CURE NEWS
Connecticut United for Research Excellence, Inc
The Center of Connecticut's BioScience Cluster
the first source of news on Connecticut bioscience

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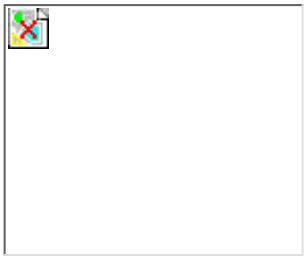
Contents

Sector Vital But Needs to Gear for Uncertainty

From the desk of Paul Pescatello, President and CEO of CURE



It was great to see such a turnout for the CURE theater evening Jan 30. We enjoyed an outstanding performance by Anna Deveare Smith of her new piece about the human body "Let Me Down Easy," in which she portrayed dozens of people, including Yale School of Medicine faculty. And we had the chance to mix and mingle, with the New Haven arts as well as the bioscience community, at the cocktails and dinner prior to the performance.

The evening was also an informal launch for Developing World Cures, the new CURE subsidiary that will seek donations of compounds and intellectual property from pharmaceutical companies and research universities, in order to develop them into medicines for neglected diseases of the developing world. Denice Spero, the president, and Peter Farina, the CEO of the new company, were both on hand for the networking and theater evening.

Earlier in the week, the Hartford Courant ran a story on Developing World Cures that was picked up by the AP. As I pointed out there, fund-raising is just beginning for this project, and it will take some time before development of medicines for neglected diseases is in full swing. But meanwhile it is one more sign, like Connecticut's recent support of stem cell research, of the vitality and commitment of our state's bioscience industry. Developing World Cures is poised to tap into the research excellence all around us, and at the same time it represents one more reason why top-notch researchers, and their working spouses, will want to come to Connecticut.

Needless to say, keeping Connecticut attractive for bioscience remains CURE's key priority as we enter a new legislative season. This session is a short one, from February to May. In theory, with the biennial budget off the table this year, lawmakers will have more time to focus on policy considerations, especially in such important areas as transportation and health care. But as the economy slows and state revenues dwindle, there will be new pressures on Connecticut bioscience R&D. All of us must remain vigilant.

We must also find ways to continue to attract new investment during a time of economic uncertainty. One initiative that CURE is backing is the extension of the tax benefits now afforded to C corporations to LLPs and LLCs as well. Since many venture capitalists and angel investors prefer the latter forms of organization (because they pass through taxation, and hence tax credits, to the individuals behind a company), this measure would be a simple and elegant method of attracting more venture capitalists and angel investors to the state.

Paul R. Pescatello is President and CEO of CURE.

Rib-X Tells the Story of Its Novel Antibiotics

Mix of science and business fuels attendance at CURE/Yale BioHaven Series

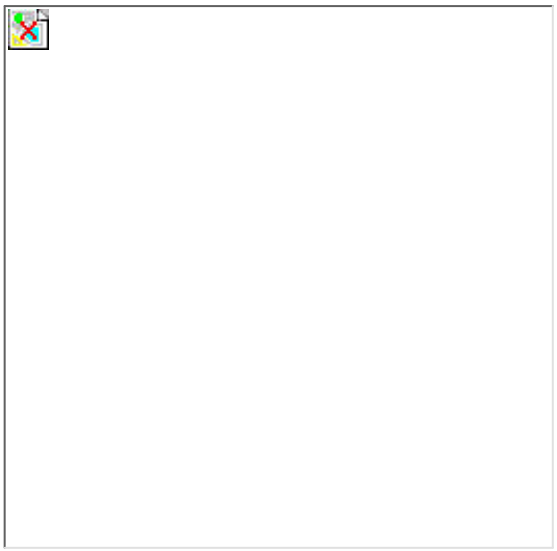
Resistant to traditional antibiotics, "superbugs" such as MRSA are a growing problem in both hospital and community settings. Rib-X Pharmaceuticals, Inc. is focused on the design and development of novel small-molecule antibiotics for the treatment of antibiotic-resistant infections in such environments.

