International Centre for Genetic Engineering and Biotechnology

An international organization dedicated to advanced research and training in molecular biology and biotechnology, with special regard to the needs of the developing world

Research

Training

Services

History, Mission and Focus

- 1983: Signing of Statutes by 26 member countries; Special Project under UNIDO
- 1984: Italy-India partnership accepted
- 1987: Trieste (Italy) component
- 1988: New Delhi (India) component
- 2007: Cape Town (South Africa) component

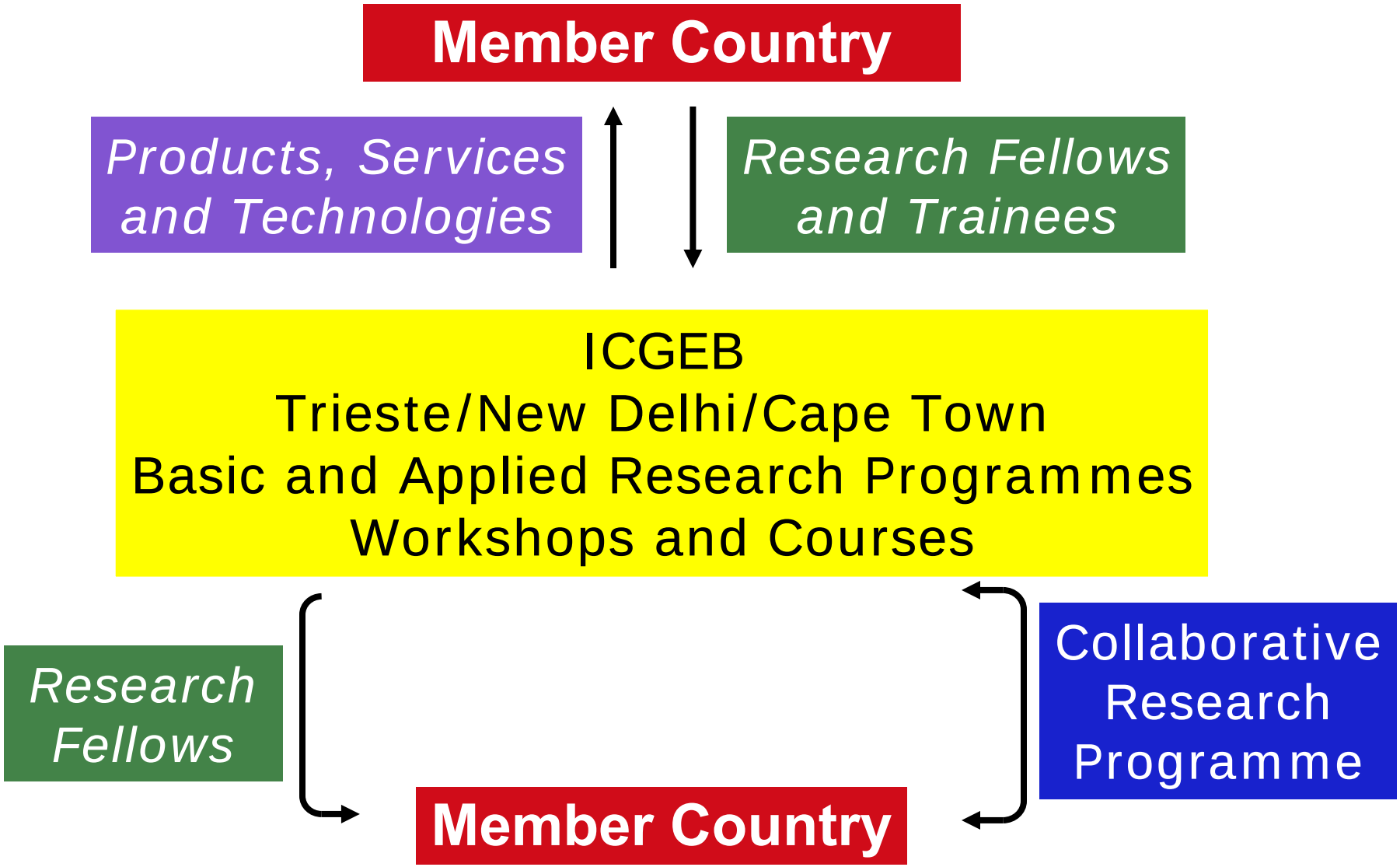
Mission

- Conduct innovative research in biotechnology for the benefit of developing countries
- Strengthen biotechnology capacity of Member Countries through research, training, funding and advisory services

