

# Translational Research in Tissue Engineering

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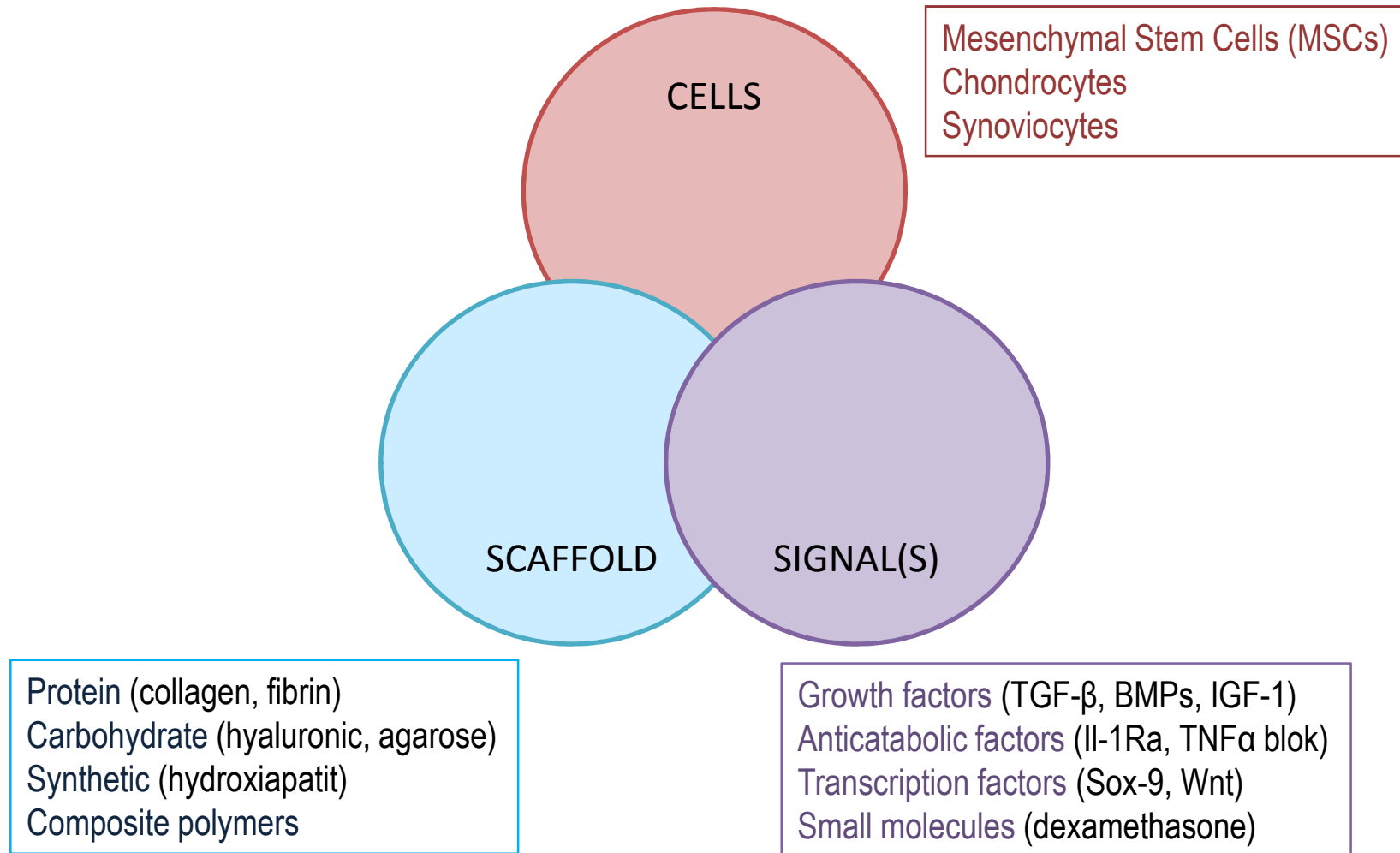
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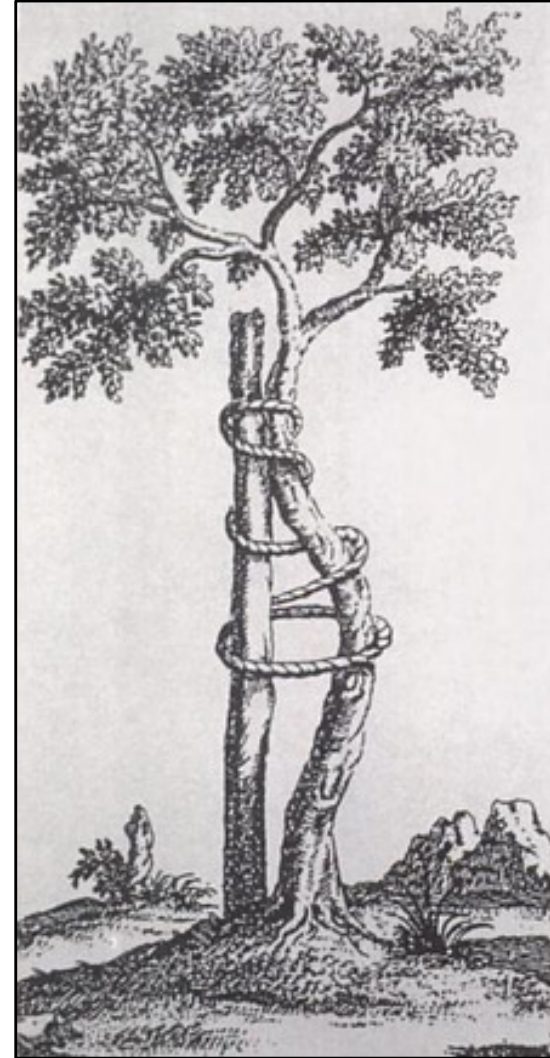


