

BioVisionAlexandria 2006
26-29 April

Bibliotheca Alexandrina

Conference Booklet

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Alexandria, 26 April 2006

Dear Participant,

Welcome to Alexandria and to this international event organized by the Bibliotheca Alexandrina in partnership with the World Life Sciences Forum, BioVision.

BioVisionAlexandria and the World Life Sciences Forum, BioVision, are important gatherings of opinion leaders and prominent scientists who encourage constructive dialogue among key players in the development of life sciences. They include members of academia, industry, research, institutions, media, and society. The ultimate goal is to provide a platform of exchange and information to meet the challenges facing the 21st century in life sciences, a vital step for economic development leading to global improvement of quality of life for all.

BioVisionAlexandria aims to increase the participation of developing countries, bringing into the Forum the voices of these nations and will present the opportunity for the international community to exchange ideas and develop a common vision for a better future of the sick and the poor. BioVisionAlexandria 2006 is a conference that will be dedicated to the role of the New Life Sciences in Changing Lives for the better for all of humanity.

We hope that you will agree that the setting of the conference, meeting on the very spot where the ancient Bibliotheca Alexandrina once stood, once again gathering the best minds from around the world to discuss issues of importance, along with the remarkable tourist sites of Egypt will make for a memorable visit.

We are convinced that the site and the quality of the participants will be equally conducive to fruitful debates.

We wish you a successful and pleasant stay in Alexandria!

Ismail Serageldin



Librarian of Alexandria
Director of the Bibliotheca Alexandrina

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Provisional Program




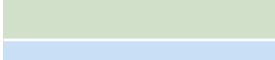
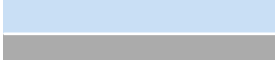

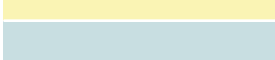


Bio Vision Alexandria 2006

Conference at a Glance

(Subject to change)

Wednesday 26 th April 2006 Nobel Day	8:00-	<i>Registration (During all days of the conference)</i>		
	10:00-11:30	Conference Opening Session (Featuring international and national eminent figures)		
	11:30-12:00	Break		
	12:00-13:30	Session1: On the Quality of Science		
	13:30-14:30	Lunch Break		
	14:30-16:00	Session 2: Science for Humanity		
	16:00-16:30	Break		
	16:30-18:00	Session 3: Technology of Hope		
	18:00-18:30	Break		
18:30-19:30	Evening Event 1:Nobel Round Table			
Thursday 27 th April 2006 Plenary Sessions	8:00-	<i>Registration (During all days of the conference)</i>		
	9:00-10:30	Plenary Session 1: Health Discoveries	<i>Track 1: Drought Plenum 1</i>	
	10:30-11:00	Break		
	11:00-12:30	Plenary Session 2: Launching of the Disease Control Priorities Project	<i>Track 1: Plenum 2</i>	
	12:30-13:30	Lunch Break		
	13:30-15:00	Plenary Session 3: Agri-food and Environment: Meeting the Global Challenge	<i>Track 2 : Ethics</i>	
	15:00-15:30	Break		
	15:30-17:00	Plenary Session 4: Africa Biotechnology Panel	<i>Track 3 : Diabetes Plenum 1 EAGLES SESSION</i>	
	17:00-17:30	Break		
17:30-18:30	Evening Event 2 :Launching of the «La Main à la Pâte », Arabic Website	<i>Track 3 : Plenum 2</i>		
28 th April 2006 Parallel Sessions	8:00-	<i>Registration (During all days of the conference)</i>		
	9:00-10:30	Panel A-1: Biotechnology for Affordable Health Care	Panel B-1: Environmental Issues & Agriculture	<i>Track 3 : Plenum 3</i>
	10:30-11:00	Break		
	11:00-12:30	Panel A-2: How the New Life Sciences Can Respond to Today's Challenges	Panel B-2: Rethinking Priorities in Food & Agriculture	<i>Track 3 : Plenum 4</i>
	12:30-13:30	Lunch Break		
	13:30-15:00	Panel A-3 : Public Health and Private Medicine: The Role of Science	Panel B-3: Regulations for Food, Agriculture & the Environment	<i>Track 3 : Plenum 5</i>
	15:00-15:30	Break		
	15:30-17:00	Panel A-4 : International Collaborations	Panel B-4: Old & New Issues: a review of some key points	<i>Track 3 : Plenum 6</i>
	17:00-17:30	Break		
17:30-19:00	Evening Event 3: CEO Panel		<i>Track 3 : Plenum 7</i>	

Saturday 29 th April 2006	8:00-	<i>Registration (During all days of the conference)</i>	
	9:00-10:30	Panel A-5: Biotechnology in the Developing World: Friend or Foe?	Panel B-5: Food Production & Biofortification
	10:30-11:00	Break	
	11:00-12:30	Plenary Session 5: Super Course	
	12:30-13:30	Lunch Break	
	13:30-15:00	Plenary Session 6: Reporting on Parallel Sessions <i>1- Health, 2- Agri-Food & Environment, 3- Drought, 4- Ethics, 5- Diabetes, 6- EAGLES</i>	
	15:00-15:30	Break	
	15:30-17:00	<i>Closing Session</i>	

Nobel Day session	
Plenary Session	
Theme A: Health	
Theme B: Agriculture	
Track 1: Drought	
Track 2: Ethics	
Track 3: Diabetes	
Evening Event	
Off-time	

Detailed Program

(Subject to change)

Wednesday, 26 April 2006

08:00	Registration (registration will remain open throughout the conference)
10:00 -11:30	<p>OPENING ADDRESSES Great Hall</p> <p><i>Special Inauguration Session where world renowned International Political, Social and Scientific Leaders will introduce BioVisionAlexandria 2006, with their views on the implications of the Life Science Revolution in today's world... (in order of presentation)</i></p> <p>Ismail Serageldin, Director of Bibliotheca Alexandrina (Egypt) Philippe Desmarescaux, Chairman, The World Life Sciences Forum, BioVision (France) Koji Omi, Former Japanese Minister of State for Science and Technology Policy (Japan) Elias Zerhouni, Director, National Institutes of Health (USA) Mohamed Hassan, Executive Director TWAS (Italy) Ibrahim Badran, Former Minister of Health (Egypt) Hany Helal, Minister of Higher Education (Egypt)</p>
Day 1	
11:30-12:00	<i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i>
	NOBEL LAUREATES' DAY
12:00-13:30	<p>Session 1: On the Quality of Science Great Hall</p> <p>Chair: Francois Gros, Honorary Permanent Secretary, Academy of Sciences (France) Rapporteur: Pierre Anhoury, Principle IMS Health (France) Erling Norrby, Secretary General of the Royal Swedish Academy of Sciences (Sweden) <i>More than 100 Years of Nobel Prizes</i> Georges Charpak, Physics 1992 (France) <i>Supramolecular Chemistry: Some Contributions to Life Sciences</i> Baruch Blumberg, Medicine 1976 (USA)</p>
Day 1	
13:30-14:30	<i>Lunch Break</i>
14:30-16:00	<p>Session 2: Science for Humanity Great Hall</p> <p>Chair: Roelof Rabbinge, Dean of Graduate Schools, Wageningen University (Netherlands) Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt) Harold Varmus, Medicine 1989 (USA) Bernard Kouchner, Co-founder Médecins Sans Frontières, Peace 1999 (France) Peter Doherty, Medicine 1996 (Australia)</p>
Day 1	
16:00-16:30	<i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i>

16:30-18:00	Session 3: Technology of Hope	Great Hall
	Chair: Margaret Catley-Carlson, Chair, Global Water Partnership (USA) Rapporteur: Pierre Anhoury, Principle IMS Health (France)	
Day 1	Jean-Marie Lehn , Chemistry 1987 (France) Stanley B. Prusiner , Medicine 1997 (USA)	
18:00-18:30	<i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i>	
18:30-19:30	Evening Event	Great Hall
Day 1	Round Table Discussion: Nobel Views and Perceptions Moderator: Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)	

Thursday, 27 April 2006

09:00-10:30	Health Stream: Plenary Session 1	Great Hall
	"Health Discoveries" <i>As the wealth of new medical knowledge resulting from discoveries in basic science increases, the effective translation of this knowledge into new approaches for the prevention, diagnosis, and treatment of disease, are all key challenge for the research community. How do we move from knowledge to health? And what steps separate the basic research done in the laboratory from a new drug or medical technology?</i>	
	Chair: Gabriel Persley, Cahir Doyle Foundation (UK) Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt)	
	Changing Lives: The Disease Control Priorities Project (DCPP) Elias Zerhouni , Director, National Institutes of Health (USA)	
	The Ups and the Downs of Health Discoveries Sir Peter Lachmann , Emeritus Professor of Immunology, University of Cambridge (UK)	
	Innovative Drug Discovery Frank Walsh , Executive Vice President, Discovery Research, Wyeth (USA) Yoshihide Hayashizaki , Project Director and Chief Scientist, Genome Exploration Research Group, Genomic Sciences Center (Japan)	
Day 2		

<p>11:00-12:30</p> <p>Day 2</p>	<p>Track 1: Drought “Plenum 2”</p> <p>Chair: Alain Godard , CEO of Aventis CropScience (France) Rapporteur: Luis Herrera, Head, National Laboratory of Genomics for Biodiversity, Center for Research and Advanced Studies, the National Polytechnic Institute (Mexico)</p> <p>Gene Networks in Drought Stress Response and Tolerance Kazuo Shinozaki, Director of Plant Science Center, Riken Yokohama Institute (Japan) Vincent Valez, Senior Scientist, ICRISAT, Crop Physiology Laboratory, GT-1Biotechnology (France) Ahmed Bahieldin, Professor of Genetics, Faculty of Agriculture, Ain Shams University (Egypt)</p>	<p>Middle Hall</p>
<p>12:30-13:30 <i>Lunch Break</i></p>		
<p>13:30-15:00</p> <p>Day 2</p>	<p>Agri-food & Environment Stream: Plenary Session 3</p> <p>“Agri-food & Environment: Meeting the global challenge”</p> <p><i>What are the issues facing global agriculture? How have advances in agriculture made it possible to grow more and safer food, to feed the continuously growing populations, while protecting biodiversity and the environment? And why, despite good global agricultural performance, considerable regional differences still exist?</i></p> <p>Chair: Nadia Makram Ebeid, Former Minister of State for Environmental Affairs (Egypt) Rapporteur: Salah Soliman, Professor, Faculty of Agriculture, University of Alexandria (Egypt)</p> <p>Meeting the Challenge of Sea-level Rise M. S. Swaminathan, Chairman M S Swaminathan Research Foundation (India) Food, Agriculture and Biotechnology research, in the Context of Global Challenge Christian Patermann, Director, Directorate E, European Commission (Belgium) A Decade of Biotech Crops 1996-2005:Global Status and Future Prospects Clive James, Chairman and Founder of International Service for the Acquisition of Agri-biotech Applications (USA) Suman Sahai, Convenor, Gene Campaign (India)</p>	<p>Great Hall</p>

<p>13:30-15:00</p> <p>Day 2</p>	<p>Track 2: Ethics Middle Hall</p> <p>“Bioethics in Changing Lives”</p> <p><i>The new life sciences have unleashed a number of ethical questions among the intellectuals and the public at large as no technology has done before, with the possible exception of atomic energy. It is no longer whether something is technologically feasible, but whether it is ethically desirable. Inherently, the public is disturbed at what they see as tinkering with the very building blocks of life, a tendency to play god, and self doubts as to whether we have the wisdom to make the right choices. Issues from the privacy of our DNA to the patentability of genetic material, from the rights of other species to the risks of unleashing unknown biological hazards, from GMOs to the costs of medicines, all raise questions of perceived risks and questionable appropriateness. The scientific community has lost much of the public’s trust in its ability – by itself – to avoid the risks and make the right choices about the deployment of new technological advances. Less present in the debate is the cost of inaction on the new technologies and all the good that they can bring, especially to the poorer half of humanity. Here too some questions as to the appropriateness of the private sector patents and IPR regimes in relation to the public good need to be explored. All agree on the importance of the presence of a national, regional and even international code of bioethics, but something that would satisfy everyone, or at least the overwhelming majority – like the Universal Declaration Of Human Rights did in the second half of the 20th century – is still elusive</i></p> <p>Chair: Eric Huttner, General Manager, Diversity Arrays Technology Pty limited (Australia) Rapporteur: tba</p> <p>Peter Singer, Sun Life Financial Chair in Bioethics & Director, University of Toronto Joint Centre for Bioethics (Canada) Sandy Thomas, Director, The Nuffield Council on Bioethics, (UK) Ibrahim Badran, Former Minister of Health (Egypt)</p>
<p>15:00-15:30</p>	<p><i>Break (Visit BioFair@BioVisionAlexandria and Posters’ Area!)</i></p>
<p>15:30-17:00</p> <p>Day 2</p>	<p>Plenary Session 4 Great Hall</p> <p>“Africa Biotechnology Panel”</p> <p><i>The AU and NEPAD established a High Level African Panel on Modern Biotechnology (APB) to advice the AU, its Member States and its various organs, on current and emerging issues associated with the development and application of modern biotechnology. Its specific remit is to provide the AU and NEPAD with independent and strategic advice on developments in modern biotechnology and its implications for agriculture, health and the environment. It will focus on intra-regional and international issues of regulating the development and application of genetic modification and its products. The members of the panel will present their preliminary findings to the plenary.</i></p> <p>Co-Chairs: Calestous Juma, Director, Science Technology & Innovation, Belfer Center for Science and International Affairs, Harvard University (USA) Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)</p> <p>Life Sciences and Development in Africa Abdallah Daar, Professor of Public Health Sciences, Toronto University (Canada) George Sarpong, Professor, Faculty of Law, Ghana University (Ghana) Africa Biofortified Sorghum (ABS) Project Florence M. Wambugu, CEO, Africa Harvest (Kenya) Tuberculosis and HIV: Overlapping Epidemics, Multiple Challenges Soumya Swaminathan, Deputy Director, Tuberculosis Research Centre (India)</p>

<p>15:30-17:00</p> <p>Day 2</p>	<p>Track 3: Diabetes</p> <p><i>Plenum 1: "EAGLES Session"</i></p> <p>Chair: David McConnell, Co-ViceChairman, EAGLES (Ireland) Rapporteur: Quentin Cooper</p> <p>Youssry El Gamal, Minister of Education (Egypt) <i>Burden of Diabetes – Need for Global Action</i> Phil Riley, Communication Head at the IDF (Belgium) <i>Changing Diabetes – a perspective from industry</i> Boerge Diderichsen, Vice President, Corporate Research Affairs, Novo Nordisk (Denmark)</p>	<p>Middle Hall</p>
<p>17:00-17:30 <i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i></p>		
<p>17:30-18:30</p> <p>Day 2</p>	<p>Evening Event</p> <p><i>"Launching La main à la Pâte, Arabic Website"</i></p> <p>Chair: Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt) Georges Charpak, Physics 1992 (France) Youssry El Gamal, Minister of Education (Egypt)</p>	<p>Great Hall</p>
<p>17:30-18:30</p> <p>Day 2</p>	<p>Track 3: Diabetes</p> <p><i>"Plenum 2: Health Societal and Economic Challenges"</i></p> <p>Chair: David McConnell, Co-Vice Chairman, EAGLES (Ireland) Rapporteur: Quentin Cooper</p> <p><i>Latest Estimates and Projections for Diabetes</i> Gojka Roglic, Technical Officer, WHO (Switzerland) <i>Lessons from Diabetes Prevention Studies</i> Jaakko Tuomilehto, Professor, University of Helsinki (Finland) <i>Panel Discussion: Promoting Healthy Living – Whose responsibility?</i> Azza Shaltout, Vice President, Assistance to Young Diabetics-AYD (Egypt) Britta Thomsen, European Parliament (Belgium) Phil Riley, Communication Head at the IDF (Belgium) Gojka Roglic, Technical Officer, WHO (Switzerland) V Mohan, Chairman & Chief of Diabetologist (India) Jaakko Tuomilehto, Professor, University of Helsinki (Finland) Boerge Diderichsen, Vice President, Corporate Research Affairs, Novo Nordisk (Denmark)</p>	<p>Middle Hall</p>

Friday, 28 April 2006

09:00-10:30

Health Stream: Panel A-1

Great Hall

“Biotechnology for Affordable Health Care”

Nowhere is the need for science and technology as a tool for sustainable utilization of biological resources more crucial than in addressing the health needs of the world's poor. Can biotechnology provide safe, effective & affordable health care products and treatments? What will be the effects of new therapies and products on publicly funded health care systems? Are there less costly, safer alternatives? What new health approaches focus on primary prevention?

Chair: Claudio Carlone, Chairman, Hypothesis (Italy)

Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt)

Sustainable Utilization of Biological Resources for Health Care Needs

Muhammed Choudhary, Acting Director, International Center for Chemical Sciences (Pakistan)

Facilitating Biotech to Make a Good Impact for a More Balanced Development of the World

Werner Christie, Science and Technology Counsellor, Royal Norwegian Embassy, Beijing (China)

New Approaches for Prevention by Integrating Genetic/Genomic/Biotech Knowledge in Primary and Secondary Healthcare

Ysbrand Poortman, Vice President, World Alliance of Organizations for the prevention and treatment of genetic and congenital conditions (Netherlands)

Personalized Medicine and Health Care

Kazuhiro Shigeto, Director for Advanced Medical Science, Division of Life Science, Ministry of Education, Culture, Science and Technology (Japan)

Day 3

9:00-10:30

Agri-food & Environment Stream: Panel B-1

West Hall

“Environmental Issues & Agriculture”

In our quest for scientific advancement and economic development we often neglect to consider the potential impact of new agricultural technologies on the environment. What state-of-the-art technologies are available for sustaining an environmentally sound and productive agricultural industry? What are the social issues that play a role in sustainable agriculture?

Chair: Effat Badr, Professor Emeritus. Dept. of Genetics, Faculty of Agriculture, Alexandria University (Egypt)

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

Potential Environmental Impacts of Salt And Drought Tolerance Traits in Crop Plants

Brian Johnson, Environmental Consultant (UK)

The Global Environment

David Todd, Senior Evaluation Specialist, The Global Environment Facility (USA)

Agroenergy and Biofuels Program in Brazil

Weber Amaral, CEO Brazilian Biofuels Programme (Brazil)

Marie Ricciarione, (USA)

Day 3

<p>9:00-10:30</p> <p style="text-align: right;">Middle Hall</p>	<p>Track 3: “Plenum 3: Diabetes around the World 1” Chair: Anil Kapur, Vice Chairman, Board of the World Diabetes Foundation (Denmark) Rapporteur: Quentin Cooper</p> <p><i>Diabetes in the EMME</i> Morsi Arab, IDF Regional Chair Diabetes, EMME region (Egypt) <i>Diabetes in Sub Saharan Africa</i> Kaushik Ramaiya, Vice president IDF and Regional Chair IDF Africa (Tanzania) <i>Diabetes in Egypt</i> Samir Assaad-Khalil, Professor of Internal Medicine. Unit of Diabetes & Metabolism. Faculty of Medicine, Alexandria University. Alexandria (Egypt)</p>
<p>Day 3</p>	

<p>10:30-11:00</p>	<p><i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i></p>
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<p>11:00-12:30</p> <p style="text-align: right;">Great Hall</p>	<p>Health Stream: Panel A-2 “How the New Life Sciences Can Rrespond to Today’s Challenges” <i>The world is facing new challenges in human health, including the emergence of new infectious diseases, aging, HIV/AIDS and many others. In facing today’s challenges we must follow a new path in order to move forward. How are industry and government responding to these challenges? What impact will the progress in Life Sciences have on health in developing nations? Will biotechnology applications create new concerns?</i></p> <p>Chair: Peter Singer, Director, University of Toronto Joint Centre for Bioethics (Canada) Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt)</p> <p><i>The Impact of Progress in Life Sciences on Health in Developing Nations</i> Joel Nobel, Founder and Professor Emeritus, Emergency Care Research Institute (USA) Phyllis Gardner, Associate Professor of Molecular Pharmacology & Medicine, Stanford University School of Medicine (USA) <i>Life Sciences Research Responding to Challenges Faced by the Japanese Society</i> Yasuhiro Suzuki, Director, R&D Promotion for Innovative Pharmaceuticals and Medical Devices, Ministry of Health, Labour & Welfare (Japan) <i>The Role of Biotechnology Research Parks in Economic Development, Technology Transfer, and Public Health</i> Lewis Collens, President, Illinois Institute of Technology (USA)</p>
<p>Day 3</p>	

<p>11:00-12:30</p> <p>Day 3</p>	<p>Agri-food & Environment Stream: Panel B-2 West Hall “Rethinking Priorities in Food & Agriculture”</p> <p><i>Although conventional agriculture has done an excellent job of growing plenty of food, millions of people do not get enough to eat, are undernourished and many more do not have the right kinds of food for a healthy life. Feeding the world cannot be accomplished simply by producing enough food and current systems have to be re evaluated. Who benefits under the present system, who does not, and why or why not? What types of social and economic structures are most conducive to sustainability at local, regional, national, and international levels? How should we deal with the demands of equitable food distribution?</i></p> <p>Chair: Channapatna Prakash, Professor, Plant Molecular Genetics, Tuskegee University (USA) Rapporteur: Salah Soliman, Professor, Faculty of Agriculture, University of Alexandria (Egypt)</p> <p>Vishvanath Nene, Investigator, The Institute for Genomic Research (USA) Patrick Cunningham, Professor of Animal Genetics, Trinity College, Dublin (Ireland) Eliminating Hunger and Poverty: Priorities and Delivery through Agricultural Biodiversity Stefano Padulosi, Senior Scientist, Diversity for Livelihoods Programme, IPGRI (Syria) Daniel Pagliano, President, Latin American Federation of National Biotechnology Companies Association (Uruguay) Poverty Alleviation and Biotechnology: Not a contradiction Klaus Ammann, Director, Botanical Garden, University of Bern (Switzerland)</p>
<p>11:00-12:30</p> <p>Day 3</p>	<p>Track 3 Diabetes: Middle Hall “Plenum 4: Diabetes around the World 2”</p> <p>Chair: Anil Kapur Vice Chairman, Board of the World Diabetes Foundation (Denmark) Rapporteur: Quentin Cooper</p> <p>Diabetes in China: Meeting the Challenge Changyu Pan, Professor, Chinese PLA General Hospital (China) Diabetes Epidemic in India Viswanathan Mohan, Chairman & Chief of Diabetologist (India)</p>
<p>12:30-13:30</p>	<p><i>Lunch Break</i></p>

13:30-15:00

Health Stream: Panel A-3

Great Hall

“Public Health and Private Medicine: The role of Science”

Medicine and public health have become intertwined in the public mind. Yet they are very different things, and though mostly complementary, they can nevertheless sometimes work at cross-purposes. Effective communication between the fields of private medicine and public health is essential to both. How do we mobilize science to strike a balance health of individual patients and the average health of entire populations? How much will go into prevention? How do we prioritize individual needs and population needs?

Chair: Obsis Madkour, Professor, Faculty of Medicine Cairo University (Egypt)

Rapporteur: Rafik Nakhla, Bilbiotheca Alexandrina, (Egypt)

Healthcare Policy; Global and Local Perspectives

Kiyoshi Kurokawa, President, Science Council of Japan (Japan)

Christian Suojanen, Secretary General, European Federation of Biotechnology (Spain)

Michael Osborne, Director, International Futures Programme, OECD - French Delegation (France) & **Iain Gillespie**, Head of Biotechnology Division, Science, Technology and Industry, OECD (France)

Bridging the Gaps from Bench to Bedside and from North to South – Two Seminal Scientific Challenges of Our Time

Ellis Rubinstein, President, New York Academy of Sciences (USA)

Day 3

13:30-15:00

Agri-food & Environment Stream: Panel B-3

West Hall

“Regulations for Food, Agriculture and the Environment”

Policy and regulatory instruments play an important role in maintaining the balance between producing enough food and environmental protection. What processes determine who makes decisions in food and agriculture and in whose interests these decisions are made? And how do we ensure the establishment of rigorous, science-based regulation on agricultural biotech products? What International environmental laws and conventions exist that address global environmental issues?

Chair: Magdy Madkour, Assistant Director General, ICARDA (Syria)

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

Intellectual Property Management As a Regulation Tool

Frederic Erbisich, Former Director, Office of Intellectual Property, Michigan State University (USA)

Philip Pardey, Professor, Science and Technology Policy, University of Minnesota (USA)

The 20th Anniversary of the OECD Blue Book: Taking Stock

Willy De Greef, Executive Director, International Biotech Regulatory Services (Belgium)

Hanaiya El-Itriby, Director, Agriculture Genetic Engineering Research Center (Egypt)

Day 3

<p>13:30-15:00</p> <p>Day 3</p>	<p>Track 3: Diabetes</p> <p><i>“Plenum 5: Panel Discussion”</i></p> <p>Chair: Quentin Cooper</p> <p><i>Panel Discussions: Key Common Issues Across the Developing World</i></p> <p>Morsi Arab, Kaushik Ramaiya, Samir Khalil, Changyu Pan, V. Mohan</p>	<p>Middle Hall</p>
<p>15:00-15:30 <i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i></p>		
<p>15:30-17:00</p> <p>Day 3</p>	<p>Health Stream: Panel A-4</p> <p><i>“International Collaborations”</i></p> <p><i>As the pace of innovation and competition continues to increase in the life sciences industry, building partnerships and strengthening international collaboration in biotechnology can bring significant benefits to the world. What is the role of developed countries in supporting international research cooperation? How effective are the currently existing North-South collaborations? How do developing countries make the most of available funding opportunities?</i></p> <p>Chair: tba</p> <p>Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt)</p> <p><i>The “Virtual Incubator”: A New Model of Public-Private Partnership to Facilitate Technology Transfer in Africa</i></p> <p>Cynthia P. Schneider, Distinguished Professor in the Practice of Diplomacy, George Town University (USA)</p> <p>Joe Harford, Director, National Cancer Institute International Office (USA)</p> <p><i>North-South Collaboration: Digital Molecular Medicine</i></p> <p>Rafael Rangel-Aldao, Professor of Biotechnology, Simon Bolivar University (Venezuela)</p> <p><i>The International Scientific Dimension in Framework Programme 7 (2007-2013) and Success Stories from Previous Framework Programmes</i></p> <p>Alfredo Aguilar, Head, Community Cooperation Activities Unit, International Scientific Cooperation, EU (Belgium)</p> <p><i>Non-EU Country Participation in Framework Programme 6 (FP6) and Funding Opportunities to International Scientific Cooperation in the Upcoming FP7</i></p> <p>Sohail Luka, Scientific Officer, European Commission - DG Research, International Scientific Cooperation (Unit N2), EU (Belgium)</p>	<p>Great Hall</p>
<p>15:30-17:00</p> <p>Day 3</p>	<p>Agri-food & Environment Stream: Panel B-4</p> <p><i>“Old & New Issues: A review of some key points”</i></p> <p><i>Biotechnology has seldom been more controversial in the area of GMOs and the potential impact on individual health and environmental safety. Yet, in the light of the evidence of the last decade or more, should these old issues now be set to rest? Are there new issues that have emerged? From economic concentration in seed production and distribution to accessibility of diagnostics and vaccines for the poor?</i></p> <p>Chair: Joao Paes de Carvalho, Executive Director, Associação Brasileira das Empresas de Biotecnologia (Brazil)</p> <p>Rapporteur: Salah Soliman, Professor, Faculty of Agriculture, University of Alexandria (Egypt)</p>	<p>West Hall</p>

17:30-19:00	Track 3: Diabetes “Plenum 7: Closing Session” Chair: : David McConnell, Co Vice Chairman, EAGLES (Ireland) Rapporteur: Quentin Cooper <i>Primary Prevention for Life Style Diseases</i> Stig Pramming , Executive Director, Oxford Health Alliance, (Sweden) <i>The WDF Initiative: Brief Overview of Projects</i> Anil Kapur , Vice Chairman of the Board of the World Diabetes Foundation (Denmark) Recommendations and conclusions	Middle Hall
Day 3		

Saturday, 29 April 2006

9:00-10:30	Health Stream: Panel A-5 “Biotechnology in the Developing World: Friend or Foe?” <i>Biotechnology offers great potential benefits to developing countries. However, it is clearly a threatening concept to many people in these countries. What are the successes and constraints in introducing new biotechnologies into developing countries? And what technologies are suitable designed for poor people? Are both donors and recipients involved in technology transfer aware of relevant IPR issues?</i> Chair: Zhu Chen, Vice President, Chinese Academy of Science (China) Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt) <i>Innovative Pathways for a Healthier World</i> Magid Abou Gharbia , Senior Vice President & Head, Chemical & Screening Sciences, Wyeth Research (USA) <i>UN MDGs Project</i> Joanna Rubinstein , Director Health and Science Initiatives, UN Millennium Project (USA) <i>Successes and Constraints in Introducing New Biotechnologies Into Developing Countries</i> Steven Jarrett , Deputy Director, UNICEF Supply Division (USA)	Great Hall
Day 4		

9:00-10:30	Agri-food & Environment Stream: Panel B-5 “Agri-food & Environment: Food production & biofortification” <i>Bio fortification projects from around the world-stories of success.</i> Chair: Nitya Roa, Faculty of th University of East Anglia (India) Rapporteur: Salah Soliman, Professor, Faculty of Agriculture, University of Alexandria (Egypt) <i>Golden Rice and Beyond – the power of biofortification</i> Ingo Potrykus , Chairman, Humanitarian Golden Rice Board and Network to fight micronutrient malnutrition in developing countries (Switzerland) <i>Rice for Feeding Half the World Population</i> Gurdev Khush , Professor, University of California (USA) <i>Progress in Brazil in the field of Biofortification. Harvest Plus</i> Howarth Bouis , Director of HarvestPlus (USA), Marilia Nutti , Researcher, National Research Center on Food Technology, Embrapa (Brazil) Zhangliang Chen , President of China Agriculture University (China)	West Hall
Day 4		

10:30-11:00	<i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i>	
11:00-12:30	<p>Plenary Session 5: Super Course "Super Course"</p> <p><i>The Supercourse provides a practical educational mean and a useful resource in a uniquely accessible format (internet plus CD) for health workers and educators all over the globe. is to improve global health by improving "Prevention Training" worldwide with sharing Lectures.</i></p> <p>Chair: Lewis Collens, President, Illinois Institute of Technology (USA) Rapporteur: Rafik Nakhla, Bibliotheca Alexandrina (Egypt)</p> <p>Building a Supercourse of Science Ronald LaPorte, Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh (USA)</p> <p>Supercourse and Social Responsibility for Behavioral Changes in Health Sauer Francois, CEO Trans Am Group (USA) Ismail Serageldin, Director of Bibliotheca Alexandrina (Egypt)</p>	Great Hall
Day 4		
12:30-13:30	<i>Lunch Break</i>	
13:30-15:00	<p>Reporting Plenary Session "Conclusions and Recommendations"</p> <p><i>Conclusions and Recommendations of the two streams and three tracks will be presented and open to discussion to all the participants of the Forum, opening grounds for new collaborations and concrete implementations</i></p> <p>Health Stream Rafik Nakhla, Bibliotheca Alexandrina (Egypt)</p> <p>Agri-food & Environment Stream Salah Soliman, Professor, Faculty of Agriculture, University of Alexandria (Egypt)</p> <p>Drought Track Ethics Track Diabetes Track</p>	Great Hall
Day 4		
15:00-15:30	<i>Break (Visit BioFair@BioVisionAlexandria and Posters' Area!)</i>	
15:30-17:00	<p>Closing Session</p> <p><i>International Leaders will close The World Life Sciences Forum BioVisionAlexandria 2006 by sharing their views and hopes on the universal applications of Life Sciences.</i></p> <p>Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt) Philippe Desmarescaux , Chairman, The World Life Sciences Forum, BioVision (France)</p>	Great Hall
Day 4		



Bio Vision Alexandria 2006

Speaker List

Bio Vision Alexandria 2006



Nobel Laureates

Charpak, Georges

Physics 1992 (France)
Nobel Day Session 1, Evening event 2

Lehn, Jean-Marie

Chemistry 1987 (France)
Nobel Day Session 3

Blumberg, Baruch

Medicine 1976 (USA)
Nobel Day Session 1

Prusiner, Stanley B.

