Summary of the contents of the Study Week in Vatican City May 15-19, 2009

- The *Introduction to the Study Week* presents the problem of increasing food insecurity in developing countries, the need for continued improvement of crop plants and agricultural productivity to address the problem, the track record and perspective of genetic engineering (GE) technology, and the roadblock to efficient use by the established concept of 'extreme precautionary regulation'.

- *Contributions from Transgenic Plants* will highlight what important contributions in the areas of tolerance to abiotic stress, resistance to biological stress, improved water use efficiency, improved nutritional quality, inactivation of allergens and reduction of toxins, are already in use or in the R&D pipeline. Following an account of the state-of-the-art of the technology and the world-wide, radical opposition on the use of the technology in agriculture, this session continues with the question of whether or not GE-plants diminish or promote biodiversity and describe what is necessary to achieve sustainable yield, including the contributions from the private sector.

- *In the section on the State of Application of the Technology* concrete examples from Argentina show which products have made it over the hurdles of the regulatory regimes. This session concludes with a paper on the problems of and possible solution in regard to intellectual property rights, and with a discourse on the ethics of the use and non-use of transgenic plants in the context of development.

- *The session on the Potential Impact on Development* will highlight how important the role transgenic plants could be if released from excessive regulation. The question of whether or not there is any scientific basis for an extreme precautionary attitude is analyzed in the session on

- *Putative Risk and Risk Management.* A comparison of the molecular alterations to the genome by natural genetic variation and genetic engineering shows that there *is a priori* little reason to be concerned with genetic engineering of plants. In detailed case studies putative risks to the environment and the consumer are analysed, to explore whether in the history of use there was any case of real concern. This is followed by the lessons from 25 years of use, biosafety studies and regulatory oversight, and by an overview comparing GMO myths with reality.

- *A brief section on Biofuels Must Not Compete With Food* indicates novel problems arising from the concept of biofuel production from agricultural land, already seriously affecting food security and concepts under study aiming at biofuel production from biological materials that will not compete with food sources.

- *A section Hurdles Against Effective Use For The Poor* describes which obstacles under the presently established regulatory regime preventing the use of the technology for public good. The analysis focuses on (a) the political climate around GEs having been spread from Europe around theworld; (b) the legal and trade consequences connected to regulation and political climate; (c) GMO over-regulation making use of GEs for the public sector inaccessible for cost and time reasons; (d) the financial support to professional anti-GE-lobby groups and (e) poor support for agricultural research in general.

More introductory texts from the Proceedings:

Potrykus, I. (2010). "Constraints to biotechnology introduction for poverty alleviation In Press, Corrected Proof." New Biotechnology **27**(5): -- http://www.sciencedirect.com/science/article/B8JG4-50J4MRM-3/2/bedd78fb4e30dd32c48c99d0c31f504a AND http://www.ask-force.org/web/Vatican-PAS-NBT-publ/Potrykus-PAS-Constraints.pdf

More about the background of the Study Week

Arber, W. (2010). "Editorial." New Biotechnology **In Press, Uncorrected Proof**. http://www.sciencedirect.com/science/article/B8JG4-51666JW-3/2/529912d364e4e76d107224da8f5d1cae AND http://www.ask-force.org/web/Vatican-PAS-NBT-publ/Arber-PAS-Editorial.pdf