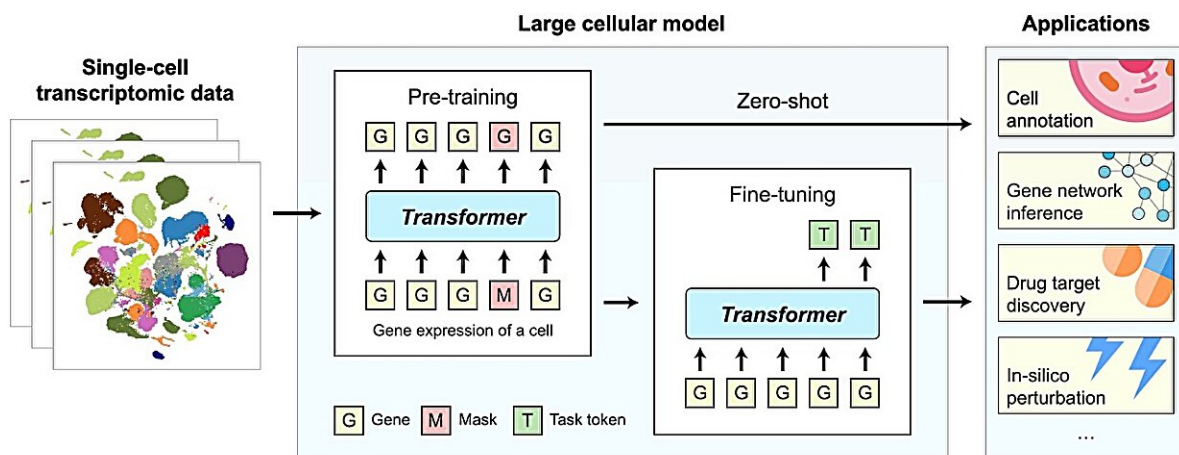


Consortium offers perspectives on large cellular models and the future of AI-driven biological research

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The framework of large cellular model (LCM). Credit: *Quantitative Biology* (2024). DOI: 10.1002/qub2.65

In a move to advance the frontiers of artificial intelligence, the *Quantitative Biology* journal has [published](#) a commentary titled "Current Opinions on Large Cellular Models," highlighting the cutting-edge developments in the field of large cellular models (LCMs).

The journal has brought together a [consortium](#) of leading scholars from China, the United States, and Canada to delve into the future of AI-

driven [biological research](#).

The commentary features influential authors behind some of the most impactful LCMs, such as scBERT, Geneformer, scGPT, scFoundation, and GeneCompass. These AI models have revolutionized the way single-cell data is processed and analyzed, offering unprecedented insights into [biological processes](#) and [scientific discoveries](#).

"The integration of AI, particularly large-scale pre-training technologies, is charting a new course for the future of quantitative biology research," said Xuegong Zhang, a contributing author of the commentary.

The commentary offers a detailed overview of the general framework and core AI concepts behind these models, as well as a forward-looking discussion on how these models can be effectively integrated with biological knowledge. It also addresses the critical challenges faced during the research and development of LCMs, including the scaling law issues and the need for data pre-training.

More information: Minsheng Hao et al, Current opinions on large cellular models, *Quantitative Biology* (2024). [DOI: 10.1002/qub2.65](https://doi.org/10.1002/qub2.65)

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