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CENTRE FOR INTELLECTUAL
PROPERTY POLICY

CENTRE DES POLITIQUES EN
PROPRIÉTÉ INTELLECTUELLE

**WORKSHOP ON
INTELLECTUAL PROPERTY, BIOTECHNOLOGY
CAPACITY AND DEVELOPMENT
SEPTEMBER 25-27, 2006**

Workshop Report

Buenos Aires, Argentina, September 25-27, 2006

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1. Workshop Background

As part of its ongoing research into intellectual property in biotechnology innovation and delivery systems the Centre for Intellectual Property Policy (CIPP) at McGill University, together with its co-host, the Argentinian Agencia Nacional de Promoción Científica y Tecnológica, convened a workshop in Buenos Aires on September 25 and 26, 2006. The workshop gathered policy-makers, non-governmental organizations, industry and academics to examine how developing countries can best configure their intellectual property systems to attract and retain scientists and promote investment in local research and development.

The Buenos Aires workshop follows up on one held in Montreal in September 2005. The Montreal workshop brought policy-makers from North, Central and South America together to discuss biotechnology IP and lead to the creation of the Latin American Consortium on Biotechnological Intellectual Property. The consortium is a means through which the CIPP and senior government officials in science funding agencies and government in Latin America can collaborate on capacity building and the development of model agreements.

The Buenos Aires workshop focused specifically on policy options developing countries might use to enhance their scientific infrastructure in the biotechnology field. These options include novel mechanisms to make venture capital available to start-up technology firms, collaborative science mechanisms and novel reward systems for innovation. In addition, the workshop explored cutting edge social science research on innovation systems and IP. The workshop was followed by a meeting of the Latin American Consortium on Biotechnological Intellectual Property to develop a plan of action for 2007 and beyond.

2. Workshop Panels

The workshop covered a variety of approaches that countries in the Latin American region are or could use to build scientific infrastructure and biotechnology capacity. The workshop began with presentations on what countries in the region are currently doing to encourage research and development in biotechnology. The workshop then moved to models that developing countries, including those in Latin America, could consider to move their scientific policy agendas forward. Discussion was structured around five panel presentations. Each panel consisted of two presenters from academia or non-state actors and one policy commentator from Latin America. An active discussion followed each panel presentation.

Country reports on biotechnology innovation

The workshop began with reports on IP and scientific innovation policies in each of Argentina, Brazil, Canada, Cuba, Ecuador and Venezuela. While presenters reported that Latin American innovation levels are on the rise, there remains an urgent need to develop further capacity among universities, government and industry on strategies to obtain and use IP rights over biotechnological innovation. A similar need exists to ensure the protection of biodiversity and traditional knowledge. Several country commentators noted that local innovators were more likely to file patent applications abroad rather than in their home jurisdiction.

The presentations reported on successful models to advance research in the region. One such example is a collaboration between several Latin American countries, Spain and Portugal that led to the successful development of a kit for the rapid detection of chronic Chagas' disease. This kit is as simple to use as many commercial pregnancy tests and is almost 100% accurate. This collaboration demonstrates that new models and partnerships can be used to address local health needs (Chagas' disease is considered to be a 'neglected disease'). However, one participant in the discussions worried that the exclusive licensing of the kit to a US pharmaceutical company (it is protected by trade

secrets, not patents) may result in a distribution that is not be as wide as may be required . Other participants wondered whether, because the kit's development was publicly funded, it should be available for free or at cost to all users. Despite these concerns, the kit seems to be distributed in the region at a reasonable price.

Venezuela has been particularly active in providing funding to research and training projects (such as the UNU-BIOLAC training programme¹) as well as infrastructure to support science laboratories at research centres. Cuba, on the other hand, has invested significantly in developing its technology transfer capacity. Cuba promotes technology transfer to other developing countries on a cost-recovery basis while it charges developed country counterparts commercial rates. Through this means, Cuba has, for example, licensed a Hepatitis B and C vaccine to other countries. Cuba has noted the need to further develop its capacity to enter into strategic alliance agreements with companies and research institutes in developed countries.

