



Stemmatters



Company Presentation

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CEO and co-founder



Stem matters



Focused in product development.

R&D model:

- Develops new medical devices and therapeutic products as primary vector for value creation.
- Exploits licensing or trade sale of discrete technology (IP and trade secrets).

Partially integrated business model.



CDMO

Development and cGMP manufacturing service model:

- Offers contract research and manufacturing services targeting bio-/pharmaceutical clients
- Provides R&D and therapeutic grade biologics and cells.

Vertically integrated business model.



Company

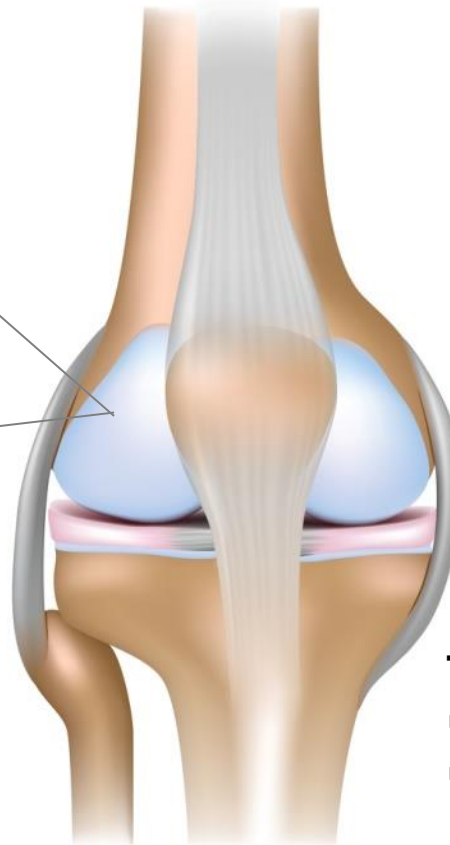
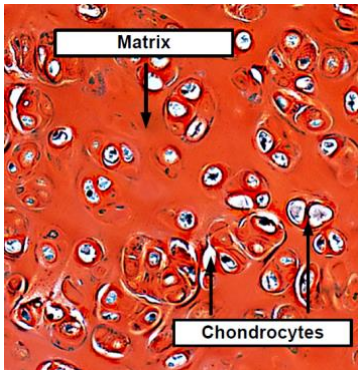


- Regenerative medicine company developing **breakthrough biomaterials for cell delivery and tissue regeneration**.
- Novel product based on innovative platform with potential application in multiple clinical areas.
- **Very strong IP position** comprising 5 patents and patent applications, with potential for further expansion. Ample freedom to operate.
- Lead product (STM-148B) targets **cartilage repair** by:
 - Reducing surgical invasiveness and complexity
 - Improving patient convenience
 - Increasing treatment cost-effectiveness

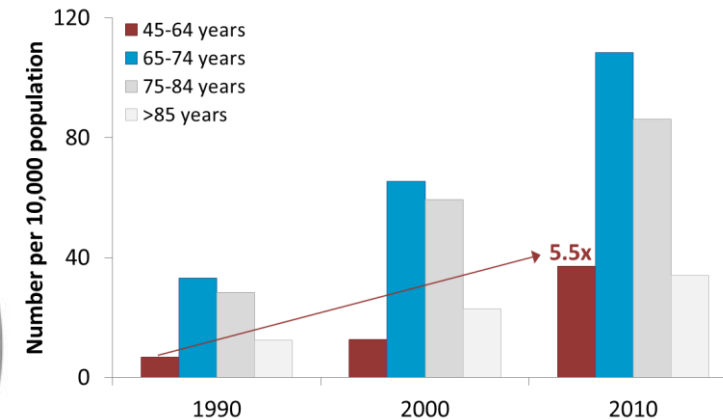
Unmet Need

Cartilage repair

Cartilage is a dense tissue covering bone extremities in all joints.



Lesions increase need for Total Knee Replacement (TKR) at younger ages:



Cartilage can be damaged by:

- Traumatic injury
- Degenerative disease

Cartilage has very limited self-repair capacity.