Detailing the Rib-X story Feb 12 in New Haven, as part of the BioHaven seminar series presented by CURE and Yale OCR, were Bob Conerly, vice president and CFO, and Erin Duffy, Ph.D., vice president, structure based drug design. The team was introduced by Michelle Bowman of series sponsor PricewaterhouseCoopers.

Since its inception in 2001, Rib-X has established a portfolio of development and discovery-stage compounds that address various segments in the diverse antibiotic marketplace, including RX-3341, a broad spectrum quinolone antibiotic which will soon enter Phase 3 studies as an IV agent and RX-1741, an oxazolidinone antibiotic now in two Phase 2 studies as an oral agent.

Erin Duffy and Bob Conerly of Rib-X Pharmaceuticals

Many classical antibiotics work by inhibiting the function of the ribosome. A key competitive advantage, Rib-X maintains, is its proprietary access to the high-resolution crystal structure of the ribosome, a molecule which is essential for the viability of all bacterial pathogens and the target of numerous valuable antibiotics.



Michelle Bowman, partner, PricewaterhouseCoopers, and Harry Penner, chair, Rib-X Pharmaceuticals

Rib-X's research goal is to use chemical and physical information from the three-dimensional structure of the ribosome to design proprietary classes of antibacterial agents that have activity against newly emerging multiple antibiotic-resistant microorganisms.

Structural and computational data about how ligands block the function of this complex molecular machine are being used to prime parallel lead optimization programs focused on new chemistry ideas about the multiple binding domains or drug targets within the ribosome.

Rib-X raised $50 million in a Series C Preferred Stock financing announced in June of 2006. The round was led by existing investor Warburg Pincus, the global private equity investment firm. That round of financing brought the total amount raised by the company to $123 million.

The presentations were followed by an hour of networking with hor d'oeuvres and wine bar.

Sponsored by Wiggin and Dana, Price WaterhouseCoopers, and Elm Street Ventures, and presented by CURE and the Yale Office of Cooperative Research, the BioHaven series continues with a presentation March 19 featuring Optherion, Inc. Download a brochure of the complete 2007-2008 series here.

A Yale student (left) exchanges cards with Paul Pescatello, president and CEO of CURE

Pescatello Reports on UK Stem Cell Facilities

On January 15, Paul Pescatello, president and CEO of CURE, testified before the Connecticut Stem Cell Advisory Committee in Hartford about his recent visit to stem cell facilities in the UK. His testimony is provided below.

Good Afternoon.

Thank you for giving me this opportunity to report back to you about stem cell research facilities in the United Kingdom.

Last October, together with Department of Economic and Community Development Commissioner Joan McDonald and University of Connecticut stem cell researcher Marc Lalande, I toured a variety of stem cell research facilities across the United Kingdom at the invitation of the UK government.

We were part of a delegation that included groups from states with innovative stem cell initiatives.

The other groups in the delegation included researchers, policy makers and industry representatives from Maryland/Johns Hopkins University, Texas/Baylor University, and California and several of California's leading research universities.

The delegation was assembled by the UK government as a means to educate about the scope and nature of stem cell research in the UK and, in the process, bring to light potential research collaborations and investment opportunities.

Our tour began in Edinburgh.

We visited the University of Edinburgh and were given an overview of its stem cell research laboratories by Ian Wilmut. We met with a cross section of academic researchers, researchers transitioning into stem cell-related entrepreneurial activities, and Scottish stem cell research policy advocates.

As was the case throughout our visit, our meetings also included introductions to and talks by those charged with ethics oversight.

The University of Edinburgh and its commitment to stem cell research was impressive. As it now stands, Ian Wilmut's Scottish Centre for Regenerative Medicine is a state-of-the-art facility. More important, though, is its planned expansion.

We were given a good sense of its future components and interconnection to other facilities both at Edinburgh University and around the UK.

We next visited the University of New Castle. New Castle University, long a leader in invitro fertilization, has recently opened a new invitro fertilization facility. This facility is reported to have the highest rate of success in world—success as measured by births resulting from pregnancies resulting from invitro procedures conducted at the New Castle clinic.

This success rate is due both to the equipment as well as the systems and protocols developed in New Castle.