The presenters from both Cuba and Argentina discussed the importance of implementing clear IP policies in order to attract investment. Nevertheless, the two countries diverge significantly in the particular IP policies they have implemented. In Cuba, all inventions belong to the State and are freely available to all Cubans. On the other hand, Argentina places great importance on strengthening its patent system to attract private investment in innovation and to facilitate technology transfer. The country has one of the highest levels of biotechnological development in the Latin American region and does not lag far behind Canada in this regard. Many workshop participants worried about Argentina's policy of enhancing patent rights. They argued that the country should be wary of following US policies on patenting and technology transfer as these policies do not translate well to countries with a different capital, university and industrial structure than the US.

¹ UNU-BIOLAC, a research and training programme of the United Nations University, was established in Caracas in 1988 with core funding from the Government of Venezuela. The mission of UNU-BIOLAC is to promote the use of biotechnology for the sustainable development of Latin American and Caribbean

Ecuador, arguably the least developed of the Latin American countries in the biotechnology field, also reports a slight increase in its innovation levels since 2005. The country now benefits from about 30 biotechnological innovation projects. Most of these projects are managed out of the country's universities, although the government is attempting to further relationships between the public and private sectors. The country possesses a large amount of biodiversity and traditional knowledge but has yet to fully protect or exploit those resources. Ecuador had recently suspended bilateral trade negotiations with Europe due largely to what Ecuador perceives as European insistence that Ecuador give up much of its control over its biodiversity.

According to the OECD, Canada lags behind other developed countries in terms of encouraging innovation. Given this, it shares some concerns with developing countries. Canada has focused its efforts on creating novel funding structures to advance its innovation goals. These structures aim to enhance research collaboration and knowledge mobilization through the creation of networks (e.g. the Networks of Centres of Excellence (NCEs) and Genome Canada), scientific infrastructure (e.g., through the Canadian Foundation for Innovation) and retention and recruitment of highly qualified personnel (through the Canada Research Chair programme). So far, there is little positive evidence that these structures are achieving their goals. This lack of success to date can be attributed in part to the coordination problems caused by the division of responsibility for science and technology between Canada's Federal and Provincial Governments. Further difficulties are caused by the frequently diverging goals of promoting innovation and promoting access to health care. Nevertheless, there are lessons to be learned from the Canadian experience, particularly, the need for a better management of IP strategies and a vision of the purpose of commercialization strategies around IP (e.g. licensing vs spin-off).

Discussion following the presentation of the country reports focused on the impact of trade negotiations on regional research and development. Many participants worried that

countries through building capacities, creating knowledge, and achieving problem-oriented research in areas that are of major concern to the region.

higher IP standards would limit access to important technologies in the Latin American region. Bilateral agreements between countries in Latin America and developed nations pose particular concern as they often limit the ability of Latin American countries to modulate their IP policy to their own needs. The growing importance of both China and India in biotechnological innovation is another cause for concern in the region. Participants felt that Latin American countries should respond to these potential competitors through increased cooperation.

Overall, participants noted that priorities within Latin America include the creation of additional capacity building opportunities for researchers, industry and government; increasing the number of scientists and technicians; establishing international research networks and strategic alliances; and protecting the economic benefits arising from the region's biodiversity. Participants also concluded that the region will need to increase quality control in its laboratories and industries to further co-operative research and industrial ventures with developed countries..

Panel 1 - Ways to encourage private and public funding of research

The workshop's first panel examined models for stimulating innovation while improving or securing access to new technologies. In particular, the panel discussed mechanisms to enhance both private sector and public sector funding of biotechnological research in developing countries and in disadvantaged communities. The panel explored informal and market mechanisms that can lead to the sustainability of a research infrastructure and culture in these countries and communities. The first panelist, James Love of CPTech, argued that an Innovation Prize Fund for pharmaceuticals would provide a better incentive to innovate than does the current patent system while also assuring better access. The second panelist, Eduardo Soares of the Biominas Foundation, presented Brazil's novel funding mechanisms for biotechnology innovation.

In his presentation, Love outlined the structure of a proposed Innovation Prize Fund. One example of such a fund is the proposed Medical Innovation Prize Fund Bill (HR 417 – 109th Congress) submitted to the US Congress in 2005. The bill aims at securing annual

funding of 0.5% of the United States' GDP – approximately \$60 billion – to encourage the development of new medicines. The fund would do so by rewarding innovators on the basis of the measurable impact of their inventions on the health of targeting populations. The fund's size would need to be sufficiently large to lure investments.

