GE95 - ANALYSIS OF MARKET SHARED THROUGH ECONOMIC ANALYSIS, PORTER AND SWOT IN THE INDUSTRY OF CHEMICAL SPECIALTY FOR CLONAZEPAM PRODUCTION

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INTRODUCTION

Indicators from the WHO and the increase in consumption of benzodiazephine drugs, as presented by Anvisa, show a prevalence of neurological and mental illnesses. Progressive consumption of these drugs occurs as function of stress, sleep depression, depression, chemical dependence, panic disorder, agoraphobia, bipolar disorder, restless legs syndrome, epilepsy, schizophrenia and neurological disorders. In 2010, Anvisa reported (1) a consumption of more than 10 million units of Clonazepam Rivotril by Roche 1st place, and around 4 million units of Bromazepam Lexotam by Roche 2nd place, and Aprazolam Xanax by Pfizer 3rd place. Clonazepam is a benzodiazepine compound used to treat epilepsy, among other diseases. Its chemical structure presents a benzene ring attached to a diazepinic ring. The Brazilian pharmaceutical industry acts in the shared Market for the production of the Clonazepam molecule. The Mercosul's balance of trade, the Porter's Force and the SWOT matrix were analyzed, and a methodological framework was defined for competitive market analysis.

OBJECTIVE & METHODS

To understand the market of the specialty pharma chemical molecule through its production chain, Porter's analysis and SWOT matrix as a tool to support the decision to enter a shared, a competitive or substitute products market. From the Mercosul Common Nomenclature (NCM) code for the clonazepam molecule, a foreign data trade analysis was performed using AliceWeb2 platform, considering the three years evolution in mercosul in US\$FOB, the Market analysis by Abiquifi, the production chain by Anvisa and technologicals by PubChem.

RESULTS AND DISCUSSIONS

The federal revenue defines the Clonazepam NCM (2933.91.13) that is used in the AliceWeb2® foreign trade platform, from 2014 to 2016. The average import costs US \$ FOB / Kg 11252.82 and export US \$ FOB / Kg 624.48. In the year of 2015, the import / export ratio showed the highest factor (25: 1), it was highly dependent on the 24 pharmaceutical companies (registered with ANVISA) with the Active Pharmaceutical Ingredients (API) suppliers. The Brazilian Chemical Industry Association (Abiquifi) describes the national manufacturers: Nortec Farmoquímicas, Formil and Alpha Br. The production chain begins with raw material from Toluene (Petrochemical) and the intermediate products of synthesis Benzophenone and Chloride of chloroacetyl, both imported. In the ranking of consumption of the pharmaceutical world market Brazil is in 8°. and predicted until 2021 of the 5th. Position, the US on 1st, China 2nd. and Japan in 3rd. (2) Porter Forces: a) Weak: (i) rivalry between

competitors for owning only three domestic manufacturers and high import characterizing broad market for growth of domestic manufacturers. (ii) Customers' bargaining power - considering pharmacists the ratio of quantity of customers / products (global availability of API) shows the weak entry barrier for commercialization; b) Moderate: (iii) Threat of new entrants - by the growing market and challenging Asian prices; need for strategic alliances; access to distribution channels and economies of scale. (iv) Threat of substitute products - Existence of new technologies with high input potential by Bigpharmas; however, there is a need for stability testing and the entire legal process involved. c) Strong: v) Bargaining power of suppliers - Restricted number of suppliers of the intermediate product, only by importation. SWOT Analysis: i) Strengths: increasing consumption and stress levels of the population; customer dependence on API purchase; ii) Opportunities: Integration possibility forwards; ongoing biological tests and high amount of related patents (PubChem); iii) Weaknesses: dependence on imported raw materials, strong centralization in Asian countries of the Benzophenones production, difficult integration back in the national market; iv) Threats: new technologies: more attractive prices of the API in the foreign market stimulating the importation instead of buying in the national market; expansion of existing players.

CONCLUSIONS

The analysis demonstrated the median attractiveness for entering the Clonazepam production business in Brazil. The need for high investment and a médium risk are highligted but the implementation of a productive plant with a larger API portfolio would justify the investment.

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⁽¹⁾ BRASIL. Boletim de Farmacoepidemiologia do SNGPC. Panorama dos dados de sistema nacional de gerenciamento de produtos controlados. ANVISA 02.V.2. Ano 1/jul a dez 2011.

⁽²⁾ INTERFARMA.Guia 2017, Saude se faz com ética e inovação, Dados do setor. 2017

⁽³⁾ PUBCHEM. Open Chemistry Database. Compound Summary for CID 2802. Clonazepam. NIH. U.S. National Library of Medicine. National Center for Biotechnology Information.