

## CURRICULUM VITAE

### Jianhang Jia, Ph.D.

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#### Education:

B.S. Agricultural University of Hebei, China, Genetics, August 1987  
M.S. Agricultural University of Hebei, China, Genetics, July 1997  
Ph.D. Chinese Academy of Sciences, China, Molecular Genetics, July 2000

#### Professional Experience:

09/2000--03/2001: Postdoctoral Researcher, Texas Tech University, Lubbock, TX, USA  
03/2001—08/2005: Postdoctoral Researcher, University of Texas Southwestern Medical Center,  
Dallas, TX, USA  
08/2005—05/2009: Assistant professor, University of Texas Medical School at Galveston, TX, USA  
05/2009—present: Associate Professor, University of Kentucky, Lexington, KY, USA

#### Honors and Awards:

1999 The second prize of Di Ao Scholarship for Graduate Students of Chinese Academy of Sciences.  
2006 John Sealy Award.  
2007 American Cancer Society Institutional Research Award.  
2010 Wethington Award, University of Kentucky

**Membership:** Genetics Society of America (GSA); Society for Developmental Biology (SDB)

#### Ad hoc Reviewer:

Development  
J. Bio Chem  
International Journal of Developmental Neuroscience  
Dev Bio

#### Teaching & Academic Committees:

2006-2009 BMB program Credentials Committee  
2007-2009 BMB Safety and Emergency Management Committee  
2006-2009 Discussion section, first year graduate student core course, Cell Biology Program  
2007-2009 Signaling in Cancer course teaching  
2010- Dental Biochemistry

#### Qualifying examination committees

Abhisek Mukerjee (BMB)

David Saenz (BMB)  
Keerthi Gottipati (BMB)  
Pavani Gangavarapu (BMB)  
Natasha C. Brooks (MCB)

### Graduate student rotations

01/2007-02/2007 Peng Zhang (BBSC)  
04/2007-06/2007 Yiwei Lin (BBSC)  
04/2008-06/2008 Anusha Srinivasan (BBSC)  
01/2010-03/2010 Vaughn Priddy

### Postdoctoral trainee

04/2006-05/2007 Xuesong Cao, Ph.D. (postdoctoral fellow)  
11/2007- Hongge Jia, Ph.D. (postdoctoral fellow)  
03/2008-05/2009 Wei Yan, Ph.D. (postdoctoral fellow)  
06/2008- Ruohan Xia, Ph.D. (postdoctoral fellow)  
10/2009- Junkai Fan, Ph.D. (postdoctoral fellow)

### Chair/Member of Ph.D. Supervisory Committee

2009-present, Tianxin Yu (BMB, UTMB and Molecular and Cellular Biochemistry, UK)  
2010-present, Dustin Perry (Department of Biology, UK)

### Service

Core Director, The UTMB Sealy Center for Cancer Cell Biology transgenic fly core  
Core Director. The Imaging Core Facility at UK Markey Cancer Center

### Bibliography:

**Jianhang Jia**, Guozhen Liu and Liyun Li. Variety identification of *Lentinula edodes* strains using IEF electrophoresis. **Journal of Hebei Agricultural University** 1997, 20(1):1-5.

**Jianhang Jia**, Zhenyue Liu, Lifang Tai Guozhen Liu, Wei Zhang, Liyun Li and Xiaobing Li. Transformation and identification of *L. edodes* DNA into protoplast of *P. ostratus*. **Acta Edulis Fungi** 4(4):5-10; 1997.

Guozhen Liu, **Jianhang Jia**, Liyun Li, Lijuan Liu, Zhenyue Liu Lifang Tai and Qingyou Huang. Study on the breeding of *Lentinula edodes* through mutation of protoplast induced by UV radiation. **Journal of Edible Fungi** 4(4):11-16; 1997.

**Jianhang Jia**, Demin Jin, Yinbing Bian, Jinguo Li, Rongqi Li, Xingcun Jiang, Bin Wang and Manli Weng. Studies on the space mutagenesis breeding of edible fungi. **Acta Edulis Fungi** 5(4):11-16; 1998.

