[194] SEEVIX SPIDERSILK "SVXGRO": FIRST MAN-MADE SPIDERSILK PRODUCED WITH BIO- AND NANO-TECHNOLOGY

Shlomzion Shen¹, ¹ Seevix Material Sciences

o Investment Rational

Seevix Material Sciences is a privately held company producing high strength spidersilk fibers. Through recombinant DNA technologies, we replicate the creation of natural spidersilk, which is six times stronger than steel of the same diameter, but only 1/5 its weight. Seevix targets applications where the combined mechanical properties and biocompatibility of its spidersilk provide novel solutions for unmet medical needs.

Business Strategy

Seevix integrates its fibers into polymers to produce new composites that target next generation products. Seevix generates revenues from the sale of its fibers and royalties from co-developed products.

Core Technology

Through recombinant DNA technologies, we are unique in our ability to replicate the natural process of spidersilk creation. We induce the protein's natural self-assembly process, thereby directly generating actual spidersilk, without the need to purify or artificially spin proteins into fibers. The integration of fibers with other materials has resulted in new composites, enabling reinforcement of various matrices.

Product Profile/Pipeline

Seevix is already marketing its first 3D cell culture products. Our fibers serve as tissue engineering scaffolds, supporting 3D cell growth, conserving prolonged cell function, delaying cell death and maintaining spheroid integrity during prolonged culturing. Our pipeline also includes stronger, thinner surgical sutures, which reduce scarring and wound closure time, and are ideally suited for cosmetic, ophthalmologic, neuro- and microsurgery.

o What's Next?

Seevix is looking to partner with market leaders in order to co-develop miniaturized, strong, biocompatible medical products. For example, Seevix is developing an intra-aortic balloon with a leading medical device company, which has advantages over available balloons as regards its mechanical properties and ease of use.