Perhaps more impressive was the connection—literally and figuratively—of this fertility clinic to the university stem cell research laboratories. Both facilities—the invitro fertilization clinic and stem cell labs—were designed and built according to Good Manufacturing Practices. Donated embryos can be transferred seamlessly from the clinic to the laboratory.

To the extent clinical opportunities arise from research conducted through these two GMP facilities, the process involved in getting stem cell research-derived material into human subjects is greatly simplified.

We spent considerable time when we were at the New Castle facilities and also subsequently exploring what it would take to duplicate the New Castle facilities here in Connecticut.

The University of Connecticut's existing and highly regarded invitro fertilization clinic and UConn's planned stem cell research expansion seem like an ideal site to build upon what has been accomplished in New Castle.

We took special note that the New Castle invitro fertilization-stem cell research lab complex was a custom design.

A means to mass produce it, so to speak, does not yet exist. This could be a real opportunity for a Connecticut provider/manufacturer to replicate New Castle's design and equipment for installation at UConn Farmington and also around the world.

We have been working since our visit to the UK to obtain the specifics about what it would take to replicate New Castle's

clinic here—both the manufacturing details and a firm grasp of the costs involved.

The last portion of our trip was in London. There we heard presentations by University of London and Cambridge scientists about their stem cell research efforts and nascent entrepreneurial activity.

The ongoing research was fascinating. One project and start-up company concerns macular degeneration. We had an interesting exchange about one of CT's new biotech start-ups, Optherion, based in New Haven. Just this summer Optherion raised $37 million, which Optherion has put to work towards its own macular degeneration R&D.

We hope our contacts in the UK will cause both research and commercial collaboration between CT and the UK in the critical field of macular degeneration treatment.

The presentations in London were perhaps the most focused on commercial development.

While I was impressed by the desire and effort to forge commercial applications of UK stem cell research, I was also somewhat surprised that the business model for the UK entrepreneurial activities appears to be based on mining profit—and recouping R&D expenditures—from the US market, while pricing products below true cost in the UK and Europe.

I am not confident that such a strategy will work for the UK—that US venture capitalists will pour investment into companies and manufacturing sites based in countries that will not allow them to price their products according to the market.

At the same time, however, this certainly raises an opportunity for us to recruit these companies when they are in later stage clinical development and, especially, when they are at the manufacturing stage.

Two New Companies Join UConn's TIP

Two new companies, Revegen Corp and Escientia Life Sciences, will join UConn's Technology Incubation Program, which offers space and services to start ups.

Revegen is pioneering a novel proprietary technology to improve the efficiency of the pharmaceutical discovery process and will locate at the Health Center in Farmington. Escientia will provide research and development services to biotechnological and biopharmaceutical companies and will serve as a resource to faculty inventors as well. Escientia will locate at TIP space in Storrs.

TIP continues to move forward with the development and planning for a new incubator at 400 Farmington Avenue, to open in 2009, and plans to offer state-of-the-art space for bioscience firms. TIP will also be expanding capacity at the Avery Point Campus and was recently notified that UConn will receive state and federal funds totalling $1 million for this project.

UConn has additional wet lab openings in Farmington. "This is a great opportunity for early-stage firms that want to leverage their resources through a relationship with the University," says Rita Zangari, Executive Program Director of UConn's Technology Incubation Program.

Located in Building 4 on the UConn Health Center campus, the labs range in size from 163 to 313 square feet with a 70 square feet adjoining office for some of them. Equipment includes fume hood, sink, and shared cold rooms, and utilities such as hot, cold and DI water, gas, vacuum and compressed air, and multiple power outlets including 110 and 220V. Phone and IT jacks are provided.

All TIP labs feature benches, shelves, cabinets, and windows in the lab space, and access to amenities such as:

- Environmental health and safety services including waste removal
- Online and physical access to the UCONN libraries
- Access to other equipment in faculty labs can be arranged
- Use of service centers at the Health Center for reasonable fees (http://www.uchc.edu/hc/research.html)
- Use of conference rooms, fax, and copier
- Teleconferencing capacity
- Animal facilities based on space available and faculty collaboration

For more information, contact Rita Zangari 860-486-3010 (rita.zangari@uconn.edu) or Alexandra Litor-Li 860-486-3001 (alexandra.li@uconn.edu); or visit the TIP website at www.tip.uconn.edu.