# TISSUE ENGINEERING



# Background

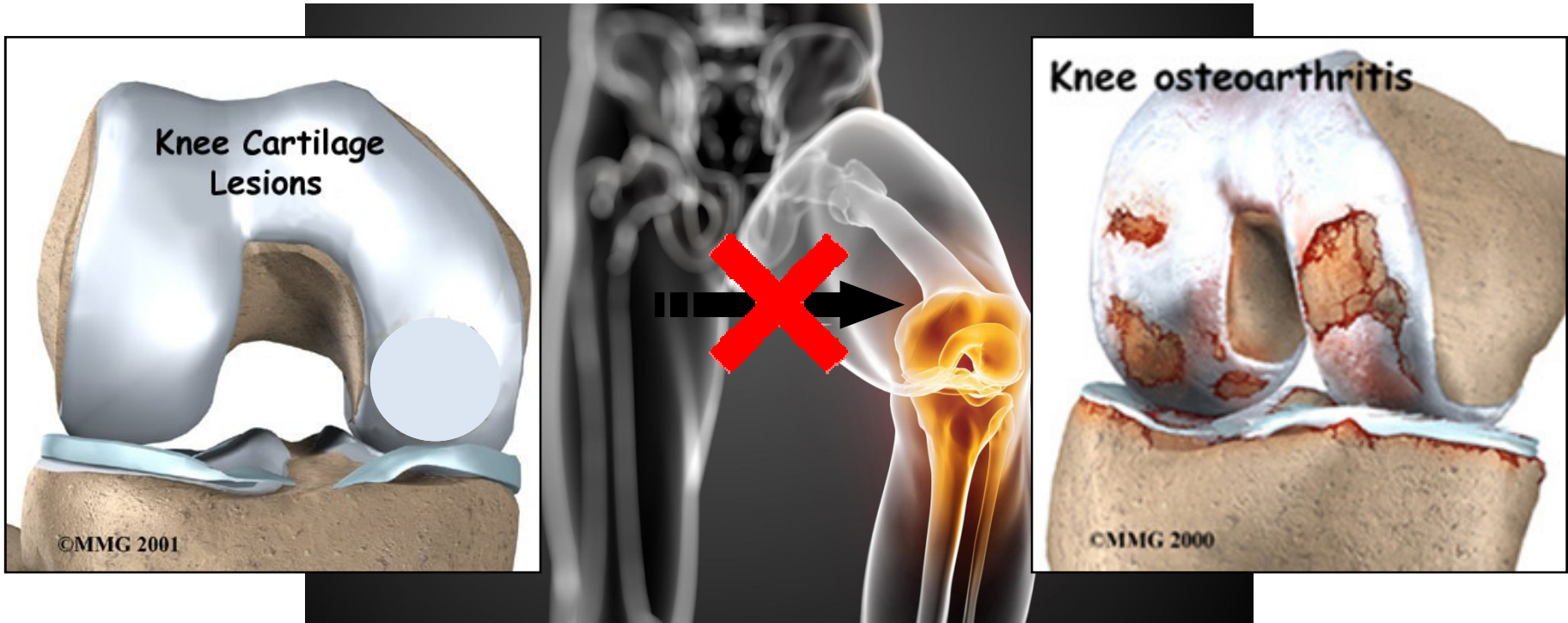
- Osteoarthritis (OA) of the knee is one of the top five causes of disability in the US
- It is commonly encountered in the clinical setting
- About 12% of Americans >60 years experience symptomatic knee OA
- The number of persons >65 expected to increase from about 35 million in 2000 to an estimated 71 million in 2030



