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HARRIS-LUX CONSULTING

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MEMORANDUM THRU Michael Kelly, Acting Chief Financial Officer

FOR Robert A. Bradway, Chairman and Chief Executive Officer

SUBJECT: Bargaining Power of Buyers

1. Harris-Lux Consulting is pleased to deliver this first of five papers analyzing Amgen's current position within the biopharmaceutical industry. Using Michael Porter's five economic forces as a basis of analysis, we begin discussing the power of buyers within the market (Porter, 1979). Buyers, in general, have power within the market when the buyers are highly concentrated and can therefore bargain for lower costs. Buyer power tends to be lower when buyers are fragmented, the cost of switching is high, or when substitutes are not readily available (Baye & Prince, 2014). This paper discusses the power of buyers in reference to: buyer knowledge, buyer concentration and large portion sales, costs of customer switching, and the availability of substitutes and product differentiation. We begin with an industry overview.
2. Industry Overview. The global market for the development of biopharmaceuticals, medications produced using living cells, is expanding rapidly. Technological advancement with the development of new biopharmaceutical agents and continued concerns about cost-containment impact the biopharmaceutical market environment. The introduction of the Patient Protection and Affordability Act (Affordable Care Act) of 2010, which includes the Biologics Price Competition and Innovation Act (BPCI Act), has made it possible for competitors to introduce biosimilar products using the FDA fast track approval process after the reference product has had 12 years of exclusive rights. This legislation resulted in a reduction from the 20 year patent protection that companies had previously enjoyed and lessened the time to recoup high R&D costs (www.phrma.org, 2014). The expiration of product patents, introduction of new legislation, and changes in Medicare regarding bundled reimbursement and value-based pricing, all present formidable challenges for AMGEN.

AMGEN holds approximately 8% of the total biopharmaceutical sales in the United States (IBIS, 2014) and had revenues of \$18.7 billion in 2013 (Hough, 2014). The journey from research to drug approval is costly and arduous. An estimated expenditure of \$802 million in 2003 was needed to develop a new drug (Albersheim, 2011). Investment in biopharmaceutical research and development (R&D) leads other manufacturing industries with \$111,032 spent on R&D per employee (www.pharma.org, 2014). The process of R&D and approval generally takes 10-15 years (Amgen, 2014). Ninety percent of AMGEN's sales are from the following biologics: Aranesp (U.S. patent expiration 2024); Epogen (U.S. patent expiration 2014); Neulasta (U.S. patent expiration 2015); and Neupogen and Enbrel (U.S.

patent expiration 2019) (Amgen, 2014). Buyers in the U.S. are primarily pharmaceutical wholesale distributors who then distribute the products through a variety of channels. In Europe, health care providers and/or pharmaceutical wholesale distributors purchase Amgen's products (Amgen, 2014). HL Consulting considers biopharmaceuticals to be neither a normal nor inferior good, as the decision of how much to buy and when is not influenced by income but by need (a person having a disease or illness). We also consider biopharmaceuticals **to be inelastic, possibly even perfectly inelastic**, until a biosimilar medication comes on the market. At that time, demand will be influenced by affordability (income) and price (both of Amgen's goods and competitors' goods) (Baye & Prince, 2014).

3. Buyer Knowledge. Most importantly for the biopharmaceutical industry, buyer power is limited due to buyers' limited product knowledge. **Identifying the "buyer" of biopharmaceutical products is complicated**. The decision to utilize a biopharmaceutical medication is influenced by individuals, providers, healthcare systems, and governments, all of whom possess different levels of knowledge.

Patients, primarily concerned with improving their medical condition, often lack the ability to review scientific information about a particular medication. A patient's primary source of knowledge about medications often comes from advertisements on television and in lay publications targeted to patients with specific medical conditions. The patient's influence on the decision to buy a particular medication consists of bringing his health care provider information gleaned from television, print media, and, especially, the internet.

Compared to individuals, health care providers control more of the decision to select a particular medication for a patient based on the provider's perception of the medication's safety, efficacy, and, sometimes, cost. Health care providers receive the majority of their information from the promotional marketing activities of drug manufacturers. Purchasers learn from marketers why to buy the drug, how to use the drug, and what are the potential safety issues (Albesheim, 2011). Expenditures on marketing consume approximately one-third of sales revenues, twice that of expenditures on R&D (WHO, 2014). The importance of marketing is indicated in 2007 data with 90,000 drug representatives marketing to 567,000 physicians. Free continuing education opportunities, free food, and a variety of giveaways such as free pens form the foundation of this promotional strategy (Albesheim, 2011).

Health care systems, governments, hospitals, and specialty clinics make purchasing decisions that may trump the preferences of individual health care providers. Most of the information used to make purchasing decisions is provided by pharmaceutical companies (Albesheim, 2011). Concerned about the biased nature of information provided by pharmaceutical companies, the World Health Organization (WHO) and governments such as the United Kingdom have pushed for unbiased information for buyers. The United Kingdom leads the way with an initiative to provide publicly funded information to purchasers and providers. However, this information is less than two percent of the total amount expended by all parties (WHO, 2014).

