MEMORIAL HOSPITAL RESEARCH LABORATORIES

The Kayvan Keshari Lab

ABOUT US

Our mission, vision & core values

Leadership

History

Inclusion & belonging

Annual report

Give to MSK

FOR THE MEDIA

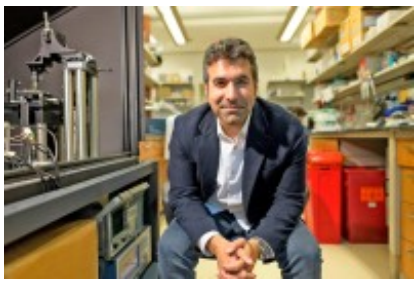
Kayvan R. Keshari, PhD
Fred Lebow Chair at MSK

The goal of our research program is to improve our biochemical understanding of cancer metabolism and use metabolic changes to develop non-invasive methods for diagnosis as well as approaches to treat cancer. Our work takes advantage of multi-modality methods at all scales, with a special focus in hyperpolarized magnetic resonance, allowing us the ability to bring these approaches to the clinic.

View Lab Overview (https://www.mskcc.org/research-areas/labs/kayvan-keshari/overview)

Featured News

IN THE LAB



[How Reprogrammed Immune Cells Can Use Fructose To Fight Cancer]

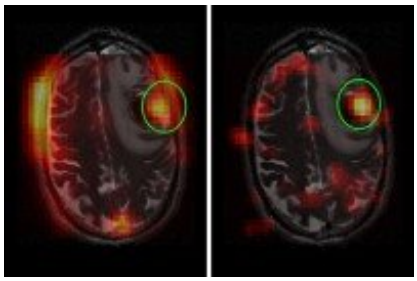
Learn how engineering immune cells to metabolize fructose could supercharge them to fight cancer.

IN THE LAB

Fructose Could Play a Role in Targeting Leukemia

Leukemia cells metabolize fructose in a way that could make them easier to target with drugs.

FEATURE



New Imaging Technique Provides Snapshot of Brain Tumor Activity

A new imaging approach could shorten the time needed to determine whether a brain tumor treatment is working.

View All Featured News

Publications Highlights

Schild T, Wallisch P, Zhao Y, Wang YT, Haughton L, Chirayil R, Pierpont K, Chen K, Nunes-Violante S, Cross J, de Stanchina E, Thompson CB, Scheinberg DA, Perry JSA, Keshari KR. (2025) Metabolic engineering to facilitate anti-tumor immunity *Cancer Cell*. Mar 10;43(3):552-562.e9. doi: 10.1016/j.ccell.2025.02.004.

Patel S, Porcari P, Coffee E, Kim N, Berishaj M, Peyear T, Zhang G, Keshari KR. (2024) Simultaneous noninvasive quantification of redox and downstream glycolytic fluxes reveals compartmentalized brain metabolism. *Science Advances* Dec 20;10(51):eadr2058. doi: 10.1126/sciadv.adr2058.

Marin-Valencia I, Kocabas A, Rodriguez-Navas C, Miloushev VZ, González-Rodríguez M,

Lees H, Henry KE, Vaynshteyn J, Longo V, Deh K, Eskandari R, Mamakhanyan A, Berishaj M, Keshari KR. (2024) Imaging brain glucose metabolism in vivo reveals propionate as a major anaplerotic substrate in pyruvate dehydrogenase deficiency *Cell Metabolism* Jun 4;36(6):1394-1410.e12. doi: 10.1016/j.cmet.2024.05.002

Keshari KR, Heller DA, Boltyanskiy R, Hricak H, Magaldi T, Overholtzer M. Engineering focusing on cancer. (2024) *Cancer Cell* Jul 8;42(7):1138-1141. doi: 10.1016/j.ccell.2024.04.013 .

