

Systems Thinking from Discovery to Delivery

FOR IMMEDIATE RELEASE

Michael Porter, Janet Woodcock, Peter Senge among speakers at inaugural Innovation in Healthcare Symposium

Symposium Hosts - MIT Department of Biological Engineering, MIT Center for Biomedical Innovation, MIT Engineering Systems Division

CAMBRIDGE, Mass., January 19, 2011 – On February 1, 2011, the Massachusetts Institute of Technology (MIT) Department of Biological Engineering, Center for Biomedical Innovation, and Engineering Systems Division will host the **Innovation in Healthcare Symposium:** *Systems Thinking from Discovery to Delivery* at MIT's Kresge Auditorium. The day-long event, sponsored by Merrimack Pharmaceuticals, will be a forum to stimulate new ways of thinking about and addressing today's greatest healthcare challenges.

"The nation needs a new way of thinking about the healthcare system," says Michael Porter in his book 'Redefining Healthcare.' "Neither the problem nor the solution will be found in any single aspect of the system or in any single actor."

Globally, healthcare is one of the great societal and economic challenges of the 21st century. With healthcare spending approaching nearly one-fifth of the world economy, access, quality and the cost of care are all major issues.

"The opportunity to sponsor this symposium is a wonderful way for Merrimack to celebrate our 10th anniversary," says Robert Mulroy, Merrimack Pharmaceuticals' president and CEO. "We are convinced that the future of healthcare innovation lies in the ability to think outside of our individual disciplines. Our goal with MIT, on February 1, is to educate and inspire tomorrow's innovators."

The Symposium will consist of four multi-disciplinary expert panels structured around three major topics: improving healthcare delivery to patients, reversing the declining productivity of biomedical research, and applying lessons learned by other industries to guide a transformation of our healthcare system. The fourth panel will be a question-and-answer session composed of young leaders currently working in the healthcare field discussing how the issues raised by the previous panels impact their work.

Welcoming Remarks

Douglas Lauffenburger, Ph.D., Ford Professor of Bioengineering, MIT; Head of the Department of Biological Engineering, MIT

Dr. Lauffenburger also holds appointments in the Department of Biology and the Department of Chemical Engineering. He is a member of the Center for Biomedical Engineering (CBI), Center for Cancer Research, Center for Environmental Health Sciences, and Center for Gynepathology Research, and is Director of the Computational & Systems Biology Initiative.

Panel #1: Are We Organized for Failure? A Discussion of the US Healthcare Delivery System

Michael Porter, Ph.D. - Harvard University, author of 'Redefining Healthcare'

Recognized as the father of the modern strategy field, Porter's ideas are taught in virtually every business school in the world. His book "Redefining Healthcare" (written with Elizabeth Teisberg) develops a new strategic framework for transforming the value delivered by the healthcare system.

John Mendelsohn, M.D. – President, University of Texas MD Anderson Cancer Center

Dr. Mendelsohn has been at the forefront in understanding how growth factors regulate the proliferation of cancer cells by activating receptors on cell surfaces. He is the developer of the cancer therapy Erbitux[™] and the founding editor of "Clinical Cancer Research."

Elizabeth G. Nabel, M.D. – President, Brigham and Women's (BWH) and Faulkner Hospitals

Prior to her position at BWH, a role she assumed on January 4, 2010, Dr. Nabel served as director of the National Heart, Lung, and Blood Institute (NHLBI) at the National Institutes of Health (NIH). Among her leadership efforts as NHLBI director, Dr. Nabel launched new scientific programs in genetics and genomics, stem and progenitor cell biology, translational research, global health, and support for young investigators.

Panel #2: The Biology Gap: Addressing the Productivity of Biomedical Research

Peter Sorger, Ph.D. – Harvard Medical School, MIT

Peter Sorger, a Professor of Systems Biology at the Harvard Medical School, holds a joint appointment in MIT's Department of Biological Engineering and Center for Cancer Research. Dr. Sorger is currently Chair of the Cell Structure and Function (CSF) study section of the National Institutes of Health (NIH) and Director of the NIH-National Institute of General Medical Sciences (NIGMS) Cell Decision Processes (CDP) Center for Systems Biology.

Janet Woodcock, M.D. – Director, Center for Drug Evaluation and Research, Food and Drug Administration (FDA)

Dr. Woodcock has led many of the FDA's drug initiatives. She introduced the concept of risk management as a new approach to drug safety and leads the 'Pharmaceutical Quality for the 21st Century Initiative.' In 2004, Dr. Woodcock introduced the FDA's 'Critical Path Initiative,' which is designed to move medical discoveries from the laboratory to consumers more efficiently.

Tawanda Gumbo, M.D. - Associate Professor, Internal Medicine – Infectious Diseases, Southwestern Medical School, Dallas, Texas

Prior to his appointment with Southwestern Medical School, Dr. Gumbo was an Assistant Professor of Medicine at Albany Medical College and attending physician in Infectious Diseases at Albany Medical Center. He has conducted research in Zimbabwe and published numerous scientific papers on AIDS and other infectious diseases.

Gustavo Stolovitzky, Ph.D. - Manager, Functional Genomics and Systems Biology, IBM Computational Biology Center

Gustavo Stolovitzky is a Fellow of the NY Academy of Sciences, a Fellow of the American Physical Society, an adjunct Associate Professor at Columbia University and the Manager of the IBM Functional Genomics and Systems Biology Group. His DNA transistor project was chosen by *Scientific American* as one of the ten world-changing ideas of 2010.

Panel #3 - Lessons Learned: What Drives Innovation?

