

Connecticut Pioneers of Scientific Discovery

The State of Connecticut stands at the crossroad of becoming a national leader for stem cell research in our country. Landmark research continues to pave the way for extraordinary new discoveries that promise to bring medical science a major step closer to curing diseases such as diabetes, certain types of cancer, heart and blood disorders, multiple sclerosis, Alzheimer's disease, and Parkinson's disease.

Connecticut's commitment to supporting stem cell research is clear. In 2005, legislation approved by the General Assembly and signed by Governor Rell appropriated \$100 million for research over the next ten years. Through this groundbreaking initiative, Connecticut became only the third state in the nation to provide public funding for stem cell research. As a result, Connecticut is home to many of our nation's prominent scientists who have dedicated their medical research efforts toward the discovery of alternative therapies and cures for debilitating illnesses and conditions. Other states, such as Maryland and Illinois, have since followed our lead in passing legislation that supports state government funding for stem cell research.

State funding offers a significant opportunity for our prestigious institutions of higher education to develop and expand facilities, faculty lines, laboratory equipment, and research staff positions. With the establishment of Connecticut's Stem Cell Research Advisory and Peer Review Committees, \$19.8 million has been directed to laboratories at the University of Connecticut (UConn), Yale University, and Wesleyan University.

In November 2006, UConn received nearly \$12 million to fund the work of twenty-three researchers from UConn's academic departments and the UConn Health Center who are already engaged in stem cell and regenerative biology research efforts. Funds will also expand UConn's cross-campus Stem Cell Institute. Of the nearly \$12 million, \$3.52 million was awarded for a major group project involving ten principal investigators headed by Dr. David W. Rowe and based at the UConn Health Center. Through nine collaborative projects, the team will study how embryonic stem cells could help regenerate and rebuild bone, cartilage, skin and muscle.

In addition to this group research grant, UConn received \$2.5 million for the Human Embryonic Stem Cell Facility at the UConn Health Center. Directed by Dr. Ren-He Xu, this facility houses a laboratory where stem cell lines will be generated for use by researchers. Five established investigators also received \$3.7 million for their continued work on a variety of stem cell research projects. Furthermore, seven seed grants totaling \$1.4 million were awarded to faculty members in the Molecular and Cell Biology Department, the Connecticut Center for Regenerative Biology, and the UConn Health Center. Lastly, a grant of nearly \$1 million was also awarded for joint stem cell research efforts between UConn and Wesleyan University. These grants support a vast range of research projects and provide significant core facility funding for stem cell initiatives.

A \$7.7 million dollar state grant to Yale University will allow its School of Medicine to complete the construction of a human embryonic stem cell culture laboratory and fund a variety of research projects. The Yale Stem Cell Program research team is directed by Dr. Haifan Lin. Dr. Lin will oversee three planned initial core facilities that will cover such areas of research as the properties and mechanisms of human embryonic stem cells, human adult

stem cells, and animal stem cell models. Yale received \$3.8 million, the single largest individual grant, for research that will seek to determine how stem cells can develop into different types of nerve cells. The program will expand with more than forty additional faculty members drawn from the medical school and the university who are already engaged in stem cell-related research areas and with four additional faculty lines.



Representing stem cell research at UConn, Yale and Wesleyan

(mid left) Haifan Lin, Ph.D., Director, Yale Stem Cell Program; (bottom left) Ren-He Xu, M.D., Ph.D., Director, Human Embryonic Stem Cell Facility, UConn Health Center; (bottom right) Jan Naegele, Ph.D. and Laura Grabel, Ph.D., Wesleyan University; (background) UConn's Group Project Grant researchers headed by David W. Rowe, M.D., (second from staircase bottom). Images courtesy of UConn, Yale and Wesleyan