Research Focus

- Trieste: Human biology, Virology, Immunology, Genetics, Bacteriology, Yeast biology, Protein Structure
- New Delhi: Human health (Malaria, Virology, Immunology, Structural Biology), Plant Biology (Biotic/Abiotic Stress, Biopesticides, Transformation)
- Translation of research to industry

ICGEB Actions



ICGEB Actions

… MEANING:

~ 2,000 SCIENTISTS INVOLVED EVERY YEAR…

The ICGEB Universe

77 Signatory States, 55 Member States, 3 Components: Trieste (Italy), New Delhi (India), Cape Town (South Africa), and a network of **38 Affiliated Centres**

The Problem

THE DIFFUSION OF BIOTECHNOLOGY KNOWLEDGE AND KNOW-HOW ON A GLOBAL BASIS

RAISING OF THE CONCERNS FOR POSSIBLE MISUSE OF BIOLOGICAL SCIENCES BY STATE AND NON-STATE ACTORS

The Challenge

- **IMPLEMENTATION OF ARTICLE X OF THE BWC AND THE CONSEQUENT ADVANTAGES FOR DEVELOPING COUNTRIES**
- **ROLE OF SCIENTISTS TO AVOID MISUSE OF BIOTECHNOLOGY AND THE ESTABLISHMENT OF CODES OF CONDUCT.**

Biological Weapons Convention
Article X

Calls for

- **Peaceful use of Biotechnology**
- **Establishment of international scientific co-operation**

This is also the mandate of ICGEB.

THE INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY

An international organisation dedicated to advanced research and training in molecular biology and biotechnology, with special regard to the needs of the developing world

This Centre promotes the safe use of biotechnology

ICGEB Cape Town, South Africa - Inauguration, 10 September 2007

ABOUT ICGEB

- General Information
- Contact the Centre
- Affiliated Centres
- Member States
- Press Releases
- Vacancies
- What's New?
- Informazioni in italiano

RESEARCH


ICGEB Headquarters


ICGEB Trieste, ITALY


ICGEB New Delhi, INDIA


ICGEB Cape Town, SOUTH AFRICA

TRAINING AND FUNDING

- Fellowships
- ICGEB Research Grants
- Meetings and Conferences

SERVICES

- ICGEBnet Biocomputing
- Biosafety
- Biotechnology Transfer
- The ICGEB Library
- Intranet

Search Entire site

ICGEB - AREA Science Park, Padriciano 99, 34012 Trieste - ITALY. Tel: +39-040-37571; Fax: +39-040-226555

International Centre for Genetic Engineering and Biotechnology

Biosafety Web Pages

"There is a need for further development of internationally agreed principles on risk assessment and management of all aspects of biotechnology, which should build upon those developed at the national level. Only when adequate and transparent safety and border-control procedures are in place will the community at large be able to derive maximum benefit from, and be in a much better position to accept the potential benefits and risks of, biotechnology".

(Agenda 21, 16.29)

About Biosafety

- GMO's Background
- Topics of Concern

Biosafety and the ICGEB

- ICGEB Biosafety Outstation
- Biosafety Unit 2003 Activity Report
- Publications
- What's new on these pag

Biosafety Databases

- Biosafety Bibliographic Database
  - Last updates
  - Statistics
- Risk Assessment Searching Mechanism (RASM)
  - Last updates
  - Statistics
- GMO RES COM

Library

- Official Documents
- Scientific Findings
- International Biosafety Regulations
  - Europe
  - USA
  - Other Countries
- Rio Declaration
- Precautionary Approach
- Agenda 21
- Voluntary Code of Conduct

