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Stem Cell Pay Off

Connecticut's stem cell policy is beginning to pay off, writes William Hathaway in the Aug 20 *Hartford Courant*. [more](#)

Events Column

9/6 7:45 am - 12 noon. CBIA Event: The Connecticut Economy. With Joan McDonald, Commissioner, DECD, et. al. Marriott Hotel, Rocky Hill, CT. [more](#)

9/7 4:30 pm - 7:00 pm. CBIA Event: The Fairfield County Economy. With Joan McDonald, Commissioner, DECD, et. al. UConn, Stamford, CT. [more](#)

9/11 Connecticut Venture Group: "Accessing Capital to Grow Your Business." First in a series of seminars by the CVG Entrepreneur's Association. Sheraton Hotel, Stamford. [more](#)

9/26 9:00 am - 4:30 pm. Connecticut Venture Group: Early Stage Boot Camp + Practice Pitches. New Haven Lawn Club, New Haven, CT. [more](#)

10/3 3:00 pm - 5:00 pm. Connecticut Venture Group: CT Business Financing Fair. Sacred Heart University, Fairfield, CT. [more](#)

10/24 3:00 pm - 6:00 pm. CURE and Yale OCR Present: BioRelix. A BioHaven Entrepreneurship Seminar. Anlyan Center, Congress Avenue, New Haven, CT. Reception and networking to follow. Watch for details.

12/4 5:30 pm - 7:30 pm. CURE Holiday Party. Location TBD. "New Haven's best holiday networking event." Watch for details.

Patent 'Reform' Could Hurt Sector Growth

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

An Aug 29 op-ed in the *Hartford Courant* by John LaMattina of Pfizer and J. Martin Carroll of Boehringer Ingelheim points out the shortcomings of the Patent Reform Act of 2007. I hope all those who recognize how tremendously Connecticut has benefited from the growth of its bioscience industry will join me in letting Washington know that the proposal before them needs further

consideration. A lot is at stake: There are encouraging signs of the vitality and dynamism of the Connecticut bioscience sector as we move into the post Labor Day season.

For the full story



CT Stem Cell Research Funding Applications Due

On behalf of the Connecticut Stem Cell Research Advisory Committee, Connecticut Innovations has recently requested proposals for the next round of stem cell research grants-in-aid. For the period ending June 30, 2008, \$10 million in funding is available. To apply, a one-page letter of intent is due by September 15, 2007, and a completed application by 4:40 p.m. on November 1, 2007. Details and an application form can be found at <http://www.dph.state.ct.us/StemCell/Grants.htm>.

Pfizer Expanding Venture Capital Role

Pfizer Inc.'s venture capital program is being restructured and expanded. Instead of using venture dollars principally to find start-ups with technologies that could help it commercialize products, Pfizer will begin investing in a range of drug and health care technology companies. Edmund P. Harrigan of Pfizer and Barbara J. Dalton, who is on the Rib-X board, assume the reins.

For the full story

2/20 3:00 pm - 6:00 pm.
CURE and Yale OCR Present: Rib-X. A BioHaven Entrepreneurship Seminar. Anlyan Center, Congress Avenue, New Haven, CT. Reception and networking to follow. Watch for details.

3/19 3:00 pm - 6:00 pm.
CURE and Yale OCR Present: Ophtherion. A BioHaven Entrepreneurship Seminar. Anlyan Center, Congress Avenue, New Haven, CT. Reception and networking to follow. Watch for details.

3/26 Connecticut Innovations Annual Technology Celebration. The Aqua Turf Club, Southington, CT. [more](#)

4/23 3:00 pm - 6:00 pm.
CURE and Yale OCR Present: Vidus Ocular. A BioHaven Entrepreneurship Seminar. Anlyan Center, Congress Avenue, New Haven, CT. Reception and networking to follow. Watch for details.

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Life Sciences Get Top Share of VC Funding in 2Q

According to the MoneyTree™ Report, nine Connecticut companies received \$103.4 million in venture capital funds during the second quarter of 2007. The largest investments went to life sciences sector companies Spine Wave of Shelton and Applied Spine and BioRelix of New Haven.

[For the full story](#)

CURE Member News Digest

- **454 Life Sciences** sequences Watson genome
- **Achillion** sees progress in first half 2007
- **Alexion** reports \$9.8 million Soliris™ sales in 2Q
- **Applied Spine** profiled after receiving \$28 million
- **AsymmetRx** files patent infringement suits
- **Bayer HealthCare** study show Betaseron® better if not delayed
- **Boehringer Ingelheim** cites global growth, U.S. generics
- **Bristol-Myers Squibb** announces wound care product
- Bowman succeeds Pullen at **Connecticut Innovations**,
- **CuraGen** says enrollment completed in velafermin study
- **Genomas** gets SBIR grant
- **Danbury Hospital** appoints cardiothoracic surgeon
- **GlaxoSmithKline** in deal with UK on flu vaccine
- **Hartford Hospital** cited for psychiatry
- **Johnson & Johnson** continues TYLENOL® scholarships
- **MannKind** files shelf registration
- **NanoViricides** transitions to NASD OTC board
- **Neurogen** sees progress in first half 2007
- **Pfizer** reports the FDA has approved Selzentry™
- **PhRMA** creates Rx Response program
- **Quinnipiac** graduate nursing program gets federal grant
- **RainDance Technologies** reports two new board members
- **SBIR - Connecticut** reports on manufacturing event
- **Vion Pharmaceuticals** announces Cloretazine® study enrollment
- **Webster Bank** offers loan progtram for military veterans
- **XVIVO** cited in *Hartford Courant*
- **UConn Health Center** to host masked ball for skin cancer
- **Yale** team blocks tick protein in Lyme Disease

