READ-ME-FIRST

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**DISRUPTED STIFFNESS RATIO ALTERS NUCLEAR MECHANOSENSING**

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**These Ansys Apdl source codes compute - for HUVEC-CTRL Cell #5 - the percentage of external apical shear stress transmitted to the nucleus (%EAST) for a fixed stiffness ratio (i.e. nuclear stiffness/cytoplasm stiffness).**

**How to run the Ansys Apdl Source Codes for HUVEC CTRL Cell #5**

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To run the attached ANSYS APDL SOURCE CODES, execute with Ansys:

"**A1-RUN-MECHANOSENSING-H5.txt**".

The name of the output file is "**A2-MECHANOSENSING-H5-OUTPUT-Walther2023.txt**".

In this output file, you will find the following results:

1st Column: Imposed Amplitude of the External Apical shear Stress (unit: Pa)

2nd Column: Value of the Cytoplasmic Stiffness (Pa)

3rd Column: Value of the Nuclear Stiffness (Pa)

4th Column: Stiffness Ratio (Nuclear Stiffness/Cytoplasmic Stiffness)

5th Column: Percentage of External Apical shear Stress Transmitted to the Nucleus (%EAST)