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# Syros Pharmaceuticals Announces New Research Published on CDK7 in Lung and Pediatric Cancers

- *Papers in Cell and Cancer Cell describe in vivo activity of CDK7 inhibitors; further validate company's lead preclinical program -*

WATERTOWN, Mass.--(BUSINESS WIRE)-- [Syros Pharmaceuticals](#), a therapeutics company focused on discovering and developing novel gene control therapies, announced today the recent publication of two studies that further demonstrate the critical role of CDK7 in cancers driven by oncogenic transcription factors, including certain lung and pediatric cancers.

Led by Rani George, MD, PhD of the Dana-Farber Cancer Institute, along with Syros Scientific Co-Founders Richard Young, PhD and Nathanael Gray, PhD, the paper entitled "CDK7 Inhibition Suppresses Super-Enhancer-Linked Oncogenic Transcription in MYCN-Driven Cancer,"<sup>1</sup> was published in *Cell* on November 20, 2014. In the study, the researchers found that a covalent inhibitor of CDK7 caused substantial suppression of MYCN-driven transcriptional amplification and produced sustained tumor growth inhibition in a mouse model of MYCN amplified neuroblastoma, a cancer of children. Importantly, tumor shrinkage was achieved without evidence of systemic toxicity. These results suggest that CDK7 inhibition, by selectively targeting the mechanisms that promote global transcriptional amplification in tumor cells, may be a useful therapy for MYCN-driven cancers.

A second study, led by Kwok-Kin Wong, MD, of the Dana Farber Cancer Institute along with Drs. Young and Gray, and entitled "Targeting Transcriptional Addictions In Small Cell Lung Cancer With a Covalent CDK7 Inhibitor,"<sup>2</sup> was published in *Cancer Cell* on December 8, 2014. In the study, the researchers showed that a covalent CDK7 inhibitor potently suppressed small cell lung cancer cell growth. Treatment of a genetically engineered mouse model resembling human small cell lung cancer with a covalent CDK7 inhibitor resulted in significant tumor growth inhibition, including regressions, and a survival benefit. The researchers also reported a superior therapeutic window of CDK7 inhibition compared to chemotherapy.

"This research further demonstrates the unique dependency that certain cancers have for CDK7 and the tumor-promoting transcriptional programs driving these cancers," said [Eric Olson](#), PhD, Syros' Chief Scientific Officer. "The findings contribute to a growing body of evidence supporting Syros' gene control platform and our preclinical CDK7 inhibitor program."

Syros Pharmaceuticals has exclusively licensed CDK7 inhibitor intellectual property from the Dana-Farber Cancer Institute.

## About Syros Pharmaceuticals

Syros Pharmaceuticals is a therapeutics company harnessing breakthroughs in gene control to revolutionize the treatment of cancer and other diseases. Syros' proprietary platform identifies the master switches for disease genes, opening a whole new approach to novel therapeutics and biomarkers. The Company's founders are pioneers in gene control research and translation. Co-founded by Flagship Ventures and ARCH Venture Partners, Syros Pharmaceuticals is located in Watertown, MA. For more information, visit [www.syros.com](http://www.syros.com).

<sup>1</sup> Chipumuro et al., CDK7 Inhibition Suppresses Super-Enhancer-Linked Oncogenic Transcription in MYCN-Driven Cancer, Cell (2014), <http://dx.doi.org/10.1016/j.cell.2014.10.024>

<sup>2</sup> Christensen et al., Targeting Transcriptional Addictions in Small Cell Lung Cancer with a Covalent CDK7 Inhibitor, Cancer Cell (2014), <http://dx.doi.org/10.1016/j.ccell.2014.10.019>

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