**Jianhang Jia**, Chuanyou Li, Demin Jin, Liyun Li, Bin Wang and Manli Weng. Molecular biological characterization of *Lentinula edodes* mutant obtained through space mutagenesis. **Mycosystema** 18(1):20-24; 1999.

Jianmin Fu, Xueping Qu, Chuanyou Li, **Jianhang Jia**, Demin Jin, Qian Wang, Rencui Yang and Bin Wang. Construction and characterization of a bacterial artificial chromosome library of rice 5460F. **Chinese Science Bulletin** 44(17):1587-1592; 1999.

- Jianhang Jia**, Chuanyou Li, Demin Jin and Bin Wang. Genetic diversity analysis of maize inbred lines with AFLP technique. *High Technology Letters* 9(4): 43-47; 1999.
- Jianhang Jia**, Ping Wang, Demin Jin, Xueping Qu and Bin Wang. The application of RAPD markers in diversity detection and variety identification of *Porphyr*a. *Acta Botanica Sinica* 42(4): 403-407; 2000.
- Jianhang Jia** and Bin Wang. Recent advances in cloning of plant disease resistant genes (review article). *Progress in Biotechnology* 20(1): 21-26; 2000.
- Xueping Qu, **Jianhang Jia**, Qian Wang, Demin Jin and Bin Wang. Construction of a contig encompassing EF(t) gene locus using a rice BAC library. *High Technology Letters* 6(3): 67-71; 2000.
- Yihua Chen, **Jianhang Jia**, Chuanyou Li, Bin Wang and Manli Weng. Rice seed identification by computerized AFLP-DNA finger-printing. *Chinese Rice Research Newsletter* 8(1): 4-5; 2000.
- Jiwen Qiu, Demin Jin, Chuanyou Li, **Jianhang Jia**, Ouyang Ping, William Tai, Bin Wang and Dawei Li. Molecular verification of the integration of *Tripsacum dactyloides* DNA into wheat genome through wide hybridization. *Chinese Science Bulletin* 45(6): 528-531; 2000.
- Bingran Zhao, **Jianhang Jia**, Hehua Yang, Bin Wang and Longping Yuan. RAPD analysis of new tice strains developed through the method of spik-stalk-injecting DNA from wild relative. *Acta Agronomica Sinica* 26(4): 424-430; 2000.
- Yihua Chen, Chaoliang Zhang, Zeli Wang, **Jianhang Jia**, Zhiliang Sun, Demin Jin and Bin Wang. Computerized identification of DNA fingerprinting of maize seed. *Chinese Journal of Applied and Environmental Biology* 6(3):223-226; 2000.
- Jinfeng Shi, **Jianhang Jia**, Ping Wang, Demin Jin, Pu Xu, Xiugeng Fei, Bin Wang and Manli Weng. Specific colecular markers of the Porphyra lines. *High Technology Letters* 10(10):1-3; 2000.
- Jianhang Jia**, Deshui Zhang, Chuanyou Li, Xueping Qu, Songwen Wang, Varapong Chamarek., Henry T. Nguyen and Bin Wang. Molecular mapping of the reverse thermo-sensitive ginic male-sterile gene (*rtms1*) in rice. *Theor Appl Genet* 103: 607-612; 2001.
- Qian Wang, Kaichun Zhang, Xueping Qu, **Jianhang Jia**, Demin Jin and Bin Wang. Construction and characterization of a bacterial artificial chromosome library of peach. *Theor Appl Genet* 103:1174-1179; 2001.
- Jianhang Jia**, Chuanyou Li, Qiyun Deng and Bin Wang. Rapid constructing a genetic linkage map by AFLP technique and mapping a new gene *tms5*. *Acta Botanic Sinica* 45(5): 614-620; 2003.
- Jianhang Jia**, Kazuhito Amanai, Gelin Wang, Jiong Tang, Bing Wang and Jin Jiang. Shaggy/GSK3 anatagonizes Hedgehog signaling by regulating Cubitus interruptus. *Nature* 416: 548-552; 2002.
- Jianhang Jia**, Chao Tong, and Jin Jiang. Smoothened transduces Hedgehog signal by physically interacting with Costal2/Fused complex through its carboxyl-terminal tail. *Genes and Development* 17:2709-2720; 2003.
- Jianhang Jia**, Wensheng Zhang, Bing Wang, Richard Trinko and Jin Jiang. The *Drosophila* Ste20 family kinase dMST functions as a tumor suppressor by restricting cell proliferation and promoting apoptosis. *Genes and Development* 17: 2514-2519; 2003.