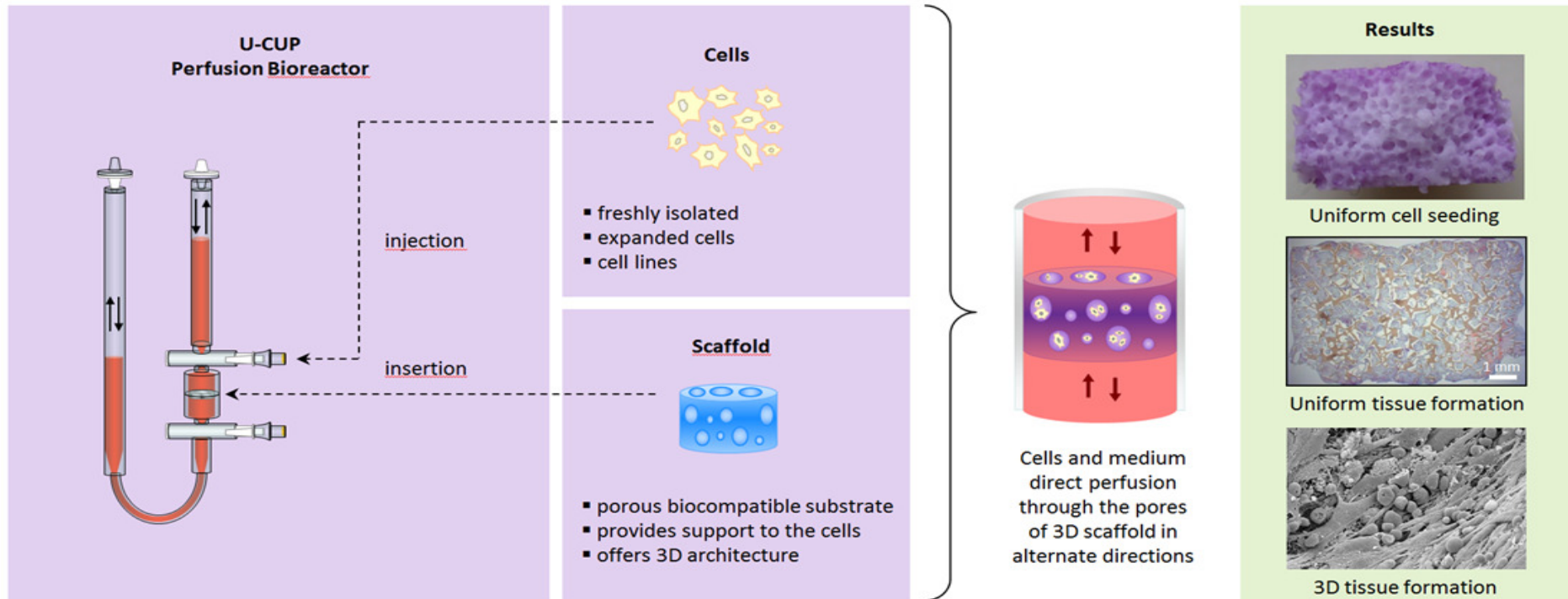
# The impact of cartilage injuries on society cannot be underestimated!

