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Memorial Sloan Kettering  
Cancer Center

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CANCER BIOLOGY & GENETICS PROGRAM

[Research](#)

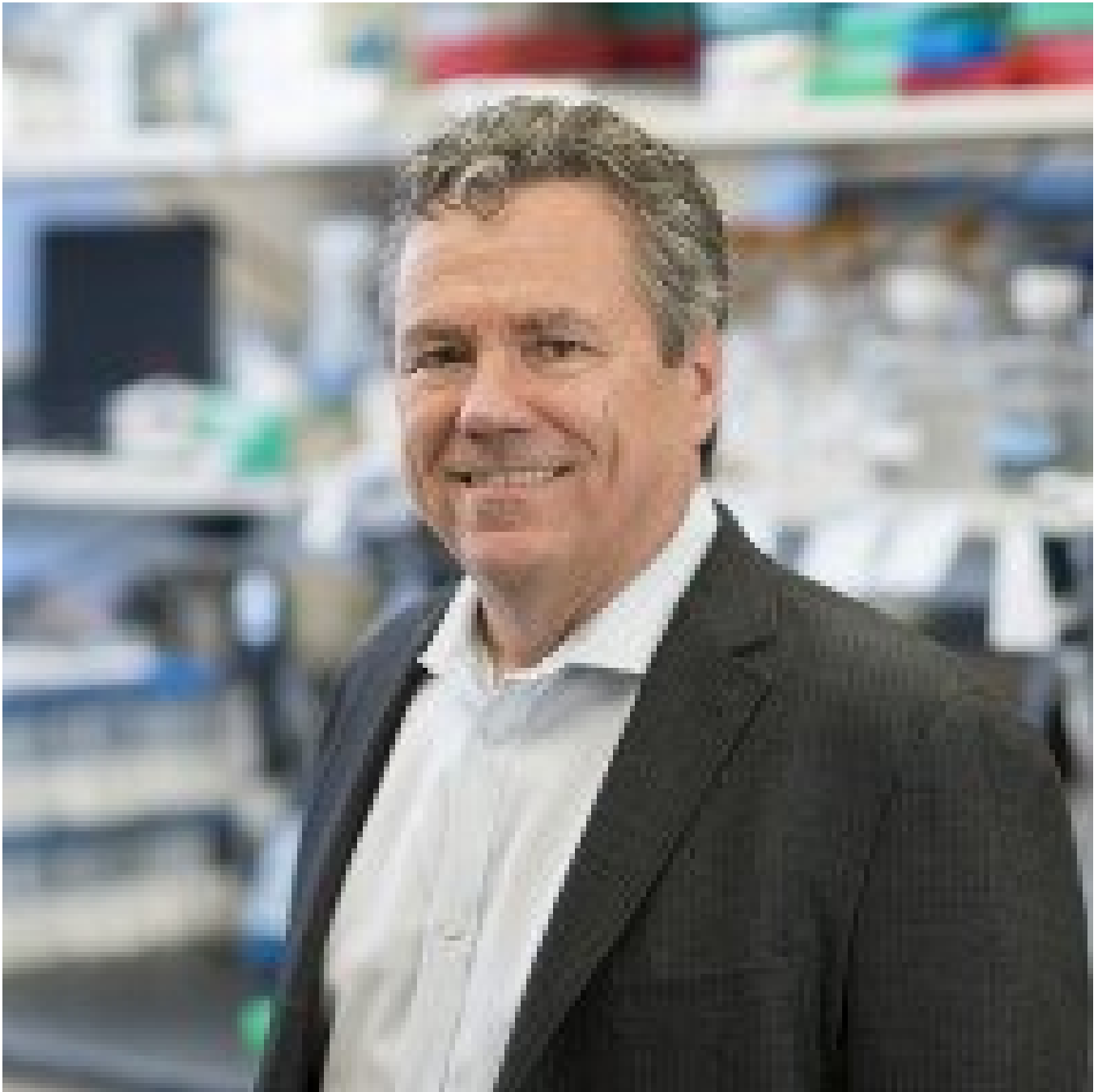
## The Scott Lowe Lab

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## Research

[Open Positions](#)



Scott W. Lowe, PhD  
Chair, Cancer Biology & Genetics Program, SKI; Chair, Geoffrey Beene Cancer Research Center; Investigator,  
Howard Hughes Medical Institute

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## About the Scott Lowe Lab

Our laboratory studies tumor-suppressor networks controlling apoptosis and senescence and how their disruption influences malignant behavior.

