Chapter 33
Knowledge Management in Biotechnology Drugs in Brazil as a Case Study of the National Pharmaceuticals Laboratories

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ABSTRACT

The informational age in the twenty-first century is also known as the age of knowledge. The great differential of organizations has been the strategic innovation through the best way to manage the existing knowledge. The pharmaceutical area is one of the most intensive areas in research, development, and innovation. In this century, the discovery of new drugs and biotechnology drugs has revolutionized several treatments for human health. It is estimated that in 2017 the medical prescriptions of biotech drugs will exceed US $220 billion. It was identified that by the year 2019, several biotechnological patents will be expired in the world. New structures and strategic innovations in the scientific and technological environment of the Brazilian pharmaceutical area have occurred. There is a boom in investment opportunities in the industry through strategic innovation fostered by the updating of Brazilian legislation and investments by private companies. Knowledge management in biotechnological drugs has favored scientific, technological, and market growth in Brazilian organizations.

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INTRODUCTION

Knowledge management is a particular field under the management science theory, although the notion links an epistemological concept (knowledge), a concept that is at the center of many philosophical debates and that is linked to the perspective of efficient action in the company. The hybridization which results from the simultaneous use of the two terms induces the idea of an action situated in relation to teleological knowledge or, in other words, beliefs and certainties of a very particular nature. This hybridization is also described as one of the signs of the institutionalization of the company which is today supposed to create and manage knowledge (Cowan, 2001; Pirró, Mastroianni, & Talia, 2010).

In order to manage some knowledge, it is first necessary to have information and, therefore, to have data to be processed (Antunes, Mendes, Schumacher, Quoniam, & Magalhães, 2013; Jamil, Malheiro, & Ribeiro, 2013; Lawrence & Giles, 2000). According to BALMISSE (2006), the different notions to the definitions of Knowledge Management are: Knowledge is the information assimilated to carry out an action; Information is the data put into context; and, Data are the gross element outside of context.

In the age of knowledge, the intellectual capital plays an important role in economics and business. A key to competitiveness and, therefore, to economic development in technology. In areas of high density, such as pharmaceuticals, aerospace and telecommunications, among others of equal weight and impact, knowledge becomes the most important asset and, therefore, the need to better manage this knowledge (Lastres & Sarita, 1999).

The management of knowledge is presented as a major stake in the functioning of organizations and societies. It is also under this common denominator that the link between the knowledge-based enterprise and the knowledge-based society is established, the development of knowledge-based enterprises being in the direction of building a Society of knowledge just like yesterday in the conservative vulgate, the prosperity of the enterprises was assuring that of the companies, and the global employment as the sum of the jobs of the enterprises. This makes it possible to assert that the understanding of the enterprise of knowledge is the only valid one, without really having to face the problem of the transition from the enterprise to the knowledge society (Pesqueux, 2005).

In this context, the pharmaceutical sector presents itself as one of the most capital-intensive areas of the economy. It presents relevant investments in Research, Development & Innovation (R, D & I) activities. In this aspect, it is only surpassed by the war industry (Gadelha, 2003; Magalhaes, Boechat & Antunes, 2008). Their contribution to global health is unmatched. By the year 2021, drug spending by the world's population is expected to reach US $ 1.5 trillion and the sector's revenues will be around US $ 370 billion higher than in 2016 (IMS Institute for Healthcare Informatics, 2017).

According to the IMS INSTITUTE FOR HEALTHCARE INFORMATICS (2016), there is a prospect of growth in drug spending of around 6% by 2021, most of which will occur in developed markets driven by the areas of oncology, autoimmune diseases and diabetes. In these areas, are expected the most significant innovations (IMS Institute for Healthcare Informatics, 2013).

As far as the pharmaceutical technological development process is concerned, there is a technological trajectory that runs from basic research to industrial application. In this way, it demands an innovative process and demarcated by the existence of multiple mechanisms of interaction and feedbacks by knowledge management. It is therefore capable of directing synergies in order to obtain, develop and share knowledge, many of them tacit and intangible, in the search for new markets and products (Chaves, Oliveira, Hasenclever, & Melo, 2007; Prahalad & Hamel, 1997).