Wesleyan University's \$878,348 state grant will continue to fund research led by Dr. Laura Grabel, Fisk Professor of Natural Sciences and Professor of Biology, and Dr. Jan Naegele, Chair and Professor of Biology and Professor of Neuroscience and Behavior, on generating the appropriate stem cell types for transplantation and for promoting successful integration into host tissue. The development of these stem cell lines can lead to successful

stem cell specialization with the potential for transplant surgeries combating neurodegenerative disorders such as Parkinson's and Alzheimer's disease, as well as epilepsy. Dr. Grabel was recently elected as a fellow by the American Association for the advancement of Science, the largest society of scientists in the United States. In December 2006, Dr. Naegele received a \$300,000 grant from the McKnight Foundation to conduct research on the use of embryonic stem cells to manage epileptic seizures in mice. These grants have raised Wesleyan's profile as a research institution.

Given their leadership, UConn, Yale, and Wesleyan recently participated in StemCONN 07, an international symposium on stem cell research. Held in March 2007 in Hartford, the symposium was founded by the Connecticut Department of Public Health, the Connecticut Stem Cell Coalition, and Connecticut United for Research Excellence (CURE), the state bioscience organization. Attended by over 40 leading scientists and principal investigators as well as proponents of stem cell research in the United States, StemCONN 07 informed public officials, legislators and others about stem cell research and its real potential for the cure of many illnesses and debilitating conditions.

In recognition of the tremendous benefit this cutting-edge research will have on Connecticut citizens, our nation, and our world, I am proud to dedicate the 2007 edition of the *Connecticut State Register and Manual* to the stem cell scientists and researchers at the University of Connecticut, Yale University, and Wesleyan University.

A handwritten signature in cursive script, reading "Susan Bysiewicz". The signature is written in black ink and is positioned to the left of the typed name.

Susan Bysiewicz
Secretary of the State



(Photo courtesy of UConn)

Dr. Xiangzhong (Jerry) Yang
Founding Director,
Connecticut Center for Regenerative Biology
Internationally-renowned scientist

As new discoveries and techniques for stem cell research emerge on an international and national level, Connecticut is honored to recognize one of its finest citizens, Dr. Xiangzhong (Jerry) Yang. Dr. Yang is truly an outstanding scientist and humanist whose enormous contributions and work offers great promise to cure many illnesses and conditions.

Born in 1959 in a small rural village in Hebei, China, Xiangzhong (Jerry) Yang worked as a herdsman, veterinarian, and later as Deputy Mayor of his village. In 1978, with only 28 days to prepare for it, he passed a prestigious national college entrance examination to gain admission, along with 399 others, to Beijing Agricultural University's Department of Animal Science. After completing his undergraduate studies, he won a distinguished national fellowship and came to the United States in 1983 to study at Cornell University where he earned his MS and Ph.D. degrees in 1986 and 1990 respectively. In 1991, Dr. Yang briefly pursued postdoctoral training at Cornell University in the field of animal biotechnology. Soon, he was offered a research scientist position as a principal investigator and program director at Cornell's Department of Animal Science. There he assumed responsibility for developing a vibrant externally-funded animal biotechnology program.

In June 1996, Dr. Yang joined the faculty of the University of Connecticut as Associate Professor of Animal Science and Head of the Biotechnology Center's Transgenic Animal Facility. In 2000, he was promoted to the rank of full professor. In 2001, the University of Connecticut made an unprecedented decision to establish the Connecticut Center for Regenerative Biology with a total investment of over \$20,000,000 that included five new faculty lines. Professor Yang was appointed as Founding Director.

As an internationally-renowned scientist, Dr. Yang's achievements in cloning research have received extensive coverage from major news networks including CNN Headline News, ABC, CBS and BBC News. Newspapers such as The New York Times, The Washington Post, The Wall Street Journal, and US News & World Report have also reported on his work. He has been featured in news documentaries in the United Kingdom, France, Germany, Korea, and China.

