



**The Blanche and Irwin Lerner
Center for the
Study of Pharmaceutical
Management Issues**

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Message from the Director

It gives me great pleasure to present the fourth issue of the Lerner Center's Newsletter. This issue reports the activities of the Center during the past academic year (2010-2011), including the fifth annual symposium. Brief descriptions of each activity and the Fall 2011 schedule of *The Campbell Pharmaceutical Seminar Series* are provided.

The Lerner Center serves as an educational conduit between the pharmaceutical industry, the University and various other organizations. By providing industry data, organizational support and hosting research colloquia and seminars the Center facilitates pharmaceutical management research within Rutgers Business School. The Center offers the following resources to the University and organizations:

- Short-term executive training programs on issues facing the pharmaceutical, biotech and health care industries.
- On-site customized executive training programs for biopharmaceutical companies.
- Facilitates faculty and Ph.D. students' pharmaceutical management research by providing relevant data and organizational support. The Center maintains IMS databases – NSP, NPA, IPS and NDTI – which cover monthly data for the years 2000 through 2010.

We would like to thank the following individuals and organizations for sponsoring the Center's activities: Blanche and Irwin Lerner, Robert Campbell, Bristol-Myers Squibb, Celgene, Daiichi Sankyo, Medassurant, and Pfizer.

We welcome your comments on the Center's activities and programs.

Mahmud Hassan, Ph.D.
Director

Annual Healthcare Symposium

Rutgers Business School's Blanche and Irwin Lerner Center for Pharmaceutical Management Issues held its 2011 Annual Healthcare Symposium, titled *Problems and Prospects of the Pharmaceutical Industry*. Held in Newark, New Jersey on April 21, 2011, the symposium was attended by an at-capacity audience of industry executives, government officials, medical practitioners, and scholars.



*Sol J. Barer, CEO and Executive
Chairman of the Board, Celgene (retired)*

Dr. Sol J. Barer, former Chairman of Celgene Corporation, gave the keynote speech. Dr. Barer discussed recent challenges faced by the pharmaceutical industry in R&D, patent expirations, and financial performance. Dr. Barer emphasized innovation and partnership as a means to develop new drugs, extend human life, and be successful in business. The lecture was followed by a series of Q&A.



*From left to right: William Looney, Allan M. Korn,
MD, Geoffrey Joyce, PhD, and Joshua P. Cohen, PhD.*

William Looney, Editor-in-Chief of Pharmaceutical Executive Magazine, moderated the first Academic Research Panel. The panelists consisted of Joshua Cohen, Ph.D., Senior Research Fellow, Tufts Center for the Study of Drug Development, Geoffrey Joyce, Ph.D., Associate Professor, USC School of Pharmacy and Senior Economist for Rand Corporation, and Allan Korn, MD, Senior VP and Chief Medical Officer, Blue Cross Blue Shield Association, Chicago.

Members of the academic research panel held a lively discussion regarding various challenges faced by the pharmaceutical industry:

- Dr. Cohen discussed the challenges faced by the field of Pharmacogenomics. Using information on eight drugs, Dr. Cohen presented the challenges of clinical, regulatory, and reimbursement issues in the development of new drugs.
- Dr. Joyce presented his findings regarding physicians prescribing habits within ten therapeutic classes. He concluded that physician prescribing habits are not as narrow as once thought, especially in therapeutic classes dominated by brand name drugs.
- Dr. Korn focused on the importance of society's need for more breakthrough products. He reviewed healthcare and pharmaceutical costs, including BCBS market interventions.

The R&D expert panel was moderated by: the Honorable Richard Bagger, Governor Christie's Chief-of-Staff. The panel members included Paul Biondi, Senior VP, R&D of Operations, Bristol-Myers Squibb; Howard Hutchinson, MD, Chief Medical Officer, Astra Zeneca; Briggs W. Morrison, MD, Head of Worldwide Medical Excellence Group, Pfizer; and Garry Neil, MD, Corporate VP, Corporate Office of Science and Technology, Johnson & Johnson.