ICGEB Biosafety Workshops

2007

4 -9 February, Khartoum, Sudan
14-18 May, Ca' Tron (Treviso), Italy
24-28 September, Belo Horizonte, Minas Gerais, Brazil
8-12 October Ca' Tron (Treviso), Italy

2006

6-10 March, Ca' Tron (Treviso), Italy
22-24 March, Peradeniya, Sri Lanka
15-19 May, Florence, Italy

ICGEB Biosafety Newsletters

- ICGEB Biosafety News
  - Subscribe to Biosafety News
  - Last Issue
  - Archives
- Biosafety Data
  - Subscribe to Biosafety Data

Links

- Biosafety and Risk Assessment Web Sites
- United Nations System, International Organizations & Governmental Agencies
- Information Sharing / Available Databases

Search this Site

The ICGEB Biosafety WebPages are enhanced for slow internet connections

ICGEB Biosafety Unit

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Last update: 02/05/07FF

ARTICLE X of the BWC
and the ICGEB STATUTES

The States that are party to this Convention undertake to facilitate and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the use of biological agents for peaceful purposes

The Objectives of the ICGEB are:

a) **To promote international co-operation in developing and applying peaceful uses of genetic engineering and biotechnology, in particular for developing countries**

b) **To assist developing countries in strengthening their scientific and technical capabilities**

ARTICLE X and *ICGEB STATUTES*

Parties to the Convention in a position to do so, shall also co-operate in contributing individually or with other States or International Organizations to the further development and application of scientific discoveries in the field of biology for prevention of diseases for other peaceful purposes.

c) To stimulate and assist activities at Regional and National levels

d) To develop and promote application of Genetic Engineering and Biotechnology for solving problems of development, particularly in developing countries

ARTICLE X and ICGEB STATUTES

This Convention shall be implemented in a manner designed to avoid hampering the economic or technological development of States, or international exchange of biological agents and toxins and equipment for the processing, use or production of biological agents and toxins for peaceful uses, in accordance with the provisions of the Convention

e) To serve as a forum of exchange of information, experience and know-how among scientists and technologists of Member States

f) To utilize the scientific and technological capabilities of developing and developed countries in the field of genetic engineering and biotechnology

g) To act as a Focal Point of a network of Affiliated Research and Development Centres

UN-ICGEB Co-operation Agreement, March 2001

THE UNITED NATIONS AND THE INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY MAY, SUBJECT TO THE DECISIONS OF THEIR COMPETENT BODIES, DECIDE TO CO-OPERATE IN ACTIVITIES RELATED TO THE SUSTAINABLE AND SAFE USE OF GENETIC ENGINEERING AND BIOTECHNOLOGY, AS WELL AS IN THE IMPLEMENTATION OF THE INTERNATIONAL COOPERATION PROGRAMMES FORESEEN BY THE CONVENTION ON BIOLOGICAL DIVERSITY AND ITS CARTAGENA PROTOCOL ON BIOSAFETY AND TO FOSTER INTERNATIONAL COOPERATION IN THE EXCHANGE OF INFORMATION IN THE FIELD OF PEACEFUL USE OF BIOTECHNOLOGY, IN ACCORDANCE WITH THE BIOLOGICAL WEAPONS CONVENTION (ART. VI.2)

UN-ICGEB Co-operation Agreement, March 2001

ICGEB TO ASSIST THE UN SECRETARIAT IN FULFILLING THE MANDATE RECEIVED FROM THE SECURITY COUNCIL TO REINFORCE ETHICAL NORMS AND THE CREATION OF CODES OF CONDUCT FOR SCIENTISTS THROUGH INTERNATIONAL AND NATIONAL SCIENTIFIC SOCIETIES AND INSTITUTIONS THAT TEACH SCIENCES OR ENGINEERING SKILLS RELATED TO WEAPONS TECHNOLOGIES

What Kind of Code?

