



Gerstner Sloan Kettering  
Graduate School of Biomedical Sciences

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HUMAN ONCOLOGY & PATHOGENESIS PROGRAM

## The David Solit Lab

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[Cancer Biology](#)

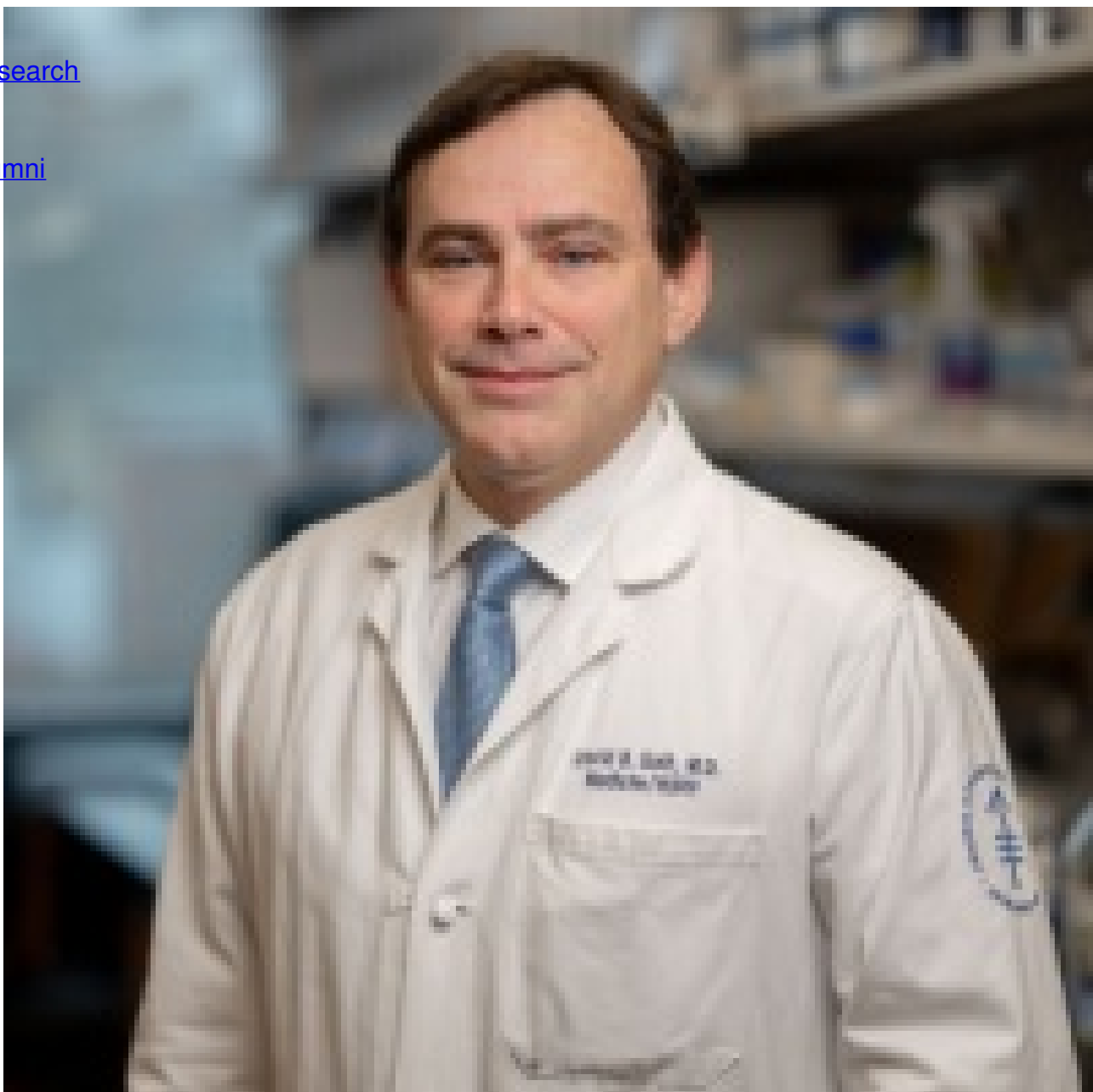
**Research**

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David B. Solit, MD

Our research is based on the underlying hypothesis that the ability to inhibit an oncogenic pathway and block cancer growth will vary based on cell lineage and the complement of mutations within the tumor. To design rational therapeutic studies, we must define not only the spectrum of genetic changes within particular tumor types but also the mechanisms by which these alterations support tumor growth, survival, metastasis, and other hallmarks of cancer.

