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Message from the Director

It gives me great pleasure to present to you the second issue of the Lerner Center's Newsletter. This issue highlights our third annual symposium held on July 16, 2007, and brief descriptions of the research findings of projects funded by the Lerner Center. Over 130 executives from the Pharmaceutical and Biotech industries in New Jersey attended the symposium. The Center appreciated the opening remarks by President Richard M. McCormick and Provost Steven Diner of Rutgers University.

The Lerner Center provides resources of expertise of the pharmaceutical industry to the university and other organizations. It facilitates pharmaceutical management research within Rutgers Business School by providing industry data, a forum to exchange ideas through colloquia and seminars, funding and basic organizational support to prepare research proposals. The Center also organizes workshops involving participants from academia, government, pharmaceutical and biotech industries to disseminate information and knowledge concerning aspects and issues facing the pharmaceutical, biotech and health care industries in general.

We thank the following individuals and organizations for sponsoring the symposium and other activities of the Center: Blanche and Irwin Lerner, Robert Campbell, The HealthCare Institute of New Jersey, Bristol-Myers Squibb, Organon, Ortho Biotech of Johnson & Johnson, Novo Nordisk, Patton Boggs LLP, Roche, Sanofi-Aventis, and Vioquest Pharmaceuticals, Inc.

We would appreciate any feedback and comments from you about the Center's activities and programs.



Congressman Frank Pallone Jr.



Dean Michael Cooper

Mahmud Hassan, Ph.D

Director
Annual Symposium on July 16, 2007

The Lerner Center organized its annual symposium on July 16, 2007. The theme of this year's symposium was Medicare's prescription drug plan known as Medicare Part D.

The Keynote Speaker was Congressman Frank Pallone, Jr., Chairman of the Energy and Commerce subcommittee on Health. It was attended by Honorable James Florio, former Governor of New Jersey, President Richard M. McCormick and Provost Steven Diner of Rutgers University, and over 130 executives from the Pharmaceutical and Biotech industries.

In his opening remarks, President McCormick explained the role of Rutgers

University in serving the healthcare industry through a variety of programs and training.

Through the generosity of Blanche and Irwin Lerner, the Rutgers Business School has established a center that supports the life sciences industry and promotes vital research in pharmaceutical management.

In introducing Congressman Frank Pallone, Jr., Governor Florio explained the dynamic nature of the healthcare industry that comes with dislocation and stress in a variety of forms and shapes. Today's leadership needs to know how to manage change and incorporate it into the policies in the healthcare field.

Congressman Pallone, Chairman of the Subcommittee on Health of the Committee on Energy and Commerce, briefly explained the Medicare Part D plan.

The Medicare Part D plan is not a privatized program by the government. The State Children's Health Insurance Program (SCHIP) will undergo change to allow more low income families to join the plan. Since the profit margin in US pharmaceuticals is high and R&D is costly, it is difficult to bring down the price of drugs; however, this may be remedied if the government took on the role to fund future R&D costs.

(Continued on pg. 2)



Lerner Center Funded Research

Optimization for Patients Recruitment in Multi-center Clinical Trials *by Mahesh Kumar, PhD*

Clinical trials are an expensive and time sensitive part of the drug development process. To minimize time, trials are often conducted at multiple centers, however, each with its own patient recruitment rate as well as various other fixed and variable costs. The objective of this study was to come up with an optimal subset of centers that would recruit the target number of patients within a specified timeline at minimal cost. A second objective in the study, along with minimizing cost, was to minimize the completion time of these clinical trials simultaneously in one optimization problem. The proposed method in this study involves an optimization problem in which patient recruitment rates are estimated while simultaneously updating the set of centers that are actually open and functional when selecting centers for clinical trials.

Transnational Technology Networks in the Pharmaceutical Industry: Investigating the Challenges for Firms and Governments *by John Cantwell, PhD, Rutgers Business School, Management and Global Business*

In today's pharmaceutical industry, large firms are dispersing various aspects of R&D to an ever expanding network of globally dispersed subsidiaries and external agencies. The challenge for the parent firm is to coordinate these highly complex and dispersed international technology networks and to ensure that coherence and creativity characterizes the overall R&D activities of the multinational enterprise network. There were two main focuses within this study; the first was to understand change in terms of the location where R&D activity is taking place and the second, the type of R&D taking place abroad.

The Optimal Match Between Sales Force and Customer: Modeling Sales Call Heterogeneity in Sales Response Function *by Ying Xie, PhD, Sooyeon Nikki Lee-Wingate, PhD*

Since companies that have multiple product categories often use different sales forces to promote the same client, the purpose of this study is to first, improve sales efficiency by developing a more specialized sales force for each category, and second to use several salespeople to capture more of the client's attention and avoid a possible "wear-out" effect resulting from the client seeing the same sales rep over and over again.

Do Mergers and Acquisitions Create Shareholder Wealth in the Pharmaceutical Industry? *by Mahmud Hassan, PhD, Rutgers Business School and Howard Tuckman, PhD, Fordham University*

The objective of this study was to analyze mergers and acquisitions within the US pharmaceutical industry between 1981 and 2004. Findings displayed that short and long-term returns as well as other efficiencies were found more within acquisitions than mergers. It was also found that there are differences pertaining to the effects of acquisitions of foreign-based vs. US targets. The key take-away point in this study was that acquisitions of US-based companies in the pharmaceutical industry have a positive impact on wealth creation for company shareholders.