Medicine 1997 (USA)
Nobel Day Session 3

Doherty, Peter

Medicine 1996 (Australia)
Nobel Day Session 2

Varmus, Harold

Medicine 1989 (USA)
Nobel Day Session 2

Speakers

A

Abou Gharbia, Magid

Senior Vice President & Head, Chemical & Screening Sciences, Wyeth Research (USA)
Evening Event 3, Panel A-5

Aguilar, Alfredo

Head, Community Cooperation Activities Unit, International Scientific Cooperation, European Commission (Belgium)
Panel A-4

Alleyne, Sir George

Director Emeritus PAHO: Editor DCPD (USA)
Plenary Session 2

Amaral, Weber

Professor & CEO Brazilian Biofuels Programme (Brazil)
Panel B-1

Ammann, Klaus

Director, Botanical Garden, University of Bern (Switzerland)
Panel B-2

Anhoury, Pierre

Principle, IMS Health (France)
Nobel Day Session 1, Nobel Day Session 3

Arab, Morsi

IDF Regional Chair Diabetes, EMME region (Egypt)
Track 3 Plenum 3, Track 3 Plenum 5

Assaad-Khalil, Samir

Professor of Internal Medicine, Unit of Diabetes & Metabolism, Faculty of Medicine, Alexandria University (Egypt)

Track 3 Plenum 3, Track 3 Plenum 5

B

Badr, Effat

Professor Emeritus. Dept. of Genetics, Faculty of Agriculture, Alexandria University (Egypt)

Panel B-1

Badran, Ibrahim

Former Minister of Health (Egypt)

Opening Session, Track 2

Bahieldin, Ahmed

Professor of Genetics, Faculty of Agriculture, Ain Shams University, Egypt & Senior Scientist, AGERI, ARC (Egypt)

Track 1 Plenum 2

Bouis, Howarth

Director, HarvestPlus (USA)

Panel B-5

Breman, Joel

Senior Scientific Advisor, Fogarty International Center, National Institutes of Health (USA)

Plenary Session 2

C

Carlone, Claudio

Chairman, Hypothesis (Italy)

Panel A-1

Catley-Carlson, Margaret

Chair, Global Water Partnership (USA)

Nobel Day Session 3

Chen, Zhu

Vice President of Chinese Academy of Sciences; Director of Shanghai Institute of Hematology (China)

Chen, Zhangliang

President, China Agricultural University (China)

Panel B-5

Chieko, Ikeda

Director for Advanced Medical Science, Division of Life Science, Ministry of Education, Culture, Science and Technology (Japan)

Panel A-1

Choudhary, Muhammad

Professor of Chemistry, University of Karachi (Pakistan)

Panel A-1

Christie, Werner

Science and Technology Counsellor, Royal Norwegian Embassy, Beijing & Former Minister of Health, Norway (China)

Panel A-1

Clark, Brian

Vice President, European Federation of Biotechnology (Denmark)

Evening Event 3

Collens, Lewis

President, Illinois Institute of Technology (USA)

Panel A-2, Plenary Session 5

Cunningham, Patrick

Professor of Animal Genetics, Trinity College, Dublin & Chair, IdentiGEN Ltd (Ireland)

Panel B-2

D**Daar, Abdallah**

Professor of Public Health Sciences, University of Toronto (Canada)

Plenary Session 4

De Greef, Willy

Executive Director, International Biotech Regulatory Services (Belgium)

Panel B-3

Desmarescaux, Philippe

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

Opening Session, Closing Session

Diderichsen, Boerge

Vice President, Corporate Research Affairs, Novo Nordisk (Denmark)

Track 3 Plenum 1, Track 3 Plenum 2

E**Ebeid, Nadia Makram**

Executive Director of the Center for Environment and Development for the Arab Region and Europe & Former Minister of State for Environmental Affairs, Egypt (Egypt)

Plenary Session 3

El Gamal, Youssry

Minister of Education, Egypt (Egypt)

Track 3 Plenum 1, Evening Event 2

El Itriby, Hanaiya

Director, Agriculture Genetic Engineering Research Institute (AGERI) (Egypt)

Panel B-3

El-Abaddi, Mohamed

CEO, Vacsera Holding Company (Egypt)

Evening Event 3

Elliott, Malcolm

Executive Director, The Norman Borlaug Institute for Crop Improvement (UK)

Panel B-4

Erbisch, Frederic

Former Director, Office of Intellectual Property, Michigan State University (USA)

Panel B-3

G

Gabr, Mamdouh

Secretary General, Egyptian Red Crescent Society (Egypt)

Plenary Session 1

Gardner, Phyllis

Associate Professor of Molecular Pharmacology & Medicine, Stanford University School of Medicine (USA)

Panel A-2

Gillespie, Iain

Head of Biotechnology Division, Science, Technology and Industry, OECD (France)

Panel A-3

Godard, Alain

CEO of Aventis CropScience (France)

Track 1 Plenum 1, Track 1 Plenum 2

Green, Anders

Professor and Consultant, Department of Applied Research and HTA (Denmark)

Track 3 Plenum 6

Gros, Francois

Honorary Permanent Secretary, Académie des Sciences (Secrétaire General) (France)

Nobel Day Session 1

H

Harford, Joe

Director, National Cancer Institute International Office (USA)

Panel A-4

Hassan, Mohamed

Executive Director, TWAS (Italy)

Opening Session

Hayashizaki, Yoshihide

Project Director and Chief Scientist, Genome Exploration Research Group, Genomic Sciences Center

(Japan)

Plenary Session 1

Helal, Hany

Minister of Higher Education, Egypt (Egypt)

Opening Session

Herrera-Estrella, Luis

Head, National Laboratory of Genomics for Biodiversity, Center for Research and Advanced Studies, the National Polytechnic Institute (Mexico)

Track 1 Plenum 1, Track 1 Plenum 2

Hirata, Tadashi

Former Chairman CEO, Kyowa Hakko Kogyo Co., Ltd. , Member of the Board, Japan Bioindustry Association (Japan)

Evening Event 3

Hirst, Sir Michael

Former Minister of Health (UK)

Track 3 Plenum 1, Track 3 Plenum 2

Huttner, Eric

General Manager, Diversity Arrays Technology Pty Limited (Australia)

Track 2 , Panel B-4

J**James, Clive**

Chairman and Founder of ISAAA (USA)

Plenary Session 3

Jamison, Dean

Senior Editor, Disease Control Priorities Project & Fellow, Fogarty International Center, National Institutes of Health (USA)

Plenary Session 2

Jarrett, Steven

Deputy Director, UNICEF Supply Division (USA)

Panel A-5

Johnson, Brian

Head of Biotechnology Advisory Unit , English Nature (UK)

Panel B-1

Juma, Calestous

Director, Science Technology & Innovation, Belfer Center for Science and International Affairs, Harvard University (USA)

Plenary Session 4

K**Kapur, Anil**

Vice Chairman of the Board of the World Diabetes Foundation (Denmark)

Track 3 Plenum 7

Khatib, Oussama

Regional WHO Medical Advisor, EMRO (Egypt)

Track 3 Plenum 6

Khush, Gurdev

Professor, University of California (USA)

Panel B-5

Kouchner, Bernard

Former French Minister of Health, Co-Founder, Doctors Without Borders (France)
Nobel Day Session 2

Kurokawa, Kiyoshi

President, Science Council of Japan & Director & Professor, Institute of Medical Sciences, Tokai University (Japan)
Panel A-3

L

Lachmann, Sir Peter

Emeritus Professor of Immunology, University of Cambridge & Head, Microbial Immunology Group, Centre for Veterinary Science (UK)
Plenary Session 1

Laporte, Ronald

Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh (United States of America)
Plenary Session 5

Luka, Sohail

Scientific Officer, European Commission - DG Research, International Scientific Cooperation (Unit N2), European Commission (Belgium)
Panel A-4

M

Madkour, Magdy

Assistant Director General, International Cooperation, International Center for Agricultural Research in the Dry Areas (ICARDA) (Syria)
Track 1 Plenum 1, Panel B-3

Madkour, Obsis

Faculty of Medicine, Cairo University, (Egypt)

Mahmoud, Adel

President, Merck Vaccines, Merck & Co. Inc. (USA)
Plenary Session 2

McConnell, David

Co Vice Chairman, EAGLES (Ireland)
Track 1 Plenum 1, Track 3 Plenum 1, Track 3 Plenum 2

Mohan, Viswanathan

Chairman & Chief of Diabetologist (India)
Track 3 Plenum 2, Track 3 Plenum 4, Track 3 Plenum 5

N

Nakhla, Rafik

Bibliotheca Alexandrina (Egypt)
Rapporteur

Nene, Vishvanath

Investigator, The Institute for Genomic Research (USA)
Panel B-2

Nobel, Joel*Founder and Professor Emeritus, ECRI (USA)***Panel A-2****Norrby, Erling***Secretary General, The Royal Swedish Academy of Sciences (Sweden)***Nobel Day Session 1****Nutti, Marilia***Researcher, National Research Center on Food Technology, Embrapa (Brazil)***Panel B-5****O****Oborne, Michael***Director, International Futures Programme, OECD - French Delegation (France)***Panel A-3****Omi, Koji***Former Japanese Minister of State for Science and Technology Policy; Chairman, the Diet Members Promotion Alliance for Life Science (Japan)***Opening Session****P****Padulosi, Stefano***Senior Scientist, Diversity for Livelihoods Programme, IPGRI (Syria)***Panel B-2****Paes de Carvalho, João***Corporate Development Director, Genoa Biotecnologia SA (Brazil)***Panel B-4****Pagliano, Daniel***President, Latin American Federation of National Biotechnology Companies Association (FELAEB) (Uruguay)***Panel B-2****Pan, Changyu***Professor, Chinese PLA General Hospital (China)***Track 3 Plenum 4, Track 3 Plenum 5****Pardey, Philip***Professor, Science and Technology Policy, University of Minnesota (USA)***Panel B-3****Patell, Viloo***Avesthagen, Founder & CEO (India)***Evening Event 3****Patermann, Christian***Director, Directorate E, European Commission. (Belgium)***Plenary Session 3****Persley, Gabrielle***Chair, Doyle Foundation (UK)*

Poortman, Ysbrand

Vice President, World Alliance of Organizations for the prevention and treatment of genetic and congenital conditions (Netherlands)

Panel A-1

Potocnik, Janez

European Commissioner for Science and Research, European Commission (Belgium)

Opening session

Potrykus, Ingo

Chairman, Humanitarian Golden Rice Board and Network to fight micronutrient malnutrition in developing countries (Switzerland)

Panel B-5

Prakash, Channapatna

Professor, Plant Molecular Genetics & Director, Center for Plant Biotechnology Research, Tuskegee University (USA)

Panel B-2

Pramming, Stig

Executive director, Oxford Health Alliance (Sweden)

Track 3 Plenum 7

R

Rabbinge, Roelof

Dean of Graduate Schools Wageningen University & Co-chair, InterAcademy Council (IAC) Study - Food for Africa (Netherlands)

Nobel Day Session 2

Ramaiya, Kaushik

Vice president IDF and Regional Chair IDF Africa (Tanzania)

Track 3 Plenum 3, Track 3 Plenum 5

Rangel-Aldao, Rafael

Director of Project Digital Molecular Medicine, Professor of Biotechnology, Simon Bolivar University (Venezuela)

Panel A-4

Rashid, Rashid M

Minister of Trade and Industry (Egypt)

Evening Event 3

Rezk, Mourad

Regional Medical Director, Novo Nordisk (Egypt)

Track 3 Plenum 6

Ricciardione, Marie

USA Embassy in Egypt (USA)

Panel B-1

Roglic, Gojka

Technical officer Diabetes, WHO (Switzerland)

Track 3 Plenum 2

Rubinstein, Ellis*President, New York Academy of Sciences (USA)***Panel A-3****Rubinstein, Joanna***Associate Dean for institutional affairs at Columbia University Health Sciences Division, Director Health and Science Initiatives, UN Millennium Project (USA)***Panel A-5****S****Sahai, Suman***Convenor, Gene Campaign (India)***Plenary Session 3****Sanjeevi, Carani***Associate Professor, Karolinska Institute (Sweden)***Track 3 Plenum 6****Sarpong, George***Professor of Environmental Law, University of Ghana (Ghana)***Plenary Session 4****Sauer, Francois***CEO Trans Am Group (USA)***Plenary Session 5****Schneider, Cynthia P***Distinguished Professor in the Practice of Diplomacy, School of Foreign Service & Public Policy Institute, George Town University & Former Ambassador of the USA to the Netherlands (United States of America)***Panel A-4****Serageldin, Ismail***Director of Bibliotheca Alexandrina, Chairman of European Action on Global Life Sciences, EAGLES (Egypt)***Opening Session, Plenary Session 4, Evening Event 3, Evening Event 2, Plenary Session 5, Closing Session****Shaltout, Azza***Vice President, Assistance to Young Diabetics-AYD (Egypt)***Track 3 Plenum 2****Shinozaki, Kazuo***Director of Plant Science Center, Riken Yokohama Institute (Japan)***Track 1 Plenum 2****Shotkoski, Frank***Director, Agricultural Biotechnology Support Project (ABSP) II, Cornell University (United States of America)***Panel B-4****Singer, Peter***Sun Life Financial Chair in Bioethics & Director, University of Toronto Joint Centre for Bioethics (Canada)***Track 2, Panel A-2**

Soliman, Salah

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

Rapporteur

Suojanen, Christian

Secretary General, European Federation of Biotechnology & Strategic Adviser, Europe Unlimited SA (Spain)

Panel A-3

Suzuki, Yasuhiro

Director, R&D Promotion for Innovative Pharmaceuticals and Medical Devices, Ministry of Health, Labour & Welfare (Japan)

Panel A-2

Swaminathan, M.S.

Chairman, M S Swaminathan Research Foundation (India)

Plenary Session 3

Swaminathan, Soumya

Deputy Director (Sr. Grade), Tuberculosis Research Centre (India)

Plenary Session 4

T

Thomas, Sandy

Director, The Nuffield Council on Bioethics (UK)

Track 2

Thomsen, Britta

European Parliament (Belgium)

Track 3 Plenum 2

Todd, David

Senior Evaluation Specialist, The Global Environment Facility (GEF) (USA)

Panel B-1

Tuomilehto, Jaakko

Professor, University of Helsinki (Finland)

Track 3 Plenum 2

V

Vadez, Vincent

Senior Scientist, ICRISAT, Crop Physiology Laboratory, GT-1 Biotechnology, India (France)

Track 1 Plenum 2

Valdez, Marta

Professor, University of Costa Rica (Costa Rica)

Panel B-4

Van Montagu, Marc

Chairman, Institute of Plant Biotechnology for Developing Countries, Ghent University (Belgium)

Track 1 Plenum 1

W

Walsh, Frank

Executive Vice President, Discovery Research, Wyeth (USA)

Plenary Session 1

Wambugu, Florence M.

CEO, Africa Harvest (Kenya)

Plenary Session 4

Z

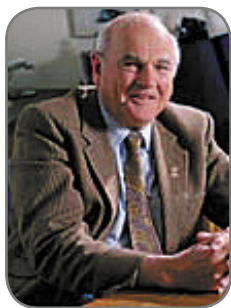
Zerhouni, Elias

Director, National Institutes of Health (USA)

Opening Session, Plenary Session 1, Plenary Session 2

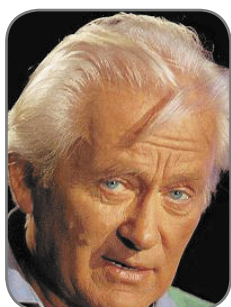
Nobel Laureates

Bio Vision Alexandria 2006



BLUMBERG, Baruch
1976 Physiology or Medicine

Dr. Blumberg received his M.D. degree from Columbia University and Ph.D. in biochemistry from Oxford University. Appointments early in his medical career included Chief of Geographic Medicine and Genetics at NIH (National Institutes of Health). Prior to his NAI Director appointment, Dr. Blumberg worked in clinical research, population oncology, and administration advisory positions with the Fox Chase Cancer Center (Philadelphia, PA). He has also served as Professor of Medicine and Anthropology at the University of Pennsylvania and as a Visiting Professor at Stanford University. From 1989 - 1994, he was Master of Balliol College, Oxford University. Dr. Blumberg received the 1976 Nobel Prize for Physiology or Medicine for his pioneering work to develop the hepatitis B vaccine.



CHARPAK, Georges
1992 Physics

Polish-born French physicist, winner of the Nobel Prize for Physics in 1992 for his invention of subatomic particle detectors, in particular the multiwire proportional chamber. Charpak became a French citizen in 1946. He received his doctorate in 1955 from the College de France, Paris, where he worked in the laboratory of Frederic Joliot-Curie. In 1959 he joined the staff of CERN (European Organization for Nuclear Research) in Geneva and in 1984 also became Joliot-Curie professor at the School of Advanced Studies in Physics and Chemistry, Paris. He was made a member of the French Academy of Science in 1985. Charpak built the first multiwire proportional chamber in 1968. Unlike earlier detectors, such as the bubble chamber, which can record the tracks left by particles at the rate of only one or two per second, the multiwire chamber records up to one million tracks per second and sends the data directly to a computer for analysis. The speed and precision of the multiwire chamber and its descendants, the drift chamber and the time projection chamber, revolutionized high-energy physics. Samuel Ting's discovery of the J/psi particle and Carlo Rubbia's discovery of the W and Z particles, which won Nobel Prizes in 1976 and 1984, respectively, involved the use of multiwire chambers; and by the 1990s such detectors were at the heart of almost every experiment in particle physics. Charpak's chamber also has applications in medicine, biology, and industry.

DOHERTY, Peter Charles
1996 Physiology or Medicine

Professor Peter Doherty shared the Nobel Prize in Physiology or Medicine in 1996 with Swiss colleague Rolf Zinkernagel, for their discovery of how the immune system recognises virus-infected cells. He was Australian of the Year in 1997, and has since been commuting between St Jude Children's Research Hospital in Memphis and the Department of Microbiology and Immunology at the University of Melbourne. His research is mainly in the area of defence against viruses. He regularly devotes time to delivering public lectures, writing articles for newspapers and magazines and participating in radio discussions.



LEHN, Jean Marie
1987 Chemistry

Jean-Marie LEHN was born in Rosheim, France in 1939. In 1970 he became Professor of Chemistry at the Université Louis Pasteur in Strasbourg and since 1979 he is Professor at the Collège de France in Paris. He shared the Nobel Prize in Chemistry in 1987 for his studies on the chemical basis of "molecular recognition" (i.e. the way in which a receptor molecule recognizes and selectively binds a substrate), which also plays a fundamental role in biological processes.



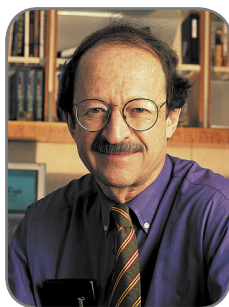
Over the years his work led to the definition of a new field of chemistry, which he has proposed calling "supramolecular chemistry" as it deals with the complex entities formed by the association of two or more chemical species held together by non-covalent intermolecular forces, whereas molecular chemistry concerns the entities constructed from atoms linked by covalent bonds.

Author of more than 700 scientific publications, Lehn is a member of many academies and institutions as well as of several industrial bodies. He has received numerous international honors and awards.



PRUSINER, Stanley
1997 Physiology or Medicine

Stanley B. Prusiner, M.D., is Director of the Institute for Neurodegenerative Diseases and Professor of Neurology and Biochemistry at the University of California, San Francisco. He received his undergraduate and medical training at the Univ. of Pennsylvania and his clinical training at UCSF. He is editor of 12 books and author of 330+ research articles. Prusiner is a member of the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences, the American Philosophical Society, and is a foreign member of the Royal Society, London. He is the recipient of numerous prizes, including the Potamkin Prize for Alzheimer's Disease Research from the American Academy of Neurology; Richard Lounsberry Award for Extraordinary Scientific Research in Biology and Medicine from the National Academy of Sciences; Gairdner Foundation International Award; Albert Lasker Award for Basic Medical Research; Paul Ehrlich Prize from the Federal Republic of Germany; Wolf Prize in Medicine from the State of Israel; Keio International Award for Medical Science; Louisa Gross Horwitz Prize from Columbia University; and the Nobel Prize in Physiology or Medicine. Prusiner discovered an entirely new class of pathogens, an infectious protein that he called a "prion" that replicates without nucleic acid. His work has created a new field of research that has resulted in revolutionary studies and progress in understanding degenerative diseases of the central nervous system.



VARMUS, Harold
1989 Medicine

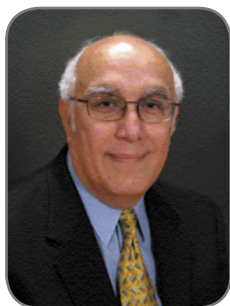
Harold Varmus, former Director of the National Institutes of Health and co-recipient of the 1989 Nobel Prize in Physiology or Medicine, has served as the President and Chief Executive Officer of Memorial Sloan-Kettering Cancer Center in New York City since January 2000.

Dr. Varmus received the Nobel Prize (jointly with Michael Bishop, his former colleague at the University of California, San Francisco) for elucidating the molecular and genetic mechanisms that underlie the transformation of a normal cell to a cancerous one. He is a member of the U.S. National Academy of Sciences and the Institute of Medicine. In addition to authoring hundreds of scientific papers and four books on the genetic basis of cancer, including an introduction to the subject for a general audience, Dr Varmus has been an advisor to the World Health Organization, the federal government, pharmaceutical and biotechnology firms and many academic institutions. He is also a founder of the Public Library of Science, a publisher dedicated to making the scientific literature freely available to everyone via the internet.

Harold Varmus majored in English literature at Amherst College, earned a master's degree in English at Harvard University, and graduated from Columbia University's College of Physicians and Surgeons.

Speakers' Biographies
& Abstracts

Bio Vision Alexandria 2006

**ABOU GHARBIA, Magid**

Senior Vice President & Head, Chemical & Screening Sciences, Wyeth Research

Dr. Abou-Gharbia received his BS in Pharmaceutical Sciences in 1971, MS in Organic Chemistry in 1974 from Cairo University, and PhD in 1979 from The University of Pennsylvania followed by a two-year NIH Postdoctoral Fellowship at Temple University. After joining Wyeth in 1982 he has advanced through roles of increasing responsibility to Senior Vice President & Head of Chemical & Screening Sciences. In his current role he oversees Wyeth's Chemistry and Screening Discovery research efforts at four sites. He and his research team have contributed to the discovery of many drugs including: first-in-class Antidepressant Effexor; Anticancer Agent Mylotarg; a Sedative Hypnotic Sonata; a Broad Spectrum Antibiotic Tygacil; a Non-Steroidal HRT Bazedoxifene; an anticancer rapamycin derivative, Toresil (Temsirolimus); and, an SNRI Antidepressant, Exsira (DVS-23). Scientific contributions include over 150 invited lectures, presentations and publications; inventor on 95 US-issued US patents and over 300 patents worldwide. His scientific achievements were recognized by receiving several awards. Scientific and Professional activities include ACS, AAAS, NYAS, The Royal Society of Chemistry, Board of Visitors, Temple U. Pharmacy School, and the Editorial and Scientific Advisory Boards of many journals. He holds several academic appointments: adjunct Professor of Medicinal Chemistry at Temple University, Cairo University and the University of Ferrara, IT.

Abstract**Innovative Pathways for a Healthier World**

M. Abou Gharbia, Senior Vice President & Head, Chemical & Screening Sciences, Wyeth Research

Drug Discovery and Development is a challenging and complex process that involves the dedicated multidisciplinary efforts of many R&D functions. It is becoming increasingly more expensive to carry out innovative drug discovery, and fewer novel therapeutics are making it to market. This story is seemingly the same across the entire industry. Many research organizations have adopted several approaches to ensure survival and success in the 21st century by building a robust pipeline which pipeline that promises to provide significant benefit to patients and caregivers in the coming years. Our Discovery Research group at Wyeth, perhaps one of the most productive and creative in the industry, has placed annually an impressive 12 new compounds into development since 2001. This was achieved by stepping up our internal R&D activities, putting in place key state-of-the-art enabling technologies such as Transcriptional Profiling, High Throughput Screening (HTS), and translational research capabilities. Success has also been achieved by bringing in in-licensed products, engaging in and through collaborations with several academic and industrial partners, and establishing research partnership initiatives and consortia in the US, Europe and Asia.

The lecture will give an overview of Wyeth Drug Discovery and Development process focusing on the role and application of key enabling technologies in enhancing innovation and productivity. The presentation will also highlight attributes of some of the recently marketed drugs and give examples of current health care access partnerships in the developing world.

AGUILAR, Alfredo

Head, Community Cooperation Activities Unit, International Scientific Cooperation, European Commission



From 01/10/2004 Head of the Unit Community Cooperation Activities. Directorate International Scientific Cooperation, DG Research, European Commission (EC). Budget ca 90Mio€/year

2002-30/09/2004 Head of the Unit Biotechnology and Applied Genomics. Directorates Health and Biotechnology, Agriculture and Food, DG Research (EC). Budget ca 150Mio€/year

1999-2002 Head of the Unit The Cell Factory. Directorate Life Sciences, DG Research (EC). Budget ca. 110Mio €/year

1997-98 Head of the Unit Demonstration Projects in Life Sciences, Directorate Life Sciences and Technologies, DG Research, (EC). Budget ca.20Mio €/year

1986-97 Biotechnology Unit, Directorate Life Sciences and Technologies, DG Research (EC). Scientific and Principal Scientific Officer

1985- Associate Professor of Microbiology (tenure), Faculty of Biology, University of León (E), and Faculty of Biology, University Complutense Madrid (from 1988)

1983 Visiting Professor, Institut für Zellbiologie, Eidgenössische Technische Hochschule (ETH), Zurich (CH)

1981-85 Associate and Assistant Professor of Microbiology, Department of Microbiology, University of León (E)

1979-81 Postdoctoral Research Fellow, John Innes Institute (Norwich, UK) with an EMBO fellowship

1975-79 Predoctoral Research Fellow, Institute of Enzymology (CSIC) - Department of Biochemistry. Faculty of Medicine, Autonomous University of Madrid

1974-75 Manager at the Chemistry R&D Department, Lever Ibérica (Unilever), Aranjuez (E)

Abstract

The International Scientific Dimension in Framework Programme 7 (2007-2013) and Success Stories from Previous Framework Programmes

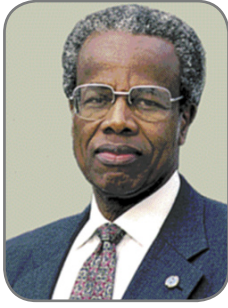
A. Aguilar, Head, Community Cooperation Activities Unit, International Scientific Cooperation, European Commission

The international scientific cooperation policy of the EU aims at developing cooperation to generate, share and use knowledge through equitable research partnerships taking into account the country, regional and socio-economic context and knowledge base of partner countries. The strategic approach is to enhance EU competitiveness and global sustainable development through such partnerships between the EU and third countries at bilateral, regional and global levels based on mutual interest and benefit. To this end the EU's role as a global player is also promoted through multilateral international research programmes. The international cooperation in scientific research is tightly connected to mainstream policy issues of the EU in order to address its international commitments and to contribute to sharing European values, competitiveness, socio-economic progress and welfare under the umbrella of global sustainable development.

Specifically, International cooperation in FP7 aims to support an international Science and Technology policy that has two interdependent objectives:

To support and promote European competitiveness through strategic research partnerships with third countries including highly industrialized and emerging economies in science and technology by engaging the best third country scientists to work in and with Europe.

To address specific problems that third countries face or that have a global character, on the basis of mutual interest and mutual benefit. With FP6 coming to its end this year and while looking ahead to FP7, some representative examples of International Scientific Cooperation in FP6 will be showcased during the talk.

**ALLEYNE, Sir George**

Director Emeritus PAHO: Editor DCP

Graduated from the University of the West Indies, entered academic medicine there, becoming Professor of Medicine in 1972. Joined PAHO in 1981, Director 1994-2002. Currently Director Emeritus PAHO, Chancellor University of the West Indies, UN Special Envoy for HIV/AIDS in the Caribbean, Visiting Professor Johns Hopkins Bloomberg School of Public Health; Editor DCP

Degrees; MD,FRCP

Distinctions; Knight Bachelor, Order of the Caribbean Community.

Abstract**Cardiovascular Diseases (CVD)**

G. Alleyne, Director Emeritus PAHO: Editor DCP

All countries have passed or are passing through the epidemiologic transition with increase in the burden of noncommunicable diseases, particularly CVD which are now the number one cause of death globally. It is less well known that CVD are now the leading cause of death (over 25% of all deaths) in low and middle income countries (LMIC). DCP examines ischemic heart disease (IHD), stroke and congestive cardiac failure (CCF) which together account for 80% of CVD burden. 82% of DALYs resulting from IHD occur in LMIC. Most CVD are attributable to a few risk factors: blood pressure, tobacco use, overweight, physical inactivity and abnormal blood lipids. Overweight is a major risk factor for diabetes which also contributes to the burden of CVD. DCP gives data for the cost effectiveness of pharmacological interventions for acute and long term management of CVD at the individual level and the pharmacological and non-pharmacological interventions at individual and population levels. There is no cutoff point for amount smoked, blood pressure, cholesterol or body weight as risk factors for CVD, thus the "absolute risk factor" approach, aiming to reduce any or all of these risk factors in the population, with benefits mainly depending on the underlying risk. A wide range of drugs is effective for treatment of CVD, but aspirin for treatment and secondary prevention of stroke and aspirin plus beta blockers for treatment and secondary prevention of acute IHD are the most cost effective interventions. The best strategy for reducing CVD burden is near universal access to effective drugs (perhaps a multi-drug regimen in a polypill) for those with existing CVD or clear risk, plus population interventions to reduce risk factors. The most effective population intervention is to raise tobacco taxes: others include regulation to change the composition of dietary fat or decrease sodium intake and facilitate increased physical activity.

AMARAL, Weber

Professor & CEO Brazilian Biofuels Programme

Weber A.N. Amaral, a Brazilian national, obtained his Ph.D. and M.A. degrees from Harvard University, USA. He also holds a Master of Sciences degree from the University of Sao Paulo (USP), Brazil. His research and professional interests are in the areas of sustainable use of biodiversity, biotechnology and biosafety, sustainable development and environmental public policy.



He is currently the CEO of the Brazilian Biofuels Programme (www.polobio.esalq.usp.br), and formally Senior Scientist at the International Plant Genetic Resources Institute, IPGRI (<http://www.ipgri.cgiar.org/>), based in Rome, coordinating the Global Forest Resources Project.

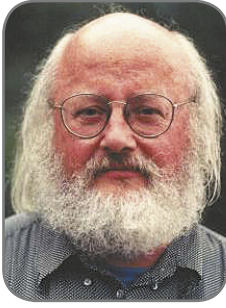
He is also an associated professor at the University of São Paulo (<http://www.esalq.usp.br>), ESALQ, Brazil (on leave). Prior to his current assignment at the University of Sao Paulo, he was an Assistant Professor, Agronomy and Forestry at the State University of Sao Paulo (UNESP: <http://www.fac.unesp.br>) from 1989 to 1996. He has published more than 50 articles in peer reviewed journals, several book chapters and two books. His professional career has included working as a researcher in Plant Genetics and Breeding and head of the Research Department of the company Votoratin Cellulose s/a in Brazil. Weber Amaral has been a consultant on Biodiversity for the Brazilian government, member of the International Advisory Group of the Pilot Programme on Tropical Rain Forests (PPG7), UNCTAD – Biotrade Programme, FUNBIO, NGOs and private sector. He speaks fluent Portuguese, English, Spanish and Italian.

Abstract

Challenges for Sustainable Production of Biofuels in Brazil: How green are they?

W. Amaral, Professor & CEO Brazilian Biofuels Programme

Biofuels have the potential to displace a significant amount of petroleum around the world in the next few decades, and this trend has already begun. But the full deployment of its potential requires concerted of actions, ranging from enabling policies, development and access to technology, quantifiable socio and environmental benefits compared to fossil fuels, capacity building and awareness. Several countries are in the process of developing biofuels policies with strong incentives to increase their production and promote their use for transport over the next few years, and thus creating markets that need to be attended, especially from developed countries. Biofuels can be either in a liquid form (like ethanol or biodiesel) or in gaseous form such as biogas and hydrogen. They are produced from biological sources like feedstock (cereals, grains, sugar crops and other starches), cellulosic materials (trees and wood processing waste), oil-seed crops (soybeans and rapeseed) or organic wastes (waste oil such as cooking oil and animal fat). The potential production of biofuels from crops depends on several factors acting at different temporal and space scales such as: agricultural policies, land availability, agricultural yield, cultivated area and the conversion yield (biofuels yield per ton of crop). To what extent, the production of biofuels might contribute to severe land use changes and to compete with food production, and yet be an important alternative for fossil substitution, is still under investigation and requires inter-disciplinary research and frameworks for their proper assessment. This paper addresses some of these key issues related to the production of biofuels, and their impacts (positive and negative) on socio-environmental indicators, using the Brazilian Programme for Production and Use of Biodiesel as a case study and other references from the Brazilian Ethanol Program.



AMMANN, Klaus

Director, Botanical Garden, University of Bern

Dr. Phil. University of Bern, Switzerland

Director Botanic Garden Bern

Prof. hon. University of Bern

Chair Biodiversity Section, European Federation of Biotechnology

Member Swiss Biosafety Committee etc.

UNIDO faculty on biosafety

Biosafety, Biodiversity, Conservation, History of Cultivars, Vegetation Ecology, Philosophy

Prof. emeritus by end of February 2006

Several research fellowships in Norway, United States, Jamaica



ANHOURY, Pierre

Principal, IMS Health

Pierre Anhoury, MD, MPH (master in public health), HRM (Healthcare Risk Manager) MD and MPH in France. HRM in Philadelphia and Chicago.

18 years healthcare consulting practice (Ernst & Young, Deloitte & Touche) with a broad experience in oncology:

- Built the strategic planning of most of the university hospitals dedicated to cancer treatment in France
 - Regular consultant for the national institutions in charge of cancer (Mission Cancer and Institut National du Cancer).
 - Regular consultant for pharma companies delivering drugs for cancer (Roche +++).
 - Worked on market access for innovative and expensive drugs in oncology and hematology
- Professor of healthcare management at the "French House of Oncologist".

BioVision rapporteur since 1999.

ARAB, Morsi

IDF Regional Chair Diabetes, EMME region

Prof. Morsi Arab, born 1932, Alexandria, Egypt. Currently Emeritus Professor of Medicine, university of Alexandria. Ex-Chairman of the Department of Internal Medicine. President of the Egyptian Diabetes Association. Regional Chairman of EMME Region International Diabetes Federation (IDF). Author of several books in internal medicine, history of medicine and Poetry.