The Medical Innovation Prize Fund Bill would reward provide an annual return based on the benefit that the innovation has on the quality of health status (measured in Quality Adjusted Life Years or QALY) in each of the 10 years measured. In return for accepting a payment out of the fund, the innovator would need to agree to allow anyone to use and sell the innovation, opening the door to competition from generic drug companies.

As this method of rewarding innovation is independent of capacity to pay, companies will do as well improving the life of the poor than of the rich. Because health interventions for the rich tend to be more expensive – they suffer less from illnesses due to lack of funds – it may make more financial sense for a company to invest in lower-cost interventions for the poor than higher-cost interventions for the rich. This structure also reduces the incentive to develop so-called 'me-too' drugs as the QALY associated with a marginal improvement in medications will be lower than a drug addressing an unmet health need. The draft legislation currently provides that certain percentages of the fund be set-aside to specifically encourage investment in global neglected diseases (4%), orphan drugs (10%), global infectious diseases and other global public health priorities (4%). Love pointed out, however, that a mechanism is still needed to reward second medical use for a known drug within the system. Love also suggested that some reward should be offered to those who pool technologies together in such a way as to improve health outcomes.

Workshop participants examined the reward fund proposal carefully. Some participants raised the question of how the fund proposal would allocate liability for negative side-effects arising from drugs introduced through the system. Given that the proposal opened the marketplace to generic competitors, who among the innovator and these generic manufacturers should be held liable for potential side-effects? Other participants noted that the proposal only addressed applied research and did not provide an incentive for

basic research. Given that basic research is needed to conduct applied research, these participants wondered whether the reward fund provided enough of an incentive to innovate throughout the research cycle.

During his presentation, Eduardo Soares discussed the Brazilian approach to encouraging research and development into neglected diseases. Originally, Brazil relied almost exclusively on public research funding to conduct biotechnological research. However, over the last few years, the country has concentrated on bringing together both public and private financing for research in order to complete and make efficient its funding model for innovation. To reach this aim, Brazil recently created new funds to encourage cooperation between universities and industry:

- INOVAR – launched in May 2000 by FINEP, a Brazilian Research and Projects Financing Agency, to provide financing, principally venture capital, to small and medium-size technology companies;
- PIPE (in the State of São Paulo); and,
- PAPPE (the national Technological Innovation in Small Businesses Programme) which aims at supporting innovative research on important problems in science and technology carried out by small businesses that have high potential for commercial or social return.

Finally, the Brazilian government promulgated a new Technology Innovation Law (similar to the US Bayh-Dole Act) in 2004 to promote technology transfer and partnership arrangements between universities, researchers and companies to encourage the development of new products and processes.

Lino Baranao, the policy-maker discussant, applauded the Brazilian strategy for promoting competitiveness among small businesses. He noted, however, that , the Brazil Technology Innovation Law could not address the problem of neglected diseases by itself. He insisted that South American countries need to undergo a cultural change within their scientific communities. He stated that there is, at present, a large divergence of attitude between researchers and industry concerning the purposes of scientific research.

While University and other public sector researchers concentrate on discovery in advancement of science, industry focuses on developing marketable innovations. There is a crucial need to reconcile these two objectives if South America is to benefit from biotechnology. Funding, such as the prize fund proposed by Love, could constitute a first step toward the attainment of this objective. This funding would, however, have to be coupled with an adequate legal framework to ensure both research and innovation. Risk capital strategies and private and public interactions still have to be developed. Brazil's experience with PIPE and PAPPE may point the way.

Baranao insisted on the need for South American countries, particularly Argentina, to develop technology-based businesses through incentives to small biotech companies. These businesses will bring more than traditional technology transfer in that they create new jobs at both the professional and non-professional level. His agency, the Agency of Science and Technology Promotion, created two funds, one to promote public and the other private innovation in Argentina. Grants are targeted at start-up companies and to cover the costs of patent applications. .

Panel 2 – Is development best facilitated nationally or through regional cooperation and harmonization?