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Friday, September 7, 2007

Patent 'Reform' Could Hurt Sector Growth

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

An Aug 29 op-ed in the Hartford Courant by John LaMattina of Pfizer and J. Martin Carroll of Boehringer Ingelheim ([more](#)) points out the shortcomings of the Patent Reform Act of 2007, which is now before lawmakers in Washington.



Robust patent protection is a cornerstone of our industry, providing a safeguard and incentive – not just for established pharmaceutical companies, but especially for up-and-coming biotechs and academic researchers considering promising new therapies.

I hope all those who recognize how tremendously Connecticut has benefited from the growth of its bioscience industry the past decade will join me in letting our representatives in Washington know that the patent proposal before them needs further consideration.

There is, after all, a lot at stake. There are encouraging signs of the vitality and dynamism of the Connecticut bioscience sector as we move into the post Labor Day season.

The latest MoneyTree™ report shows that over \$80 million in new investment poured into Connecticut life sciences companies in 2Q 2007 ([more](#)). And Pfizer has signaled its intention to invest more broadly in a wide range of biotech ventures, a policy that is of potential benefit to Connecticut-operations as well as those elsewhere ([more](#)).

Boehringer Ingelheim too is continuing to build its presence in the U.S. and in Connecticut. The official opening of their new physical sciences building in Ridgefield is scheduled for Sept 7.

Meanwhile, Connecticut's far-sighted decision to encourage stem cell research continues to pay dividends. The energizing effect of the state's funding on UConn, Wesleyan, and Yale was documented most recently in a *Hartford Courant* article by Bill Hathaway ([more](#)).

Yale's new stem cell research facility in the Amistad Building in New Haven officially opens October 5, and within the next six months, UConn's Farmington lab is expected to become one of a handful in the country to have extracted human embryonic stem cells from donated embryos, an act forbidden in labs that receive any form of federal funding.

The state's stem cell research committee has already begun taking applications for this year's grants-in-aid ([more](#)), and following the successful StemCONN 07 stem cell symposium in Hartford last March, CURE will continue to take a leadership role in sponsoring further Connecticut stem cell events.

CURE is also working in partnership with Yale's Office of Cooperative Research to produce the new season (fall 2007 and spring 2008) of BioHaven entrepreneurship seminars. Each event features the top business and scientific talent behind recent successful biotech start-ups – see the Events Column in this issue for the current confirmed programs.

And remember, following each BioHaven presentation is a wine and cheese reception, continuing the CURE tradition of networking opportunities such as last July's beach party in Branford ([more](#)) and the CURE annual holiday party (coming up this year on Dec 4).

Paul R. Pescatello is President and CEO of CURE.

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Pfizer Expanding Venture Capital Role

Pfizer Inc.'s venture capital program is being restructured and expanded.

Instead of using venture dollars principally to find start-ups with technologies that could help it commercialize products, Pfizer will begin investing in a range of drug and health care technology companies.

It was recently announced that Barbara J. Dalton, Ph.D., formerly of SR One, the venture unit of GlaxoSmithKline, would join Pfizer in September to lead a new venture investment group.

That follows the announcement last October that Pfizer's Edmund P. Harrigan, M.D., had been promoted to senior vice president of worldwide licensing and business development, in order "to accelerate the search for new and innovative technologies and products that will play a critical role" in the company's growth.

Pfizer's new unit may begin investing as soon as this year, according to press reports, and will consider a wide range of companies, including biotech, specialty-pharmaceutical, diagnostic, drug-delivery, and other health care technology providers.

A board certified neurologist, Dr. Harrigan joined Pfizer in 1992. Until his promotion, he had served as senior vice president of worldwide regulatory affairs and quality assurance since 2003.

Barbara Dalton has built a career in academic research, pharmaceutical research, and venture capital. A graduate of Pennsylvania State University, she received her Ph.D. in microbiology and immunology at the Medical College of Pennsylvania and worked in research at SmithKline Beecham.

She is on the board of New Haven's Rib-X Pharmaceuticals, Inc., where she has chaired the company's audit committee.

