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Mini Review

Significance of Biomechanics of Bone

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Abstract

It deals with the osteoclastic and osteoblastic activity of bone and even. Deals with Biomechanics of bone and problems of bone deformation and Significance of Biomechanics of bone.

Keywords: Osteoclast; Osteoblast; Bone; Biomechanics; Biomechanics of Calcium; Calcium Ion

Biomechanicology and biomechanics of bone

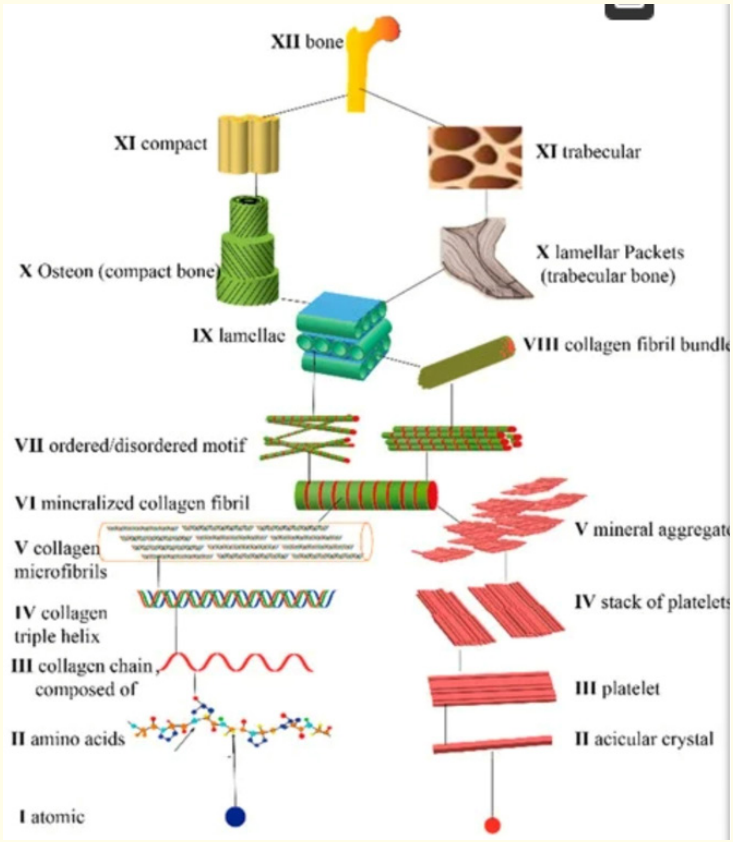

Figure 1

Its representation of the biomechanical characteristics of the bone matrix and the affects of mechanical stimuli on the bone matrix and its components, Collagen and HA, and bone-related cells, such as mesenchymal stem cells.

