

## CURRICULUM VITAE

**Dingbo Lin, Ph.D.**

### **Office**

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Department of Human Nutrition  
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### **EDUCATION**

1996                      Zhejiang Agricultural University, now Zhejiang University, China

### **RESEARCH INTEREST**

**General Field:** Nutritional Biochemistry and Cell/Molecular Biology

**Specific Research Field:**

1. Control of gap junctions in cell death and age-related cerebellar neurodegeneration
2. Dietary supplements in prevention of oxidative retinal neurodegeneration

### **FUNDINGS**

#### ***Current***

1. Dietary supplements protect retinal pigment epithelial cells from apoptosis. *NIH COBRE Award P20 RR017686*, July 1, 2008-June 30, 2010. ---**Project Leader**

### **PROFESSIONAL EXPERIENCE**

- 1 Sep. 2007-present **Research Assistant Professor, Graduate Faculty Member,** Department of Human Nutrition, Kansas State University, U.S.A.

**Research Interests:**

1. Dietary supplements in prevention of oxidative neurodegeneration in retina using retinal pigment epithelial cell lines and the type 2 diabetic mice as model systems
2. Control of gap junctions in ER stress-linked cell death and neurodegeneration using HT22 cell line in vitro and in the diabetic PKC $\gamma$  H101Y transgenic mouse in vivo
3. The role of AMP-activated protein kinase in age-related neurodegeneration

- 2 Dec. 2001-Sep. 2007 **Post-doctoral Fellow, Research Assistant Professor,** Department of Biochemistry, Kansas State University, U.S.A.

**Research Interests:** 1. PKCgamma control of gap junctions in lens cataractogenesis using PKCgamma knockout mice and cell cultures as models  
2. Gap junctions in spinocerebellar ataxia type 14

- 3 Dec. 2000-Dec. 2001 **Post-doctoral fellow**, Department of Biochemistry, Kansas State University, U.S.A.

**Research Interests:** Phospholipid metabolism and stress signalling in Arabidopsis

- 1 Dec. 1998-Dec. 2000 **STA Fellow** (Science and Technology Agency of JAPAN), National Agricultural Research Center for Hokkaido Region, Sapporo, Japan

**Research Interests:** Molecular characterization and promoter identification of wheat 1-SST gene---the first synthetic enzyme for inulin metabolism in plant

- 5 July 1996-Oct. 1998 **Research Fellow**, National Key Laboratory of Crop Genetic Improvement; and **appointed Associate Professor**, Department of Horticultural Sciences, Huazhong Agricultural University, China

**Research Interests:** Citrus embryogenesis and osmotic stress signalling

- 6 Sep.1993-July 1996 **Graduate Student, Ph. D. Candidate**, Zhejiang Agricultural University, now Zhejiang University, China

**Research Interests:** Generation of citrus cold tolerant somatic variants by cell mutagenesis

- 7 July 1991-Aug. 1996 **Research Scientist, Principal Investigator**, Institute of Subtropical Crops, Zhejiang Academy of Sciences, China

**Research Interests:** Molecular mechanism on cross resistance in citrus

- 8 Sep. 1988-July, 1991 **Graduate Student, M.S. Candidate**, Shanxi Agricultural University, China

**Research Interests:** Molecular mechanism on citrus cold resistance

- 9 Sep. 1984- July, 1988 **Undergraduate Student**, Zhejiang Forestry University, China

### TEACHING EXPERIENCE

#### *At Kansas State University*

- 1 **Laboratory Biosafety Training** (Lecture to graduate students of Human Nutrition), fall of 2007
- 2 **Coenzyme and Vitamins**, Biochemistry 561 (Guest lectures), spring of 2006 (Undergraduate course)
- 3 **Confocal Microscopy**, Biochemistry I (Lab sections), fall of 2006 (Graduate course)
- 4 **Confocal Microscopy**, Biochemistry 911 (Lab sections), spring of 2005 (Graduate course)

- 5 **Confocal Microscopy**, Biochemistry 756 (Lab sections), fall of 2004, fall of 2005 (Graduate course)

***In China***

- 6 Plant Biochemistry, Sep. 1997 through Jan. 1998 (Graduate course)
- 7 Citrus Genetics and Breeding, Sep. 1995 through Jan. 1996 (Undergraduate course)
- 8 Plant Physiology, Sep. 1990 through Jan. 1991 (Undergraduate course)

