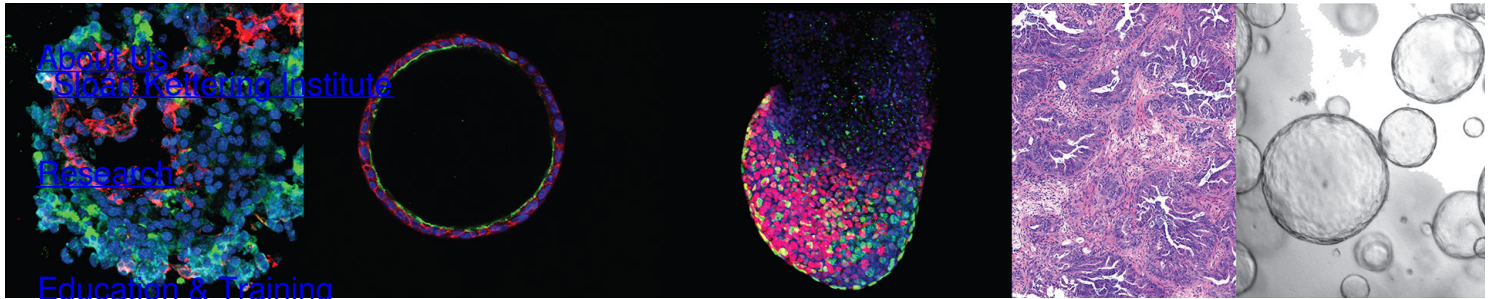


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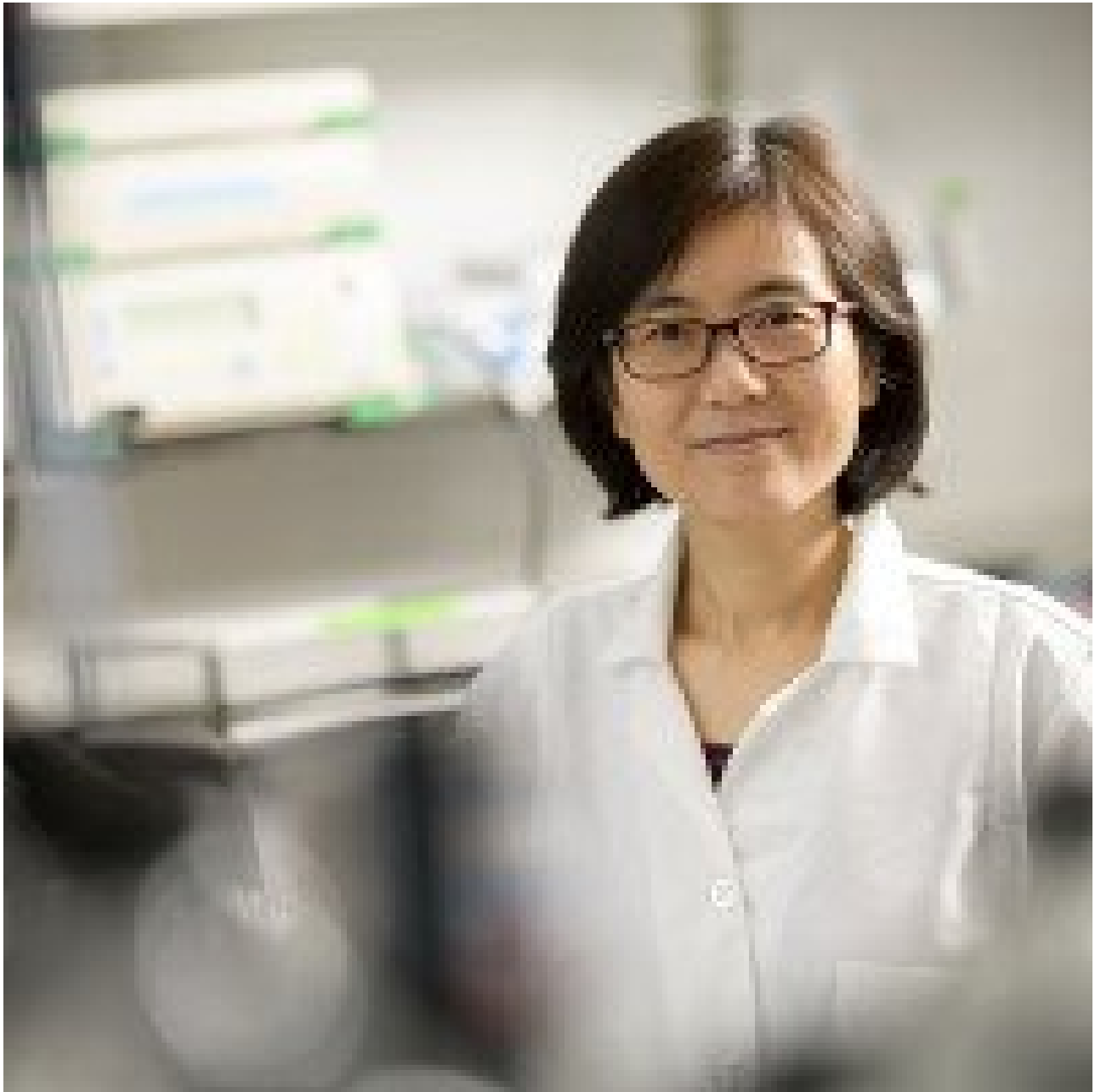
DEVELOPMENTAL BIOLOGY PROGRAM