Annual Symposium 2007 (cont'd)

The symposium also contained a panel discussion, moderated by Honorable Bob Franks, President of the HealthCare Institute of New Jersey. The members of the panel included: Heather Howard, Policy Advisor on Health to the Governor of New Jersey, Geoffrey Joyce, Health Economist, Rand Corporation, Robert Meehan, Vice President, Horizon Blue Cross Blue Shield of New Jersey, Kirsten Axelsen of Pfizer, and Nancy Featherstone of Astra Zeneca.

In his opening remarks, Honorable Franks set the stage by stating that supporters of the Medicare Part D plan believe that it provides healthcare to senior citizens at a lower cost. The opposition towards the plan claims that it only serves to benefit the Republicans and the pharmaceutical companies.

The panel members explained that Medicare Part D can be a venue to provide cheaper prices for drugs, because of the number of people in the plan. The effect of negotiating

drug prices can affect R&D negatively, because if drug prices go down, funding the resources for R&D for future drugs becomes problematic. This is why instead of price negotiating, more emphasis should be made on affordable healthcare plans.

The Lerner Center is Proud to Announce its Upcoming Robert Campbell Seminar Series

FALL 2007

The location for the following Seminars is as follows:

Rutgers Business School-Newark, 111 Washington St, Room 203, Newark, NJ 07102

The time frame for the following Seminars is as follows: 9 am – 11:30am

Registration Fee: Free to Rutgers Business School Faculty, Students and Staff, \$210 for Rutgers Alumni and sponsoring companies BMS, Eisai, J&J, Merck, Novartis, Organon, Roche, and their subsidiaries, and current members of BCNJ, \$250 General Public (Includes seminar fee and breakfast)

To attend, you must RSVP: icastillo@rbsmail.rutgers.edu, 973-353-1016

Wednesday, October 17, 2007

Leveraging Scientific, Technological, and Strategic Knowledge for Drug Discovery: Can We Do it Better?

Presenter: Deborah Dougherty, PhD, Rutgers Business School, Management and Global Business

The pharmaceuticals sector has been actively reorganizing its drug discovery and early development process to generate more novel drug candidates, while at the same time attempting to meet more stringent standards. This seminar builds on almost 100 in-depth interviews with therapy scientists (biologists, chemists, pharmacologists), technological experts (bio-informatics, genomics, assay development), and strategic managers about their everyday innovation challenges and how they deal with them.

Wednesday, October 31, 2007

Category Versus Branded: Examining the Effectiveness of the Direct-to-Consumer Advertising in the Pharmaceutical Industry.

Presenters: Sooyeon Nikki Lee-Wingate, PhD and Ying Xie, PhD

Different types of Direct-to-Consumer Advertising (DTCA) has been receiving attention, since the approval by FDA in 1997. Effectiveness of each type, however has been controversial and warrants more theoretical research. The presenters will present in this seminar how they drew from the theories of diagnosticity and accessibility and focus on these two types of DTCA: health seeking (or category based) ads and product-claim (or branded) ads.

Wednesday, November 14, 2007

On the Brink of Overwhelming Change: The Forces That Will Alter the Pharmaceutical Industry and How They Will Impact Careers, Opportunities and Personal Economics

Presenter: Michael Steiner, CFP, CPA, RegentAtlantic Capital LLC

The pharmaceutical industry is being shaken by a series of forces. Globalization, the expiration of patent protection on the industry's most profitable drugs, the increased power of insurance companies, and the flood of product liability litigation are only a few of the factors driving many companies to reengineer their business models. While these companies will survive and many will thrive, as many as 50,000 upper-middle and upper managers and researchers will be displaced. Although these changes appear very threatening to industry participants, they will be simultaneously unlock many new opportunities for individuals who can monetize their intellectual capital. Mr. Steiner will describe how the industry will change over the next decade; the skills that will be of greatest value; pharma's best future career opportunities; and how individuals can position themselves to take advantage of the forces.

Wednesday, December 5, 2007

Value-Based Pricing and Payment for Pharmaceuticals and Biologics

Presenter, Luis Gutierrez, Jr., President, Commercialization Services, Covance, Inc.

The Seminar will cover the following points:

- Cost drivers for bio-pharmaceutical products: fixed versus variable
- Approaches to quantifying the value created/delivered by a given bio-pharmaceutical product
- Factors to consider when establishing and managing a pricing strategy for a bio-pharmaceutical product
- Roles of intermediary decision-makers in regulating elasticity of demand for bio-pharmaceutical products
- Emerging economic models that the prices paid for drugs to the therapeutic outcomes they deliver

“The Future of Healthcare: Medicare Part D and Beyond”



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Symposium 2007



*Provost Steven Diner, Dean Michael Cooper,
President Richard McCormick, Governor James Florio*



July 16 Event Attendees



Irwin Lerner, Governor James Florio, the Hon. Bob Franks



*Kirsten Axelsen (Pfizer), Nancy Featherstone (AstraZeneca),
Heather Howard (Office of the Governor), Geoffrey Joyce (RAND),
Bret Koplrow (standing – Patton Boggs LLP)*