4. Buyer Concentration and Large Portion Sales. Due to the nature of the product, the end user, the patient, has **little buyer power with regard to buyer concentration and large portion sales**.

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This is also true for individual providers who prescribe the product. The influence of large portion sales and buyer concentration has come mainly from Medicare. This government entity flexed its buyer muscle when it bundled reimbursement payment for complete treatment of dialysis. This lowered the reimbursement that dialysis clinics received for Amgen's product, Epogen, a drug used for the treatment of anemia caused by chronic kidney disease in 1.4 million Medicare patients (Pollack, 2012). Bundled reimbursement meant that dialysis clinics were not being reimbursed for Epogen separately and instead dialysis clinics were receiving reimbursement based on capitation. The new lower reimbursement provided more incentive and leverage for dialysis clinics to negotiate lower prices and use less Epogen.

5. Cost of Customer Switching. Little financial switching costs are seen in this industry. The actual costs may present in time value of money to both the buyer (end-user) and the prescriber. The buyer may experience loss of time due to time spent finding a pharmacy that stocks the prescribed medication. Similarly, the prescriber may experience loss of time researching and studying alternative medications.
6. Availability of Substitutes and Product Differentiation. Porter emphasized that buyers are more powerful if they can select a variety of "interchangeable products" since this allows them to negotiate lower prices when alternative products are available (Porter, 1979). In the biopharmaceutical industry, many biopharmaceutical drugs marketed are under patent and buyers are limited to a single choice until biosimilars are available.

For example, in the dialysis sector, Amgen has traditionally had a strong market share with its product Epogen. However, Affymax's product, Omontys, is currently challenging AMGEN's medication, for an increased market share (Pollack, 2012). This development provides buyers with another choice and will likely drive down buyer costs. More suppliers in the market place will give buyers more leverage when negotiating with suppliers. In addition, the introduction of the BPCI Act will make it possible for competitors to introduce biosimilar products through an FDA fast track process. The availability of substitutes will be discussed in more detail in Memorandum 2.

7. Conclusion. In summary, the current state of buyer power is weak based on buyer knowledge, limited availability of substitutes, and limited buyer concentration. This status is changing with novel biopharmaceutical agents being developed, biosimilar medications being introduced, and mechanisms being implemented to help buyers gain more knowledge. Amgen needs to carefully follow all international, federal, and state legislation concerning the introduction of biosimilars into the market and the requirements for promotional marketing of biopharmaceuticals.

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References

Albersheim, S. G., & Golan, A. (2011). The physician's relationship with the pharmaceutical industry: Caveat empter...buyer beware! *The Israel Medical Association Journal*, 13, 389-393. Retrieved July 12, 2014, from

<http://www.ima.org.il/IMAJ/ViewArticle.aspx?year=2011&month=07&page=389>

Amgen. (2013, February 24). *Letter to shareholders*. Retrieved July 2, 2014, from Amgen: www.amgen.com

Baye, M. R., & Prince, J. T. (2014). *Managerial economics and business strategy*. New York: McGraw-Hill Irwin.

Company Profile Amgen, Inc. (2014, June 27). Retrieved July 12, 2014, from Marketline:

<http://www.marketline.com>

Company Profile Amgen, Inc. (2014, February 25). Retrieved July 12, 2014, from Marketline:

<http://marketline>

Goozner, M. (2013, Feb 4). A Little extra in the fiscal deal. Backroom deals are bad medicine and no way to set payment policy. *Mod Health*, 43(5), 24. Retrieved July 2, 2014, from <http://www.ncbi.nlm.nih.gov/pubmed/23437488>

Hough, J. (2014, June 21). *Sweet dividends - With a cherry on top*. Retrieved July 2, 2014, from Barron's:

<http://online.barrons.com/news/articles/SB50001424053111903927604579628353669245142>

Pharmaceutical Industry. (n.d.). Retrieved July 2, 2014, from World Health Organization:

<http://www.who.int/trade/glossary/story073/en/>

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Pollack, A. (2012, March 27). *F.D.A. approves new anemia drug*. Retrieved July 2, 2014, from New York Times: http://www.nytimes.com/2012/03/28/health/policy/fda-approves-new-anemia-drug.html?pagewanted=all&_r=0

Pollack, A. (2013, January 28). *Biotech firms, billions at risk, lobby states to limit generics*. Retrieved July 2, 2014, from The New York Times: <http://www.nytimes.com/2013/01/29/business/battle-in-states-on-generic-copies-of-biotech-drugs.html>

Porter, M. E. (1979). How competition forces shape strategy. *Harvard Business Review*, 137-145.

The biopharmaceutical industry helps strengthen the U.S. economy. (n.d.). Retrieved July 2, 2014, from PhRMA: <http://www.phrma.org/economic-impact>

The pharmaceutical and biotech industries in the United States. (n.d.). Retrieved July 2, 2014, from Select USA: <http://selectusa.commerce.gov/industry-snapshots/pharmaceutical-and-biotech-industries-united-states>