454 Life Sciences (Branford) announced that, using 454 sequencing technology, researchers at Columbia University and Victorian Infectious Disease Laboratory have discovered a new virus responsible for the deaths of three organ transplant recipients. Earlier the company announced new products and software for its ultra-high throughput Genome Sequencer FLX System.

Achillion Pharmaceuticals, Inc. (New Haven) announced the appointment of Dr. Elizabeth A. Olek as vice president and chief medical officer. Dr. Olek joins Achillion as a member of the executive management team and will lead the clinical development of Achillion's product development candidates. Dr. Olek joins Achillion from Novartis Pharmaceuticals Corporation.

Alexion Pharmaceuticals (Cheshire) and The Oklahoma Medical Research Foundation announced that Alexion has agreed to acquire from OMRF all rights to certain patents related to complement-inhibition technology. The patents cover inventions made by OMRF in the 1980s relating to the treatment of complement system mediated disorders, to which Alexion has had limited rights as a licensee since the inception of the company. In the 1990s, Alexion began programs to create and develop monoclonal antibodies capable of blocking the body's complement system. One result of these Alexion programs was the development of Soliris®, which was approved for marketing by the U.S. Food and Drug Administration and by the European Commission during 2007. Soliris® (eculizumab) is a complement inhibitor product developed and marketed by Alexion for the treatment of paroxysmal nocturnal hemoglobinuria, a rare, debilitating and life-threatening disease.

Commenting on the company's 2007 results, Leonard Bell, M.D., CEO, said: "Alexion's regulatory and commercial success in 2007 is a direct result of breakthrough science, compelling clinical data and a steadfast commitment to patients. During 2007, Alexion became a global commercial organization and started to fulfill its mission of improving the lives of people with serious and life-threatening disease. Physicians are developing a new sense of urgency in detecting and treating patients with PNH as early as possible. We greatly appreciate the confidence and support we have received from physicians, employees, and shareholders since Alexion was founded."

Applied Spine Technologies (New Haven) announced the appointment of Michael J. Giordano, M.D., M.B.A. as chief medical officer. He will oversee an ongoing, randomized, controlled, national clinical study comparing the company's Stabilimax NZ® device to traditional fusion surgery.

Bayer HealthCare (Leverkusen, Germany/West Haven) announced that its partner, ZymoGenetics Inc., received FDA approval of RECOTHROM™ for use as a topical hemostatic product. Bayer acquired the product rights for all markets outside the US in 2007 and will provide US sales support for a three-year period as part of a co-promotion agreement.

Boehringer Ingelheim (Ingelheim, Germany/Danbury) announced completion of the enrollment phase of its RE-LY™ study, which is comparing two blinded doses of oral dabigatran etexilate with the current standard therapy, warfarin (target INR 2.0-3.0) in patients with non-valvular atrial fibrillation who are at moderate to high risk of stroke. Currently, over 10,000 patients have been treated for at least 6 months with final study results expected to be reported in early 2009.

Bristol-Myers Squibb Company (New York/Wallingford) has named Togo D. West, Jr., to its board of directors, where he will will serve as a member of the compensation and management development committee and the committee on directors and corporate governance. West, 65, is currently chairman of TLI Leadership Group and of Noblis, Inc. He has been U.S. Secretary of the Army and U.S. Secretary of Veterans Affairs.

Carigent Therapeutics (New Haven) announced that the National Science Foundation has awarded the company a six-month, $97,000 Phase I Small Business Innovation Research (SBIR) grant to engineer long-circulating nanoparticles that target delivery and enable controlled release of paclitaxel to ovarian cancer tumors. Paclitaxel, a widely used chemotherapy drug sold under various brand names, including Taxol®, is a potent anticancer natural product used to treat patients with leukemia, lymphoma, and a number of solid-tumor malignancies including ovarian cancer, breast cancer, lung cancer, and brain cancer.

Cognate BioServices (Baltimore/New Haven) has taken 7,550 square feet of laboratory and office space at the Long Wharf Maritime Center in New Haven. Established in 2002 and founded by Toucan Capital, Cognate is an international research and development company with an established track record of of successfully developing and providing a broad range of cell-based products and services for research, drug discovery, and clinical applications. Richard Gold of O,R&L represented the company in the lease negotiations.

