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Craig B. Thompson, MD

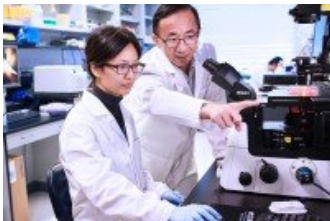
The Thompson laboratory has proposed that the basis of metazoan cell survival is determined by the inability of cells to take up nutrients in a cell-autonomous fashion. This hypothesis was formulated to explain how multicellularity might have arisen during evolution. We believe the lack of a cell-intrinsic mechanism to regulate nutrient uptake provides the first and most fundamental barrier to cell transformation.

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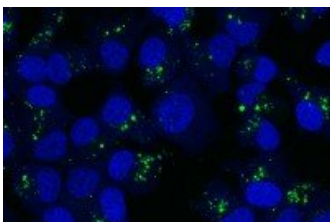
Featured News

IN THE LAB



[More Evidence that Cellular 'Death by Iron' Could Be Promising Avenue of Cancer Treatment](#)

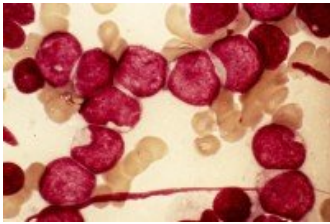
Cancers with certain mutations are vulnerable to ferroptosis, a form of iron-dependent cell death.



[Research Published in Genes and Development from Craig Thompson Lab](#)

New research from the Craig Thompson Lab offers a closer look at the transcriptional activators, Yap/Taz, and the role they play in cell growth and macropinocytosis.

FINDING



[Findings from Two Patients Shed New Light on Drug Resistance in AML](#)

A team at MSK has discovered a previously unknown type of resistance to a new leukemia drug.

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Publications Highlights

[King, B., Araki, J., Palm, W., & Thompson, C. B. \(2020\). Yap/Taz promote the scavenging of extracellular nutrients through macropinocytosis. *Genes & development*, 10.1101/gad.340661.120. Advance online publication.](#)

[Vardhana, S. A., Hwee, M. A., Berisa, M., Wells, D. K., Yost, K. E., King, B., Smith, M., Herrera, P. S., Chang, H. Y., Satpathy, A. T., van den Brink, M., Cross, J. R., & Thompson, C. B. \(2020\). Impaired mitochondrial oxidative phosphorylation limits the self-renewal of T cells exposed to persistent antigen. *Nature immunology*, 21\(9\), 1022–1033.](#)

[Schwörer, S., Berisa, M., Violante, S., Qin, W., Zhu, J., Hendrickson, R. C., Cross, J. R., & Thompson, C. B. \(2020\). Proline biosynthesis is a vent for TGFβ-induced mitochondrial redox stress. *The EMBO journal*, 39\(8\), e103334.](#)

[Li, A. M., Ducker, G. S., Li, Y., Seoane, J. A., Xiao, Y., Melemenidis, S., Zhou, Y., Liu, L., Vanharanta, S., Graves, E. E., Rankin, E. B., Curtis, C., Massagué, J., Rabinowitz, J. D., Thompson, C. B., & Ye, J. \(2020\). Metabolic Profiling Reveals a Dependency of Human Metastatic Breast Cancer on Mitochondrial Serine and One-Carbon Unit Metabolism. *Molecular cancer research : MCR*, 18\(4\), 599–611.](#)

[Zhu, J., Berisa, M., Schwörer, S., Qin, W., Cross, J. R., & Thompson, C. B. \(2019\). Transsulfuration Activity Can Support Cell Growth upon Extracellular Cysteine Limitation. *Cell metabolism*, 30\(5\), 865–876.e5.](#)

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People



Craig B. Thompson, MD

Craig Thompson studies molecular signaling pathways that regulate nutrient uptake and the role these pathways play in the regulation of cell growth and survival.
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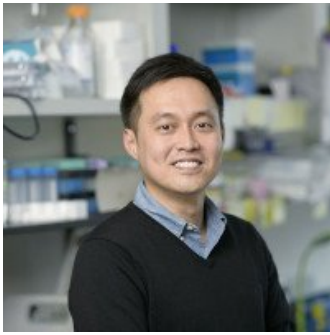
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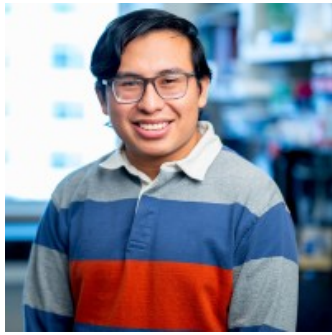
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Craig B. Thompson discloses the following relationships and financial interests:

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Albert and Mary Lasker Foundation

Professional Services and Activities

Charles River Laboratories

Equity; Fiduciary Role / Position

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Fiduciary Role / Position

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