Pigliapochi R, Peyear T, Ruan T, Keshari KR. (2024) Hyperpolarized Nano-NMR Platform for Quantification of Mass Limited Samples. *Analytical Chemistry*. Jul 22:10.1021/acs.analchem.4c02378. doi: 10.1021/acs.analchem.4c02378

View All Publications

People

Kayvan R. Keshari, PhD

Fred Lebow Chair at MSK

- Biochemist and Bioengineer Kayvan Keshari explores changes in cancer metabolism to develop advanced imaging techniques and cancer therapeutics.
- BA, University of California, Berkeley
- PhD, University of North Carolina Chapel Hill

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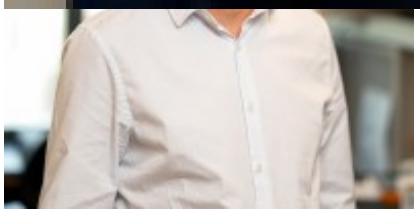
Email Address

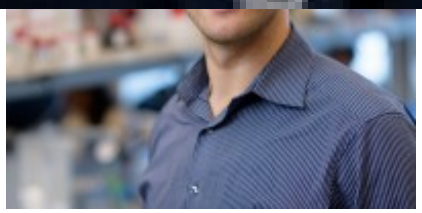
View physician profile
Physician profile

Members

Lab Alumni



Marjan Berishaj
Senior Research Technician

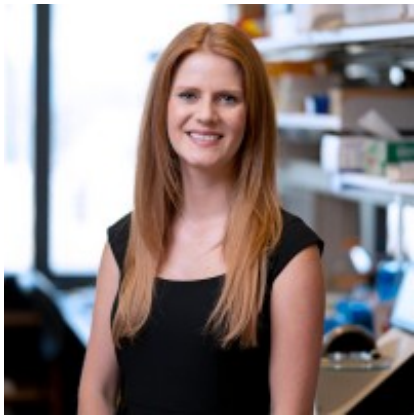


Ross Boltyanskiy
Assistant Director- Imaging & Bioengineering Lead

Lab Affiliations

Achievements

- 2012 Pathway Independent Award
- 2012 Junior Fellow, International Society of Magnetic Resonance in Medicine
- 2019 NIH Rising Stars

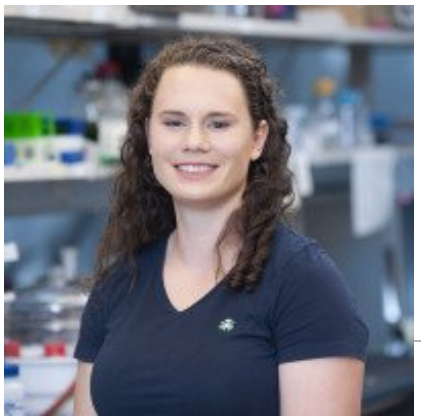


Elizabeth Coffee

Instructor, Neuro-Oncology

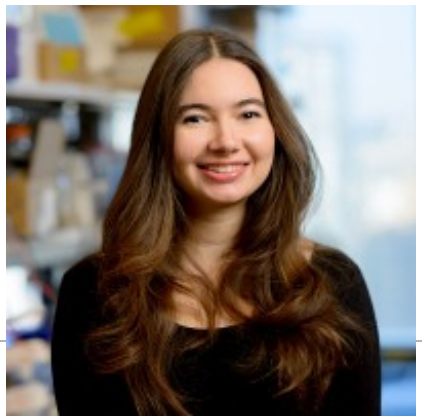
John Consiglio

Engineering Specialist



Quinlan Cullen

Graduate Student



Nadine Elkasri

Graduate Student

Grace Figlioli

Research Technician

Celia Martinez de la Torre

Research Scholar

- 2020 Distinguished Investigator, American Academy of Radiology and Biomedical Research
- 2024 Fellow, World Molecular Imaging Society

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

Career Opportunities

Apply

now (https://www.mskcc.org/research-areas/labs/kayvan-keshari/career-opportunities)