Lack of treatment will lead to **loss of articular and chronic degeneration.**

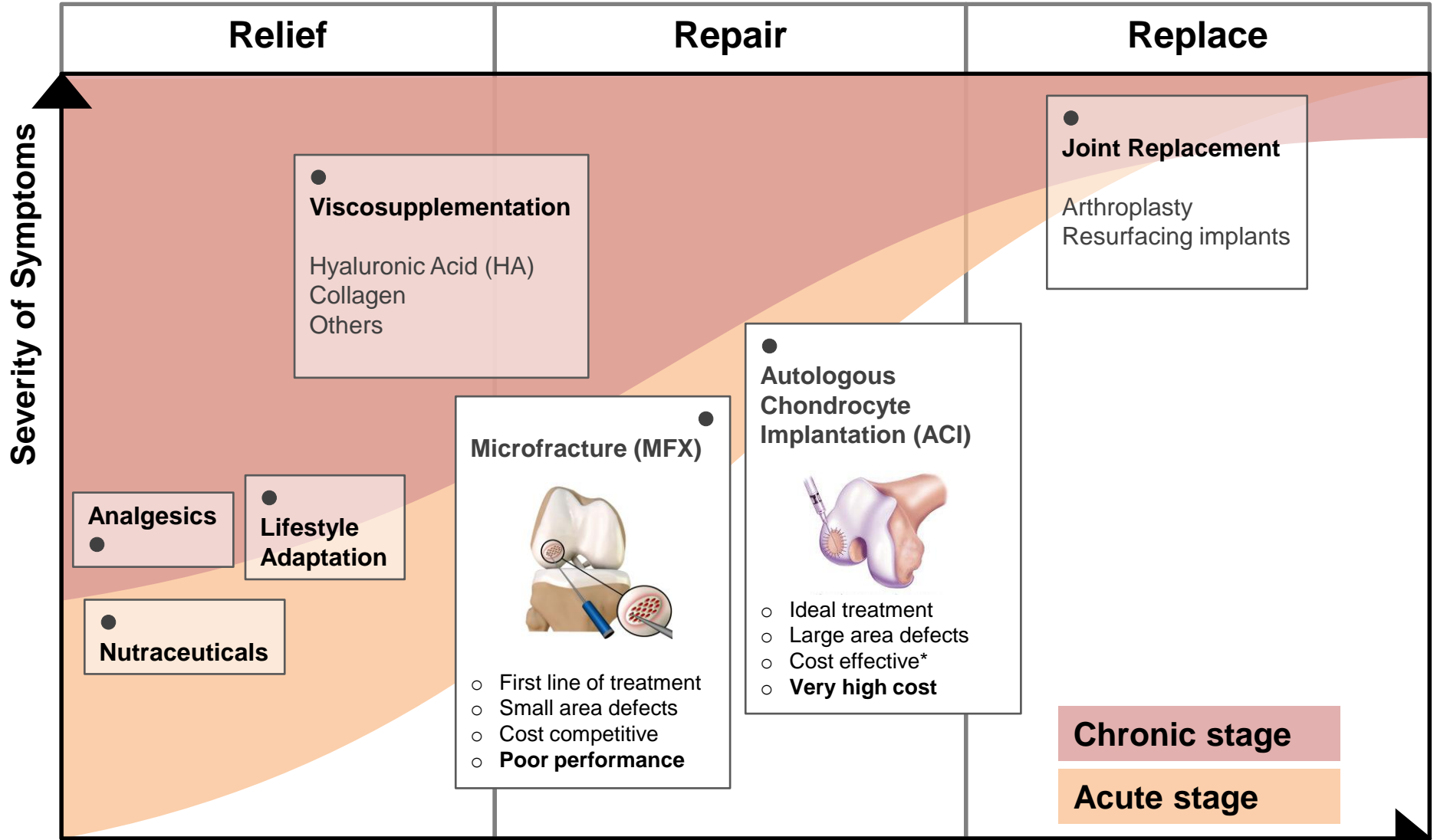
TKR remains limited:

- Replacement after ~10 /20y
- Physical impairment & disability

Ultimate objective:

Treat lesion in acute stage and avoid onset of chronic disease

Cartilage treatment



* Mistry H, Connock M, Pink J, Shyangdan D, Clar C, Royle P, et al. Autologous chondrocyte implantation in the knee: systematic review and economic evaluation. *Health Technol Assess* 2017;21(6).