This panel investigated whether regional or international harmonization of IP was in the best interests of developing countries. Despite the national nature of IP laws, trade agreements have increasingly attempted to impose minimum IP standards on member countries.

Richard Gold began the panel with an overview of the origin and goal for the Latin American Consortium on Biotechnological Intellectual Property. This consortium of Latin American policy-makers was formed in Montreal in September 2005 following a workshop organized by the CIPP. The initial consortium members included representatives from Argentina, Brazil, Cuba and Peru, with Venezuela joining later. This group formed the consortium to facilitate regional cooperation in biotechnological research by developing training programmes and model agreements for inter-institutional

research. While Latin America possesses several important advantages in the area of biotechnology (for example, a large biodiversity, several strong research centers, peaceful relations between countries and similar approaches to the regulation of biosafety and biodiversity) the region suffers from a lack of skilled managers and of the financial resources necessary to develop innovation. One of the problems in the region is both the over and under-protection of IP. IP is under-protected to the extent that the region lacks skilled managers to identify locally developed technology that, when patented, could generate revenue. It is over-protected in that institutions in the region have a tendency to not share innovation with other similar institutions, thus preventing opportunities for cooperative projects for mutual benefit.

Nancy Johnson, presenting on behalf of Carlos Braga, John Daly and herself, argued that innovating countries seek to harmonize IP laws not for the public good but for internal commercial reasons. The general perception is that harmonization benefits developed countries far more than developing countries as higher IP protection means a greater transfer of wealth from the developing world to businesses in developed countries. Despite this appearance, however, developing countries do derive some benefit as well. For example, developing countries can benefit from increased standards in developing country patent offices to learn best practices. Harmonization also helps to attract biotechnological investment into developing countries. Finally, harmonization may provide an incentive to innovators in developing countries to commercialize biotechnology and to seek wider markets for their innovations. Whether these benefits are sufficient to compensate developing countries for the wealth transfer involved with harmonization is an open question. In any case, even if its advantages outweigh its disadvantages, harmonization would at best play only a minor role in the important job of institution building that needs to be done.

This is where regional cooperation comes into play. When developing countries cooperate at a regional level, they can leverage their resources for the benefit of all. For example, countries in a region can pool their human and financial resources in order to increase the efficiency of their patent offices. Individually, developing countries have

limited resources to commit to the infrastructure of establishing and maintaining a patent office. By cooperating, they can more effectively examine and grant patents without redundancy at a lower cost. Such forms of regional cooperation would provide foreign inventors significant advantages, most notably an increased ease and lower cost of obtaining patent coverage in several countries at once.

To bring these advantages to their own companies, countries in the region will need to invest in the skills and infrastructure necessary to ensure that local inventors and investors conduct biotechnological research and use the patent system. In this way, they will similarly benefit from the higher standards and efficiency of the patent office.

Annalisa Primi of the United Nations Economic Commission for Latin America and the Caribbean commented on the two presentations. She stated that it was important that, before engaging in bilateral trade agreements with developed countries, Latin American nations identify their own needs with respect to innovation and IP. If they do not do this, she warned, these countries will be pressured to accept higher levels of IP protection than is appropriate for them.

Workshop participants raised a number of points following the panel. Jamie Love pointed out that some critics of the way that bilateral agreements are negotiated complain that developing countries are being forced to meet what they perceive as strong US IP standards. In fact, he pointed out, the US IPRs system is, in some cases, weaker than that in Europe. He suggested that even without the world's highest IP standards, the US was able to achieve the highest R&D rate in the world. This indicated that IP rights are not the only factor leading to investment. Most participants not only agreed with this comment, but some extended the point to suggest that capacity building was as important as IP to attract investment. IP rights should be seen, most participants concluded, as one tool among several to achieve scientific capacity. South American countries should therefore consider how best to deploy their IP systems, including when and how to patent and when to publish an invention.

Panel 3 – Managing bilateralism and multilateralism to achieve IP policy objectives

Countries or regions wishing to develop innovative ways of creating a scientific infrastructure are constrained by both international legal rules and the exercise of power by economically strong nations and regions. This panel explored strategies for countries and regions to manage those constraints.

