



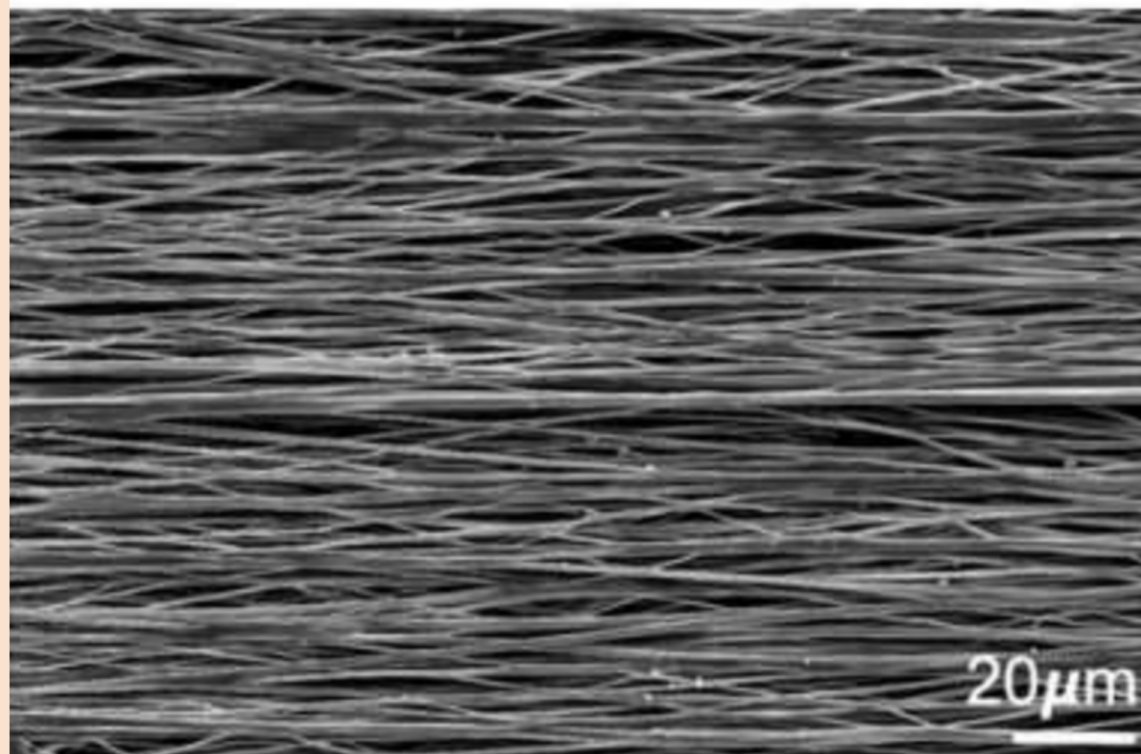
TEXTILES IN TISSUE ENGINEERING

Salihah Cann-Polentz

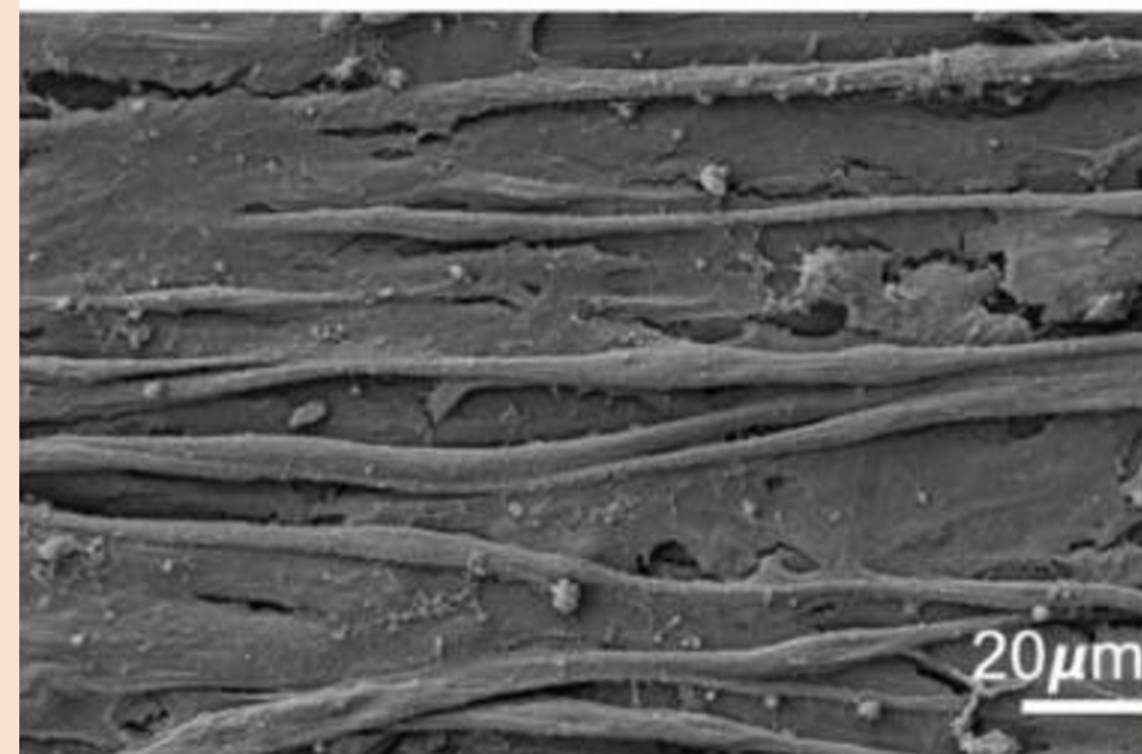


What is a scaffold?