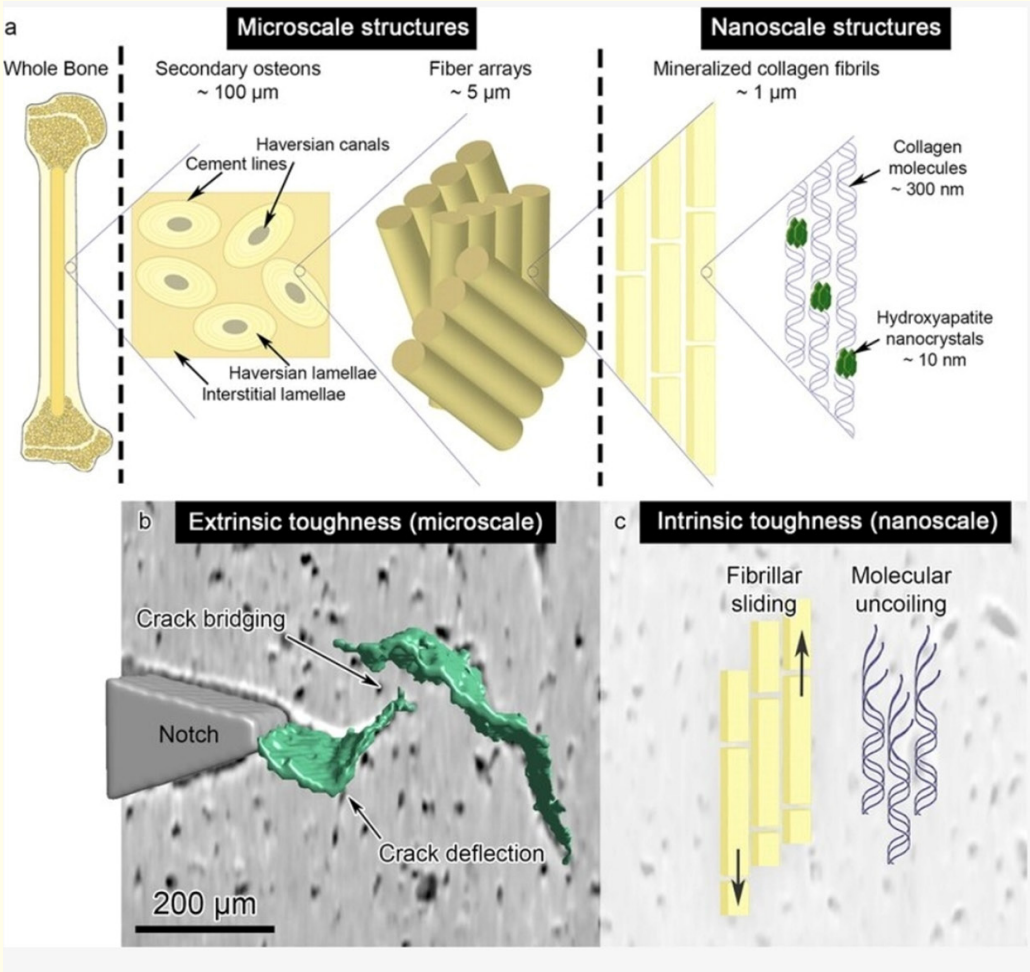

Figure 2

It shows the structure and microscopic structure of bone and scale is setup to [6].

100um to see osteons and haverson cannels [7].

It shows the structure of the pericellular matrix, the [8] intracellular actin cytoskeleton inside the process and the connection between the percellular matrix and the intracellular actin cytoskeleton [9].

Effects of FSS on cell differentiation and gene expression. A FSS can affect the signal expression in MC3T3-E1 cells. The nuclear translocation of P-ERK5 and FoxO3a; FoxO3a nuclear trans locating activities in green fluorescence and nuclear locating activities in red fluorescence 132. B Mechanism of FSS on mineralized -related cells. FSS can promote mesenchymal stem cell differentiation into osteoblasts and then promote the further differentiation and orientation of osteoblasts, bone lining cells and osteocytes. More, it can induce the expression of signalling molecules and proteins [10].

