

Bio-Material Improves Heart Surgery Outcomes

Purdue Research Foundation



More than 650,000 open heart surgeries are performed every year. During open heart surgery, the thin sac or casing surrounding the heart is cut open and sometimes even damaged. It's usually left unrepaired because a compatible repair material is not readily available. This increases the risk of developing scar tissue or adhesions, which may result in difficult follow-up surgery.

In the late 1980s and early 1990s researchers at Purdue University, West Lafayette, Ind., in partnership with Cook Biotech Inc. in Purdue Research Park, developed the CorMatrix ECM Patch for closing the pericardial sac during surgery. Further cardiovascular applications were developed by Rob Matheny, M.D. of CorMatrix Cardiovascular Inc. in Sunnyvale, Calif.

The CorMatrix® ECM Patch is made from a pig's small intestine submucosa, which has been used for years in general soft tissue reconstruction and repairing wounds. This same material is now being used by heart surgeons.

“ *The CorMatrix® ECM Patch provides surgeons with a way to repair or reconstruct the sac surrounding the heart. This also helps restore the natural barrier between the back of breastbone and the heart and can also protect underlying grafts.*

In 2006 the first CorMatrix® ECM Patch was implanted to close the pericardial sac. To date more than 2,000 pericardial closure implants have been successfully performed in the United States. CorMatrix® Cardiovascular Inc. continues to research and develop new cardiovascular applications for this innovative technology.

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