Special Issue: Developmental Biophysics

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The application of biophysics to investigate developmental processes has a long tradition. To showcase the achievements and level of advance in this field, we invite contributions from all areas of developmental biophysics, including experimental, theoretical, and computational approaches.

The development of an organism from a single cell to its fully grown form is a carefully orchestrated but robust process. In it, we find molecular actions, cellular events, and tissue mechanics all embodying crucial and, to date, only incompletely understood interacting processes that are required for the successful growth of an animal. Although biophysics arguably developed later than developmental biology, biophysics played a role in early research as evidenced by the fact that Alan Turing’s 1952 article is a mainstay of developmental research. Today, we possess a range of developmental model systems, in which we study single-molecule, cellular, tissue, or organism-wide events with unprecedented spatial and temporal resolution. Advances in experimental and theoretical methodology, technology, and computation provide new and exciting possibilities for understanding one of the most important processes in life. In this special issue, we will showcase recent results and highlight the importance of biophysics in our quest to understand the development of living organisms.

We welcome contributions from scientists applying biophysical methods to investigate developmental processes in different organisms from the molecular scale to whole systems by using experimental, theoretical, and computational approaches.

Deadline for submission: March 31, 2024

- Instructions for authors can be found at: https://www.cell.com/biophysj/authors.
- Please include a cover letter stating that you would like to contribute to the Developmental Biophysics special issue and please describe why the work fits into the special issue.
- Normal publishing charges will apply.
- Questions can be addressed to the BJ Editorial Office (BJ@biophysics.org; (240) 290-5600) or to Thorsten Wohland (twohland@nus.edu.sg), Timothy E. Saunders (timothy.saunders@warwick.ac.uk), or Chii Jou Chan (dbschii@nus.edu.sg).

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