Life Sciences Get Top Share of VC Funding in 2Q

Venture-backed companies in Connecticut raised over \$60.0 million more investment dollars in the second quarter of 2007 than in the first quarter of 2007. According to the PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report based on data from Thomson Financial, nine Connecticut companies received \$103.4 million in venture capital funds during the second quarter of 2007, an increase of 142% over \$42.7 million invested in five companies in the first quarter of 2007.

In Connecticut, the Life Sciences sector (Biotechnology and Medical Devices combined) obtained the largest share of venture capital funds for the second quarter of 2007 – a total investment of \$83.8 million in three companies, or 81% of total investment dollars.

In Q2 2007, the largest investment in Connecticut went to Spine Wave, Inc., a Shelton developer of medical products for the treatment of spinal disorders that received \$45.0 million in investment dollars in their fifth round of financing. BioRelix, Inc., a New Haven company that develops antibiotics that target drug resistant pathogens, received \$25.8 million in their second round of financing. Rounding out the top three deals for the quarter, New Haven based Applied Spine Technologies, Inc., a developer of stabilization devices with full anatomic motion for back pain, received \$13.0 million in their fourth round of financing.

"Anytime over \$100 million of venture capital is invested in Connecticut companies, it is an outstanding quarter. This marks the second year in a row where Connecticut investments have broken the \$100 million mark in the second quarter," said Owen Davis, co-chair of PricewaterhouseCoopers' venture capital/private equity practice in Connecticut and Westchester County, New York. "Four of the current quarter's nine investments were for Startup/Seed companies, and six of the quarter's investments were first-time financings, reflecting investors' continued interest in new ventures."

Nationally, in the second quarter of 2007, venture capitalists invested \$7.1 billion in 977 deals in the second quarter of 2007 -- the highest level of deals reported in a quarter since Q3 2001.

“The data are good news all around for the venture capital industry, which has been extremely active in doing what we do best -- building companies from the ground up,” said Mark Heesen, president of the National Venture Capital Association. “Not only does the increase in Seed and Early stage deals demonstrate the number of young, promising opportunities available, but the diversity of investment strongly suggests that the prospects for innovation are all around us. The industry is not relying on one particular sector for deals. Even better, dollars invested are holding steady or even declining, suggesting that venture capitalists are being very measured about how much money they invest per company.”

Of the 17 industry sectors tracked by MoneyTree, 14 experienced an increase in the number of deals from Q1 2007. However, the dollar amount invested declined in 10 industry sectors, indicating lower average dollar rounds this quarter.

“Based upon what we’ve seen in the first half of 2007, we may be looking at a new 6-year high in VC investments,” said Tracy Lefteroff, global managing partner of the venture capital practice at PricewaterhouseCoopers. “Venture capitalists have found no shortage of promising companies in which to invest, as indicated by the sharp uptick in the number of deals during the second quarter. Innovation is alive and well, and VCs are making sure these companies are provided with the opportunity to become the Fortune 500 powerhouses of tomorrow.”

In the second quarter, the Silicon Valley region placed first among major regions in terms of deals and dollars invested, followed by the New England region (which includes portions of CT). The New York Metro region (which includes Fairfield county) placed fifth in terms of dollars invested and third in terms of deals.

Region	# of Investments	Investment Amount
Silicon Valley	290	\$ 2,527.2 million
New England	141	\$ 862.4 million
San Diego	43	\$ 477.7 million
LA/Orange Co.	62	\$ 465.5 million
New York Metro	65	\$ 446.1 million
Southeast	65	\$ 356.4 million

Connecticut Results, Most Recent Quarters

Quarter and Year	# of Investments	Investment Amount	Average Deal Size
Quarter 2, 2007	9	\$103.4 million	\$11.5 million
Quarter 1, 2007	5	\$ 42.7 million	\$ 8.5 million
Quarter 4, 2006	5	\$33.0 million	\$6.6 million
Quarter 3, 2006	10	\$56.4 million	\$5.6 million
Quarter 2, 2006	9	\$111.7 million	\$12.4 million
Quarter 1, 2006	7	\$59.8 million	\$8.5 million
Quarter 4, 2005	5	\$33.2 million	\$6.6 million
Quarter 3, 2005	7	\$49.9 million	\$7.1 million

Quarter 2, 2005	8	\$22.9 million	\$2.9 million
Quarter 1, 2005	10	\$82.6 million	\$8.3 million

Connecticut Results, Most Recent Six Years

Year	# of Investments	Investment Amount	Average Deal Size
2006	31	\$260.9 million	\$8.4 million
2005	30	\$188.6 million	\$6.3 million
2004	33	\$195.9 million	\$5.9 million
2003	35	\$235.4 million	\$6.7 million
2002	38	\$1827 million	\$4.8 million
2001	70	\$549.8 million	\$7.9 million

Industry Sectors – Life Sciences Leads Second Quarter

In Connecticut, the Life Sciences sector (Biotechnology and Medical Devices combined) obtained the largest share of venture capital funds for the second quarter of 2007 – a total investment of \$83.8 million in three companies, or 81% of total investment dollars. Business Products and Services followed with \$8.5 million invested in one company and the Software industry ranked third with \$7.3 million invested in two companies. Telecommunications ranked fourth with \$2.6 million invested in two companies and IT Services ranked fifth with \$1.3 million invested in one company.

