

Certificate of Advanced Studies in



Biosafety and Plant Genetic Resources Management



January to November 2008

Faculty of Sciences, University of Geneva

Partners

Federal Office for the Environment - FOEN
Agroscope Changins-Wädenswil
Faculty of Law, University of Geneva
Interface sciences-société, University of Lausanne

Unil
UNIL | Université de Lausanne



**UNIVERSITÉ
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FORMATION CONTINUE

Presentation

Plant genetic resources (PGR) are the core material from which farmers since the Neolithic revolution have progressively selected and improved the multitude of crop varieties on which we rely today. Much more recently, molecular biologists have developed what is known as green biotechnology, a wide array of technical tools. Among these tools, genetic engineering directly modifies DNA sequences to create genetically modified plants. However, the diversity of plant genetic resources is nowadays threatened by various factors and urgently requires specific management and conservation strategies.

Unique in Europe, this interdisciplinary training provides full theoretical and practical skills in biosafety and plant genetic resources (PGR) management. The training is enriched by the contribution of worldwide specialist (molecular biologist, sociologist, economist, lawyer, and philosopher). Lectures will cover technical, legal and socio-economic aspects, including:

- 1) Biosafety – the wide range of instruments (legal, political, administrative, biological and agronomical) aimed at providing the right level of protection against the possible risks to the environment and human health arising from the production, use, transport and transformation of genetically modified organisms
- 2) Access to PGR, including issues related to intellectual property rights and benefit sharing
- 3) PGR management and conservation of crop diversity

Objectives

- to develop an interdisciplinary approach to biosafety and plant genetic resources management (PGR)
- to give a synthesis of the most recent scientific knowledge in the field of green biotechnology and biosafety
- to understand the various practices of selection developed by small farmers as well as formal agronomic research, and their impact on plant crop diversity
- to identify technical and economic challenges related to the conservation of PGR
- to analyse plant biodiversity conservation and management from a North-South perspective
- to study legal systems, both national and international, that aim to preserve biodiversity, guarantee food security and promote biosafety regulation
- to provide a comprehensive view of socio-economic and ethical issues related to the use of genetically modified organisms and PGR

Target Audience

Professionals from the public/private sector and representatives from non-profit organizations – e.g. scientists, industrialists, legal practitioners, technicians, project managers – with a particular interest in biosafety and/or PGR management. Advanced students can also apply.

Steering Committee

- **Direction**
Prof. J.-D. ROCHAIX, Faculty of Sciences, University of Geneva, director
Mirko SAAM, RIBios - Biosafety Interdisciplinary Network, co-director
- **Members**
Alain KAUFMANN, Interface sciences-société, University of Lausanne
Dr Pia MALNOË, Agroscope Changins-Wädenswil
Prof. Anne PETITPIERRE, Faculty of Law, University of Geneva
Dr Anne-Gabrielle WUST-SAUCY, Federal Office for the Environment (FOEN)
Dr Marc-Antoine FOURNIER, Graduate Institute of Development Studies (IUED) and Swissaid

Features

The course curriculum features nine modules and a thesis work. Each module consists of thematic lectures and discussions and lasts two to three days. An e-learning platform allows students to participate in the courses at home. A five-months period – from July to November 2008 – is dedicated to the thesis work preparation.

Language

Most of the courses will be held in English and a few in French. The documentation will be provided in English.

Educational approach

- **Interdisciplinary:** the contributions of specialists coming from various fields allow participants to get an overview of critical biosafety and PGR management issues
- **Flexible:** an e-learning platform offers the opportunity of gaining the certificate by distance learning
- **Interactive:** workshops, debates/roundtables and exchange of experiences are included in the curriculum
- **Concrete:** the experiences and knowledge shared by a diverse array of lecturers and professionals allow participants to discover the “everyday” practice of biosafety and PGR management

Duration

The whole Certificate will last eleven months (January to November 2008), with the first six months (January to June 2008) dedicated to the courses and the last five months (July to November 2008) to the thesis work. This is a part-time programme, totalling 576 hours, comprising 168 hours of courses, 228 hours of personal work and 180 hours for the thesis work.

