NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Capacity building course Southern Africa region: Synthetic biology – biosafety and contribution to addressing societal challenges

Date: 20-26 September 2015 (6 days)
Venue: North-West University, Potchefstroom, South Africa

Topics include:

- Overview of genomes, genes and gene expression
- Synthetic biology innovations: processes and products
- Laboratory exercise
- Biodiversity, ecosystems and ecological impacts
- Future applications of synthetic biology
- Cultural, social, ethical issues related to emerging biotechnologies including synthetic biology
- Risk assessment and management
- Policy issues, including capacity building and public participation (scientific, enforcement, educational, legal)
- Cartagena Protocol, Nagoya Protocol, WTO and other international agreements

Background

Synthetic biology is a new and emerging field within modern biotechnology that through engineering and *de novo* synthesis of genetic material aims to improve biological systems for human, agricultural and environmental purposes. It is difficult to accurately differentiate SynBio from genetic modifications, however the technological advance of SynBio enables easier, faster and potentially more targeted GMO design with the prospective for crop improvements and more efficient biofuel production, and is therefore considered to have an impact on biological diversity. Much of the risk assessment and safety guidelines developed for GMOs may be applied to SynBio products, but there is significant uncertainty to what extent SynBio processes and products are covered by the international protocols under The Convention on Biological Diversity (i.e. Cartagena Protocol, Nagoya Protocol[1]). An effective implementation of the protocols implies adequate regulatory mechanisms (including national laws), effective administrative procedures, independent research, and a good understanding of biotechnology and biodiversity. The main objective for the regional course is to build crucial regional and institutional capacity that includes fundamental knowledge of the technology, scientific and social-scientific risk-related knowledge, technology potential and contributions to addressing societal challenges. This will support governments and authorities and enable them to build up their own system of regulations and management.

[1] Cartagena Protocol on Biosafety to the Convention on Biological Diversity. Nagoya protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the Convention on Biological Diversity.

About the course
The course will be designed to provide high-level policy makers, regulators, scientists, industry representatives and NGOs/civil society from developing countries with knowledge and training in crucial gene technology biosafety issues, innovation possibilities and sustainable use of genetic resources with particular attention given to synthetic biology.

Eligibility and selection process
Approx. 40 participants will be selected for sponsorships. The sponsorship selection criteria will be based on gender (approx. 50% women), geography and type of position/level (regulator, scientist, professor, NGO, legal). Eligible countries are Eastern and Southern African countries (SADC-region). Priorities will be given to applicants from regions with current involvement in Synthetic Biology at national or international level.

The course application form must be filled out entirely and with as much detail as possible. The applicant must provide information about the type/level of position they are holding and state the basis for their interest in the course. The course will be in English.

Applications close on **30 June 2015.**

Costs and expenses
Full sponsorship will be given to 40 selected applicants. The sponsorship will cover curricular materials, course-associated travel, visa-fees, accommodation and meals.

Organizers
The course is organized by North-West University in Potchefstroom, South Africa, in partnership with the Norwegian research institutes GenØk – Centre for Biosafety and Bioforsk. The course is financed with a grant from the Norwegian Ministry of Foreign Affairs.

How to apply
Please use the online application form available at:
https://docs.google.com/forms/d/1ogw1sCCdJYp4AdF1tQtcjkscXb2VDUi9e52jbDzp9ds/viewform

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