CryoLife Announces First SynerGraft -R- Biologic Heart Valve Implants in Human Patients; Trans-species Transplant Performed Without Use of Immunosuppression

August 31, 1999

ATLANTA--(BW HealthWire)--Aug. 31, 1999--CryoLife, Inc. (NYSE:CRY), the leader in the development and commercialization of living human tissue implantable devices and a manufacturer and distributor of stentless heart valves and surgical adhesives, today announced that two human females had each received a tissue-engineered SynerGraft(R) porcine heart valve in the aortic position. Dr. Mark O'Brien, a paid consultant to CryoLife, Inc. and a member of the CryoLife Cardiovascular Medical Advisory Board, performed the first implants of tissue-engineered heart valves in Brisbane, Australia. The research and development which led to this unprecedented surgery were made possible, in large part, by grants totaling over $1.1 million from the National Institutes of Health (NIH). Additional SynerGraft research is also being funded by a $2 million grant from the U. S. Department of Commerce, National Institute of Standards and Technology (NIST).

CryoLife's SynerGraft technology incorporates the use of a porcine heart valve which is depopulated of its cells and is expected by the Company to repopulate following implantation with the cells of the heart valve recipient, producing a bio-engineered human heart valve similar to the patient's own heart valve.

Steven G. Anderson, President and Chief Executive Officer of CryoLife, said, "I believe the successful implant of a tissue-engineered heart valve is an enormous milestone for our company and our SynerGraft technology. The SynerGraft technology has multiple applications, but holds particular promise for cardiac surgery in children since we believe that the bio-engineered heart valve should have the capability to remodel itself with the recipient's own cells, potentially growing with the child. I believe the implantation of a tissue-engineered heart valve represents a revolutionary breakthrough in implantable device technology. SynerGraft technology enables a trans-species transplant of an unfixed biologic heart valve without requiring the use of immunosuppression."

Mark O'Brien, M.D., of the Department of Cardiac Surgery at The Prince Charles Hospital, Brisbane, Australia, said, "The implantation of these two heart valves, which took place one week ago, is a landmark event in heart surgery. To our knowledge, these are the first implantations of tissue-engineered heart valves in the world. This SynerGraft technology may revolutionize the replacement of heart valves, making life-saving surgery available to expanded numbers of patients."

Founded in 1984, CryoLife, Inc. is the leader in the development and commercialization of living human tissue implantable devices for use in cardiovascular, vascular and orthopaedic surgeries throughout the United States and Canada. The Company's BioGlue(R) surgical adhesive, CE marked in the European Union for use in vascular and pulmonary sealing and repair, is distributed throughout Europe. The Company also manufactures CryoLife-O'Brien(R) and CryoLife-Ross(TM) stentless porcine heart valves which are distributed within the European Community.

Statements made in this press release which look forward in time involve risks and uncertainties and are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such risks and uncertainties include the possibility that the implanted SynerGraft valve will not repopulate with the cells of the recipient, or even if repopulated, that the valve will not grow with pediatric recipients, the risk that the SynerGraft valve will otherwise not perform as expected and will therefore not become an acceptable alternative to currently available implantable valves, changes in economic cycles, competition from other companies, changes in laws and governmental regulations applicable to the Company and other risk factors detailed in the Company's Securities and Exchange Commission filings, including the Company's Form 10-K for the year ended December 31, 1998.

The Company web site is: http://www.cryolife.com

Editor's Note:

Historical timeline of heart valve replacements: Mechanical heart valve implant - 1960 Fresh homograft implant - 1962 Stented porcine(1) heart valve implant - 1968 Stented bovine(1) pericardial implant - 1981 Cryopreserved(2) homograft implant - 1984 Stentless porcine(1) heart valve implant - 1988 Tissue engineered(3) heart valve implant - 1999

(1) Glutaraldehyde fixation (2) Commercially available (3) SynerGraft technology

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