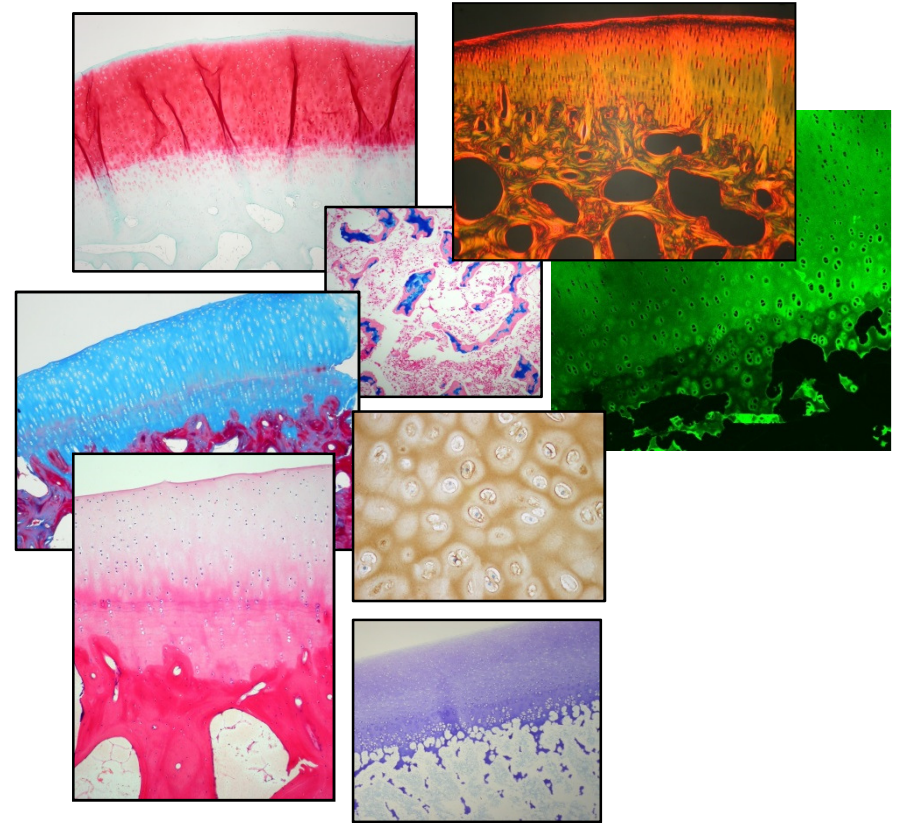
- Diminishes patient's quality of life
- A high cost in healthcare resources - expenses overpass 89 billion dollars per year
- >30 000 arthroscopies: 60 - 66% patients have cartilage lesions
  - Patients in their 30s & 40s
- Damaged cartilage doesn't heal





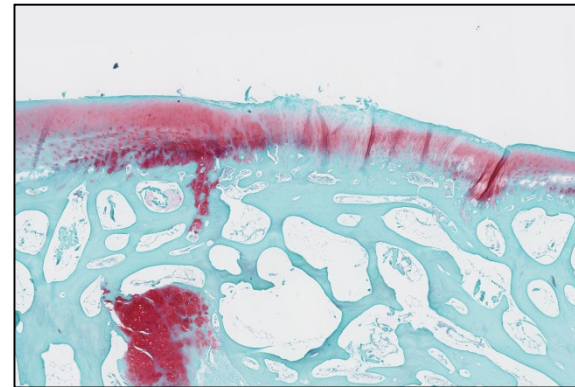
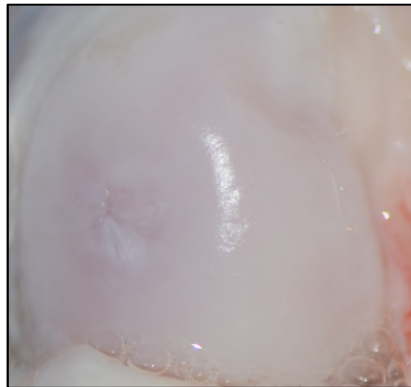
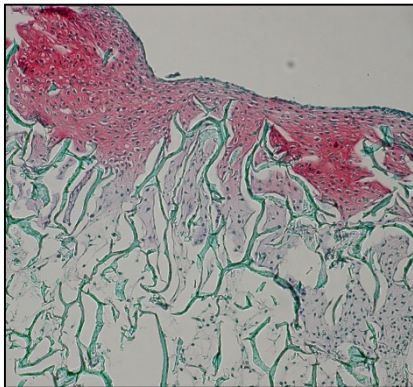
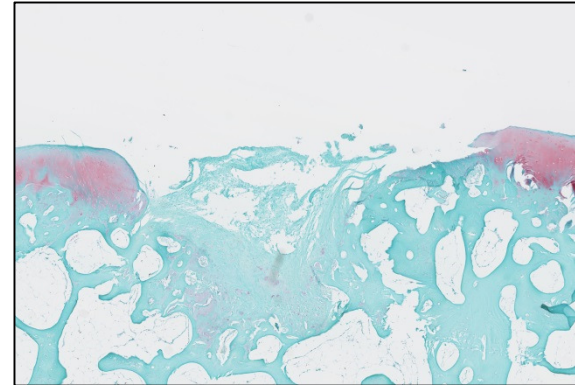
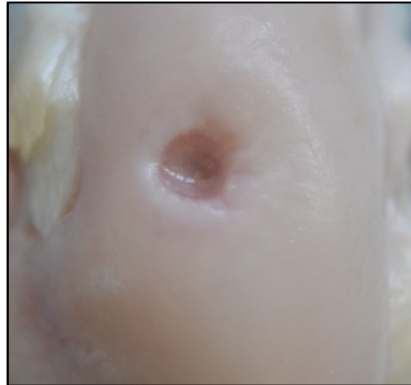
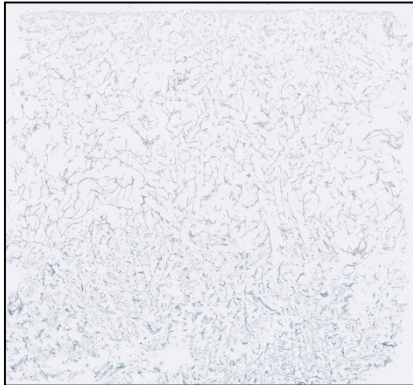
# TISSUE ENGINEERING





