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Craig B. Thompson, MD

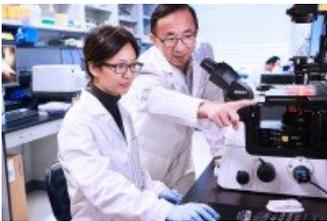
The Thompson laboratory has proposed that the basis of metazoan cell survival is determined by the inability of cells to take up nutrients in a cell-autonomous fashion. This hypothesis was formulated to explain how multicellularity might have arisen during evolution. We believe the lack of a cell-intrinsic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

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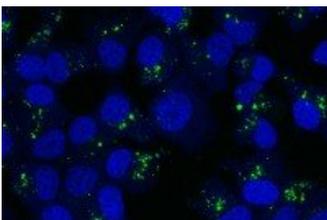
Featured News

IN THE LAB



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

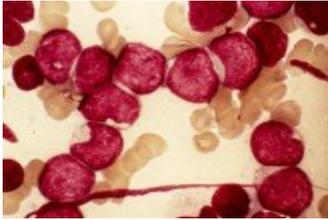
Cancers with certain mutations are vulnerable to ferroptosis, a form of iron-dependent cell death.



[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 TGF \$\beta\$ -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.

MD, University of Pennsylvania

✉ thompsonc@mskcc.org

Email Address

Members



Viktoria Gabor
Lab Administrative
Assistant



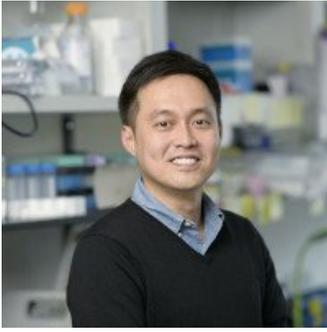
Olivia
Jones
Research Tech



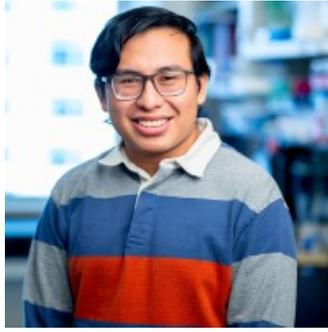
Dayi Li
Rotational Student



Charles
Ng
Research Fellow



Keunwoo Ryu
Postdoctoral fellow



Elias Tzoc-
Pacheco
Research Tech

Lab Alumni
+

Lab Affiliations
+

Get in Touch

✉ thompsonc@mskcc.org

Lab Head Email

☎ [646-888-3285](tel:646-888-3285)

Lab Phone

☎ [646-888-3010](tel:646-888-3010)

Lab Fax

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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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