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## Research Projects

[The p53 Tumor Suppressor Network](#)

[Cellular Senescence in Tumor Suppression and Tissue Pathology](#)

[Identifying Tumor Maintenance Genes](#)

[Accelerating Cancer Discovery Using Mouse Models](#)

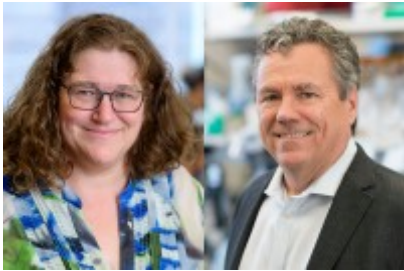
VIDEO | 02:17

Go inside the lab of Scott Lowe from SKI's Cancer Biology & Genetics Program.

[Video Details](#) →

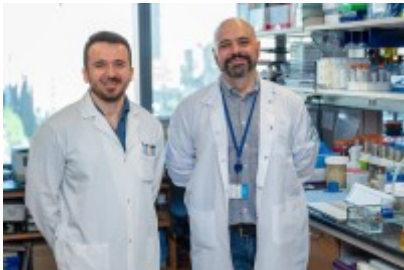


## Featured News



### [Expansion of Cell-to-Cell Communication Drives the Early Development of Pancreatic Cancer, New Research in Mice Finds](#)

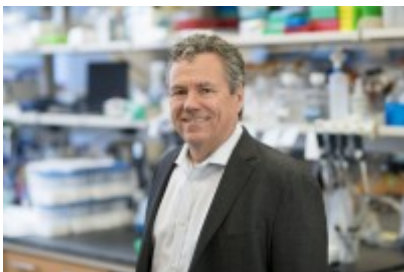
New MSK research combined sophisticated genetically engineered mouse models and advanced computational methods to map the earliest cell states leading to pancreatic ductal adenocarcinoma (PDAC), the most common type of pancreatic cancer.



### [New MACHETE Technique Slices Into Cancer Genome To Study Copy Number Alterations](#)

Learn why MSK researchers developed MACHETE, a new CRISPR-based technique to study large-scale genetic deletions efficiently in laboratory models.

#### IN THE LAB



### [SKI Scientists Solve 30-Year-Old Mystery About p53 Protein — Dubbed ‘Guardian of the Genome’](#)

Rather than promoting genetic chaos, loss of p53 leads to an orderly progression of genetic changes that no one saw coming.

[View All Featured News](#)

## Publications Highlights

[Epigenetic plasticity cooperates with cell-cell interactions to direct pancreatic tumorigenesis.](#)

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Burdziak C, Alonso-Curbelo D, Walle T, Reyes J, Barriga FM, Haviv D, Xie Y, Zhao Z, Zhao CJ, Chen HA, Chaudhary O, Masilionis I, Choo ZN, Gao V, Luan W, Wuest A, Ho YJ, Wei Y, Quail DF, Koche R, Mazutis L, Chaligné R, Nawy T, Lowe SW, Pe'er D. *Science*. 2023 May 12;380(6645):eadd5327. doi: 10.1126/science.add5327. Epub 2023 May 12. PMID: 37167403

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[Senescence Rewires Microenvironment Sensing to Facilitate Antitumor Immunity.](#)

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Chen HA, Ho YJ, Mezzadra R, Adrover JM, Smolkin R, Zhu C, Woess K, Bernstein N, Schmitt G, Fong L, Luan W, Wuest A, Tian S, Li X, Broderick C, Hendrickson RC, Egeblad M, Chen Z, Alonso-Curbelo D, Lowe SW. *Cancer Discov*. 2023 Feb 6;13(2):432-453. doi: 10.1158/2159-8290.CD-22-0528. PMID: 36302222 Free PMC article.

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[MACHETE identifies interferon-encompassing chromosome 9p21.3 deletions as mediators of immune evasion and metastasis.](#)

[View All Publications](#)

## People



## Scott W. Lowe, PhD

*Chair, Cancer Biology & Genetics Program, SKI; Chair, Geoffrey Beene Cancer Research Center; Investigator, Howard Hughes Medical Institute*

Cancer biologist Scott Lowe uses genetically engineered mouse models to study how the genetic alterations in cancer cells contribute to tumorigenesis, alter treatment response, and create molecular vulnerabilities that may be targeted therapeutically.