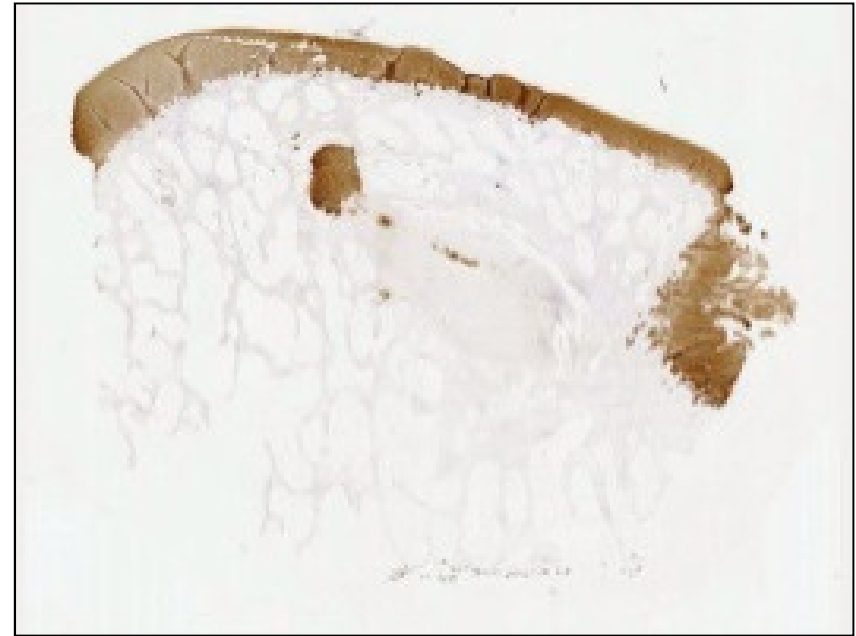
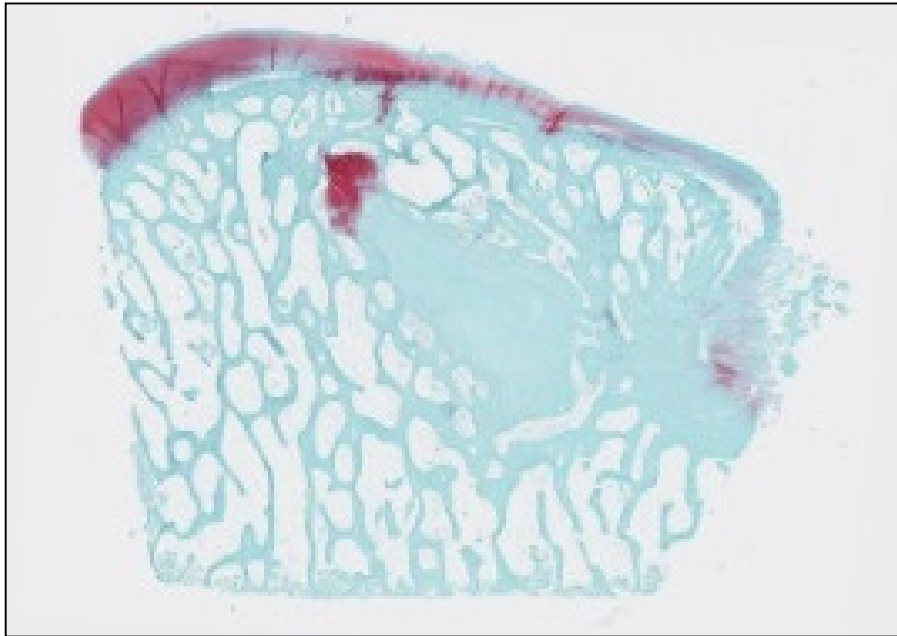
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# RESULTS