The Life Sciences sector had another strong quarter with \$2.2 billion going into 223 deals. Though down slightly in dollars from the first quarter, which was the highest quarterly dollar amount ever recorded for Life Sciences deals at \$2.6 billion, the Life Sciences sector had the most active quarter in history in the second quarter, with the deal volume reaching an all-time high. Both Biotechnology and Medical Devices saw a decrease in dollars but an increase in deals for the quarter.

Nationally, the Software sector had its strongest quarter since 2001 with \$1.5 billion going into 248 deals, regaining its position as the single largest industry sector for the quarter. In the previous three quarters, the Biotechnology sector represented the most dollars invested. Other industry sectors which saw increases in both dollars and deals include Consumer Products and Services, Networking & Equipment, Semiconductors, Industrial/Energy and Computers & Peripherals.

The Clean Tech sector, which crosses traditional MoneyTree sectors and comprises alternative energy, pollution and recycling, power supplies and conservation, saw \$451 million going into 44 deals in the second quarter. This represented 38 percent increase in the number of deals and 46 percent increase in dollars, partially attributed to a \$73 million investment in a solar energy company, also the largest deal of the quarter.

Internet-specific companies captured \$897 million going into 160 deals in the second quarter, a marked decrease from the first quarter when \$1.4 billion went into 177 deals. The decrease in Internet investing activity negates theories that a new 'bubble' is forming. 'Internet-Specific' is a discrete classification assigned to a company whose business model is fundamentally dependent on the Internet, regardless of the company's primary industry category.

Media and Entertainment continued to see a decline in deal and dollar volume with \$482 million going into 73 companies. This is the third consecutive quarter with volume declines in this sector. The Financial Services and Healthcare Services sectors also experienced quarterly declines in both deal and dollar volume in the second quarter.

Stage of Company Development – Later Stage Leads Second Quarter in Connecticut

For the second quarter of 2007 in Connecticut, one Later Stage company received \$45.0 million of the state's total in-bound funding or 44% of the total dollars invested in Connecticut. Also in Q2 2007, two Early Stage companies received \$37.1 million of funding, two Expansion Stage companies received \$21.5 million, and four Startup/Seed Stage companies received \$4.9 million.

Nationally, Seed and Early stage investing had the strongest quarter since 2001 in both number of deals and dollars invested. Venture capitalists invested \$1.6 billion into 378 deals in the second quarter compared to \$1.3 billion into 289 deals in the first quarter of 2007. Seed/Early stage deals accounted for 39 percent of total deal volume in the second quarter compared to 34 percent in the first quarter.

Expansion stage deals also showed a notable increase in the number of deals but a decrease in dollars invested. Investment for the second quarter in Expansion stage deals was \$2.4 billion in 303 deals, representing 31 percent of deal volume. This compares to the first quarter when \$2.9 billion was invested in 287 Expansion stage deals, representing 34 percent of total deal volume.

Later stage deals held fairly steady in volume but decreased in terms of dollars in the second quarter with \$3.1 billion going into 296 Later stage deals. This represented 30 percent of total investments. In the first quarter, \$3.2 billion went into 269 Later stage deals, representing 32 percent of the volume.

CURE Member News Digest

454 Life Sciences (Branford), in collaboration with scientists at the Human Genome Sequencing Center, Baylor College of Medicine, recently completed a project to sequence the genome of James D. Watson, Ph.D., co-discoverer of the double-helix structure of DNA. The mapping of Dr. Watson's genome was completed using the Genome Sequencer FLX™ system and marks the first individual genome to be sequenced for less than \$1 million.

In a recent review of the company's progress, Michael Kishbauch, President and CEO of **Achillion Pharmaceuticals, Inc.** (New Haven), said, "We have continued to make significant progress across all our pipeline programs, and anticipate achieving a number of important goals during the second half of 2007. We expect to report top-line results from our two Phase II trials with elvucitabine in the treatment of HIV patients. In the HCV NS4A antagonist program, which we partnered with Gilead Sciences, we continue to advance ACH-1095 as a potential clinical candidate. We also plan to advance ACH-702, our novel-target compound for combating bacterial infections, such that we can file an IND (investigational new drug application) and initiate human clinical trials within the next several months."

During 2Q 2007, **Alexion Pharmaceuticals** (Cheshire) initiated commercial sales of Soliris™ (eculizumab) in the United States for the treatment of paroxysmal nocturnal hemoglobinuria (PNH), a rare and life-threatening blood disorder, and the European Commission granted marketing approval for Soliris for all patients with PNH. Separately, Alexion acquired exclusive world-wide rights to FLAER, a highly sensitive diagnostic test for PNH. Soliris product sales in the United States and Europe totaled \$9.8 million in the quarter.