[View Lab Overview \(https://www.sloankettering.edu/research-areas/labs/david-solit/overview\)](https://www.sloankettering.edu/research-areas/labs/david-solit/overview)

## Research Projects

- [Defining the Temporal Sequence of Oncogenic Mutations in Bladder Cancer](#)
- [Studies on Mechanism\(s\) of De Novo and Acquired Resistance to RAF Inhibitors](#)
- [Whole Genome Sequencing of Outlier Responders to Systemic Cancer Therapies \(Extraordinary Responder Initiative\)](#)



## Featured News

### [Finding Clues in Genes of ‘Exceptional Responders’](#)

Physician-scientist David Solit was interviewed about exceptional responders, patients who defy all expectations by responding dramatically to a drug t...

#### EVENT



### [A Sneak Preview of Our Annual “Major Trends” Seminar Live Webcast](#)

Every year, MSK gives high school students and their teachers the opportunity to learn about cutting-edge biomedical research from our scientists.

## FEATURE



## [Memorial Sloan Kettering Transforms Cancer Research and Care Delivery](#)

Memorial Sloan Kettering's vision is nothing less than to revolutionize the treatment of cancer. Learn about some of the ways we're doing it.

[View All Featured News](#)

## Publications Highlights

[Xing F, Persaud Y, Pratilas CA, Taylor BS, Janakiraman M, She QB, Gallardo H, Liu C, Merghoub T, Hefter B, Dolgalev I, Viale A, Heguy A, De Stanchina E, Cobrinik D, Bollag G, Wolchok J, Houghton A, Solit DB. Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring \(V600E\)BRAF. \*Oncogene\*. 2012 Jan 26;31\(4\):446-57. doi: 10.1038/onc.2011.250. Epub 2011 Jul 4.](#)

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[Poulikakos PI, Persaud Y, Janakiraman M, Kong X, Ng C, Moriceau G, Shi H, Atefi M, Titz B, Gabay MT, Salton M, Dahlman KB, Tadi M, Wargo JA, Flaherty KT, Kelley MC, Misteli T, Chapman PB, Sosman JA, Graeber TG, Ribas A, Lo RS, Rosen N, Solit DB. RAF inhibitor resistance is mediated by dimerization of aberrantly spliced BRAF\(V600E\). \*Nature\*. 2011 Nov 23;480\(7377\):387-90. doi: 10.1038/nature10662.](#)

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[Hanrahan AJ, Schultz N, Westfal ML, Sakr RA, Giri DD, Scarperi S, Janakiraman M, Olvera N, Stevens EV, She QB, Aghajanian C, King TA, Stanchina Ed, Spriggs DR, Heguy A, Taylor BS, Sander C, Rosen N, Levine DA, Solit DB. Genomic complexity and AKT dependence in serous ovarian cancer. \*Cancer Discov\*. 2012 Jan;2\(1\):56-67. doi: 10.1158/2159-8290.CD-11-0170.](#)

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[Misale S, Yaeger R, Hobor S, Scala E, Janakiraman M, Liska D, Valtorta E, Schiavo R,](#)

[Buscarino M, Siravegna G, Bencardino K, Cercek A, Chen CT, Veronese S, Zanon C, Sartore-Bianchi A, Gambacorta M, Gallicchio M, Vakiani E, Boscaro V, Medico E, Weiser M, Siena S, Di Nicolantonio F, Solit D, Bardelli A. Emergence of KRAS mutations and acquired resistance to anti-EGFR therapy in colorectal cancer. \*Nature\*. 2012 Jun 28;486\(7404\):532-6. doi: 10.1038/nature11156.](#)

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[Iyer G, Hanrahan AJ, Milowsky MI, Al-Ahmadie H, Scott SN, Janakiraman M, Pirun M, Sander C, Socci ND, Ostrovnaya I, Viale A, Heguy A, Peng L, Chan TA, Bochner B, Bajorin DF, Berger MF, Taylor BS, Solit DB. Genome sequencing identifies a basis for everolimus sensitivity. \*Science\*. 2012 Oct 12;338\(6104\):221. doi: 10.1126/science.1226344. Epub 2012 Aug 23.](#)

[View All Publications](#)

## People



# David B. Solit, MD

*Co-Director, Marie-Josée & Henry R. Kravis Center for Molecular Oncology*

*Professor*

- Physician-scientist David Solit studies human oncology and pathogenesis, genomics, oncogenes and tumor suppressors, cancer therapeutics, and clinical trials.
- MD, University of Pennsylvania

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Email Address

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physician profile

Members

Lab

Alumni



Alexis M. Jones

Research Lab Manager



Aphrothiti Hanrahan

Assistant Lab Member

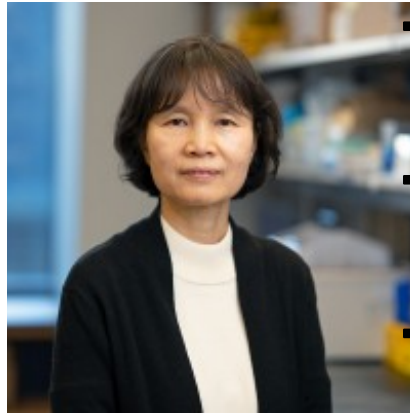
Lab Affiliations

## Achievements

- Member, American Society for Clinical Investigation (2011)
- Louise and Allston Boyer Young Investigator Award for Basic Research, Memorial Sloan Kettering Cancer Center (2007)

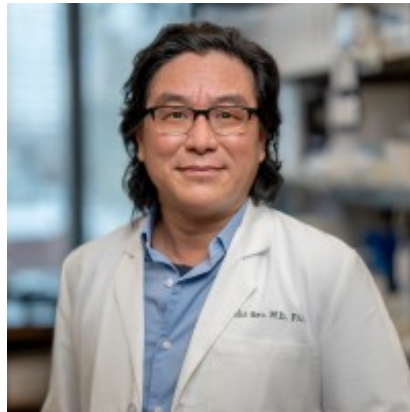


Gopa Iyer  
Assistant Attending,  
Genitourinary Oncology Service



Kwanghee Kim  
Associate Attending Biologist

- Kimmel Scholar, Sidney Kimmel Foundation for Cancer Research (2007)
- Career Development Award, American Society of Clinical Oncology (2002)
- Young Investigator Award, American Society of Clinical (2001)

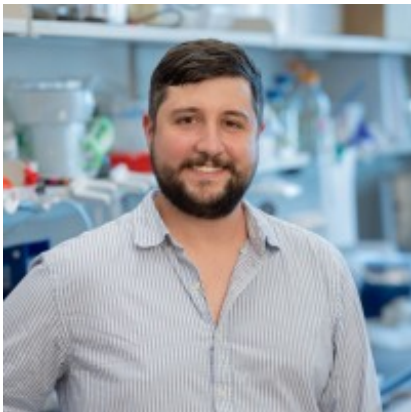


Paul (Sizhi) Gao  
Scientific Research Lead

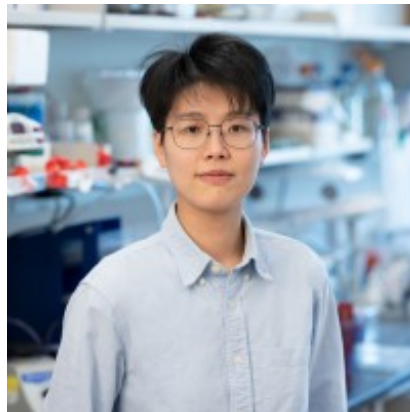
## Open Positions

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](#)



James Rodrigues  
GSK Graduate Student



Josie (Jiaqian) Luo  
Weill Cornell BCMB Graduate Student

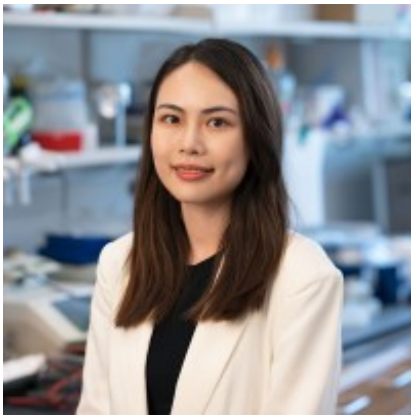
## Career Opportunities

[Apply](#)

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## Postdoc Position in Preclinical and Translational Cancer Genomics and Therapeutics

[Apply now \(https://www.sloankettering.edu/research-areas/labs/david-solit/postdoc-position-preclinical-and-translational-cancer-genomics-and-therapeutics\)](https://www.sloankettering.edu/research-areas/labs/david-solit/postdoc-position-preclinical-and-translational-cancer-genomics-and-therapeutics)



Michelle (Xinran) Tang  
Weill Cornell Graduate Student



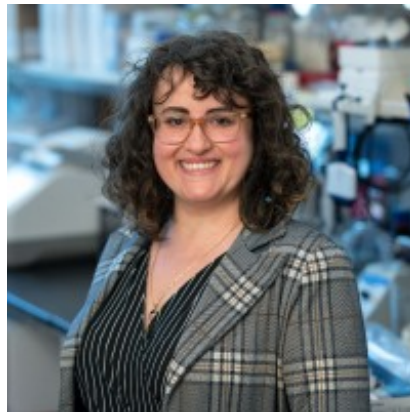
Jordan Eichholz  
Computational Biologist I



Hikmat A. Al-Ahmadie  
Associate Attending  
Pathologist, Memorial Hospital



Cansu Yol  
Senior Research Scientist



Merve Basar  
Senior Research Scientist

## Get in Touch

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Lab Head Email

☎ [646-888-2641](tel:646-888-2641)

For non-clinical issues only

☎ [646-422-4459](tel:646-422-4459)

For patient-related issues

☎ [646-888-2649](tel:646-888-2649)

Lab Phone

## 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.

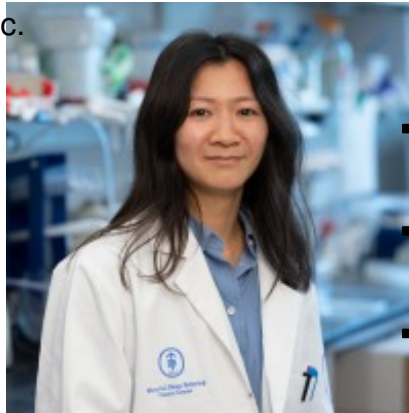
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David B. Solit discloses the following relationships and financial interests:



Antares Therapeutics, Inc.

Hui Jiang  
Research Associate



Lynda Vuong  
Scientific Research Lead



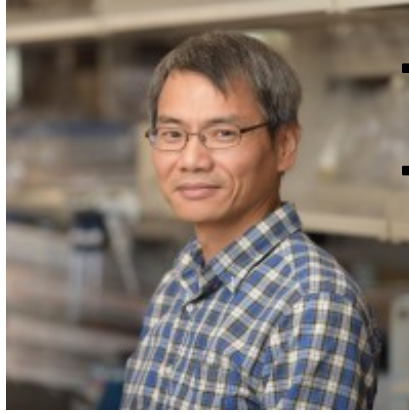
Jie-Fu Chen  
Assistant Attending Pathologist



Aaron Gillmor  
Computational Biologist



Olvania-Danyca Hilaire  
Senior Research Technician



David (Fengshen) Kuo  
Bioinformatics Software Engineer

Daniel Barbakoff  
Medical Student    Equity

- BridgeBio Inc.  
Professional Services and Activities
- Corramedical, Inc.  
Equity
- Elsie Biotechnologies, Inc.  
Equity; Professional Services and Activities
- Fog Pharmaceuticals, Inc.  
Professional Services and Activities
- Fore Biotherapeutics  
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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

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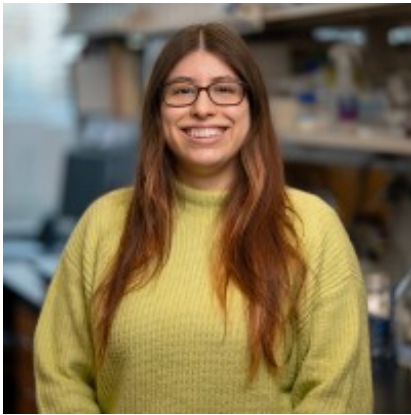
Andrea Lopez-Sanmiguel  
Graduate Research Assistant



Nicole Rittenhouse  
Research Technician

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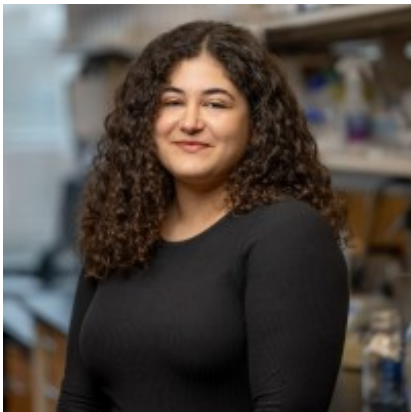
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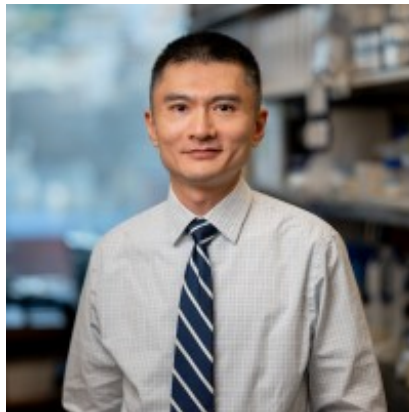
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Research Technician



Chione Sylvester  
Administrative Assistant



Ecenur Turkey  
GSK Graduate Student



Ao Zhang  
Urologic Oncology Fellow

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