CuraGen Corporation (Branford) announced the appointment of Sean Cassidy as vice president and CFO. David W. Wurzer is stepping down to pursue other opportunities. Previously Cassidy served as controller of 454 Life Sciences Corporation.

Danbury Hospital (Danbury) has announed the appointment of Jessica L. Dodge, M.D., to the Department of Laboratory

Medicine. Board certified in Anatomic and Clinical Pathology, Dr. Dodge earned her medical degree from the Medical College of Pennsylvania, and was an intern at the Johns Hopkins Hospital in Baltimore, MD. She also completed a residency and Surgical Pathology Fellowship at Johns Hopkins Hospital. She was previously employed at the Cayuga Medical Center at Ithaca (NY) and St. Vincent Hospital at Worcester Medical Center in Massachusetts.

GlaxoSmithKline (London/Research Triangle Park, NC) and XenoPort, Inc. announced positive top-line results from a placebo-controlled Phase 3 clinical trial designed to evaluate the potential of XP13512 (GSK1838262) to maintain efficacy over the course of nine months in patients with moderate-to-severe primary Restless Legs Syndrome. "The results of this study strengthen our belief that XP13512 has potential as an effective and well tolerated treatment for primary RLS," said Ronald W. Barrett, Ph.D., chief executive officer of XenoPort.

The newest satellite facility of **Hartford Hospital** (Hartford) is the Helen & Harry Gray Cancer Center in Avon. The new center, on Fisher Drive just a short distance from the hospital's Wellness Center on Rte. 10, is slated to open in July, 2008.

HistoRx (New Haven) named Rana K. Gupta CEO. Gupta had been serving as interim CEO since August 2006. During that time, the company advanced its proprietary AQUA® tissue biomarker analysis technology platform, increased its revenue stream to fund product development, and completed a $6 million Series B equity financing round.

Ipsogen (Marseille, France/New Haven) has entered into a pilot agreement with AstraZeneca to evaluate molecular services and products in cancer research. Ipsogen will provide AstraZeneca with JAK2-based products for initial evaluation and will conduct quantitative analysis in its Marseille laboratories on samples provided by AstraZeneca. The study will help determine the viability of a test which could potentially be utilized by AstraZeneca in future clinical trials. Ipsogen is the exclusive worldwide licensee of the intellectual property on the JAK2 V617F mutation.

The company also announced the a license agreement with Université Libre de Bruxelles (ULB), Belgium for the worldwide and exclusive rights on the Genomic Grade™, a genomic index invented by Pr. Christos Sotiriou & Pr. Martine Piccart, from the Bordet Institute, Brussels and Dr. Mauro Delorenzi from the Swiss Institute for Cancer Research (ISREC), Lausanne, two leading European cancer research institutes.

Reporting on 2007 results, William C. Weldon, chairman and CEO of **Johnson & Johnson** (New Brunswick, NJ), said, "Despite challenges in certain markets, our broad base of businesses allowed us to achieve solid results, building on our foundation of long-term profitable growth. It was a year of significant progress in our pipeline; the successful integration of Pfizer Consumer Healthcare; and the creation of new organizational structures focused on future growth."

Commenting on 3Q results, Alfred Mann, chairman and CEO of **MannKind Corporation** (Valencia, CA/Danbury), said, " While Exubera [inhalable insulin] was withdrawn from the marketplace, our Technosphere Insulin is very different and continues to be well received by patients and physicians in our clinical trials. Our Phase III program is on track and our readiness for commercial operations is proceeding according to schedule. As data becomes available in 2008, we will be able to share more of this progress with our investors. In the meantime, the recently announced positive Phase I data for our Technosphere/GLP-1 product were encouraging. More than ever, there is a need for improved and innovative diabetes therapies. We at MannKind remain committed to bringing such therapies to the enormous number of diabetes patients who suffer from this disease."

