

## A **SUCCESS** STORY

### INJECTABLE PRODUCT FOR **TORN JOINT TISSUE REPAIR**

This collaborative research sought to design and optimize new biopolymer products to repair damaged joint tissue, like rotator cuff and meniscus tendon tears, or to deliver therapeutic RNA to a specific location in the body by demonstrating the products' efficacy in animals.


In 2015, a patent describing a new method for producing lyophilized chitosan formulations containing a lyoprotectant and a clot activator soluble in platelet-rich plasma (PRP) led to the creation of injectable implants for tissue repair.

Working jointly with **Prof. Michael Buschmann** and **Marc Lavertu** at **Polytechnique Montréal**, the Montreal-based SMEs **Ortho Regenerative Tech Inc.** and **ANRis Pharmaceuticals Inc.** demonstrated the feasibility of using these implants in animals.

The project confirmed the biomaterials' potential for human regenerative medicine applications. It provided the crucial data that was needed to submit an experimental drug application to the Food and Drug Administration (FDA) while seeking regulatory approval to conduct clinical investigations for rotator cuff repair.

The project resulted in the development of three new products, two new procedures and one new technology. More than 20 high-impact publications and several conferences at international scientific events helped raise awareness regarding the possibilities of using chitosan when treating arthritis.

 *Ortho RTI is entirely satisfied with the Polytechnique and ANRis research collaboration.*

*PRIMA showed flexibility regarding the minimum % contribution from one of the partners (ANRis), which was unable to pay the full amount of its initial commitment. This flexibility was essential to the project's success.* 

- **Brent Norton**,  
CEO, Ortho RTI



#### SECTORS

Polymers  
Biomaterials  
Nanoparticles



#### APPLICATIONS

Implants  
Arthritis health



#### TRL

1-3



#### DURATION

24 months  
(2016-2019)