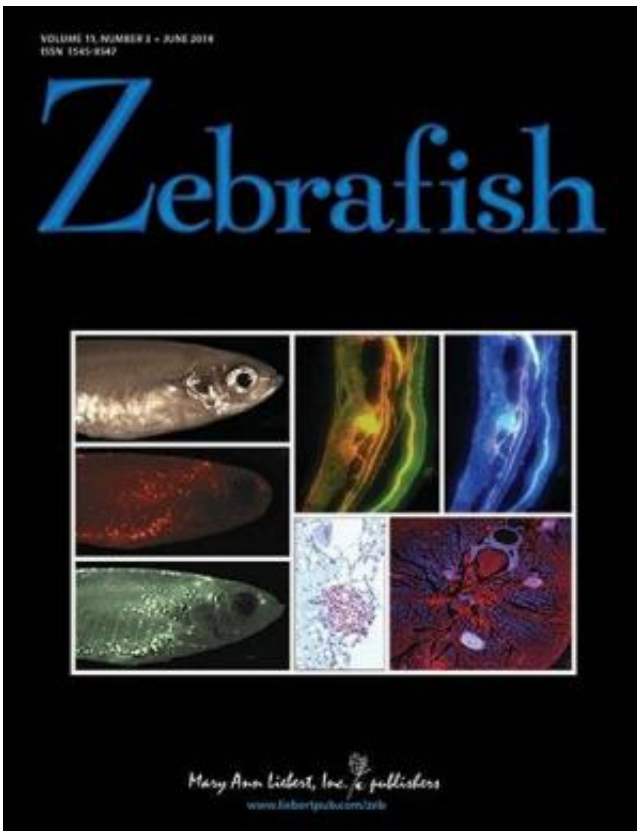


# New method to grow zebrafish embryonic stem cells can regenerate whole fish

June 30 2014

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Zebrafish, a model organism that plays an important role in biological research and the discovery and development of new drugs and cell-based therapies, can form embryonic stem cells (ESCs). For the first time, researchers report the ability to maintain zebrafish-derived ESCs for

more than 2 years without the need to grow them on a feeder cell layer, in a study published in *Zebrafish*.

Ho Sing Yee and coauthors from the Malaysian Ministry of Science, Technology and Innovation (Pulau Pinang), Universiti Sains Malaysia (Penang), and National University of Singapore describe the approach they used to be able to maintain [zebrafish](#) stem cells in [culture](#) and in an undifferentiated state for long periods of time. The ability to establish and grow the zebrafish ESCs without having a feeder layer of cells to support them simplifies their use and could expand their utility. In the article "[Derivation and Long-Term Culture of an Embryonic Stem Cell-Like Line from Zebrafish Blastomeres Under Feeder-Free Condition](#)", the authors show that the ESCs retain the morphology, properties, and ability to differentiate into a variety of cell types that is characteristic of ESCs, and were used to generate offspring after transmission through the germline.

"By addressing a major technical bottleneck in the field, this new culture system enables an array of exciting cellular and molecular genetic manipulations for the zebrafish," says Stephen Ekker, PhD, Editor-in-Chief of *Zebrafish* and Professor of Medicine at Mayo Clinic, Rochester, MN.

**More information:** The article is available free on the [Zebrafish website](#).

Provided by Mary Ann Liebert, Inc

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