Technology Transfer and the Innovative Process in Biomedical Sciences in the Developing World

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Abstract

Technology transfer may be defined as the conveyance of either a man-made tangible or intangible know-how from those who posses it to those who do not. Although the technology transfer encompasses great a many different types of activities, the transfer process can be examined according to six major elements, namely, the transfer item, the technology donor, the technology recipient, the transfer mechanism, the rate of diffusion of technology and the absorptive capacity of the recipient. These are several ways in which technology can be transferred from donor to recipient. Some of these mechanisms include turnkey operations, the technological enclave, licensing, joint ventures, patents, in house transfers to foreign subsidiaries, SImple emulation of a product or a process, direct purchase of naked technology, embodied technology/technological services, education abroad, site-visits and on training, international co-operative research efforts, meetings and seminars. Scientists from the developing world are involved at various levels in the process of technology transfer. In the process of participating in all these activities the innovative process may come into play. Medical "technology" implies understanding of the equipment and paraphernalia of medicine and the art and skill in using it. The International Laboratory for Research on Animal Diseases (ILRAD) and Kenya Medical Research Institute (KEMRI) Kenya Trypanosomiasis Institute (KETR!) amongst others have notably participated in the development of Bio-Medical technology at various levels. Contributions of various African Scientists in the development of techniques and methods of treatment and control of various diseases is outstanding and has been of great assistance to drug companies for the development of products. The output of Research and Development must be considered productive and may lead to development of new technologies or improvement or existing ones. Industries are the beneficiaries here as they produce products that are sold to final users, The patenting of such products or know-how should reflect the participation of third world Scientists. High level of technological awareness must therefore be created among researchers and scientists of the third world. A system that protects intellectual property rights that works must be created. Joint cooperative research projects between the third world scientists and scientist of the developed world should lead to the beginning of a breakthrough in the technological underdevelopment of these countries towards the year 2000 and beyond. While conferences, intensive seminars and workshops are to be encouraged even more, work well done must not end up in shelves as papers presented in high scientific conferences. Key words: Technology transfer, the innovative process, transfers item, technology donor, technology recipient. and technology diffusions.