Member of the American, Arab, Pan African and Mediterranean groups for the study of Diabetes. Member of the Egyptian Academy of Sciences and Technology. Member of the Egyptian Union of Writers. Founder of The Morsi Arab Social and Cultural Foundation

Abstract

Diabetes in EMME Region

M. Arab, IDF Regional Chair Diabetes, EMME region

The East Mediterranean and Middle East (EMME) Region extends from Pakistan on the east to Morocco on the west. Diabetes and IGT prevalence rates in this region are among the highest three prevalence in the IDF regions. In 2003, the mean prevalence of DM was 7.0% and IGT 6.8%. It is estimated that by the year 2005 these rates will rise to 8.0% and 7.4% respectively. Within the region, prevalence of DM varies quite widely. It ranges between 20.1% up and 3.1% down. and is highest at the gulf oil producing countries.

It is also expected that the prevalence of diabetes will be appreciably increased by 2005 in all individual countries.

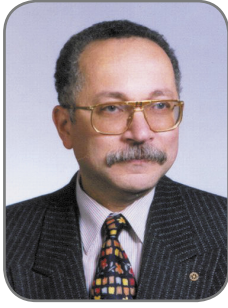
The high prevalence of DM and its progressive increase is certainly related to the dominant type of life style and the changes occurring in it. Epidemiological studies revealed an appreciably higher prevalence among urban compared to rural communities, especially in the rural desert, with a Bedouin life style.

The general structure of population has a pyramidal form, with about half of it below age 20.

While DM prevalence is much lower below age 20 it progressively increases with age.

The effect of change of life Style on diabetes and other metabolic dysfunctions was demonstrated by the study on the Egyptian Nubians migrating to urban communities This led to about three fold increase in diabetes and other metabolic parameters.

Studies in the region also revealed that the state of glyceamic control, body weight, blood pressure and other metabolic parameters are much less than the accepted levels according to WHO recommendations. (For example, only 19.8% of fasting and 13.5 % of post prandial blood sugar, 53% of Systolic and 64% % of diastolic blood pressure, and 18.8% of BMI levels were within the accepted levels).



ASSAAD-KHALIL, Samir Helmy

Professor of Internal Medicine. Unit of Diabetes & Metabolism. Faculty of Medicine, Alexandria University, Egypt

Professor of Internal Medicine. Unit of Diabetes & Metabolism, Alexandria Faculty of Medicine. Education: MBChB Alexandria 1971. MD Thesis Germany 1975. Doctor Degree Alexandria 1982. Post Doctoral Paris University 1983-84. Member of the Council of the DESG (Diabetes Education Study Group) of the EASD (European Association for the Study of Diabetes). Granted the Scientific Research Award, Alexandria University in 1986. Award of the ALFEDIAM Paris in 1989. Received the Research Award Medal, Lucentina University, Alicante, Spain in 1990. The Diabetes Education Award Geneva in 1997. Awards of the Egyptian Medical Syndicate in 1996 & 1999. Received the EASD - DESG Award for the best research in the field of Diabetes Therapeutic Patient Education during the IDF Congress Paris 2003. Wrote & produced a film: "The Diabetes Jinns' Party awarded the EASD Award 2003 & Rotary International Award, Cyprus 1999. Co-author of the National Guidelines for Diabetes Management issued in 2003 & 2005. Author of the Arabic Diabetes Letters of the DESG and Author or co-author of books related to diabetes and metabolism; the latest is "Diabetes in the Arab World published in the UK in 2005. Editor-in-Chief of the Journal of the Egyptian Association of Endocrinology, Diabetes & Metabolism. Foundation of the Youth Diabetes Registry. Foundation & management of two non-profit hospitals in Alexandria. Author of 140 publications in the field of Diabetes, Lipidology or Metabolic Diseases

Abstract

Diabetes in Egypt

S. H. Assaad-Khalil, University of Alexandria, Faculty of Medicine, Alexandria, Egypt

Egypt has one of the higher prevalence rates of diabetes (DM) which will continue to increase. In fact, a growth rate of 9.3% was estimated in 1992, 10.2% in 2000 and an expected rate of 13.3% in 2025. Factors driving a rapid increase of the burden of DM include population growth, particularly the ageing one and rising prevalence of obesity. This is further complicated by the rapid change in a society increasingly adopting the "global" culture, urbanization, westernization of lifestyles, economic development and some local social factors. This will have its burden on the individual's health as well as on the society. An IDF publication 2002 reported a 41% prevalence of retinopathy among Egyptians with DM. A conjoint survey between Alexandria University & the Mario Negri Institute, Italy, revealed that the probability of surviving free from complications for 20 years in Alexandria among subjects with T2 DM is 30% for neuropathy, 66 % for nephropathy, 44% for retinopathy, 77% for cardiac complications & 71% for diabetic foot. Among many features of inappropriate health care, only 50% of non-insured patients have regular follow up visits, less than 50% of them have ever been subjected to health education & less than 8% have regular SBGM. Local myths & misconceptions in relation to the disease & its management besides an illiteracy rate of more than 40% accentuate even more the problem. On the other hand, a simple intervention on school children with Type 1 DM and their parents: a full one day camp and the projection of an educational locally made Egyptian video film. "The Diabetes Jinn's Party" resulted in marked improvement in the knowledge, practices, attitudes and even on the management outcome (HbA1C 9,72% vs. 7,75%) This beneficial outcome is due to the fact that the intervention has been especially designed and tailored to the target population; which is the real challenge!

BADR, Effat

Professor Emeritus, Department of Genetics, Faculty of Agriculture, Alexandria University



PhD Columbia University, USA, 1963

Professor of Genetics, Alexandria University, 1977–99

Chairman, Department of Genetics, Alexandria University, 1991–94

Vice-President, Egyptian Society of Genetics, 1979–84, 2001–present

Chairman of the Permanent Scientific Committee of Genetics, Supreme Council of Universities, 1995–98 and member of the Board, 1978–present

Fulbright Award, Genetic Engineering Research, Harvard University, 1984

Visiting Professor, National Center for Scientific Research (CNRS) France 1979 and Grenoble University, 1983

Notional Award in Agricultural Sciences Egypt, 1974

Medallion of Sciences and Arts, 1st Class, Egypt, 1976

Listed in the Encyclopedia of Egyptian National Figures, 1989

Member of the Task Force Committee on Biotechnology, center for International Development at Harvard University, 1999–present

Member of the High Education Sector Committee of Genetic Engineering and Biotechnology, Supreme Council of Universities, 1998–present

PI of Several Joint Scientific Projects with American and French Universities

Director of Central Laboratory of Biotechnology, Faculty of Agriculture, 1992–95

Chairman of Molecular Biology Unit, University of Alexandria Research Center, 1978–84

On the editorial board of the Egypt. J. of Genetics and the Arab J. of Biotechnology

Member/member of board of several NGOs concerned with society and the environment

Active in promoting public awareness on Genetic Engineering Biotechnology and environment through public lectures and the media

Member of the Biotechnology and Genetic Engineering Committee, Mubarak City of Science and Technology, Burg El Arab, Alexandria, 2002–present.



BADRAN, Ibrahim

Former Minister of Health, Egypt

Professor Ibrahim Badran was born in 1924, in Egypt .

He had his M.B. CH.B from Cairo University , Faculty of Medicine in 1947, and his M.Ch, M.D. from Cairo University in 1951.

Professor Badran is one of the leading and eminent surgeons and he is known as the father of Surgery in Egypt . He has been a University Professor and Chairman of Surgery Department, Cairo University since 1966, President of the University, 1978–1980.

He served as the Egyptian Minister of Health (1976–1978).

He was the President of the Academy of Scientific Research and Technology (1980–1984), Chairman of the Specialized Research Council of Medical Sciences since 1984, Chairman of National Social Services Council since 1996, member of Supreme Council of Islamic Affairs, member of Islamic Research Organization, Al-Azhar since 1995, Medical Consultant of WHO, member of the board of governors of the Islamic Medicine Organization, Fellow of Royal Society of Medicine, Chairman of the Specialized National Council for Medicine in Egypt.

He is author of 7 books dealing with health policy in Egypt, future of scientific research, development of university education and development of human resources.

Professor Badran has 120 scientific papers in surgery and articles in different medical and social disciplines.

Professor Badran was elected a Fellow of the IAS in 2001.

BAHIELDIN, Ahmed

Professor of Genetics, Faculty of Agriculture, Ain Shams University, Egypt & Senior Scientist, AGERI, ARC, Giza, Egypt

Abstract

Field Evaluation of Transgenic Wheat Plants Stably Expressing the HVA1 Gene for Drought Tolerance

A. Bahieldin, Professor of Genetics, Faculty of Agriculture, Ain Shams University, Egypt & Senior Scientist, AGERI, ARC, Giza, Egypt

H.T. Mahfouz

H.F. Eissa, O.M. Saleh

A.M. Ramadan

I.A. Ahmed

W.E. Dyer

H.A. El-Itriby

M.A. Madkour

The barley HVA1 gene, encoding a member of the group 3 late embryogenesis (LEA) proteins, was previously introduced into spring wheat cv. Hi-Line to determine its effect on drought tolerance (Sivamani et al. 2000). T₄ progeny from six independent transgenic events (lines 111/1, 1/1, 11/2, 84, 765 and 1201) were tested in nine field experiments over six cropping seasons. In the first two seasons, total biomass/plot and grain yield/plot of line 111/1 were higher than line 1/1, while higher than the wild type control in the second season. Grain yield/plot of line 11/2 was significantly lower than transgenic lines 111/1 and 1/1 in the third season, and this line was not tested further. In the fourth season, plant height and grain yield/plot of line 111/1 were significantly higher than those of the wild type control. Under dryland conditions in the fifth season, line 111/1 had significantly greater plant height, total biomass/plot and grain yield/plot than the wild type control in at least two out of the four locations as well as across locations. In the sixth season, newly developed transgenic lines 1201 and 765 significantly overyielded the two original transgenic lines 111/1 and 1/1, the non-expressing transgenic line 84 as well as the wild type control in the three yield attributes and leaf water measurement namely relative water content (RWC). This result coincided with that of the rate of HVA1 transgene expression of different genotypes. Differences in total seed-storage protein concentrations among the transgenic lines and the wild type control within or across environmental conditions were insignificant. These field trials showed that the HVA1 gene has potential for conferring drought stress protection in transgenic spring wheat.





BOUIS, Howarth
Director, HarvestPlus

Howarth Bouis is the Director of HarvestPlus, an interdisciplinary, global alliance of research centers and implementing agencies working together to develop and disseminate micronutrient-dense staple food crops and to measure their impact in improving nutrition. Since 1993, he has sought to promote "biofortification" activities both within the Centers of the Consultative Group on International Agricultural Research (CGIAR), including their partner National Agricultural Research and Extension Systems (NARES), and in the human nutrition community -- through publications, seminars, workshops, symposiums, and fund-raising.

As Director of HarvestPlus, Dr. Bouis holds a joint appointment at the International Center for Tropical Agriculture (Cali, Colombia) and the International Food Policy Research Institute (Washington, D.C.). His past research has concentrated on understanding how economic factors affect food demand and nutrition outcomes, particularly in Asia. Howarth Bouis received his B.A. in Economics from Stanford University and his M.A. and Ph.D. from Stanford University's Food Research Institute.

Abstract

HarvestPlus: Breeding Crops for Better Nutrition

H. Bouis, Director, HarvestPlus

HarvestPlus is an inter-disciplinary, international program to breed for mineral and vitamin dense varieties of food staples, that is to develop "biofortified" rice, wheat, maize, sweetpotato, beans and cassava for release to farmers in developing countries. Target micronutrients are iron, zinc and beta-carotene.

The biofortification strategy seeks to take advantage of the consistent daily consumption of large amounts of food staples by all family members, including women and children who are most at risk for micronutrient malnutrition. Predominately staple diets of low-income households are an underlying cause for over 2 billion cases of iron and zinc deficiency in humans worldwide and 250 million children who are deficient in vitamin A.

After the one-time investment is made to develop seeds that fortify themselves, recurrent costs are low and germplasm may be shared internationally. It is this multiplier aspect of plant breeding across time and distance that makes it so cost-effective. Once in place, the biofortified crop system is highly sustainable. Biofortification provides a feasible means of reaching malnourished populations in relatively remote rural areas, delivering higher-nutrient foods to people with limited access to commercially-marketed fortified foods.

Mineral packed seeds sell themselves to farmers because, as recent research has shown, these trace minerals are essential in helping plants resist disease and other environmental stresses.

HarvestPlus is a Challenge Program of the Consultative Group on International Agricultural Research (CGIAR). It is organized around the following component themes: Plant Breeding, Human Nutrition, Biotechnology, Food Processing, Impact and Policy, Reaching End User and Communication. Conventional breeding is currently emphasized, while it is expected that potentially more powerful transgenic methods will be employed as deployment of GMOs becomes more widely accepted.

BREMAN, Joel

Senior Scientific Advisor, Fogarty International Center, National Institutes of Health.



Joel Breman, MD, DTPH, was educated at the University of California, Los Angeles (UCLA); Keck School of Medicine, University of Southern California (USC); and the London School of Hygiene and Tropical Medicine. He is trained in internal medicine (USC), infectious diseases (Harvard), and epidemiology (Centers for Disease Control and Prevention, CDC). Dr. Breman was advisor to the Guinean Smallpox Eradication-Measles Control Program from 1967-1969. From 1972-1976, he was responsible for disease surveillance and vaccine research with the Organization for Coordination and Cooperation in the Control of the Major Endemic Diseases in Burkina Faso. In 1976, in the Democratic Republic of the Congo, Dr. Breman investigated the first outbreak of Ebola Hemorrhagic Fever. He was in the Smallpox Eradication Unit, World Health Organization (WHO) from 1977-1980, responsible for orthopoxvirus research and the certification of global eradication. In 1980, Dr. Breman returned to the CDC where he began work on malaria, a continuing passion. Dr. Breman joined the Fogarty International Center of the U.S. National Institutes of Health (NIH) in 1995, and has been Deputy Director of the Division of International Training and Research and Senior Scientific Advisor. Dr. Breman has authored over 100 publications focused on infectious diseases and research capacity strengthening in developing countries. He is co-managing editor of the Disease Control Priorities Project.

Abstract

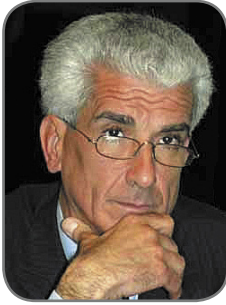
Infectious Diseases and the Disease Control Priorities Project (DCPP)

J. Breman, Senior Scientific Advisor, Fogarty International Center, National Institutes of Health.

Infectious Diseases and DCPP: Infectious diseases are controlled in many rich countries yet continue to imperil poor nations. Sub-Saharan Africa, with 13% of the population of low- and middle-income countries (LMIC) contributes 25% of the Disability-Adjusted Life Years (DALYs) and 54% of infectious disease DALYs: 27% of the LMIC infectious diseases burden is in South Asia, 12% in East Asia, 3% in Latin America, and 2% each in the Middle East and Europe/Central Asia. Lower respiratory infections, HIV/AIDS, diarrhea diseases, tuberculosis and malaria are among the top ten causes of death in developing countries. Interventions against many infectious diseases have proven extremely cost effective, particularly childhood vaccinations. For malaria, intermittent preventive treatment of pregnant women to prevent low birth weight and maternal anemia, use of insecticide-treated bed nets, and switching to artemisinin combination therapy when parasite resistance prevails are very cost effective. For HIV/AIDS, peer education of those at risk, counseling and testing, diagnosis and treatment of sexually transmitted infections, condom promotion, blood safety, and prevention of mother-to-child transmission have attractive cost-effectiveness ratios. For low burden diseases, there are many cost effective

interventions: albendazole for geohelminths; case finding for leishmaniasis; ivermectin for onchocerciasis; and drugs and surgery for trachoma. The emergence of microbial resistance to drugs and insect resistance to insecticides has created a dangerous environment for patients and communities. Research is essential to understand the resurgent old and newly-emerging pathogens and to develop better diagnostics, drugs, vaccines, insecticides, and social approaches to combat them.

Professor Badran was elected a Fellow of the IAS in 2001.



CARLONE, Claudio
Chairman, Hypothesis

Claudio Carlone, born in Rome in 1952, is the President of Hypothesis – a company specialized in communications, special projects, corporate image, and public and institutional relations – which he founded in 1989 to provide strategic consulting services in the hi-tech sector to a wide variety of firms and institutions.

Carlone received a degree in chemical engineering and biology from the University of Rome “La Sapienza” (1977) and later conducted research in biotechnology at the Italian National Research Council.

In the 1980s, Carlone launched a career in communications, focusing on the relationship between science, enterprise and society and the role of new technology in development.

Since the 1990s, he has worked as a strategic advisor in the hi-tech and financial sectors. He served on the boards of listed companies and is a partner in the Nuovo Mercato of Borsa Italiana (the Italian Stock Exchange's index of hi-tech firms).

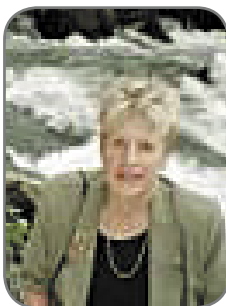
Carlone's other activities include acting as the Coordinator of the Milan Chamber of Commerce's Advisory Board for the Innovation Centre Project launched in 2005. He was the Secretary General of the Commission for the recovery plan for the former Falck industrial area in Sesto San Giovanni (Milan) and coordinated Milan's Committee for Science and Technology (CAST).

Carlone has chaired or participated in numerous international seminars, conferences and congresses.

He is a member and past president of the Rotary Club Milano-Ovest, sits on the board of APE (Italian Association for Economic Development) and is a member of the Società del Giardino (Italy's oldest social club).

His personal interests include music and offshore sailing.

He speaks English, French and Spanish.



CATLEY-CARLSON, Margaret
Chair, Global Water Partnership

Margaret Catley-Carlson is actively involved in organizations that apply science and knowledge to national and international problems in freshwater governance, health, agriculture, environmental protection, international development and development finance. She is Chair of The Global Water Partnership, of the Board of ICARDA (Agricultural research in dry areas) in Syria, and The Water Resources Advisory Committee for Suez/Lyonnaise of Paris. She is Vice Chair of the International Development Research Centre in Ottawa and a member of the Board of IIED in London and the Library of Alexandria (Egypt). Mrs. Catley-Carlson was president of CIDA, the Canadian International Development Agency (1983-89), and of the Population Council (91-99). Her professional career began as a career diplomat Canada; she has been Deputy Minister of Health in Canada, and Deputy Director (Operations) of UNICEF, with the rank of Assistant Secretary-General of the United Nations. She has received eight honorary degrees and became an Officer of the Order of Canada in 2002.

CHEN, Zhu

Vice President of Chinese Academy of Sciences; Director of Shanghai Institute of Hematology

Prof. Zhu Chen born in Shanghai on August 17, 1953, got his master's degree at Shanghai Second Medical University in 1981 and doctor's degree at Paris VII University in 1989, and presently is member and Vice President of Chinese Academy of Sciences, Foreign Associate of National Academy of Sciences of US, Titular Member of European Academy of Arts, Sciences and Humanities, Foreign Associate of French Academy of Sciences, Co-Chair of InterAcademy Panel, Director of Chinese Human genome center at Shanghai, Director of Shanghai Institute of Hematology and Director of Shanghai Center for Systems Biology at Shanghai Jiao Tong University. He is devoted to research on leukemia, in the field of which he is well-known for the advancement of molecular target-based therapy of human cancer after the breakthroughs in the clinical and molecular study of the treatment of acute promyelocytic leukemia with all-trans retinoic acid and arsenic trioxide. He is also now playing a leading role in human genome project of China. Dr. Zhu Chen was the first non-French winner of "Prix de l'Qise" by "La Ligue Nationale contre le Cancer" of France. In October 2002, he was awarded "Chevalier de l'Ordre National de la Légion d'Honneur".



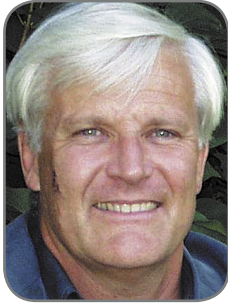
CHIEKO, Ikeda

Director for Advanced Medical Science, Division of Life Science, Ministry of Education, Culture, Science and Technology

Since 2006, Ikeda Chieko has been Director for the Advanced Medical Science Division, Ministry of Education, Culture, Sports, Science and Technology. In this position, she has been promoting large scale life science research projects which are directly funded by our division, such as genomic research, generation and regeneration research, brain research, cancer research and so on. She received a Medical Doctor degree (M.D.) from Tsukuba University, School of Medicine in 1988, and a Master of Public Health degree and a Master of Science degree from Harvard School of Public Health in 1996.

Ikeda Chieko has worked in the area of health care policy and management for 17 years at Japanese government, Prefectural government and international organization such as WHO and UNAIDS. Her career-long interest has been how to promote human health care through innovation in the field of life science and administrative system reform.



**CHRISTIE, Werner**

Science and Technology Counselor, Royal Norwegian Embassy, Beijing & Former Minister of Health, Norway

Born in Oslo April 26th, 1949. Married, 2 children.

Werner Christie is a former Minister of Health of Norway, and former chair of the Biotechnology Advisory Board of Norway. Werner is a Medical Doctor also educated in Social Science. He also has more than 13 years experience as a part-time farmer.

He has worked as a public health officer and hospital manager in Norway and has done research and published a textbook in the planning and management of health care. He has served on a number of boards for health care providers, investors and start-ups, including European Federation of Biotechnology and ScanBalt network of Biotech networks. He was for 5 years a special advisor in medical and Biotechnology for the Norwegian Trade Council, and served two years in that function in San Francisco. He chaired the development of WHO's "Stop TB" initiative (www.stoptb.org), a worldwide public – private partnership against tuberculosis, from its beginning until it included more than 40 global organizations.

In 2001 he started his own fulltime consulting business, "World Health Connections", focusing on entrepreneurship and investment strategies in Medical and Biotechnology and advising both private and public enterprises.

He was May 2004 appointed as Science and Technology Counselor for the Royal Norwegian Embassy, Beijing, where his work is mainly focused on energy, environmental, building, medical, marine and bio- science and technologies.

Abstract

Facilitating Biotech to Make a Good Impact for a More Balanced Development of the World
W. Christie, Science and Technology Counselor, Royal Norwegian Embassy, Beijing & Former Minister of Health, Norway

This presentation will draw on the speakers experience form national and international public health, as well on his roles as former Minister of Health and Chair of the Biotechnology advisory board in Norway. To make biotechnology a tool for a more equitable development of health in the world, it is necessary to scrutinize the conditions under which biotech is implemented, and the premises laid out for its further development. This will lead us to explore how both globalized politics and the world economic system influence the priorities and directions for biotech innovation. Given an overview and perspective of these systems dynamics, we need to analyze both favorable and adverse influences and consequences too chose strategic actions and points of optimum leverage for change.

Given an effective combination of the right vision , with necessary political push and economical pull, it can be possible to improve the impact of biotechnology on a more harmonious and balanced development in the world.

CLARK, Brian

European Federation of Biotechnology, Vice President

Education

1961 PhD (Chemistry), Cambridge University

1975 ScD (Molecular Biology), Cambridge University Career

1964-74 Member of Scientific Staff, MRC Laboratory of Molecular Biology, Cambridge

1974- Professor of Biostructural Chemistry, University of Aarhus, Denmark

Achievements

1966 Discovery of the Initiation Codon for protein synthesis and thus coding of protein starts

1968 First crystallization of a tRNA molecule

1985 Determination of the first structure of a GTP-binding domain

1995 Crystal structure of the ternary complex of Phe-tRNA^{Phe}, elongation factor Tu and GTP

1995- Studies on the concepts of structural macromolecular mimicry

Areas of Research Interests

- Macromolecular mimicry and molecular mechanism of protein synthesis
- Protein engineering of factors involved in protein synthesis
- Molecular and cellular mechanism of ageing
- Use of phage display to identify differential cellular gene expression
- Functional genomics and technology transfer

Outside Activities

1996-2005 Chairman of the Danish Centre for Molecular Gerontology

1998-1999 Chairman of FEBS (Federation of European Biochemical Societies)

2000-2003 President of the IUBMB (International Union of Biochemistry and Molecular Biology)

2001- Chairman of TGIR (Task Group on International Relations) of the European Federation of Biotechnology

2001- Member of the Board of Advisors of BankInvest

2003 Vice-Chairman of EMBO Council

Honors

1974- Member of European Molecular Biology Organization (EMBO)

1980- Foreign Member of the Royal Danish Academy of Sciences and Letters

1988- Member of the Danish Academy of Natural Sciences (DNA)

2001- FEBS Diplôme d'Honneur

2005- Copernicus Medal from the Polish Academy of Sciences



Abstract

International Strategic Cooperations in Biotechnology for Europe via the EFB

B. Clark, European Federation of Biotechnology, Vice President

The Task Group on International Relations (TGIR) is an activity under the aegis of EFB (European Federation of Biotechnology) aiming to facilitate national and International (European and global) interactions. TGIR's role is to provide EFB, the European Commission and other organizations with contacts, avenues and proposals on how to implement the mission of EFB with respect to international relations, in particular focusing on countries outside Europe. TGIR will discuss and formulate strategic considerations and proposals on how the European Union best can handle strategic relations in biotechnology and the life sciences related to innovation, research, human capital, training, infrastructures, public perception and ethical issues. TGIR will foster an internationally-oriented entrepreneurial spirit in Europe by encouraging technology transfer and commercialization resulting in start-up companies.

EFB will thus support training of management skills and networking of financing opportunities. EFB is the pan-European organization well placed to facilitate broad interaction and collaboration between Europe and the rest of the world in innovation, research and training in the field of biotechnology.

So far EFB has received approval from the EC programme for the EFBIC (European Focus on Biotechnology in China) project.

**COLLENS, Lewis**

President, Illinois Institute of Technology

Lewis Collens has served as president of Illinois Institute of Technology since 1990.

He holds degrees in accounting (B.S., U. of Illinois), philosophy (M.A., U. of Illinois) and Law (J.D., U. of Chicago). He joined IIT's Chicago-Kent College of Law as Professor of Law in 1970 (teaching corporate and securities law), and was serving as a Law and Humanities Fellow at Harvard Law

School when he was named Dean of Chicago-Kent in 1974.

Before joining Chicago-Kent he practiced law in Chicago and Washington, D.C., was Controller of Robeson's department store in Champaign, Ill., and was Co-founder and Chairman of BAR/BRI Educational Publishing Co.

He currently serves as a director of Dean Foods Company, AMSTED Industries, Alion Science and Technology Corp. and The Colson Group, Inc.

He has been very active in civic and professional activities, including service as a member of the Advisory Committee of The Partnership for New Communities; President, Leadership Greater Chicago; Director, The Economic Club of Chicago; Chairman, Association of Independent Technological Universities; Director, National Association of Independent Colleges and Universities; Trustee, The Latin School of Chicago, and a member of the Mayors Council of Technology Advisors.

He is a life long Chicagoan where he lives with his wife Marge. They have one son, Steven.

Abstract

The Role of Biotechnology Research Parks in Economic Development, Technology Transfer, and Public Health

L. Collens, President, Illinois Institute of Technology

The role of biotechnology research parks in economic development, technology transfer, and public health University and government affiliated research parks are an established mechanism to grow new ventures and promote economic development. The majority of the world's university and government-affiliated research parks identify biotechnology as the primary focus of their efforts. This presentation examines the experience gained in the 40-year history of biotechnology research parks in the developed world. Beginning with an overview of the economic benefits derived from university based research parks, I will discuss the economic, legal and regulatory conditions necessary for the effective transfer of technology from the university to the commercial world. This will include a review of strategies undertaken by governments to reform intellectual property law; promote anti-trust activity that fosters collaborative research; and advance regulatory frameworks that accelerate the process of bringing new products to market. Finally, I will compare issues surrounding research imperatives, technology transfer, and public health in mature collaborative environments such as North America, Europe, and Asia and their relationship to the evolving situation in South America, the Middle East, and Africa.

CUNNINGHAM, Patrick

Professor of Animal Genetics, Trinity College, Dublin & Chair, IdentiGEN Ltd



Patrick Cunningham is Professor of Animal Genetics in Trinity College, University of Dublin. He was formerly Deputy Director (Research) in the Irish National Agriculture and Food Research Institute (1980 - 1988), visiting Professor at the Economic Development Institute, World Bank (1988) and Director of the Animal Production and Health Division, Food & Agriculture Organization of the UN, Rome (1990 - 93). He has published extensively on the genetics of domesticated animals. He is co-founder and Chairman of the biotechnology company IdentiGEN. He has been President of the European and World Associations of Animal Production, and served on the European Life Sciences Group which advised Commissioner Busquin.

Abstract

The New Challenges that will Drive the Research Agenda

P. Cunningham, Professor of Animal Genetics, Trinity College, Dublin & Chair, IdentiGEN Ltd

The notion of “the end of history” has proved premature. New challenges are forcing change in global food production, trade and consumption at unprecedented rates. There are steadily increasing pressures on world resources of land, water, energy, environment and climate. There is growing disparity between those whose food chain is secure and those for whom it is precarious. The need for well directed investment in research to find solutions to these challenges has never been greater.

Among the major issues are:

- Changing patterns of consumption – in particular the increasing use of meat and dairy products that comes with growing wealth and urbanization
- The changing food chain – longer, more complex, and often with greater potential for threats to human health
- Globalization, with an increasing proportion of foods traded internationally, producing exceptional pressures for change in production systems in many countries
- The energy sector, the greatest single factor in economic security, and intimately connected to food security
- The environment, with climate change the central concern, and with huge implications for food production systems, particularly in fragile areas

The research agenda to meet these challenges is different from that of the past. Formerly, yield enhancing or cost reduction technologies were the main objective. Pre and post evaluations of research showed good cost/benefit returns to the users of the technologies, and through them to society. The new agenda is directed more at the delivery of public goods, and the formal evaluation of returns is correspondingly more difficult. Despite this, the scale and urgency of the research challenges is greater than ever.



DAAR, Abdallah

Professor of Public Health Sciences

Dr. Daar is Professor of Public Health Sciences and Surgery at the University of Toronto, where he is Director of Ethics and Policy at the McLaughlin Centre for Molecular Medicine. He studied medicine in Uganda and London and went to Oxford University for postgraduate training in surgery and internal medicine and a PhD in immunology. He taught at Oxford for several years before going to the Middle East to help start two medical schools. He took up the foundation Chair of Surgery in Oman in 1988.

He has co-authored five books and has about 300 publications in immunology, immunogenetics, transplantation, surgery, global health and bioethics. He has been an expert advisor to WHO and OECD, and is currently chair of the External Review Committee of the WHO/World Bank/UNDP/UNICEF Special Program on Tropical Diseases Research and Training. He is a member African Union High-Level Panel on Modern Biotechnology.

He is a Fellow of the New York Academy of Sciences and is on the Ethics Committee of the Human Genome Organization. He holds the official world record for performing the youngest kidney transplant.

In 1999 he was awarded the Hunterian Professorship of the Royal College of Surgeons of England. In 2005 he was awarded the Anthony Miller Prize for Research Excellence at the University of Toronto and the UNESCO Avicenna Prize for Ethics of Science. His current research interests are in exploring how the life sciences can be used effectively to ameliorate global health inequities.

Abstract

Life Sciences and Development in Africa

A. Daar, Professor of Public Health Sciences

Science and technology are becoming increasingly important as critical elements for Africa's development. The African Union has recently created a High-Level Panel on Modern Biotechnology. I will describe recent research results highlighting the crucial role of the life sciences in improving health, agriculture and the environment. I will also describe the work of the Panel so far and examine some science policy implications of our work.

DE GREEF, Willy

Executive Director, International Biotech Regulatory Services



Willy De Greef is a plant biologist with extensive experience in tropical crop breeding (through research management positions in Congo, Malawi and Cameroon) and in technology transfer related to agricultural biotechnology. He has been head of regulatory affairs for two biotechnology leaders, Plant Genetic Systems in the 1980S, and Syngenta Seeds from the late 1990s. He has been involved in the policy and public debate around agricultural biotechnology since 1986 (OECD, UNIDO, Biodiversity Convention, Cartagena Biosafety Protocol) and involved in the development of the regulatory framework since then. He is currently head of the consultancy company International Biotech Regulatory Services, based in Belgium, and specializes in the development of rational regulatory frameworks for biotechnology for developing countries and in capacity building for biotechnology researchers in the developing world in biosafety assessment and regulatory compliance.

Abstract

The 20th Anniversary of the OECD Blue Book: Taking stock

W. De Greef, Executive Director, International Biotech Regulatory Services

Twenty years ago OECD published a document titled “Recombinant DNA safety considerations”, the outcome of three years of work by a group of experts charged with creating common technical guidance for the evaluation of safety in GMOs. It became known in the biotech community as “the Blue Book”. This set of guidelines today is still the basis of the national regulations in almost all countries that have set up a regulatory framework for agricultural biotechnology.

The quality of the Blue Book is best demonstrated by the fact that in the time since its publication more than 20000 experimental field releases have been managed safely, and since 1995 a total of over 400 million hectares of GM crops have been grown and consumed safely. Nevertheless, the Blue Book is under pressure from two opposing sides:

- The Cartagena Protocol on Biosafety is undermining the technical basis of the Blue Book, most clearly in its drive to do away with the “step by step” assessment procedures.
- The progress in GM technology is inevitably leading to new technologies and products which put technical stress on the approaches to risk assessment of the Blue Book.

