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Memorial Sloan Kettering
Cancer Center

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CELL BIOLOGY PROGRAM

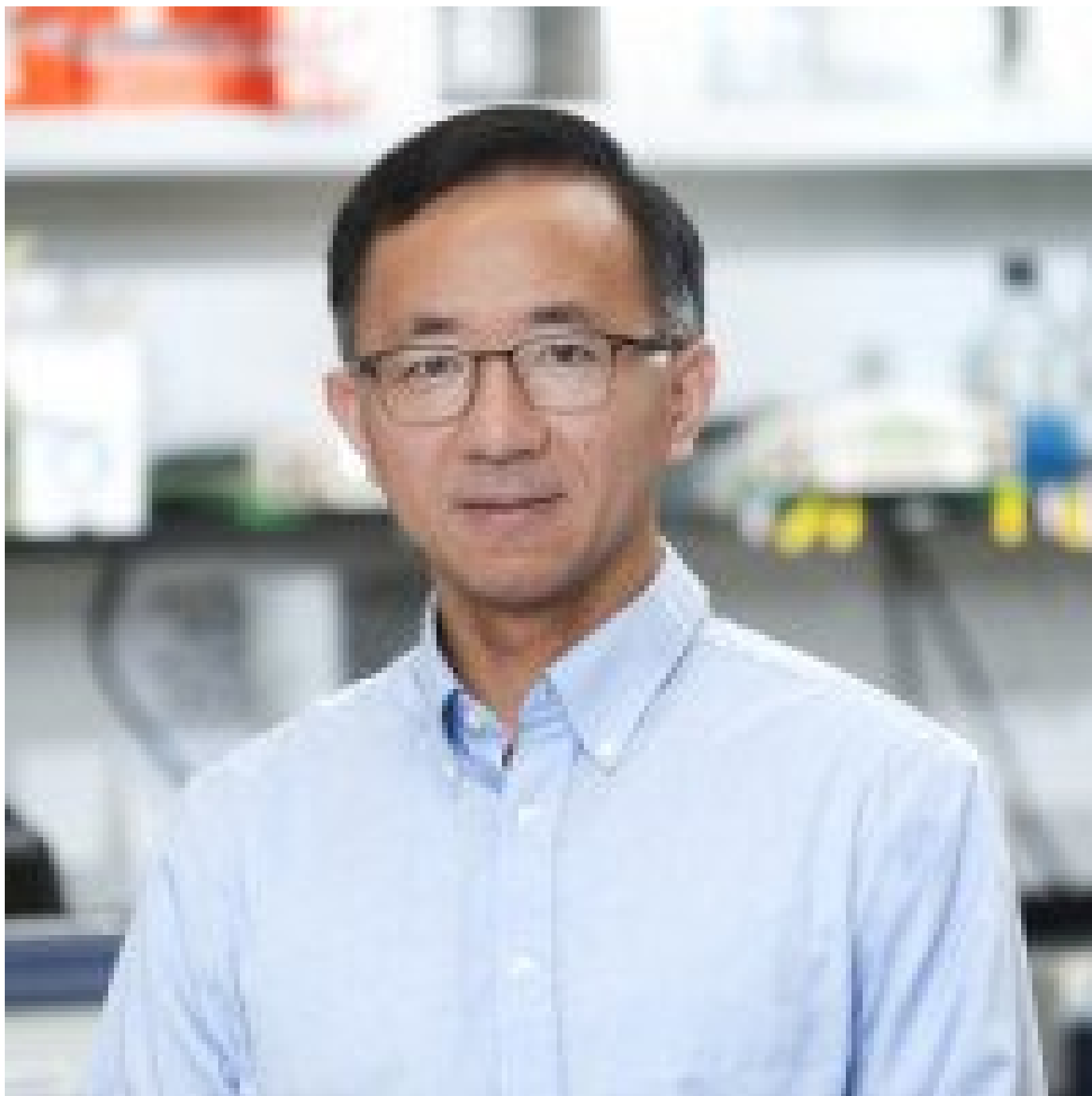
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Xuejun Jiang, PhD

