



Supplementary Figure1. Stress as a patterning guide. Iron filings are arranged by magnetic fields (Credit: M0000164: Michael Faraday's iron filings diagram. Wellcome Library has provided this material; GB CC BY 4.0). **(A)**, a behavior that can be modeled computationally **(B)**. This arrangement is a consequence of the underlying field **(C)**. To create this, we simulated the magnetic field of 4 charges at different positions along the y-axis. The black lines represent the direction of the field with a Gaussian noise of 10 degrees; only around 50 % of them are shown. Similarly, tissues are also shaped according to the mechanical state to which they are subjected.