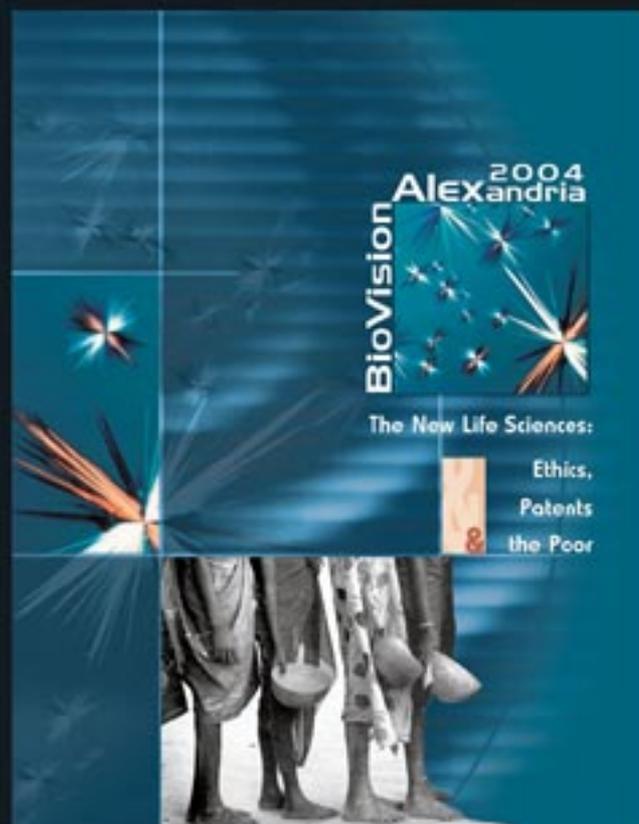


The Colors of BioVision Alexandria 2004



BioVisionAlexandria 2006
Alexandria, Egypt
New Life Sciences: Changing Lives
26-29 April 2006

Colors of BioVisionAlexandria 2004

Concept:
Mohamed El-Faham

Edited by:
Marwa Kandeil
Amani Massoud

Graphic Design and Layout:
Mohamed Gomaa

Photos by:
Mohamed Nafea
Ahmed Roushdy

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Preface

In a world undergoing profound transformations, globalization, the needs of the poor, the new rules governing international trade, all call into question the directions we must pursue to assure the universal ideals of sharing and benefiting from the enormous advantages offered by the New Life Science revolution since no area in science is moving faster nor will have a greater impact on people's lives.

To this end, coordination and cooperation within the scientific community is essential for rapid, efficient progress and development. It is through the exchange of ideas, discoveries and policies that effective progress can be achieved. For progress, real progress is when the deprived, the weak and the marginalized become the producers of their own bounty and welfare, and not just the recipients of charity or the beneficiaries of aid.

Set up on the initiative of Mr Raymond Barre, former Prime Minister of the Republic of France, and the Académie des Sciences, the World Life Sciences Forum BioVision is a unique 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.

The World Life Sciences Forum, BioVision was held in 1999, 2001 and 2003 and its next meeting is in Lyon, France from 11 to 15 April, 2005. Following the World Forum in February 2001, it was decided to widen

the participation from developing countries, with also a wider representation of the Society at large. There was unanimous agreement that in all sectors, the development of BioSciences may have a dramatic impact, and may constitute a unique opportunity for developing countries to move forward. The appropriate use of these technologies, within strict ethical framework, should, at a relatively low cost, transform the living conditions of large populations. The Alexandria Conference, then called the Egyptian Biotechnology Conference, was subsequently developed in 2002, focusing on Life Sciences and Sustainable Development, giving priority to concrete actions between the South and North.

As a consequence of the Alexandria Conference in 2002, it has been decided to alternate the two conferences, the World Life Sciences Forum BioVision taking place in Lyon every odd year, while the Alexandria Conference would take place in even years and is officially called the BioVision Alexandria Conference.

In 2004, Bibliotheca Alexandrina hosted the BioVision Alexandria from 3 to 6 April, 2004 in Alexandria, Egypt. The conference was entitled "The New Life Sciences: Ethics Patents and the Poor" and revolved around Healthcare and the Poor, Agriculture and Safe Food Sufficiency, Exploiting Biodiversity and Protecting the Environment, as well as sessions on Trade, Patents and Developing Countries.

Individual experts from all over the globe, who not only represent virtually all aspects of biotechnology, its applications, and its regulation, but also the many nations of the world as well, gathered to discuss the different topics of the BioVision Alexandria 2004.

The Conference began with BioVision Nobel Laureates' Day on 3 April, to celebrate the Nobel Laureates whose dedication and vision is making possible the dawn of the new scientific age of the 21st century.

The three pillars of Science, Industry and Civil Society and their representatives met during the plenary and parallel sessions of BioVision Alexandria 2004. They voiced their social, ethical and economic concerns of the New Life Sciences, and underlined the need for alliances, such as the European Action in Global Life Sciences, commonly known as EAGLES, and others. The list of 73 invited speakers included renowned scientists and political figures from around the world, as well as four Nobel Laureates.

An accompanying Book Fair for publishers and organizations active in the field of Biotechnology and a Poster session also took place.

The conference also featured the launching of the Academia Bibliotheca Alexandrina (ABA), an academy formed of the greatest minds of our world, to revive the tradition of the old Museum of the ancient Library of Alexandria, as well as the launching of the Arab Society for Ethics in Science and Technology (ASEST).

The next BioVision Alexandria will take place during 26-29 April 2006. The conference will focus on new life sciences and how they have changed lives.

The present publication aims to provide the reader with an overview of the first BioVision Alexandria that took place in 2004. It also contains a short description of the next conference main topics.

