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Syros Pharmaceuticals Co-Founders' Novel Approach to Cancer Regulation Published in Nature

Discovery further validates Syros' proprietary gene control platform

WATERTOWN, Mass.--(BUSINESS WIRE)-- [Syros Pharmaceuticals](#), a therapeutics company harnessing breakthroughs in gene control to discover and develop revolutionary drugs to treat cancer and other diseases, announced today the publication of a study analyzing the critical role of CDK7 inhibitors in regulating cancer-causing genes. Led by Syros Scientific Co-Founders Nathanael S. Gray, Ph.D., and Richard A. Young, Ph.D., the paper entitled "[Targeting Transcription Regulation in Cancer with a Covalent CDK7 Inhibitor](#)"¹ was published in the online edition of *Nature – the International Weekly Journal of Science* on June 22, 2014.

In the study, the researchers found that pharmacological modulation of CDK7 kinase activity provides a unique approach to identifying and treating tumor types that are highly dependent on transcription for maintenance of their oncogenic (tumor-causing) state. This research, in part, is based on Syros' proprietary gene control platform, which maps and modulates transcriptional programs that drive tumor growth. Syros has an exclusive license to intellectual property from the Whitehead Institute and the Dana-Farber Cancer Institute around this technology and unique class of gene control medicines.

"This research demonstrates the critical role CDK7 plays in enabling the dominant expression of oncogenes driven by super-enhancers," said [Dr. Gray](#), senior author of the study who, in addition to being a Syros scientific co-founder, serves as professor of Biological Chemistry and Molecular Pharmacology at Harvard Medical School and Dana-Farber Cancer Institute. "Importantly, it provides us with a novel way to inhibit deregulated genes, including transcription factors, in cancer. Furthermore, it provides a new way to extend the reach of targeted kinase inhibitors to a large number of cancer patients whose tumors are not dependent on mutant kinase oncogenes."

"These findings support Syros' innovative approach to modulating oncogenic transcription factors and disrupting oncogenic transcriptional circuitry," said [Nancy Simonian](#), M.D., CEO of Syros Pharmaceuticals. "The *in vivo* efficacy and tolerability seen with CDK7 inhibition provides a strong rationale for the development of gene control medicines. Importantly, the Syros platform identifies patients most likely to benefit from this and other gene control medicines."

Kwiatkowski, N., Zhang, T., Rahl, P., Abraham, B., Reddy, J., Ficarro, S., Dastur, A., Amzallag, A., Ramaswamy, S., Tesar, B., Jenkins, C., Hannett, N., McMillin, D., Sanda, T., Sim, T., Kim, N., Look, T., Mitsiades, C., Weng, A., Brown, J., Benes, C., Marto, J., Young, R., & Gray, N. (2014). Targeting transcription regulation in cancer with a covalent CDK7 inhibitor. *Nature* (2014), <http://dx.doi.org/10.1038/nature13393>

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. Syros' initial focus is in cancer, but the company platform will also be applicable to other therapeutic areas. The Company's founders are pioneers in gene control research and translation. Co-founded and backed by Flagship Ventures and ARCH Venture Partners, Syros Pharmaceuticals is located in Watertown, MA. For more information, visit www.syros.com.

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