There is an urgent need for a new dialogue to deliver an up to date new set of internationally accepted technical guidelines for the further development of GM crops.

DESMARESCAUX, Philippe

Chairman, The World Life Sciences Forum, BioVision



Born on July 16, 1938 Philippe Desmarescaux is graduated from the higher national school of chemistry of Paris and is Doctor in physics.

His career started as a Research Attaché at the National Centre for Scientific Research in 1961 (CNRS, France). He joined the Rhône-Poulenc Group in 1963 as an engineer in the Research Department of PROGIL. In 1974 he became Research Director in the Agrochemical Division of Rhône-

Poulenc. He was then Director of Marketing and Exports (1977) before being President of the Agrochemical Division in 1979.

In 1980, Philippe Desmarescaux became Member of the Rhône-Poulenc Group's Executive Committee. He has been President and later Chairman of the Agrochemical Sector of the company (1980-1996). Chairman of Chemicals Sector (1991-1997), Chairman of the Group's American subsidiary Rhône-Poulenc Inc. from 1986 to 1997, he became President of the Rhône-Poulenc Group in 1992.

Chairman of the board of the Lyon teachers' training college (Ecole Normale Supérieure de Lyon) from 1994 to 2000, Philippe Desmarescaux chairs the Scientific Foundation of Lyon and the World Life Sciences Forum, BioVision since 1998.

Philippe Desmarescaux is also:

- Chevalier de la Légion d'Honneur (Legion of Honour medal)
- Chairman of the Société Française de Chimie (French company of chemistry)
- Chairman of various companies (SEB Group, Auriga, Innate Pharma, Therascope, Chrysalon ...)

DIDERICHSEN, Boerge

Vice President, Corporate Research Affairs



Boerge Diderichsen, Professor, Ph.D.

Ph.D. in microbiology from Copenhagen University 1980.

Research scientist, Novo Industry, from 1981.

Vice President of Corporate Research Affairs, Novo Nordisk, 1996-.

Adjunct professor at Aarhus University, 1993-.

Governing Board of the European Industrial Research Management Association, 1996-2000.

Board of Medicin Valley Academy, 1997-.

Faculty Council of the Faculty of Health Sciences, University of Copenhagen, 1997-2001.

Academy of Technical Sciences, 1997-.

Senate at Aalborg University, 2001-2004.

Research policy steering group of the Danish Association of Pharmaceutical Industries, Chairman 2001-2005.

Board of directors of the Nano- and Microelectronics Institute, Chairman October 2001-2004.

European Federation of Biotechnology, President 2002-2005.

European Commission Advisory Group for Life Sciences, Genomics, and Biotechnology for Health, the 6th FP, October 2002-.

ScanBalt BioRegion, Vice-Chairman October 2002-.

High-Level Supervisory Committee of EFBIC (European Focus on Biotechnology in China), Co-chairman 2002-2005.

EAGLES – European Action on Global Life Sciences. Steering Committee 2003-.

Abstract

Changing Diabetes - a perspective from industry

B. Diderichsen, Vice-President, Novo Nordisk

Diabetes: Pandemic

Diabetes is a major global public health problem. In 2003, 194 million people had diabetes and that number is expected to reach 333 million by 2025. Diabetes is associated with long-term complications such as heart diseases, blindness, kidney failure, and amputations. The human and socio-economic costs associated with diabetes are exorbitant. Especially poorer groups that are less able to get access to proper care become a greater burden on society. The economic burden of diabetes, already huge, will be catastrophic in the future if nothing is done.

Changing Diabetes

Novo Nordisk is committed together with key stakeholders to develop solutions for how better to meet the needs of people with or at risk of developing diabetes and its complications.

Poor control of diabetes translates into lost lives, lost quality of life and lost national productivity. With proper treatment people with diabetes can lead almost normal lives and reduce the risk of disabilities. Education and access to basic health care services are important parts of the solution. The goal is to change the life of people with diabetes.

Reaching the poorest nations

As part of its World Partner Program, Novo Nordisk is collaborating with 8 developing countries to improve diabetes care by establishing diabetes clinics, training doctors and nurses, and collaborating with governments to set up national diabetes programmes.

Novo Nordisk offers human insulin to the public health systems in the 50 Least Developed Countries at prices not to exceed 20% of the average price in North America, Europe and Japan.

The World Diabetes Foundation was launched in 2002 as an independent non-profit organization with an initial grant from Novo Nordisk of 90 million \$ to improve diabetes care in the world's poorest countries. Today WDF is supporting 57 projects with an estimated direct impact on 24 million people.



EBEID, Nadia Makram

Executive Director of the Center for Environment and Development for the Arab Region and Europe & Former Minister of State for Environmental Affairs, Egypt

Dr. Nadia Makram Ebeid, Executive Director, Center for Environment and Development for Arab Region and Europe; Formerly Egyptian Minister of Environment for five years (first woman to hold this position in Arab World); Special Peace Envoy of Secretary General of Arab League; Member of several prestigious institutions including General Secretariat, National Democratic Party; Board of Directors, Suzanne Mubarak Women's International Peace Movement and UNDP Advisory Board, New York. Visiting Professor, George Washington University, USA. Holder of numerous awards.



EL GAMAL, Youssef

Minister of Education, Egypt

B.Sc. in: Electrical Eng., Alex. Univ. 1968

M.Sc. in: Computer Eng., Ain-Shams Univ. 1977

Ph.D. in: Computer Science, GW Univ. 1985

August 1997 to 2005 : Vice President For Education and Research , Arab Academy for Science and Technology and Maritime Transport, AASTMT.

August 1990 -1997 : Dean, College of Engineering & Technology, Arab

Academy for Science and Technology and Maritime Transport, AASTMT.

August 1987 - 1990 : Head of Electronics and Computer Studies Department. Arab Maritime Transport Academy AMTA, Alexandria, Egypt.

November 1988 - 2005 : Director of AMTA Computer Center. Alexandria, Egypt.

Awards:

1984 : Richard E. Merwin Award for distinguished doctoral students. School of Engineering and Applied Science, George Washington University, USA.

Jan. 1982 - Oct. 1983 : Peace Fellowship Program Award for D. Sc. study for 21 months at George Washington University, USA.

1978, 1979 : Intergovernmental Maritime Co-Operation Organization (IMCO)

Award for Training in the field of Marine Automation, England and West Germany.

ELLIOTT, Malcolm

Executive Director, The Norman Borlaug Institute for Crop Improvement



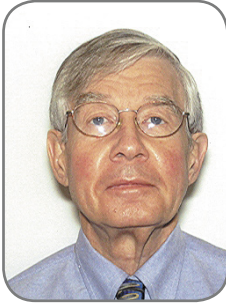
Malcolm Elliott is the Professor of Plant Molecular Biology and Executive Director of The Norman Borlaug Institute for Crop Improvement. He graduated with First Class Honors in Plant Sciences from The University of Wales (1963) and received his PhD in plant biochemistry from The University of Wales in 1966. He was a Fulbright Scholar and Research Fellow at Yale University (1967–69); Lecturer in Plant Biochemistry at The University of Leicester (1969–71); Professor and Head of The School of Life Sciences at De Montfort University, Leicester (1971–94); Chairman of The College of Deans at De Montfort University (1989–93) then Founding Executive Director of The Norman Borlaug Institute (1994 to date). Professor Elliott is the author of several hundred research publications with emphasis on molecular biological approaches to cereal improvement. He is frequently invited to speak on the genetic enhancement of crops for the benefit of developing countries. He was awarded the Charles University Medal (1992), the Gregor Mendel Gold Medal for Biological Sciences Research of Exceptional Merit (1993) and the Jan Evangelista Purkyne Medal (1994). Professor Elliott sees The Norman Borlaug Institute's role as facilitating the delivery of food security and creation of wealth in the developing world by applying cutting edge plant science techniques in crop improvement programmes which will enable the sustainable enhancement of global agricultural production.

Abstract

Starvation, Obesity, or.....: Quo Vadis?

M. Elliott, Executive Director, The Norman Borlaug Institute for Crop Improvement

The world has some 6.47 billion people. Every night 850 million of them try to sleep through the pain of hunger while more than a billion ponder the aesthetic and clinical implications of being overweight/obese. Obesity is not just an issue for the developed countries of the North; starvation and obesity coexist in the same countries reflecting major changes in diet and physical activity patterns around the world. In fact levels of overweight/obesity are increasing faster in the developing world than in high income countries. Moreover, obesity is particularly prevalent in adolescents and this condition persists into adulthood. The predicted increase in morbidity from related non-communicable diseases is likely to add a major burden to existing over-stretched and often failing or embryonic health services. It is increasingly recognised that diet and nutrition are key components of any preventative health strategy aimed at counteracting such diseases as those spanned by metabolic syndrome, including obesity, insulin resistance, hyperlipidaemia and hypertension. Metabolic syndrome greatly increases the chances of developing type two diabetes and coronary heart disease. Some cancers and osteoporosis are also linked to diet. In consequence a holistic approach to food production is now required in order to ensure not only an adequate supply for basic food security for all, but also to optimize diets as the next major goal for health promotion and non-communicable disease prevention. So in addition to exploiting our increasing understanding of genomics for improved plant breeding via genetic enhancement, the same technology is also of strategic importance for improving the health and well-being of people worldwide through a better appreciation of phenotypic variation due to genotype and diet. This new field of "nutrigenomics" recognizes that one's diet should, ideally, be uniquely tailored to the specific demands of one's own or at least one's culture's genetic profile.

**ERBISCH, Frederic**

Former Director, Office of Intellectual Property, Michigan State University

After obtaining a Ph.D. in botany from the University of Michigan he joined the Biological Sciences Department of Michigan Technological University (MTU). He taught botanical courses and conducted research there for 20 years and later was appointed as MTU's Director of Research. As Research Director he established the Office of Intellectual Properties.

After serving as Office Director for ten years he went to Michigan State University (MSU) to establish the Office Intellectual Property. He retired as Office Director in 2000. Presently he is an adjunct professor in the Institute of International Agriculture and a Faculty Fellow in the College of Law at MSU.

He is Member Emeritus of the Association of University Technology Managers. He is also a member of the Licensing Executive Society. He received the Thomas Jefferson Award from the Technology Transfer Society. He has authored numerous articles and several books in intellectual property management as well as botany.

With more than 25 years of intellectual property management experience he is most interested in sharing this experience with others, especially those in developing countries. He has provided intellectual property management training at MSU and throughout the world over the past five years.

*Abstract***Intellectual Property Management as a Regulation Tool**

F. Erbisch, Former Director, Office of Intellectual Property, Michigan State University

Management of intellectual properties serves in many instances to regulate and control the acquisition and distribution of food stuffs and other agricultural products. TRIPs is providing guidance to most countries through the requirement of basic intellectual property law establishment. The fact that counties must and can establish a means for the protection and use of plant varieties, especially in the area of farmers' rights, is also important in regulation issues. While countries are working to comply with TRIPs, are the individuals who work under these regulations being educated? How effective can compliance be if those needing to know and understand do not have basic knowledge of intellectual property management? Case histories and examples will be given to show the importance of management training in meeting regulation requirements.

GABR, Mamdouh

Secretary General, Egyptian Red Crescent Society

Dr. Mamdouh Gabr, born on 8 November 1925.

Graduated: Faculty of Medicine, Cairo University, December 1947 MD

Pediatrics, Cairo, November 1951, FRCP London 1981.

1985–89: President, International Union of Nutrition Sciences;

1992–95: President, International Pediatric Association;

1991–94: President, Global Advisory Committee on Health Research, WHO, Geneva;

President, CAMAS (Union of African Medical Associations), 1983/84;

President, Union Middle East Mediterranean Pediatric Societies, 1984/85;

Secretary General, Arab Council for Childhood and Development, 1987–1991;

Vice-Chairman, International Federation of Red Cross and Red Crescent, 1997–2005;

Minister of Health of Egypt (1978–82);

Chairman, Egyptian National Committee on Nutrition (1977–to the present);

Chairman, Pediatric Department, Cairo University (1982–86); Member, High Ministerial Council of Childhood and Motherhood (1974 and from 1990–to the present);

Member of the Board and Secretary-General of the Egyptian Red Crescent Society (1991–present).



Awards :

National Prize of Science, Egypt (1961);

Bearer of the Order of Science First Degree, Egypt (1961);

Bearer of the High Order of the Republic First Degree, Egypt (1980);

Bearer of the High Order of the Sacred Treasure, Japan (1986); WHO Shousha Prize (1997). He published four monographs and 150 publications on food and nutrition, child health, health and food ethics.

**GILLESPIE, Iain**

Head of Biotechnology Division, Science, Technology and Industry, OECD

Iain Gillespie is Head of the Organization for Economic Cooperation and Development's (OECD) Biotechnology Division, a post he has held since June 2001. The Biotechnology Division works with the 30 OECD member countries to develop international consensus on the use of biotechnology as a driver for sustainable growth and development and the delivery of a more resilient biobased economy. The focus of OECD work is on health-related and other innovation in the bioindustries, human genetics and genomics, IPRs, biosecurity, metrics and other infrastructure issues, and on supply/ demand side policy integration in biotechnology.

Iain worked in academia (UK and Middle East) and in the biotechnology industry (Agricultural Genetics Co Ltd, Cambridge) before joining government service in 1991. He held policy posts in the UK Departments of the Environment, of Health and of Trade and Industry as well as in the Cabinet Office where he ran a policy unit in support of the UK's Chief Scientific Advisor (the now Lord May). Just before joining OECD, Iain ran the highly successful Pharmaceutical Industry Competitiveness Task Force (PICTF), reporting to the Prime Minister. Iain is a scientist by training with a PhD in Microbiology. He also holds an MA in International Relations and European Politics and an MBA. He was educated at the Universities of Edinburgh, London and Kent at Canterbury, as well as the Open University in the UK, and prior to that at George Heriot's School in Edinburgh. He is married with one small son.

Abstract***Reinventing the Clinical Innovation Enterprise***

I. Gillespie, Head of Biotechnology Division, Science, Technology and Industry, OECD

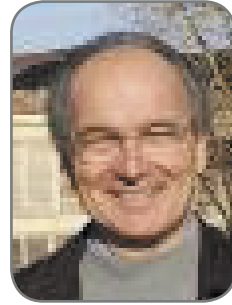
The links between innovation, productivity, health and wealth are recognized by OECD countries. Investing in and encouraging innovation is a priority for many jurisdictions as is the affordability, quality and sustainability of health-care systems. The apparent tension between these two goals can be mitigated, however. The challenge for policymakers is to encourage innovation that addresses health needs and priorities; maximizes access to the benefits; and manages risks in a way that is beneficial both to innovators and health systems.

The presentation will consider some of the key challenges facing policy makers and innovators as well as the opportunities provided by developments in genomics and informatics in particular to reorganize and reinvent the way that clinical innovation is delivered.

An attempt will be made to draw the strings together for a short-medium term agenda for international policy action that might reduce regulatory uncertainty and encourage the creation of a more stable receiving environment for life science innovation, particularly in the health sector.

GODARD, Alain

CEO of Aventis CropScience



French Agronomy Engineer from Ecole Nationale Agronomique de Toulouse (France).

Started his carrier as a Researcher at Institut de Recherches pour les Huiles et Oleagineux (IRHO) in the field of oil palm genetic.

Joined ROHM AND HAAS company in 1969.

Joined RHONE- POULENC in 1975 occupying various technical and business positions until becoming in 1992 CEO of RHONE-POULENC AGRO., and then CEO of AVENTIS CropScience, one of the major ag and biotech company in the world.

left AVENTIS in 2001 to become farmer (wine and olive oil production)

Joined BioVision in 2005 as Ag/Food advisor.

Alain Godard is the author of “Engagements, espoirs, rêves”(1998 Village Mondial ed), translated in 2000 in English under the title” transformational leadership”(2000 Palgrave ed)

Abstract

The Development of Agriculture in Dry and Salty Areas: An opportunity for the South and the North

A. Godard, CEO of Aventis CropScience

The Executive Committee of BioVision 2007 in LYON, France, has retained this topic as one of the key questions to be addressed during the next 11-14 march 2007 Forum.

It has been decided within BioVision to prepare the debates and set the stage for BioVision parallel conferences by organizing pre-conferences in order to prepare the reflection and identify the points to address more in depth or more specifically.

This today conference on was selected in agreement with Biovision Alexandria to serve as a preconference on this subject.

We enter a period where the world become more aware that water is and will be on one side more and more a limited resource , and on the other side one of the key factor to increase food production in the future. To look at how to reduce the consumption of water used in Agriculture(70% of worldwide use of water), how to open new areas for production by allowing crops to be grown in hostile areas like salty soils, or to be irrigated with partly desalted water could be of major importance for the South.

Also, technological breakthrough developed for the conditions of the southern countries could be applied for the Northern ones, where scarcity of water starts to have impact on the capacity to grow certain crops.

The idea of using this conference as a preconference for BioVision 2007 has to be understood within the above framework .

All interventions and discussions of today will be recorded and synthesized .This morning session will be completed by an additional brainstorming discussion this afternoon.

a written report will be issued and presented to the participants of BioVision 2007 ,in order to prepare the parallel conference which will address the topic in march 2007.

On the behalf of BioVision 2007, I want to thanks the organizers of BioVision Alexandria to have accepted to develop this original form of cooperation between the two forums, demonstrating if needed that Cooperation must also work from the South To the North.

**GREEN, Anders**

Professor and Consultant, Department of Applied Research and HTA

Danish citizen, born 1950.

Medical school completed 1976; PhD in Medicine 1979 and DrMedSci 1983, University of Southern Denmark .

Specialization in internal medicine 1993.

Positions held:

1976-1985: Academic positions at University of Southern Denmark.

1986-1993: Clinical positions

1993-1997: Associate professor (University of Southern Denmark) and

Consultant (WHO-Europe)

1997-2005: Professor in Epidemiology, University of Aarhus (Denmark)

2005- : Professor and Consultant in Clinical Epidemiology, University of Southern Denmark and Odense University Hospital.

Teaching and research supervision:

Coordinator, lecturer or contributor at totally 85 postgraduate courses and seminars in research methodology, diabetes epidemiology and genetic epidemiology.

Supervisor of 45 Ph.D. programmes, Master of Public Health projects and medical dissertations.

Other professional activities:

During 1985-1988 official Danish delegate of the supervising committee COMAC-Epidemiology for the European Union Medical Research Programmes, including assignment as an expert genetic epidemiology advisor for international research projects on multiple sclerosis, inflammatory bowel diseases, homocysteinaemia, Sjögren syndrome and diabetes mellitus.

During 1988-1999 Project coordination with the Concerted Action EURODIAB under the European Union Medical Research Programme, with responsibility for epidemiological and etiological research in childhood-onset diabetes.

Abstract**Economic Burden of Poor Health - A Case for Targeting Chronic Disease Prevention in the Developing World**

A. Green, Professor and Consultant, Department of Applied Research and HTA

Chronic diseases represent an increasing health problem worldwide, but to a large extent neglected so in the alarming pattern of infectious diseases and natural disasters in the developing world.

We have developed a framework for assessing the societal impact of chronic diseases, exemplified with diabetes. The model uses epidemiological techniques to estimate patient-years experienced in a defined period under different scenarios. Costs assigned to the patient-years are structured in healthcare resources, non-healthcare resources, patients' time and informal caregivers' time and are obtained from available reports, healthcare providers and 'ad hoc' enquiries. Effects are quantified in terms of patient-years, quality-adjusted patient-years and production value (income by working).

The paper presents a recent study of diabetes in Bangladesh for year 2001 under contrasting scenarios. The Current scenario assumes to reflect the real situation for diabetes in Bangladesh and assumes that 22.5% of the population has access to diabetes care at a low level. The Improved scenario represents the situation where the total population has access to care and treatment at otherwise similar conditions. More extreme scenarios will also be presented.

The results suggest that prevailing conditions for managing diabetes in Bangladesh are poor, leading to increased morbidity and mortality, and associated low production value for these patients. Establishing access to care and treatment for all patients yields a considerable net benefit since the extra costs are out-weighted by an increased number of patient-years and associated production value.

We recommend this novel tool to be further validated and developed and we encourage its application to other chronic diseases as well in order to optimize the basis for proper priority settings in the healthcare systems globally.

GROS, François

Honorary Permanent Secretary, Académie des Sciences (Secrétaire General)

François Gros (born in 1925) Ph.D., Emeritus professor of Biochemistry at College de France (Paris). Past director general of Pasteur Institute (1976-1981), former Science advisor to Prime Minister of France (1981-1985), Special advisor to European Research Commission (1989-1990), Permanent Secretary of French Academy of Sciences (1991-2000). Author of many scientific publications and books on molecular genetic. President of the Biovision, International science committee.



HASSAN, Mohamed

Executive Director, TWAS

Mohamed H.A. Hassan is Executive Director of the TWAS - the academy of sciences for the developing world, President of the African Academy of Sciences (AAS), Secretary General of the Third World Network of Scientific Organizations (TWNISO) and serves on a number of committees in other organizations world-wide. He was born in the Sudan in 1947, and holds a Ph.D. in Plasma Physics from the University of Oxford, UK (1974). A former professor and dean of the School of Mathematical Sciences at the University of Khartoum, he received the order of scientific merit of Brazil. He is a fellow of TWAS, AAS, and the Islamic Academy of Sciences as well as honorary member of the Colombian Academy of Exact, Physical and Natural Sciences, corresponding member of the Belgian Royal Overseas Academy of Sciences, and foreign fellow of the Pakistan Academy of Sciences. His research areas include theoretical plasma physics, physics of wind erosion and sand transport. He is married and has two daughters and a son.



**HAYASHIZAKI, Yoshihide**

Project Director and Chief Scientist, Genome Exploration Research Group, Genomic Sciences Center, RIKEN

Date of Birth: 02/16/1957

Nationality: Japan

Yoshihide Hayashizaki received his M.D. and Ph.D. from Osaka University Medical School in 1982 and 1986, respectively. From 1988 to 1992, he worked as a research scientist at National Cardiovascular Center Research Institute (Department of Bioscience), Osaka and developed a new technology known as the Restriction Landmark Genome Scanning (RLGS) System. In 1992, he joined RIKEN, and was appointed Project Director for the RIKEN Genome Project in 1995. Since then he has been taking part to establish a Mouse Genome Encyclopedia. His present position is Project Director of Genome Exploration Research Group, Genomic Sciences Center, RIKEN, Yokohama and he aims to analyze the gene transcriptional network using the Mouse Genome Encyclopedia, for the development of new drugs, based on functional genomics in the post-genome era. In 2001 he was assigned to Foreign Adjunctive Professor of the Kalorinska Institute (Sweden) and Honorary Professor of The University of Queensland (Australia).

**HELAL, Hany**

Minister of Higher Education, Egypt

Diplôme de Docteur Ingénieur, Earth Sciences (Rock Mechanics and Engineering), Ecole des Mines de Nancy, Institut National Polytechnique de Lorraine, Nancy, France, March 1982.

D.E.A (Diplôme d'Études Approfondies), Rock Mechanics and Engineering, Ecole des Mines de Nancy, Institut National Polytechnique de Lorraine, Nancy, France, October 1979.

Secretary General, Education Development Fund, Egypt, July 2005.

President of «l'Université Internationale de Langue Française au Service du Développement Africain 'Université Senghor'», Octobre 2004.

UNESCO Consultant / Interim Administrative Director, International Centre for Synchrotron-Light for Experimental Sciences and Applications in the Middle East (SESAME), December, 2002.

National TEMPUS Coordinator (European Union Programme for Higher Education Enhancement), September 2002.

Chairman of the Associate Professors Promotion Committee for Mining, Petroleum and Metallurgical Engineering, Supreme Council of Universities, Egypt.

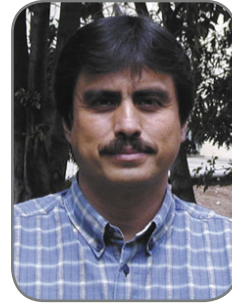
Member of board of Directors, the Center for Documentation of Cultural and Natural Heritage, Bibliotheca Alexandria.

Grade d'Officier dans l'Ordre des Palmes Académiques, Ministère de l'Éducation National, de l'enseignement Supérieur et de la Recherche, France, Novembre 2005.

Special Prize of the Egyptian Academy for Scientific Research and Technology in the field of Management and Conservation of Historical Sites, 1993.

HERRERA ESTRELLA, Luis

Head, National Laboratory of Genomics for Biodiversity, Center for Research and Advanced Studies, the National Polytechnic Institute



Doctor Luis Herrera-Estrella was born on June 21, 1956 in Mexico city. He graduated with a B.Sc. degree in Biochemical Engineering from the School of biological Sciences of the National Polytechnic Institute in 1978. In 1980 he received his M. Sc. from the Center for Research and Advanced Studies in Mexico city and in 1984 his Ph. D. from the State University in Ghent, Belgium.

Dr. Luis Herrera-Estrella has made important contributions to the field of plant molecular biology, especially in the study of gene regulation and in the development of gene transfer methods. While still working as a Ph. D. student he published the first report showing the successful transfer and expression of a bacterial gene in plant cells. He also pioneered the development of dominant selectable markers and the use of reporter genes for plant systems, which later became two of the most important tools to develop gene transfer systems for economically important crops. Dr. Herrera-Estrella has published over 100 articles in peer-reviewed international journals including Nature, Science, PNAS, Cell and The plant Journal. He has been awarded several national prizes, among them the award in biology from the Mexican Academy of Sciences and the National Art and Science award from the Mexican Government. He has also been honored with international awards such as the Minuro and Ethel Tsutsui Distinguished Graduate Research Award of the New York Academy of Sciences and the Javed Husain prize for young scientists from UNESCO. Dr. Herrera-Estrella was elected in 2003 foreign member of the US National Academy of Sciences and is currently Director of the National Laboratory of Genomic for Biodiversity in Mexico.

Abstract

Molecular and Genomic Approaches to Understand Drought Tolerance Mechanisms

L.H Estrella, Head, National Laboratory of Genomics for Biodiversity, Center for Research and Advanced Studies, the National Polytechnic Institute

The efficient use of water supplies requires a systems approach that encompasses all aspects of making water available and its use within society that must recognize global issues. Increasing the efficiency of water use within agricultural systems is an essential priority in many regions of the world. Research must combine the latest genomics resources including quantitative genetics, genomics and biomathematics with an ecophysiological understanding of the interactions between crop plant genotypes and the growing environment to better inform crop improvement. Drought stress is a major constraint to agricultural production and yield stability in many rainfed regions of Asia, Africa, and South America. Genetic improvement for adaptation to drought has been largely addressed through conventional approaches that select for yield and its stability over locations and years. Because of low heritability of yield under stress and inherent variation in the field, such selection programs are expensive and slow in attaining progress. The objective of this presentation is to review the current knowledge in physiology and molecular genetics that have implications in breeding for drought resistance in plants. Recent development of molecular linkage maps and other advances in molecular biology offer new opportunities for drought resistance breeding. Molecular markers linked to root traits and osmotic adjustment are being identified, which should lead to marker-assisted selection. Transgenic plants having tolerance to water deficit and osmotic stresses have been reported. Close collaboration between molecular geneticists, plant physiologists, and breeders is needed to critically assess the contribution of specific genes and application of molecular genetics to breeding for drought resistance in rice and other crops.

**HIRATA, Tadashi**

Former Chairman, CEO, Kyowa Hakko Kogyo Co., Ltd. and Member of the Board of Japan Bioindustry Association

Education:

Tokyo University

Ph. D. of Agricultural Chemistry

Job Carrier:

1963 Joined Kyowa Hakko Kogyo Co., Ltd.

1970 Visiting Researcher, National Cancer Institute, NIH, USA

1976 Associate Senior Research Scientist, Tokyo Research Laboratories Developed novel carbapenem antibiotic

1979 Senior Research Scientist, Tokyo Research Laboratories

1985 Associate-Director, Research Planning & Administration Department Tokyo Research Laboratories

1989 Director, Pharmaceutical Research Laboratories

1993 Member of Board of Directors Plant Manager, Fuji Plant Director, Pharmaceutical Research Laboratories

1995 Managing Director, General Manager, Pharmaceuticals International Division, Pharmaceutical Planning & Administration Dept.,

1996 President, Chief Operating Officer

1998 President, Chief Executive Officer

2003 Chairman, Chief Executive Officer

2005 Senior Advisor

Public Service:

Member of Japan Biotechnology Strategic Council Chairman,

Japan Biological Informatics Consortium President,

Kato Memorial Bioscience Foundation

Abstract**A Breakthrough in Monoclonal Antibody**

T. Hirata, Former Chairman, CEO, Kyowa Hakko Kogyo Co., Ltd. and Member of the Board of Japan Bioindustry Association

Therapeutic monoclonal antibody based on the rapid progress of life science and technology has been increasingly important as novel medication for cancer, allergy and other hard-to-cure diseases and also as highly promising growth driver in pharmaceutical industry. However comparatively high manufacturing cost of the biologics reflects on significantly high medication cost which may limit the wide spread of this promising medication. Moreover current MoAb still has some limitation in efficacy and there exists substantial population of patients that does not respond satisfactorily to existing MoAb therapy.

We have developed a unique technology, POTELLIGENT which shows great promise to solve these underlying problems. During the course of molecular manipulation on MoAb, reducing and eventually nullifying the fucose content of Fc-domain turned out to potentiate ADCC activity dramatically by ~100 fold. The POTELLIGENT MoAb can be simply and reproducibly produced by replacing the current producing cell lines with the derivative of which fucosylation enzyme FUT-8 gene was knocked out.

The significant improvement of ADCC activity for wide range of MoAB should make a great impact on MoAb therapy as well as business.

BioWa was founded in USA to pursue the business development of POTELLIGENT.

HUTTNER, Eric

General Manager, Diversity Arrays Technology Pty Limited



Current Position

- General Manager of Diversity Arrays Technology Pty Limited, a biotechnology company, delivering a novel technology for high throughput and low cost genotyping.
- Manager of Triticarte, a company delivering genotyping services for wheat and barley.

Career Highlights

- Engineer-Doctor degree from Institut National Agronomique (1986).
- Postdoctoral scientist (1987-1988), laboratory of Professor Zhou Guang Yu, Shanghai Institute of Biochemistry, Chinese Academy of Science, Shanghai, P.R. of China.
- Staff scientist, INRA Versailles (1988-1990).
- Director, Groupe Limagrain Pacific (1990-1998), the plant molecular biology research laboratory of Groupe Limagrain in Canberra (Australia). Molecular tools for crop improvement, genes for artificial male sterility and virus resistance.
- Founding member of the Cooperative Research Centre for Plant Science (Canberra, 1991-1998).
- Scientific adviser to Gene Shears Pty Limited, a biotechnology company developing ribozyme technology for commercial applications (1991 – 1998). Member of the Board of Gene Shears (1993 – present).
- Director of plant genomics research, Biogemma, Paris (1998-2000). Instrumental in founding Génoplante, the French public-private consortium for plant genomics research.
- Chief Scientific Officer, Biogemma (2000).
- Business Development Manager and Principal Scientist, CAMBIA (2001-2004).
- Author of several publications, book chapters. Inventor of several technologies, patented or with patent pending.

Abstract

New Plant Breeding Strategies Using an Affordable and Effective Whole-Genome Profiling Method
E. Huttner, General Manager, Diversity Arrays Technology Pty Limited

Molecular technologies, both transgenesis (GM) and molecular markers, have been most successfully applied to plant breeding when dealing with a small number of genes, and with relatively simple traits. To meet the ongoing challenge of increasing food production in a more sustainable manner, we have to increase the effectiveness and speed of classical plant breeding. Many important traits are complex: they are often multigenic, involve interacting loci and genes, and may be subject to epigenetic variation. Affordable and effective molecular markers covering the whole genome will play a major role in improving crops for these complex traits.

Over the past 6 years we have developed Diversity Arrays Technology (DArT, www.DiversityArrays.com) to provide whole-genome profiles to plant breeders. The technology is now available for 18 plant species, including orphan crops for which no molecular information is available. We will present the current status of DArT and review two application case studies. For wheat, a major crop for developing and developed countries, a DArT-based whole-genome profiling service has been available for more than a year (www.Triticarte.com.au). It has served scientists in 7 different countries and has been applied to building genetic maps, identifying QTL and managing germplasm collections. In banana, an orphan crop, critical for subsistence farmers in many developing countries, DArT was established in 3 months at the end of 2005. More than 1000 polymorphic markers are now available. They will accelerate the mapping of genomic regions of agronomic importance and clarify genetic and epigenetic diversity in the plantains, a group with high phenotypic diversity but probably of oligo or monoclonal origin. For genomics studies, the markers will assist in ordering BAC libraries, anchoring genetic and physical maps and identify methylation polymorphisms.



JAMES, Clive

Chairman and Founder of ISAAA

Educated in the UK
PhD Cambridge University
Emigrated to Canada
Researcher, Federal Dept of Agriculture Canada
FAO Staff Rome Italy
Senior Adviser CIDA Canada

Deputy Director General CIMMYT Mexico
Founder and Chair of ISAAA

Experience- international agricultural research and development, and potential contribution of biotech crops in alleviating poverty and hunger.

