

# Med school discovery could lead to better cancer diagnosis, drugs

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A Florida State University College of Medicine research team led by Yanchang Wang has discovered an important new layer of regulation in the cell division cycle, which could lead to a greater understanding of the way cancer begins.

Wang, an assistant professor of biomedical sciences at the College of Medicine, said the findings will lead to an improved ability to diagnose cancer and could lead to the design of new drugs that kill cancer cells by inhibiting cell reproduction. His paper on the discovery has been published in the journal *Proceedings of the National Academy of Sciences*.

"The correct timing of chromosome segregation during cell division is necessary to ensure normal, healthy growth," Wang said. "Now we have discovered a previously undetected layer of regulation in how the chromosomes separate, which helps to ensure the correct timing and decreases the potential for the formation of cancerous growth."

The cell division cycle is a collection of tightly regulated events that lead to cell duplication. The most important events are the doubling of the hereditary information encoded within a set of chromosomes, and the division of that duplicated information into two daughter cells that are genetically identical to each other and the mother cell.

The correct order of cell-cycle events is essential for successful cell division. Wang's article addresses the role of a particular protein

enzyme, Cdc14, in ensuring that cell division events occur in exactly the right order.

Defects in the regulation of the order of events can lead to cell death or the alteration of genetic information, which contributes to the formation of cancerous cells.

Source: Florida State University

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