From left to right: *The Honorable Richard Bagger, Paul Biondi, MBA, and Howard Hutchinson, MD.*

The executives of the R&D expert panel brought to light the key issues the pharmaceutical industry is currently facing. Bristol-Myers Squibb executive Paul Biondi stressed that the challenging business environment has forced companies to change in order to be successful. He suggested, "Focus on innovation to drive value and success, based on meeting serious unmet need, is the core to any successful biopharma strategy." Johnson & Johnson executive Dr. Garry Neil emphasized how the pharmaceutical industry has contributed to the health and welfare of this society. According to Dr. Neil, "We need to invest more in understanding basic biologic mechanisms, translational endpoints and biomarkers, a clinical trials infrastructure, enhanced methods for surveillance of products in market post approval, and regulatory science." Astra Zeneca executive Dr. Hutchinson stressed, "One of the key issues facing the industry at the current time is ensuring an optimal framework for assessing the benefit/risk profile of drugs. Despite the challenges, I continue to see a bright future for pharmaceuticals and those who decide to make our industry their career choice." Pfizer executive Dr. Briggs Morrison emphasized the industry's importance for people with unmet needs, especially since this industry's focus is medical innovation. Dr. Morrison affirmed, "It is likely that the industry will also continue to consolidate its R&D capacity to return to a more realistic investment paradigm, and that the industry will also continue to improve its decision making and capital allocation."

**The Lerner Center is Proud to Announce its
Upcoming Robert Campbell Pharmaceutical Seminar Series
Fall 2011**

Location: Rutgers Business School-Newark and New Brunswick,
1 Washington Park, 11th floor conference room #1123, Newark, NJ 07102
To attend, you must RSVP: icastillo@business.rutgers.edu, 973-353-1016

Wednesday, October 26, 2011 11:30 am – 1pm
Seminar Title: Opportunity for Analytics in Pharmaceutical Sales and Marketing

The Blanche and Irwin Lerner Center for the Study of Pharmaceutical Management Issues
Fall 2011 – Issue 4

Presenter: Daniel J. Feldman, Ph.D., Director, Market Research, Plavix, Avapro, Avalide, Bristol-Myers Squibb

In the age of “Doing More with Less,” should we manage with less analytic support? Many companies are currently struggling with this question. This presentation by Dr. Daniel Feldman – faculty of the Pharmaceutical Management Program at the Rutgers Business School, pharma industry analytics leader, and psychologist – explores the pharmaceutical industry’s response to the latest economic crisis and “patent cliff.” From the viewpoint of Paradigm Shift theory, he will review the historical trends of analytic functions that support the commercial functions of manufacturers and extrapolate those trends into the future industry response. Unmet analytic needs will be uncovered as well as a review of a model to position a management science team strategically within and outside of an organization.

Wednesday, November 16, 2011 11:30 am – 1pm

Seminar Title: Obvious and Non-Obvious Policy Influences on the Biopharma Industry

Presenter: Neal Masia, Pfizer, Ph.D., Vice President and Assistant Treasurer

Public policy influences the biopharmaceutical industry on many levels, some more obvious than others. The presentation will discuss how the mixture of regulatory policy, Medicare payment rules, evolving tax regimes, publicly supported science research, financial system reform, and other factors combine to influence decisions, investments, and capital allocation within the industry.

Research Reports Completed

- A White Paper for IMS Health titled, “Changing Paradigms in Long-Term Care: Unlocking the Opportunities” was completed. This article focuses on conveying key trends occurring in long-term care and how pharmaceutical companies can adopt their strategies to capture business.
- A report titled, “What Keeps Pharmaceutical Executives up at Night?” was completed. Consisting primarily of interviews with pharmaceutical executives, the report details key business issues and obstacles that represent opportunities for future studies.

Research Support to PhD Student

- The Center awarded Genevieve O’Connor, Ph.D. student, \$4,200 to support her summer research on Healthcare Market Segmentation. Ms. O’Connor’s research looks at how a major metropolitan hospital in New Jersey can enhance their marketing strategies based on physician referral networks.

Executive Training

Three times a year, the Center conducts a *Two Day Certificate Program in Pharmaceutical Management*. In the 2010-2011 academic year, approximately 60 professionals in the biopharmaceutical and healthcare industries attended such training. Participating companies include: Bristol-Myers Squibb, Celgene, Daiichi Sankyo, IMS Health, Johnson & Johnson, Merck, Novo Nordisk, PhRMA, and Ranbaxy. The next program is scheduled for October 27-28, 2011. If you are interested in attending, please visit us at: www.business.rutgers.edu/lerner



Executives that attended the 2010 Two Day Certificate Program in Pharmaceutical Management

The Center provided a Customized *Executive Training Program* for Novo Nordisk this year. The Center will provide a similar program for PhRMA this fall in Washington DC. Please contact Ingrid Castillo at 973-353-1016, or email her at: icastillo@business.rutgers.edu to discuss a customized training program for your company.

Center Research Fellow Publications during the Past Academic Year

Contractor F. 2010. Global “Chop Shops” Slice, Dice and Outsource: Pharmaceutical companies slice up R&D tasks and scour the globe for cost advantages. *Yale Global*.

<http://yaleglobal.yale.edu/content/global-chop-shops>.

Dougherty D, Dunne D. (forthcoming). Organizing Ecologies of Exploratory Innovation. *Organization Science*. 22(5): 1214-1223.

