

Print contact: Sheila Hotchkin, (210) 567-3026, hotchkin@uthscsa.edu
Broadcast contact: Lucie Portela, (210) 567-2570, portelal@uthscsa.edu

For immediate release

Organ preservation device expected to save lives

*San Antonio-based medical innovations company
licenses technology developed at UT Health Science Center*

SAN ANTONIO (Sept. 17, 2009) — The University of Texas Health Science Center at San Antonio today announced a license agreement with MCD Life Sciences LLC to commercialize a novel organ preservation technology. The technology, developed through more than a decade of scientific investigations in the School of Medicine, is expected to significantly increase the time that can elapse between removal of donor organs and their transplant into waiting recipients. The current four- to six-hour window could be expanded to as long as a day, the inventors said.



(L_R) Jerry Gelineau and Leon Bunegin showcase their licensed organ preservation device.

The technology — a portable, sealed canister that uses a rich medium and small amounts of compressed oxygen to keep hearts, kidneys and livers oxygenated and fed with nutrients — could replace the traditional method of putting organs in cold medical solution, then on ice for transport.

The worldwide market based on current transplant surgeries is projected to be approximately \$400 million, with two-thirds of that estimated to be from kidney transplants.

“The device allows 24 hours of preservation, is compact and light, and uses only small amounts of oxygen,” said co-inventor Leon Bunegin, associate professor of anesthesiology in the School of Medicine. “From the moment an organ is preserved it does not deteriorate in this system, such that the organ after transplant will function as well as it did before it was harvested.”

The canister does not rely on electricity and requires a small bottle of compressed oxygen. Because of this, the entire system weighs less than 15 pounds and is small

enough to stow in an in-flight overhead compartment, said Edward (Jerry) Gelineau, co-inventor and research scientist in the School of Medicine.

Lisa Maier, Ph.D., president of MCD Life Sciences, said the device will allow flexibility for enhanced organ matching to donors, resulting in improved survival and lower rejection rates. It will also reduce the number of discarded organs. “Medical personnel will be able to transport an organ from any donor to any recipient around the globe,” Dr. Maier said. “This is going to increase the donor pool substantially.”

Bunegin pointed out that many transplants — currently performed as emergencies — could be scheduled, giving comfort to patients, families and operating teams. The device is designed for the heart and kidney, and with adaptations will support the liver and lungs. (Those organs require a larger canister.) The Health Science Center has three U.S. patents on the original version invented by Bunegin and the now-retired Bobby O’Dell, plus a U.S. patent pending on the newest version of the device, and soon will file a patent on new designs.

South Texas Technology Management, a regional technology transfer office that serves four University of Texas institutions — the UT Health Science Center at San Antonio, UT San Antonio, UT Brownsville and UT Pan American — negotiated the licensing agreement with MCD Life Sciences. MCD Life Sciences, a medical innovations company based in San Antonio and focused on commercializing breakthrough technologies from universities, was founded in May 2009 by Dr. Maier.

Grants from South Texas Technology Management and The University of Texas System's Texas Ignition Fund led to device development, and are supporting the testing required for U.S. Food & Drug Administration approval.

Facts - organ transplantation and preservation

- 27,963 organs were transplanted in the U.S. in 2008.
- Of those, 21,746 were recovered from deceased donors and required some level of preservation prior to transplantation.
- More than 103,600 Americans are on transplant waiting lists as of today (Sept. 17).
- From January to June 2009, 14,191 transplants were performed in the U.S.

- Over the same period, there were 7,250 donors nationwide.
(Source: *United Network for Organ Sharing*)

For more information about STTM, please visit the STTM website, www.utsttm.org, or contact Christine Burke at burkec@uthscsa.edu or (210) 567-0776.

#

South Texas Technology Management (STTM) is the regional technology transfer office serving the UT Health Science Center at San Antonio, UT San Antonio, UT Brownsville and UT Pan American. STTM provides comprehensive intellectual property services for technologies developed by faculty, staff and students. STTM is dedicated to the protection and licensing of these technologies in order to further research and development, protect the interests of the faculty and the University, enhance economic development and provide humanitarian value to the community. By facilitating the development and commercialization of UT inventions, STTM is fostering innovation and encouraging the creation of new and cutting-edge technologies. To learn more about STTM please refer to www.utsttm.org.

The University of Texas Health Science Center at San Antonio is the leading research institution in South Texas and one of the major health sciences universities in the world. With an operating budget of \$668 million, the Health Science Center is the chief catalyst for the \$16.3 billion biosciences and health care sector in San Antonio's economy. The Health Science Center has had an estimated \$36 billion impact on the region since inception and has expanded to six campuses in San Antonio, Laredo, Harlingen and Edinburg. More than 26,400 graduates (physicians, dentists, nurses, scientists and other health professionals) serve in their fields, including many in Texas. Health Science Center faculty are international leaders in cancer, cardiovascular disease, diabetes, aging, stroke prevention, kidney disease, orthopaedics, research imaging, transplant surgery, psychiatry and clinical neurosciences, pain management, genetics, nursing, dentistry and many other fields. For more information, visit www.uthscsa.edu.