NanoViricides, Inc. (West Haven) reported that they are on course with the development of nanoviricides™ drug candidates against highly pathogenic avian influenzas (HPAI) including H5N1 bird flu, and common influenza. "We are now ready to begin animal studies on H5N1 at a renowned federal agency," said Dr. Eugene Seymour, MD, MPH, CEO of the Company. Earlier, the Company had delayed these studies in search of suitable facilities. The work is expected to begin once the contracts are finalized.

Neurogen Corporation (Branford) announced Feb 4 that its president, Stephen R. Davis, has been appointed chief executive officer. William Koster has retired but remains on the company's board. The company announced Feb 6 that it is reducing its workforce as part of a restructuring intending to focus its resources on its advancing clinical assets.

Earlier, the company announced that it has completed the follow-up component of a Phase I multiple ascending dose (MAD) study with NGD-4715, an MCH-1 receptor antagonist being investigated for the treatment of obesity. Results suggest that the effect of MCH-1 receptor antagonism on caloric regulation and sleep architecture requires further study in humans. Based on the results, Neurogen has determined that it will not advance the compound into Phase II testing at this time, but will consider out-licensing its MCH program for potential development with a partner.

Commenting on 2007 results, Jeff Kindler, chairman and CEO of **Pfizer Inc.** (New York, NY/Groton/New London), said: "In 2007, we delivered solid performance, and made structural and operational changes to enhance the future performance of our company. With strong product performance, cost reductions, improved productivity and the benefits of foreign exchange, we achieved both revenue and adjusted diluted EPS growth ... . Our new products — Lyrica, Chantix, and Sutent — are performing well. We are continuing to strengthen our senior leadership team and enhance accountability. We

are shifting investments into high-priority therapeutic areas, revamping our R&D operations and acquiring new compounds and technologies that we believe are especially promising. These actions taken together have made Pfizer a stronger company than it was a year ago, and we look forward to continued progress in 2008."

Pharmaceutical Research and Manufacturers of America (PhRMA) (Washington, DC) has joined a nationwide workplace wellness effort in becoming *CEO Cancer Gold Standard*™ accredited, certifying their commitment to the health of their employees and their families by meeting an exceptionally high standard of cancer prevention, screening and health care. The *CEO Cancer Gold Standard*™, calls for companies to evaluate their benefits and culture and take extensive, concrete actions in five key areas of health and wellness to fight cancer in the workplace. To earn accreditation, a company must establish programs to reduce cancer risk by discouraging tobacco use; encouraging physical activity; promoting a healthy diet; providing appropriate screening to detect cancer at its earliest stages and providing access to quality care, including cancer clinical trials.

Purdue Pharma L.P. (Stamford) said it had achieved an important victory in its patent infringement litigation relating to Purdue's patents covering the pain medicine OxyContin® (oxycodone HCl controlled-release) Tablets when the United States District Court for the Southern District of New York rejected claims that the patents in suit were unenforceable because of alleged inequitable conduct by Purdue in obtaining them from the United States Patent and Trademark Office. In an Opinion and Order dated January 7, 2008, the Court stated, "[T]he weight of the equities before this Court does not warrant the extreme sanction of holding the patents in suit unenforceable. ...[D]efendants have failed to show by clear and convincing evidence that the Purdue committed inequitable conduct before the PTO, and therefore the patents-in-suit will not be held unenforceable on that basis."

RainDance Technologies (Guilford) was selected as a World Economic Forum Technology Pioneer and invited to participate in the World Economic Forum Annual Meeting in Davos, Switzerland, in January 2008. Technology Pioneers are companies that have been identified as developing and applying highly transformational and innovative technologies in the areas of energy, biotechnology and health, and information technology. According to the Forum, to be selected as a Technology Pioneer, a company must be involved in the development of life-changing technology innovation and have the potential for long-term impact on business and society. In addition, it must demonstrate visionary leadership, show all the signs of being a long-standing market leader — and its technology must be proven.