Programme

UNIT 1 SCIENTIFIC AND TECHNICAL ASPECTS

- **Module 1 Introduction to biotechnology and plant genetic resources** January 10-11, 2008
This module gives a scientific introduction to biotechnology and genetic engineering especially. The participant will be able to deal with e.g. transgenesis, cloning, tissues cultures, methods. The main issues related to plant genetic resources will be investigated as well.
Dr Pia MALNOË, Agroscope Changins-Wädenswil and Barbara BORDOGNA PETRICCIONE, RIBios – Biosafety Interdisciplinary Network
- **Module 2 Risks related to GMOs and preservation of agrobiodiversity** January 24-25, 2008
Risk assessment methods and risks arising from genetic engineering in food and agriculture will be addressed in the first part of this module. The second part will focus on threats to animal and plant biodiversity as well as the main strategies for biodiversity conservation.
Dr Angelika HILBECK, GMO Environmental Risk Assessment project
- **Module 3 Biotechnology applications and tools for studying and preserving PGR** February 21-22-23, 2008
Cases of biotechnology applications in the fields of agriculture, pharmaceuticals and industry will be described, while the majors tools used to study and conserve plant biodiversity will be examined.
Mirko SAAM and Jonathan KISSLING, RIBios – Biosafety Interdisciplinary Network
- **Discovery-Day 1 GMO detection workshop** March 7, 2008

UNIT 2 LEGAL AND INSTITUTIONAL ASPECTS

- **Module 4 International regulations related to biodiversity, biosafety and PGR** March 13-14, 2008
This module deals with legal aspects of biosafety and biodiversity management, especially international legal agreements such as the Convention on Biodiversity, the Cartagena Protocol and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Commercial treaties with direct relevance to biosafety and biodiversity such as the WTO's SPS and TBT will also be studied.
Dr François PYTHOUD, Swiss Federal Office of Agriculture
- **Module 5 National regulatory frameworks (Swiss, European, American)** April 3-4, 2008
This module will focus on comparative study of national and regional regulatory frameworks (Swiss, European, and American) in the field of biosafety and biodiversity.
Dr Anne-Gabrielle WUST-SAUCY, Swiss Federal Office for the Environment
- **Module 6 Access to genetic resources and benefit sharing, intellectual property rights and liability** April 17-18, 2008
Issues related to intellectual property rights on living material and access to genetic resources and benefit sharing will be considered in this module. Furthermore, the specific problem of liability and redress in connection with GMOs will be presented.
Dr Susette BIBER-KLEMM, University of Basel

UNIT 3 SOCIO-ECONOMIC AND ETHICAL ASPECTS

- **Module 7 Socio-economic aspects of biotechnology and plant genetic resources** May 8-9, 2008
Biotechnologies and seed production markets as well as their production process will be analyzed. A focus on production, selection and conservation of seed at farmer and industrial level will be made.
Ezra RICCI, Lullier School of Engineering
- **Module 8 Impact of biotechnologies on ethics (precautionary principle, world vision) and ethical standpoint on biodiversity** May 29-30, 2008
Precautionary principle, patents on living material, intrinsic value of biodiversity, ethics of research practices and the point of view of various religious traditions will be examined from an ethical perspective.
Dr Andrea ZANINETTI and Dr Mark HUNYADI, RIBios – Biosafety Interdisciplinary Network
- **Module 9 Interdisciplinary approach of risk and expertise – Public participation in science and technology** June 19-20, 2008
Starting from a critical approach of classical risk assessment and management, this module will explore the role of expertise and public participation in designing a more democratic governance for emerging technologies such as biotechnologies.
Alain KAUFMANN, Interface sciences-société, University of Lausanne
- **Discovery-day 2 Station Agroscope Changins-Wädenswil, Valais** June 2008

Practical information

Application

Application form, CV and a cover letter should be submitted before **November 30, 2007** to:

Jonathan KISSLING
RIBios – Biosafety Interdisciplinary Network
C/o IUED, Rue Rothschild 20 – 1211 Geneva 21
Tel: + 41 (0)22 906 59 75
E-mail: jonathan.kissling@iued.unige.ch
For detailed information: www.unige.ch/formcont/biosecurite

Admission

Candidates will be selected on the basis of their application file, taking into account the following requirements:

- A university degree or equivalent and professional experience in a field related to biosafety or PGR management.
- Excellent knowledge of English, spoken and written, and good oral comprehension of French are required.