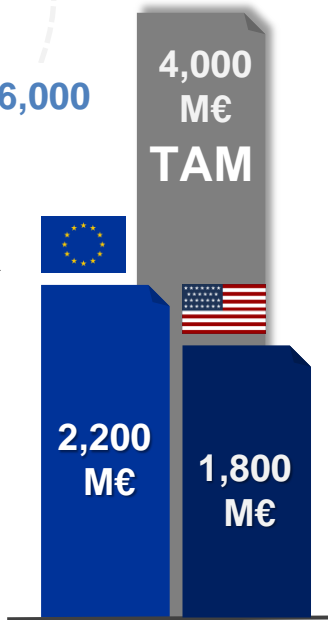
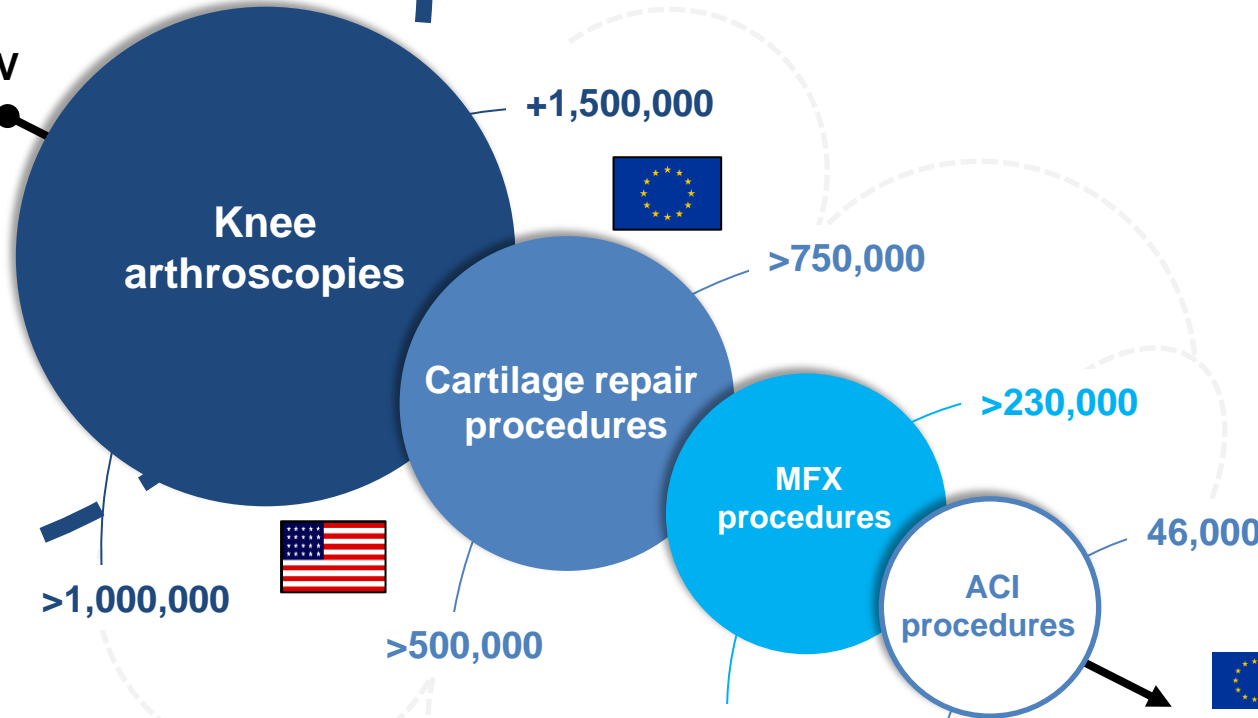
Opportunity