Rib-X Pharmaceuticals, Inc. (New Haven) announced the enrollment of the first patients in two separate Phase II clinical trials. The studies will evaluate the safety and efficacy of RX-1741 in the treatment of Community-Acquired Pneumonia, and separately in the outpatient treatment of Uncomplicated Skin and Skin Structure Infections. RX-1741 is the Company's first antibiotic program developed using its proprietary technology platform. RX-1741 is an oxazolidinone antibiotic that exhibits activity against methicillin-resistant Staphylococcus aureus (MRSA) and other Gram-positive organisms, and has demonstrated both greater spectrum and potency of activity than the currently marketed product of the same class. Rib-X believes that RX-1741, discovered using proprietary knowledge of the three dimensional structure of a key area of the ribosome, the 50S subunit, will demonstrate a high level of effectiveness against resistant microbes.

Vion Pharmaceuticals, Inc. (New Haven) announced that the FDA has lifted the clinical hold on the Phase III trial (Vion Study CLI-037) of its lead anti-cancer agent, Cloretazine® (VNP40101M), in combination with cytarabine in relapsed acute myelogenous leukemia (AML). Alan Kessman, CEO, said, "We are pleased with the FDA's decision ... and are now poised to move ahead with clinical development."

Webster Bank (Waterbury) announced the appointment of Jeffrey A. Klaus as regional president for its greater New Haven region. Klaus has 25 years of experience in the Connecticut banking industry.

*Following is recent news from **The University of Connecticut** (Storrs) and the **University of Connecticut Health Center** (Farmington).*

Six proposals from researchers in the sciences and engineering won a total of $2 million of equipment funding in the recent Provost's Research Equipment Competition at UConn. more

A new automated clinical laboratory is adding another level of patient protection at the Health Center, as well as cost-savings and safety benefits for staff. more

The second annual New England Musculoskeletal Institute Research Day was held recently at the UConn Health Center. The event is an opportunity for scientists and clinicians to present their latest research findings. more

*Following is recent news from **Yale University** and the **Yale School of Medicine** (New Haven).*

Bioengineers at Yale and Cornell have created a modified chemotherapy that more effectively reaches and remains at the site of brain tumors — by adding a water-soluble polymer to the anti-cancer drug, according to a report in the November-December issue of Bioconjugate Chemistry. "This approach has the potential to increase treatment distances to

more than a centimeter, which may be sufficient to prevent the recurrence of human brain tumors," said Mark Saltzman, Goizueta Foundation Professor of Chemical and Biomedical Engineering at Yale and senior author on the paper.

Boosting an exercise-related gene in the brain works as a powerful anti-depressant in mice-a finding that could lead to a new anti-depressant drug target, according to a Yale School of Medicine report in Nature Medicine. "The VGF exercise-related gene and target for drug development could be even better than chemical antidepressants because it is already present in the brain," said Ronald Duman, professor of psychiatry and senior author of the study.

An antibody used to treat certain cancers and rheumatoid arthritis appears to greatly delay type 1 diabetes in mice, Yale School of Medicine researchers report in the Journal of Clinical Investigation. "Our paper shows, for the first time, that after successful B cell depletion, regulatory cells emerge that can continue to suppress the inflammatory and autoimmune response even after the B cells return," said Li Wen, senior research scientist in the division of endocrinology. "Even more strikingly, we found that these regulatory cells include both B and T cells."

Yale School of Medicine researchers have shown for the first time that it is possible to suppress the development of epilepsy in genetically predisposed animals — which could open the door to treating epilepsy as a preventable disease. "Current treatments for epilepsy may control seizures, but they do nothing to alter the underlying disease," said Hal Blumenfeld, M.D., associate professor of neurology and lead author of the study. "These findings are important because they set the stage for prevention of epilepsy in genetically susceptible people."

A genetic mutation expands lesions in the aorta and promotes coronary atherosclerosis, more commonly known as hardening of the arteries, according to a study by Yale School of Medicine in Cell Metabolism. "Mice engineered without the Akt1 gene and fed a high cholesterol diet had many more signs of aortic atherosclerosis compared to their littermates," said William Sessa, senior author of the study, professor of pharmacology, and director of Yale's vascular biology and therapeutics program.

Yale School of Medicine researchers have isolated a gene that helps protect newborns from the most common respiratory cause of infant death in the United States — respiratory distress syndrome. "The finding is important because prematurity is not only the most common respiratory cause of infant mortality in the U.S., it also tends to be a more serious problem in inner city neighborhoods," said Richard Bucala, M.D., professor of medicine and pathology, professor of epidemiology at Yale School of Public Health, and senior author of the study.