For further information please visit our website:
www.bibalex.org/biovisionalexandria

*The Colors of
BioVision Alexandria 2004*

The New Life Sciences:
Ethics, Patents and the Poor

*Organized in Partnership
with The World Life Sciences Forum BioVision*

3 – 6 April 2004

at

Bibliotheca Alexandrina (BA)

Alexandria, Egypt

Saturday, 3 April 2004

OPENING ADDRESSES



Special Inauguration Session where world renowned International Political, Social and Scientific Leaders introduced BioVision Alexandria 2004, with their views on the implications of the Life Science Revolution in today's world...

(in order of presentation)

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

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

Koji Omi, Former Minister for Science and Technology Policy (Japan)

Sherwood Rowland, Nobel Laureate, Chemistry 1995 (USA)

Mohamed Hassan, Executive Director, Third World Academy of Sciences

Jean-Marie Lehn, Nobel Laureate, Chemistry 1987 (France)

Ibrahim Badran, Former Minister of Health (Egypt)

H.E. Dr. Atef Ebeid, Prime Minister, Arab Republic of Egypt



Ismail Serageldin

“... Welcome Excellencies, Ladies and Gentlemen in the Library of Alexandria, a venue for BioVision Alexandria 2004. The ancient Library of Alexandria was the world’s first academy of learning, the world’s first free space for inquiry and interdisciplinary research, and the world’s first great universal library. We have now successfully revived the Library by your very presence...”

Ismail Serageldin

“... We do not only have the moral obligation of preparing the future, but also the duty of repairing the past: Wealth & Health in a secure environment are at stake, and the development of Life Sciences will contribute to this evolution, if not this Revolution...” ***Philippe Desmarescaux***



Philippe Desmarescaux



Koji Omi

“... BioVision Alexandria has brought together people from both developing and developed nations to discuss biotechnology and mankind’s future... discussion on a global level is essential if we are to deal with the questions and issues we are faced with today ...” ***Koji Omi***

“...this natural bridge which lies between scientists from different countries offers optimism for the 21st century, the ability to make your decisions on the basis of actually how nature operates rather than whatever position you held when you went into it and speaking for the academies of the world, the Library of Alexandria can be a beacon for all of us...” ***Sherwood Rowland***



Sherwood Rowland



Mohamed Hassan

“...the new life sciences: the most compelling science of our times and a science that holds great promise for addressing some of the most difficult issues that we face in public health, food production and environmental protection...”

Mohamed Hassan

“...This Library and its Academy are dedicated to the celebration of human knowledge, devoted on this present occasion to Biosciences. BioVision Alexandria 2004 pays special attention to developing regions of the world, to North-South and South-South issues. We are gathered during these days for Life Sciences, but we are here above all for Living Science...” ***Jean-Marie Lehn***



Jean-Marie Lehn

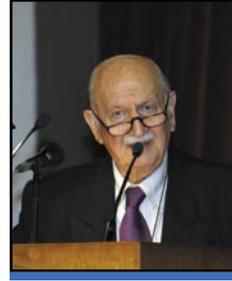


H.E. Dr. Atef Ebeid

“...global cooperation is needed more than ever to help meet the key challenges facing humanity: Poverty and the availability of inexpensive medical care. The hope is and will continue to be in the contributions made by scientists, the positive response of entrepreneurs and the strong commitment of our governments...”

H.E. Atef Ebeid

“...a capacity building system for ethics should be created, and not be left in the hands of amateurs alone. From different professions & responsibilities in life, a battalion of specialized, educated & trained ethicists should be developed as a critical mass of professional experts to guard against overshooting in the progress of research & inventions in fields that can be disastrous to life or to human beings...” ***Ibrahim Badran***



Ibrahim Badran

BioVision Nobel Laureates' Day

Highlights of the Biochemical Revolution

Chair: **Francois Gros**, Honorary Permanent Secretary,
Academy of Sciences (France)

Ahmed Zewail, Chemistry 1999 (Egypt/USA)

BioVision at the Interface

Jean-Marie Lehn, Chemistry 1987 (France)

Supramolecular Chemistry: Some Contributions to Life Sciences



Francois Gros

“...This Nobel laureates day will be centred around four eminent Nobel personalities, who have revolutionized the field of chemistry for the progress of life sciences, and for the benefit of human health environment and, knowledge of our universe...”



Jean-Marie Lehn

“...There is no biology without chemistry and chemistry is the science of informed matter. On the molecular level, it represents storage while on the supra-molecular level it represents processing...”



Ahmed Zewail

“...We need to understand the physics, the mathematics and the chemistry of biology, to make improvements in life sciences...”

The New Life Sciences: Implication in Civil Society

Chair: **M. S. Swaminathan**, UNESCO Chair in Ecotechnology; M.S.
Swaminathan Research Foundation (India)

Ryoji Noyori, Chemistry 2001 (Japan)

Asymmetric Catalysis: Roles in Biomedical Science and Technology

Sherwood Rowland, Chemistry 1995 (USA)

The Changing Atmosphere in 2004



M.S. Swaminathan

“...Formulation of new drugs and the danger of human life styles’ consumption of energy...have very rich implications to human security in the long term...”

“...Changes taking place in the Earth’s atmosphere can affect the human health, and the biological response of plants. The detailed knowledge of the atmosphere has been greatly advanced in the past several decades by the development of measurement techniques which have much greater precision and accuracy, much improved sensitivity and global coverage...”



Sherwood Rowland



Ryoji Noyori

“...Producing and designing drugs implies the mastering of a full range of key structural characteristics. Elementary composition, atom connectivity, configuration and conformation are the basis of molecules properties and functions...”

**Round Table Discussion:
Nobel Views and Perceptions**



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



Professor Jean-Marie Lehn, Dr. Ismail Serageldin, Professor Ryoji Noyori, Professor Sherwood Rowland (left to right) during the BioVision Nobel Laureates' Day Round Table Discussion



“...we are members of this scientific community, it transcends boundaries, it transcends political differences, it speaks the common language of science...”

