

Flex Biomedical, Inc. develops and commercializes innovative products for the treatment and diagnosis of orthopedic injuries and diseases. Flex Biomedical's lead product is a synthetic polymer, the Flex Polymer™, designed to treat osteoarthritis, an incurable joint disease that affects millions around the world.

Flex Biomedical has raised over \$2.1 million. The company is seeking investors, partners, and collaborators.

✓	Large Market Opportunity
✓	Innovative, Proprietary Technology
✓	Strong In Vivo Data
✓	Weak Competitive Products
✓	High Profit Margin
✓	Experienced Team

### Market Opportunity

Osteoarthritis is an incurable and chronic form of arthritis that is characterized by a breakdown of cartilage and synovial fluid in the joints. This painful disease currently affects over 200 million people around the world including 27 million people in the United States. Traditionally, osteoarthritis is treated with hyaluronic acid (HA) viscosupplements injected into the joint to try to improve the viscosity of the synovial fluid and reduce pain and swelling within the joint. However, injected HA only stays in the joint for 1-2 days and often is ineffective. Some trials have shown no superior benefit when compared to placebo. The current market for all osteoarthritis treatments is over \$5 billion annually, including about \$1 billion of HA viscosupplements sold globally. A product that can successfully help osteoarthritis patients has the potential for billion-dollar revenues.

### Strategy & Exit Plan

Flex Biomedical's strategy is to demonstrate human efficacy of the Flex Polymer™ as rapidly as possible and then seek US FDA approval or approval in another major market such as Japan or Europe. The likely exit for investors will be an acquisition by a larger company with a sales force targeting orthopedic surgeons.

### Flex Polymer™

Flex Biomedical's polymer was designed to be a superior viscosupplement. We believe the polymer can both relieve pain and protect the cartilage from further degradation, the latter thus slowing down the progression of osteoarthritis - something current viscosupplement products cannot do. The Flex Polymer is appealing for this use because:

- It has a low coefficient of friction for improved lubrication in the joint - superior lubricant.
- It exhibits non-linear viscosity during high-impact joint loads and shear strain (i.e. exhibits increased stiffness and reduced viscosity) - superior cushioning ability.
- It is a slow-degrading polymer. This translates to a much longer residence time in the joint than HA products.
- It can be synthetically manufactured much less expensively than HA products - projected \$1-\$2/dose vs an estimated \$10-20/dose for HA products.

The Flex Polymer demonstrated **strong cartilage protection abilities** in an aggressive animal osteoarthritis model. *In vitro* and *in vivo* tests have confirmed the polymer's superior mechanical properties and its biocompatibility. Cytotoxicity, genotoxicity, sensitization, irritation, acute toxicity and other biocompatibility tests have been conducted, demonstrating the polymer's safety.

### Co-Founders

The CEO, Sal Braico, and the CSO, Hideki Suzuki, PhD, ran the biotech company ConjuGon from 2002 - 2008, raised over \$8.3 million, and advanced the lead product into clinical trials. The VP of R&D, Michel Wathier, PhD, is the co-inventor of the Flex Polymer™ and a highly experienced polymer chemist.

Mark Grinstaff, PhD is a Professor of Biomedical Engineering and Chemistry at Boston University. He has co-founded 4 startup companies. Brian Snyder, MD, PhD, is an orthopedic surgeon at Childrens Hospital in Boston and Director of the Orthopedic Biomechanics Laboratory at Beth Israel Deaconess Medical Center in Boston.