Abstract

A Decade of Biotech Crops 1996-2005: Global status and future prospects

C. James, Chairman and Founder of ISAAA

In the early 1990s, some were skeptical that genetically modified (GM) crops, also referred to as biotech crops, could deliver improved products and make an impact at the farm level. There was even more skepticism that developing countries would adopt biotech crops. 2005 was the tenth anniversary of the commercialization of biotech crops, when the one-billionth cumulative acre of biotech crops was planted globally. The adoption of biotech crops, during the first decade of commercialization is reviewed, with the most recent status in 2005 characterized. The benefits that biotech crops offer global society are summarized including their contribution to: global food, feed and fiber security; a safer environment; a more sustainable agriculture; and the alleviation of poverty and hunger in the developing countries of the world. Data on current global status of biotech crops are complemented with a commentary on future prospects in the second decade of commercialization 2006-2015.

JAMISON, Dean

Senior Editor, Disease Control Priorities Project & Fellow, Fogarty International Center, National Institutes of Health



Jamison is a professor at the University of California, San Francisco and an affiliate of UCSF Global Health Sciences. Jamison concurrently serves as an Adjunct Professor in the Peking University Guanghua School of Management. Jamison previously spent many years at the World Bank where he was a senior economist in the research department, division chief for education policy, and division chief for population, health and nutrition. In 1992-93 he temporarily rejoined the World Bank to serve as Director of the World Development Report Office and as lead author for the Bank's 1993 World Development Report, Investing in Health. His publications are in the areas of economic theory, public health and education. Most recently Jamison has served as the Senior Editor for the Disease Control Priorities Project, where he was involved with preparation of Disease Control Priorities in Developing Countries, 2nd edition, and The Global Burden of Disease and Risk Factors, both published by Oxford University Press in early 2006. Jamison studied at Stanford (A.B., Philosophy; M.S., Engineering Sciences) and at Harvard (Ph.D., Economics, under K.J. Arrow). In 1994 he was elected to membership in the Institute of Medicine of the U.S. National Academy of Sciences.

Abstract

Disease Control Priorities in Developing Countries: Progress and challenges

D. Jamison, Senior Editor, Disease Control Priorities Project & Fellow, Fogarty International Center, National Institutes of Health

Since 1960 life expectancy high-income countries has increased at a rate of 2.3 years per decades. Low- and middle-income countries have been closing the gap with high-income countries by increasing their life expectancy at a rate of 6.5 years per decade. These health improvements have yielded measurable and significant macroeconomic and demographic consequences. Four challenges, however, potentially threaten the remarkable accomplishments in health of recent decades: AIDS; H5N1; rapid growth in costly non-communicable diseases; and substantial populations that have failed to share in more general health gains. The Disease Control Priorities Project is a collaborative effort to distill and disseminate evidence to assist countries in meeting these challenges. DCPD results area now available and will be presented in this session.

**JARRETT, Stephen**

Deputy Director, UNICEF Supply Division

Mr. Jarrett is primarily responsible for strategic issues and problem solving concerning the supply function in the context of UNICEF support to programs benefiting children in 160 countries worldwide resulting in over \$1 billion procurement value annually. He oversees the global procurement and management of vaccines and pharmaceuticals acquired by UNICEF for over 100 developing countries, maintaining contact with senior management in pharmaceutical and vaccine companies worldwide. He also oversees the procurement services offered by UNICEF to partner agencies in international development.

Mr. Jarrett has recently completed 34 years of service with UNICEF, having worked in various capacities during this time. These have included diverse field assignments in program management in several countries in the Americas in the 1970s, and as senior health officer in China in the 1980s, supporting the achievement of universal child immunization. Prior to his current position, he was working in UNICEF as a senior adviser on health systems strengthening, with a focus on drug supply systems in sub-Saharan Africa and other low-income countries.

Mr. Jarrett holds a Bachelor of Sciences degree in Civil Engineering from the University of Southampton, U.K. and a Masters in Public Health degree from Columbia University, New York, U.S.A. He has published numerous articles on immunization and health services strengthening.

JOHNSON, Brian

Head of Biotechnology Advisory Unit, English Nature



Dr Brian Johnson was until recently senior advisor on biotechnology to the British statutory nature conservation agencies and is head of the Agricultural Technologies Group at English Nature, one of the UK government's advisors on nature conservation. He has been closely involved in the debate on potential effects of GMOs on biodiversity and other aspects of the environment. After pursuing academic research in population genetics and ecology, he has spent the last 20 years in nature conservation. He has written numerous articles in the scientific and popular press about biosafety, conservation and the impact of biotechnology on the environment. Dr Johnson sits on several advisory committees concerned with biological research, regulating the release of GMOs into the environment, and the development of more sustainable farming methods. In 2004 he chaired the panel reviewing biosafety within CGIAR. He is a member of the design and authorship team of the International Assessment of Agricultural Science and Technology for Development, an initiative launched by the World Bank/UNEP in 2003.

Abstract

Potential Environmental Impacts of Salt and Drought Tolerance Traits in Crop Plants

B. Johnson, Head of Biotechnology Advisory Unit, English Nature

This paper will explore some of the potential environmental risk factors that should be addressed before release of crops and other plants (including long-lived perennials) that have been or may in future be genetically modified to be drought resistant and salt tolerant. The analysis will focus especially on the ecological characteristics and distributions of plants found in arid and saline ecosystems in both tropical and temperate regions. The paper will also examine risks from gene flow of these traits to wild plants that may hybridize with GM crops such as cereals that are currently subject to transgenic modification for drought and salinity tolerance. There have been some hybridizations in the past that might help us better understand the ecological risks from gene flow in saline environments, but few if any cases in arid environments. Experience has shown that in saline environments, environmental risks are not just ecological but must also include consideration of the important role that plants play in geomorphological processes that take place in estuaries and other coastal ecosystems. Commonly used risk assessment procedures should be adequate for assessing environmental risks from plants with salt and drought tolerance traits, but these will only be effective and reliable if sufficient ecological data are collected. These data should not only be in relation to the ecology of GM plants themselves, but also more research is needed on the ecology of wild plants in arid and saline ecosystems.

**KAPUR, Anil**

Vice Chairman of the Board of the World Diabetes Foundation

Dr Anil Kapur is Vice-Chairman World Diabetes Foundation, Vice-President Novo Nordisk Corporate Stake holder Relations – Asia, and Trustee of the Novo Nordisk Education Foundation. He has written books on diabetes both for medical professionals and lay people and published more than sixty papers in the areas of Internal Medicine, Clinical Pharmacology and Diabetes in national and international journals. He has coordinated two large studies 'Cost of Diabetes Care in India' and the 'National Urban Diabetes Survey' and developed a nutritional software package called NINA. He has presented numerous lectures on diabetes, in India and abroad.

Abstract**The WDF Initiative: Brief Overview of Projects**

A. Kapur, Vice Chairman of the Board of the World Diabetes Foundation

Diabetes is already a public health problem in the developing world and regarded as a major cause of premature mortality and morbidity. It is amongst the leading causes of blindness, renal failure, heart attacks, strokes and limb amputations. Due to a compromised immune system, bacterial and fungal infections are also common and pose a health hazard for diabetics. Poor and disadvantaged people tend to be diagnosed later, have less access to treatment and consequently suffer more acute and late complications, limiting productivity and increasing economic burden. Effective intervention reduces health and economic burden of diabetes and requires focusing on prevention - primary prevention – promoting healthy living, and secondary prevention - reducing the burden of complications by early diagnosis and proper care.

World Diabetes Foundation (WDF) aims to address and potentially limit the epidemic by bringing diabetes higher on the global health care agenda as well as fund sustainable projects in awareness, primary prevention, building healthcare capacity, and improving access to care in the poorest countries. The strategy is to act as a catalyst - help others do more – thereby making a greater impact than the Foundation's size would suggest.

WDF, established in 2002 through a commitment of 500 million Kroner over ten years by Novo Nordisk A/S, is registered as an independent trust and governed by a board of six experts in the field of diabetes, access to health and development assistance. WDF raises funds from other sources to support specific projects ensuring a multiplier effect; for every dollar spent it receives approx three dollars in cash or kind from other sources. At present WDF supports 64 projects in 60 developing countries. These projects will directly impact the lives of 27.5 million people with diabetes in developing countries. For information on WDF funded projects please visit: www.worlddiabetesfoundation.org

KHATIB, Oussama

Regional Advisor/Non-Communicable Diseases/EMRO/WHO

Dr. O.M.N Khatib, MRCP, MD, PhD



Abstract

Regional Overview, Diabetes Prevention and Care

O. Khatib, Regional Advisor/Non-Communicable Diseases/EMRO/WHO

Diabetes is considered one of the most common non-communicable diseases. It can be found in almost every population in the world. There is substantial evidence that it is an epidemic and it is the fourth leading cause of death in East Mediterranean Region (EMR). Also, there is increasing evidence that it will become one of the foremost public health challenges to face our Region in this millennium.

World Health Organization has recently accorded priority status to diabetes.

WHO produced a report using epidemiological information and estimated the global burden of diabetes at 135 million in 1995, with the number reaching 299 million by the year 2025. There has been an explosion of diabetes in EMR mainly due to type2DM. There is an estimated 20 million people with diabetes. The Region has experienced significant social and economic changes. The current lifestyle expectancy in the majority of countries exceeds 65 years of age. An increasing rate of obesity, less physical activity and an increase in smoking are contributing to the increase in the prevalence of diabetes. Studies conducted in different populations of the Region have reported high prevalence rates for diabetes varying from 7-25% in adult population. Many EM Countries are now reporting the onset of Type 2 diabetes at an increasingly young age. Subjects are presenting with Type 2 diabetes in third decade, and in some countries, type 2DM is emerging in children.

Dramatic increases in diabetes, is expected in the Eastern Mediterranean Region. This is due to the following:

- Increasing sedentary lifestyles and higher life expectancy
- The socio-economic situation in EM many countries has forced people to move to urbanized.

The WHO Regional Office for EMRO is the second WHO Office after that of Europe to set goals and targets towards diabetes prevention at the Regional level. We need to work towards prevention of diabetes and we must stop the rise in the number of diabetes patients.

***KHUSH, Gurdev***

Professor, University of California

Dr Khush was born in India. After receiving early education in India he studied at University of California Davis (UCD) and received Ph.D. in Genetics in 1960. After serving on the faculty of UCD for seven years he joined International Rice Research Institute, Philippines as Plant Breeder in 1967 and was promoted as Head of Plant Breeding Department in 1972. He led the institute's rice breeding Program for 35 years. High yielding, disease and insect resistant varieties developed under his leadership and their progenies are now grown on 60% of world riceland and world rice production has doubled in a 30 year period. For his contributions to world food security Dr Khush received Japan Prize in 1987, World Food Prize in 1996, and Wolf Prize in 2000. Dr Khush was elected to some of the world's most prestigious academies such as Indian National Science Academy, The Third world Academy of Sciences, U.S. National Academy of Sciences and The Royal Society.

Abstract**Rice for Feeding Half the World Population**

G. Khush, Professor, University of California

Rice is the most important food crop and primary source of food for more than half the world's population. More than 90% of world's rice is grown and consumed in Asia where 60% of the earth's people live. It accounts for 35-75% of the calories consumed by more than 3 billion Asians. Rice consumption is increasing in most African and Latin American countries. Between 1966 and 2000, the population of densely populated low income countries grew by 90% but rice production increased by 130% from 257 million in 1966 to 600 million in 2000. In 2000 average per capita food availability was 18% higher than in 1966. The technological advance that led to the dramatic achievements in the world food production during the last 40 years was the development of high yielding, disease and insect resistant varieties of rice. However, demand for rice is increasing at the rate of 1.5% and according to various estimates, we will have to produce 40% more rice by 2030. To meet this challenge we need rice varieties with higher yield potential and greater yield stability. Various conventional and biotechnological techniques are being employed to achieve this objective.

KUROKAWA, Kiyoshi

President, Science Council of Japan & Director & Professor, Institute of Medical Sciences, Tokai University



Dr. Kurokawa is President of the Science Council of Japan and of Pacific Science Association; member of the Science and Technology Policy Committee of the Cabinet of the government; formerly Professor of Medicine of Departments of Medicine, UCLA School of Medicine and also at the University of Tokyo Faculty of Medicine; currently Professor of the Research Institute of Science and Technology, Tokai University, and of Research Center for Advanced Science and Technology of the University of Tokyo, and Professor Emeritus of the University of Tokyo; Master of American College of Physicians and Governor of its Japan Chapter; Elected member of many professional societies including Association of American Physicians, Institute of Medicine of National Academies of USA, InterAcademy Council, Committee for Science Policy and Review of the International Council of Science, President of Pacific Science Association, Commissioner of the WHO Commission for Social Determinants of Health (2005-); received the Order of Purple from the Government of Japan for Excellence in Academic Achievements in 1999.

Abstract

Healthcare Policy: Global and local perspectives

K. Kurokawa, President, Science Council of Japan & Director & Professor, Institute of Medical Sciences, Tokai University

With rapid advances in public health, medical science and technology over the last century, healthcare policy has become major social issues in economically affluent nations and wide public awareness for such treatment Basic principle that governs healthcare policy is how to balance its access, quality, and cost. Nonetheless, when looked at global perspective, poverty and poor social factors are the key for health. How we prioritize the stakeholders of health policies.



LACHMANN, Peter

Emeritus Professor of Immunology, University of Cambridge & Head, Microbial Immunology Group, Centre for Veterinary Science
Peter Lachmann trained in medicine at Cambridge and University College Hospital and obtained a PhD and ScD in Cambridge in immunology.

His principal research interests are:

The immunochemistry, biology and genetics of the complement system
Microbial immunology. Particular topics include microbial subversion of the innate immune response and the immunology of measles
Enhancement of the immune response and its relevance to vaccines
Immunopathology, particularly in relation to systemic LE and to multiple sclerosis
Insect sting allergy. He is emeritus Sheila Joan Smith Professor of Immunology in the University of Cambridge and a fellow of Christ's College. He is also President Emeritus of the Federation of European Academies of Medicine and of the Henry Kunkel Society. He was the founder President of the UK Academy of Medical Sciences (1998-2002) and has served as its representative on the Inter Academy Medical Panel executive committee since its inception. He has been 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, particularly in connection with vaccination, stem cells, transmissible spongiform encephalopathies and genetically modified food crops.

Abstract

The Ups and the Downs of Health Discoveries

P. Lachmann, Emeritus Professor of Immunology, University of Cambridge & Head, Microbial Immunology Group, Centre for Veterinary Science

Health Discoveries address three principal aims: preventing disease; understanding and diagnosing disease; and treating disease. The spectacular advances not only in biology but also in physical science and engineering have allowed great progress in achieving each of the three aims; but have also engendered controversy and opposition.

For prevention examples will include the use of genetics to predict disease susceptibility for common disease as well as for single genes disorders. This has profound implications for the organization of medical care as well as for insurance and the ever controversial question of abortion. The recognition that very early life environment predicts later disease gives further promise of prevention as do life style modifications – which have proved quite difficult to bring about
Diagnosis has been transformed by clinical pathology and by powerful imaging techniques. These are the tools for diagnosing disease and have been, in part at least, rejected by those who believe in holistic medicine and are skeptical of specific causes for specific pathological processes. The use of tests for screening healthy populations is a growing area where evidence base for benefit is always needed.

Treatment aims at “cure” but increasingly provides “management” instead. This has given rise to uncontrollable increases in the expense of best care – a problem that no system of provision has yet solved. It is possible that new technologies such as stem cell therapy may provide more cures but that is so far an aspiration. The high cost of treatment is made worse by unreasonable risk averseness in this area which makes drug development so expensive.

There remains the uncomfortable assertion that up to half of the average person's life time medical expenditure is incurred in the last six months of life – whenever this occurs. While this is the case every new health discovery will make the provision of health care more expensive. This has major implications for humane and sensible care of terminal disease.

LAPORTE, Ronald

Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh



Ph.D. in Cognitive Psychology in 1977, Masters degree in Epidemiology, 1981

- 505 publications in Epidemiology, Global Health, and Internet
- First Distinguished Teacher, Graduate School of Public Health, University of Pittsburgh 1989.
- Lillienfeld Award, APHA for outstanding life time achievement in education
- Director, Disease Monitoring and Telecommunications, WHO Collaborating Center, Dept of Epidemiology • Developer and PI of the WHO multinational Project for Childhood Diabetes, involving 155 centers in 70 countries
- 1994 Developer, Global Health Network,
- Numerous funded national and international projects from NIH, and NASA
- Kelly West Diabetes Epidemiology Award from the American Diabetes Association

Abstract

Building a Supercourse of Science

R. LaPorte, Professor of Epidemiology, Graduate School of Public Health, University of Pittsburgh

F. Sauer, CEO, Trans Am Group

I. Serageldin, Director of Bibliotheca Alexandrina, Chairman of European Action on Global Life Sciences, EAGLES

V. Cerf, Ph.D.

Science and education used to go hand in hand. However during the past decade the speed and specialization of Science have markedly outpaced education. What we see in higher education now, often is 5-10 years old, much well beyond its "expiration date". In addition education in developing countries is in need due to the paucity of scientific journals.

We proposed to establish a Supercourse of Science based upon the principles of our Global Supercourse of prevention. During the past 7 years we have networked over 31,000 faculty in 151 countries to improve the science of prevention world wide. The goal was to improve global education in science. To accomplish these we have developed a simple, but powerful system whereby scientists share their best, most exciting lectures with each other. A scientist at the CDC could use a lecture on the epidemiology of West Nile Fever, and a scientist in the Sudan could present using a template lecture on the epidemiology of diabetes by an expert from Pittsburgh. We have built a free lecture library which has 2502 top quality lectures.

Lectures have been provided by 6 Nobel Prize winners, 60 members of the Institute of Medicine, Ministers of Health, etc.

In addition the Supercourse has created a system of Just-in-Time lectures for example with the Tsunami, or Bam Earthquake where a top-flight lecture is built by world's experts within a day after the event begins, and continues to be updated. Our Just-in-Time lectures have been seen by over 1,000,000 students world wide.

We plan to work with you, and the Library of Alexandria to establish a Supercourse of Science where we network a million scientists from 100s of disciplines, and then collect 1000s of top quality scientific lectures for all to use.

**LUKA, Sobail**

Scientific Officer, European Commission - DG Research, International Scientific Cooperation (Unit N2), European Commission

He received his B.Sc. degree in Microbiology and Chemistry from Ain Shams University in Cairo in 1986 and his Ph.D. in Molecular Microbial Genetics from the University of Tennessee, USA. As of 1993, he has occupied several academic positions in Egypt at the National Research Centre (NRC), Agricultural Genetic Engineering Research Institute (AGERI) and Mubarak City for Science and Technology (MuSCAT), respectively.

During the period of 1994-1997, he acted as a Visiting Professor in Molecular Genetics at the International Institute for Genetics and Biophysics, Italian National Research Council (CNR), Naples, Italy.

In 1997, he moved from academia to the Industry joining Procter & Gamble company, first in the Human & Environmental Safety department and ultimately as External Relations Manager for Europe, Africa and the Middle-East. He was based in the company's European Headquarters in Brussels.

He is the author of numerous scientific articles in international peer-reviewed journals as well as book chapters in the scientific literature.

Dr. Luka speaks Arabic, English, Italian and French. He is a musician of classical Arabic music, a cook and a Judo coach. He has had a musical release in the USA and two published food recipes

Abstract

Non-EU Country Participation in Framework Programme 6 (FP6) and Funding Opportunities to International Scientific Cooperation in the Upcoming FP7

S. Luka, Scientific Officer, European Commission - DG Research, International Scientific Cooperation (Unit N2), European Commission

The European Commission supports its research policies through a multi-annual Framework Programme (FP), at the beginning of which a specific budget and a set of research priorities are established for the entire duration of the programme. We have currently entered the final year of the Sixth FP programme (FP6, 2002-2006) and therefore, the primary opportunities for funding International Scientific Cooperation activities and European research in general will materialize through the funding Instruments of the Seventh FP programme (FP7, 2007-2013). The general architecture of FP7 is quite different from that of FP6 both in its general architecture and in the way the International Dimension is weaved within its various specific programmes.

Within the FP programme, the funding for any type of research activity is channeled through various Instruments. For example, some instruments are used to fund research activities as is the case for the Specific Targeted Research Project (STREP) Instrument, while others provide funding for the coordination of research activities or research policies, as is the case for Networks of Excellence (NoE), Coordination Actions (CA) and Specific Support Actions (SSA).

The aim of this talk is to give a brief account of the nature and extent of participation of Third Countries in FP6 and to give a schematic overview of FP7 in general and especially of the way International Cooperation is structured in it.

MADKOUR, Magdy

Assistant Director General, International Cooperation, International Center for Agricultural Research in the Dry Areas (ICARDA)



He had his PhD from University of Wales, UK. Physiological Plant Pathology being his area of specialization. Past professional and academic activities include: Lecturer Assistant, Lecturer, Associate Professor and Professor. Department of Pathology, Faculty of Agriculture, Alexandria University, Egypt. (1969-1990). Visiting Professor, Plant Growth Laboratory, University of California, Davis, USA. (1989-1990)

- Director, Agricultural Genetic Engineering Research Institute (AGERI), ARC, Egypt. (1990-Nov. 2001).
- Vice President (2001-2003) and President (2003-2004), Agricultural Research Center (ARC), Egypt.
- Member of the American Society for Microbiology (ASM), AAAS, IS-MPMI, ISPMB, Member of BIO.
- Member of TAC/CGIAR (1996-2000), and Member of the Board of Trustees of ICARDA and IPGRI.
- He received the AOAD Award for Scientific Excellence in 1999 and 2003, as well as the FAO world Food Day Award (2001)
- Received two patents in 1996 with the Egyptian Patent Office and in 1999 with USA Patent Office, for a Novel biological insecticide.

Author of 140 scientific publications in International refereed Journals. He also contributed chapters in 7 Text books published internationally.

**MAHMOUD, Adel**

President, Merck Vaccines, Merck & Co. Inc.

Adel A.F. Mahmoud, M.D., Ph.D., is completing eight year tenure as President, Merck Vaccines. Formerly, he served Case Western Reserve University and University Hospitals of Cleveland as Professor and Chairman of Medicine and Physician-in-Chief.

Dr. Mahmoud's academic pursuits focused on investigations of the biology and function of eosinophils particularly in host resistance to helminthic infections. In recent years, he turned his attention to Emerging Infections and the need to expand vaccination in the developing world. At Merck, Dr. Mahmoud led the effort to develop four new vaccines: combination of Measles, Mumps, Rubella and Varicella; Rota Virus; Shingles and Human Papillomavirus.

Born in Cairo, Egypt in 1941, Dr. Mahmoud received his M.D. degree from the University of Cairo in 1963. He completed training at the teaching hospitals of the University of Cairo and obtained his Ph.D. degree from the University of London, School of Hygiene and Tropical Medicine in 1971.

Dr. Mahmoud was elected to membership of the American Society for Clinical Investigation in 1978, the Association of American Physicians in 1980 and the Institute of Medicine of the National Academy of Sciences in 1987. He received the Bailey K. Ashford Award of the American Society of Tropical Medicine and Hygiene, and the Squibb Award of the Infectious Diseases Society of America.

Abstract**Priorities for Global Health Research and Product Development**

A. Mahmoud, President, Merck Vaccines, Merck & Co. Inc.

Global health research is the translation of global will for better life for all, into generating new knowledge and its applications to develop usable products. The effort must be cognizant of the different global settings. Currently, global health research is focusing on 1) unfinished agenda of infectious diseases, 2) the coming epidemic of chronic diseases and aging population, 3) the unnecessary epidemic: injuries, casualties of war and humanitarian emergencies and 4) crisis in health systems. But priority setting for research on problems of the developing world is now crucial. During the next decade the focus should be: maternal and child health, microbial threats, non-communicable diseases and injury and health policy. Convergence of new scientific pursuits such as synthetic, system and structural biology and integrative genomics with immunology, genetics and molecular biology offer a unique opportunity for discovery and innovation. Information technology, increase in research capacity in the developing world, an expanded base of scientific excellence and freedom of scientific inquiry are necessary prerequisites. The other arm of the global effort must address product development for pharmaceuticals, vaccines and diagnostics. The economics of product development in the pharmaceutical sector shows that a new chemical entity costs approximately \$800 million. Recently, the movement towards product development in public-private partnerships is paving the way to explore uncharted territory. Low cost products for developing countries must not mean different standards. Enabling conditions such as regulatory systems, liability, and intellectual property have to be similarly streamlined to accelerate the pace of development. Global health research and its applications are fundamental to social development and progress; the need is urgent.

MCCONNELL, David

Co-Vice Chairman, EAGLES

David McConnell, BA, PhD, FTCD, MRIA, FZSI, member of EMBO, is Professor of Genetics at the Smurfit Institute of Genetics, Trinity College, Dublin.

Educated at Trinity College Dublin (BA., 1966) and the California Institute of Technology (PhD., 1971), he has been a member of the faculty of Trinity College since 1970 when he introduced the science and technology behind genetic engineering to Ireland. In the course of this work he carried out research with many companies including Guinness Ireland, NovoNordisk, BP, Schering Plough and ICI. He advised the Industrial Development Authority of Ireland on the potential impact of biotechnology on the Irish economy. He advised the United Nations Industrial Development Organization (UNIDO) and other organizations on biotechnology policy in many countries. He held an Eleanor Roosevelt Fellowship of the IUAC at Harvard University (1976-77).

He is a member of the Executive Board of the European Federation of Biotechnology and Co-Vice-Chairman of European Action on Global Life Sciences (EAGLES). He is co-coordinating two projects of the European Commission on meeting the challenges for the life sciences in the developing and emerging countries.

He was a member of the Irish Council for Science, Technology and Innovation, and participated in the Technology Foresight exercise, developing arguments that laid the basis for the establishment of Science Foundation Ireland. He is Chairman of The Irish Times Trust, a not-for-profit company which owns The Irish Times.



**MOHAN, Viswanathan**

Chairman & Chief of Diabetologist

DR.V. MOHAN, M.D., FRCP (UK), FRCP (Glasg), Ph.D., D.Sc. FABMS, FIMSA, FICP, FNASc

Chairman & Chief of Diabetology, Dr. Mohan's Diabetes Specialties Centre and President & Director, Madras Diabetes Research Foundation

DR. V. Mohan is one of India's leading diabetologists and is presently the Chairman and Chief of Diabetology of the Dr. Mohan's Diabetes Specialties Centre and President and Director of the Madras Diabetes Research

Foundation at Gopalapuram, Chennai. A student of the Madras Medical College, Dr. Mohan was awarded several prizes during his undergraduate course and the Dr. R.V. Rajam Gold Medal for standing first in the University in the M.D. examination. Deeply interested in research even from his undergraduate days, Dr. Mohan has published over 400 original research papers in prestigious peer reviewed journals. He has also contributed chapters to over 50 text-books on diabetes. His main research interests are in epidemiology of diabetes and its complications and genomics of diabetes

Abstract**Diabetes Epidemic in India**

V. Mohan, Chairman & Chief of Diabetologist

The World Health Organization reports indicate that India leads the world with the largest number of diabetic subjects (32 million). These numbers are projected to increase to 79.4 million people in the year 2030, which is 20% of the world's diabetic population. Population based studies conducted by us, the Chennai Urban Rural Epidemiology Study (CURES) reveals a rising prevalence of diabetes in urban India with figures ranging between 12 - 16%, which is in sharp contrast to 2% reported in 1970's. There are several peculiarities of Type 2 diabetes among Indians: [1] It occurs 2-3 decades earlier compared to Europeans, [2] Genetic factors are stronger than in Europeans [3] Coronary artery disease is more common, while micro vascular complications like retinopathy are less common compared to Europeans. These ethnic differences could be due to genetic factors. Our studies indicate that some genes like the Pro12Ala polymorphism of the PPAR γ gene which are known to be protective against diabetes in Europeans does not offer protection to Indians. The Thr394Thr(G/A) polymorphism in PGC-1 gene which is strongly associated with diabetes as well as body fat in Indians has not been reported in other populations. However, it is the rapid epidemiological transition accompanied by sedentary lifestyle and unhealthy diet that is responsible for the epidemic of diabetes in India. Unfortunately awareness of diabetes remains very low with only 10% of people being aware that obesity and physical inactivity could predispose to diabetes. This emphasizes the need for increasing diabetes awareness activities in India and for more research into its causation.

NAKHLA, Rafik

Director of Personnel Department, Bibliotheca Alexandrina



Rafik Nakhla a graduate pharmacist. He holds a Master degree in Quality Management from the University of Wolverhampton, (U.K.)

After five years of training and sales experience in the Pharmaceutical industry, he became a lecturer in Sales and Marketing with the AUC and a visiting lecturer with the AAGSB. He is also a Management Consultant.

In October 2002 he joined Bibliotheca Alexandrina (BA) as the Training and Human Resources Consultant; he is currently the Director of Personnel.

He contributed to several international conferences in BA; Biotechnology voices of the north and the south in 2002, Ethical and social responsibility of science and technology 2002, Teaching math and science in the 21st century 2003 and Biovisionalexandria2004. He participated in the pre conference workshop of the Arab Reform Forum and the Education Reform Forum

He is a member of the 2005 Board of Examiners of the National Award for Excellence

Some Publications:

Nakhla, R. (2004) Biotechnology a Controversial Technology. Alexandria: Bibliotheca Alexandrina.

Nakhla, R. (2003) Biology Curriculum in Secondary Schools in Egypt. Alexandria: Bibliotheca Alexandrina.

El Tayeb, M., El Mofty, M., Eid, M., Refai, A., Abdo, A., Nakhla, R. (2005) Reform issues in Continuous Education and vocational development. Alexandria: Bibliotheca Alexandrina. Education Reform Forum

Schneider, C., Nakhla, R., Soliman, S., Erbisch, F. (2004) An overview of Biovision Alexandria 2004. Alexandria: Bibliotheca Alexandrina/The Doyle Foundation.

**NOBEL, Joel**

Founder and Professor Emeritus, ECRI

JOEL J. NOBEL, M.D

Joel Nobel founded ECRI, a 38-year old U.S. based nonprofit health services research organization. He developed ECRI's overall policies and programs, including its technology assessment, product evaluation, risk management, and technical assistance services. He created the concepts and operating plans for Health Devices, Health Devices Alerts, the Healthcare Product Comparison System and many other ECRI publications and services. He also developed ECRI's international programs and its related World Health Organization (WHO) Collaborating Centre.

He established offices in the United Kingdom to serve Europe, in Malaysia to serve the Asia-Pacific region, and in Dubai to serve the Middle East. He has also directed projects on five continents.

Dr. Nobel testified before the U.S. Congress on proposed legislation, ranging from national telecommunications policy to medical device regulation, and has served as a consultant to many government and international agencies, ministries of health and hospitals.

Dr. Nobel received his BA degree with high honors from Haverford College, his MA degree in international relations from the University of Pennsylvania and his MD from Thomas Jefferson University Medical College.

His neurosurgical residency was interrupted by military service as a medical officer in the U.S. Navy. He served on a nuclear submarine and then chose a research rather than a clinical career and established ECRI.

Abstract**The Impact of Progress in Life Sciences on Health in Developing Nations**

J. Nobel, Founder and Professor Emeritus, ECRI

The Impact of Progress in Life Sciences on Health in Developing Nations

Joel J. Nobel, MD

Founder & President Emeritus, ECRI

Improving healthcare in developing nations, as was the case for industrialized countries in earlier times, is a multi-sectoral challenge. While our focus at Biovision 2006 is on life sciences and health, we must remain alert to the relationships between disease, nutrition, energy levels, productivity, education, capital formation and health.

Current developments in biotechnology, gene mapping and therapies, immunology, neurosciences, other life sciences and their expression in new diagnostic and therapeutic technologies capture our imagination. But they will have little impact on health indicators in developing nations in the foreseeable future. Such nations will continue the struggle to provide safe water supplies, sanitary systems, food distribution, to improve education and basic immunization programs.

Nutrition is a core health determinant. Transportation infrastructure is often the primary limitation in food and healthcare availability. Therefore progress in life sciences is likely to have relatively little impact on the world's poor for decades to come. Two exceptions to this assertion are immunization programs and genetically modified foods, despite political resistance to the latter.

Extending lifespan increases population and food demand, lest starvation kill those saved from disease. Population pressures have led to forest loss because of the need for fuel and agricultural land in some nations. The loss of topsoil then decreased food availability and turned subsistence agricultural areas into net food importers. Social unrest and political turmoil often accompanied these changes.

To benefit the world's poor, improvements in healthcare must be paralleled by improvements in regulating fertility, improving nutrition and education and job availability before progress in life sciences and sophisticated medical care will serve human needs well.

NORRBY, Erling

Secretary General, The Royal Swedish Academy of Sciences

MD 1963, PhD 1964, Professor of Virology, Karolinska institute, 1972-1997, Dean of the Medical Faculty 1990-1996, Secretary General of the Royal Swedish Academy of Sciences, 1997-2003. Adjunct member, Member of the Nobel committee of the Karolinska institute, 1975-1993. Chairman of the Division of Virology of the International Union of Microbiological Societies, 1984-1987. Lord Chamberlain in Waiting at the Royal Swedish Court.



Abstact

More than 100 Years of Nobel Prizes

E. Norrby, Secretary General, The Royal Swedish Academy of Sciences

The Nobel Prizes is a unique institution. Over the years it has acquired the status of being an exceptional measure of scientific quality. In this lecture Alfred Nobel and his will instituting the world-renowned Prizes will be presented. It will also describe the process by which new Laureates are selected. The distribution over time to scientists of different nationalities will also be presented. Finally some reflections will be given on the conditions of creativity favoring discoveries awarded with Prizes.