Ismail Serageldin

“...the ethical aspects of almost all aspects of science are going to be a growing concern in the next decades...” **Sherwood Rowland**





“...that is the definition of science, we have no dogmas, we just continue and change our view of the universe, of scientific theories as we have more information, more knowledge, and so on...”.

Jean-Marie Lehn

Dr. Rafik Nakhla,
Dr. Salah Soliman
and Dr. Mohamed El
Faham; forming the
Screening Panel for
the questions in the
Nobel Round Table
Discussion



When Earth is threatened by industrial progress of mankind, scientific research needs, more than ever, to find effective solutions, which will address this crucial issue. Years of scientific discovery yield to different scientific perspectives.

- Nobel Laureates still admit that serendipity can be as effective as cutting-edge scientific techniques.
- Understanding of complex phenomenon can be based on billion years timescale observations whereas some others have to be clarified within only a femtosecond window.

The more we know, the less we understand. Future challenges require a multidisciplinary approach where branches of science are merging together. However, the three pillars of science remain Basic research, Technology development and Society values, with Basic research the foundation of knowledge.

How can we harness, this global community that believes in common humanities and is determined to pursue a greater understanding of the processes of life which constitutes the new life sciences of this new century.

An even greater understanding of the processes of life and means of knowledge is required in order to bring closer to reality the promise that is implicit to science. It will indeed one day be able to heal the sick, protect environment, feed the hungry and bring dignity to work.

Science can and has the promise to do, but perhaps institutions and structure in which we work are preventing the best of science in serving humanities.

Ismail Serageldin

Sunday, 4 April 2004

Opening Plenary Session

The New Biology: A Survey of the Issues



KeyNote BioLeaders will open The World Life Sciences Forum BioVision Alexandria 2004 by assessing the current and future applications of Life Sciences and their social or economic implications

Chair: **Andrew Bennett**, Executive Director, Syngenta Foundation (Switzerland)

Rapporteur: **Gabrielle Persley**, Chair, The Doyle Foundation (UK)

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)
Economic Issues: Providing the Conditions for Life Science Research and Development

M. S. Swaminathan, UNESCO Chair in Ecotechnology; M.S. Swaminathan Research Foundation (India)
Ever-green Revolution and Biohappiness

Malcolm Elliott, Director of The Norman Borlaug Institute for Plant Science Research (UK)
New Biology for Developing Countries: Opportunities and Constraints

Massimo Garzelli, Head of Regional Office, UNIDO
Global Biotechnology Forum in Chile: Overview and Conclusions



Malcolm Elliott

“...It is supremely ironic that the principle objections to exploitation of the new technology have come from countries where obesity, not malnutrition, poses a major threat to human health. If the developing countries are fully to benefit from the opportunities created by The New Biology, it will be necessary to overcome the political constraints; the scientific constraints; and the barriers to market participation that particularly disadvantage developing countries...”



Ismail Serageldin

“...Decisions on development (R&D) associated with Life Sciences, and deployment (marketing) of new technologies will be largely if not totally determined in industrial countries...”



M.S. Swaminathan

“...To get full benefits from biodiversity for enriching the human environment, there is need for symbiotic biopartnerships between biodiversity-rich developing countries and technology-rich industrialized countries...”



Andrew Bennett
Session Chair



Gabrielle Persley
Rapporteur



Massimo Garzelli
“Think globally, act locally”

Special Session on the EAGLES Initiative



The EAGLES initiative has been created to propose strategies by which the huge power of the Life Sciences and biotechnology, mostly controlled by the developed world, can be directed for the benefit of the Third World... Its working session will be the opportunity to foster concrete grounds for action.

Chair: **Ismail Serageldin**, Director, Bibliotheca Alexandrina,
Chairman, European Action on Global Life
Sciences (EAGLES)

Members of the EAGLES Consortium including:

Huanming Yang, Professor of Genetics, Director of Beijing Genomics
Institute, Chinese Academy of Sciences, Beijing (China); Co-Vice-
Chairman, European Action on Global Life Sciences (EAGLES)

Boerge Diderichsen, President, European Federation of Biotechnology

Marc van Montagu, Chairman, Institute of Plant Biology for Developing
Countries (Belgium)

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

European Action on Global Life Sciences (EAGLES)

EAGLES is a consortium of life scientists and humanists from Europe and developing countries who are dedicated to the application of knowledge of the life sciences to the great humanitarian challenges of hunger, thirst, disease and environmental degradation. EAGLES is a Task Group of European Federation of Biotechnology. Its objective is to encourage Europe and Europeans to create more sensitive life science policies and stronger supporting programs that are focused on the needs of developing countries.



Ismail Serageldin
Session Chair

“...EAGLES will raise highly the banner of life sciences and humanity for the whole world. Let’s work together for an intact and better world where everybody is equal and equally benefits from science...”



Huanming Yang



David McConnell

“...Life sciences and biotechnology hold the promise of contributing to meeting some of the fundamental needs for more food and better health facing the developing world as highlighted in the United Nations Development Programme in its 2001 Human Development Report...”

“...EAGLES proposes first to establish a platform for outstanding scientists in the life sciences and biotechnology with the intention to give voice in Europe to the needs and competences of these countries...”



Marc van Montagu



Boerge Diderichsen

“...Europe needs to embrace biotechnology in a wider international context and to respond with responsible and proactive policies at the global level for the strong reason that European decisions regarding life sciences and biotechnology have important consequences on developing countries...”

Parallel Session 1/4 on Healthcare and the Poor

Life Sciences Applications to New Healthcare in Low Resource Environments: High Hopes?

