

### **3. Time-delay in active response of cells generate biological oscillations**

During the embryonic development, it has been observed the prior to drastic shape changes of the organism, tissues deformations oscillate in a manner that resembles a fluid. One of those examples is the ventral invagination (first large deformation in embryo development) or dorsal closure in *Drosophila* fly. Strikingly though, inertial terms are negligible in such systems, which are the cause of oscillation in general mechanical systems. During this internship, oscillation will be generated with a chemo-genetic regulatory mechanism, that uses a delay between the mechanical state and the active response of the biological system. the presence of oscillation will be tested to a flat distribution of cells.

#### **References**

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