**HONORS AND MEMBERSHIPS**

- 1 Junior Faculty Travel Grant to the Ataxia Investigator's Meeting by National Ataxia Foundation, March 25-28, 2008, Las Vegas, NV (\$1,000)
- 2 National Eye Institute Travel Award to ARVO2007, Fort Lauderdale, FL (\$700)
- 3 Travel Fellowship Award for the 131st Annual Meeting of the American Neurological Association at the Chicago Hyatt Regency Hotel, Oct. 8-11, 2006 (\$1,000)
- 4 Young Investigator Travel Grant to Ataxia Investigator's Meeting by National Ataxia Foundation, March 2-4, 2005 (\$1,000)
- 5 STA Fellowship (Science and Technology Agency of Japan) from December 1998 to December 2000
- 6 The Excellence on Research Award by the National Committee of Science and Technology of China and the Ministry of Forestry of China on Jan. 6, 1998
- 7 The Distinguished Student Award in 1989 academic year, Shanxi Agricultural University
- 8 Highest Scholarships and High Distinction in Forestry, Zhejiang Forestry College. 1984-1988

**Member**-- the Association for Research in Vision and Ophthalmology

**Member**-- the Society for Neuroscience

**Member**-- the American Society for Cell Biology

**Fellow**--Midwest Institute for Comparative Stem Cell Biology, Kansas State University

**REFEREE FOR JOURNALS**

- 1 American Journal of Alzheimer's Disease & Other Dementias
- 2 Molecular Vision
- 3 Current Eye Research

**GRADUATE STUDENTS ADVISED AS DISSERTATION COMMITTEE MEMBER**

**Yu (Joyce) Jiang**, PhD student in Human Nutrition (2008)

**LABORATORY MEMBERS TRAINING**

**Yu (Joyce) Jiang, PhD**, Post-doc Fellow (2008-present)

**Yunong Zhang, MD & MPH**, visiting scientist (2008-present)

**PEER-REVIEWED PUBLICATIONS**

*Original Research Articles*

- 1 Yunong Zhang, Adam Snider, Lloyd Willard, Dolores J Takemoto, and **Dingbo Lin**. 2009. Loss of Purkinje cells in the PKCgamma H101Y transgenic mouse. *Biochem. Biophys. Res. Comm.* 378:524-528
- 2 Denis M Medeiros, Yu Jiang, Darcey L Klaahsen, and **Dingbo Lin**. 2008. Mitochondrial and sarcoplasmic protein changes in hearts from copper deficient rats: Upregulation of PGC1- $\alpha$  transcript and protein as a cause for mitochondrial biogenesis in copper deficiency. *J. Nutr. Biochem.* (2008 Nov 5. [Epub ahead of print])
- 3 Satyabrata Das, **Dingbo Lin**, Snehalata Jena, Aibin Shi, Srinivas Battina, Duy H Hua, Rachel Allbaugh, and Dolores J Takemoto. 2008. Protection of retinal cells from ischemia by a novel gap junction inhibitor. *Biochem. Biophys. Res. Comm.* 373: 504-508
- 4 Michael Barnett, **Dingbo Lin**, Vladimir Akoyev, Lloyd Willard, and Dolores J Takemoto. 2008. Protein kinase C epsilon activates lens mitochondrial cytochrome C oxidase Subunit IV during hypoxia. *Exp. Eye Res.* 86:226-234
- 5 **Dingbo Lin\*** and Dolores J. Takemoto. 2007. Protection from ataxia-linked apoptosis by gap junction inhibitors. *Biochem. Biophys. Res. Comm.* 362:982-987 **\*corresponding author**
- 6 **Dingbo Lin**, Guido A. Zampighi and Dolores J. Takemoto. 2007. Protein kinase C gamma activation in the early streptozotocin-diabetic rat lens. *Current Eye Res.* 32:523-532
- 7 **Dingbo Lin**, Denton Shanks, Om Prakash, and Dolores J. Takemoto. 2007. Protein kinase C gamma mutations in the C1B domain cause caspase-3-linked apoptosis in lens epithelial cells through gap junctions. *Exp. Eye Res.* 85:113-122
- 8 **Dingbo Lin**, Michael Barnett, Samuel Lobell, Daniel Madgwick, Guido A. Zampighi, and Dolores J. Takemoto. 2006. PKCgamma knockout mouse lenses are more susceptible to oxidative stress damage. *J. Exp. Biol.* 209:4371-4378
- 9 **Dingbo Lin** and Dolores J. Takemoto. 2005. Oxidative activation of protein kinase C gamma through the C1 domain: effects on gap junctions. *J. Biol. Chem.* 280:13682-13693