Rapporteur: **Rafik Nakhla**, Bibliotheca Alexandrina (Egypt)

State of the Art (Panel 1)

Chair: **Ibrahim Badran**, Former Egyptian Minister of Health (Egypt)

Discussant: **Brian Clark**, President, International Union of Biochemistry and Molecular Biology, Aarhus University (Denmark)

Muhammad Choudhary, Acting Director, HEJ Institute of Chemistry, University of Karachi (Pakistan)

Medicinal Plants-Importance in Health and Economy

Claude Jasmin, Founding President, International Council for Global Health Progress (France)

Losing Life

Sir Peter Lachmann, Past President, Academy of Medical Sciences (UK)

The Enduring Threat of Infectious Disease



Panel 1 speakers and audience



Rafik Nakhla
Rapporteur



Ibrahim Badran
Session Chair



Sir Peter Lachmann

“...All in all the message of infectious disease is that if it has not gone away then it is unlikely to and while the price of freedom is eternal vigilance, this applies equally to freedom from infectious disease...”

“...A healthy world is in part dependent on our ability to put modern technology to the service of developing countries. This is not only an ethical responsibility but a question of overall survival...”



Claude Jasmin

Technical Papers/Case Studies (Panel 5)

Chair: **Sir Peter Lachmann**, Past President, Academy of Medical Sciences (UK)

Discussant: **Claude Jasmin**, Founding President, International Council for Global Health Progress (France)

Stephen Jarrett, Deputy Director, Supply Division, UNICEF
Vaccine Security: Ensuring the Uninterrupted Sustainable Supply of Affordable Vaccine to developing Countries

Cherif Matta, Chemistry Department, University of Toronto(Canada)
Computational Chemistry: A Powerful and Inexpensive Tool for basic and applied research in the life sciences

Noel Murphy, Department of Genetics, Smurfit Institute of Genetics, Trinity College (Ireland)
Delivering Practical, Sustainable Solutions for Problems of Neglected Diseases in the Postgenomics Era



Noel Murphy

“...The genomics revolution has partially leveled the scientific “arena” as the data are publicly available worldwide for analysis. It is the potential for exploitation of that data where inequalities lie and it is this area that requires greater co-operation and collaboration between scientists of the South and North...”

“...The establishment of schools of computational chemistry in the developing world should be seen within the wider context of achieving educational and academic reforms and the strive for excellence in these countries...”



Cherif Matta



Stephen Jarrett

“...The example of vaccines is illustrative of the need for biotechnological break-throughs...”



Sir Peter Lachmann
Session Chair

Parallel Session 2/4 on Agriculture and Safe Food Sufficiency

AgBiotech for Higher Food Safety and Higher Productivity: Application and Inclusion Processes

Rapporteur: **Cynthia Schneider**, Ass. Professor, Georgetown University;
Former US Ambassador

State of the Art (Panel 2)

Chair: **Gabrielle Persley**, Chair, the Doyle Foundation (UK)

Discussant: **Rudy Rabbinge**, University Professor at the Executive Board
of Wageningen UR (Netherlands)

Patrick Cunningham, Department of Genetics, Trinity College
Dublin (Ireland)

New times, New Challenges

Marc van Montagu, Chairman, Institute of Plant Biotechnology for
Developing Countries (Belgium)

Magdi Madkour, President, Agriculture Research Centers,
Ministry of Agriculture (Egypt)

*Science and Technology Strategy for Improving Agricultural
Productivity in Egypt*



Magdi Madkour

“...In the last two decades, there have been sincere efforts to upgrade how agriculture is dealt with in Egypt...”



Gabrielle Persley, Patrick Cunningham, Marc van Montagu (left to right)

Technical Papers/Case Studies (Panel 6)

Chair: **Rudy Rabbinge**, University Professor at the Executive Board of Wageningen UR (Netherlands)

Discussant: **C. S. Prakash**, Director, Center for Plant Biotechnology Research at Tuskegee University (USA)

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

Developments Beyond Golden Rice

Mouin Hamze, President, International Center for Advanced Mediterranean Agronomic Studies (Lebanon)

CIHEAM: an intergovernmental organization supporting development in the Mediterranean area

(Presented by **Mohamed Nawar**, President of Scientific Advisory Commission of CIHEAM)

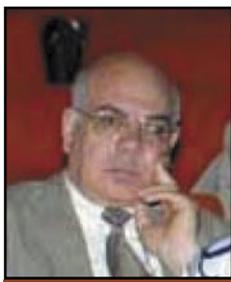
Hanaiya El Itriby, Director, Agricultural Genetic Engineering Research Center (Egypt)

Biotechnology Serving Agricultural Development in Egypt

Adel El Beltagy, Director General, International Center for Agricultural Research in Dry Areas (Syria)

Harnessing new science for sustainable agriculture in dry areas

(Presented by **Richard Cross**, Director of the Germplasm Program of ICARDA)



Mohamed Nawar

“...CIHEAM was founded to promote the spirit between international cooperation between supervisors working in the area of agriculture in Mediterranean countries...”



C.S. Prakash
Discussant



Hanaiya El Itriby



Ingo Potrykus

“...GMO technology has the potential to support and to complement traditional plant breeding...”



Rudy Rabbinge
Session Chair

Parallel Session 3/4 on Exploiting Biodiversity and Protecting the Environment

Exploiting Natural Resources while Preserving Biodiversity and Protecting the Environment: What is the Secret Formula?

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

State of the Art (Panel 3)

Chair: **Michael Cernea**, Former Senior Adviser for Sociology and Social Policy, the World Bank

Discussant: **Eric Huttner**, General Manager, Diversity Arrays Technology Pty Limited (Australia)

Farouk El-Baz, Director, Center for Remote Sensing Boston University (USA)

Space platforms as environmental monitors

Klaus Ammann, Director, Botanical Garden, University of Bern (Switzerland)

Impact of Agriculture on Biodiversity

Coosje Hoogendoorn, Deputy Director General, International Plant Genetic Resources Institute (Italy)

Agricultural Biodiversity for Sustainable Development: Strengthening the Knowledge Base



Panel 3 speakers and audience



Farouk El Baz

“...Biodiversity is drastically affected by changes to the environment of the biota... In order to fully understand the changes and remedy the resulting problems, we must ascertain the nature of the changes and where and at what rate do they occur. Much can be learned in this regard through the application of remote sensing methodologies, particularly photographing the Earth from space platforms...”