Researchers at Yale School of Medicine have found that a low concentration of vitamin E in the blood is linked with physical decline in older persons. Published in the January 23 issue of Journal of the American Medical Association, the study included 698 people age 65 or older who were randomly selected from the population registry in two municipalities close to Florence, Italy. The researchers, led by first author Benedetta Bartali of Yale, collected blood samples to measure the levels of micronutrients including folate, iron and vitamins B6, B12, D and E.

The New Haven City Plan Commission unanimously approved a site plan for a garage to be used by the Smilow Cancer Center at Yale-New Haven Hospital. Plans call for retail shops to surround the garage. Besides the garage, a new medical lab on Park Street accompanies development of the cancer center, which is expected to open in 2009.

Research projects by two Yale School of Medicine investigators — one studying global healthcare disparities, the other, depression — have been given a boost with five-year, $600,000 awards from the Patrick and Catherine Weldon Donaghue Medical Research Foundation for Health-Related Research. The Investigator Awards to Jennifer Prah Ruger, assistant professor in the Division of Global Health at Yale School of Public Health, and Alexander Neumeister, M.D., director of the Molecular Imaging Program in psychiatry, are intended to support particularly promising and highly talented medical researchers holding academic appointments at Connecticut institutions.

Tim Corson, a Yale postdoctoral fellow in the Department of Molecular, Cellular & Developmental Biology, received two top fellowship honors from the Canadian Institutes of Health Research (CIHR) in Ottawa on November 20 for his proposal of a research project to target and destroy a protein commonly active in cancer. Corson received the Jean-François St-Denis Fellowship in Cancer Research for the top-ranked proposal in the field of cancer research in the 2006-2007 competition, and a Bisby Fellowship for submitting the overall top-ranked post-Ph.D. proposal in February 2007 competitions.

Even though current guidelines advocate colorectal cancer screenings for those with severe illnesses, they may bring little benefit and may actually pose harm, according to a recent study by Yale School of Medicine researchers published in the Archives of Internal Medicine. First author R. Scott Braithwaite, M.D., and his colleagues developed a new method of evaluating medical screening tests like colonoscopy, called the "payoff time," which is the minimum amount of time it takes for the benefits from a test to exceed its harms (i.e., its complications and side effects).

The largest, most comprehensive study of young women with heart attacks — VIRGO (Variation in Recovery: Role of Gender on Outcomes in Young AMI patients) — was recently launched at Yale School of Medicine with a $9.7 million National Institutes of Health grant. "This is the first study to focus on this high risk-and highly unstudied-group." said Yale School of

Public Health Associate Professor Judith Lichtman, co-principal investigator of the study. “There have been no large, prospective studies of this population, even though the death toll is comparable to that from breast cancer.”

The adage “It's not what you say but how you say it” — was confirmed by a Yale study, which shows that playing up the benefits of quitting smoking is more effective in getting people to quit than emphasizing the problems associated with continuing to smoke. The difference is substantial enough that consideration should be given to rewriting the warning labels on packs of cigarettes to emphasize the benefits of quitting smoking rather than the risk of continuing, said first author Benjamin Toll, assistant professor of psychiatry at Yale School of Medicine.

Children learn by imitating adults-so much so that they will rethink how an object works if they observe an adult taking unnecessary steps when using that object, according to a Yale study today in Proceedings of the National Academy of Sciences. “Even when you add time pressure, or warn the children not to do the unnecessary actions, they seem unable to avoid reproducing the adult's irrelevant actions,” said Derek Lyons, doctoral candidate, developmental psychology, and first author of the study. “They have already incorporated the actions into their idea of how the object works.”

Black patients are significantly less likely than their white counterparts to receive therapy for various kinds of cancer, despite recent efforts to close gaps in treatment, according to a study by researchers at Yale School of Medicine published in the January 7 online issue of the journal Cancer. Cary P. Gross, M.D., associate professor of medicine at Yale School of Medicine, and colleagues studied the Surveillance, Epidemiology, and End Results (SEER)-Medicare database to evaluate whether greater attention and investment in access to care for all individuals have led to any reduction in cancer treatment disparities.

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