- 10 **Dingbo Lin**, Michael Barnett, Jerry Robben, Annie Jewell, Larry Takemoto, and Dolores J. Takemoto. 2005. Expression of SOD in whole lens prevents cataract formation. *Mol. Vis.* 11:853-858
- 11 Guido A. Zampighi, Ana M. Planells, **Dingbo Lin**, Dolores J. Takemoto. 2005. Regulation of lens cell-to-cell communication by activation of PKC $\gamma$  and disassembly of Cx50 channels. *Invest. Ophthalmol. Vis. Sci.* 46:3247-3255
- 12 **Dingbo Lin**, Sam Lobell, Annie Jewell, and Dolores J. Takemoto. 2004. Differential phosphorylation of Cx46 and Cx50 by H<sub>2</sub>O<sub>2</sub> activation of protein kinase C  $\gamma$ . *Mol Vis.* 10:688-695
- 13 Midori Yoshida, **Dingbo Lin**, and Akira Kawakami. 2004. A mini exon in the sucrose:sucrose 1-fructosyltransferase gene of wheat. *J Plant Physiol.* Accepted
- 14 **Dingbo Lin**, Jianzheng Zhou, Peggy Zelenka, and Dolores J. Takemoto. 2003. Protein kinase C  $\gamma$  regulation of gap junction activity through caveolin-1 containing lipid rafts. *Invest. Ophthalmol. Vis. Sci.* 44: 5259-5268
- 15 **Dingbo Lin**, Daniel J. Boyle, and Dolores J. Takemoto. 2003. IGF-1-induced phosphorylation of connexin 43 by PKC $\gamma$ : Regulation of gap junctions in rabbit lens epithelial cells. *Invest. Ophthalmol. Vis. Sci.* 44:1160-1168
- 16 **Dingbo Lin**, Qiushen Yan, and Dexu Sheng. 1999. Selection of cold tolerant somaclonal variant from *Citrus sinensis* cv. Jincheng and genetic stability evaluation of its cold tolerance. *Acta Botanica Sinica.* 41: 136-141
- 17 **Dingbo Lin**. 1998. A study on selection of hydroxyproline-resistant somaclonal cell line from citrus and evaluation of its cold tolerance. *J. Zhejiang Agric. Univ.* 24: 895-902
- 18 **Dingbo Lin**, Qiushen Yan, and Dexu Sheng. 1997. Protoplast culture and plant regeneration from long-term subcultured callus of citrus. *J. Zhejiang Agric. Univ.* 23: 386
- 19 **Dingbo Lin**, Junqi Zhang. 1996. A preliminary study on the modification of protein synthesis in *Citrus unshiu* Marc. under high temperature stress. *Acta Horticulturae Sinica.* 23: 115-118
- 20 **Dingbo Lin**, Zuqi Liu, and Shicheng Zhang. 1994. Effects of cold acclimation and ABA on membrane stability and synthesis of membrane protein in *Citrus*. *J. Nanjing Agric. Univ.* 17: 1-5
- 21 Zuqi Liu, **Dingbo Lin**. 1994. Relationship between specific protein regulated by ABA/GAs and cold resistance of citrus plants. *Chinese J. Bot.* 6: 42-47
- 22 **Dingbo Lin**, Zuqi Liu, and Shicheng Zhang. 1994. Effects of polyamines on cold hardiness development of citrus. *Acta Horticulturae Sinica.* 21: 222-226

### **Reviews**

- 23 **ingbo Lin.** 1999. Recent advances in low-temperature signal transduction and gene expression in plant. *Plant Physiology Communication* (accepted)
- 24 **Dingbo Lin.** 1998. Basis of molecular biology on induction of plant cold hardiness by abiotic stresses. *Plant Physiology Communications.* 34: 183-192
- 25 **Dingbo Lin.** 1997. Somaclonal variation and its applications to germplasm creation in fruit trees. *J. Shenyang Agric. Univ.* 27: 253-260
- 26 **Dingbo Lin.** 1996. Advances in molecular responses and genetic improvement of plant to water stress. *J. Guanxi Agric. Univ.* 15: 161-166
- 27 Zuqi Liu, **Dingbo Lin.** 1993. Progress in molecular biology of plant cold hardiness. *J. Nanjiang Agric.l Univ.* 16: 113-120

***Book chapters***

- 28 **Dingbo Lin.** 1999. Associate editor-in-chief. *Plant Growth Regulation: Theory and Application*, Beijing: China Agricultural Science & Technology Press
- 29 **Dingbo Lin.** 1994. *Plant Stress Physiology* (Chapter 9), Beijing: China Agriculture Press, pp369-386