“...Genetic diversity..has provided, and will continue to provide, the basis for increased productivity, increased resistance to pests and diseases and resilience to abiotic stress. This diversity is under threat as crop varieties adapted to specific environments, and with them the genes and alleles they carry, are subject to erosion and extinction...”



Coosje Hoogendoorn



Klaus Ammann

“...The greatest threat to natural biodiversity comes from habitat loss, much of which is driven by agricultural demand...”



Eric Huttner
Discussant

Technical Papers/Case Studies (Panel 7)

Chair: **Eric Huttner**, General Manager, Diversity Arrays Technology Pty Limited (Australia)

Discussant: **Brian Johnson**, Head of Biotechnology Advisory Unit, English Nature (UK)

Weber Amaral, Senior Scientist, International Plant Genetic Resources Institute (Italy)

Application of Biotechnology Tools on Biodiversity and Biocomplexity Studies

Mahmoud Solh, Director, Plant Production & Protection Division, Agricultural Department, FAO
Agrobiodiversity, People and the Environment

Ahmed Amri, Biodiversity Project Coordinator, West Asia Regional Program, ICARDA (Morocco)

“Preventing land degradation and loss of agrobiodiversity in dryland ecosystems in West Asia”



Members of Panel 7



Mahmoud Solh

“...The goals of the Millennium and the World Food Summit in fighting hunger and poverty and protecting the natural resource base, including agro-biodiversity, can be met through sustainable agricultural development based on scientific advances, in addition to farmer and community empowerment and an enabling policy environment...”



Weber Amaral

“...genetic engineering techniques for the production of GMTs (genetically modified trees) are another emerging set of the biotechnology tools, therefore they should not be treated as a surrogate of biotechnology itself...”



Mahmoud Solh

“...local agrobiodiversity is still the basis of the existing traditional farming systems under harsh conditions prevailing in the drylands and mountainous areas and its potential to contribute significantly to diversification and improvement of farmers and herders incomes...”



*Brian Johnson
Discussant*

Parallel Session 4/4 on Trade, Patents and Developing Countries

Facing the Issue: How can Free Trade and the Patent System Benefit Developing Countries?

Rapporteur: **Frederick Erbsich**, Former Director, Office of Intellectual Property, Michigan State University (USA)

State of the Art (Panel 4)

Chair: **Claudio Carlone**, Hypothesis Communication Agency (Italy)

Discussant: **Philip Pardey**, Professor of Science and Technology Policy, Department of Applied Economics, University of Minnesota (USA)

Malcolm Elliott, Director of The Norman Borlaug Institute for Plant Science Research (UK)

IPR: Must there be a Conflict between Commercial Need and Humanitarian Benefits?

Carlos Romeo-Casabona, Director, Inter-University Chair BBV Foundation – Provincial Government of Biscay in Law and the Human Genome (Spain)

Intellectual Property Rights and the controversy between Developed and Developing Countries: is it ethical to take care for animals suffering but to forget the needs for survival of humans?

Zhu Chen, Vice President, Chinese Academy of Sciences (China)

Filling the South-North gap in life science and biotechnology through capacity building, innovation and benefit sharing: View from a Chinese life scientist



Zhu Chen

“...promoting the concept of benefit sharing is an internationally win-win situation while enhancing the competitiveness of the developing world will be the only way to ensure opportunities of common development...”



Carlos Romeo-Casabona

“...Globalisation should be a way to improve responsibility, solidarity, tolerance and understanding among the nations and the people...”



Claudio Carlone
Session Chair



Philip Pardey
Discussant

Technical Papers/Case Studies (Panel 8)

Chair: **Mohamed Hassan**, Executive Director, Third World Academy of Sciences

Discussant: **David Bennett**, Acting General Secretary, European Federation of Biotechnology (Netherlands)

Claudio Carlone, Hypothesis Communication Agency (Italy)
Venture Capital, Patents and the Market: The Case-Study of Biotechnology in Italy

Willy de Greef, Executive Director, International Biotech Regulatory Services (Belgium)
Non-Conventional IPR Issues

Philip Pardey, Professor of Science and Technology Policy, Department of Applied Economics, University of Minnesota (USA)
Agricultural R&D and Crop-related IPRs



*Mohamed Hassan
Session Chair*



Philip Pardey, Frederick Erbisch (left to right)



Claudio Carlone

“...Biotech is surging, in part, because the Food and Drug Administration (FDA) is speeding up the drug-approval process.”

“... There is an emergent disconnect between different views on IPRs and on biotechnology which is beginning to affect the way in which biotechnology can function, and in particular the way in which biotechnology in the public sector can function...”



Willy de Greef



David Bennett
Discussant

CEO Panel

Convener: **Boerge Diderichsen, Novo Nordisk**

- **Hassan Abbas Helmy**, Pharco
- **Whitney Macmillan**, Cargill
- **Magid Abou-Gharbia**, Wyeth
- **Osamu Nagayama**, Chugai Pharmaceutical Co, Ltd, JABEX



Members of CEO Panel



Whitney MacMillan

“...Technologies are worthless if not adopted...”



“...Intellectual Property Protection is the Cornerstone of the Industry’s existence...”

Magid Abou-Gharbia



“...I intend to have a book on research for the ‘have-nots’...”

Hassan Abass Helmy

“...as rapid advances continue to be made in science and technology, it is vital that pharmaceutical industries, especially R&D-based companies in Japan, carry on with their supply of new innovation, technology, information and knowledge...”



Osamu Nagayama



“...there is a major global divide in generation and control of intellectual property rights...”

Boerge Diderichsen

Monday, 5 April 2004

Parallel Session 1/4 on Healthcare and the Poor

Life Sciences Applications to New Healthcare in Low Resource Environments: High Hopes?