Dr. Yang has attracted over \$10 million in external funding for his research program and has published over two hundred papers, over one hundred of them in top peer-reviewed scientific journals. He has lectured at scientific conferences or symposia in over a dozen countries, and is an honorary or visiting professor in numerous institutions in China, Taiwan, Japan, and Korea, and in several European countries. Professor Yang has been an advisor and reviewer for federal and international funding agencies and has organized various national or international scientific conferences and symposia. He is a member of the Connecticut Stem Cell Research Advisory Committee.

Well known in his field for his contributions to the development of various embryo genetic manipulation techniques, including his high-profile research on animal cloning, Dr. Yang is credited with producing the first male clones from a breeding bull in the world in Japan in 1998 and producing the first clone (cow) of an adult farm animal (known as Amy, the calf) in the United States in June 1999.

In Memory of

John A. Chapman

Phillip A. Jordan

Kemaphoom Ahn Chanawongse

Wilfredo Perez, Jr.

Richard Selden Eaton, Jr.

David Travis Friedrich

Anthony D'Agostino

Phillip R. Albert

Jeffrey Braun

Eric Thomas Paliwoda

Benjamin Gilman

Tyanna Avery-Felder

Felix Delgreco

Nathan B. Bruckenthal

Melissa Hobart

Jacob D. Martir

*Service members from Connecticut lost in
Afghanistan and Iraq,
March 2002 – September 2004¹*

¹ Biographical sketches for the service members listed above were published in the 2004 Edition of the Connecticut State Register and Manual.

In Memory of

William Brennan

Kevin J. Dempsey

Joseph Michael Nolan

Michael J. McMahon

Henry E. Irizarry

Robert Hoyt

Thomas E. Vitagliano

Lawrence R. Philippon

John T. Schmidt, III

Christopher Hoskins

Steve Reich

David Coullard

*Service members from Connecticut lost in
Afghanistan and Iraq,
October 2004 – October 2005²*

² Biographical sketches for the service members listed above were published in the 2005 Edition of the Connecticut State Register and Manual.

In Memory of

Brian S. Letendre

Stephen Bixler

Jordan C. Pierson

Philip A. Johnson

Nicholas A. Madaras

*Service members from Connecticut lost in
Afghanistan and Iraq,
November 2005 – September 2006³*

³ Biographical sketches for the service members listed above were published in the 2006 Edition of the Connecticut State Register and Manual.

In Memory of

Jason Hamill

Joseph E. Phaneuf, II

Richard L. Ford

Stephen K. Richardson

Keith Heidtman

*Service members from Connecticut lost in
Afghanistan and Iraq,
November 2006 – May 2007*



Army Captain Jason Hamill

Army Capt. Jason Hamill, 31, who grew up in Salem, [Connecticut] was killed Nov. 26, 2006. He was within days of finishing his tour in Iraq.

Capt. Hamill of the 4th Infantry Division and two other soldiers were killed by a roadside bomb while riding in an armored vehicle, said Hamill's father, Dick Hamill of Salem.

Jason Hamill was born in New Haven, attended grade school in Salem and graduated from East Lyme High School in 1993. He graduated from the University of Connecticut with an engineering degree in 1998, his father said. Hamill was stationed at Fort Hood, Texas.

His mother, Sharon Hamill, was the first in the family to learn of her son's death when Army representatives visited the Salem house.

"My first thought was that was Jason ringing my doorbell, because he was due home about this time and I thought he was being his typical wise guy," she said, adding that her son was a comedian who kept his family laughing.

Dick Hamill said his son "enjoyed being in the Army. He believed in what he was doing.... He felt a strong sense of purpose in what he was doing."

Jason Hamill was one of a set of triplets and also had an older sister. He spent a lot of his high school career wrestling, running track and playing the drums in the school band. But when he got to college, his father said, being a member of the ROTC program and studying engineering took up most of his time. He entered the Army as soon as he graduated from college in January 1998.

As a soldier, he served in Kosovo and Afghanistan and was hoping to start a family with his wife when he returned from Iraq, his father said. Hamill and his wife, Karen, married in 2005 and were in the middle of fixing up their four-bedroom house in Killeen, Texas, Dick Hamill said.