This panel will explore the lessons of innovation from other industries. Topics will include how to organize for increased innovation, barriers to innovation, and the environmental components needed to support innovation.

Peter Senge, Ph.D. – Senior Lecturer, MIT Sloan School of Management, Founding Chair Society for Organizational Learning, author of "The Fifth Discipline"

Peter Senge is a senior lecturer at MIT's System Dynamics Group and co-faculty at the New England Complex Systems Institute. Senge's book "The Fifth Discipline" is a study of systems thinking.

- Stephen D. Huffman, Ph.D., Vice President and Chief Technology Officer, MITRE Corporation
- Other Panelists: TO BE ANNOUNCED

Panel #4: The Next Generation

Douglas Lauffenburger, Ph.D. – MIT, Panel Moderator

Douglas A. Lauffenburger is Ford Professor of Bioengineering and Head of the Department of Biological Engineering at MIT, and also holds appointments in the Department of Biology and the Department of Chemical Engineering. He is a member of the Center for Biomedical Engineering (CBI), Center for Cancer Research, Center for Environmental Health Sciences, and Center for Gynepathology Research, and is Director of the Computational & Systems Biology Initiative.

- Thomas Roberts, Jr., M.D. Managing Member, Farallon Capital
- Anand R. Asthagiri Associate Professor, Department of Chemical Engineering at Northeastern University
- Judy Maro Ph.D. Student in Engineering Systems at MIT
- Gavin MacBeath, Ph.D. Senior Director, Head of Translational Medicine, Merrimack Pharmaceuticals

Closing Remarks

Anthony Sinskey, Sc.D. - Professor of Microbiology and Health Sciences and Technology, MIT

Dr. Sinskey currently serves on the board of directors of ABEC, Merrimack Pharmaceuticals, Metabolix and Tepha. He is an advisor to Serono, VIMAC Ventures, and Knome. Dr. Sinskey received his undergraduate degree from the University of Illinois and his Sc.D. from the Massachusetts Institute of Technology. His post-doctoral work was done at the Harvard School of Public Health.

The **Innovation in Healthcare Symposium:** *Systems Thinking from Discovery to Delivery* was conceived by Merrimack Pharmaceuticals, Inc. and developed with the help of MIT's Center for Biomedical Innovation, Department of Biological Engineering and Engineering Systems Division. The Symposium's goal is to inspire today's students, our future experts, to implement innovative, systems thinking to improve healthcare from discovery through delivery. To learn more about the Symposium, visit <u>http://www.innovationinhealthcare2011.com</u>.

Symposium Sponsors

Lead Sponsor: Merrimack Pharmaceuticals; Key Sponsor: UBS; Contributing Sponsors: Inc Research, WilmerHale

Symposium Beneficiary

Symposium proceeds will be donated to the **Lustgarten Foundation**, dedicated to advancing the scientific and medical research related to the diagnosis, treatment, cure and prevention of pancreatic cancer. The foundation's efforts focus on increasing funding and support of research, bridging dialogue between members of the medical and scientific communities, and heightening public awareness to patients, families and friends. To learn more visit www.lustgarten.org.

About Merrimack

Merrimack Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to the discovery and development of novel medicines for the treatment of cancer. The Company is advancing a robust pipeline of engineered therapeutics paired with molecular diagnostics. In addition to several pre-clinical and research stage programs, Merrimack has three oncology candidates in clinical development: MM-121 in Phase 2 clinical testing in partnership with sanofi-aventis, MM-111 in Phase 1/2 clinical testing, and MM-398, in Phase 2 clinical testing in partnership with PharmaEngine, Inc. MM-121, MM-111, and MM-398 are investigational drugs and have not been approved by the U.S. Food and Drug Administration or any international regulatory agency. The Company's proprietary Network Biology discovery platform, developed with the help of leading scientists from MIT and Harvard, integrates the fields of engineering, biology and computing to enable mechanism-based model driven discovery and development of both therapeutics and diagnostics. Merrimack is a privately-held company based in Cambridge, Massachusetts. For additional information, please visit http://www.merrimackpharma.com.

About the MIT Center for Biomedical Innovation (CBI)

CBI's mission is to improve global health by overcoming obstacles to the development and implementation of biomedical innovation. CBI, which resides in the MIT Engineering Systems Division, provides a safe haven for collaborative research among industry, academia, and government, and draws on the expertise of MIT's schools of engineering, science, and management, as well as the Harvard-MIT Division of Health Sciences and Technology (HST). Visit web.mit.edu/cbi.

About the MIT Department of Biological Engineering (BE)

MIT's Biological Engineering department is on the forefront of the emerging biology-based engineering discipline. BE researchers fuse engineering principles with the knowledge and tools of molecular life sciences in order to solve contemporary problems through the measurement, modeling, and rational manipulation of biological systems. We prepare engineers and scientists to create biology-based technologies to benefit a range of diverse areas including human and environmental health, agriculture, manufacturing, and defense. Our faculty explores complicated problems arising from societal needs and concerns. BE researchers direct leading-edge research programs designed to address those problems.

About the MIT Engineering Systems Division (ESD)

MIT Engineering Systems Division recognizes that many of today's most complex and pressing challenges require innovative and interdisciplinary approaches. Challenges such as making healthcare affordable and accessible, managing global manufacturing and supply chains, rebuilding crumbling infrastructures, and working toward energy security don't have purely technical solutions. They involve technology, processes, and policies. ESD students and faculty address such challenges using interdisciplinary approaches rooted in engineering, management, and social sciences.

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