Rapporteur: **Rafik Nakhla**, Bibliotheca Alexandrina (Egypt)

Technical Papers/Case Studies (Panel 9)

Chair: **Mamdouh Gabr**, Secretary General, Egyptian Red Crescent (Egypt)

Discussant: **Werner Christie**, Former Minister of Health,; President, World Health Connections (Norway)

Stefan Ehlers, Head of Department, Borstel Leibniz Center for Medicine and Biosciences (Germany)

Genetics and Biotechnology in Tuberculosis Research: Ethical Issues

Magid Abou Gharbia, Vice President, Wyeth Research (Egypt/USA)
Impact of Chemical and Screening Technologies in Drug Discovery

Annica Dahlstrom, Professor, Cell Biology, Göteborg University (Sweden)

Women's and men's brains and the intellectual power



Mamdouh Gabr
Session Chair

“...Many research organizations have adopted several approaches to ensure survival and domination in the 21st century. Improving productivity through innovation and discovery of novel drug candidates is the cornerstone of this strategy...”

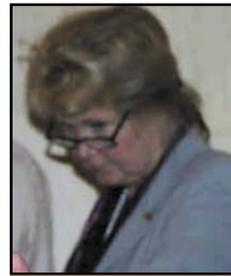


Magid Abou Gharbia



Stefan Ehlers

“...Only a partnership between basic re-searchers, currently located in the North, and the beneficiary population, currently located in the South, will help provide clues for a strategy to eradicate TB...”



Annica Dahlstrom

“...Leaders, at all levels, must realize and acknowledge that there are indeed differences between most men and most women, and that attitudes, intelligence profiles, and strategies in the two sexes are different, but comple-mentary!”



Werner Christie
Discussant

Issues and Options (Panel 13) (round table discussion)

Chair: **Albert Sasson**, Former Assistant Director-General of UNESCO (Morocco)

Panel Head: **Werner Christie**, Former Minister of Health,; President, World Health Connections (Norway)
Global Health Challenges and the Impact of Biotech Community on the Developing World

Stephen Jarrett, Deputy Director, Supply Division, UNICEF

David Bennett, Acting General Secretary, European Federation of Biotechnology (Netherlands)

Effat Badr, Professor of Genetics, Alexandria University (Egypt)



Effat Badr

“...Collective political will of the advanced countries is needed to sustain major action to help building scientific excellence to the benefit of everyone...”

“...we need new effective policies for and in the developing world to implement both existing and new technologies and health programs...”



Werner Christie



Stephen Jarrett



David Bennett

Parallel Session 2/4 on Agriculture and Safe Food Sufficiency

AgBiotech for Higher Food Safety and Higher Productivity: Application and Inclusion Processes

Rapporteur: Cynthia Schneider, Ass. Professor, Georgetown University; Former US Ambassador

Technical Papers/Case Studies (Panel 10)

Chair: **Alexander Von Der Osten-Sacken**, Former Director, Consultative Group on International Agricultural Research (Germany)

Discussant: **Marilia Nutti**, Biosafety and Human Nutrition Researcher, National Research Center on Food Technology, Embrapa (Brazil)

Ronnie Coffman, Chair, Department of Plant Breeding, Director, International Programs/CALS, Ithaca (USA)
The Agricultural Biotechnology Support Project II

Randy Hautea, ISAAA Global Coordinator and SEAsia Director (Philippines)
Transferring Technology and Knowledge to Develop Biotechnology-derived Tropical Crops

Willy de Greef, Executive Director, International Biotech Regulatory Services (Belgium)
Agriculture in the age of regulation



Ronnie Coffman, Randy Hautea, Willy de Greef (left to right)



Marilia Nutti
Discussant



*Alexander Von Der
Osten-Sacken*
Session Chair



Cynthia Schneider
Rapporteur

Issues and Options (Panel 14) (round table discussion)

Chair: **Ingo Potrykus**, Professor Emeritus, Institute of Plant Sciences (Switzerland)

Panel Head: **Roger Beachy**, President, Donald Danforth Plant Science (USA)

Developing Partnerships to Facilitate Agriculture Biotechnology for Developing Economies

C. S. Prakash, Director of the Center for Plant Biotechnology Research, Tuskegee University (USA)

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

Marc van Montagu, Chairman, Institute of Plant Biotechnology for Developing Countries (Belgium)

Alexander Von Der Osten-Sacken, Former Director, Consultative Group on International Agricultural Research (Germany)



Panel 14 Members



Alexander Von Der Osten-Sacken

“... Institutions represent the setting in which science works; they reflect the culture in which scientists interact, collaborate and reach out; they represent the means for organizing research and for producing results...”



Roger Beachy

“...The many potential applications of agricultural biotechnology that are being developed in advanced laboratories around the globe promise many benefits if judiciously integrated with other aspects of crop production...”



Ingo Potrykus
Session Chair

Parallel Session 3/4 on Exploiting Biodiversity and Protecting the Environment

Exploiting Natural Resources while Preserving Biodiversity and Protecting the Environment: What is the Secret Formula?

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

Technical Papers/Case Studies (Panel 11)

Chair: **Nadia Makram Ebeid**, Former Minister of State for Environmental Affairs (Egypt)

Discussant: **Emile Frison**, Director General, International Plant Genetic Resources Institute (Italy)

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

Diversity Arrays Technology, A Novel Tool for Harnessing the Genetic Potential of Orphan Crops

Antonio Paes De Carvalho, General Director, Extracta Moléculas Naturais Ltda (Brazil)

Intellectual property in Accessing Biodiversity

C. S. Prakash, Director, Center for Plant Biotechnology Research at Tuskegee University (USA)

Agriculture Biotechnology: Its Impact on Biodiversity



Panel 11 Members



*Antonio Paes
De Carvalho*

“...Maximal use of scientific human resources in developing countries is a fundamental step in this process and would warrant North–South technology transfer in an ambience of respect for intellectual property...”

