## **Description of Additional Supplementary Files**

File Name: Supplementary Movie 1

Description: 3D reconstructions of the cuboid bone of CIA voluntary running mice which show clear erosions at mechano-stressed locations.

File Name: Supplementary Movie 2

Description: 3D reconstructions of the cuboid bone of C57BL/6 wild type mice showing no erosions.

File Name: Supplementary Software 1

Description: Interactive anatomical application. Tendons and muscles are shown on a micro-CT scan of a hindfoot (healthy mouse). Individual names can be seen by moving on the individual tendons/muscles. Individual bones and tendons can be removed (and added) by clicking on them.