

**Biosafety and Biotechnology
Research & Training Programs at
Gene Research Center,
University of Tsukuba, Japan**

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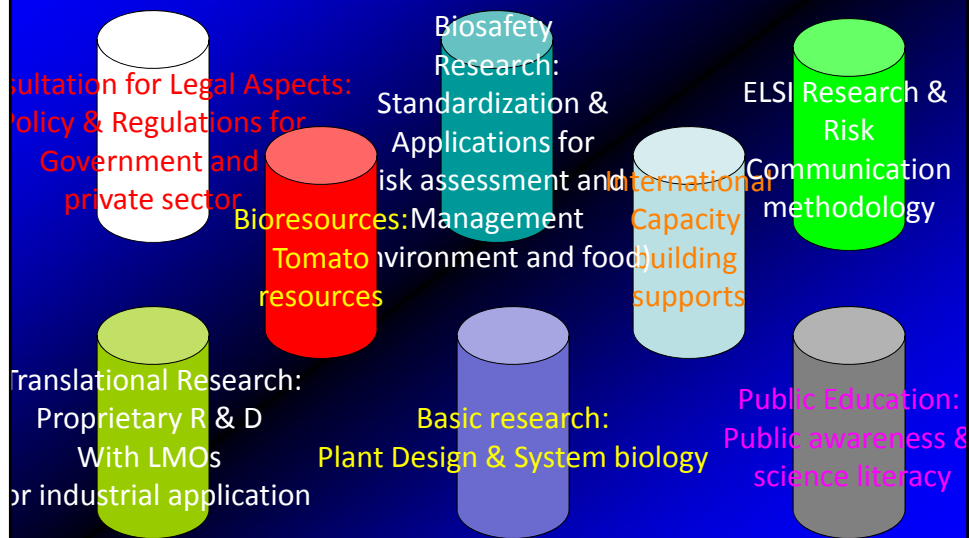
**Gene Research Center at University of Tsukuba
Located at 60 km Northeast from Tokyo**

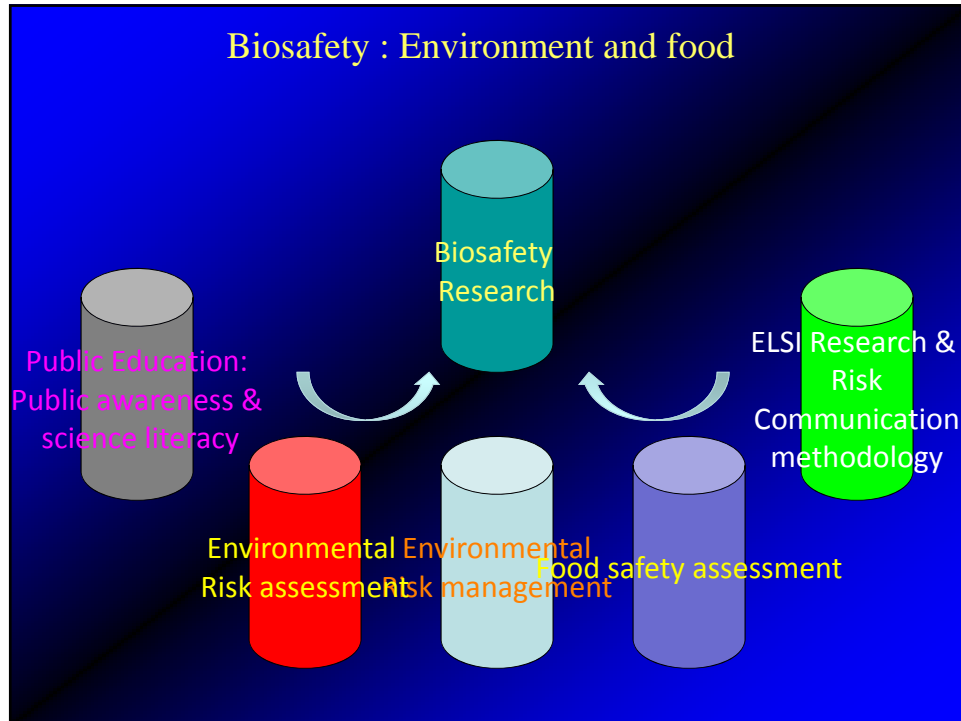
- The principal center for plant biotechnology & biosafety research and associated education under Ministry of Education, Culture, Sports and Science and Technology (MEXT) of Japan (The COE on plant biotech)
- Thirty research groups consisting three hundred user members within the university
- Three alliance centers under the university: animal resources, marine biology and highland/forestry centers
- Strong at biological science and technology

