The **NEXT** Treatment for Low Back Pain

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What causes Degenerative Disc Disease?
**Associated Biomarkers:**
- Disc Bulge
- Joint Instability
- Fissures into outer 30% of AF
- AF HIZs (T2)
- Modic I&II adjacent to EP

**Pain Generators**

**Neuropathy**
Disc Therapeutic Performance Criteria

Increase retention of GAGs/ hydration?
Increase nutritional flow/ permeability?
Improve mechanical properties/ durability?
Reduce disc bulge?
Reduce joint instability?
Increase tear resistance?
Provide adhesion of adjacent tissues?
Ensure minimal toxicity?
Useful as an adjunct to surgery?
Fast-acting / Long-lasting?
Inexpensive?
Injectable Collagen Crosslink augmentation
- Genipin-based reagent augments crosslinking of native ECM
- Injectable/conservative care/biomimetic approach
- Immediate effect/long-lasting covalent bonds
- Cost effective
Summary of Experimental Results: NEXT...

- Increases retention of GAGs/ hydration (>40%)
- Increases nutritional flow/ permeability (100%)
- Improves mechanical properties/ durability (>25%)
- Reduces disc bulge (>25%)
- Reduces joint instability (4-fold)
- Increases tear resistance (50%)
- Provides adhesion of adjacent tissues (3X)
- Exhibits minimal toxicity (sub-cu/neurotox/6-studies)
- A good adjunct: Restabilizes post-discectomy
- Fast-acting / Long-lasting
- Inexpensive (90% reduction in device costs)
Some of Our 28 Peer-Reviewed Publications


Follow-On Work By Others


When is it the right time to use NEXT?

Normal Aging, Disc Degeneration / Dehydration

Annulus Overload / Nutritional Deficiency

Bulges / Fissures / Cracks / Mechanical Insufficiency

Disc Collapse / Herniations

Nerve Root Compression / Facet Joint Pain

Early Stage Disease

Advanced DDD

DDD Degenerative Cascade ~10 years

NEXT is ideal as a primary treatment to prevent decades of chronic pain

NEXT can be used as a surgical substitute (flexible stabilization) or as an adjunct to surgery

*Weber ‘94
The ‘Injectable’ Competition: Can Biologic Treatments Work in the Intervertebral Disc?

- Harsh, nutritionally deficient environment of the disc led to DDD in the first place
- “Degenerative discs are not able to support the added nutrient demands from increase in cellular activity or cell number…” – Jill Urban, PhD
- Biological treatments offer no near-term effect, not appropriate as a stand-alone treatment
**NEXT** is the Perfect Adjunct to Cell-Based Therapies

- Provides **immediate joint stability** and resistance to mechanical degradation
- Crosslinking **increases nutrient permeability for long-term treatment viability**
Patent Portfolio

- 10 US and 6 international patents issued or in condition for allowance
- Additional 25 US and international patents pending
Funding required: $600k or $6million

Exit Strategy #1: Early acquisition by spinal device company

Available upon request

Exit Strategy #2: Acquisition after US market entry or IPO*

Available upon request

Contact Tom Hedman for more information: thedman@intralinkspine.com