**NUTTI, Marilia**

Researcher, National Research Center on Food Technology, Embrapa

Food Engineer, MSc in Food Science at the State University of Campinas, Brazil(1986), Post-Graduate Course in Nutritional Planning at the University of Gent, Belgium (1980) and in Consumer Studies at the University of Guelph, Canada(1985). Full time researcher and lecturer at the Department of Nutrition and Food Planning, State University of Campinas(1983-1987), being responsible for courses and examination committees. Technical Director of Nutricia S.A-Produtos Dieteticos e Nutricionais, leading a group of 40 researchers mainly oriented at R&D of Foods for Special Dietary Uses. Director of Embrapa Food Technology (1996 -2003). Brazilian delegate at the Codex Alimentarius Committee in Food Labeling since 1997, the Codex Alimentarius ad hoc Task Force on Foods Derived from Biotechnology (Japan) since 2000. Member of the Interministerial Group for the Labeling of Genetically Modified Foods, representing the Minister of Agriculture and Supply. Member of FAO/WHO Expert Consultation "Safety Aspects of Genetically Modified Foods of Plant Origin", expert of FAO/WHO in Biosafety. Coordinator of the Latin American activities for the Harvest Plus, focus on Biofortification of crops in order to improve human nutrition and health, being responsible for the interface between breeding, biotechnology, food technology and nutrition activities. Researcher at Embrapa, Brazilian Agricultural Research Corporation, in food safety, nutrition, biosafety and labeling of genetically modified foods.

Abstract**Progress in Brazil in the Field of Biofortification: Harvest Plus**

M. Nutti, Researcher, National Research Center on Food Technology, Embrapa

HarvestPlus, is a innovation proposal, with a multidisciplinary team in the areas of plant breeding, biotechnology, human nutrition, food science and economy, in order to fight micronutrient deficiency. In Brazil, this project is coordinated by EMBRAPA, having important alliances with, Universities, NGO s and private sector. The project team expects to develop and diffuse technologies that will have good acceptance among the farmers and can cause an impact in the health of the population. In NE Brazil, levels of iron deficiency anemia approach that of 50% of children under 2 years Vitamin A deficiency is a chronic problem impacting mainly low income children in parts of North, North East and South East Brazil. The main areas of research of HarvestPlus in Brazil are cassava, maize and common beans, with improved levels of provitamin A, Iron and Zinc. The screening of germplasm banks of these crops has indicated promising varieties for the breeders, which expects to increase the micronutrient content by conventional breeding. South-South collaboration has been carried out with ten African countries, in order to develop local capacity for carotenoid analysis, when a hands on training course for carotenoid detection and analysis were performed in Tanzania, July 2005. March 2005, the Brazilian HarvestPlus team of plant breeders and nutritionists presented the state of research on biofortified crops for Brazil to an audience of Brazilian policy makers and national scientists who are critical for paving the pathway and enabling biofortification as a viable strategy to reduce micronutrient malnutrition. For 2006, the team will also work in the screening of local germplasm of cowpea, wheat and sweet potato.

OBORNE, Michael

Director, International Futures Programme, OECD - French Delegation



Michael Osborne has been at the Organization for Economic Co-operation and Development (OECD) since 1980. He has held posts as Senior Research Fellow (China and Pacific Basin), Executive Assistant to the Deputy Secretary General of OECD, Head of the Science and Technology Policy Division of OECD, and Deputy Director for Science, Technology and Industry. He is presently Director of the OECD's International Futures Programme and the OECD's Global Science Forum.

Mr. Osborne was educated at the University of California at Berkeley (BA, MA, and PhD), Cambridge University, and the Ecole Normale Supérieure in Paris. He has taught at universities in the United States, Great Britain, France and Italy. In the 1980's he worked on the political economies of the Pacific Basin countries, and published books and articles on technology and direct foreign investment issues in the People's Republic of China.

Over his career, Mr. Osborne has worked extensively in the areas of biotechnology, science policy, innovation policy frameworks, information technology policy and the political economy of China. Currently, the IFP is working on projects focused on the commercialization of space, the new security economy, monitoring and managing new systemic risks and the emerging bio-economy. Mr. Osborne chairs the OECD Internal Coordinating Group on Biotechnology. He organized and chaired the 2004 Frascati meeting on the promotion of responsible oversight in the biosciences, and is currently developing further work on biosecurity.

Abstract

Reinventing the Clinical Innovation Enterprise

M. Osborne, Director, International Futures Programme, OECD - French Delegation

The links between innovation, productivity, health and wealth are recognized by OECD countries. Investing in and encouraging innovation is a priority for many jurisdictions as is the affordability, quality and sustainability of health-care systems. The apparent tension between these two goals can be mitigated, however. The challenge for policymakers is to encourage innovation that addresses health needs and priorities; maximizes access to the benefits; and manages risks in a way that is beneficial both to innovators and health systems.

The presentation will consider some of the key challenges facing policy makers and innovators as well as the opportunities provided by developments in genomics and informatics in particular to reorganize and reinvent the way that clinical innovation is delivered.

An attempt will be made to draw the strings together for a short-medium term agenda for international policy action that might reduce regulatory uncertainty and encourage the creation of a more stable receiving environment for life science innovation, particularly in the health sector.



OMI, Koji

Former Japanese Minister of State for Science and Technology Policy; Chairman, the Diet Members Promotion Alliance for Life Science

1956: Graduated from Hitotsubashi Univ., joined the Ministry of International Trade and Industry (MITI); Consul, Consulate General in New York; Director, South Asia & Eastern Europe Div., Trade Policy Bureau; Director, small Enterprise Policy Div., Small and Medium Enterprise Agency; Director, Administrative Div., Science and Technology Agency, Director-General, Guidance Dept. SME Agency, First elected in 1983; Parliamentary Vice-minister for Finance; LDP Dir.-Gen. Minister for Economic Planning (1997-98), Minister for Okinawa and Northern Territories Aff. and for Science and Technology Policy (2001-02), Central role to enact the Fundamental Law of Science and Technology (1995); created the Okinawa Institute of Science and Technology, international and interdisciplinary graduate university; founded the Science and Technology in Society (STS) forum with the aim of building a worldwide network among scientists, policymakers and business people. The STS forum is to be held annually in Kyoto, Japan, to discuss the “lights and shadows” of science and technology for the sake of humankind.

PADULOSI, Stefano

Senior Scientist, Diversity for Livelihoods Programme, IPGRI



Stefano Padulosi, is a senior scientist at the International Plant Genetic Resources Institute (IPGRI). He earned his PhD in Biological Sciences at the University of Louvain-La-Neuve, Belgium in 1993. He coordinates IPGRI's work in the area of neglected and underutilized species. His contributions include the development of an institutional strategy to guide the use-enhancement of such species and the implementation of the first UN Global Project aiming at mobilizing their contribution to strengthen food security and incomes of the rural poor. Prior this work, he was a plant explorer at The International Institute of Tropical Agriculture (IITA, Nigeria) from where he mounted scientific expeditions across Sub-Saharan Africa to study and sample IITA's mandated crops and its wild relatives. He is also the coordinator of IPGRI's Project on Agricultural Biodiversity, Human Health and Welfare and is currently based in Aleppo, Syria.

Abstract

Eliminating Hunger and Poverty: Priorities and delivery through agricultural biodiversity
S. Padulosi, Senior Scientist, Diversity for Livelihoods Programme, IPGRI

Eliminating Hunger and Poverty: Priorities and Delivery through Agricultural Biodiversity
E. Frison, T. Johns, I. Hoeschle-Zeledon, S. Padulosi (IPGRI) and M.S. Swaminathan and S. Bala Ravi (MSSRF)

In spite of enormous progress made in enhancing productivity of major food crops, more than 800 million people are under-nourished and the majority of them live in areas rich in agricultural biodiversity. Reducing hunger and poverty by half by 2015 is the first of the UN Millennium Development Goals (MDGs). A recent assessment of the MDGs indicates inadequate progress in reducing hunger and poverty. An International Consultation held at Chennai, India in 2005 underscored the unique contribution that agricultural biodiversity makes in household security and income generation. Its outcome is particularly significant while rethinking priorities in food & agriculture. Endemic hunger caused by protein-energy malnutrition, hidden hunger caused by deficiencies of micro-nutrients in the diet, and transient hunger caused by drought and other natural disasters can be overcome through an integrated strategy for the conservation and sustainable and equitable sharing of the benefits arising from agricultural biodiversity. Better nutrition plays a strategic role also in combating non-communicable diseases linked with simplification of diets and greater consumption of carbohydrates and fats. The Chennai Platform for Action promotes the principles of giving agricultural biodiversity greater importance in national and international development strategies. It calls for urgent actions for meeting the MDGs. The global struggle against poverty and hunger requires increased international collaboration in conservation and sustainable and equitable use of agricultural biodiversity. Where hunger rules, peace cannot prevail. Hence, the time has come to embrace the idea of a decentralized and community-managed sustainable nutrition security system based on expanded agricultural biodiversity.

**PAGLIANO, Daniel**

President, Latin American Federation of National Biotechnology Companies Association (FELAEB)

Daniel Pagliano Freire is the actual President of the Latin American Federation of National Biotechnology Companies Associations (FELAEB) and Director of the Uruguayan Association of Biotechnology Companies.

He is President & CEO of Scutia Biobusiness and Director of Nidetec, a holding that integrates plant biotechnology and fruit production (www.nidetec.com).

He was a Director of Zonamerica Business and Technology Park (www.zonamerica.com), a technology park in Latin America which host more than 200 companies, and where he developed the project and built up the Biotec Plaza Building, a leading infrastructure for biotech companies (www.biotec-plaza.com).

He founded and was the first President of the REDBIO Foundation (www.redbio.org), an organization that promotes plant biotechnology in Latin America with the sponsorship of FAO. This NGO actually joins more than 640 laboratories in this region.

Pagliano is a former Fellow from the Eisenhower Exchange Fellowship and the European Union. He participated as project leader in the first regional biotechnology project for the Inter-American Institute for Cooperation on Agriculture with support from the Inter American Development Bank.

He was a Professor of Microbiology in the Uruguayan University and co-founder of the Unit of Biotechnology at the National Institute of Agriculture Research.

Pagliano has a degree in Agronomy from the University of the Republic, and a Master's degree in molecular biology from the Free University of Brussels in Belgium.

PAN, Changyu

Professor, Chinese PLA General Hospital



Chang Yu Pan is currently Prof of Dept of the Endocrinology Department at the Chinese PLA General Hospital in Beijing China She received her MD degree from Harbin Medical University in 1956 and was postgraduate trainee of Endocrinology at the PUMC from 1963-1965, and visiting investigator at Okynawa University in Japan from 1985-1986, as well as scholar fellower at Tulfts University in Boston USA from 1986-1987? Chang Yu Pan is an active member of numerous national and international scientific organizations, including the Chinese Medical Association and ADA. Pan is an editorial board member of key Chinese medical journals. She has received 4 awards from Chinese Military technological and scientific. Her research interest include the detction, prevention and treatment of diabetes and its complications? She was the principle investigator of the Chinese Diabetes Prevention Study with acarbose, and a member of international steering or management committees of ADVANCE«NAVIGATOR and The National leader of Origin international intervention trials. She was published more the 300 articles in peer reviewed journals both in China and internationally.

Abstract

Diabetes in China: Meeting the challenge

C. Pan, Professor, Chinese PLA General Hospital

Diabetes is growing into one of the most serious and costly diabetes globally in both human and economic terms. The prevalence of diabetes in China is increasing with economic and changes from traditional to modernized lifestyle. Many Chinese people now drive cars instead of cycle or walk and there are higher calorie-food intake. This has triggered a rapid growth of diabetes prevalence in the country. The total number of diabetes is nearly 30 million and another 30 million for prediabetes (IGT). However, several large scale survey showed 60%-70% of diabetes was undiagnosed in the general population and majority of patients(84.5%,1228/1470) with abnormal glucose metabolism would have remained undiagnosed in the established CHD patients. The Diabcare-China in 2003 which recruited 2700 patients with diabetes at 30 specialist centers found that of the people who participated in the study, 95% were diagnosed type2 diabetes as opposed to other types of diabetes, over half of patients with metabolic control (61.% had mean total Ch 5.1+/-1.1 mmol/L,53.3%had HDL-c 1.3+/-0.6mmol/L and 60%had TG 1.9+/-1.1 mmol/L). In this study ,only 65.0%and 38.5% of people with diabetes had eye and feet examinations, respectively, in the past 12 months. In the light of higher frequencies of diabetes eye complications such as cataract (37.2%) ,neuropathy(29.3%) and retinopathy(18.4%) than foot complications among Chinese people with diabetes (CVD) and metabolic syndrome. Lifestyle modification and some pharmacological therapies. Such as Acarbose, have been shown to reduce disease progression in China. While a number of trials China joined are ongoing to future assess the potential preventive effects various therapies.



PATELL, Viloo Morawala
Avesthagen, Founder & CEO

Dr. Viloo Morawala-Patell started her professional career at the International Crops Research Institute for the Semi-Arid Tropics ("ICRISAT") at Hyderabad, in 1978. She worked on projects on the biochemistry of nitrogen fixation in Legumes, standardizing a screening technique for drought tolerance and on cytoplasmic male sterility in Millet and Sorghum, amongst other projects.

In 1989 Dr. Patell embarked on a PhD program in plant molecular biology at University Louis Pasteur, Strasbourg, France. Upon completing her PhD program in 1993, Dr. Patell moved back to India, only to return back to Europe soon afterwards in early 1994. She started on a post-doctoral program at the University of Gent, Belgium, at the labs of Prof. Marc van Montagu, in whose labs the technology of genetic engineering of plants was first developed.

Afterwards she established herself as independent scientist and principal investigator working from the National Center for Biological Sciences ("NCBS") and subsequently at the University of Agricultural Sciences ("UAS") in Bangalore. She raised funds from the Rockefeller Foundation, the Indo-French Center for the Promotion of Advanced and the UK Department for International Development ("DFID"). She founded Avesthagen in April 1998 as a public-private Company to promote a sustainable innovation platform for the Nation, operating out of the labs of the UAS, before moving to ITPL in 2000.



PATERMANN, Christian
Director, Directorate E, European Commission.

Christian Patermann was born in Gliwice, Upper Silesia, in 1942. Following his High School years he studied Law, Economics and Languages in Germany (Freiburg, München, Bonn), Switzerland (Lausanne, Geneva) and Spain (Santander) and completed his Doctoral Thesis in Law at the University of Bonn in 1969. He entered the German public service in 1971 by joining the Federal Ministry of Science and Education, Bonn. A few years later he became, for the next 5 years, Science Counselor at the German Embassy in Washington D.C., USA. He then returned to the Ministry of Research and Technology, where he held many positions, among them Director of Cabinet of the German Federal Minister of Research and Technology Dr. H. Riesenhuber: In 1993 he became Deputy Director-General of the Ministry. In 1996 he went to Brussels to be the Programme Director for Environment Research at the Research Directorate-General of the European Commission, where he conceived and implemented the 4th, 5th and 6th RTD Framework Programmes of the EU in this field. He was also Vice-President of the Steering Committee of IGFA (International Group of Funding Agencies in Global Change) and elected Member of the START Scientific Committee.

Since January 2004 he is Programme Director for Biotechnology, Agriculture & Food Research at the Research Directorate-General of the European Commission. He is an enthusiastic Jazz musician and promotes also modern art as a Member of the Board of the Kunst- und Ausstellungshalle der Bundesrepublik Deutschland in Bonn.

POORTMAN, Ysbrand

Vice President, World Alliance of Organizations for the Prevention and Treatment of Genetic and Congenital Conditions



Ysbrand Poortman is a biologist by education and the father of a daughter with a genetic, as yet incurable disease (spinal muscular atrophy). After teaching in high school and academia, he focused on issues related to medical research and genetics and on strengthening parent/patient organizations.

- * In 1967 he founded the Dutch Association for Neuromuscular Diseases (VSN, Baarn) and in 1975 he founded the Dutch Genetic Alliance of Parent / Patient Organizations (VSOP, Soestdijk) of which he has been executive director up till 2002
- * From 1974 till 1996, he was vice president of the European Alliance of Neuromuscular Disorder Associations (EAMDA, Malta). From 1989 till 1995 he was founder and chairman of the European Neuromuscular Centre for the coordination and stimulation of international research (ENMC, Baarn) which has now organized over 140 international workshops and consensus meetings. He was co- founder of the World Alliance of Neuromuscular Disorder Associations (WANDA, Adelaide) of which he is vice president since 1994.
- * From 1992 till 2000 he has been vice president of the European Alliance of patient and parent organizations for Genetic Services and innovation in medicine, recently evolved in the European Genetic Alliances' Network (EGAN, Brussels) of which he is senior advisor.
- * Since 1994 founder member of the European Platform for Patients Organizations, Science and Industry (EPPOSI, Brussels) of which he was the chairman from 2000 – 2005.
- * He is vice president of the World Alliance of Organizations for the Prevention and Treatment of Genetic Conditions (WAO, New York) and Secretary General of the International Genetic Alliance of Patient organizations (IGA, Washington) which started in 2000.
- * He partnered and partners in various major EU- projects such as GENED, EUROMITOCOMBAT, EUROGENGUIDE)
- * He is a founder- & board member of the Centre for Clinical Genetics of the Erasmus university from 1980 to 2000. (SKGRR, Rotterdam)
- * He has since 1998 a senior advisory function at the Flemish Institute of Biotechnology (VIB, Gent)
- * He is a member of the college of chairs of the World Life Sciences' Forum, BioVision.
- * He is a member of various advisory (f.i. Dutch National Health Council), university curatoria and expert committees on the national, European and global level.
- * He authored a number of publications such as a handbook on neuromuscular diseases, chapters in books, articles, teaching packages, and information materials on genetics. His latest publication is "The increasing role of nutrition and genomics for prevention and management of disease", Nov. 2004, 145 p., ISBN 90-5911-407-8.

A number of television productions and educational audiovisuals bear his name.

**POTRYKUS, Ingo**

Chairman, Humanitarian Golden Rice Board and Network to Fight Micronutrient Malnutrition in Developing Countries

PhD in Plant Genetics 1968 at Max-Planck-Institute, Cologne, Germany; Ass. Professor, Institute of Plant Physiology, Stuttgart 1970-74. Research Group Leader, Max-Planck-Institute, Ladenburg 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.

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.

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.

Member Academia Europaea, Pontifical Academy of Sciences, Hungarian Academy of sciences, World Technology Network, Swiss Academy of Technical Sciences, Cover TIME Magazine July 31, 2000.

Abstract**Golden Rice and Beyond – The Power of Biofortification**

I. Potrykus, Chairman, Humanitarian Golden Rice Board and Network to Fight Micronutrient Malnutrition in Developing Countries

Rice is the major diet for over 2 billion poor in developing countries. It is an excellent source of calories, but poor in micro nutrients. The consequence is widespread micro nutrient deficiency. Since the early 90's a concept is gaining attention, proposing to aim at directed improvement of the nutrient content by using the potential of genetics: 'biofortification'. 'Golden Rice' is the first successful GMO-case. Since the first 'proof of concept' (1), science has progressed such that 'Golden Rice' provides the amount of provitamin A from a standard diet necessary, to prevent vitamin A malnutrition (2). Within the framework of a humanitarian project 'Golden Rice' is carried through 'product development' and 'deregulation' and will be made available, to subsistence farmers in developing countries, free of costs. Ex ante studies have indicated that adoption of 'Golden Rice' would have dramatic health and economic benefits (3). Extreme precautionary regulation delays use of 'Golden Rice' for a minimum of 6 years and is, therefore, responsible for many avoidable deaths. Other, even more important micro nutrient deficiencies relate to iron, zinc, and essential amino acids. This challenge has been taken up since the middle of the nineties (4), and a breakthrough should be expected within the next five years from the 'Grand Challenges in Global Health' initiative of the Melinda & Bill Gates Foundation. Thanks to generous funding international research consortia have been established to work on 'Golden Rice' complemented by 'high iron', 'high zinc', and 'high quality protein'. And this concept is extended to cassava, sorghum, and banana (5). Citations: (1) Ye et al., *Science* 287: 2000 ; (2) Paine et al., *Nature Biotechnology* 23: 2005; (3) Anderson et al., *Journal of Economic Integration* 20 (4) 2005 ; (4) Lucca et al., *Theor.Appl.Genetics* 102 : 2001 ; (5) www.goldenrice.org ; (6) www.grandchallengesgh.org.

PRAKASH, Channapatna S.

Professor, Plant Molecular Genetics & Director, Center for Plant Biotechnology Research, Tuskegee University



Dr. C. S. Prakash, Professor in Plant Molecular Genetics and the Director of Center for Plant Biotechnology Research at Tuskegee University, oversees the research on food crops of importance to developing countries and training of scientists and students in plant biotechnology. Dr. Prakash has also been actively involved in enhancing the societal awareness of food biotechnology issues around the world. His Internet website www.agbioworld.org has become an important portal disseminating information and promoting discussion on this subject among stakeholders such as scientists, policy makers, activists and journalists. He has earlier served on the USDA's Agricultural Biotechnology Advisory Committee and the Advisory Committee for the Department of Biotechnology for the government of India.

His outreach activities include writing commentaries, delivering public lectures, providing media interviews, and moderating daily Internet discussion group and newsletter 'AgBioView' which is read by more than 5000 experts in 65 countries. The AgBioView is widely recognized as a premier news outlet on agbiotech issues because of its broad focus on technical, societal and ethical issues. Dr. Prakash, through his efforts has been successful in impacting decision makers, the media and consumers in creating awareness of agbiotech issues especially on technology development and biosafety issues. He been instrumental in catalyzing the scientific community in many countries to be more proactive in the biotechnology debate.

RABBINGE, Roelof

Chairman/Dean of Wageningen Graduate Schools



Roelof Rabbinge is Chairman/Dean of Wageningen Graduate Schools in the Netherlands and University Professor for Sustainable Development and Systems Innovation. He led various missions and agricultural programs in developing countries and served as Editor of several journals. He also served on the Board of Trustees of six centers of the Group of International Agricultural Research; was Chairman of the International Rice Research Institute Board of Trustees (1995-2000), and was co-chair of the InterAcademy panel on Food Security and Agricultural Productivity in Africa. He is presently a member of the Senate of the Netherlands Parliament; Chairman of the Royal Institute of the Tropics; and serves on the boards of various international agribusiness firms.

**RANGEL-ALDAO, Rafael**

Director of Project Digital Molecular Medicine, Professor of Biotechnology

Rafael Rangel-Aldao received his M.D. from University Central of Venezuela, and a Ph.D. from Albert Einstein College of Medicine, New York. For over twenty-five years as a professor of biotechnology at Simón Bolívar University, and as former Director of Research and Innovation of Empresas Polar (1987-2005), the largest food and beverage conglomerate of Venezuela and the third of Latin America, he has published extensively with scientific and technological contributions in a wide range of fields encompassing from biochemistry, molecular biology, chemistry, plant physiology, and medicine, to food product development, industrial processes, and agricultural research in marker-assisted plant breeding. Rangel-Aldao is author of several triadic patents in biotechnology applied to both the food and biomedical industries. Born in Caracas, Rangel-Aldao has received numerous awards and prizes, a member of several scientific societies, and visiting scientist at universities such as Yale, Lovain, Sao Paulo, and Catholic of Chile. He is or has been a member of the editorial board of Biological Research, Electronic Journal of Biotechnology, and Revista Colombiana de Biotecnología, as well as a writer of scientific journalism, activity that has rewarded him with several prizes. He is a frequent speaker at universities and companies of USA, E.U., and Latin America, as well as consultant of biotechnology issues for several Governments of Latin America and UN agencies.

Abstract**North-South Collaboration: Digital Molecular Medicine**

Rafael Rangel-Aldao, Director of Project Digital Molecular Medicine, Professor of Biotechnology

Most developing countries have yet to assimilate major technological advances such as biotechnology and molecular medicine. There are exceptions, of course, but these are mostly due to lax intellectual property laws, low-cost generics, and vaccines that hardly reach the private sector to capture wealth and employment. Besides all obvious obstacles to technology transfer, two are noteworthy here, one is the accelerating rate of technology change; second, is the lack of integration at all levels of local innovation systems. Thus, scientific prowess and industrial infrastructure in no way assure a capability of novel science applications for developing countries. It would become necessary to connect skilled people with the hubs of networks where technology is effectively integrated into global innovation systems. This great challenge is also an opportunity for developing countries to catch up with an evolving new medicine of considerable importance to health systems world wide.

Three hypotheses are put forward as a framework to integrate scientists and physicians at the national level with their peers of global networks. The first, considers disease as preceded by the malfunction of biological informational networks that can be cartographed into digital maps to predict risk. Digital molecular medicine, as we called it, would emerge from cutting edge knowledge including systems biology, biotechnology, and nanotechnology, being translated into clinical medicine. The second, set ups collaboration as the linkage to global hubs of biomedical research, of three networks at the national level made of, (a), physicians; (b), molecular biologists; (c) computer scientists, physicists, and mathematicians to jointly build the digital maps. The third, formulates how developing countries could reap substantial benefits of social and economic importance by taking advantage of North-South collaboration.

RACHID M., Rachid

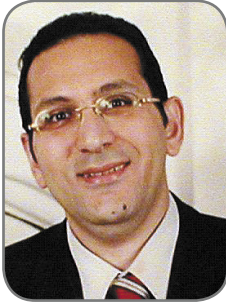
Minister of Trade and Industry, Egypt



H.E. Rachid Mohamed Rachid took up his duties as Minister of Foreign Trade and Industry in Egypt in July 2004, a member of the economic team appointed in the cabinet reshuffle. H.E. Rachid's appointment coincides with the amalgamation, under a single portfolio, of the previously separate Ministry Industry and Technological Development and Ministry of Foreign Trade. As Minister, his duties extend to include his role as alternate Board Governor at the Arab Development Bank for Economic Development in Africa and member of the COMESA Bank Board of Governors

Rachid Mohammed Rachid also holds the posts of Chairman and founder of the Alexandria Development Center, and Chairman of the Board of Trustees for the New Borg El-Arab City in Alexandria and also the Egyptian Dutch Business Council. Additional positions of responsibility, in Egypt, include his membership of the Board of Directors for HSBC Bank, the Egyptian British Council, the Egyptian European Association at Cairo University, the Social Development Fund for Egypt, and the Finance and Administration Committee of the Alexandria Library.

Rachid Mohamed Rachid received his B.Sc. in Mechanical Engineering from the Faculty of Engineering at Alexandria University in 1978. He has attended a number of management programs in the United States, including the Management Development Program at Stanford University in 1983, the Strategic Management Program at MIT in 1993, and the Advanced Management Program at Harvard Business School in 1996.

**REZK, Mourad**

Regional Medical Director, Novo Nordisk

Education:

- 1-Bachelor of medicine and surgery, Ain Shams University, Cairo/ 1989.
- 2-Masters degree in internal medicine, Cairo university 1995
- 3-Marketing diploma, American university of Cairo 1998
- 4-Master of business administration /Arab Academy of science and technology, Cairo ,2000
- 5-Masters degree in Algeology (chronic pain management), national cancer institute, Cairo , Egypt 2003.

Career:

- 1-2003 till currently: regional medical director of NovoNordisk Africa and Gulf region
- 2-1999-2002: Medical director of Janssen Cilag Egypt
- 3-1996-1998: biotechnology business unit manager for Janssen Cilag Egypt
- 4-1995: Biotechnology product manager/ Janssen Cilag Egypt
- 5-1994: Clinical research associate / Cilag Ag international
- 6-1990-1993: resident doctor in intensive care unit of national diabetes institute and national heart institute of Cairo.

Abstract**Role of the Paramedical Health Worker in Prevention and Care of Diabetes**

M. Rezk, Regional Medical Director, Novo Nordisk

Diabetes mellitus is emerging as a major health care problem, Increased longevity , coupled with rapid urbanization and changes from traditional lifestyles, will most likely trigger a diabetes epidemic estimated to affect 300 million capita by year 2025. Diabetes is the main cause of kidney failure, limb amputation, and new-onset blindness. People with diabetes are also two to four times more likely than people without diabetes to develop heart disease.

Paramedical health workers can play a substantial role in lowering the risk of development and or progress of type 2 diabetes ,

Screening and consequently early identification programs coupled with education on life style modification were proven to substantially lower the prevalence of diabetes amongst the risk groups..

Education of diabetics can optimize control ,reduce complications ,increase life expectancy and lowers total health care costs, Simple measures like patient education and awareness about foot problems can bring about a remarkable reduction in amputation rates.

A focus on regular screening and early monitoring for complications is worthwhile Detection and treatment of diabetic eye disease in both the US and Scandinavia is not only cost effective, but is actually cost saving. Potential savings in the USA exceed \$600 million, early detection of nephropathy by screening for micro albuminuria and immediate recourse to improved control with anti-Hypertensive medication, not only increases life expectancy significantly but also at the same time reduces total health care costs.

Similarly simple foot examination can help avoiding most of unwanted amputations.

ROGLIC, Gojka

Technical officer Diabetes, WHO



Dr Gojka Roglic, MD is the Technical Officer of the World Health Organization diabetes programme, and works in the Department of Chronic Diseases and Health Promotion based in Geneva, Switzerland. She took up the post in 1999 and is responsible for generating and updating global estimates of diabetes, its complications and mortality. Dr Roglic has previously worked as diabetologist and epidemiologist in the University Clinic for Diabetes, Endocrinology and Metabolic Diseases in Zagreb, Croatia. Dr Roglic participated in several national surveys of diabetes prevalence and multinational studies of diabetes epidemiology (the WHO DIAMOND Study, the EURODIAB IDDM Incidence Study, the EURODIAB IDDM Prospective Complications Study, the EURODIAB IDDM Family Nephropathy Study, the EUCLID Study, the WHO Multinational Study of Vascular Disease in Diabetes).

The Global Burden of Diabetes and the WHO Response to Face the Challenge

G.Roglic, Technical officer Diabetes, WHO

The prevalence of diabetes is increasing worldwide, in large part driven by the increased prevalence of risk factors like obesity and physical inactivity. It is estimated that the number of persons with diabetes will increase from over 170 million in the year 2000 to over 360 million in 2025, mostly on account of the increase in developing countries. Diabetes is responsible for some 3 million excess deaths every year. In many countries at least one in ten deaths is attributable to diabetes.

The World Health Organization as a technical agency assists its member states in implementing appropriate interventions to prevent diabetes, its complications and related chronic diseases. Its activities are also aimed at raising awareness among policy makers that the diabetes epidemic has the potential to cripple any health care system, and is a serious threat to the attainment of some Millennium Development Goals. Diabetes Action Now is a partnership with the International Diabetes Federation, supported by the World Diabetes Foundation. Its main aim is to provide the evidence base for interventions in diabetes prevention and control, to raise awareness of the diabetes as a major public health threat, and to provide solutions for an adequate response.

**RUBINSTEIN, Ellis**

President, New York Academy of Sciences

As President of the NYAS since November 2002, Ellis Rubinstein is rejuvenating the 189-year-old institution through novel initiatives. The Science Alliance for Graduate Students and Post Docs provides career-mentoring to over 5,000 investigators. The Frontiers of Science Program is a “science salon” for researchers in the hottest fields of science. Science Without Borders disseminates information to 25,000+ members in 140 countries and to nearly 100,000 non-member Web visitors each month. Mr. Rubinstein spent 13 years at the American Association for the Advancement of Science, serving as Editor of *Science* magazine 1993-2002. He was Editor of *The Scientist*, Senior Editor at *Newsweek*, and Managing Editor of *Science* 86 and *IEEE Spectrum*. He was thrice honored by National Magazine Awards—the Pulitzer Prizes of the periodical industry. He conducted the first one-on-one interview with Chinese President Jiang Zemin granted to a Western magazine and Bill Clinton’s first interview with a science magazine. Ellis pioneered in global partnerships with the prestigious Chinese Ministry of Science and Technology; Japan’s Society for the Promotion of Science; the UK’s Ministry of Trade, the German Research Foundation, France’s INSERM, and the EU Commission. A member of World Economic Forum for 6 years, he moderated discussions at the nexus of science and society. A 1967 graduate of the University of California, Berkeley, Rubinstein is a Fellow of the AAAS and a member of the IEEE.

Abstract**Bridging the Gaps from Bench to Bedside and from North to South – Two Seminal Scientific Challenges of our Time**

E. Rubinstein, President, New York Academy of Sciences

As the advances of science become ever more spectacular, the lag-times before they improve our lives become ever more glaring. In the clinics of the developed world, doctors and patients wonder when they will have therapies that suit the needs of the individual ... or, at the very least, the needs of homogenous classes of individuals. In the clinic-less villages of economically deprived nations, people wonder when – if ever – the wonders of modern medicine will become available ... assuming they are even aware of the cornucopia of treatments that can address the treatable diseases of our time. As Charles Dickens wrote: “It was the best of times; it was the worst of times...” This presentation will point to signs suggesting that the scientific community is struggling to address society’s problems in new ways. It will then propose initiatives that could help bridge the gaps between bench and bedside and between North and South.