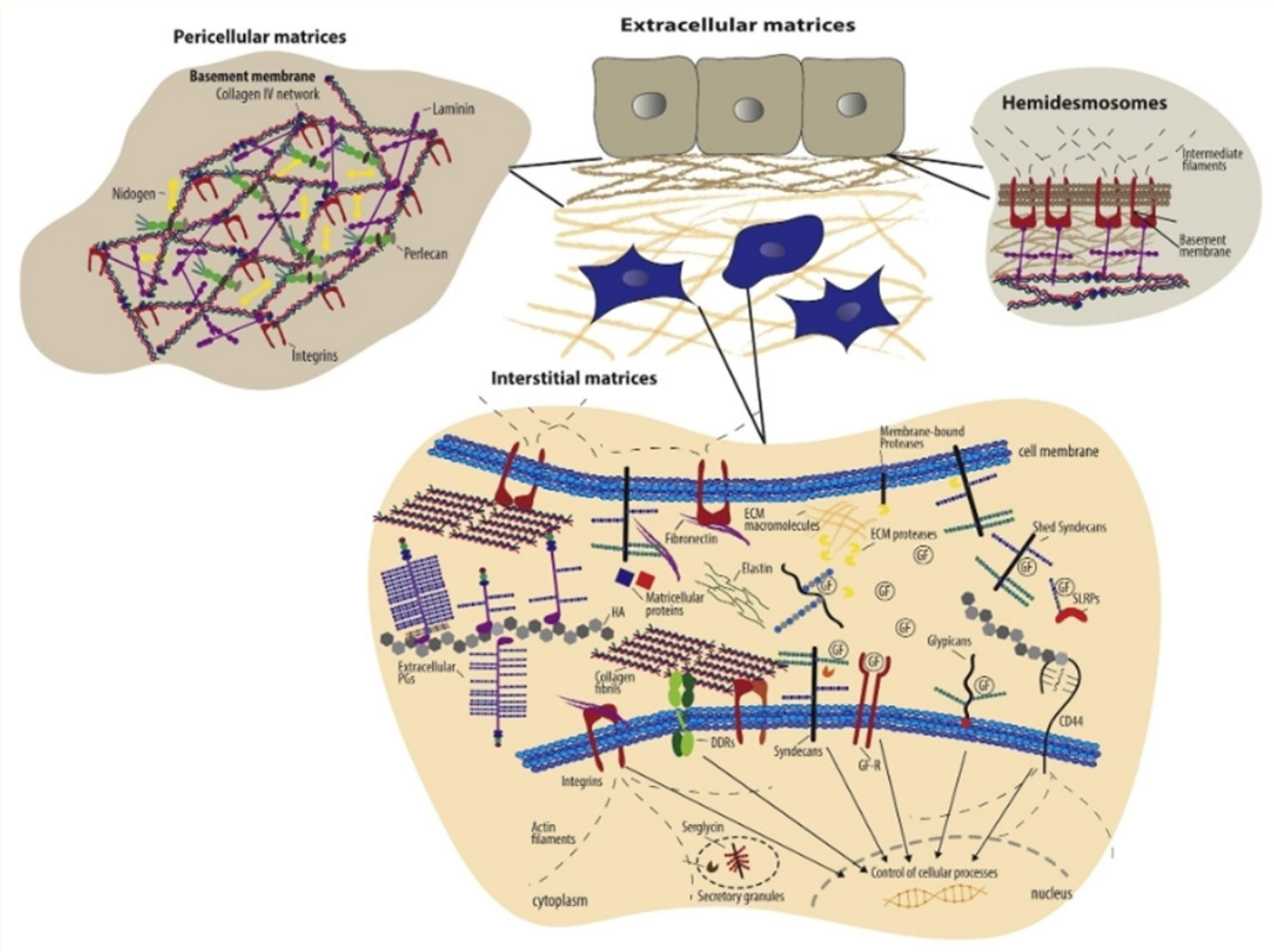

Figure 3

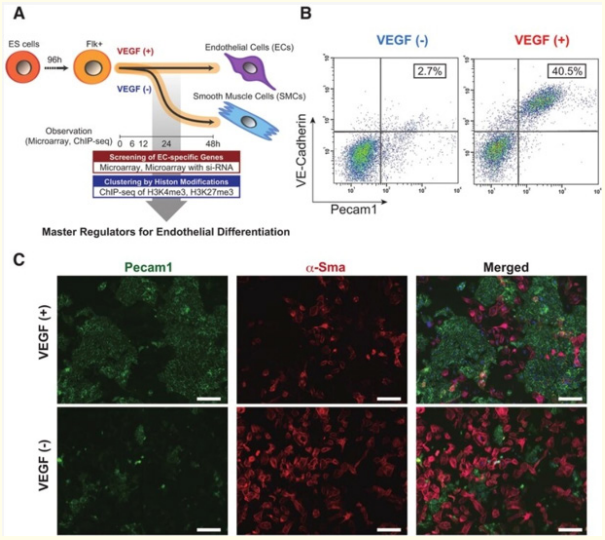

Figure 4

Discussion

- Bone matrix
- Osteoclastic activity
- Effect of flurosence on bone
- Osteoblastic activity

Conclusion

Significance of bone Biomechanics is useful in detection of arthritis and osteonecrosis above techniques can help.

Bibliography

1. https://www.mdpi.com/2079-4983/14/4/212
2. https://www.swri.org/bone-biomechanics
3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5101038/
4. https://g.co/kgs/nghkDDe
5. https://www.researchgate.net/publication/279719822_Biomechanics_of_Bone
6. https://link.springer.com/chapter/10.1007/978-0-387-21787-1_10
7. https://www.intechopen.com/chapters/88095
8. https://teambone.com/education-basic/biomechanics-of-bone/
9. https://link.springer.com/chapter/10.1007/978-1-4757-2264-2_9
10. https://g.co/kgs/m76Gh4N