (TWAS)- Italy (BA is the Arab Regional office of TWAS)
 - BioVision: the World Life Sciences Forum-France
 - The Research Development and Innovation RDI/EU Egypt Year of Science- Egypt
 - Qatar Foundation- Qatar
 - Islamic Development Bank- Saudi Arabia
- **Platinum Sponsor:**
 - British Council- UK
- **Golden Sponsors:**
 - The Academy of Scientific Research & Technology (ASRT)- Egypt
 - Sanofi Aventis- Egypt
 - DAAD- Germany
- **Regular Sponsors:**
 - Pharco Corporation- Egypt
 - Sedico Pharmaceuticals- Egypt
 - Novo Nordisk- Denmark
 - Elsevier- Netherland
 - BioMed Central- UK

7. BVA Supporters

- No.: 17

Including some such as: (Rotman Centre- Canada, University of Michigan-USA, Desertec-Germany, IFAD-Italy, ICARDA-Syria or CGIAR, IDRC-Canada, Istituto dell'Approccio Centrato sulla Persona-Italy, Sanofi Egypt, University of Bonn-Germany, ISAAA, University of Guanajuato-Mexico)

8. BioFair@BioVisionAlexandria 2012

Gives the exhibitors an opportunity to showcase their products and services to over 1900 participants, around 105 Nobel Laureates, distinguished keynote speakers, eminent scientists, and CEOs of several national and multinational companies as well as Ministers of Health and Agriculture coming from the four corners of the globe. All aimed to identify and explore new frontiers and fields in life sciences that will immensely serve humanity, and to discuss the finest achievements of the human intellect.

- **Exhibitors:**

- CSSP
- The Research Development and Innovation RDI/EU Egypt Year of Science
- FAO
- World Bank
- WHO
- Springer
- EduCamp Project
- TWAS
- Egyptair
- San Giovanni
- British Council
- Sanofi Egypt
- DAAD
- BA bookshop
- BA Depository Library
- BA PSC
- BA Library Resources
- BA LYM and YESBU
- The Academy of Scientific Research & Technology (ASRT)
- Novo Nordisk
- Pharco Corporation
- Sedico Pharmaceuticals
- Elsevier

- BVA volunteers

9. TWAS/BVA.NXT 2012

TWAS/BioVisionAlexandria.NXT (BVA.NXT) initiative was launched during BioVisionAlexandria 2008, where the Bibliotheca Alexandrina hosted 99 young scientists from 27 developing countries to discuss the problems these scientists face when conducting research in their respective countries.

TWAS/BVA.NXT 2012 will be the third BioVisionAlexandria.NXT to be organized in Alexandria. The Event will be held under the theme: ***“Scientific Innovation in the Developing World: From Theory to Practice”***. TWAS/BVA.NXT 2012 intends to explore scientific innovation in the developing world, and highlight its importance for sustainable development. It will also identify innovative solutions to overcome different problems in developing countries.

The Event will be held on 21 and 22 April 2012, and the **85** TWAS/BVA.NXT 2012 young researchers from developing countries will be offered the opportunity to meet with professionals in the field of innovation from different parts of the world. This will allow them to share their views regarding the status, obstacles and future of innovative research in developing countries. They will also have the chance to discuss different problems regarding funding sources, marketing of ideas, and intellectual property rights. The young scientists will be invited to participate in BioVisionAlexandria Conference program.

- **Objectives:**

- Emphasizing the role of innovation studies in understanding how advanced countries have become competitive
- Identifying the problems facing young researchers
- Encouraging and supporting scientific innovation in developing countries
- Capacity building and creating networking opportunities between young researchers for global collaboration between the developing and the developed world
- Encouraging the industry to support to young researchers
- Understanding how to transform marginal innovative activities into sustainable innovations that have wider impacts on creating a better life
- Providing a platform for young researchers to present innovative ideas and solutions

- **Countries of the young researchers:**
 - Algeria, Argentina, Bangladesh, Benin, Brazil, Burkina Faso, Cameroon, Egypt, Ethiopia, Ghana, India, Indonesia, Iran, Iraq, Jordan, Kenya, Lebanon, Libya, Mauritius, Mongolia, Nepal, Nigeria, Pakistan, Senegal, South Africa, Sudan, Tunisia, Venezuela, and Yemen

10. BVA in the Press

BVA 2006, 2008 & 2010

<http://www.bibalex.org/bva2012/Home/StaticPage.aspx?page=74>