RUBINSTEIN, Joanna

Associate Dean for Global Initiatives at Columbia University Health Sciences Division, Director for Health and Science Initiatives, UN Millennium Project



As Executive Director for Global Health and Science Initiatives of the UN Millennium Project, Joanna Rubinstein coordinates international partnerships with the private sector, academic institutions and research funding bodies. She also leads the “Quick Wins” initiatives of the Millennium Project. Moreover, she represents the Millennium Project internationally and leads cross-country initiatives.

Rubinstein comes to the Earth Institute from the Columbia University Medical Center (CUMC), where she supervised the medical center’s graduate and post-doctoral programs and organized a wide variety of innovative initiatives.

Among Rubinstein’s “outward-looking” initiatives, she has exploited 15 years of experience as a practicing scientist and senior administrator in Europe to organize joint scientific meetings, faculty and student exchanges, business and training collaborations and strategic partnerships between the universities, medical centers and pharmaceutical companies across the U.S., Asia and Europe.

Rubinstein came to Columbia University from the Karolinska Institute in Stockholm, Sweden, where she was the Director for Research and Postgraduate Education.

Prior to her appointment at the Karolinska, Rubinstein was a director at Sweden’s Medical Research Council with responsibility for the peer review process. And before that, she was a cell biologist at the Karolinska, authoring nearly 60 papers. Rubinstein holds a D.D.S. and a Ph.D. in cell biology from the Karolinska.

Abstract

Biotechnology and Sustainable Development

J. Rubinstein, Associate Dean for Global Initiatives at Columbia University Health Sciences Division, Director for Health and Science Initiatives, UN Millennium Project

**SANJEEVI, Carani**

Associate Professor, Karolinska Institute

Dr. C. B. Sanjeevi,

Education:

MD, MSc, PhD

CB.Sanjeevi, is an Associate Professor at KAROLINSKA INSTITUTE, Stockholm, Sweden. He is Head of Molecular Immunogenetics Group at the Diabetes Center Karolinska. He is also the Karolinska Institute Scientific Coordinator for India.

Dr Sanjeevi is also associated with various professional journals and associations in different capacities such as:

1. Associate Editor for Diabetologia,
2. Editor, Immunology of Diabetes series, Annals of the New York Academy of Sciences, New York,
3. Member, Council of EASD (European Association for the Study of Diabetes)
4. Editor for 'The Diabetes News',
5. Member, Editorial Board of Current Diabetes Reviews (USA).
6. Member, Editorial Board of Human Immunology
7. Member, Scientific Advisory Board of Journal of Association of Physicians of India
8. Member, Editorial Board of the Postgraduate Medical Journal

Publications:

Dr Sanjeevi has 104 original papers in peer reviewed international journals in addition to 26 review articles and book chapters to his credit.

Honors:

He is the recipient of prestigious awards like the

1. Prof. M.Vishwanathan Oration from RSSDI
2. Prof. Sam GP Moses Oration from RSSDI and
3. The Albert Reynolds award from EASD.
4. R.M.Shah Oration from Gujarat Diabetes Federation
5. CDRF Gold Medal Oration, Cuttack 2005.

Abstract**Immunogenetics of Diabetes in the Developing World**

C. Sanjeevi, Associate Professor, Karolinska Institute

HLA DQ8 and 2 are associated with susceptibility and DQ6 to protection in Type 1 diabetes (T1DM). A set of polymorphic genes, called MHC class I chain-related genes (MIC-A) in HLA class I region interacts with NK cells. In Italians, MICA allele 5 increases the risk by 6.1 and together with susceptibility DR-DQ increases the risk several times. HLA class I genes, also identified as susceptibility genes for T1DM, interact with polymorphic Killer immunoglobulin-like receptors (KIR) on NK cells. Our results on HLA and MICA in Swedish and other populations show positive association for MICA with disease. Our results on KIR in Latvian patients with T1DM also suggest a role of KIR in the etiology of T1DM. The results from MICA and KIR studies suggest that aberrations in these genes of the innate immune system identify possible defects in the first line of defense in the etiology of T1DM. Newer studies suggest a role for these genes in the newborn screening and prediction strategies for T1DM.

SAUER, François
CEO Trans Am Group



Education:

University of Mexico, (UNAM) M.D. with honors General Medicine & Surgery

Harvard Business School program @ "IPADE" Mexico M.B.A.

Spanish-American University (UIA), Mexico Master in System Analysis with honors

Positions:

2004-Present CEO Trans Am Group

2001-2004 CEO BCEC & after merge VP of Business Development for KCCatalyst

2000-2001 VP of Business Development for Latin America marchFirst, Chicago, IL

1999-2000 Consultant, KCADC & KC Life Sciences Institute Inc., Kansas City MO

1997-1999 CEO Cerner International, Kansas City

1996-1997 Director of Strategic Growth, TransQuest (JV Delta Airlines and AT&T) Atlanta, GA

1994-1996 Managing Partner, Enterprise Development Group, GIS former NCR part of AT&T

1988-1994 Consultant/Practice Leader, DEC Maynard, MA & Geneva Switzerland

1985-1988 VP and Senior Consultant, Federal Group, Inc. Acton, MA

1975-1985 VP National Bank of Mexico

1970-1975 Advisor to the Medical Director of IMSS, Mexico

Honors:

Faculty member of the "William Glasser Institute"

Former board member of American Red Cross of Kansas City

Member of System Dynamics Society (MIT Cambridge, MA)

Founding member of Global HealthNet /Supercourse Pittsburgh, PA

Founding member of National Athenaeum of Arts, Letters, Sciences and Technology Mexico

Published more than 20 articles in peer-reviewed journals including: British Medical Journal,

Lancet, Military Medicine & Nature Medicine.

Abstract

Supercourse and Social Responsibility for Behavioral Changes in Health

F. Sauer, CEO Trans Am Group

The Supercourse is on a journey to help translate worldwide knowledge in preventive medicine, biotechnologies and sciences into behavioral changes that improve individual and community Health.

This Social Responsibility of translating knowledge for Health requires a partnership between Academy, Industry, NGOs and Governments to wrap the knowledge cycle of:

- Creation and acquisition,
- Classification and just in time (JIT) distribution and
- Translation into behavioral changes and validation of their effectiveness.

This partnership is required because:

- Knowledge as money has no intrinsic value. A currency has a "purchasing power" for goods and services only in its specific country and knowledge "can transform" individual minds and behaviors only in an open context for its assimilation. Our Social Responsibility for health is to package the worldwide "multi-disciplinary" scientific knowledge in a "translation ready" format. The leverage point is the teacher who helps students assimilate, validate and improve knowledge for its effective translation into positive behavioral changes for health.

- Knowledge as money is not consumed. It remains in circulation. Our Social Responsibility is to help leverage the Human and Technological networks that facilitate worldwide the quick circulation of the available knowledge for its local translation.

- The relative value of each nugget of knowledge to improve health dramatically shrinks over time because, as with the inflation process for money, new knowledge is continuously created. As Ray Kurzweil says: "An analysis of the history of technology [and medicine] shows that technological change is exponential, contrary to the common-sense "intuitive lineal" view." Our Social Responsibility is to create awareness about this exponential growth of knowledge and to help adapt the translation process considering the unique capabilities and needs of each local community.



SCHNEIDER, Cynthia

Distinguished Professor in the Practice of Diplomacy, School of Foreign Service & Public Policy Institute, George Town University & Former Ambassador of the USA to the Netherlands

Prof. Cynthia Schneider works on public policy projects in cultural diplomacy and the life sciences. Organized Arts and Cultural Leaders Seminar, US-Islamic World Forum, Doha, Qatar (February, 2006) for the Brookings Institution. P.I. for Rockefeller Foundation public-private partnerships study in agricultural biotechnology in developing world. Now working in "virtual incubator" project for Africa. From 2002-2005 organized three life science conferences, including two on aspects of bioterrorism, and worked on the Perspectives in the Future of Science and Technology conference series for State Department. As U.S. Ambassador to the Netherlands (1998-2001), Dr. Schneider led initiatives in the fields of biotechnology, cyber security, military affairs, education, public diplomacy, and culture. From 1984-2004, Prof. Schneider taught Renaissance and Baroque art history at Georgetown University. Has published on Rembrandt, seventeenth century Dutch art, biopreparedness, and cultural diplomacy. Dr. Schneider has a B.A. and Ph.D. from Harvard University. Was awarded the Office of the Secretary of Defense Exceptional Public Service Order and is a member of Phi Beta Kappa.

Abstract

The "Virtual Incubator": A New Model of Public-Private Partnership to Facilitate Technology Transfer in Africa

C. Schneider, Distinguished Professor in the Practice of Diplomacy, School of Foreign Service & Public Policy Institute, George Town University & Former Ambassador of the USA to the Netherlands

Drawing upon the experiences of universities in the US and elsewhere (Ireland, India), this presentation will consider possible solutions to the lack of a translational sector for agricultural research in Africa. One concept that seems promising is the "virtual incubator" -- a group of people including investors, business experts and industry representatives, scientists, government representatives, lawyers and IP experts -- who would both fund and mentor tech transfer and business development projects. Possible projects, to be selected on a competitive basis, include the development and manufacturing of East Coast Fever Vaccine; "sweet cassava" production linked to biofuels facilities; and, in the long term future, plant bred pharmaceuticals.

The "virtual incubator" model seems especially promising with regards to biofuels projects, which, in turn, hold promise for Africa because they would help small scale farmers as well as trained scientists, engineers and business people. Since biofuels facilities can operate on a small scale, they could be scattered throughout the countryside, diminishing transportation costs. These facilities would provide a ready market for maize. If a biofuels industry were to take hold in parts of Africa, it would help to stem the brain drain by offering scientists, engineers and businessmen the possibility to earn money using their knowledge and training.

In sum, the "virtual incubator" generally and a biofuels project specifically rest on the following premises: 1) there are good scientists and good research in Africa; 2) facilitating the commercialization of that research would help the farmers who benefit from it, the entrepreneurs who make and market the product, and the overall economy that is boosted by new business development. A handful of successful projects could have an impact at all economic levels, and might provide a concrete deterrent to the "brain drain".

SERAGELDIN, Ismail

Director of Bibliotheca Alexandrina, Chairman of European Action on Global Life Sciences, EAGLES



Ismail Serageldin, Director, Library of Alexandria, also chairs the Boards of Directors for each of the BA's affiliated research institutes and museums and is Distinguished Professor at Wageningen University in the Netherlands. He serves as Chair and Member of a number of advisory committees for academic, research, scientific and international institutions and civil society efforts which includes the Institut d'Egypte (Egyptian Academy of Science), TWAS (Third World Academy of Sciences), the Indian National Academy of Agricultural Sciences and the European Academy of Sciences and Arts. He is former Chairman, Consultative Group on International Agricultural Research (CGIAR, 1994-2000), Founder and former Chairman, the Global Water Partnership (GWP, 1996-2000) and the Consultative Group to Assist the Poorest (CGAP), a microfinance program (1995-2000). Serageldin has also served in a number of capacities at the World Bank, including as Vice President for Environmentally and Socially Sustainable Development (1992-1998), and for Special Programs (1998-2000). He has published over 50 books and monographs and over 200 papers on a variety of topics including biotechnology, rural development, sustainability, and the value of science to society. He holds a Bachelor of Science degree in engineering from Cairo University and Masters' degree and a PhD from Harvard University and has received 18 honorary doctorates.

**SHALTOUT, Azza**

Vice President, Assistance to Young Diabetics (AYD)

Academic record

I graduated from the School of Medicine, Alexandria University in 1968, followed by Membership of the Royal College of Physicians, UK in 1978. I have been granted the fellowship of the Royal College of Physicians, Edinburgh, in 1985, the Royal College of Physicians, London, in 1988 and the Royal College of Pediatricians and Child Health UK in 1997.

Appointments

Currently I am a Consultant Pediatrician in Cairo Medical Center and Heat Medical Center , Vice President of the Association for Youngsters with Diabetes (AYD) and Member of the Scientific Council of Pediatrics, the Egyptian Board for Medical Specialization in the Ministry of Health and Population.

My previous appointment was in Kuwait University where I was Professor of Pediatrics, Pediatric Endocrinology and Diabetes during the period from 1990-2000.

I am member of the International Society for Pediatric and Adolescent Diabetes (ISPAD)

In Egypt, since the year 2000, I have participated in the establishment of AYD where we have successfully implemented a therapeutic diabetes education programme for children and youth with diabetes and the aim is to improve awareness and the importance of self- management for all people affected with type 1 diabetes.

Abstract**Developing Partnership through Therapeutic Diabetes Education**

A. Shaltout, Vice President, Assistance to Young Diabetics (AYD)

Diabetes is a major cause of micro vascular complications, resulting in reduction of the length and quality of life. There is now unequivocal evidence that the control of blood glucose at near normal levels is effective in preventing or delaying the development of these complications. Challenges to effectively implement efficacious treatment include society's poor awareness of the problem and health care systems that are geared to acute rather than chronic diseases

In Egypt the prevalence of childhood diabetes is about 1 in 600, and an estimated 35,000 children under the age of 19 are affected.

The Association of Youngsters with Diabetes (AYD), a non profit organization, was established in the year 2000 to focus its attention on meeting the needs of children with diabetes in Egypt. The aim of AYD is to educate, communicate and inform. To achieve its aims, AYD provides Therapeutic Education for children and their families, and empowering them in self-management. Its mission is to help parents fully understand the importance of good long- term control and adherence to the prescribed treatment.

AYD implemented an ambitious 20 hours programme of structured education and teaching practical skills, provided by a multidisciplinary educational team in designated Diabetes Schools and Mobile Units in the two major University Hospitals.

Since 2002, more than 2000 children and their families completed the educational courses, regardless of their social standing or literacy.

On the 25th of February 2006, the first satellite center was established in Aswan, the most southern governorate of Egypt, in collaboration with the Primary Health Sector to provide its services to 1.2 million inhabitants in Aswan and neighboring areas.

In conclusion, AYD has succeeded in implementing its educational programme in a relatively short time and has won the international DAWN (Diabetes, Attitudes, Wishes and Needs) Award in 2004, amongst 60 contestant countries worldwide.

SHINOZAKI, Kazuo

Director of Plant Science Center, Riken Yokohama Institute

Dr. Shinozaki was born on February 23, 1949 in Japan. He took his Ph. D. at the Institute of Molecular Biology, Faculty of Science, Nagoya University. The title of his thesis is "Discontinuous DNA replication of T7 phage". He was appointed to be Research Associate of Department of Molecular Biology, National Institute of Genetics, at Mishima. He studied molecular cloning of tobacco chloroplast genes and analyzed the structure and gene expression. In 1983, he became Assistant Professor of Department of Biology, Faculty of Science, Nagoya University, and studied gene structure and expression of cyanobacteria and tobacco chloroplast. Then, he became Associate Professor, Center for Gene Research, Nagoya University, and determined nucleotide sequence of tobacco chloroplast genome in 1986. As a Visiting Scientist, he studied transgenic plant technology in Prof. Nam-Hai Chua's laboratory of The Rockefeller University. Dr. Shinozaki was appointed to be Chief Scientist (Director) of Plant Molecular Biology Laboratory, RIKEN Tsukuba Institute in 1989 to start molecular biology of plant abiotic stress response using Arabidopsis. He was also an Adjunct Professor of Tsukuba University, Institute of Biological Sciences. In 1999, he started Arabidopsis functional genomics as a Project Director of Plant Functional Genomics group, RIKEN Genomic Sciences Center, RIKEN Yokohama Institute. In 2005, he was appointed to be Director of Plant Science Center, RIKEN Yokohama Institute.



Abstract

Gene Networks Involved in Drought Stress Responses and Tolerance

K. Shinozaki, Director of Plant Science Center, Riken Yokohama Institute

K. Y. Shinozaki

Drought stress induces a variety of genes at transcriptional level. Their gene products are thought to function in drought stress tolerance and response. Many drought-inducible genes have been used to improve stress tolerance of plants by gene transfer. In this conference, we present recent progress on global analysis of expression profiles of drought- and cold-responsive gene expression using microarray technology, and functional analyses of stress-inducible genes in stress tolerance.

We have analyzed expression profiles of the drought- and cold-inducible genes and identified at least four independent regulatory systems in stress-responsive gene expression, two are ABA-dependent and two are ABA-independent. In one of the ABA-independent pathways, a cis-acting element (DRE/CRT) and its binding proteins, DREB1/CBF and DREB2, are important cis- and trans-acting elements in stress-responsive gene expression, respectively. Based on microarray analysis, many DREB1A/CBF-target genes that function in stress tolerance have been identified. Overexpression of these genes improves stress tolerance in transgenics. Recently, we showed that one of the NAC transcription factors functions in stress-responsive gene expression. In two ABA-dependent pathways, bZIP transcription factors (AREB/ABF) and MYC/MYB transcription factors are involved in stress-inducible gene expression.

We have identified genes for key enzymes, NCED3 and CYP707A3, involved in ABA biosynthesis and metabolism, respectively, during drought stress. We used these genes for the improvement of drought stress tolerance in transgenic plants. Furthermore, we have analyzed signal transduction cascades in osmotic stress and ABA responses, and identified two types of protein kinases that are involved in ABA signaling. They are a receptor like kinase RPK1 and SnRK2 protein kinases. Functions of these protein kinases have analyzed using T-DNA tagged mutants and transgenic plants. We used the SnRK2C gene for the improvement of drought stress tolerance by gene transfer. We will discuss the roles of the protein kinases in drought stress signaling network.

Yamaguchi-Shinozaki and Shinozaki: Trends in Plant Science. 10: 88-94 2005

Umezawa et al. : Current Opinion of Biotech. in press, April 2006.



SHOTKOSKI, Frank

Director, Agricultural Biotechnology Support Project (ABSP) II

EDUCATION

Ph.D. in Molecular Entomology - University of Minnesota 1988-1992

M.S. in Entomology, University of Nebraska-Lincoln 1986-1988

B.S. in Agronomy, University of Nebraska-Lincoln 1980-1984

PROFESSIONAL EXPERIENCE

CORNELL UNIVERSITY 2005 - present Agricultural Biotechnology Support Project II (ABSP II) Director

Adjunct Professor Department of Plant Breeding and Genetics

SYNGENTA PLANT SCIENCE 2001 – 2004

Global Cotton Traits Technical Manager

Cotton Biotechnology Crop Leader

NOVARTIS AGRIBUSINESS BIOTECHNOLOGY RESEARCH INC. 1998 – 2001

Staff Scientist II

ACADEMIC EXPERIENCE

UNIVERSITY OF WASHINGTON 1995 – 1998

Research Associate/Senior Research Fellow - Department of Medical Genetics

UNIVERSITY OF WISCONSIN 1992 – 1995

Postdoctoral Research Associate - Department of Entomology

Abstract

Eggplant: A story of public/private cooperation

F. Shotkoski, Director, Agricultural Biotechnology Support Project (ABSP) II

The technology used to develop a fruit and shoot borer resistant eggplant product will be described. Acquisition of the technology for South and SE Asia will be discussed. The socio-economic impact of commercializing such a product will be addressed and the cooperative effort between the commercial private enterprise and that of public institutions will be highlighted.

SINGER, Peter

Sun Life Financial Chair in Bioethics & Director, University of Toronto Joint Centre for Bioethics



Dr. Peter A. Singer is Sun Life Financial Chair in Bioethics and Director, University of Toronto Joint Centre for Bioethics and Professor of Medicine at the University of Toronto and University Health Network. He directs the PAHO/WHO Collaborating Centre for Bioethics and the Canadian Program on Genomics and Global Health at the University of Toronto. He studied internal medicine at the University of Toronto, medical ethics at the University of Chicago, and clinical epidemiology at Yale University. Dr. Singer is the recent recipient of awards including CIHR Distinguished Investigator; Award for Excellence, Yale University School of Public Health; and the University of Toronto Dales Award. He has published over 200 articles in peer-reviewed journals and has held almost CAN\$50 million in research grants, including three large grants from Genome Canada. He has trained over 50 graduate students and fellows. He is a member of the Scientific Advisory Board, Bill & Melinda Gates Foundation Grand Challenges for Global Health Initiative and the Committee on Advances in Technology and the Prevention of Their Application to Next Generation Biowarfare Agents of the US NAS, and a Director of BIOTECCanada. His contributions have included improvements in quality end of life care, fair priority setting in healthcare organizations, and teaching bioethics. His current research focus is global health, in particular harnessing genomics and nanotechnology to improve health in developing countries.



SOLIMAN, Salah

Professor, Faculty of Agriculture, University of Alexandria

Salah Ahmed Soliman, Professor of Pesticide Chemistry and Toxicology, Faculty of Agriculture, Alexandria University (1986–present).

Visiting Scientist, U.S. Environmental Protection Agency, Research Triangle Park , North Carolina , USA (1979–82).

Visiting Professor, University of Texas Medical Branch, (UTMB), Galveston , Texas , USA (1987–88).

Visiting Professor, King Saud University , Saudi Arabia (1988–94).

Member, Final Review Boards (FRBs), International Program on Chemical Safety (IPCS), World Health Organization (WHO) since 1992.

Member, Joint Meeting on Pesticide Residues, WHO/FAO JMPR, since 1999.

Vice-Chairman, Steering Group on Risk Assessment (IPCS/SGRA, WHO), 1999–present.

Has more than 70 scientific papers in areas of neurotoxicity, pesticides and heavy metals monitoring and mode of actions published mostly in international journals.

Constructed a number of Research Laboratories at the Department of Pesticide Chemistry and Toxicology, Alex University through research projects funded by USEPA and other US and UN organizations.

Member , US Society of Toxicology; Society of Environmental Chemistry and Toxicology; Weed Science Society of America ; and Egyptian Society of Toxicology.

Rewarded the National Award on Agricultural Sciences, 1980 and offered the First Level Medallion of Science and Art by Decree of the President of Egypt, 1981.

SUZUKI, Yasuhiro

Director, R&D Promotion for Innovative Pharmaceuticals and Medical Devices, Ministry of Health, Labor & Welfare



Born in 1959, married with one daughter (10y/o).
Graduated from School of Medicine, Keio University (MD) in 1984 and trained as neurologist.
Two Master's degrees from the Harvard School of Public Health (MPH in 1999 & MSc in 2000).

PhD for public health from Keio University in 1996.
Professional Career at the Ministry of Health, Labor & Welfare for 22 years covering mental health, environmental health, food safety, international health, ageing & health, health research policy.
Worked for the World Health Organization as Executive Director for Health Technology and Pharmaceuticals from 1998 to 2002.
Worked also for the Prefectural Government in Tochigi as Health Secretary.
Since 2005, served as Director, R&D Promotion for Innovative Pharmaceuticals and Medical Devices

Abstract

Life Sciences Research Responding to Challenges Faced by the Japanese Society

Y. Suzuki, Director, R&D Promotion for Innovative Pharmaceuticals and Medical Devices, Ministry of Health, Labor & Welfare

Government sponsored life sciences research (approx. USD 3 billion) is identified as one of the 4 priority projects of the National Science & Technology Strategy, which in turn is expected to lead to industrial corner stone for the 21st century.

This trend is partially responsible for increasing % of the Japanese contributors to major international scientific journals in basic sciences such as "Sciences" and "Nature", which contrasts to scarcity of the Japanese contributors to clinical journals such as "Lancet" and "The New England Journal of Medicine". We believe that this clearly demonstrates the need for the translational research which bridges basic sciences and clinical trials/application. As for the business model in developing life sciences seeds, much of the patentees in life sciences could be found in pharmaceutical companies in Japan, whereas their equivalents are seen in venture companies or university labs in US.

Life sciences research is expected to assist controlling health care expenditure (approx. USD 250 billion) by introducing less-aggressive or ultra-early medical procedures.

Currently, Japan has the most graying population profile (LEs are 79 y/o for male, 86 y/o for female). Life sciences research is greatly improving their QOLs by providing tools to cope with their disabilities.

Japan also has one of the lowest fertility rate in the world (TFR 1.29). Life sciences can give us weapons to tackle problems related to infertility

Life sciences research, thus, can help address many issues faced by the modern Japanese society and will bring seeds for its industrial competition.

**SWAMINATHAN, M.S.**

Chairman, M S Swaminathan Research Foundation

Professor M.S. Swaminathan was Chairman of the UN Science Advisory Committee set up in 1980 to take follow-up action on the Vienna Plan of Action. He has also served as Independent Chairman of the FAO Council and President of the International Union for the Conservation of Nature and Natural Resources.

Professor Swaminathan's contributions to the agricultural renaissance of India have led to his being widely referred to as the scientific leader of the green revolution movement. His advocacy of sustainable agriculture leading to an evergreen revolution makes him an acknowledged world leader in the field of sustainable food security. Professor Swaminathan was awarded the Ramon Magsaysay Award for Community Leadership in 1971, the Albert Einstein World Science Award in 1986, the first World Food Prize in 1987, Volvo Environment Prize in 1999, and the Franklin D. Roosevelt Four Freedoms Award in 2000.

Professor Swaminathan is a Fellow of many of the leading scientific academies of India and the world, including the Royal Society of London and the US National Academy of Sciences. He has received 43 honorary doctorate degrees from universities around the world. Recently, he has been elected as the President of Pugwash Conferences on Science and World Affairs. He currently holds the UNESCO Chair in Ecotechnology at the M.S. Swaminathan Research Foundation in Chennai (Madras), India.

Abstract**Meeting the Challenge of Sea-level Rise**

M.S Swaminathan, Chairman, M S Swaminathan Research Foundation

It is now clear that there is every likelihood of sea level going up because of global warming induced melting of the Arctic and Antarctic ice caps as well as various glaciers. Countries like Maldives and other island nations are very worried about the damage that could be caused to lives and livelihoods as a result of seawater inundation. The tsunami of December 26, 2004 gave a wake up call in relation to the damage that can be caused to coastal agriculture and aquaculture through seawater ingress. In the short term, bio-shields consisting of mangroves, cauarina, salicornia and other halophytic plants will have to be developed all along the coast. In the longer term, we should be prepared with crop and tree varieties tolerant to seawater. In this context, M S Swaminathan Research Foundation has been working during the last fourteen years on the transfer of genes from mangrove species to rice, mustard and other crops. The transgenic material has a high level of tolerance to seawater. A detailed strategy will be presented for empowering coastal communities to manage the consequences of sea level rise.

SWAMINATHAN, Soumya

Deputy Director (Sr. Grade), Tuberculosis Research Centre



Position Title: Deputy Director (Sr. Grade)

Education and Training:

Institution and Location Degree (if applicable) Year(s) Field of study
Armed Forces Medical College Pune, India All India Institute of Medical
Institute, New Delhi, India M.B.B.S, M.D 1980 1985 Medicine
Pediatrics

National Academy of Medical Sciences, N. Delhi Children's Hospital of
Los Angeles, USA D.N.B Fellowship 1986 1989 Pediatrics Pediatric pulmonology

A. Research and/or Professional Experience

1985-1986 Sr Resident, Department of Pediatrics, AIIMS, New Delhi

1987-1989 Fellowship in Pediatric Pulmonology, Children's Hospital of Los Angeles, CA, USA

1989-1990 Research Fellowship, Department of Pediatrics, Leicester Royal Infirmary, Leicester, UK

1992-1997 Assistant Director, Tuberculosis Research Centre, Chennai

1997- 2002 Deputy Director, Tuberculosis Research Centre

2002- till date Deputy Director Senior Grade, Head of Division of HIV/AIDS, Tuberculosis
Research Centre

Honors

1. President's Gold medal for the best academic performance in the year 1980, Armed Forces Medical College, Pune
2. Kalinga Trophy for the best all-round outgoing student performance in the year 1980, Armed Forces Medical College, Pune

Abstract

Tuberculosis and HIV: Overlapping epidemics, multiple challenges

S. Swaminathan, Deputy Director (Sr. Grade), Tuberculosis Research Centre

India has an estimated 5.1 million individuals living with HIV infection. The epidemic has become generalized in six states of the country. While other states are highly vulnerable because of factors like poverty, ignorance and migration. Anti-retroviral therapy is now available free of cost, through government clinics but the demand is far in excess of the capacity to deliver these services.

India is one of the tuberculosis high-burden countries and accounts for one-third the world's burden of TB. Over 60% of the adult population is latently infected with TB and there are an estimated 1.8 million new cases every year. By the end of 2005, the Revised National TB Control Program had covered a population of over 1000 million, making free and high-quality TB diagnostic and treatment services available. TB is the commonest infection in HIV positive individuals. At early stages of the infection when CD4 counts have not dropped, clinical presentation is fairly typical and response to therapy is also good. As HIV disease advances, the presentation of TB tends to become more atypical with more disseminated and extra-pulmonary forms and chest radiographs that can vary from normal to military TB. This has the potential to increase both under and over-diagnosis in health care settings in resource-poor countries. Though response to standard short-course anti-TB regimens has been found to be good, mortality during treatment as well as during follow-up is unacceptably high. Thus, patients with HIV and TB should be considered a target group for institution of anti-retroviral therapy. The challenge for the HIV and TB control programs in India is to develop effective coordination between the two so that TB patients get the opportunity to avail of voluntary counseling and testing while HIV positive individuals get the benefit of screening for TB and treatment if necessary. With improving access to anti-retroviral therapy, it will also be necessary to develop strategies to integrate DOTS delivery with anti-retroviral treatment.

**TODD, David**

Senior Evaluation Specialist , The Global Environment Facility (GEF)

Dr. David Michael Todd, Senior Evaluation Officer, Global Environment Facility

Dr. David Todd obtained his MA (Honors) Degree in Social Anthropology from Cambridge University in the United Kingdom, before completing his Ph.D. at Kent University. He has 30 years' experience of applied social science and development work with Government Departments, multilateral, bilateral, NGO, private sector and academic institutions in more than 20

countries.

In the GEF Evaluation Office, he managed a major study of the linkages between local and global environment benefits in GEF activities and he is now leading a series of Impact Evaluations. Prior to joining the GEF, Dr. Todd was Social Development Adviser in the Department for International Development of the UK; working first in the European Commission Delegation, covering Barbados and the Eastern Caribbean and then in the Evaluation Department. Earlier, he led the Netherlands' Government's evaluation of its assistance to NGOs in Bangladesh and the World Bank's Participatory Poverty Assessment of Nigeria. He also conducted a major study on Gypsy Site Policy and Provision in the UK and managed one of the largest public consultation exercises ever held in the UK.

Dr. Todd has produced over 35 published journal articles and books and more than 100 consultancy documents, research and conference papers and is a former member of the Postgraduate Training Board of the Economic and Social Research Council of the United Kingdom.

Abstract**The Global Environment**

D. Todd, Senior Evaluation Specialist , The Global Environment Facility (GEF)

The Global Environment – Challenges in Reconciling Social, Scientific and Economic Needs in Developing Countries

The Global Environment Facility supports activities in developing countries and emerging economies, which bring environmental benefits to the global community. Interventions are developed on the basis of scientific best-practice. However, in many instances the “best” solution to reduce or eliminate environmental threats may challenge the social and economic needs of local or national populations.

In the case of the GEF biodiversity portfolio, there has been an assumption that “win-win” interventions are broadly possible, under which both biodiversity and communities can gain. The study found that such results were frequently unobtainable. Strategies developed to provide alternative livelihoods to those seen as environmentally detrimental were prone to failure, or were not accessible to the same people whose livelihoods were reduced. There were usually trade-offs to be made between environment and development and the intended conservation solution could not be fully achieved. Even if it could in the short term, local livelihood losses generated hostility, threatening the sustainability of gains made.

Challenges to a scientifically-based conservation approach included:

- Insufficient understanding of the use of natural resources by different groups at different times
- Projects designed by “outsiders,” with little regard for indigenous knowledge and conservation practices
- Tendency to introduce new project-based institutions, duplicating roles of existing local institutions and customary bodies.

The GEF and its implementing agencies have placed great emphasis on the importance of a scientifically sound approach to protecting the global environment. They have had considerable success in this. The application of broader development skills has not been at the same level, resulting in many interventions, which have not achieved their full potential.

VADEZ, Vincent

Senior Scientist, ICRISAT, Crop Physiology Laboratory,
GT-1 Biotechnology, India



Vincent Vadez is a PhD in plant physiology. He obtained his degree from the National School of Agronomy, Montpellier, France in 1996. He started his training as a plant physiologist in a study on the effect of salinity on BNF, during his master's thesis, 1989 -1990. He joined the University of Singapore between 1990 and 1992, as a research cooperant for CIRAD, where he screened tolerant population of *Acacia mangium* to low phosphorus, for a research support program for replantation in Sabah, Malaysia. He joined CIAT between 1992 and 1994, as a research fellow, and there he worked on the effect of P deficiency on BNF in bean. After completing his PhD, he joined the lab of Tom Sinclair, Gainesville, US, between 1996 and 2000, to study the effect of drought on BNF in soybean. Lately, he spent a few years in Bolivia doing on-farm research in relation with the introduction of pigeon pea, and other legumes, in the farming system of a rural population of Bolivia. He is now a Senior Scientist at ICRISAT (the International Crops Research Institute for the Semi-Arid Tropics), head of the Crop Physiology Laboratory, in the Global Theme on Biotechnology. He is in charge of research on abiotic stresses on Sorghum, Pearl Millet, Chickpea, Groundnut, and Pigeon pea. His main current focus is drought, salinity, and phosphorus deficiency. He has over 30 publications in peer-reviewed journals, plus a number of book chapters, conference proceedings, and poster presentations.

Abstract

What is the Scope for Molecular Breeding and Genetic Engineering to Improve Crops' Drought Tolerance?

