

Silk Biomaterials: nanomedicine from lab to market

*Antonio Alessandrino
Silk Biomaterials Srl*

Silk Biomaterials S.r.l. (limited liability Company) is an “innovative startup” under the Italian Legislative Decree No. 179 - 18 October 2012, converted in Law No. 221 - 13 December 2012. It has received private investments (€485'000 – Dicember 2015) from a selected group of business angels and institutional Series A VC investment (€7'000'000 – April 2016). It's main area of activities is the development of a technology platform to manufacture medical implantable devices. The technology is based on the coupling of electrospun biomimetic matrices and textile high tensile strength matrices made of silk fibroin. Previous in-vitro and in-vivo studies demonstrated the capability of silk fibroin matrices to stimulate a “sito specific” in-vivo tissue regeneration.

Silk Biomaterials is developing new devices for the regeneration of small blood vessels and peripheral nerves by leveraging the biomimetic properties and the mechanical advantages of silk. However with the same technology it is possible to manufacture devices for several applications as cardiac valves, tendons and ligaments, skin, dura madre,