days. An independent pathologist evaluated abdominal adhesion, mesh shrinkage, local tissue tolerance and tissue ingrowth through histological analysis (H&E and Movat Pentacrome) at sacrifice. Fixation strength of the explanted abdominal walls was also assessed via burst-test.

**Results:** No adverse events were observed at implantation or during the survival period. All the meshes were in place at sacrifice. Mesh shrinkage and abdominal adhesion scores were similar between the two groups. Histological analysis of the mesh demonstrated equivalent quality of tissue ingrowth and excellent local tissue tolerance with minimal/mild foreign body response and mononuclear cells inflammation. The repair strength, evaluated through a burst ball method 90 days after implantation, showed no significant difference between the TISSIUM adhesive and tacks. Usability is currently being evaluated in clinically relevant models.

**Conclusions:** In this preclinical study the TISSIUM adhesive demonstrated similar fixation strength and quality of repair when compared to commercial tacks. This technology has the potential to impact hernia procedures standardization and reduce pain often associated with current fixation technologies.

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**P046 ATRAUMATIC AND CONSISTENT HERNIA MESH FIXATION: PERFORMANCE AND SAFETY IN A LAPAROSCOPIC IPOM PORCINE MODEL**

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**Aim:** Demonstrate the performance and safety of TISSIUM on-demand activated adhesive for atraumatic hernia mesh fixation in a laparoscopic IPOM porcine model.

**Material and Methods:** Full thickness 4 cm in diameter excisional abdominal defects (n = 14) were created in pig (n = 8). The defects were repaired through laparoscopic intraperitoneal mesh placement using commercial composite meshes fixed with TISSIUM adhesive (n = 8) or resorbable tacks (n = 6). The animals were sacrificed after 28 and 90