

## ***Innovation and Technology Transfer for Global Health***

### ***'Bridging the Gap in Global Health Innovation – From Needs to Access'***

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#### **SESSION SUMMARIES – MANAGING INTELLECTUAL PROPERTY FOR HEALTH AND AGRICULTURAL INNOVATION<sup>1</sup>**

*Linda Gonzales chaired this session on global intellectual property (IP) policies, foreign direct investment and the relationship to health and agricultural innovation. The World Trade Organisation's TRIPS Agreement (the Trade Related Aspects of Intellectual Property Rights) was discussed and flexibilities in setting national policy as well as the effect of the agreement on raising the cost of access to technology were noted. The MIHR-PIPRA "Intellectual Property Handbook in Health and Agricultural Innovation" provides a guiding reference for less developed countries (LDCs) in development efforts to enable innovations in agriculture biotechnology to continue to provide products for improved health and well-being.*

#### **The WTO TRIPS Agreement and Public Health: Ms. Jayashree Watal, World Trade Organization**

There has been a lack of definitional agreement of the scope and nature of the flexibility in TRIPS and also uncertainty around the extent to which TRIPS would be interpreted by all WTO members in the same pro-public health way. TRIPS is a guide to good practice. Each country needs to take responsibility for flexibilities in IP law and to take decisions at a national level rather than through the international community. The system need not be used if capacity is produced locally and if there are voluntary licenses.

#### **TRIPS. Did the Sky Fall?: Prof. Keith Maskus, University of Colorado**

The purpose of TRIPS was to improve prospects for innovation, to expand information flows into developing countries and to encourage technology transfer. There is an explicit obligation placed on developed countries to provide mechanisms under which their firms will transfer technologies to less developed countries (66(2)). Problems may emerge when IP protection is increased, such as biasing markets in the presence of weak competition and enabling monopolies to block patents and restrict innovation, raising the costs of inputs and raising the cost of access to technology.

However, it is difficult to isolate the impact of IP reforms where there are many factors related to technological change and innovation. It is necessary to take country-specific circumstances into consideration and to look at developments over a period of time that is longer than the TRIPS Agreement allows. The body of evidence suggests that IP reforms have improved prospects for collaborative intellectual property management across borders and for achieving effective contracts. In addition, the TRIPS Agreement provides substantial flexibility in terms of allowing countries to set standards and IP reforms.

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***IP and Agricultural Innovation: Prof. Magdy Madkour, Egypt***

The Agricultural Genetic Engineering Research Institute (AGERI) aims to promote agricultural stability through biotechnology products through commercialising its research. Modern technologies, especially biotechnology, can contribute to alleviating the difficulties in meeting the agricultural needs of a growing population in a country with a limited arable land base and a sole source of water supply.

Increased awareness of IP law in scientific research and at a policy level are needed to encourage effective capacity building in Egypt. AGERI has set up a special services unit to enable it to handle IP and technology transfer. AGERI's collaborations across the private and public sector have enabled commercialisation and have yielded several patents. The partnerships have also led to progress in attitudes towards the use of biotechnology to enhance agricultural products.

***IP, Pharmaceuticals and Foreign Direct Investment: Dr. Douglas Lippoldt, OECD***

Although there is a limited time period to analyse, there is tangible evidence that the TRIPS agreement, which was drafted with the intention of promotion of technological innovation and transfer in a manner conducive to social and economic welfare, has led to positive results.

There has been an increase in the index of patent rights and a near-equivalent increase in research and development (R&D) expenditure in both OECD and Developing countries since TRIPS was signed, although there has been variation particularly across developing countries. There has also been an increase in flows of foreign direct investment (FDI). There seems to be a positive relationship between the ability of pharmaceutical firms to capitalise on their innovation and protect it using IP and their willingness to trade, invest or to transfer technology in to new markets. TRIPS-plus may increase the attractiveness of a country to investors.

***Case study: ICMR: Dr. K. Satyanarayana, Indian Council for Medical Research***

The Indian Council for Medical Research (ICMR) has worked through public-private partnerships and through reformulating policies for IP to progress the long-term goals of the ICMR. These include strengthening R&D, developing capabilities for regulation and ethical conduct of clinical trials, securing the market for new medicines, encouraging industry to be more engaged in neglected diseases, and gaining donor support. A partnership with IAVI showed how strategic partnerships can accelerate the product development process, capacity building and the transfer of technology. ICMR worked to sensitise the government on IP issues and to reform policy to ensure that the right mix of ownership, access and exclusivity was agreed so that project goals could be achieved.

Product innovation and introduction must be complemented by policy and financial support for integration into health systems. Government engagement is essential for the clinical and ethical testing of new products, decisions about their introductions and use and in encouraging civil society participation. Finally, independent evaluation and monitoring is essential.

***IP, Innovation and Access – New Insights from the MIHR/PIpra Handbook: Dr. Anatole Krattiger, Arizona State University***

The overlap between research, development, production and delivery means that there is a great challenge in making IP deals upfront because they have many

repercussions several years down the line. One of the challenges is to consider the whole process before knowing all the parameters that exist around access.

The MIHR/PIPRA IP Handbook focuses on IP and strategies for access and acts as a plan for charting the management of innovations and ownership, which are very important to optimise outputs. IP is one of the fundamental determinants of innovation and is a means of transferring value between partners. These sources of value differ between the corporate/industry model and the PDPs. Although the tools are essentially the same, the criteria on how to make decisions are very different. It is important for PDPs to try to prepare for areas that potentially may be difficult in the future, such as issues around branding of products and the need for trademarks to enable deals to be made both upstream and downstream.

### ***Discussion***

With regard to drug pricing models and tiered pricing in particular, there is a need for “middle markets” between low-volume/high-price and high-volume/low-price market segments. Participants noted the importance of recognising the role of other factors such as educational progress and infrastructure in addition to the patent system.

The role of IP protection and TRIPS was discussed further in relation to their impacts on access to medicines. There might be scope for harmonising IP enforcement beyond the current agreement. IP protection plays a significant role in enabling technology transfer and attracting investment but there is a trade-off with the possible increase in cost of access to technology. Singapore and India are examples of good practice in encouraging FDI and innovation and conference participants suggested the establishment of a working group to explore and share good practice in national policy making. Plant-derived vaccines as a technology are an alternative to the main commercial paradigm for innovation but present a number of technical and political challenges.