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Research



Neal Rosen, MD, PhD

The main goal of our laboratory is the identification and characterization of signal transduction pathways that cause the dysregulation of growth and inhibition of apoptosis that characterize advanced human cancer. Our laboratory is dedicated to understanding the consequences of activation of these pathways and to using this information to develop mechanism-based therapeutic strategies.

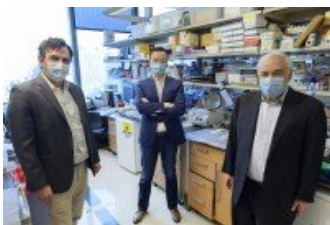
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Research Projects



Featured News

IN THE CLINIC



[Promising Results from the First-Ever Trial of a Drug that Blocks Cancer Gene KRAS](#)

The drug, sotorasib, is targeted against a cancer-causing protein that has long been considered an “undruggable” target.

IN THE LAB

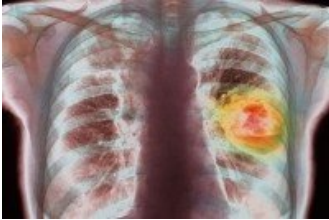
The Neal Rosen Lab



[Knocking Out KRAS-Mutant Cancers with a One-Two Punch](#)

A new approach aims to combine two existing targeted therapy drugs to attack lung cancer and pancreatic cancer with mutations in the hard-to-target gene KRAS.

IN THE LAB



[New Lung Cancer Therapy May Target Previously Untreatable Tumors](#)

Researchers are developing uses for a drug that could benefit many people with lung cancer.

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Publications Highlights

Lee BJ, Boyer JA, Burnett GL, Thottumkara AP, Tibrewal N, Wilson SL, Hsieh T, Marquez A, Lorenzana EG, Evans JW, Hulea L, Kiss G, Liu H, Lee D, Larsson O, McLaughlan S, Topisirovic I, Wang Z, Wang Z, Zhao Y, Wildes D, Aggen JB, Singh M, Gill AL, Smith JAM, Rosen N. Selective inhibitors of mTORC1 activate 4EBP1 and suppress tumor growth. *Nat Chem Biol.* 2021 Oct;17(10):1065-1074. doi: 10.1038/s41589-021-00813-7. Epub 2021 Jun 24. Erratum in: *Nat Chem Biol.* 2021 Jun 29;; Erratum in: *Nat Chem Biol.* 2021 Nov;17(11):1209. PMID: 34168367.

Mukherjee R, Vanaja KG, Boyer JA, Gadai S, Solomon H, Chandarlapaty S, Levchenko A, Rosen N. Regulation of PTEN translation by PI3K signaling maintains pathway homeostasis. *Mol Cell.* 2021 Feb 18;81(4):708-723.e5. doi: 10.1016/j.molcel.2021.01.033. PMID: 33606974; PMCID: PMC8384339.

Yao, Z., Gao, Y., Su, W., Yaeger, R., Tao, J., Na, N., Zhang, Y., Zhang, C., Rymar, A., Tao, A., Timaul, N. M., Mcgriskin, R., Outmezguine, N. A., Zhao, H., Chang, Q., Qeriqi, B., Barbacid, M., de Stanchina, E., Hyman, D. M., Bollag, G., ... Rosen, N. (2019). RAF inhibitor PLX8394 selectively disrupts BRAF dimers and RAS-independent BRAF-mutant-driven signaling. *Nature medicine*, 25(2), 284–291. <https://doi.org/10.1038/s41591-018-0274-5>

Gao, Y., Chang, M. T., McKay, D., Na, N., Zhou, B., Yaeger, R., Torres, N. M., Muniz, K., Drosten, M., Barbacid, M., Caponigro, G., Stuart, D., Moebitz, H., Solit, D. B., Abdel-Wahab, O., Taylor, B. S., Yao, Z., & Rosen, N. (2018). Allele-Specific Mechanisms of Activation of MEK1 Mutants Determine Their Properties. *Cancer discovery*, 8(5), 648–661. <https://doi.org/10.1158/2159-8290.CD-17-1452>

Yaeger, R., Chatila, W. K., Lipsyc, M. D., Hechtman, J. F., Cercek, A., Sanchez-Vega, F., Jayakumaran, G., Middha, S., Zehir, A., Donoghue, M., You, D., Viale, A., Kemeny, N., Segal, N. H., Stadler, Z. K., Varghese, A. M., Kundra, R., Gao, J., Syed, A., Hyman, D. M., ... Schultz, N. (2018). Clinical Sequencing Defines the Genomic Landscape of Metastatic Colorectal Cancer. *Cancer cell*, 33(1), 125–136.e3. <https://doi.org/10.1016/j.ccell.2017.12.004>

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People



Neal Rosen, MD, PhD

Pharmacologist Neal Rosen focuses on understanding biochemical mechanisms underlying phenotypes caused by tyrosine kinase activation in epithelial tumors and developing new therapeutic strategies.

MD, PhD, Albert Einstein College of Medicine

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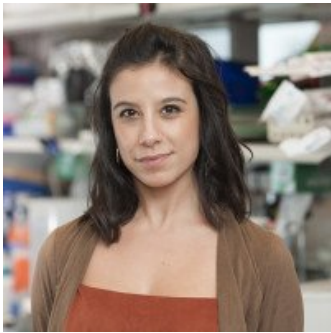
Physician profile

Members

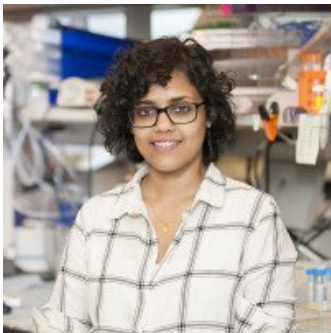
In Cancer Metabolism at

Research Fellow

Princeton University,
Princeton, NJ

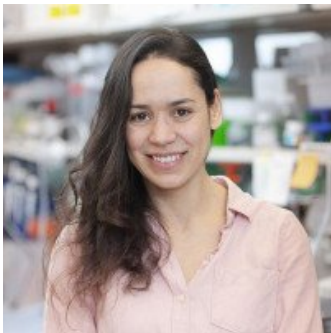


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