# REGENERATED CARTILAGE





**Bi**oreactor-based, **c**linically **o**riented  
**m**anufacturing of **e**ngineered **t**issues  
**BIO-COMET** (FP7)

# BIO-COMET TEAM



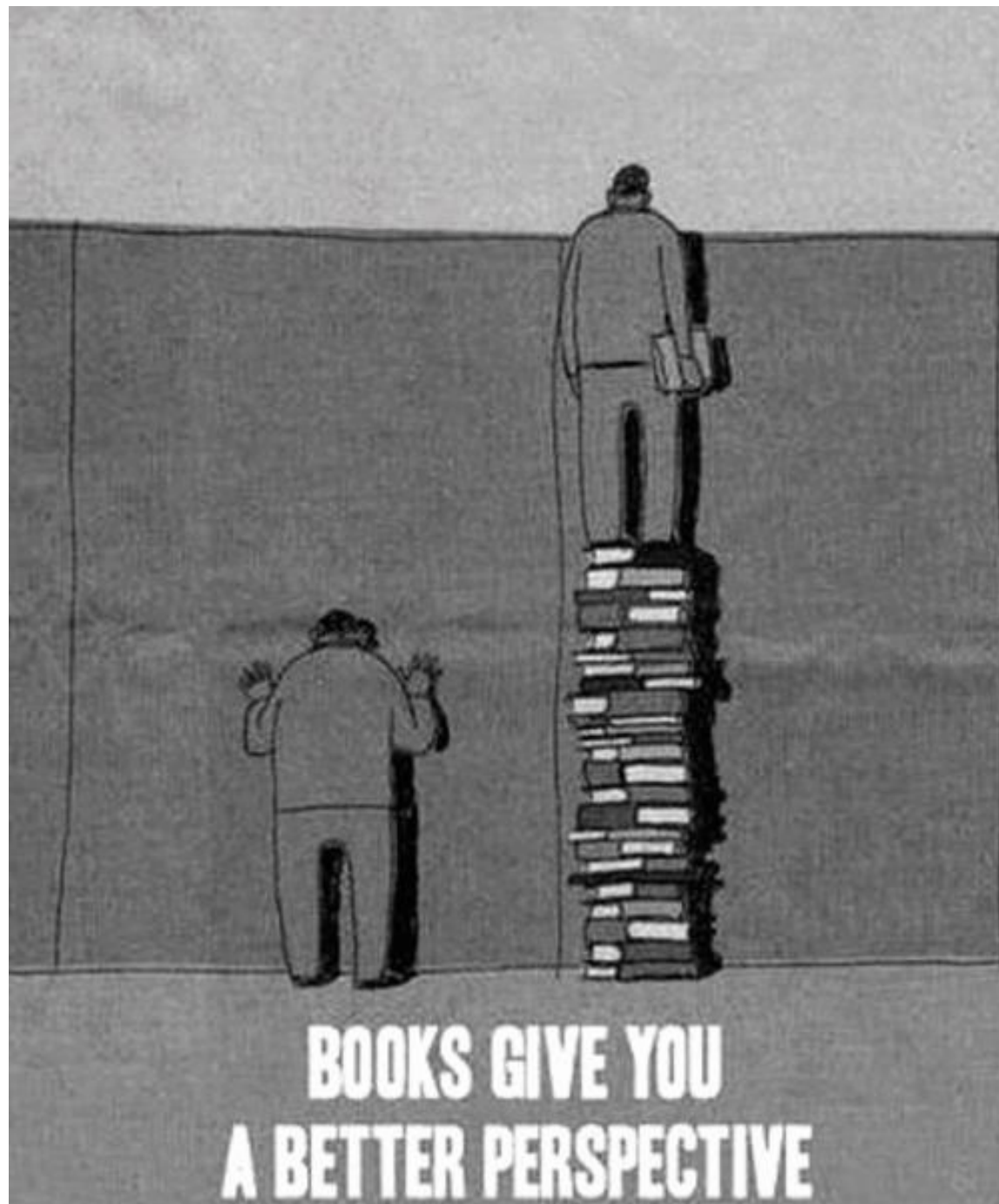
# BIO-C HIP

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BIOengineered grafts for Cartilage Healing In Patients (Horizon 2020)

## Literature

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