Applied Spine Technologies, Inc. (New Haven) was profiled recently in the *Hartford Courant* after receiving \$28 million in third-round financing during 2Q 2007. ([See related story.](#)) The company, which has licensed technology from Yale, initiated a 400-patient clinical trial in April. [more](#)

AsymmetRx, Inc. (Amston) recently filed suit against several companies for infringing on its patents relating to the use of p63 antibodies for diagnosing prostate cancer. AsymmetRx has a license from the President and Fellows of Harvard College that gives AsymmetRx the exclusive right to the p63 antibodies for diagnostic purposes.

Bayer HealthCare (Leverkusen, Germany/West Haven) said that patients treated with Betaseron® (interferon beta-1b) shortly after their first clinical MS event or "attack" showed a 40 percent lower risk of developing confirmed disability progression compared to patients in whom treatment was delayed. The results—which were fast-tracked and published in *The Lancet*—provide the first controlled evidence that delaying Betaseron treatment has an effect on later accumulation of disability, as observed over the three-year study period.

Reviewing results for first half 2007, **Boehringer Ingelheim** (Ingelheim, Germany/Danbury) said that key global products, such as Spiriva®, Micardis®, and Mirapex®/Sifrol®, performed strongly. However, overall growth rate was lower than in 2006, due mainly to competition from generics. For example, U.S. sales of Mobic®, for the treatment of pain associated with arthritis, were lower after the market entry in the U.S. of generic competitors.

ConvaTec, the wound care subsidiary of **Bristol-Myers Squibb Company** (New York/Wallingford) announced the U.S. availability of the ConvaTec Moldable Technology™ line of ostomy skin barriers, designed to increase convenience while offering improved protection of the skin surrounding the stoma. ConvaTec Moldable Technology™ skin barriers are available

on the company's SUR-FIT Natura® ostomy system. They will be made available in four sizes in the U.S. and Europe over the next several months.

Governor M. Jodi Rell has appointed Edward M. Bowman Jr. of Southbury to be chairman of **Connecticut Innovations** (Rocky Hill). Bowman, 48, is the former owner of Village Oil Co, and a current member of the board of directors of the Independent Connecticut Petroleum Association.

CuraGen Corporation (Branford) said that enrollment has been completed in the Phase II randomized, double-blind, placebo-controlled study evaluating the efficacy and safety of a single infusion of velafermin for the prevention of severe oral mucositis. A total of 390 patients at 33 centers were enrolled throughout the United States. Top-line efficacy results from the completed trial are scheduled to be available in mid-October of 2007.

Genomas Inc. (Hartford) has been awarded a Phase II SBIR (Small Business Innovation Research) Grant totaling \$1.4 million. The grant, entitled "DNA Diagnostics for Minimizing Metabolic Side-Effects of Antipsychotics", was awarded by the National Institute of Mental Health as part of its program on "Development of Biomarkers for Mental Health Research and Clinical Utilities."

GlaxoSmithKline (Brentford, UK/Research Triangle Park, NC) announced that it has entered into an agreement with the UK Government to provide its pandemic influenza vaccine in the event of a flu pandemic. It is one of the largest contracts signed by GSK to date for its proprietary pandemic flu vaccine.

Hartford Hospital (Hartford) was selected as one of the top-ranked hospitals in the nation for psychiatry in US News & World Report's annual issue devoted to "America's Best Hospitals." "The volume and depth of research produced at our psychiatric division," said John Meehan, president and CEO of Hartford Hospital, "and its translation into excellent clinical care undoubtedly contributed to this honor. We congratulate all associated with the Institute for such a prestigious achievement."

The McNeil Consumer Healthcare subsidiary of **Johnson & Johnson** (New Brunswick, NJ) has announced its annual TYLENOL® Scholarship program for secondary education students pursuing careers in healthcare. The 2007 program will award \$250,000 in scholarship funding to 170 students in the form of \$1,000 and \$5,000 grants. Students eligible for the TYLENOL® Scholarship are those pursuing a healthcare-related undergraduate or graduate degree in the spring of 2008 at an accredited college, university, or vocational-technical school. Those who qualify may apply for the scholarship at www.tylenol.com.

MannKind Corporation (Valencia, CA/Danbury) announced in August that it had filed a shelf registration statement, intended to provide additional financing flexibility for use if and when appropriate.

NanoViricides, Inc. (West Haven) has completed its transition onto NASD's OTC Bulletin Board, with approval for listing under the symbol NNVC.OB. The move culminates work that began in March when the Company's Form 10-SB became effective with the Securities and Exchange Commission and the Company became fully reporting.