Get in Touch

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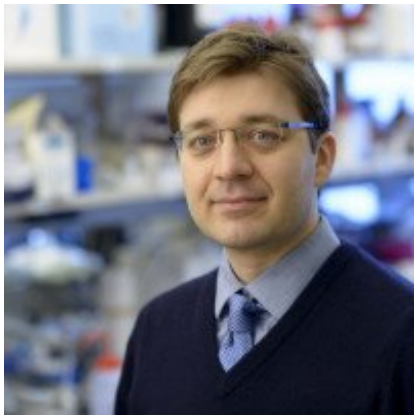
Lab Head Email

@KeshariLab



Vesselin Miloushev
Assistant Attending

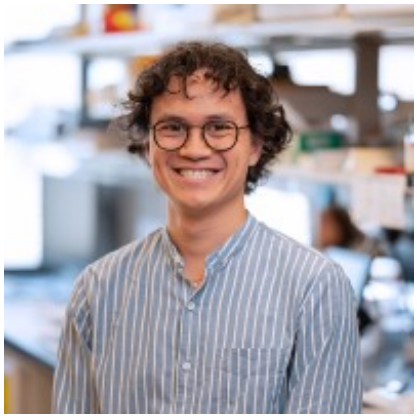
Saket Patel
Research Scholar

Thasin Peyear
Graduate Student

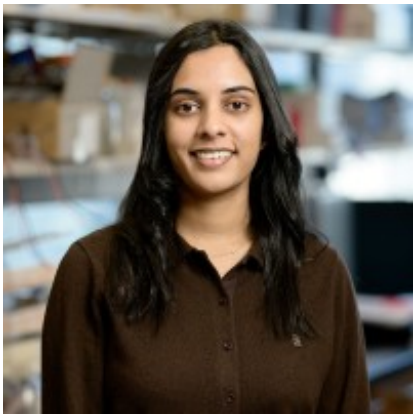
Roberta Pigliapochi
Senior Research Scientist

Aisha Pintor
Project Coordinator

Paola Porcari
Senior Research Scientist



Thomas Ruan
Graduate Student



Nancy Santiappillai
Research Fellow

Disclosures

Members of the MSK Community 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. These activities outside of MSK further our mission, provide productive collaborations, and promote the practical application of scientific discoveries.

MSK requires doctors, faculty members, and leaders 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. Not all disclosed interests and relationships present conflicts of interest. MSK reviews all disclosed interests and relationships to assess whether a conflict of interest exists and whether formal COI management is needed.

Kayvan R. Keshari discloses the following relationships and financial interests:

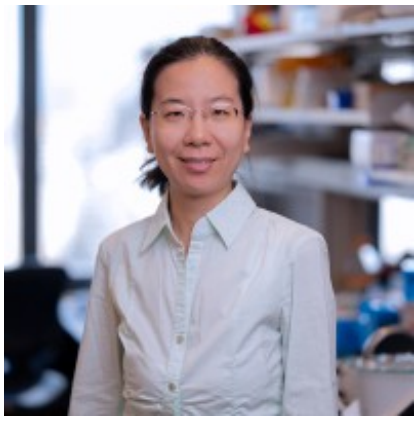
- Atish Technologies, Inc.
  Equity; Intellectual Property Rights

Thomas Smoot

Research Technician

Briana Turner

Graduate Student



Guannan Zhang

Research Fellow

Skye Zhao

Graduate Student

Professional Services and Activities

- Imaginostics, Inc.

  Equity

- Mi2 Holdings LLC

  Equity; Professional Services and Activities (Uncompensated)

- NVision Imaging Technologies GmbH

  Equity; Professional Services and Activities

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This page and data include information for a specific MSK annual disclosure period (January 1, 2024 through disclosure submission in spring 2025). This data reflects interests that may or may not still exist. This data is updated annually.

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View all disclosures (https://www.mskcc.org/disclosures)