- **Essential element of scientific deontology, addressed to the individual conscience of the scientist (no juridical implications);**
- **Focus on individual responsibility of scientists and on the principle that ethical values shall overcome hierarchy;**
- **Dimensional aspect: life scientist is in a position to follow the complete procedure related to the potential misuse of the experiment (≠ nuclear)**
- **Not a definition of permissible or forbidden experiments but the concept of acceptable or unacceptable intents of the research;**
- **Not aimed at establishing principles of self-censorhip but example of self-governance by the scientific community.**

A CODE OF CONDUCT FOR SCIENTISTS, IN RELATION TO THE SAFE AND ETHICAL USE OF BIOLOGICAL SCIENCES

Developed by ICGEB Secretariat and Prof. Arturo Falaschi, Former Director-General, ICGEB.

Presented to ICGEB Board of Governors, Oct 2005.
Approved Nov 2006.

General Considerations

- Codes of conduct should
  - Raise awareness of the Biological Weapons Convention
  - Increase the level of responsibility to avoid any misuse of scientific research
  - Ensure due reporting of alleged breaches
- Codes should not entail a violation of Article X of BWC. Instead, it should be the main driving force.
- It is necessary to establish a threshold for acceptable and non-acceptable research.
- There should be three levels of codes
  - Local: operational codes developed by research institutions
  - National: developed by national scientific bodies
  - International: universal code with ethical norms and principles
- While a universally accepted code may be difficult to define, the smallest common denominator should be possible. These are the “building blocks”.

1. Conscience of the Possible Dual Use

Scientists operating in life sciences must be constantly aware of:

- **The extraordinary opportunities made available by the knowledge and the technologies recently developed or foreseeable in the near future.**
- **The possibility of a misuse of these technologies, insofar as the results of any given experimentation might be utilised either for the benefit of health and the environment or for the spread of disease or environmental damage.**
- **The need to recognise that personal benign intent does not justify neglect of the possible hostile utilisation of their scientific endeavour.**
- **The ethical implications of their work and of their duty to society and humankind: it is their moral duty that their activity be only aimed at advancing knowledge and at bringing benefit to humankind and the environment.**

2. Absolute Necessity of Good Practice

- **The use of good and safe laboratory procedures, whether codified by law or by common practice, must also be considered as part of the moral duties of scientists, particularly those involved in the work with pathogenic organisms or with dangerous toxins, so that also the risk of unintentional damage be eliminated.**

3. Demands on the Conscience of Individual Scientists

- **Whenever any suspicion about the possible hostile use of their research arises, the involved scientists must raise the issue at the appropriate level. They should also take into due account the intrinsic continuity of scientific endeavours, whereby also experimentation performed upstream or downstream of a given scientific project may orient it in a very different, and hostile, context and direction.**

- **Scientists with positions of responsibility, whether for oversight of research or evaluation of projects or publications, have the duty, individually and collectively, to assure the knowledge and respect of those principles and precautions by those under their control, supervision or evaluation, so that they become an integral part of the educational curricula and of institutional regulations.**

- **At the beginning of their scientific career, scientists should accordingly take an oath/make a pledge: this action would certainly increase the ethical retention against any unlawful use of the results of their research**

4. Prevalence of Moral Duty of Heirarchy

- **The duty to avoid any possible hostile use of research must take precedence over any other commitment, including professional and militar duties. Such an obligation must be considered as an essential element of general principles of self-governance by scientists.**

5. Need for Education and Public Awareness

- **Scientists must strive to know, diffuse and teach the knowledge of national and international regulations aimed at abolishing the harmful use of biological agents, including, in particular, the convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction.**

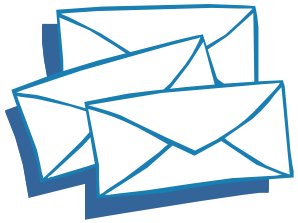
- **Scientists must also favour the raising of public awareness that the production or use of biological weapons should be universally prohibited, prosecuted and punished.**

The pledge against the military use of biological research

"We the undersigned biologists and chemists, oppose the use of our research for military purposes. Rapid advances in biotechnology have catalyzed a growing interest by the military in many countries in chemical and biological weapons and in the possible development of new and novel chemical and warfare agents. We are concerned that this may lead to another arms race. We believe that biomedical research should support rather than threaten life. Therefore, we pledge not to engage knowingly in research and teaching that will further the development of chemical and biological warfare agents."

(Council for Responsible Genetics)

Decio Ripandelli
Director, Administration and External Relations



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