Reviewing results, William H. Koster, Ph.D., president and CEO of **Neurogen Corporation** (Branford), said, "I'm extremely pleased with our progress and clinical results as we head into the second half of 2007. We hit the primary endpoints in our two Phase IIb studies in chronic insomnia with NG2-73 in June, achieving rapid onset of sleep and sleep maintenance in chronic insomnia patients. The data have confirmed the very rapid sleep onset seen in our previously reported Phase IIa transient insomnia study. Since reporting the top-line data, analyses of other endpoints in the trials revealed that NG2-73 achieved statistical significance over placebo on the subjective measure of sleep quality. This measure of patient satisfaction has now been consistently seen across three Phase II studies. NG2-73 has now been tested in over 600 subjects in eight clinical studies to date."

Pfizer Inc. (New York, NY/Groton/New London) announced Aug 6 that the FDA has approved Selzentry™ (maraviroc) tablets, the first in a new class of oral HIV medicines in more than 10 years. Selzentry blocks viral entry into white blood cells, significantly reducing viral load and increasing T-cell counts in treatment-experienced patients infected with a specific type of HIV. The FDA granted accelerated approval to Selzentry. An accelerated approval allows for earlier approval of drugs that provide a meaningful therapeutic advantage over existing treatment for serious or life-threatening diseases. This approval is based on 24-week data. Longer-term data will be required before the FDA can consider traditional approval.

Pharmaceutical Research and Manufacturers of America (PhRMA) (Washington, DC) joined other health care organizations involved in the manufacturing, distribution and dispensing of pharmaceutical products in announcing the creation of Rx Response – a program designed to help support the continued delivery of medicines during a severe public health emergency. The partnership includes the American Hospital Association, American Red Cross, Biotechnology Industry Organization, Healthcare Distribution Management Association, National Association of Chain Drug Stores, and the National Community Pharmacists Association.

Protein Sciences Corporation (Meriden) is outpacing pharmaceutical giants in the race to develop better flu vaccine production capability, according to a Bloomberg article. The closely-held Connecticut company (whose shareholders include Wyeth and Swedish Diamed Medical AB) may get U.S. market clearance for a seasonal vaccine next year, according to the article. The Protein Sciences approach to vaccine production is to insert flu genes into cells from a corn-eating caterpillar. The cells are then induced to make proteins that when injected into humans trigger an immune response. [more](#)

The graduate nursing program at **Quinnipiac University** (Hamden) has received a federal training grant for the fourth consecutive year from the Health Resources and Health Services Administration of the U.S. Department of Health and Human Services. The grant, for \$27,244, provides scholarships for students pursuing a master of science in nursing at Quinnipiac.

Mike Hunkapiller and Sue Siegel recently joined the board of directors of **RainDance Technologies** (Guilford). Hunkapiller is a general partner at Alloy Ventures, which he joined in 2004 after 21 years at Applied Biosystems, where his last position was president and general manager. Siegel is a partner with Mohr Davidow Ventures, which participated in a \$23.7 million round of financing RainDance raised earlier this year. Prior to joining MDV, she was president and director of Affymetrix. Siegel is also a member of the board of directors of Pacific Biosciences, which is also backed by MDV. RainDance's other directors are Jonathan Rothberg, a company founder, who also founded 454 Life Sciences; Bill Ericson, who leads investments in life sciences and software for MDV; and David Weitz, a professor of applied physics and physics at Harvard University. Jeff Samberg, managing member of Acadia Woods Partners, a New York-based investment partnership, is a board observer.

SBIR - Connecticut (East Hartford) has posted a [photo album](#) from its June event, "The Future of Manufacturing is Innovation." The Connecticut SBIR office helps high tech small businesses and entrepreneurs compete for and win federal SBIR/STTR (small business innovation research/small business technology transfer) awards.

Vion Pharmaceuticals, Inc. (New Haven) announced it had accrued a total of 85 patients to the pivotal Phase II trial of its lead anticancer agent Cloretazine® (VNP40101M) in previously untreated elderly patients with *de novo* poor-risk acute myelogenous leukemia. Alan Kessman, chief executive officer, said, "We are extremely pleased to have reached this milestone in the pivotal Phase II trial of our lead anticancer agent. We will now proceed to analyze the data and, if warranted, prepare a New Drug Application for submission to the U.S. Food and Drug Administration in 2008." He added, "We continue to plan on the release of preliminary data from this trial at the American Society of Hematology (ASH) Meeting in December."

Webster Bank (Waterbury) announced the initiation of its Patriot Express Loan program, which will provide to eligible military veterans preferential pricing terms on loans guaranteed by the U.S. Small Business Administration. Webster is the first lending institution in Connecticut, and second in the nation, to offer these loans. Patriot Loans support the start of a small business or expansion of an existing small business, equipment and inventory purchases, working capital or business-occupied real estate purchases.