By Regine LaBossiere, Courant Staff Writer

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Army Staff Sergeant Joseph E. Phaneuf II

Army National Guard Staff Sgt. Joseph E. Phaneuf II of Eastford died Dec. 15, 2006 when the armored vehicle he was driving struck a roadside bomb in Afghanistan. He was 38 years old, and left a wife and three children.

All four [Phaneuf] brothers have been in the service. Rob Phaneuf of Putnam, and Dennis Phaneuf of Medford, Mass., were Marines, like their father, Peter Phaneuf of Killingly, who did two stints in Vietnam. Tony Phaneuf of Danielson, served in the Army, notably in Bosnia and Somalia. Joe's birthday was even military: He turned 38 on Dec. 7, [2006], Pearl Harbor Day.

The [brothers] even crossed paths in the service—Joe and Tony at Fort Leonard Wood, Mo., and again when both were stationed in Germany; Rob and Dennis at Camp Pendleton, Calif.

Joe Phaneuf's wife, Michele, and his siblings, standing on the front porch, [told] great stories about him, laughing and teasing one another. [T]he only sign of tears [came] when the subject turn[ed] to his sense of mission, as a soldier and a human being.

Like when he [re-enlisted] with the National Guard after 9/11.

"He had to, to protect our country. He had to find those terrorists," Holly Grube of Eastford said of her brother's decision at the time.

[Phaneuf's] 13 nieces and nephews were nuts about him. He sent them desert hats and gifts, issuing all of them ranks, but never higher than his own. He loved to give the kids in Afghanistan coveted ballpoint pens and candy.

And there was the time Joe and some other fathers built the playscape at Eastford Elementary. They embedded a dime in the pavement, imagining the future generations of kids trying to pick it up. That was Joe.

Besides his military service, he was an emergency medical technician and firefighter. He and Michele, also an EMT, took turns answering calls when the kids were small. They met in high school but started dating when they met again while Michele was getting EMT training.

[Sergeant Phaneuf] left for Afghanistan in April [2006] with the 102nd Infantry Battalion of New Haven, due back in spring 2007.

He served in Iraq from February 2004 to 2005.

By Stephanie Summers, Courant Staff Writer

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Army Sergeant Richard L. Ford

Army Sgt. Richard L. Ford, a decorated soldier from East Hartford, died Feb. 20, 2007 on his third deployment to Iraq of wounds suffered from small arms fire near Baghdad. He was 40 years old.

He became the 37th person with Connecticut ties to die in Iraq or Afghanistan since March 2002.

“I am extremely proud of my dad’s service to our country,” his son Michael Ryan Patrick, of Bridgeport, said in a statement. “My dad is my greatest hero.”

Ford was a rifleman assigned to the 2nd Battalion, 325th Airborne Infantry Regiment, 2nd Brigade Combat Team, 82nd Airborne Division out of Fort Bragg, N.C. He had served previous tours in Iraq, from December 2004 to March 2005, and from September to December 2005, the Defense Department said.

Ford was the recipient of the Bronze Star and Purple Heart, and received an Army Commendation Medal with a “V” device for Valor in February 2005, for his role in an incident in Mosul [Iraq].

A specialist at the time, he helped save members of his crew while under enemy fire, according to the Defense Department.

“As both a fatherly and brotherly figure, he was looked up to by many of his fellow paratroopers,” said Lt. Col. Richard Kim, battalion commander, in a statement. “He contributed immensely to the readiness of the organization and will be sorely missed.”

Ford joined the Army National Guard in 1995 and was placed on active duty in June 2004.

He is survived by his son; his father, Mason Ford, of Colchester; a sister, Vanessa Migliore, of East Hartford; and a brother, Matthew O’Connor, of Lebanon.

By Rachana Rathi, Courant Staff Writer

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Army Private First Class Stephen K. Richardson

Army Pfc. Stephen K. Richardson, who grew up in Bridgeport, was killed March 20, 2007 by a roadside bomb in Baghdad, [Iraq]. He was 22 years old, and left a wife and daughter in Kansas.