**Jianhang Jia**, Chao Tong, Bing Wang, Liping Luo and Jin Jiang. Hedgehog signaling activity of Smoothed requires phosphorylation by protein kinase A and casein kinase I. *Nature* 432: 1045-1050; 2004.

**Jianhang Jia**, Lei Zhang, Qing Zhang, Chao Tong, Bing Wang, Fajian Hou, Kazuhito Amanai, and Jin Jiang. Phosphorylation by Double-time/CKIa and CKIe targets Cubitus interruptus For Slimb/b-TRCP mediated proteolytic processing. *Developmental Cell* 9: 819-830; 2005.

Wensheng Zhang, Yun Zhao, Chao Tong, Gelin Wang, Bing Wang, **Jianhang Jia**, and Jin Jiang. Hedgehog-regulated costal2-kinase complexes control phosphorylation and proteolytic processing of cubitus interruptus. *Developmental Cell* 8:267-278; 2005.

**Jianhang Jia** and Jin Jiang. Decoding the Hedgehog signal in Animal Development (review article). *Cell. Mol. Life Sci* 63: 1249–1265; 2006.

Lei Zhang, **Jianhang Jia**, Bing Wang, Kazuhito Amanai, Keith A. Wharton, Jr., and Jin Jiang, Regulation of Wingless signaling by the CKI family in *Drosophila* limb development. *Developmental Biology* 299, 221-237, 2006.

Yajuan Liu, Xuesong Cao, Jin Jiang, and **Jianhang Jia**. Fused-Costal2 protein complex regulates Hedgehog-induced Smo phosphorylation and cell-surface accumulation. *Genes and Development* 21:1949-1963, 2007.

Hongge Jia, Yajuan Liu, Wei Yan, and **Jianhang Jia**. PP4 and PP2A regulate Hedgehog signaling by controlling Smo and Ci phosphorylation. *Development* 136: 307-316, 2009.

Wen Zhang, Jun Yang, Xi Chen, Tianxin Yu, Yajuan Liu, **Jianhang Jia**, Chunming Liu. PR55a, a regulatory subunit of PP2A, specifically regulates PP2A-mediated b-Catenin dephosphorylation. *J Biol Chem* 284:22649-56, 2009

Hongge Jia, Yajuan Liu, Ruohan Xia, Chao Tong, Tao Yue, Jin Jiang, and **Jianhang Jia**. Casein Kinase 2 promotes Hedgehog signaling by regulating both Smoothed and Cubitus interruptus. Accepted.

#### Meeting Abstracts:

Chuanyou Li, **Jianhang Jia** and Bin Wang. Identification and cloning of molecular markers linked to PGMS gene in rice by using AFLP technique in combination with near-isogenic lines. Abstracts of Eighteenth International Congress of Genetics, August 10-15, 3P61. Beijing, China. 1998.

**Jianhang Jia**, Demin Jin, Jinguo Li and Bin Wang. Molecular biological characterization of *L. edodes* mutant obtained through space mutagenesis. Abstract Book of Eighteenth International Congress of Genetics, August 10-15, 8p149. Beijing, China. 1998.

Bin Wang, **Jianhang Jia**, Yihua Chen and Chuanyou Li. Rice identification by computerized DNA fingerprinting. Abstract book of General Meeting of the International Program on Rice Biotechnology, September 20-24, Concurrent Session 2D, Phuket, Thailand. 1999.

**Jianhang Jia**, Xueping Qu, Fang Qiu and Bin Wang. Development of fine map and BAC contig map of rice *tms1* gene encompassing-region. Abstract Book of General Meeting of the International Program on Rice Biotechnology, September 20-24, P289. Phuket, Thailand. 1999.

