

Absorptive Capabilities in the Development of Biopharmaceutical Industry: The Case of Bioprocess Development and Research Unit, National Polytechnic Institute

Authors : Ana L. Sánchez Regla, Igor A. Rivera González, María del Pilar Monserrat Pérez Hernández

Abstract : The ability of an organization to identify and get useful information from external sources, assimilate it, transform and apply to generate products or services with added value is called absorptive capacity. Absorptive capabilities contribute to have market opportunities to firms and get a leader position with respect to others competitors. The Bioprocess Development and Research Unit (UDIBI) is a Research and Development (R&D) laboratory that belongs to the National Polytechnic Institute (IPN), which is a higher education institute in Mexico. The UDIBI was created with the purpose of carrying out R and D activities for the Transferon®, a biopharmaceutical product developed and patented by IPN. The evolution of competence and scientific and technological platform made UDIBI expand its scope by providing technological services (preclinical studies and bio-compatibility evaluation) to the national pharmaceutical industry and biopharmaceutical industry. The relevance of this study is that those industries are classified as high scientific and technological intensity, and yet, after a review of the state of the art, there is only one study of absorption capabilities in biopharmaceutical industry with a similar scope to this research; in the case of Mexico, there is none. In addition to this, UDIBI belongs to a public university and its operation does not depend on the federal budget, but on the income generated by its external technological services. This fact represents a highly remarkable case in Mexico's public higher education context. This current doctoral research (2015-2019) is contextualized within a case study, its main objective is to identify and analyze the absorptive capabilities that characterise the UDIBI that allows it had become in a one of two third authorized laboratory by the sanitary authority in Mexico for developed bio-comparability studies to bio-pharmaceutical products. The development of this work in the field is divided into two phases. In a first phase, 15 interviews were conducted with the UDIBI personnel, covering management levels, heads of services, project leaders and laboratory personnel. These interviews were structured under a questionnaire, which was designed to integrate open questions and to a lesser extent, others, whose answers would be answered on a Likert-type rating scale. From the information obtained in this phase, a scientific article was made (in review and a proposal of presentation was submitted in different academic forums. A second stage will be made from the conduct of an ethnographic study within this organization under study that will last about 3 months. On the other hand, it is intended to carry out interviews with external actors around the UDIBI (suppliers, advisors, IPN officials, including contact with an academic specialized in absorption capacities to express their comments on this thesis. The initial findings had shown two lines: i) exist institutional, technological and organizational management elements that encourage and/or limit the creation of absorption capacities in this scientific and technological laboratory and, ii) UDIBI has had created a set of multiple transfer technology of knowledge mechanisms which have had permitted to build a huge base of prior knowledge.

Keywords : absorptive capabilities, biopharmaceutical industry, high research and development intensity industries, knowledge management, transfer of knowledge

Conference Title : ICIKMTK 2017 : International Conference on Innovative Knowledge Management and Transferring Knowledge

Conference Location : Copenhagen, Denmark

Conference Dates : October 02-03, 2017