“... We have already realized significant environmental benefits from the biotech crops currently being grown, including a reduction in pesticide...”



C.S. Prakash



Eric Huttner

“...The growing success of the Open Source model in the software industry may provide some guidance towards establishing a sustainable system for open access biotechnology...”



*Nadia Makram Ebeid
Session Chair*

Issues and Options (Panel 15) (round table discussion)

Chair: **Jim Peacock**, President, Australian Academy of Science
(Australia)

Panel Head: **Brian Johnson**, Head of Biotechnology Advisory Unit,
English Nature (UK)

Is Biosafety only the first step towards more sustainable cropping systems?

Weber Amaral, Senior Scientist, International Plant Genetic Resources
Institute (Italy)

Mahmoud Solh, Director, Plant Production & Protection Division,
Agricultural Department, FAO

Nadia Makram Ebeid, Former Minister of State for Environmental
Affairs (Egypt)

“...The regulation and development of transgenic crops has shown that not only is there a need to develop productive and more sustainable cropping systems, but there is also the need to demonstrate with sound scientific evidence that they really are more sustainable...”



Brian Johnson



“...The regulation and development of transgenic crops has shown that not only is there a need to develop productive and more sustainable cropping systems, but there is also the need to demonstrate with sound scientific evidence that they really are more sustainable...”

Mahmoud Solh



Salah Soliman
Rapporteur



Jim Peacock
Session Chair



Panel 15 Members

Special Session on Intellectual Property Rights (Panel 12)

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Carl-Gustaf Thornström, Senior Research Advisor, Agriculture
Department for Research Cooperation, Sida/SAREC (Sweden)

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



Panel 12 Members

“...Open new doors for universal access to all knowledge for all people at all times...”



Ismail Serageldin



Frederick Erbisch
Rapporteur



Philip Pardey, Carl-Gustaf Thornström (left to right)

Issues and Options (Panel 16) (*round table discussion*)

Chair: **Philip Pardey**, Professor of Science and Technology Policy,
Department of Applied Economics, University of
Minnesota (USA)

Panel Head: **David McConnell**, Co-Vice Chairman of European Action
on Global Life Sciences; Professor at Smurfit Institute
of Genetics, Trinity College (Ireland)

Managing the risks of biotechnology

Yuan Zheng-Hong, Vice-Dean, Medical College, Fudan University
(China)

Carl-Gustaf Thornström, Senior Research Advisor, Agriculture
Department for Research Cooperation, Sida/SAREC (Sweden)

Carlos Romeo-Casabona, Director, Inter-University Chair BBV
Foundation - Provincial Government of
Biscay in Law and the Human Genome (Spain)



*Yuan Zheng-Hong, David McConnell, Philip Pardey, Carlos Romeo-Casabona,
Frederick Erbisch (left to right)*



Yuan Zheng-Hong

“...In some parts, patents perpetuate poverty in
developing countries...”

“...The challenge is how can we rationalize the impacts of IPR policies...”



Carl-Gustaf Thornström



Yuan Zheng-Hong, David McConnell, Philip Pardey, Carlos Romeo-Casabona, Frederick Erbisch (left to right)

Promises and Delivery:

Inventing New Partnerships (Plenary Session)

From new biology to its universal applications: common elaboration of new partnerships

Chair: **Philippe Desmarescaux**, Chairman, The World Life Sciences Forum, BioVision (France)

Discussant: **Andrew Bennett**, Executive Director, Syngenta Foundation (Switzerland)

Rapporteur: **Gabrielle Persley**, Chair, The Doyle Foundation (UK)

Jim Peacock, President, Australian Academy of Science (Australia)

Partnerships for Success

M. S. Swaminathan, UNESCO Chair in Ecotechnology; M.S. Swaminathan Research Foundation (India)

Towards an Era of Symbiotic Biopartnerships

Ysbrand Poortman, Vice President, World Alliance of Organizations for the Prevention of Birth Defects (Netherlands)

A Global Partnership of Scientists, Doctors and Patients' Organizations Working on Prevention and Management of Genetic Disease and Birth Defects



M.S. Swaminathan, Ysbrand Poortman, Philippe Desmarescaux, Andrew Bennett, Gabrielle Persley (left to right)



Jim Peacock

“...partnerships are the only way in which biotechnology, modern biology, will be able to be of major assistance to production systems in the developing world...”



Andrew Bennett
Discussant



Ysbrand Poortman

“...The fast expanding networks of patient organisations, and the increasing collaboration between them and the scientific and clinical community has a positive influence on the quality and efficiency of healthcare...”

Capacity Building in Science & Technology (Plenary Session)

Inventing a Better Future: A Strategy for Building Worldwide Capacities in Science and Technology with the InterAcademy Council's Report as the support of the discussion...

Chair: **Margaret Catley-Carlson**, Chair, Global Water Partnership (USA)

Rapporteur: **Gabrielle Persley**, Chair, The Doyle Foundation (UK)

Ismail Serageldin, Director, Bibliotheca Alexandrina (Egypt)

Muhammad Choudhary, Director, HEJ Institute of Chemistry, University of Karachi (Pakistan)

Mamphela Ramphela, Managing Director, the World Bank

Mohamed Hassan, Executive Director, Third World Academy of Sciences



Ismail Serageldin, Margaret Catley-Carlson, Muhammad Choudhary (left to right)



Mohamed Hassan

“...the pursuit of this science raises compelling social and ethical issues that should not –indeed cannot – be ignored...”



Session Speakers

“... We are united in our belief that S&T has always been a driver of change, and a key determinant of wealth and standard of living...”