The research of my laboratory focuses on two directions highly relevant to cancer biology, (1) the molecular basis of programmed cell death processes (including apoptosis and ferroptosis), and their roles in human disease; and (2) the molecular basis of autophagy and its role in cancer. We also study various cancer signaling and cellular metabolic events, especially those involved in cell death/survival determination. We aim to translate our basic research finding into potential therapeutic approaches. To achieve these goals, the laboratory utilizes a combination of approaches including biochemistry, chemical biology, proteomics, molecular cell biology, high-throughput screening, 3-dimensional microfluidic cell array, and mouse modeling.

[View Lab Overview](#) →



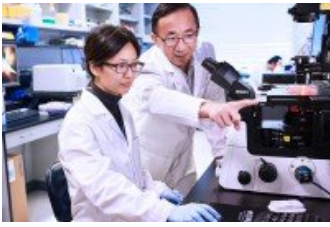
Featured News



[MSK Research Highlights, June 29, 2023](#)

New MSK research discovered ferroptosis regulators that suggest therapeutic opportunities against hormone receptor-positive cancers; examined how tumor-associated macrophages might be turned against cancer; acquired new insights into joint inflammation in rheumatoid arthritis; developed a systems-level platform called epichaperomics to map changes in interactors among thousands of proteins involved in cancer-related processes; and investigated how artificial intelligence could help diagnose an invasive form of breast cancer.

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.

FINDING



[Scientists See Potential in Cellular 'Death by Iron' for Cancer Treatment](#)

This form of cell death is called ferroptosis, and certain cancer cells are especially vulnerable to it.

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Publications Highlights

[Liang D, Feng Y, Zandkarimi F, Wang H, Zhang Z, Kim J, Cai Y, Gu W, Stockwell B, Jiang X. Ferroptosis surveillance independent of GPX and differentially regulated by sex hormones. Cell 2023 Jun22 \(13\) 2748-2764. \[PMID: 37267948\]](#)

[Yi J, Zhu J, Wu J, Thompson CB, Jiang X. Oncogenic activation of PI3K-AKT-mTOR signaling suppresses ferroptosis via SREBP-mediated lipogenesis. PNAS 2020 \(117\):31189-31197. PMCID: PMC7733797](#)

[Zhang Z, Karthaus WR, Lee RS, Gao VR, Wu C, Russo JW, Liu M, Mota JM, Abida W, Linton E, Lee E, Darnes SD, Chen HA, Mao N, Wongvipat J, Choi D, Chen X, Zhao H, Manova-Todorova K, de Stanchina E, Taplin ME, Balk SP, Rathkopf DE, Gopalan A, Carver BS, Mu P, Jiang X*, Watson PA*, Sawyers CL*. Tumor microenvironment-derived NRG1 promotes antiandrogen resistance in prostate cancer. Cancer Cell 2020 \(38\) 279-296. PMCID: PMC7472556 \(*: co-corresponding authors\)](#)

[Wu J, Minikes AM, Gao M, Bian H, Li Y, Stockwell BR, Chen ZN, Jiang X. Intercellular interaction dictates cancer cell ferroptosis via NF2-YAP signalling. Nature 2019 Aug;572\(7770\):E20. PMCID: PMC6697195](#)

[Gao M, Yi J, Zhu J, Minikes AM, Monian P, Thompson CB, Jiang X. Role of mitochondria in ferroptosis. Molecular Cell 2019 \(73\):354-363. PMCID: PMC6338496](#)

People



Xuejun Jiang, PhD

Cell biologist Xuejun Jiang studies programmed cell death, molecular mechanisms, and their roles in tumorigenesis.