XVIVO (Rocky Hill) was profiled in a recent *Hartford Courant* article. Co-founders, David Bolinsky and Michael Astrachan - a medical illustrator with a scientific background and a painter educated in fine art - met a few years earlier at a conference. Since its founding in 2001, the company has made a name for itself for videos that depict scientific concepts. Animation and illustration projects have been completed for corporate clients as well as Harvard University and the U.S. Dept of Defense. [more](#)

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

Michael J. Hogan has been appointed the 14th president of the University of Connecticut. Hogan, 63, joins UConn from the University of Iowa, where he has been executive vice president and provost since 2004. [more](#)

Dr. Peter J. Deckers, dean of the School of Medicine since 1995 and executive vice president of health affairs since 2000, stepped down from both positions on June 30, at the conclusion of his appointment. On behalf of the University, President Philip E. Austin expressed "deep appreciation for Dr. Deckers' farsighted leadership at the Health Center. He established a search committee chaired by Dr. Richard Garibaldi and supported by the services of a national recruitment firm. [more](#)

Mun Young Choi of Drexel University has been named as the next dean of UConn's School of Engineering. He will begin in January 2008. Choi, 43, is currently the associate dean for research and graduate studies at Drexel University's College of Engineering in Philadelphia, where he also heads the department of mechanical engineering and mechanics. "I believe that in Mun we have found an outstanding leader for the school," says Provost Peter J. Nicholls. [more](#)

An elegant masked ball is planned for this fall to raise funds to expand the Health Center's skin cancer program. Proceeds from the ball will support the development of a Cutaneous Oncology Center. "The incidence of melanoma is increasing at an alarming rate," says Dr. Carolyn Runowicz, director of the Carole and Ray Neag Comprehensive Cancer Center, chair of the

National Cancer Advisory Board, and former president of the American Cancer Society. "Our goal is to raise funds to recruit new faculty and bolster research initiatives in the area of skin cancer and melanoma." [more](#)

An enthusiastic group of Health Center supporters, volunteers, and staff members gathered recently at the historic Warner Theatre in Torrington to celebrate the newest addition to the Carole and Ray Neag Comprehensive Cancer Center. The reception, hosted by the Neags, was designed to promote the ground-breaking accomplishments of the Cancer Center and to highlight the Cancer Center's new Helical TomoTherapy Hi-Art System – the latest, most technologically advanced development in radiation oncology. One of only approximately 150 such systems in use worldwide, UConn's TomoTherapy system is the first of its kind in Connecticut. [more](#)

Graduate students in the sciences and those with an interest in environmental research received a shot of financial support this summer to develop their skills mentoring undergraduates and collaborating with researchers in other fields. The College of Liberal Arts and Sciences (CLAS), through its donor-supported Fund for Innovative Education in Science, provided more than \$40,000 in summer support for a pilot program that paired graduate student mentors with minority undergraduates doing scientific research with CLAS faculty. [more](#)

The teaching style of Dr. Frank Nichols, professor of periodontology at the UConn School of Dental Medicine, has long been popular with his students. Nichols' approach is so popular with students that for two years in a row, he has been honored with the Kaiser Permanente Excellence in Teaching Award. [more](#)

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

This summer the Yale Entrepreneurial Institute has been hosting a 10-week program designed to inspire, nurture and educate student entrepreneurs, and demonstrate that resources available locally match or better those in more celebrated hotbeds of entrepreneurship. Spurred by an article in the Wall Street Journal that highlighted two Yale students who moved their start-ups to Silicon Valley, John Soderstrom, managing director of the Yale Office of Cooperative Research, challenged his staff to see what was missing and what Yale could do to make student businesses successful in New Haven. Primary organizers of the program are James Boyle and Richard Madonna from OCR, Yale alumni Sean Glass and Miles Lasater of Higher One, Rob Bettigole of Elm Street Ventures, and Jennifer McFadden from the School of Management, who serves as the Program Director. [more](#)

High resolution views of a receptor molecule that is implicated in cancer offer a clear target for the development of a new class of cancer drugs, Yale School of Medicine researchers report July 27 in Cell. It is also anticipated that the new family of drugs may be applied for the treatment of gastrointestinal stromal tumor (GIST) cancers that are resistant to Gleevec and Sutent. Although these drugs would target the same receptors as Gleevec and Sutent, they would do so by a different mechanism and may therefore be useful for patients who are resistant to these drugs. "I was surprised to see what the molecules did when they were activated," said Joseph Schlessinger, professor and chair of pharmacology and senior author of the study. "The arrangement is much simpler and more elegant than I thought."

Blocking a tick protein that protects the Lyme disease bacteria as it moves from mice back to the tick that infected them might reduce incidences of the illness among humans, a Yale School of Medicine researcher reports in Cell Host & Microbe. In this study on mice, Erol Fikrig, professor of internal medicine, first blocked the protein Salp25D in the tick's salivary gland to see if it would interrupt transmission of the bacteria, but it did not affect the bacteria.

Peripheral pain, a side effect of the highly effective cancer drug paclitaxel, appears to be caused when the drug binds to a protein and initiates improper calcium signaling, a Yale School of Medicine researcher reports in a study published recently in the Proceedings of the National Academy of Sciences. "This response leads to the generation of side effects such as acute hypersensitivity, slower heart rhythms, tingling, numbness, and other symptoms," said Barbara Ehrlich, professor of pharmacology and physiology and lead author of the study. Paclitaxel, a substance isolated from the pacific yew Taxus brevifolia and approved by the FDA in 1990, has been very successful in treating solid tumors such as breast cancer and ovarian cancer. However, serious side effects limit its effectiveness. Peripheral pain, for instance, becomes worse with continued use of paclitaxel and increased dosages lead to persistent and irreversible pain, Ehrlich said.