The blast also killed [another] member of Richardson's Army unit, the 1st Battalion, 28th Infantry, 4th Brigade of the 1st Infantry Division.

Richardson was an active-duty soldier who grew up in Bridgeport, where his father, Cedric Richardson, still lives. The younger Richardson was living in Kansas with his wife and daughter before being deployed [in February 2007] to Baghdad.

He went to Bassick High School in Bridgeport. Then he attended the University of Bridgeport before joining the Army. His unit was based at Fort Riley in Kansas.

In his semester at the university, he did "very well," said university President Neil Albert Salonen. "He was well thought of. It's a kick in the stomach. There's no easy way to take news like this."

Richardson made an impression on his academic adviser and literature professor, Ed Geist. "He was a serious young man," said Geist, who recalled an essay Richardson wrote as a student. "He talked about wanting to go back to Jamaica. He thought international business was a particularly good goal for him. He really wanted to have some sort of impact...."

Geist had wondered what happened to Richardson, who had signed up for a second semester but hadn't attended. He learned [later] that the student he taught about American playwrights had been killed in the war.

While Richardson was serving America, he had a strong connection to Jamaica, where relatives—including his mother—still live. Richardson was born in Jamaica and moved to Connecticut before his teen years, said Lt. Col. John Whitford of the Connecticut National Guard.

According to a spokesman at Fort Riley, Richardson enlisted in the Army in 2005 and joined the unit [in 2006]. [Iraq] was his first deployment.

The mission of the 4th Brigade, 1st Infantry Division, according to the Army, was to "assist Iraqi Security Forces to clear, control and retain key areas of the capital city in order to reduce violence and to set the conditions for a transition to full Iraqi control of security in the city."

By Jesse Hamilton, Courant Staff Writer

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Army First Lieutenant Keith Heidtman

Army 1st Lt. Keith Heidtman was killed May 28, 2007—Memorial Day—when enemy fire brought down his helicopter in Diyala province northeast of Baghdad, [Iraq].

As Heidtman’s family learned of the 24-year-old’s death, news [emerged] from Iraq about the incident. The U.S. military announced the loss of a Kiowa helicopter—a small, highly maneuverable scouting and attack aircraft with two aboard. As a ground rescue team raced toward the scene, its vehicles were hit by roadside bombs, killing six more soldiers.

Heidtman’s family and friends struggled with the news that they had lost a son, brother, baseball player and college graduate.

The family issued a statement, saying they were devastated by the loss but "proud of his service to his country."

"We support what he wanted to do," said his stepfather, Arthur Robidoux.

Keith Heidtman, the son of Kerry Heidtman and Maureen Robidoux, graduated [in 2001] from the Norwich Free Academy. Hugh "Duke" Campbell, a principal there, was his assistant baseball coach.

"It's tragic news for all of us," Campbell said.

Campbell knew Heidtman since he was a boy coming to baseball camps and remembers him as the hard-working first baseman and outfielder who hit .371 one year.

Heidtman graduated [in 2005] from UConn with honors. His education also included ROTC—the four-year training program to become a military officer.

"He showed up in my office one day," said Maj. Glenn Colby, enrollment officer there. "He wanted to serve his country," Colby said. "You couldn't ask for a better kid."

[In 2006], Heidtman had another graduation—from an Army aviation school in Alabama. And then, [in December 2006], he was in Iraq.

As Memorial Day [2007] approached, [Heidtman's] Task Force Lightning was working northeast of Baghdad in one of Iraq's more unsettled regions.

The commander of U.S. forces there, Maj. Gen. Benjamin Mixon, said earlier...that Diyala province's government [was] nonfunctional and that he would need additional forces in Diyala "to get that situation to a more acceptable level."

Seventeen days later, eight of his soldiers, [including Lieutenant Keith Heidtman], were killed in a single incident.

By Jesse Hamilton, Courant Staff Writer

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