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Members

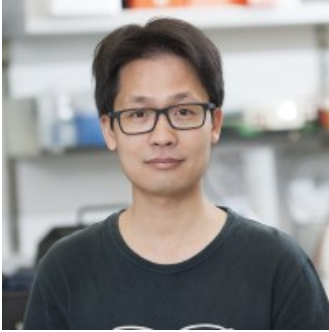


Xuejun Jiang

Lab Head

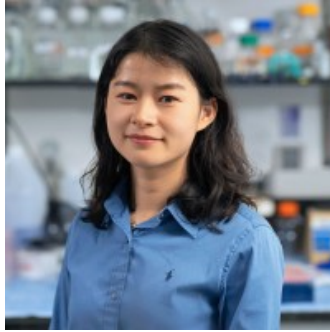
Jinnie Kim

Graduate Student, WCMC



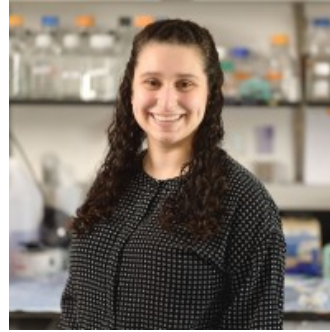
Deguang
Liang

Senior Research Scientist



Pei Liu

Research Fellow



Atara R
Neugroschl

Graduate Student, WCMC



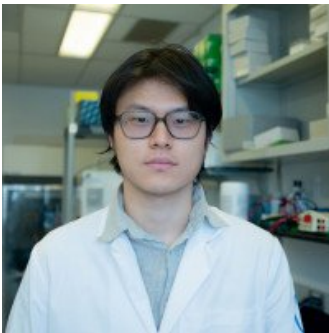
Nanfang Peng

Senior Research Scientist



Megan Wong

Research Assistant



Zechuan
Zhao

Graduate Student, WCMC

Lab Alumni
+

Lab Affiliations
+

Achievements

Louis and Allston Boyer Young Investigator Award for Basic Research, Memorial Sloan Kettering Cancer Center (2007)
Scholar, American Cancer Society (2007-2010)
Catherine and Frederick Adler Chair for junior faculty, Memorial Sloan Kettering Cancer Center (2006)
V Scholar, The V Foundation for Cancer Research (2004-2006)
Alfred Bressler Scholar, Alref W. Bresler Scholars Fund (2004-2007)

Read more

+

Lab News & Events

UPCOMING EVENT

[Structure and Mechanism of STRIPAK in Hippo Signaling](#)

Thursday, May 9, 2024 - 2:00 PM to 3:00 PM

Memorial Sloan Kettering Cancer Center
Rockefeller Research Laboratories
430 East 67th Street
RRL-120 (Auditorium)
New York, NY 10065

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

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Disclosures

Doctors and faculty members often work with pharmaceutical, device, biotechnology, and life sciences companies, and other organizations outside of MSK, to find safe and effective cancer treatments, to improve patient care, and to educate the health care community.

MSK requires doctors and faculty members to report (“disclose”) the relationships and financial interests they have with external entities. As a commitment to transparency with our community, we make that information available to the public.

Xuejun Jiang discloses the following relationships and financial interests:

Exarta Therapeutics

Equity; Fiduciary Role / Position; Intellectual Property Rights; Professional Services and Activities

Lime Therapeutics, Inc.

Equity; Professional Services and Activities (Uncompensated)

VivoZ Biolabs, LLC

Intellectual Property Rights; Professional Services and Activities (Uncompensated)

The information published here is for a specific annual disclosure period. There may be differences between information on this and other public sites as a result of different reporting periods and/or the various ways relationships and financial interests are categorized by organizations that publish such data.

This page and data include information for a specific MSK annual disclosure period (January 1, 2022 through disclosure submission in spring 2023). This data reflects interests that may or may not still exist. This data is updated annually.

Learn more about MSK’s COI policies [here](#). For questions regarding MSK’s COI-related policies and procedures, email MSK’s Compliance Office at ecoi@mskcc.org.

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