It's not just what's in your genes, it's how you turn them on that accounts for the difference between species - at least in yeast - according to a report by Yale researchers in this week's issue of Science. "We've known for a while that the protein coding genes of humans and chimpanzees are about 99 percent the same," said senior author Michael Snyder, the Cullman Professor of Molecular Cellular and Developmental Biology at Yale. "The challenge for biologists is accounting for what causes the substantial difference between the person and the chimp."

Sukru Emre, M.D., has been appointed director of the Yale-New Haven Transplantation Center and section chief of transplant surgery and immunology in the department of surgery at Yale School of Medicine. In his role, Dr. Emre will oversee the activities of the center and its multi-disciplinary group of physicians and caregivers. He will also continue to practice his speciality, adult and pediatric liver transplantation. "Dr. Emre is a leader in the field of liver transplantation,"

noted Tucker Leary, vice president, administration, Yale-New Haven Hospital. "He is recognized throughout the Northeast for his expertise in the area of pediatric transplantation. We are pleased he has become a member of the Yale-New Haven team."

Compared with their counterparts a decade ago, today's heart attack patients are receiving emergency angioplasty or clot-busting drugs to re-open clogged arteries at a far greater rate, but 10 percent of patients who could benefit from this life-saving treatment still do not receive it, according to a study published in *The American Journal of Medicine* by Yale and University of Michigan researchers. "This study has good and bad news," said senior author Harlan M. Krumholz, M.D., the Harold H. Hines, Jr. Professor of Medicine at Yale School of Medicine. "We have definitely made progress in treating appropriate patients, but our findings indicate that we need to improve further to be sure that no patient who could benefit from treatment is missed."

Heart attack patients admitted to hospitals ranked to be among "America's Best" by U.S. News & World Report are less likely to die within 30 days than those patients admitted to non-ranked hospitals, Yale School of Medicine researchers report in the July 9 Archives of Internal Medicine. "The rankings, which include many of the nation's most prestigious hospitals, did identify a group of hospitals that was much more likely than non-ranked hospitals to have superb performance on 30-day mortality after acute myocardial infarction," said corresponding author Harlan M. Krumholz, M.D., The Harold H. Hines, Jr. Professor of Medicine and Epidemiology and Public Health at Yale School of Medicine. "But our study also shows that not all ranked hospitals had outstanding performance and that many non-ranked hospitals performed well."

Kim Woodrow, a postdoctoral fellow in biomedical engineering at Yale, is one of the five American women recently honored by L'Oréal USA with their 2007 Fellowships for Women in Science. Woodrow is developing new drug delivery strategies and diagnostic tools for monitoring and treating infectious diseases and cancer. She is designing biodegradable nanoparticles that can direct themselves to specific targets inside cells and at the same time deliver therapeutic molecules to those sites. Looking to nature for a model, Woodrow is aiming to harness what is known about viral drug delivery to develop a safe and effective system for sustained delivery of various agents: DNA, RNA, peptides, proteins and small molecule drugs. Her nanoparticles will exhibit features that enable drug targeting at the tissue, cell, and molecular level.

A research paper co-authored by Jennifer Prah Ruger, assistant professor of Global Health in the Department of Epidemiology and Public Health at Yale School of Medicine, and Daniel Kress, senior program officer of the Bill and Melinda Gates Foundation, reported major milestones in health status, health care delivery and financing to expand health insurance coverage in Morocco. The results of this study and others were presented at the Health Affairs Briefing: Financing and Improving Global Health Care held at the National Press Club in Washington, D.C. on July 16, 2007.

Chronically ill older persons frequently refuse medical and surgical interventions recommended by their physicians, according to a recent study by Yale School of Medicine researchers. The study suggests that physicians continue to recommend invasive or risky interventions for people with advanced illness despite the patient's view that these treatments may be too burdensome, or that the treatment doesn't fit with their goals of care. "Physicians need to offer treatment alternatives that better fit their patients' goals and preferences," said first author Marc Rothman, M.D., postdoctoral fellow in geriatrics in the Department of Internal Medicine at Yale.

Overweight children who are stigmatized by peers and their parents and teachers sustain profound and potentially lasting harm, according to a paper by scientists from Yale and the University of Hawaii at Manoa. "The childhood obesity epidemic is rapidly accelerating," said lead author Rebecca Puhl of the Rudd Center for Food Policy & Obesity at Yale. "That means thousands of children in North America are at risk for serious emotional and physical health consequences that science shows are connected to weight stigma. We cannot overestimate the urgency of combating stigma."

For more member news, see the [July 2007 issue of CURE News](#)