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Graduate School of Biomedical Sciences

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# The Zhirong Bao Lab

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## Research



Zhirong Bao, PhD

Professor

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My lab investigates how the genome dictates development using *C. elegans* as a model.

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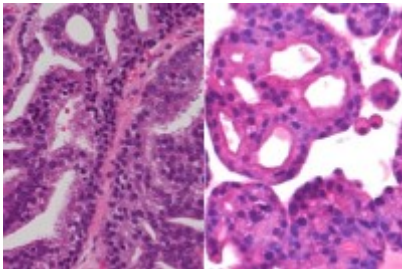


The Bao Lab, MSK

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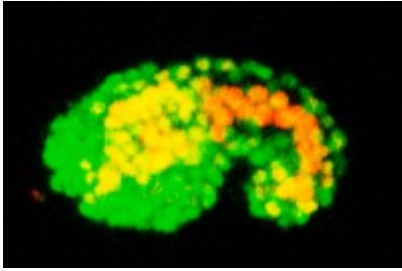
## Featured News

### IN THE LAB



### [Five Fascinating Approaches to Cancer Science](#)

From tropical plants and 3-D snapshots of worms to tiny particles that light up tumors, here's a glimpse at some of the fascinating work MSK researchers pursued in 2014 as part of our quest to advance cancer science.



## [How to Build a Worm, in 3-D High Definition](#)

Stunning movies captured in the lab of computational biologist Zhirong Bao reveal how cells divide, grow, and move around, as in a carefully choreographed dance, during the development of a nematode worm embryo.

## Publications

Wang, Z., Wang, D.\* , Li, C., Xu, Y., Li, H. & Bao, Z.\* (2018). Deep reinforcement learning of cell movement in the early stage of *C. elegans* embryogenesis, *Bioinformatics*, 34, 3169-77

Shah, P.K., Santella, A., Jacobo, A., Siletti, K., Hudspeth, A.J. & Bao, Z. (2017). An *in toto* approach to dissecting cellular interactions in complex tissues. *Dev Cell*, 43, 530-540

Shah, P.K., Tanner, M.R., Kovacevic, I., Rankin, A., Marshall, T.E., Noblett, N., Tran, N.N., Roenspies, T., Hung, J., Chen, Z., Slatculescu, C., Perkins, T.J., Bao, Z.\* & Colavita, A.\* (2017). PCP and SAX-3/Robo pathways cooperate to regulate convergent extension-based nerve cord assembly in *C. elegans*, *Dev Cell*, 41, 195-203

Du, Z., Santella, A., He, F., Shah, P.K., Kamikawa, Y. & Bao, Z. (2015). The regulatory landscape of lineage differentiation in a metazoan embryo, *Dev Cell*, 34, 592-607

Du, Z., Santella, A., He, F., Tiongson, M. & Bao, Z. (2014). *De novo* inference of systems-level mechanistic models of development from live imaging-based phenotype analysis, *Cell*, 156, 359-72

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# People

## Zhirong Bao, PhD

*Professor*

The Bao laboratory investigates how the genome dictates development using *C. elegans* as a model.

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## Members



Kristopher Barnes

Graduate Student



Christopher Brittin

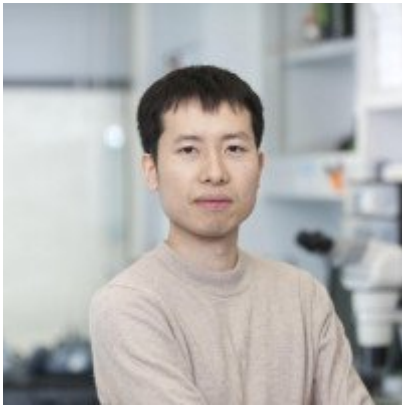
Research Scholar



Hayao

Ohno

Research Fellow



Yichi  
Xu  
Research Fellow



Anthony Santella  
Senior Research Scientist

Lisbelle  
Adorno  
Administrative Assistant

Lab Affiliations  
+

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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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## Career Opportunities

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## Get in Touch

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Lab Head Email

## 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.

Zhirong Bao discloses the following relationships and financial interests:

*No disclosures meeting criteria for time period*

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.

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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.

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