Dougherty D, Dunne D. (forthcoming). Digital Science and Knowledge Boundaries in Complex Innovation. *Organization Science*.

Hassan M, Tuckman H, Patrick R, Kountz D, Kohn J. 2010. Hospital Length of Stay and Probability of Acquiring Infection. *International Journal of Pharmaceutical and Healthcare Marketing*.4(4):324-338.

Hassan M, Tuckman H, Patrick R, Kountz D, Kohn J. 2010. Cost of Hospital-Acquired Infection. *Hospital Topics*. 88 (3): 82-89.

Hemphill S, Sampat B. (forthcoming Dec. 2011). When do Generics Challenge Drug Patents? *Journal of Empirical Legal Studies*. 8 (4): 613-649.

Lichtenberg F. (forthcoming). The impact of new (orphan) drug approvals on premature mortality from rare diseases in the U.S. and France, 1999-2007. *European Journal of Health Economics*.

Lichtenberg F, Duflos G. (forthcoming). Does competition stimulate drug utilization? The impact of changes in market structure on US drug prices, marketing and utilization. *International Review of Law and Economics*.

Lichtenberg F. (forthcoming). The contribution of pharmaceutical innovation to longevity growth in Germany and France, 2001-2007. *PharmacoEconomics*.

Lichtenberg F. 2011. Has pharmaceutical innovation reduced Social Security Disability growth? *International Journal of the Economics of Business*. 18 (2).

Lichtenberg F. 2011. Pharmaceutical companies' variation of drug prices within and among countries can improve long-term social well-being. *Health Aff (Millwood)* PMID:21821571[PubMed - in process] 30(8):1539-44.

Lichtenberg, F. 2011. Despite steep costs, payments for new cancer drugs make economic sense. *Nat Med*. 17(3):244. No abstract available. PMID:21383714[PubMed - indexed for MEDLINE]

David G, Markowitz S, Richards S. 2010. The Effects of Pharmaceutical Marketing and Promotion on Adverse Drug Events and Regulation. *American Economic Journal – Economic Policy*. 2(4): 1-25.

Toole, A.A. (forthcoming Dec. 2011). The Impact of Public Basic Research on Industrial Innovation: Evidence from the Pharmaceutical Industry. *Research Policy*.

Fleischhacker A, Zhao Y. 2011. The Dynamic Economic Lot-size Model for Clinical Trial Supply Chains: Planning for Demand Failure. *European Journal of Operational Research*. 211: 496-506.

Robert Campbell Pharmaceutical Seminar Series (October 2010- through March 2011)

Strategy and Structure for Pharmaceutical Firms: Why and How Both Must Change

Presented by Richard Evans, Co-founder and Managing Director, Sector & Sovereign, LLC

October 4, 2010

As R&D productivity has fallen, and as the end of real pricing power grows near, legacy structures arguably can no longer succeed. Mr. Evans traced the key features of current industry structure to their historic origins, and considered how likely future scenarios may compel structural change.

Understanding Innovation Management: Challenges of Drug Discovery

Presented by Deborah Dougherty, Ph.D., Department of Management and Global Business, Rutgers Business School

October 27, 2010

Professor Dougherty discussed how discovering new drugs for unmet medical conditions is a complex learning process that unfolds over many years, and costs enormous sums of money with no assured return. This research found that the everyday social process of drug discovery was comprised of normal, observable, and manageable practices that differed profoundly from conventional work flows.

The Organizational and Geographical Relocation of R&D and High-Value Company Functions through Outsourcing and Offshoring

Presented by Farok Contractor, Ph.D., Department of Management and Global Business, Rutgers Business School

November 16, 2010

Dr. Contractor reviewed the current global economic transformation. He focused on how companies are reducing their value chain into smaller functions and dispersing responsibilities internationally.

When Do Generics Challenge Drug Patents?

Presented by C. Scott Hemphill, JD, PhD, Lerner Center Research Fellow, Associate Professor of Law, Columbia University

February 22, 2011

Dr. Hemphill reviewed how the Hatch-Waxman Act regulates competition between brand-name and generic drugs in the United States. He examined a feature of the Act that has generated significant controversy, yet has received little systematic attention.

Why are Branded Drugs Priced Higher than Generics?

Presented by James Sawhill, PhD, Assistant Professor, Department of Supply Chain Management and Marketing Science, Rutgers Business School

March 28, 2011

Dr. Sawhill reviewed several possible explanations as to why branded drugs are priced higher than generics. Professor Sawhill, along with Ms. Kathleen Martino, developed a partial equilibrium model for the US prescription drug market. Through this process, they estimated both demand and cost functions, providing insight into this important research question.