

New research tool targets microRNA expression in zebrafish

March 17 2011

A new research tool for studying microRNA expression in zebrafish will help researchers study the effects of miRNA on the early development of this model organism and better understand developmental and disease mechanisms in humans, as described in *Zebrafish*, a peer-reviewed journal published by Mary Ann Liebert, Inc.

Researchers from University of Oregon (Eugene) have developed a novel, cost-effective method for measuring the expression of microRNAs (miRNA) in specific tissues in developing [zebrafish](#) embryos. miRNAs play an important role in regulating [embryonic development](#). They are difficult to detect because they are very short strands of oligonucleotide and are often present in cells at low levels. Xinjun He, Yi-Lin Yan, April DeLaurier, and John Postlethwait describe the efficient technique they devised using digoxigenin-labeled riboprobes (oligonucleotide-based probe sequences capable of binding to a complementary miRNA sequence) in in situ hybridization (ISH) experiments. Their work is presented in the article, "Observation of miRNA [Gene Expression](#) in Zebrafish [Embryos](#) by In Situ Hybridization to MicroRNA Primary Transcripts."

"This is a terrific new addition to the zebrafish toolbox, opening the door to an array of new experiments focused on the biology of non-coding RNAs using this superb model system," 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 online ahead of print.

Provided by Mary Ann Liebert, Inc.

Citation: New research tool targets microRNA expression in zebrafish (2011, March 17)
retrieved 19 April 2024 from <https://phys.org/news/2011-03-tool-micrna-zebrafish.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.