Keith Aoki started the panel by discussing the advantages and disadvantages of bilateralism and multilateralism for developing countries. To illustrate his arguments, he focused on the right of farmers to freely use, save and exchange seeds. The context for the debate surrounding Plant Genetic Resources (PGRs) involves a complex, overlapping and confusing set of international agreements including TRIPs and equity/conservation regimes such as the International Treaty for Plant Genetic Resources (ITPGR) and the Convention on Biological Diversity (CBD). Until the 1980s, the international community regarded PGRs as part of humanity's common heritage. Today, international law treats them as "sovereign national property". The concept of "common heritage" worked while it was seen as facilitating the free flow of germplasm across borders. This changed once developing countries started seeking protection for their farmers and plant breeders. They did so by replacing the common heritage concept by one of state sovereignty. According to Aoki, this new concept and the multitude of rights it created led to an anti-commons problem since so many different nations claimed the right to restrict access to PGRs. The result of this multiplicity of rights was to chill and diminish access to PGRs.

Aoki suggested that one way to work through the complexity generated by the multiplicity of international and bilateral agreements and to solve the anti-commons problem is to introduce an open licensing system. This system would be similar to the General Public License (GPL) system used in the software industry. GPLs use a "viral" approach to ensure free access to both software and any improvements to that software. They do this by requiring anyone who builds improvements on GPL-licensed software to license his or her own software on the same terms.

Aoki suggested that the concept of GPL can be applied equally well to patented seeds. While IP rights may impose initial limits on access, in both the software and seed cases, open licensing can ensure that those who need the technology can use it. He suggested that a GPL for PGRs be based on the idea that farmers are both users and developers of different types of information technology. New plant varieties could be made available to farmers and plant breeders using a GPL-style license that has the same “viral” effect it does with software in that any subsequent modification would also be accessible under the GPL terms. To achieve this, the GPL-like license over plant varieties would need to explicitly and contractually require the receiver of plant materials to place no downstream restrictions on the rights of others to experiment, innovate, share or exchange his or her PGR. Take, for example, an originating country that controls access to its PGRs. In return for allowing a firm to take a sample of the PGR, the country would require the firm to agree to disclose the origins of any newly developed seed in any of its patent application, and further, to agree not to claim any ownership interest in the plant’s underlying genetic information.

One of the advantages of using GPLs is that farmers would not be limited to reusing their seeds for research purposes only. In addition, since GPLs encourage simultaneous use of PGRs, they increase the likelihood of better quality plants and more improvement. On the other hand, it may prove difficult to apply GPLs to PGRs given difficulties in creating and managing user communities as well as coordinating the various national governments that would need to participate in the scheme.

The policy-maker discussant, Javier Verastegui, agreed that GPLs could offer a useful way to balance innovation and the protection of PGRs. Nevertheless, he worried that differential access to basic science between developed and developing countries could undermine the regime. Developed countries have greater opportunities to develop new products based on PGRs than do developing countries. Developing countries lack, for example, capacity in both science and management. Before implementing any system based on GPLs, therefore, Verastegui suggested that greater resources be invested in increasing skills among developing nations.

Maristela Basso, in her presentation, argued that bilateral agreements represent a danger for Latin American countries. These agreements set new and higher IP standards for pharmaceutical products (for example, with respect to data protection, patent term extension and compulsory licenses) than does the TRIPs Agreement. Basso nevertheless suggested that it possible to combine multilateral, bilateral and regional agreements in a manner that benefits Latin America. To do so, however, requires dialogue rather than coercion and a new approach to international negotiations under which less powerful countries still maintain a real ability to negotiate IP clauses.

Verastegui, commenting on Basso's arguments, agreed that so far, Latin America has suffered when bilateral trade agreements call for greater IP protection than is required by TRIPs. He was not optimistic, however, that much could be done to redress this problem except to build greater capacity in Latin American countries.

Panel 4 – Enhancing business capability in developing countries

A central problem in building a technological base for biotechnology research and development is the lack of skilled managers, venture capital and markets. This panel explored ways to assist developing countries and disadvantaged communities to build this capacity.