PhD, Massachusetts Institute of Technology

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## Members



Valentin  
Barthet



Lynn  
Boss

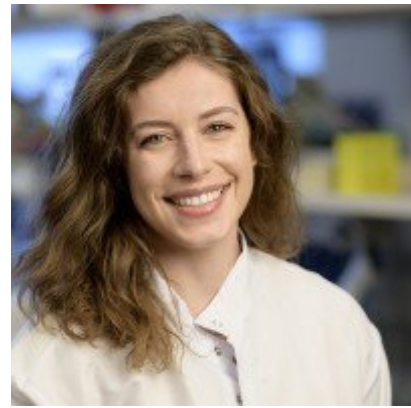


Caroline Broderick  
Graduate Student



Postdoctoral Researcher

Administrative Coordinator



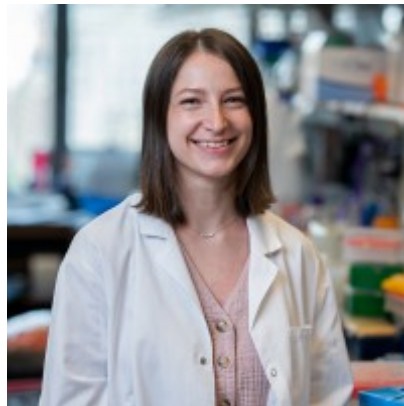
Andrea Chaikovsky

Postdoctoral Researcher



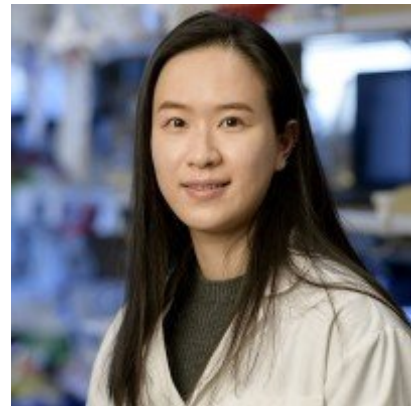
Almudena Chaves  
Perez

Postdoctoral Researcher



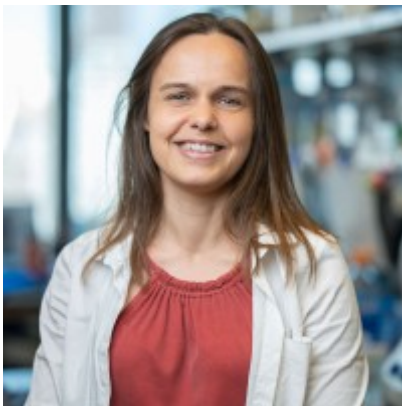
Isabella Del  
Priore

Graduate Student



Xin  
Fang

Research Technician



Aveline  
Filliol

Lead Program Manager



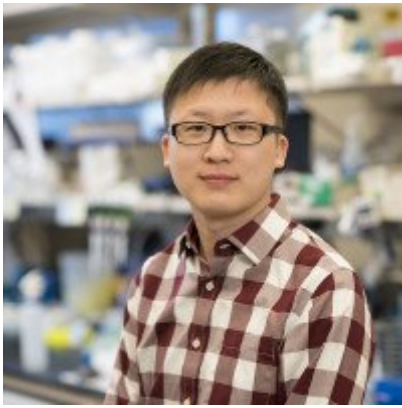
Hailey V. Goldberg

Graduate Student

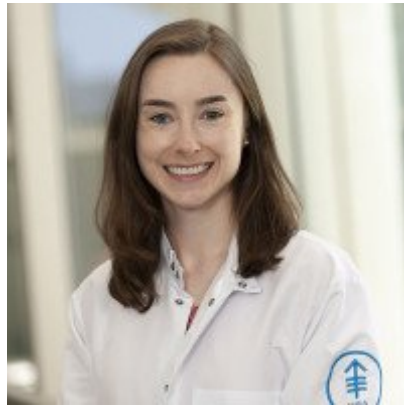


Clemens  
Hinterleitner

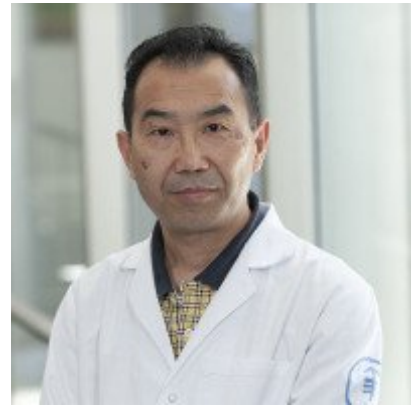
Postdoctoral Researcher



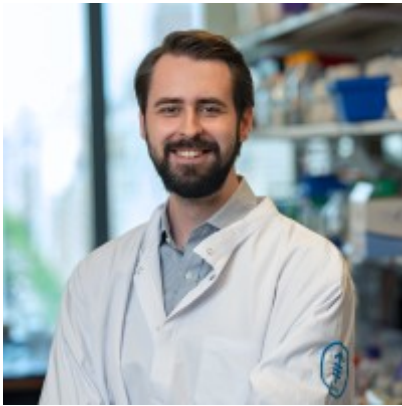
Yu-Jui (Ray)  
Ho  
Computational Biologist



Margaret Kennedy  
Graduate Student



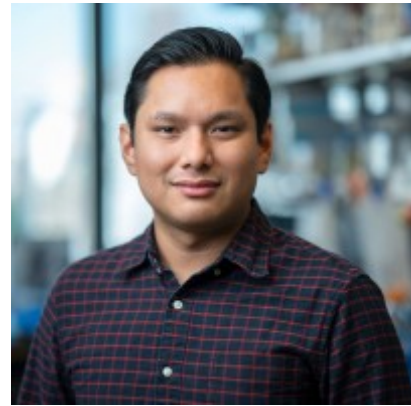
Wei  
Luan  
Senior Research  
Technician



Domhnall McHugh  
Postdoctoral Researcher



Riccardo Mezzadra  
Postdoctoral Researcher



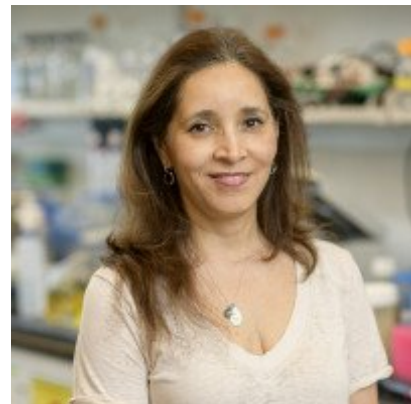
Nalin Ratnayeke  
Postdoctoral Researcher



José  
Reyes  
Postdoctoral Researcher



Corinne L.  
Rodriguez  
Assistant to Chair

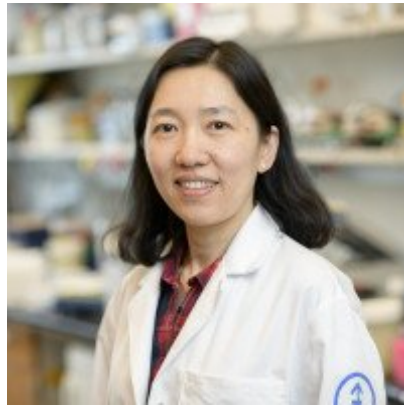


Janelle  
Simon  
Mouse Colony Manager





Exequiel  
Sisso  
Research Technician



Sha Tian  
Senior Research  
Technician



Anne Trumble-  
Koncelik  
Lab Manager



Kaloyan  
Tsanov  
Postdoctoral Researcher



Zeda  
Zhang  
Postdoctoral Researcher



Changyu Zhu  
Postdoctoral Researcher

Lab Alumni  
+

Lab Affiliations  
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Lab Resources

+

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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.

Scott W. Lowe discloses the following relationships and financial interests:

Blueprint Medicines

Equity; Professional Services and Activities

Eli Lilly and Company

Equity

Faeth Therapeutics, Inc

Equity; Professional Services and Activities (Uncompensated)

Fate Therapeutics

Intellectual Property Rights; Professional Services and Activities

Geras Bio Inc

Equity; Professional Services and Activities (Uncompensated)

Mirimus

Equity; Professional Services and Activities

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Equity; Professional Services and Activities

PMV Pharma

Equity; Professional Services and Activities

Senescea Therapeutics

Equity; Intellectual Property Rights; Professional Services and Activities (Uncompensated)

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