Cartilage repair market

- Defects found in **60% of all knee arthroscopies**
- **20% are grade IV**


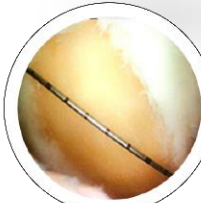
By 2023

Potential annual procedures



Pipeline

Products and indications

Lead	Medical purpose	Indication
<p>STM-148B</p> <p>Key features</p> <ul style="list-style-type: none"> ▪ Injectable hydrogel ▪ Chemically defined ▪ Bioadhesive ▪ Arthroscopy delivery 	<p>Structural matrix to support cartilage repair</p> <p><i>Medical device</i></p>	<p>Microfracture (MFX) enhanced Defects < 2 cm²</p> <p><u>Main intended use</u> Non-clinical development Q2, 2018</p> 
	<p>In-situ articular delivery</p> <p><i>Functional ingredient</i></p>	<p>Cell implantation (ACI) Defects > 2 cm²</p> <p><u>Secondary intended use</u> Non-clinical development Q1, 2018</p> 
	<p>Therapeutic delivery Small and large joints</p> <p><u>Tertiary intended use</u> Non-clinical development Q3, 2018</p>	





Product

Features & advantages



-

**Minimally
invasive**

-

Arthroscopy



-

**Patient
Convenient**

-

**Outpatient
treatment**



-

**Tissue
Adhesive***

-

**No additional
fixation**

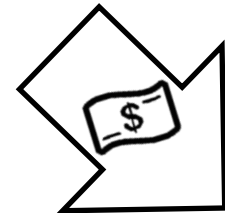


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**Cell
Retention**

-

**High cell
efficiency**



-

**Cost
Effective****

-

**37% cost
reduction**

*Does not use fibrin or equivalent animal derived product


** ICER as compared to reference ACI cost and relative to MFX – economic evaluation conducted for STM-148B



Competitive Positioning

Benchmarking



Company	Product Name	Xenofree	Injectable	Self Adhesive	<i>In situ</i> Delivery	Volumetric Filling
Amedrix	Chondrofiller liquid	✗	✓	✓	✗	✓
TETEC	Novocart Inject	✗	✓	✓	✓	✓
Osiris Therapeutics	Cartiform	✗	✗	✗	✗	✗
Geistlich Pharma	Chondro-Gide	✗	✗	✗	✓	✗
Matricel	Cartimaix	✗	✗	✗	✓	✗
Histogenics	Neocart	✗	✗	✗	✓	✗
BioTissue	Bioseed-C	✓	✗	✗	✓	✗
Anika Therapeutics	Hyalofast	✓	✗	✓	✓	✗
Regentis Biomaterials	GelrinC	✓	✓	✓	✗	✓
Smith & Nephew	Cargel	✗	✓	✓	✗	✓
Oligo Medic	Joint Rep	✗	✓	✓	✗	✓
 Stematters	STM-148B	✓	✓	✓	✓	✓



Product Development Roadmap

Key stages and milestones

	2017				2018				2019				2020				2021				2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preclinical Development																								
GLP Safety Studies	█	█	█	█	█																			
Performance study - ACI	█	█	█	█	█																			
Formulation optimization				█	█																			
Additional performance study - MFX						█	█	█																
End-Product / Dossier Submission								█																
End-Product / Dossier Update									█															
QMS Upgrade																								
QMS: ISO13485 Implementation									█	█	█	█												
QMS: ISO13485 audit stage													█	█										
QMS: ISO13485 certification															█									
Clinical Development																								
Autorization Clinical Study Phase I/IIa											█													
Enrollment Start - End												█	█	█										
Clinical Study - End 12 months												█	█	█	█	█	█							
Clinical Study - End 24 months												█	█	█	█	█	█	█	█	█	█			
Final Report																								█
Product Approval																								
CE Marking Submission																			█	█				
CE Marking Approval																				█	█			
Company Financing																								
Pre-series						█	█	█																
Series A funding									█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█



Stem matters



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