Michael Lounsbury drew on the experience of the US nanotechnology industry to provide a model of how developing countries can develop their biotechnology sectors. The nanotechnology sector is presently characterized by limited clustering and dominated by corporate actors. Industry has been active in submitting patent applications even over early-stage research. It is very difficult to predict the number of patents that will eventually be granted and whether these patents are likely to lead to fragmentation (or anti-commons) problems. One can conclude, however, that given the large number of patent field categories covered by nanotechnology, patent offices will find it difficult to sort through these applications. In addition, patent offices do not readily possess the expertise needed to evaluate these applications.

Given this experience, developing countries wishing to develop capacity in a new technology must first clearly set out their goals. They will also need to concentrate on building capacity within government institutions and the private sector to handle the technology. In addition, they will need to provide incentives to researchers to commercialize their inventions.

The second presenter, Dimitri Fraeys de Veubeke of Valorisation-Recherche Québec (VRQ) discussed the role of public funding institutions to encourage local technology development. The VRQ is a funding institution established by the province of Quebec to encourage universities to carry out technological transfer and commercialize research results. Its aim is to encourage universities to group together in order to form a critical mass that is large enough to fund the commercialization of university research. The VRQ facilitates technology transfer by assessing the commercial value of new technologies and funding further development.

Fabricio Nunez, in his comment, stressed that a successful capacity building strategy necessarily involves the creation of properly fashioned and flexible institutions. He warned that, before creating any institution, countries need to think about transaction costs and geography to ensure that industry will develop smoothly.

Panel 5 – Alternative solutions to intellectual property management

Several initiatives suggest innovative ways to either use IP or to build incentive mechanisms that exist outside IP regimes in the biotechnology field. This panel explored solutions that offer the most promise to developing countries.

The first presenter, Alan Bennett, described the Public Intellectual Property Resource for Agriculture (PIPRA) project. PIPRA seeks to overcome IP fragmentation in the agricultural field by bringing together public sector institutions holding IP in agricultural biotechnology. PIPRA provides those wishing to conduct research aimed at developing world agricultural needs with one-stop shopping for IP rights, thus decreasing transaction

costs. In addition, PIPRA offers IP expertise and a legal support network to its members, acts as IP information clearinghouse, offers project analysis and promotes IP management best practices and capacity enhancement.

Amy Kapczynski, the panel's second speaker, proposed a strategy aimed at increasing freedom to use biotech innovation, avoiding anti-commons problems, and avoiding obstacles caused by free trade agreements. She concentrated on the United States' academic sector but suggested that the same approach could be extended to other countries. Drawing on what she called "the self-renewing commons paradigm", Kapczynski suggested the use of an open licensing model for publicly funded inventions. Her proposal calls for the creation of guidelines that require universities to license out university inventions to the private and public sectors only through an open license that provides free use of the inventions on condition that any further invention is also licensed out on similar terms. Kapczynski's model is called the "equitable access license" [EAL]. It applies to the biomedical field and is particularly designed for public institutions that are legally permitted to take out patents on their research outputs and who generally have partnership arrangements with the private sector to finance their work. Nevertheless, these institutions wish to promote access to pharmaceutical and other health-related end products that they develop. Generally, the model requires that, when a university and a drug company sign a license, they agree to permit anyone to supply any resulting end product in low- and middle-income countries, retaining the high income country market to the private actor.

In the last presentation of this panel, James Simon examined how patent pools may work to overcome IP fragmentation problems. In doing so, he drew upon his experience with the SARS virus patent pool. Simon explained that SARS IP rights are presently a source of considerable uncertainty for all stakeholders, including patent owners and consumers. This uncertainty stems from the simultaneity of the sequencing of the virus by the different groups that may lead to costly interference proceedings. Patent pools could actually represent an efficient manner of dealing with patent right fragmentation. These pools are formed when owners of complementary patents, all of which are necessary to

sell a particular product, aggregate their patents and license them as a group to third parties. This mechanism (1) reduces administrative costs since all patents in a pool are licensed simultaneously from one entity and (2) decreases the risk that an essential patent is offered for license either at exorbitant rates or exclusively. Simon considers the SARS situation is ideal for pooling because of its relative simplicity particularly because the patent applications are at a similar, early stage of prosecution. This means that formation of a pool is not complicated by these patent applications being entangled in many third-party agreements and because, at this time, only four parties are currently known to hold the key patent applications that would form part of the pool. So far, efforts have been initiated in the United States in to determine how such a pool might be formed and made to comply with regulations.

