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CELL BIOLOGY PROGRAM

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Marilyn Resh, PhD

Member

The goal of my laboratory's research is to understand how fatty acylation influences the structure and function of membrane-bound and secreted signaling proteins. Our focus is on the Src family tyrosine protein kinases, Hedgehog and Wnt proteins.

[View Lab Overview \(<https://www.mskcc.org/research/ski/labs/marilyn-resh/overview>\)](https://www.mskcc.org/research/ski/labs/marilyn-resh/overview)

Research Projects

- [Fatty Acylation of Wnt Proteins by Porcupine](#)
- [Lipid Modification of Hedgehog Proteins](#)
- [Hedgehog Palmitoylation as a Target to Block Pancreatic Cancer](#)



Publications Highlights

[Petrova E, Rios-Esteves J, Ouerfelli O, Glickman JF, Resh MD. Inhibitors of Hedgehog acyltransferase block Sonic Hedgehog signaling. Nat Chem Biol. 2013 Apr;9\(4\):247-9. doi: 10.1038/ncembio.1184. Epub 2013 Feb 17.](#)

[Resh MD. Targeting protein lipidation in disease. Trends Mol Med. 2012 Apr;18\(4\):206-14. doi: 10.1016/j.molmed.2012.01.007. Epub 2012 Feb 17.](#)

[Buglino JA, Resh MD. Hhat is a palmitoylacyltransferase with specificity for N-palmitoylation of Sonic Hedgehog. J Biol Chem. 2008 Aug 8;283\(32\):22076-88. doi:](#)

[10.1074/jbc.M803901200](https://doi.org/10.1074/jbc.M803901200). Epub 2008 Jun 4.

[Resh MD. Palmitoylation of ligands, receptors, and intracellular signaling molecules. Sci STKE. 2006 Oct 31;2006\(359\):re14.](#)

[Resh MD. Trafficking and signaling by fatty-acylated and prenylated proteins. Nat Chem Biol. 2006 Nov;2\(11\):584-90.](#)

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People



Marilyn Resh, PhD

Member

- Cell biologist Marilyn Resh investigates the regulation of protein function by fatty acylation, and the development of Hedgehog palmitoylation inhibitors to block pancreatic and lung cancer.
- PhD, Harvard University
- AB, Princeton University

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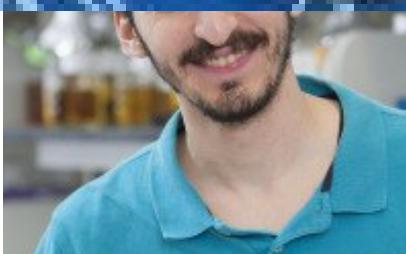
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Office Phone

Members



Debra Alston
Sr. Administrative Assistant



James Asciolla
Graduate Student

Lab
Alumni

Lab Affiliations

Achievements

- Excellence in Teaching and Mentoring Award, Weill Cornell

Graduate School (2009)

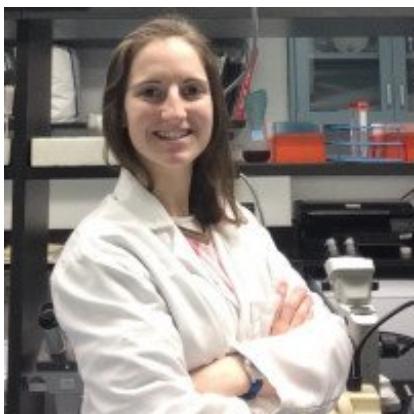
- Established Scientist, American Heart Association (1994-1999)



Atul Khire, Ph.D.
Postdoctoral Fellow



Kalpana Rajanala
Research Fellow



Adina R. Schonbrun
Associate Manager, Research
Program Management,
Regeneron Pharmaceuticals



Jing Zhou, Ph.D.
Postdoctoral Fellow



Raisa Louft-Nisenbaum
Research Technician

- Pew Scholar in the Biomedical Sciences, Pew Charitable Trusts (1987-1991)
- Discovery of the ""two-signal hypothesis"" for binding of myristoylated proteins to membranes
- Discovery of a myristoyl switch mechanism for membrane binding of HIV-1 Gag

Open Positions

To learn more about available postdoctoral opportunities, please visit our [Career Center](#)

To learn more about compensation and benefits for postdoctoral researchers at MSK, please visit [Resources for Postdocs](#)

Get in Touch

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