The principal center for plant biosafety research and associated education among universities in Japan

- The chair university among fifty national university on biosafety: networking
- More than twenty years of experience in biosafety training courses at various context
- Certificate issued to foreign participants besides the ordinary graduate degree program
- Overseas on-site programs by bilateral arrangements (Tunisia, Myanmar and Pakistan at present)

Eight Pillars on International Plant Design Organization





Collaborating agencies in biosafety research

- Universities(including foreign ones)
- National Institute of Agrobiological Sciences
- National Institute of Agricultural Environmental Sciences.
- National Institute of Food Sciences
- National Institute of Enviroment
- National Institute of Technology Evaluation
- National Institute of Infectious Diseases
- Japan Intl. Center for Ag. Sciences,
- CGIAR commodity research centers

CPB related Research

- Molecular Biology / Genetic Engineering
- Biological confinement
- Environmental risk assessment practice
- Risk assessment methodology
- Biodiversity assessment
- Risk management systematics
- Risk-benefit communications
- Risk communication methods
- Biosafety capacity building methods

Environmental Biosafety Research

- The leading institution in Japan:
Biological(gene to field), ELSI and PEST
aspects all covered
- Many experiences in safety research
- Field trial approved under MEXT as its first
case in JAPAN in 2005
- First experience in Japan on field trial of
transgenic trees

Scope of Training

I. General and technical basics

- General Biosafety
- Biosafety within general safety issues (lab, worker, chemical, waste, biohazard, radioactive etc)
- Biosafety precautionary principles
- Biotechnology (basic & plant)
- Food issues
- Risk assessment and risk management

Scope of Training

II. Implementation of risk assessment

- Diagnostics / identification of LMOs
- Environmental risk assessment
- Health risk assessment
- Risk-benefit analyses (individualized program)
- Data-management (individualized program)

Scope of Training III. Governance

- Legislation and regulation(individualized)
- Institutional development
- Socio-economic aspects (individualized)
- Ethical aspects / Bioethics
- Technology transfer (individualized)
- Public communication and civil participation
- Capacity building methods

In-house Annual Training Programs

- Several sessions of a half-day module either on basics or governance on biotechnology
- One-week basic course for beginners
- Several workshops for domestic educators
- Intensive workshops for secondary school students
- Specific intensive programs for foreign researchers with extramural funding
(one week up six months, including basic course and specific modules)

Degree-oriented and postdoctoral Programs

- Two graduate school divisions
- Joint programs with graduate schools with MEXT scholarships (limited)
- JSPS Foreign researcher fellowships
- Joint PD and predoctoral program with IAS-UNU
- Sandwich-degree programs (Ronpaku)

Domestic off-campus

- Intensive modules
- Seminars at public

Training Overseas

- Joint workshops by extramural funding
(ASEAN focused)
- Specific country programs such with Myanmar, Tunisia, Vietnam, Pakistan where agreements established. Annually several sessions of workshops, seminars and modules in each country.
- Limited capacity in distance learning
(host country situation does not permit often)

Participation in Cartagena Protocol related Capacity Building

- UNEP/CBD/BS/COP-MOP/2/INF/9*
 - *Previously circulated as UNEP/CBD/BS/LG-CB/2/INF/3. 10 April 2005
- UNEP-GEF collaboration in Myanmar and instrumental liaisons for other countries under transitions