V Vadez, Senior Scientist, ICRISAT, Crop Physiology Laboratory, GT-1 Biotechnology, India
Hash CT, Rizvi SMH, Bidinger FR, Banttee, K, Sharma KK, Devi J, Bhatnagar-Mathur P,
Kashiwagi J, Krishnamurthy L, Hoisington D, Varshney RK, Gaur PM, Nigam SN, Rupakula
A, Upadhyaya HD
ICRISAT Patancheru 502 324, AP, India

Drought is responsible for yield loss and instability of crops grown by poor farmers in the semi-arid tropics. ICRISAT's major objective is to develop resilient crops to low and erratic rainfall. In pearl millet a major QTL was mapped on LG2 of PRLT 2/89-33 for grain and stover yield under terminal drought stress. Testcross hybrid of 19 NILs with LG2 QTL and their two parents were evaluated in 14 environments and showed superiority of 2 introgression lines over recurrent parent H 77/833-2 for grain yield. In sorghum, QTLs for the staygreen trait from donor lines B35 and E36-1 have been introgressed into elite drought-sensitive R16 and ISIAP Dorado. In both pearl millet and sorghum, it was found that donor parents had more profuse deep rooting under water stress. These results are similar to those in chickpea where yield under terminal drought high root length density are correlated. The work is in progress to identify QTLs for root traits in chickpea.

High water use efficiency is another essential component for improved yield under water deficit. Groundnut lines with contrasting transpiration efficiency (TE, in g biomass kg⁻¹ water) were found and mapping populations developed. The identification of molecular markers linked to putative genes controlling TE and several surrogate traits is in progress. Finally, we are exploring the possibility to use the DREB1A transcription factor in transgenics events of groundnut to improve traits such as TE. Two transgenic events had higher TE than the non-transformed JL24, both under well watered and water deficit conditions. These differences appear to be related to differences in stomatal behavior.

**VAN MONTAGU, Marc**

Chairman, Institute of Plant Biotechnology for Developing Countries

Marc Van Montagu, organic chemist (1955) and PhD Biochemistry, did all his studies at Ghent University (Belgium). Also all his research and teaching was at this University.

He started his own research unit in 1965 on the molecular genetics of RNA phages, this in close collaboration with Walter Fiers.

In 1970 he fused his research lab with the starting unit headed by Jeff Schell. Together they studied the molecular base of tumor induction by the soil bacterium *Agrobacterium tumefaciens*. This resulted in the discovery of the Ti plasmid (1974) and the gene transfer mechanism between *Agrobacterium* and plants. Subsequently, this team developed methods to alter *Agrobacterium* into an efficient gene delivery system for gene engineering in plants and in the construction of the first transgenic plant (1983). As full Professor and Director of the Department of Molecular Genetics he developed plant molecular genetics, in particular molecular mechanisms for cell proliferation and differentiation and response to abiotic stresses. He was founder and Scientific Director of Plant Genetic Systems (PGS, presently Bayer Cropscience) (1983-1993). With PGS he constructed transgenic crops (rape seed, corn) resistant to insect pest and tolerant to novel herbicides.

He has received numerous outstanding awards for his pioneering work, including the prestigious "Japan Prize". He is foreign associate of the National Academy of Science (USA) since 1986 and the Agricultural Academy of Russia and France, the Academy of Science of Italy and Belgium, the Academy of Engineering in Sweden, the Academy of Overseas Science in Belgium.

He is author of more than 900 publications and in 2004 (five years after his retirement in 1999) he was still the most cited author in plant sciences (ISI website).

At present he is chairman of the Institute Plant Biotechnology for Developing Countries.

WALSH, Frank

Executive Vice President, Discovery Research, Wyeth



Frank Walsh received his Ph.D. in Biochemistry from University College, London, in 1977. He then undertook a one-year post doctoral research fellowship at the National Institute of Health in Bethesda, Maryland, USA, returning to the UK in 1979 to the Institute of Neurology in London. In 1989, Frank moved to the United Medical and Dental Schools of Guy's and St. Thomas's Hospitals, London, becoming the Sir William Dunn Professor of Experimental Pathology, and later served as the Research Dean. In 1997, Frank moved to SmithKline Beecham (SB) Pharmaceuticals at Harlow, UK, to become Vice President and Director of Neuroscience Research. With the creation of GSK Frank became Senior Vice President and Head of the Company's Neurology-CEDD. In 2002, Frank moved to Wyeth Research, Collegeville, Pennsylvania, USA and is the Executive Vice President, Discovery Research Worldwide. Frank serves on a number of advisory boards including the UK Medical Research Council's Centre for Developmental Neurobiology; the ALS Research Center at Johns Hopkins University, Baltimore, USA; and the CEO Council of the New York Academy of Sciences. He holds Visiting Professorships at London University's King's College, the University College Dublin, and was elected to the Academy of Medical Sciences in 2003. In 2004, Frank was awarded an Honorary Degree "Laurea Honoraris Causa," in Chemistry and Technology of Drugs from the University of Perugia, Italy. Frank is currently Chief Editor of the journal, *Molecular and Cellular Neuroscience*.

Abstract

Innovative Drug Discovery

F. Walsh, Executive Vice President, Discovery Research, Wyeth

Drug Discovery and Development is a challenging and complex process that involves the dedicated multidisciplinary efforts of many R&D functions. It is becoming increasingly more expensive to carry out innovative drug discovery, and fewer novel therapeutics are making it to market. This story is seemingly the same across the entire industry.

Since 2001 Wyeth Discovery Research has placed an impressive 60 new molecular entities into development in 60 months. This industry-leading productivity rate has been the result of a number of newly introduced technologies, initiatives and process improvements that have been implemented, as well as organizational re-design in the face of the changing R&D landscape. One of the unique drivers of success at Wyeth is our ability to access all three currently validated therapeutic platforms; small molecules, proteins and vaccines. This multi-platform approach allows us to increase the number of "shot on goal" for therapeutic targets and to select the most appropriate system given the disease and the patient needs. We have been very successful in bringing a number of therapeutics to the market in all three of these platforms, with drugs such as Enbrel™, a protein therapeutic for rheumatoid arthritis and psoriasis, Effexor™, a serotonin and norepinephrine re-uptake inhibitor for depression, and Prevenar™, a multivalent vaccine for *s. pneumoniae*. Indeed, not only have we successfully commercialized life-changing products based on each of these platforms, we also continue to pursue new and innovative drug targets in each of these areas.



WAMBUGU, Florence

CEO, Africa Harvest

Florence M. Wambugu: Ph.D. Virology, Biotechnology University of Bath, England 1991, Post-Doctoral Research Associate in genetic engineering-Biotechnology, life Science company, USA. Principle Scientist KARI Kenya and Director ISAAA AfriCenter Authored/co-authored over 100 papers and publications in local and international journals and written a book *Modifying Africa: How Biotechnology can benefit the Poor and the Hungry*. (2001), second edition, 2004. Recipient of several awards and honors from local and international institutions in recognition of her outstanding work. In June 2005 provided leadership for Africa Harvest (and consortium organizations) to be awarded US\$ 17.5 million global competitive grant from Bill and Melinda Gates Foundation Global Health Challenge to develop biofortified sorghum. Previous member of DuPont Biotech Advisory Panel-USA, current member of International Plant Genetic Research Institute, UN Millennium Development goals Hunger Task Force, and Council member of Science Technology and Society of Japan.

Abstract

Africa Biofortified Sorghum (ABS) Project

F. Wambugu, CEO, Africa Harvest

nutritionally-Enhanced Sorghum for the Arid and Semi-Arid Tropical Areas of Africa
Nutritional enhanced Sorghum for the Arid and Semi Arid Tropical Areas of Africa, also called African Biofortified Sorghum (ABS) Project (www.supersorghum.org) is a nine member consortium based project consisting of Africa Harvest Biotech Foundation International (AHBFI), (www.ahbfi.org) as the lead organization & eight other organizations. ABS is funded (US\$ 17.5 million) by Bill & Melinda Gates Foundation (www.gatesfoundation.org) as one of the 43 global competitive projects called Grand Challenges for Global Health; to develop nutritionally enhanced sorghum for arid and semi-arid tropical regions of Africa. The consortium is composed of public and private institutions from USA & Africa all playing complimentary and specific roles. They include Pioneer HiBred International, University of California Berkeley in USA, and in Africa ICRISAT – CGIAR, Africa Agricultural Technology Foundation, Forum for Agricultural Research in Africa, Council for Scientific and Industrial Research, Agricultural Research Council, University of Pretoria & AHBFI. The goal of this project is to develop transgenic sorghum varieties that will deliver essential amino acids (lysine, threonine and tryptophan); vitamins A and E; iron; and zinc which are deficient in sorghum to African populations in the arid and semi-arid tropics targeting 300 million people. Additionally, ABS will increase caloric uptake as a result of improved grain product digestibility. Taking cognizance of the limitations of classical breeding in the area of nutrition in fortifying sorghum with these essential nutrients our strategy will rely on genetic engineering. Development of the new varieties of staple sorghum food plants will aid in improving nutrition and human health. The project has a strong component of advanced technology transfer and capacity building for African Scientists, which will be presented during the conference.

ZERHOUNI, Elias

Director, National Institutes of Health



Elias A. Zerhouni, M.D., is the Director of the National Institutes of Health (NIH), the nation's medical research agency. NIH has 27 Institutes and Centers and a budget of \$28 billion. At NIH, he has overseen the completion of the doubling of the NIH budget, initiated the NIH Roadmap for Medical Research, established and supported the reduction of health disparities, and ensured public access to NIH-funded research results.

Dr. Zerhouni has spent his career providing clinical, scientific, and administrative leadership. Prior to joining the NIH, Dr. Zerhouni served as executive vice-dean of Johns Hopkins University School of Medicine.

Dr. Zerhouni was born in Nedroma, Algeria and earned his medical degree at the University of Algiers School of Medicine in 1975. He completed his residency in diagnostic radiology at Johns Hopkins in 1978 as chief resident.

He has won a Gold Medal from the American Roentgen Ray Society and two Paul Lauterbur Awards. His research in imaging led to advances in Computerized Axial Tomography (CAT scanning) and Magnetic Resonance Imaging (MRI) that resulted in 157 peer reviewed publications and 8 patents.

Since 2000, he has been a member of the National Academy of Sciences' Institute of Medicine.

Dr. Zerhouni received the honorary title Doctor Emeritus of the University of Algiers in 2005.

Abstract

Changing Lives: The Disease Control Priorities Project (DCPP)

E. Zerhouni, Director, National Institutes of Health

Life expectancy and other health metrics are increasing globally, yet many poor countries and areas in all countries are not benefiting fully from scientific and public health progress. The DCPP is an alliance of the Fogarty International Center (FIC) of the U.S. National Institutes of Health (NIH), the World Bank, the World Health Organization, and the Bill & Melinda Gates Foundation: DCPP aims to decrease disease and economic burdens in low-income countries by providing evidence-based analyses to inform health policy-making. The Project has identified the growing burden of chronic diseases (cardiovascular, cancer, mental illness) globally while highlighting the continuing importance of infections (particularly HIV/AIDS, malaria, and tuberculosis) and neonatal deaths in Africa and South Asia. Many of the best and most cost-effective solutions (e.g. keeping newborns clean and warm; advising people at risk of heart disease to take an aspirin a day) are inexpensive. Surgery for obstetrical complications, trauma or cataracts, appears expensive but is worth the investment because it effectively and efficiently treats very serious health problems. Investments in science and sharing of information are key to improved health and economic development. The presentations will cover the genesis and main messages of DCPP with focus on infectious diseases, chronic diseases, health systems, and research and product development priorities. The DCPP has just released three new books--Disease Control Priorities in Developing Countries, 2nd edition; Global Burden of Disease and Risk Factors; and Priorities in Health--that will help countries establish their own priorities, choose the best interventions and strengthen the capacity of health systems to deliver those interventions.

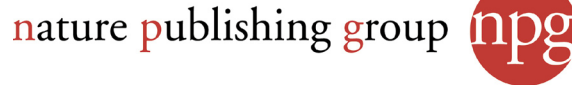


Bio Vision Alexandria 2006

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WORLD DIABETES FOUNDATION



Partners

The World Life Sciences - Biovision

Set up on the initiative of Mr Raymond Barre, former Prime Minister, and the Académie des Sciences, the World Life Sciences Forum (WLSF) BioVision is a unique international platform specifically designed to chart the progress of Life Sciences, within a strict ethical framework. BioVision is an unprecedented event enabling constructive dialogue to take place amongst all stakeholders contributing to the understanding, acceptance and development of Life Sciences.

BioVision's mission is also to provide objective information to the public regarding the questions raised by progress in Life Sciences and their applications. The Forum gathers high-level representatives from science, society at large, and industry, politics and international organisations in order for them to work in collaboration. It deals simultaneously with three fundamental areas of Life Sciences: health, agriculture & nutrition, the environment and the interactions between the three.

BioVision's objective is to facilitate the confrontation – at times heated – between these different approaches and to ensure that the expression of differences does not mean sterile confrontation. It is also about agreeing to move ahead together on concrete actions, step by step if necessary and without renouncing each other's profound convictions, in the interests of the victims of disease, hunger or those who suffer from living in an unhealthy environment. These actions concern every country, as the problems also exist for some parts of the population in "developed" countries.

European Action on Global Life Sciences - EAGLES

Addressing Europe's responsibilities towards the developing world

European Action on Global Life Sciences EAGLES was set up through the initiative of members of the European Federation of Biotechnology (EFB). EAGLES aims at enhancing the collaboration between European researchers and researchers in the developing world to fight hunger and disease has been launched by the European Federation of Biotechnology (EFB). The project is being supported by the European Commission and is a collaboration between EFB and scientific partners in Europe, China, Egypt, Ghana, South Africa and the Philippines. Members of the Steering Committees include prominent scientists from China, Egypt, Ethiopia, Ghana, India, Kenya, Mexico, South Africa, Syria and Thailand.

A number of EAGLES conferences and workshops will be organized during the next three years in Europe and various developing countries (DEC). The topics will illustrate the need for much more effective European responses on the use of biology in combating problems in health and food supply in the DECs and in achieving the Millennium Development Goals. The first major EAGLES conference will be held 26-29 April 2006 as part of BioVision at the New Library of Alexandria, Egypt. This conference will focus on drought and desertification in developing countries.

World Diabetes Foundation - WDF

Sustainable care in developing countries

The World Diabetes Foundation is dedicated to supporting prevention and treatment of diabetes in developing countries. We focus on the following areas:

- Awareness of diabetes
- Prevention of diabetes and its complications
- Education and training of patients and health care professionals
- Improvement of access to essential medicines in diabetes
- Enhancement of detection, treatment and monitoring of diabetes

We act as a catalyst to build relations among different stakeholders such as governments, diabetes organizations, hospitals and authorities to ensure continued existence of our initiatives after the completion of the World Diabetes Foundation funded projects. Presently, the World Diabetes Foundation supports 65 projects with a total portfolio of USD 76.4 million of which USD 19.9 million are donated by the Foundation.

International Center for Agricultural Research in the Dry Areas - ICARDA

Established in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) is one of the 15 centers strategically located all over the world and supported by the Consultative Group on International Agricultural Research (CGIAR). With its main research station and offices based in Aleppo, Syria Arab Republic, ICARDA works through a network of partnerships with national, regional and international institutions, universities, non-governmental organizations and ministries in the developing world; and with advanced research institutes in industrialized countries.

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Under the supervision of Civil Aviation Ministry, EgyptAir become a Holding Company with Eight Subsidiaries.

In Order to develop a new concept of modernization, EgyptAir aimed to upgrade all its sectors and Subsidiaries.

1) Airline Company

Established in 1932. EgyptAir is proud to have been the first national carrier in either the middle east or Africa. EgyptAir's fundamental philosophy is to merge the latest aircraft technology with the extraordinary touch of traditional Egyptian hospitality.

Thanks to regular checks and continuous training on the operational procedures required for safe and efficient flight, our cockpit crew and cabin personnel are able to maintain the highest standards of day-to-day operations and are prepared to respond swiftly in event of emergency.

2) Cargo Company

As the largest cargo-handling agent in the area, EgyptAir Cargo provides handling, strategy and customs services to more than 45 international carriers at Cairo International Airport, handling all types of shipments (perishable, dangerous goods, animals, courier and general goods).

EgyptAir Cargo serves a network of more than 67 key international airports and cities in Europe, Asia, Africa and the Americas.

3) Ground Services Company

EgyptAir Ground Services Company provides consulting services for construction projects and is responsible for maintaining all EgyptAir facilities. With more than 3,500 experienced engineers, technicians and qualified personnel, in addition to more than 1,000 staff handling equipment on the ground, the company offers services to over 80 of the largest international carriers. Offering services at all Egyptian airports, the company

services more than 70,000 flights, nine million passengers. 800,000 pieces of baggage annually.

4) Inflight Service Company

EgyptAir Inflight Services Company provides EgyptAir and 18 other international airlines at the Cairo International Airport with unique food production and inflight services equipment that fully live up to international standards. To keep pace with the increasing demands of tourism in Egypt, as well as the high traffic of charter flights at domestic airports, EgyptAir Inflight Service has extended its operations to Hurghada Airport, with an initial daily capacity of 3000 meals.

5) Maintenance & Engineering Company

The EgyptAir Maintenance & Engineering Company conducts all types and levels of aircraft maintenance including checks, replacements, structure repair, painting and modifications of aircraft and engines, as well as repair and overhaul of avionics and mechanical components.

A new facility for overhauling VA2500 & CFM56 engines will open in 2006, capable of overhauling and testing 50 engines per year. Committed to safety and compliance with regulatory bodies' requirements, the company offers 24-hour technical services for national and international airlines.

6) Medical Services Company

When EgyptAir Hospital was established in 1986, the company's sole charge was to provide healthcare facilities for EgyptAir and all civil aviation employees. Today the hospital is the heart of EgyptAir Medical Services Company and has

become a medical hub for patients from all around Cairo.

The hospital recently opened a cardiac and cerebral artery catheterization laboratory and instituted an air ambulance to serve different tourist zones in Egypt. In the near future, there will be a unit for open heart surgery.

7) Tourism and Duty Free Shops Company

In 1963, EgyptAir Duty Free Shops started by selling traditional items such as cigarettes, perfumes and gifts. Today you can also find innovative items such as oriental commodities and home applications (including after-sale service) taking advantage of increasing passenger traffic. EgyptAir Duty Free Shops opened new outlets at the Luxor, Alexandria, Hurghada, Sharm El-Sheikh, Taba and Aswan airports.

Karnak, EgyptAir's travel agency operates Egypt offices in Egypt (five in Cairo) and offers services from EgyptAir offices worldwide. Established in 1955, Karnak is the only approved agency that operates short day tours for transiting passengers at Cairo International Airport, providing sightseeing in Cairo with professional multilingual guides. In addition, arrival and departure assistance is provided at all international and domestic airports. Rail and marine terminal service are also available.

8) EgyptAir Supplementary Industries Company

In 2005-2006, established as the most recent EgyptAir Subsidiary. EgyptAir Supplementary Industries Company conducts and supervises EgyptAir Press, Uniform & Leather Factors and the Production Workshops.

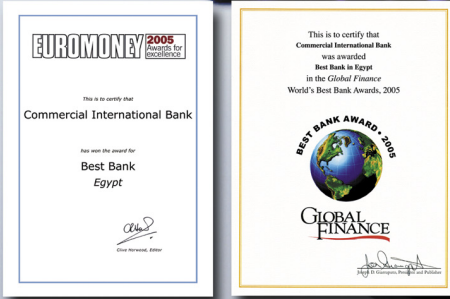
changing the focus in diabetes

Diabetes will be defeated in the laboratory. That's why Novo Nordisk invests millions into research every year. By staying at the forefront of new developments in diabetes treatment, we can offer a wide range of therapies and delivery systems that make life better for millions of people.

Our partnership with the Oxford Centre for Diabetes, Endocrinology and Metabolism enables research and clinical trials that accelerate the search for new treatments. But part of our research focus also lies with organisations such as the world-renowned Hagedorn Research Institute, an independent arm of Novo Nordisk, where the latest advances in stem cell research are being realised. Because we don't think it's enough to be an innovator in diabetes treatment. Our focus is on leading the fight for a cure.



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But it's better when someone credible says you are . . .



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for being a financial institution that caters corporate and trade finance, consumer lending, credit and debit cards, asset management, global markets and risk management, securities brokerage, life insurance, financial leasing, and car finance.

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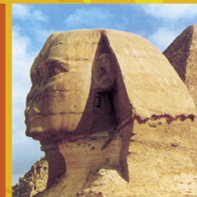
Wyeth

Research

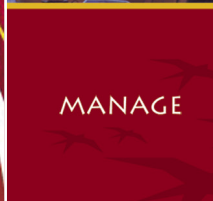
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Exhibitors Guide

Plan 1 Hall A Hall B
Plan 2 Hall D



United Nations Educational, Scientific and Cultural Organization

www.unesco.org/

Booth A1

(UNESCO) was founded on 16 November 1945. UNESCO functions as a laboratory of ideas and a standard-setter to forge universal agreements on emerging ethical issues. UNESCO is working to create the conditions for genuine dialogue based upon respect for shared values and the dignity of each civilization and culture. The world urgently requires global visions of sustainable development based upon observance of human rights, mutual respect and the alleviation of poverty, all of which lie at the heart of UNESCO's mission and activities.



Food and Agriculture Organization

www.fao.org

Booth A1

The Food and Agriculture Organization of the United Nations was established on 1945 to lead international efforts to defeat hunger. Serving both developed and developing countries, FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also a source of knowledge and information. We help developing countries and countries in transition modernize and improve agriculture, forestry and fisheries practices and ensure good nutrition for all.

The Bibliotheca Alexandrina is a Depository Library for FAO Publications.



The World Bank

www.worldbank.org

Booth A2

The World Bank is a vital source of financial and technical assistance to developing countries around the world.. It is made up of two unique development institutions owned by 184 member countries—the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). Each institution plays a different but supportive role in our mission of global poverty reduction and the improvement of living standards. The IBRD focuses on middle income and credit worthy poor countries, while IDA focuses on the poorest countries in the world.

The Bibliotheca Alexandrina is a Depository Library for World Bank Publications.

World Health Organization



<http://www.who.int>

Booth A3

The World Health Organization is the United Nations specialized agency for health. It was established on 7 April 1948. WHO's objective, as set out in its Constitution, is the attainment by all peoples of the highest possible level of health. Health is defined in WHO's Constitution as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The Bibliotheca Alexandrina is a Depository Library for the WHO Publications.



www.egypt-bic.com

Biotechnology Information Center – Egypt

www.egypt-bic.com

Booth A4

The Biotechnology Information Center – Egypt, is a not-for-profit center, established jointly between the Egyptian Ministry of Agriculture and Land Reclamation, and The International Service for the Acquisition of Agri – Biotech Applications (ISAAA). EBIC is one of The Biotechnology Information Centers (BIC 's) that concedes as a heart of Global Knowledge Center (KC) on Crop Biotechnology that facilitates the flow of information and exchange of experiences on crop biotechnology between and among the developed and developing countries.



International Center for Agricultural Research in the Dry Areas

www.icarda.org/

Booth A5

Established in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) is one of the 15 centers strategically located all over the world and supported by the Consultative Group on International Agricultural Research (CGIAR). With its main research station and offices based in Aleppo, Syria, ICARDA works through a network of partnerships with national, regional and international institutions, universities, non-governmental organizations and ministries in the developing world; as well as advanced research institutes in industrialized countries.



Mubarak City for Scientific Research & Technology Applications (MuCSAT)

www.mcsrta.sci.eg/

Booth A6

Mubarak City for Scientific Research & Technology Applications (MuCSAT) is the newest addition of research institutes in Egypt that was directed to the development and renovation of industry. Our objectives aim to develop centers of scientific Excellency that aim to serve both economic and social developments, to develop new technologies and provide new scientific methods in different fields of industry, to provide training consulting and technology transfer to different production and services agents in Egypt, to conduct applicable projects to ensure better performance in different areas that can benefit the Alexandria region and the national economy and to Cooperate with different national and international institutes in the various areas of technology.



Commercial International Bank

www.cibeg.com

Booth B2

The Commercial International Bank was established in 1975 as a joint venture between the National Bank of Egypt (51%) and the Chase Manhattan Bank (49%) under its original name 'Chase National Bank of Egypt'. CIB remains to be focused on human capital acquisition and retention, core corporate culture and values, and integrating its synergies as Egypt's leading financial service conglomerate offering premier quality to its customers.



Egypt Air

www.egyptair.egyptguide.net

Booth B3

Egypt Air was one of the pioneer airlines in the world and the most important in the Middle East and the Arab countries. It was established in May 1932 in association with Air work company under the name of Misr Air work . Its main object .Its main objective was to promote the spirit of aviation and air mindess among Egyptian youth .Using Gypsy Moth air planes, the company taught the art and science of flight and aeronautical engineering.



Unilever

www.unilever.com/ourcompany/

Booth B4

Unilever Unilever aims to help people in their daily lives. So we keep developing new products, improving tried and tested brands and promoting better, more efficient ways of working. Our brands are trusted everywhere and, by listening to the people who buy them, we've grown into one of the world's most successful consumer goods companies. In fact, 150 million times a day, someone somewhere chooses a Unilever product.




Coca Cola

www.egypt.coca-cola.com

Booth B6

The Coca-Cola Company exists to benefit and refresh everyone it touches. Founded in 1886, Coca Cola Company is the world's leading manufacturer, marketer, and distributor of nonalcoholic beverage concentrates and syrups, used to produce nearly 400 beverage brands. Coca-Cola Company is a global company with some of the world's most widely recognized brands .Coca-Cola first entered Egypt in 1942. Since then, it has continually introduced new beverages and package innovations to the Egyptian market.

nature publishing group 

Nature

npg.nature.com/npg/forms/04_cat.jsp

Booth D1

Nature, the company's flagship and the world's foremost weekly scientific journal, was launched in 1869. Nature Publishing Group (NPG) is a dynamic, innovative, creative company, committed to publishing high quality, rigorously peer-reviewed research, review and reference material; timely news; and essential career and recruitment information. NPG combines strong brands, pioneering technologies and premium information for scientific researchers in the public and private sectors, government agencies, educators and the general public. A key strength of the group is its close relationship with the scientific community; by working closely with scientists, and always placing emphasis on quality rather than quantity, NPG has taken a lead in finding innovative solutions to scientists' information needs.



World Diabetes Foundation

WORLD **DIABETES** FOUNDATION

www.worlddiabetesfoundation.org

Booth D4

The World Diabetes Foundation is dedicated to supporting prevention and treatment of diabetes in developing countries. We focus on the areas of awareness of diabetes, prevention of diabetes and its complications, education and training of patients and health care professionals, improvement of access to essential medicines in diabetes and enhancement of detection, treatment and monitoring of diabetes. We act as a catalyst to build relations among different stakeholders such as governments, diabetes organizations, hospitals and authorities to ensure continued existence of our initiatives after the completion of the World Diabetes Foundation funded projects.



Novo Nordisk

www.novonordisk.com/

Booth D5

novo nordisk® Novo Nordisk is a healthcare company and a world leader in diabetes care. The company has the broadest diabetes product portfolio in the industry, including the most advanced products within the area of insulin delivery systems. In addition, Novo Nordisk has a leading position within areas such as haemostasis management, growth hormone therapy and hormone replacement therapy. Novo Nordisk manufactures and markets pharmaceutical products and services that make a significant difference to patients, the medical profession and society.

Wyeth

Wyeth

www.wyeth.com/

Booth D6

Wyeth is a global leader in pharmaceuticals, consumer health care products, and animal health care products. Wyeth has a long history of pioneering developments in pharmaceuticals and biotechnology, with leading products in the areas of women's health care, neuroscience, musculoskeletal disorders, cardiovascular therapy, vaccines and infectious diseases, hemophilia, immunology, and oncology. Wyeth is also a leader in the development of nutrition.



Academy of Sciences for the Developing World

www.twas.org/

Booth D7

TWAS, the Academy of Sciences for the Developing World, represents the best of science in the developing world. Its principal aim is to promote scientific capacity and excellence for sustainable development in the South. TWAS is an autonomous international organization, founded in Trieste in 1983 by a distinguished group of scientists from the South under the leadership of the late Nobel Laureate, Abdus Salam of Pakistan. The Academy's more than 700 Fellows and Associate Fellows are elected from among the world's most distinguished scientists. Fellows are citizens of the South; Associate Fellows are citizens of the North who either were born in the South or have made significant contributions to the advancement of science in the South.



Harvard University Press

www.hup.harvard.edu

Booth D7

Harvard University Press Established in 1913. It is a publishing house, a division of Harvard University, that is highly respected in academic publishing. It publishes scholarly books and serious works of general interest in the humanities, the social and behavioral sciences, the natural sciences, medicine. One of their recent publication is "Dry Life Without Water" edited by Ehsan Masood, a London-based science journalist and consultant to the Science and Development Network and Daniel Schaffer, the Public Information Officer for the Academy of Sciences of the Developing Third World; which will be promoted during



Nuffield Council on Bioethics

www.nuffieldbioethics.org

Booth D8

Nuffield Council on Bioethics was established by the Trustees of the Nuffield Foundation in 1991 to identify, examine and report on the ethical questions raised by recent advances in biological and medical research. New developments in medicine and biology raise important ethical issues. The Nuffield Council on Bioethics is required, in its terms of reference, to consider these issues. The Council has achieved an international reputation, providing advice that assists policy-making, addresses public concerns and stimulates debate in bioethics.



Bibliotheca Alexandrina (BA) Library Sector Resources

www.bibalex.org

Booth D12

The Library sector of the Bibliotheca Alexandrina is a public-research library; established to revive the Ancient Library of Alexandria and to ensure an international center of excellence in Alexandria. It offers services to its users through the Main Library and its Specialized Libraries: Young People, Children, Taha Hussein for the Blind and Visually Impaired, the Arts and Multimedia Library, with the objectives to improve Awareness, Knowledge and Dialogue between cultures and attain standards of excellence in scientific research.

The BA resources are through its On-line Public Access Catalog (OPAC). Some of these resources related to the fields of Life Sciences will be displayed for the benefit of the participants in these major conferences.

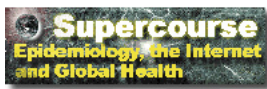


Disease Control Priorities Projects

www.fc.nih.gov/dcpp/con9summ.html

Booth D13

In 1993, The World Bank published the first edition of Disease Control Priorities in Developing Countries with contributions from WHO, developing- and developed-world scholars, practitioners, and public health specialists. The impact of the publications was to stimulate national and international debate on health-sector investments, and to catalyze extensive work on the estimation of the disease burden and the cost-effectiveness of specific health interventions. More editions have been published: "Disease Control Priorities in Developing Countries", 2nd edition, "Priorities in Health", and "Global Burden of Disease and Risk Factors". They are part of an ongoing initiative to provide technical resources to improve the health systems, and ultimately the health of people, in developing countries. [Copies will be available during the fair.]



Supercourse

www.bibalex.org/SuperCourse/Index.htm

Booth D14

Supercourse is a global repository of lectures on public health and prevention targeting educators across the world. Supercourse has a network of over 32000 scientists, in 151 countries sharing for free a library of over 2500 lectures. The concept of the Supercourse and its lecture style has been described as the Global Health Network University and the Hypertext Comic Books.



European Action on Global Life Sciences (EAGLES)

www.efb-eagles.org/index.htm

Booth D15

As a major player in life sciences and holding influential positions in international deliberations, Europe has a responsibility to assist the developing world deal with the risks, challenges and opportunities of these technologies, and to facilitate the safe and efficient development and use of life sciences and biotechnology in developing countries.

European Action in Global Life Sciences (EAGLES) intends to address these questions. EAGLES is an initiative of the European Federation of Biotechnology. EAGLES designs and implements projects to be carried out mostly by life scientists from developing countries that will stimulate and facilitate activities for the European life sciences to respond to the needs of developing countries.



Vacsera

www.vacsera.com

Booth D16

Vacsera is a manufacturer of vaccines and Biological product in Egypt. Our Name is derived from the words "vaccines and sera" reflecting our commitment to serve the preventive medicine branch in the healthcare sector through production of top quality vaccines and antiserum.

Our Mission is to create and sustain value by being recognized as a leader in the international biopharmaceutical & biotechnology industry, valued by our customers and respected by our competitors.

Our Vision is to improve health and add quality to human life by delivering innovative, high-value products for disease prevention and treatment .



International Pharmaceutical Students' Federation

www.ipsf.org/

Booth D17

The International Pharmaceutical Students' Federation was founded in 1949 by eight pharmacy student associations in London. The Federation now represents around 350,000 pharmacy students and recent graduates in 61 countries worldwide. IPSF is a non-governmental, non-political, and non-religious organization that aims to study and promote the interests of pharmacy students and encourage international co-operation amongst them.



The Bibliotheca Alexandrina - Bookshop

www.bibalex.org

Booth D18

Our Book shop contains a rich variety of books and gifts that reflect the wonders of our civilization and the uniqueness of our national heritage. It offers a perfect reminder of the great history of the Ancient Library as well as the fascinating building of the Bibliotheca Alexandrina and what it comprises.

Harty Tours

Tours Touching Your Hearts ♥

Harty Tours

www.hartytoursegypt.com/

CCA Front desk

Harty Tours commenced in Alexandria, in 1986 on the beautiful land of Alexandria. Through the years, Harty Tours became one of the most famous tourist leading companies all over Egypt and number one in Alexandria in the field of hotel and flight reservations.