The policy-maker discussant for this panel, Emilia Lara Diaz, stressed the importance of promoting technology transfer in a manner that promotes local innovation. She highlighted the importance of patent offices in providing well rounded services to clients in addition to providing patent examination. In her view, we usually only consider an invention's economic value without directly attempting to evaluate its social utility. Patent examiners play a crucial role in granting patents according to patent criteria and so, she argued, it is important to provide them with appropriate training to ensure that patents are also granted in the social interest. Presently, patent examiners do not have the training required to evaluate wide and complicated patent applications. Diaz suggests that we place more importance on examining how patents may contribute to the national interest rather than on international pressure to comply with certain IP rules.

Participants had an active discussion following this panel. Participants raised many questions about the open licensing model proposed by Kapczynski and the patent pool model suggested by Simon. Kapczynski noted that one advantage of her open licensing model over traditional licensing practices was that the latter was more likely to lead to the imposition of excessive fees on universities. One participant asked whether patent pools could be considered as anti-competitive. According to Simon, there are situations where this could occur, for example, when a license to the pool is exclusive to the pool's

membership or where there are obligations not to compete. Otherwise, patent pools comply with competition laws..

At the end of the workshop, participants agreed that countries need to be more proactive in determining the types of IP policies that best meet their needs. This entails evaluating their own strengths, looking for partnerships with other countries and concentrating on infrastructure and skill development before revamping IP laws and technology-transfer practices. Further, novel financing mechanisms must be adapted to the needs of each country and region. The Latin American Consortium on Biotechnological Intellectual Property could help coordinate efforts in this area.

Appendix 1 AGENDA

Day 1 – September 25

8:45 Welcome and Introductions

9:15 IPMG Overview

Speaker: Richard Gold

9:55 Country reports focused on biotechnology innovation, emphasizing examples of infrastructure development and/or successful co-operation between, for example, industry/public research and/or international co-operation.

Chair: Fabricio Nunez

Speakers: José Luis Ramirez (Venezuela)
José Luis Diaz Pérez (Argentina)
Emilia Lara Díaz (Cuba)
Rodrigo F. Yepez (Ecuador)
Tania Bubela (Canada)

11:15 Coffee break

11:30 Country reports *continued*

13:00 Lunch break

14:30 ***Panel 1 – Ways to encourage private and public funding of research***

Chair: Ghislaine Cleret de Langavant

Speakers: James Love
Eduardo Soares

Policy maker discussant: Lino Baranao

16:00 Coffee break

16:30 ***Panel 2 – Is development best facilitated nationally or through regional cooperation and harmonization?***

Chair: Tania Bubela

Speakers: Richard Gold
Nancy Johnson

Policy maker discussant: Annalisa Primi

18:00 Break

19:00 Dinner
Claridge Hotel's Restaurant (Private Salon)

Day 2 – September 26

9:00 ***Panel 3– Managing bilateralism and multilateralism to achieve IP policy objectives***

Chair: Jean-Frédéric Morin
Speakers: Keith Aoki
Maristela Basso
Policy maker discussant: Javier Verastegui Lazo

10:30 Coffee break

11:00 ***Panel 4– Enhancing business capability in developing countries/disadvantaged communities***

Chair: Graciela de Ortuzar
Speakers: Dimitri Fraeys de Veubeke
Michael Lounsbury
Policy maker discussant: Fabricio Nunez

12:30 Lunch

13:30 ***Panel 5– Alternative solutions to intellectual property management***

Chair: Tina Piper
Speakers: Alan Bennett
Amy Kapczynski
James Simon
Policy maker discussants: Emilia Lara Diaz

16:00 End of Workshop

16:00 Optional City Tour

19:30 Dinner and Tango Show
Complejo Tango

Day 3 – September 27

First Meeting of the Latin American Consortium on Biotechnological Intellectual Property

- 9:00 Country capacity-building initiatives
- 10:30 Coffee break
- 11:00 Regional IP model licenses and contracts
- 12:30 Lunch
- 14:00 End of Consortium Meeting

Appendix 2

List of Guests

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