Mamphela Ramphele

EAGLES Reception

EAGLES: Come and Meet

Ismail Serageldin, Director, Bibliotheca Alexandrina,
Chairman, European Action on Global Life Sciences (EAGLES)

Huanming Yang, Professor of Genetics, Director of Beijing Genomics
Institute, Chinese Academy of Sciences, Beijing (China);
Co-Vice-Chairman, European Action on Global Life
Sciences (EAGLES)

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



David McConnell, Ismail Serageldin, Huanming Yang (left to right)



EAGLES Members

Tuesday, 6 April 2004

Reporting Plenary Session:

Conclusions and Recommendations from the Parallel Sessions

Conclusions and Recommendations of the four Parallel Sessions will be presented and open to discussion to all the participants of the Forum, opening grounds for new collaborations and concrete implementations.

Chair: **Gabrielle Persley**, Chair, The Doyle Foundation (UK)

Rafik Nakhla, Bibliotheca Alexandrina (Egypt)
Healthcare and the Poor

Cynthia Schneider, Associate Professor, Georgetown University, Former
US Ambassador (USA)
Agriculture and Safe Food Sufficiency

Salah Soliman, Professor, Faculty of Agriculture, University of
Alexandria (Egypt)
Exploiting Biodiversity and Protecting the Environment

Frederick Erbsich, Former Director, Office of Intellectual Property at
Michigan State University (USA)
Trade, Patents and Developing Countries



Salah Soliman, Frederick Erbsich, Gabrielle Persley, Rafik Nakhla (left to right)



Salah Soliman



Gabrielle Persley



Rafik Nakhla



Cynthia Schneider

Closing Plenary Session

International Leaders will close The World Life Sciences Forum BioVision Alexandria 2004 by sharing their views and hopes on the universal applications of Life Sciences.

The BioVision Award

The session will start with the presentation of the BioVision Award, given to young scientists who are achieving projects for the development and application of new technologies of Life Sciences, to benefit developing countries.

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

Mamphela Ramphele, Managing Director, the World Bank

Francois Gros, Honorary Permanent Secretary, Academy of Sciences (France)

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



Presenting of BioVision Award



Presentation of Armelle Phalipon



Closing Session Speakers: Francois Gros, Philippe Desmarescaux, Ismail Serageldin, Mamphela Ramphele (left to right)



Armelle Phalipon – Winner of the BioVision Award

“...In connection with the BioVision Alex Forum, the Aventis Pasteur Foundation has recently decided to create a new prize...”



Francois Gros



Mamphela Ramphele

“...let us not settle for progress that increases comfort for one segment of humanity unless we also see progress that increases hope for all...”



Philippe Desmarescaux

“...Let’s move forward together. Even if we are late, it is certainly not too late to turn threats into real opportunities – with your help.”



Ismail Serageldin

“...together, coming out of BioVision Alexandria, and going on towards new venues, let us join, together as scientists and non scientists, join in this endless quest to know our universe and ourselves...”

BioVisionAlexandria 2006

New Life Sciences: Changing Lives

26-29 April 2006

The Bibliotheca Alexandrina is organizing BioVisionAlexandria 2006 from 26 to 29 April, 2006 in Alexandria. The conference will be a continuation of the tradition that started in BioVision 1999 in Lyon, which aims to bring distinguished speakers in discussions commemorating science and the finest achievements of the human intellect.

This venue will commence with a “Nobel Day”, as so successfully done both in BioVisionAlexandria and in BioVision in Lyon in previous years. The Nobel Day will be dedicated to Nobel laureates and will honor the scientists whose vision and perseverance in the quest for scientific innovation changed lives and transformed our world. This prestigious event which includes some of the greatest minds worldwide will be followed by the three-day conference, BioVisionAlexandria 2006.

The goal of the conference will be to promote the active exchange of biotechnological information, innovation, and new ideas and to encourage constructive dialogue between key players in the development of Life in order to better meet the challenges facing the 21st century with regard to Life Sciences, a vital step towards development and prosperity and changing people's lives for the better. It will present a unique opportunity for the international community to exchange ideas and develop a common vision for a better future of the sick and the poor.

BioVisionAlexadria 2006 will be dedicated to the role of the New Life Sciences in Changing Lives and is characterized by the following subtopics.

Health Discoveries

The wealth of new medical knowledge resulting from discoveries in basic science and the advancement of science in the health and medicine arena, the effective translation of this knowledge into new approaches for the prevention, diagnosis, and treatment of disease is currently a key challenge for the research community. Topics explored will include local health needs, creating opportunity from necessity, biotechnology for affordable medicines, infectious diseases, aging and the quality of life, affordable treatments for HIV/AIDS in developing countries, vaccines and other treatments for orphan diseases.

Agri-food and Environment: Discoveries

The conference will aim to explore the scientific issues facing global agriculture, how advances in agriculture have made it possible to grow more and safer food, and why, despite good global agricultural performance, considerable regional differences still exist. Topics discussed will include the role of science in meeting the challenge of producing sufficient food to feed the continuously growing populations, environmental conservation, improving nutrition through

biotechnology, green biotechnology, genomics and bioinformatics in agribiotechnology and novel products from plants.

From Discoveries to Delivery

The role of translational research and the application of basic scientific discoveries into clinically germane findings is as important as scientific research. The challenges of moving from knowledge to health are enormous so are the complex steps separating the basic research done in

a laboratory from a new drug or medical technology increase. Contemporary research fields do not necessarily match the needs of developing countries and the market lacks the incentive to spread best practice once a technology has been developed. All these issues present obstacles on the pathway from discovery to delivery. Among the topics to be discussed will be trade-related issues, clinical trials and regulation, emerging health biotech industries in the developing world and the delivery of new agricultural products.

See you in BioVisionAlexandria 2006!

Please visit our website at
www.bibalex.org/biovisionalexandria



**BioVision
Alexandria
2006**

**New Life Sciences:
Changing Lives**

Save the Date: 26-29 April 2006

**Alexandria
Egypt**

www.bibalex.org/biovisionalexandria