**Jianhang Jia**, Deshui Zhang, Chuanyou Li, Xueping Qu, Songwen Wang, Varapong Chamarererk, Henry T. Nguyen and Bin Wang. Molecular mapping of the reverse thermo-sensitive ginic male-sterile gene (*rtms1*) in rice. Plant and Animal Genome IX, January 13-17, P383. San Diego, CA, USA. 2001.

Qian Wang, Jinfeng Shi, **Jianhang Jia**, Kaichun Zhang, Bin Wang. Isolation and characterization of peach R homologous genes. Plant and Animal Genome IX, January 13-17, P197. San Diego, CA, USA. 2001.

**Jianhang Jia**, Kazuhito Amanai, Gelin Wang, and Jin Jiang. Shaggy/GSK3 antagonizes Hedgehog signaling by regulating Cubitus interruptus. The 44<sup>th</sup> Annual *Drosophila* Research Conference, March 5-9, 420C. Chicago, IL, USA. 2003.

**Jianhang Jia**, Wensheng Zhang, Bing Wang, Richard Trinko and Jin Jiang. The *Drosophila* Ste20 family kinase dMST functions as a tumor suppressor by restricting cell proliferation and promoting apoptosis. The 45<sup>th</sup> Annual *Drosophila* Research Conference, March 24-28, 203B. Washington, DC, USA. 2004.

**Jianhang Jia**, Chao Tong, and Jin Jiang. Smoothed transduces Hedgehog signal by physically interacting with Costal2/Fused complex through its carboxyl-terminal tail. The 45<sup>th</sup> Annual *Drosophila* Research Conference, March 24-28, 483C. Washington, DC, USA. 2004.

**Jianhang Jia** and Jin Jiang. The regulation of Ci processing by CKIe and CKIa. The 47<sup>th</sup> Annual *Drosophila* Research Conference, March 29-April 2, 401A. Houston, USA. 2006.

Yajuan Liu, Xuesong Cao, Jin Jiang, and **Jianhang Jia**. Fused-Costal2 regulates Hedgehog-induced Smo phosphorylation and cell-surface accumulation. The 49<sup>th</sup> Annual *Drosophila* Research Conference. April 2-6, 350B. San Diego, USA. 2008.

Yajuan Liu, Hongge Jia, and **Jianhang Jia**. Protein phosphatases 4 and 2A specifically regulate Smo and Ci in Hedgehog signaling. Conference on Hedgehog signaling in development and disease. Stanford, San Francisco, June 19-22, 2008.

Hongge Jia, Yajuan Liu, Chao tong, Jin Jiang and Jianhang Jia. Casein Kinase 2 regulates Hedgehog signaling through Smoothed and Cubitus interruptus. Hedgehog Signaling: From developmental biology to anti-cancer drugs. March 27-31, St. Jean Cap Ferrat, France 2010.

Hongge Jia, Yajuan Liu, and Jianhang Jia. Multiple positive roles of Casein Kinase 2 in Hedgehog signal transduction. The 51<sup>st</sup> Annual *Drosophila* Research Conference. April 7-11, Washington DC, USA 2010

## Research Support:

### Current:

American Heart Association-NSDG	01-01-2008 to 12-31-2011
“The Regulation of Hedgehog Signaling by Smoothed and its binding partners”	
Role: PI	\$308,000/direct
American Cancer Society-114887-TBE	07-01-2008 to 06-30-2012
“Genetic and biochemical study of the Hedgehog signal transduction mechanism”	
Role: PI	\$720,000/direct
NIH- 1R01GM079684-01	07-01-2008 to 06-30-2013
“The Regulation of Smoothed in Hedgehog Signaling”	

Role: PI

\$975,000/direct

Completed:

American Cancer Society-IRG

01-01-2007 to 06-30-2008

“The role of Smoothed-associated molecule in Hedgehog signaling and cancer”

Role: PI

\$80,000/direct

John Sealy Endowment Fund

02-01-2006 to 01-31-2008

The Regulation of Smoothed Phosphorylation in Hedgehog Signaling

Role: PI

\$70,000/direct