[News & Events](#)

# The Danwei Huangfu Lab

[Open Positions](#)

**Research**



Danwei Huangfu, PhD

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We apply both precision gene editing and large-scale CRISPR screening in human pluripotent stem cells (hPSCs) to explore mechanisms underlying human development. Specifically, we are interrogating the protein-coding regulators of pancreatic development and  $\beta$  cell function. The pathways that regulate these processes can be exploited for therapeutics to prevent and reverse diseases such as type 1 and type 2 diabetes. In a second, closely related area, we are developing approaches to discover developmental enhancers, and to understand the epigenetic regulation of noncoding regulatory elements with a focus on DNA methylation.

[View Lab Overview \(https://www.mskcc.org/research/ski/labs/danwei-huangfu/overview\)](https://www.mskcc.org/research/ski/labs/danwei-huangfu/overview)

[The MSK MorPhiC project \(https://morphic.mskcc.org/\)](https://morphic.mskcc.org/)



## Featured News

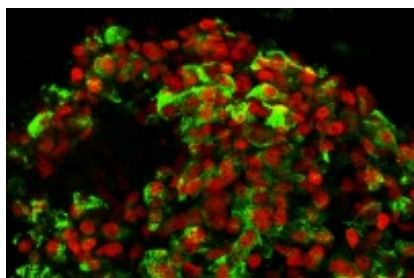
### FINDING



### [Stem Cell Research Unlocks a New Discovery about Controlling Genes](#)

Sloan Kettering Institute scientists report new findings about a gene that helps regulate DNA methylation.

## IN THE LAB



## [Scientists Use CRISPR to Learn How Cells Make Decisions](#)

The genome-editing technique uncovered several genes previously not known to influence embryonic development.

## 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.

[View All Featured News](#)

## Publications Highlights

[Glucose transporters are key components of the human glucostat.](#) Caspi I, Tremmel DM, Pulecio J, Yang D, Liu D, Yan J, Odorico JS, Huangfu D. Diabetes. 2024 May 22;db230508. *(first author(s) from the Huangfu lab are shown in bold)*

[Dynamic network-guided CRISPRi screen identifies CTCF-loop-constrained nonlinear enhancer gene regulatory activity during cell state transitions.](#) Luo R, Yan J, Oh JW, Xi W, Shigaki D, Wong W, Cho HS, Murphy D, Cutler R, Rosen BP, Pulecio J, Yang D, Glenn RA, Chen T, Li QV, Vierbuchen T, Sidoli S, Apostolou E, Huangfu D#, Beer MA#. Nature Genetics. 2023 Aug;55(8):1336-1346. *(#co-corresponding author)*

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[CRISPR screening uncovers a central requirement for HHEX in pancreatic lineage commitment and plasticity restriction.](#)

Yang D, Cho H, Tayyebi Z, Shukla A, Luo R, Dixon G, Ursu V, Stransky S, Tremmel DM, Sackett SD, Koche R, Kaplan SJ, Li QV, Park J, Zhu Z, Rosen BP, Pulecio J, Shi ZD, Bram Y, Schwartz RE, Odorico JS, Sidoli S, Wright CV, Leslie CS#, Huangfu D#. Nature Cell Biology. 2022 Jul;24(7):1064-1076.

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[QSER1 protects DNA methylation valleys from de novo methylation.](#) Dixon G, Pan H, Yang D, Rosen BP, Jashari T, Verma N, Pulecio J, Caspi I, Lee K, Stransky S, Glezer A, Liu C, Rivas M, Kumar R, Lan Y, Torregroza I, He C, Sidoli S, Evans T, Elemento O#, Huangfu D#. Science. 2021 Apr 9;372(6538):eabd0875.

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[Genome-scale screens identify JNK-JUN signaling as a barrier for pluripotency exit and endoderm differentiation.](#) Li QV, Dixon G, Verma N, Rosen BP, Gordillo M, Luo R, Xu C, Wang Q, Soh CL, Yang D, Crespo M, Shukla A, Xiang Q, Dündar F, Zumbo P, Witkin M, Koche R, Betel D, Chen S, Massagué J, Garippa R, Evans T, Beer MA#, Huangfu D#. Nature Genetics. 2019 Jun;51(6):999-1010.

[View All Publications](#)

## People



## Danwei Huangfu, PhD

- The Huangfu laboratory uses human pluripotent stem cells (hPSCs) as a powerful genetic model to interrogate the transcriptional and epigenetic mechanisms underlying cell fate decisions in development and disease.
- PhD, Cornell University, Weill Graduate School of Medical Sciences
- BS, Fudan University

✉ [huangfud@mskcc.org](mailto:huangfud@mskcc.org)

Email Address

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## Members

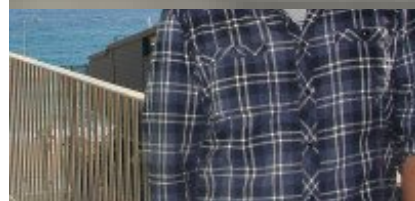
Lab

Alumni

Lab Affiliations

## Achievements

- Basil O'Connor Scholar, March of Dimes Birth Defects Foundation

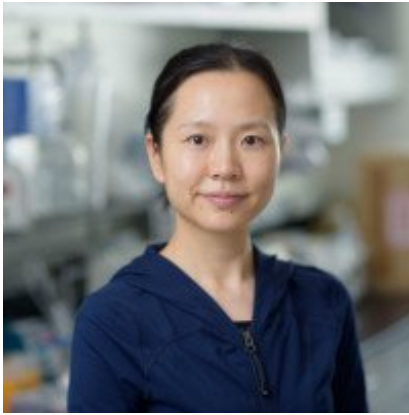


Julian Pulecio  
Sr. Research Scientist



Dapeng Yang  
Sr. Research Scientist

- (2012-2014)
- Louis V. Gerstner, Jr. Young Investigators Award, Memorial Sloan Kettering Cancer Center (2011-2014)



Xian Zhang  
Sr. Research Scientist



Adonis C. John  
Lead, Research Administrative  
Assistant

- Award from Harvard Catalyst & InnoCentive for the Ideation Challenge on “What Do We Not Know to Cure Type 1 Diabetes” (2010)
- Helen Hay Whitney Postdoctoral Fellowship (2006-2009)

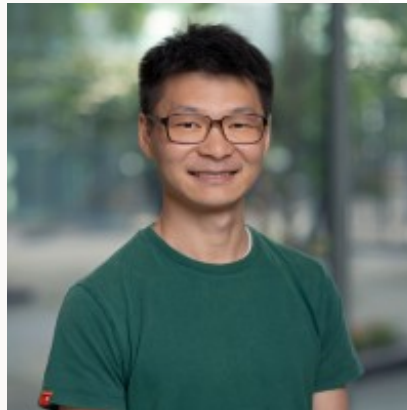
## Lab News & Events



Tamara Casteels  
Research Fellow - NYSTEM  
Training Award at the CSCB



Tingfeng Guo  
Research Fellow



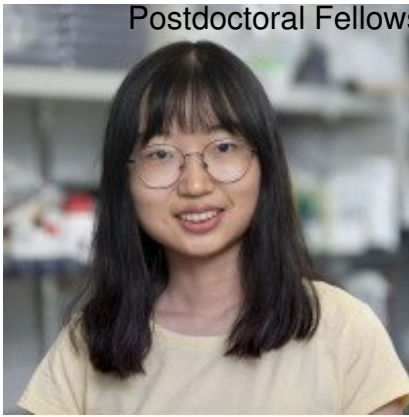
Nan Hu  
Computational Biologist

## ACCOLADES

### Team Recognitions

- Denis Torre - Damon Runyon Cancer Research Foundation Fellowship (2025)
- Tamara Casteels - Emerald Foundation

Postdoctoral Fellowship (2025)



Dingyu Liu

Graduate Research Assistant



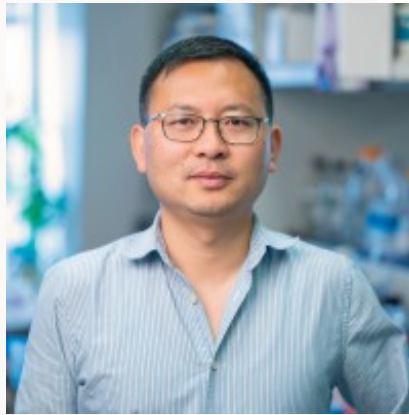
Pallavi Mohapatra

Research Fellow



Denis Torre

Research Scholar



Xianming Wang

Research Fellow



Breanna Williams

Research Technician



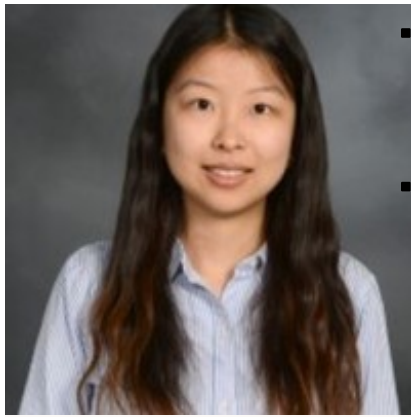
Nan Zhang

Research Associate

Pallavi Mohapatra - Kaufman Family  
Postdoctoral Fellowship in Pediatric Cancer  
(2025)

- Renhe Luo - GSK Chairman's Prize (2024)
- Julian Pulecio - 2023 cohort of MERIT  
Emerging Leaders
- Dingyu Liu - Bruce Charles Forbes Fellowship  
(2023)





Jiahui Hazel Zhao  
Graduate Research Assistant  
Award (2022)

- Tamara Casteels - NYSTEM Training Award at the CSCB (2022)
- Tamara Casteels - Award of Excellence for her PhD thesis with Stefan Kubicek in CeMM (2022)
- Nan Zhang - CDMRP PRMRP Discovery

## Open Positions

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### Graduate Student, Postdoctoral Fellow, Research Technician and Project Manager

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## Get in Touch

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Lab Head Email

☎ [212-639-5240](tel:212-639-5240)

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.

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.

Danwei Huangfu discloses the following relationships and financial interests:

- Breakthrough T1D  
Professional Services and Activities
- Stem Cell Reports  
Professional Services and Activities (Uncompensated)

The information published here is a complement to other publicly reported data and 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.

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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.

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](mailto:ecoi@mskcc.org) .

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