

# Methods in mechanics for tomorrow's medicine: predicting and understanding the mechanical behavior of soft tissue across the scales.

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## **Abstract**

To understand the mechanical behaviour of soft tissue, microscale should be taken into account as microstructure and macroscopic mechanical properties are closely related. Considerable efforts have been made by the scientific community to define and quantify this relationship between the scales. However, it is so far impossible to accurately predict the macroscopic mechanical properties of soft tissues from the properties of their microstructures.

Some methods based on image treatment will be presented to predicting and understanding the mechanical behavior of soft tissue across the scales.