Nanofiber Scaffold



Myofibers on scaffolds



SCAFFOLDS MUST SUPPORT:

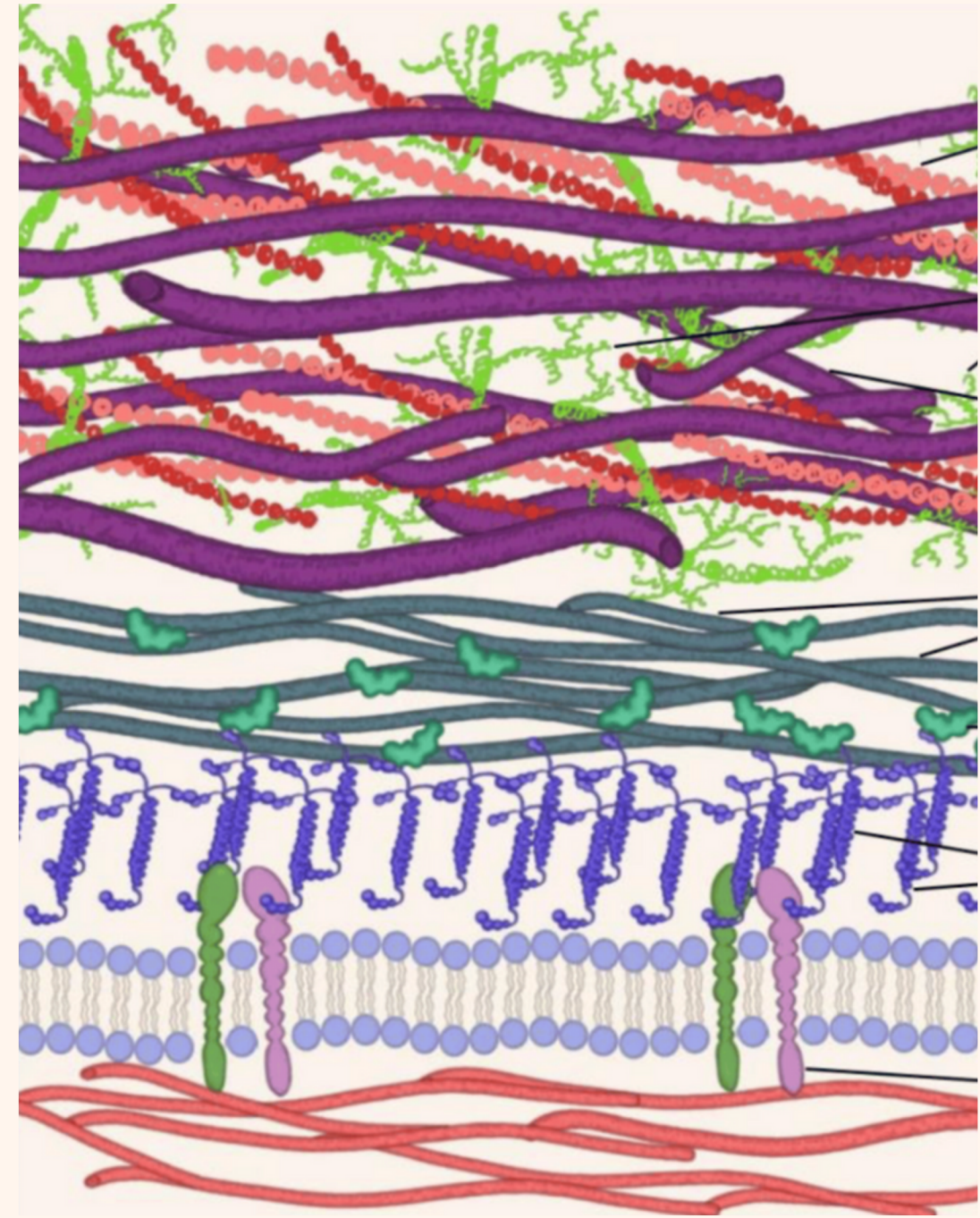
Introduction of helpful biomolecules

Vascularization

Mechanical function

Appropriate chemical/physical
environment

Compatibility with surrounding
biological tissue

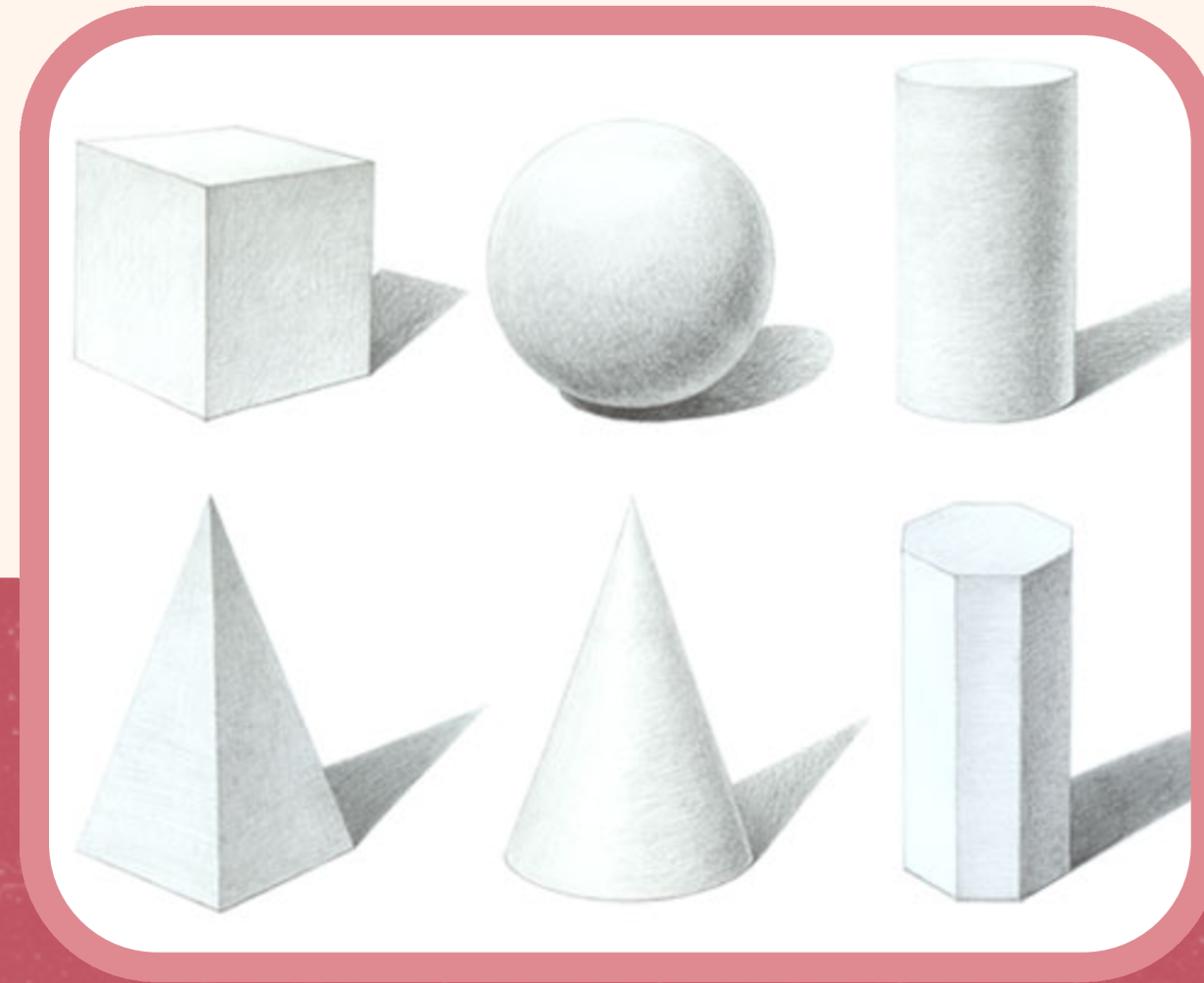


SUMMARY



MATERIAL:

Must be compatible with biomolecules and reduce immune response



Shape:

Must mimic natural conditions to guide artificial tissue into correct form

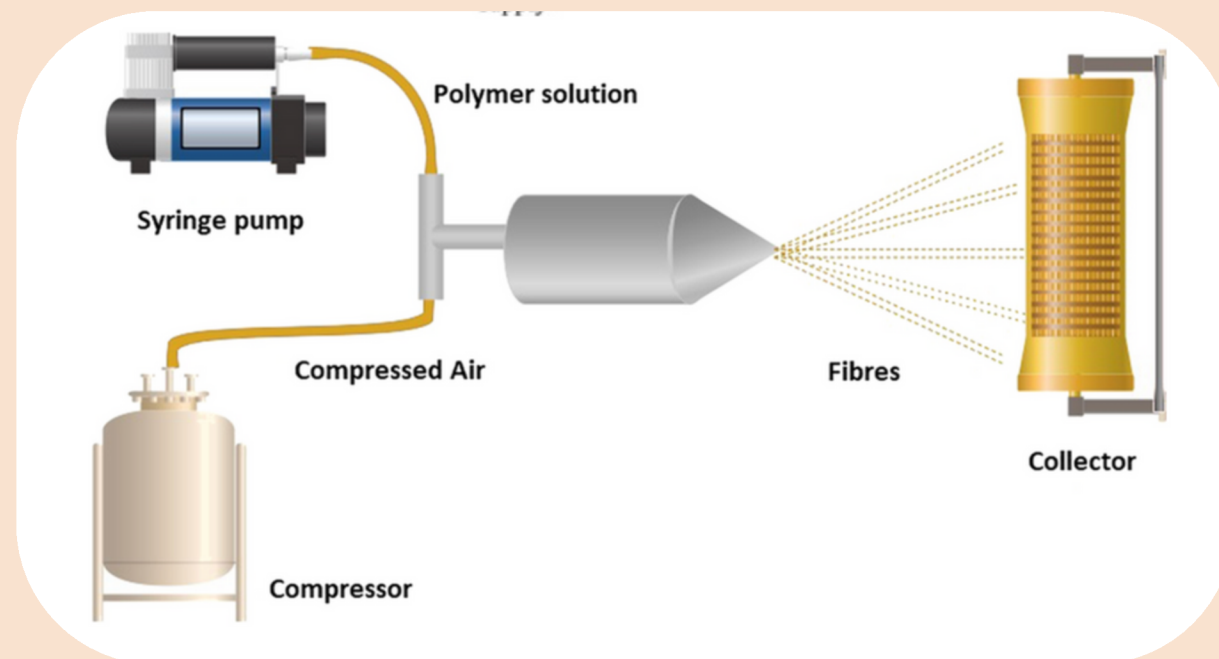
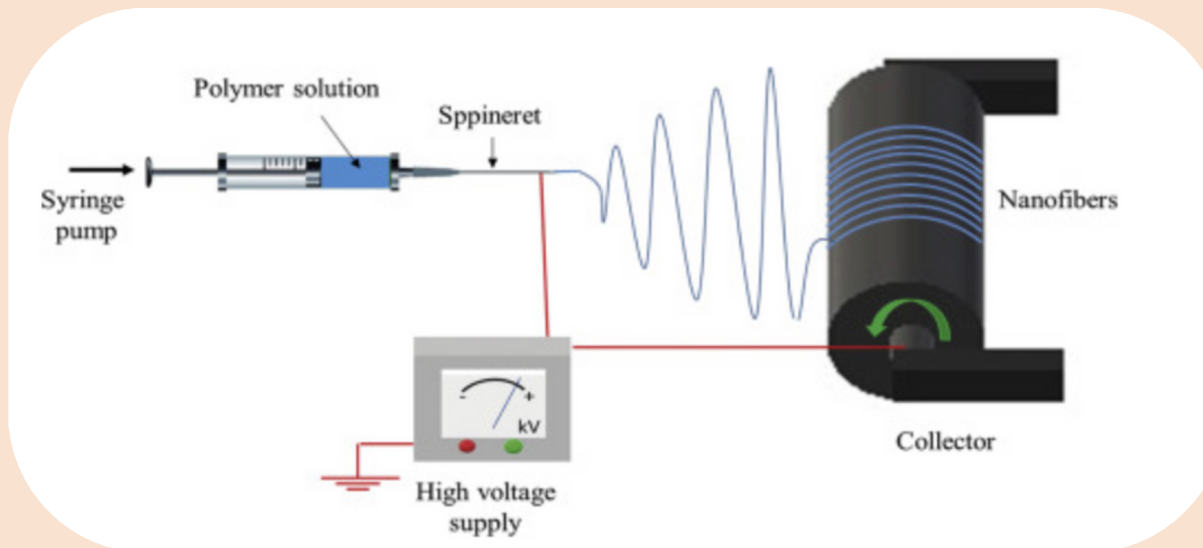
TEXTILE TECHNOLOGY!

30,000+ YEARS

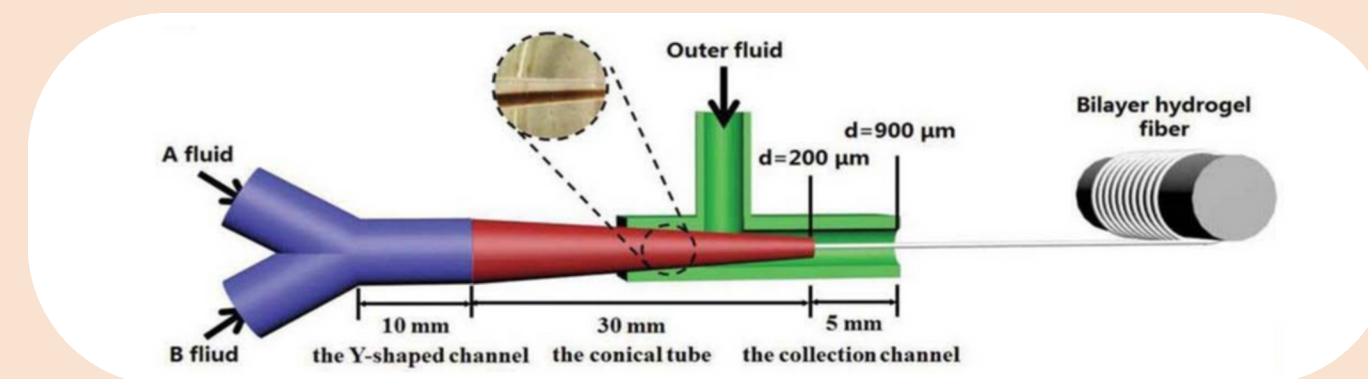
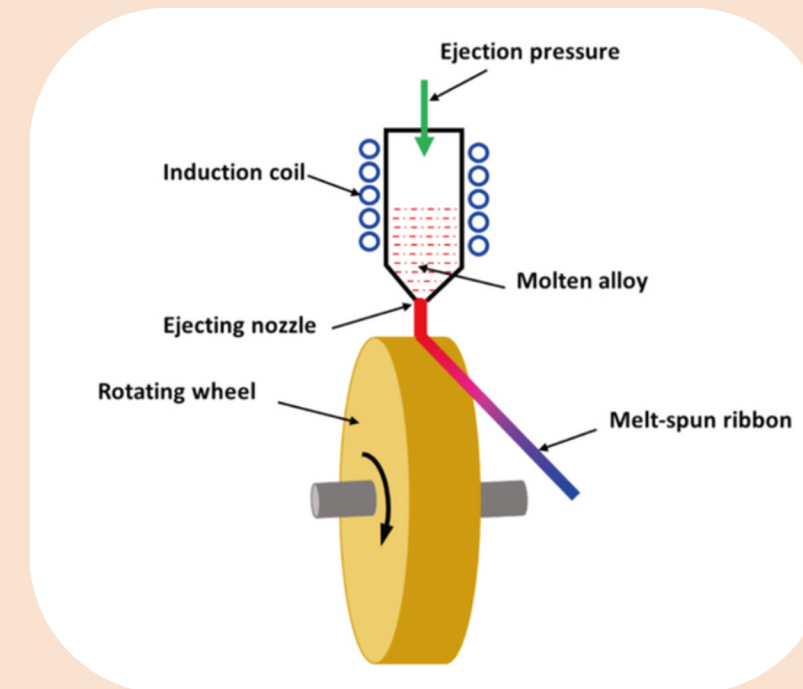


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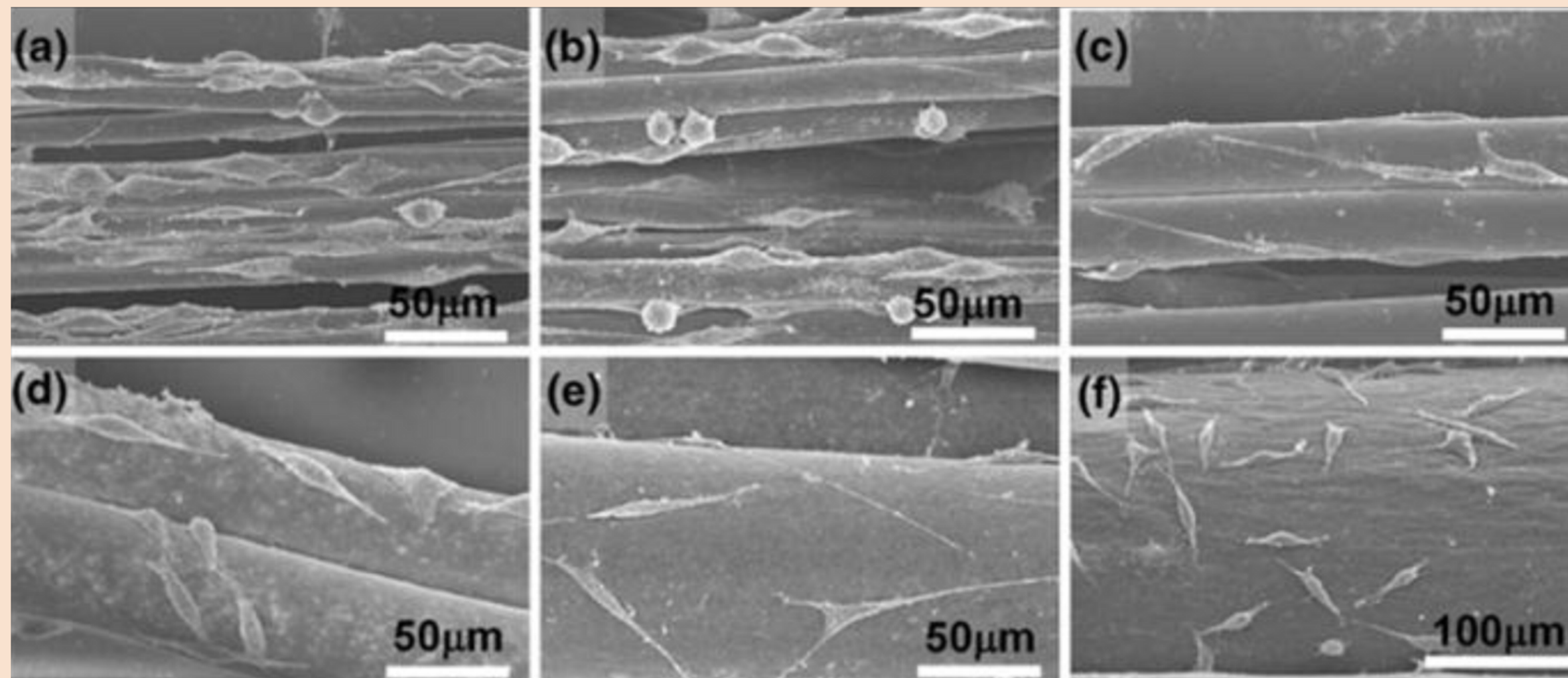
Clothes



Scaffold



Fiber/Cell Interaction

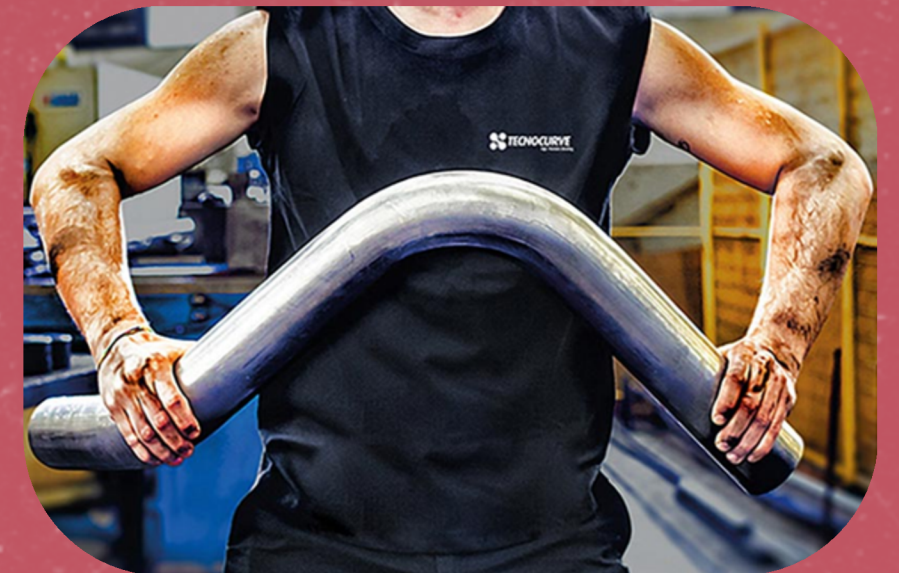
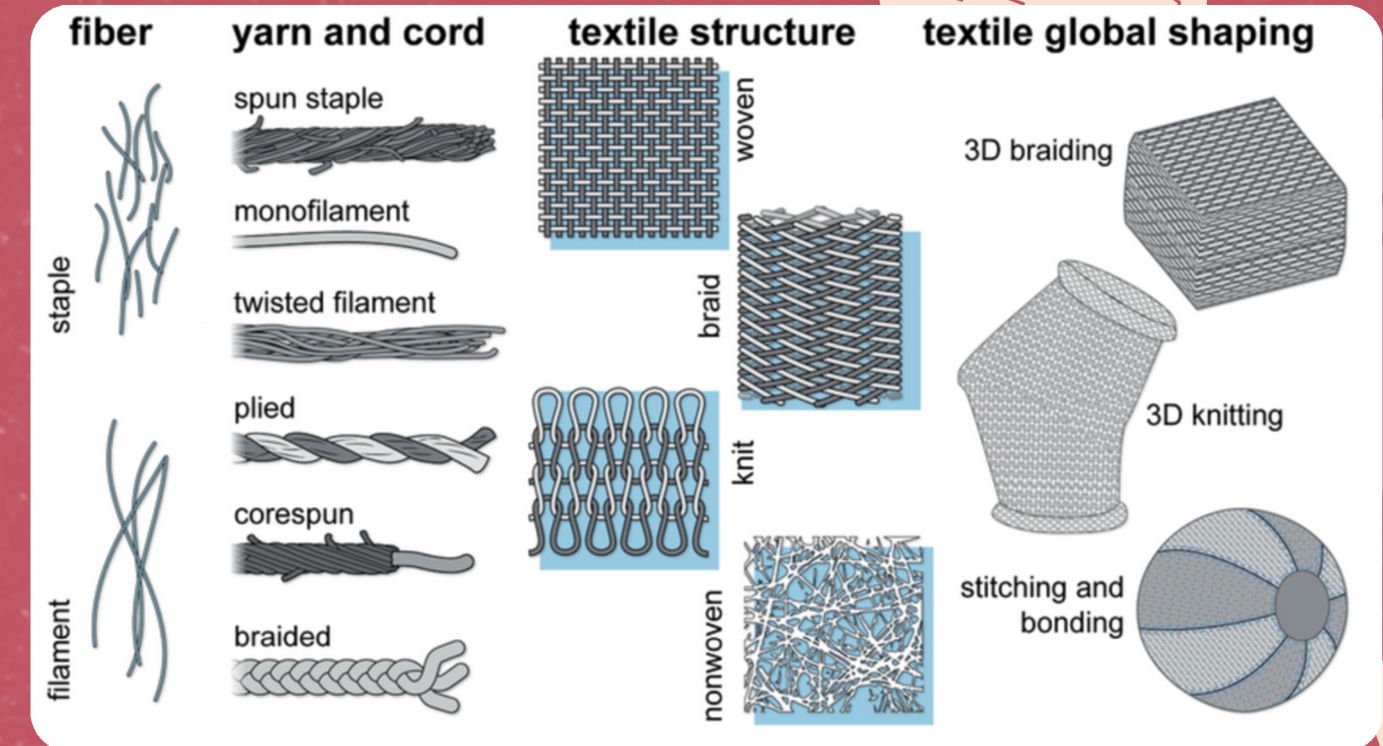


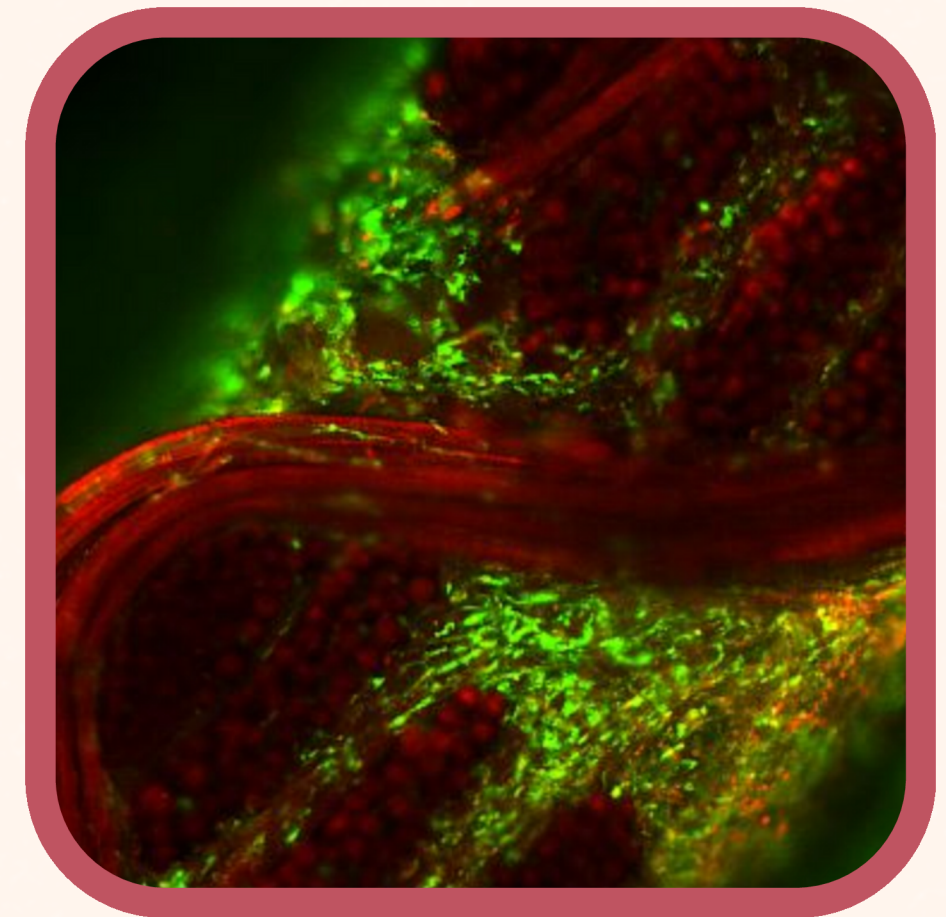
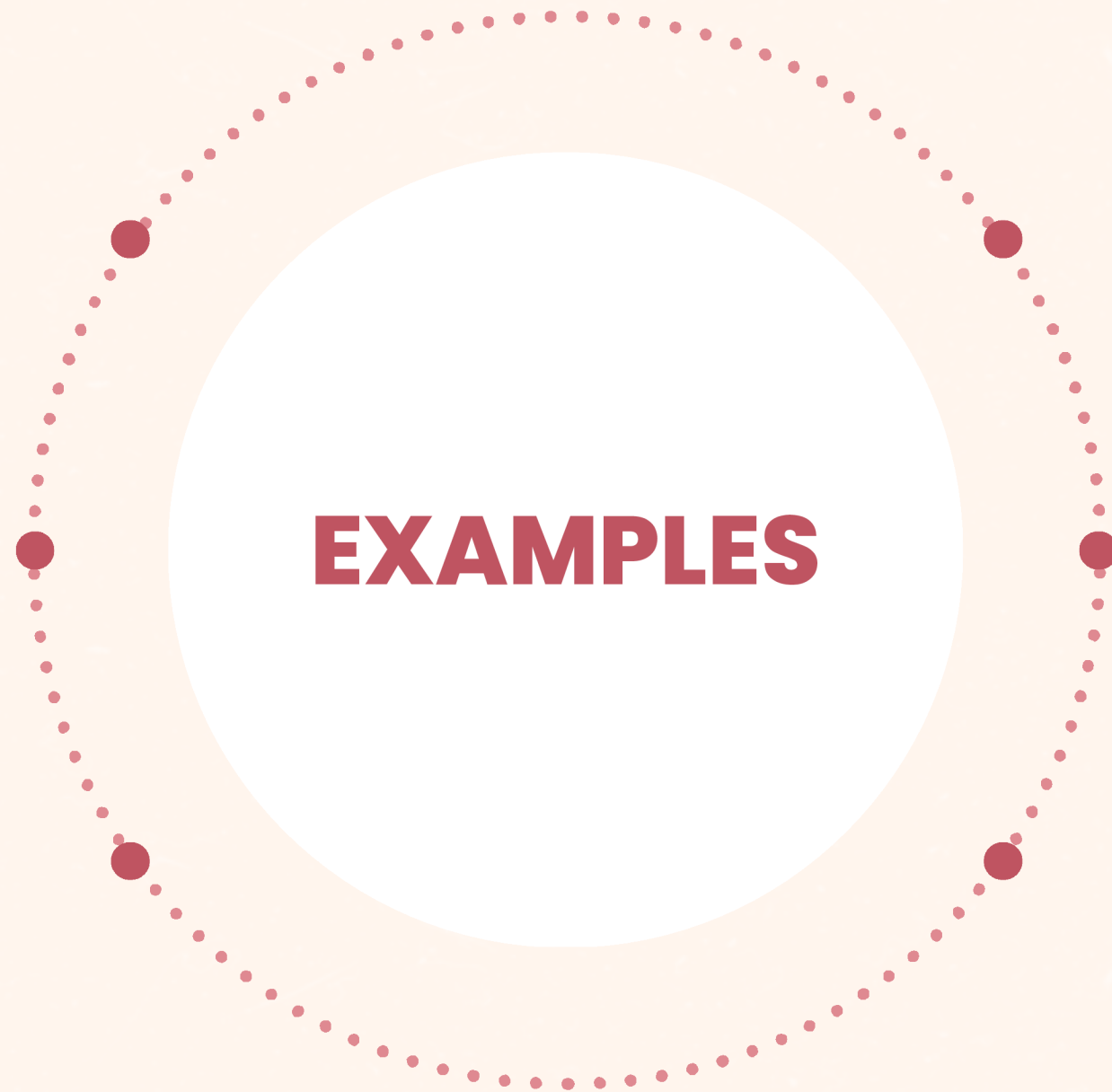
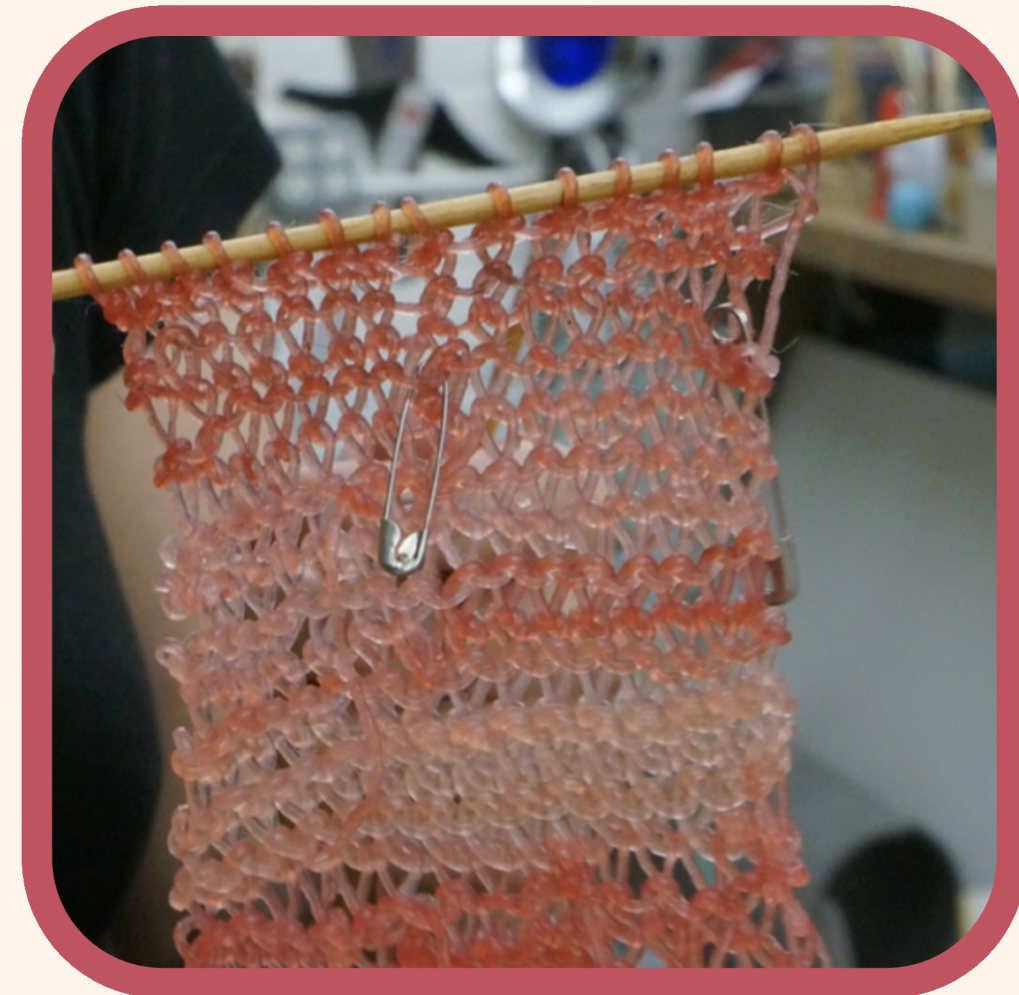
3 MAIN BENEFITS

Hierarchical structure

Anisotropic

Strain-stiffening





Thank you!

SOURCES