Diploma awarded

The Certificat de formation continue en biosécurité et gestion des ressources phytogénétiques / Certificate of Advanced Studies in Biosafety and Plant Genetic Resources Management is awarded by the University of Geneva. It is a postgraduate diploma worth 20 ECTS credits. It is obtained after successfully completing the 9 modules and a thesis work.

Tuition fee

- CHF 4'800.- for the whole Certificate
- CHF 700.- per module
- CHF 1'900.- for a thematic unit (3 modules)

The State of Geneva offers a CHF 750.- contribution to tuition fees under certain conditions. For more information, contact before the beginning of the course: Office pour l'orientation, la formation professionnelle et continue www.geneve.ch/ofpc

A few scholarships are also available under certain conditions. For more information, contact: jonathan.kissling@iued.unige.ch

Venue

University of Geneva (modules 1 to 5) and University of Lausanne (modules 6 to 9)

- 2-days modules (Thursday-Friday): 9h00 to 12h30 and 14h00 to 17h30
- except module 3, which is a 3-days module (Thursday-Friday-Saturday): 9h00 to 12h30 and 14h00 to 17h30

General information

Jonathan KISSLING
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www.unige.ch/formcont/biosecurite

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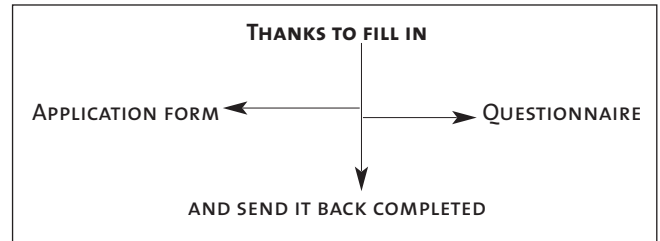


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FORMATION CONTINUE

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Application form to return before October 31 2007 to:

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C/o IUED, Rue Rothschild 20 – 1211 Geneva 21
Tel: + 41 (0)22 906 59 75
E-mail: jonathan.kissling@iued.unige.ch



Please fill in this form in capital letters Please check box

Ms Mr SurnameName
Birth Date (day/month/year)Citizenship
Profession

PROFESSIONAL DATA

Institution
Address
Zip code/City/Country
PhoneFax.....
E-mail

PERSONAL DATA

Address
Zip code/City/Country
PhoneFax.....
E-mail

POSTAL ADDRESS personal professional
(check only one box)

I WOULD LIKE TO REGISTER FOR:

The full course for the **Certificate of Advanced Studies in Biosafety and Plant Genetic Resources Management** and agree to pay the tuition of CHF 4'800.- upon receipt of acceptance

I WOULD LIKE TO REGISTER FOR:

Module 1 Module 2 Module 3 Module 4 Module 5 Module 6
 Module 7 Module 8 Module 9

and agree to pay the tuition of CHF 700.- per module.upon receipt of acceptance

I WOULD LIKE TO REGISTER FOR:

Unit 1 Unit 2 Unit 3

and agree to pay the tuition of CHF 1'900.- per unit upon receipt of acceptance

CANCELLATION FEE

Any withdrawal before the first day of the course incurs a CHF 100.- cancellation charge. On the first day of the course, the full fee is due.

Date:Signature:

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FORMATION CONTINUE

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EDUCATIONAL BACKGROUND

Educational Credentials: Middle School Secondary School University

Other:

Highest Degree Earned:

PAST EXPERIENCE IN CONTINUING EDUCATION

Several times a year Once a year Rarely (less than once a year) Never

OCCUPATION

Type of Professional Activity: Self-employed Private Company Public Corporation Jobless

Company Size - Staff of: <50 pers. <100 pers. <500 pers. <1000 pers. >1000 pers.

Company Ranking: Senior Management Upper Management Middle Management Employee

Position:

Occupation Rate:

HAVE YOU APPLIED FOR THE OFPC "CHÈQUE-FORMATION" FINANCIAL ASSISTANCE SCHEME?
(FOR GENEVA TAXPAYERS ONLY) Yes No

HAVE YOU APPLIED FOR ONE OF OUR SCHOLARSHIP? Yes No

HOW DID YOU HEAR ABOUT THIS COURSE?

Brochure sent to my Company

University of Geneva Continuing Education Program

Newspaper Advertisement? Which Newspaper?

Internet www.unige.ch/formcont

A friend's Recommendation

Brochure sent to my home

Other: