

**BIOGRAPHICAL SKETCH**

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NAME Zhang, Yanping	POSITION TITLE Associate Professor of Cancer Biology		
eRA COMMONS USER NAME			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Fudan University, Shanghai, China	B.S.	1982	Microbiology
University of Nebraska, Lincoln, Nebraska	Ph.D.	1992	Molecular Biology
University of North Carolina, Chapel Hill, NC	Postdoctoral	1997-2000	Cell Biology

**A. Positions and Honors.****Positions and Employment**

1987-1992 Graduate Research Assistant, Department of Plant Pathology, University of Nebraska-Lincoln  
 1993-1996 VP and Co-Founder, Megabase Research Products, Lincoln, Nebraska  
 1997-2000 Postdoctoral Fellow, Lineberger Cancer Center, University of North Carolina at Chapel Hill  
 2000-2004 Assistant Professor (tenure track), U. T. M. D. Anderson Cancer Center, Houston, Texas  
 2004-2006 Assistant Professor (tenure track), University of North Carolina at Chapel Hill  
 2007- Associate Professor (tenure), University of North Carolina at Chapel Hill

**Other Experience and Professional Memberships**

1998- Member of American Association for Cancer Research (AACR)  
 2000- Member of American Association for the Advancement of Science (AAAS)  
 2001-04 Fellow of the M.D. Anderson Research Trust  
 2001-04 Odyssey Advisory committee (MD Anderson Cancer Center)  
 2001- Society of Chinese Bioscientists in America (SCBA)  
 2005-07 Graduate Admission Committee for Molecular and Genetic Biology (UNC)  
 2005-06 Reviewer, DOD Breast Cancer Research Program Study Section.  
 2005- Reviewer, DOD Prostate Cancer Research Grants Program Study Section.  
 2008- Ad Hoc Reviewer, NIH CAMP Study Section.

**Honors**

1998 Postdoctoral Fellowship, Lineberger Comprehensive Cancer Center UNC at Chapel Hill  
 2000 Joseph Pagano Award for Best Publication in 1999. UNC at Chapel Hill  
 2000 Howard Temin Award  
 2000 Burroughs Wellcome Fund Career Award in the Biomedical Sciences  
 2001 M.D. Anderson Research Trust Fund Award  
 2003 M.D. Anderson Award for Excellence in Education  
 2005 Junior Research Fellow, UNC  
 2007 Leukemia & Lymphoma Society Scholar Award  
 2008 American Cancer Society Research Scholar Award

**B. Selected peer-reviewed publications (in chronological order).**

1. **Yanping Zhang**, Dwight E. Burbank, James L. Van Etten. *Chlorella* viruses isolated in China. *App/ Environ Microbiol.* 1988 Sep;54(9):2170-3.

2. Peter Strasser, **Yanping Zhang**, Jon Rohozinski, James L. Van Etten . The termini of the chlorella virus PBCV-1 genome are identical 2.2-kbp inverted repeats. *Virology*. 1991 Feb;180(2):763-9.
3. **Yanping Zhang**, Michael Nelson, James L. Van Etten. A single amino acid change restores DNA cytosine methyltransferase activity in a cloned chlorella virus pseudogene. *Nucleic Acids Res*. 1992 Apr 11;20(7):1637-42.
4. **Yanping Zhang**, Michael Nelson, Joseph W. Nietfeldt, Dwight E. Burbank, James L. Van Etten. Characterization of Chlorella virus PBCV-1 CviAll restriction and modification system. *Nucleic Acids Res*. 1992 Oct 25;20(20):5351-6.
5. Michael Nelson, **Yanping Zhang**, David L. Steffens, Reingard Grabherr, James L. Van Etten. Sequencing two DNA templates in five channels by digital compression. *Proc Natl Acad Sci USA*. 1993 Mar 1;90(5):1647-51.
6. Michael Nelson, **Yanping Zhang**, James L. Van Etten. DNA methyltransferases and DNA site-specific endonucleases encoded by chlorella viruses. A chapter for "DNA methylation: Biological Significance" (J. P. Jost and H. P. Saluz, eds.). Birkhanser Publisher Ltd. Basel, Switzerland. EXS. 1993;64:186-211. (Book Chapter).
7. **Yanping Zhang**, Peter Strasse, Reingard Grabherr, James L. Van Etten. Hairpin loop structure at the termini of the chlorella virus PBCV-1 genome. *Virology*. 1994 Aug 1;202(2):1079-82.
8. Aiwen Jin, **Yanping Zhang**, Yuanan Xia, Traylor E, Michael Nelson, James L. Van Etten. New restriction endonuclease CviRI cleaves DNA at TG/CA sequences. *Nucleic Acids Res*. 1994 Sep 25;22(19):3928-9.
9. Zhiqiang Lu, Yu Li, **Yanping Zhang**, Gerald F. Kutish, Daniel L. Rock, James L. Van Etten. Analysis of 45 kb of DNA located at the left end of the chlorella virus PBCV-1 genome. *Virology*. 1995 Jan 10;206(1):339-52.
10. Qiudeng Que, **Yanping Zhang**, Michael Nelson, Susan Ropp, Dwight E. Burbank, James L. Van Etten. Chlorella virus SC-1A encodes at least five functional and one nonfunctional DNA methyltransferases. *Gene*. 1997 May 6;190(2):237-44.
11. **Yanping Zhang**, Michael Nelson, Joe Nietfeldt, Yuannan Xia, Dwight E. Burbank, Susan Ropp, James L. Van Etten. Chlorella virus NY-2A encodes at least 12 DNA endonuclease/methyltransferase genes. *Virology*. 1998 Jan 20;240(2):366-75.
12. **Yanping Zhang**, Yue Xiong, Wendell G. Yarbrough. ARF promotes MDM2 degradation and stabilizes p53: ARF-INK4a locus deletion impairs both the Rb and p53 tumor suppression pathways. *Cell*. 1998 Mar 20;92(6):725-34.
13. Scott Stewart, Meera Sundaram, **Yanping Zhang**, Jeeyong Lee, Min Han, Kun-Liang Guan. Kinase suppressor of Ras forms a multiprotein signaling complex and modulates MEK localization. *Mol Cell Biol*. 1999 Aug;19(8):5523-34.
14. **Yanping Zhang**, Yue Xiong. Mutations in human ARF exon 2 disrupt its nucleolar localization and impair its ability to block nuclear export of MDM2 and p53. *Mol Cell*. 1999 May;3(5):579-91.
15. Manabu Furukawa, **Yanping Zhang**, Joseph McCarville, Tomohiko Ohta, Yue Xiong. The CUL1 C-terminal sequence and ROC1 are required for efficient nuclear accumulation, NEDD8 modification, and ubiquitin ligase activity of CUL1. *Mol Cell Biol*. 2000 Nov;20(21):8185-97.
16. **Yanping Zhang**, Yue Xiong. A p53 amino-terminal nuclear export signal inhibited by DNA damage-induced phosphorylation. *Science*. 2001 Jun 8;292(5523):1910-5.
17. **Yanping Zhang**, Yue Xiong. Control of p53 Ubiquitination and Nuclear Export by MDM2 and ARF. *Cell Growth Differ*. 2001 Apr;12(4):175-186. (Review)
18. Nicole Schneiderhan, Andreja Budde, **Yanping Zhang**, Bernhard Brüne. Nitric oxide induces phosphorylation of p53 and impairs nuclear export. *Oncogene*. 2003 May 15;22(19):2857-68.
19. Kevin O'Keefe, Huiping Li, **Yanping Zhang**. Nucleocytoplasmic shuttling of p53 is essential for MDM2-mediated cytoplasmic degradation but not ubiquitination. *Mol Cell Biol*. 2003 Sept;23(18): 6396-6405.
20. **Yanping Zhang** (correspondence), Gabrielle Whitewolf, Krishna Bhat, Aiwen Jin, Theresa Allio, William A. Burkhardt, and Yue Xiong. Ribosomal protein L11 binds to and negatively regulates oncoprotein HDM2. *Mol Cell Biol*. 2003 Dec; 23(23): 8902-12.
21. Koji Itahana, Krishna Bhat, Aiwen Jin, Yoko Itahana, David Hawke, Ryuji Kobayashi, and **Yanping Zhang**. Tumor suppressor ARF degrades B23, a nucleolar protein involved in ribosome biogenesis and cell proliferation. *Molecular Cell*, 2003 Nov; 12: 1151-64.

22. **Yanping Zhang.** The ARF-B23 connection: implications for growth control and cancer treatment. *Cell Cycle*, 2004; 3(3): 259-262. (Review)
23. Krishna Bhat, Koji Itahana, Aiwen Jin, and **Yanping Zhang.** Ribosomal protein L11 mediates an MDM2- and p53-dependent ribosomal-stress checkpoint. *EMBO J.* 2004 Jun 16;23(12): 2402-12.
24. Aiwen Jin, Koji Itahana, Kevin O'Keefe, and **Yanping Zhang.** Inhibition of HDM2 and activation of p53 by ribosomal protein L23. *Mol Cell Biol.* 2004 Sept; 24(17): 7669-80.
25. Judith A. Erkmann, Eric J. Wagner, Jian Dong, **Yanping Zhang,** Ulrike Kutay, and William F. Marzluff. Nuclear Import of the Stem-Loop Binding Protein and Localization during the Cell Cycle. *Mol Biol Cell.* 2005 Jun;16(6):2960-71
26. Yoko Itahana, Edward T. H. Yeh, and **Yanping Zhang.** Nucleocytoplasmic shuttling modulates activity and ubiquitination-dependent turnover of SUMO-specific protease 2. *Mol Cell Biol.* 2006 June; 26(12): 4675-89.
27. Takeharu Enomoto, Mikael S. Lindstrom, Aiwen Jin, Hengming Ke and **Yanping Zhang.** Essential role of the B23/NPM core domain in regulating ARF binding and B23 stability. *J Biol Chem.* 2006 Jul 7; 281(27):18463-72.
28. Mu-Shui Dai, Yetao Jin, Xiao-Xin Sun, **Yanping Zhang,** and Hua Lu. Differential regulation of ubiquitinated p53 and MDM2 levels by ribosomal protein L11 in cells. *J Biol Chem.* 2006 Aug 25; 281(34):24304-13.
29. Mikael S. Lindstrom and **Yanping Zhang.** NPM and ARF: Friends or Foes? *Cell Biochemistry and Biophysics* 2006;46(1):79-90. (Review)
30. Mikael S. Lindström, Aiwen Jin, Chad Deisenroth, and **Yanping Zhang.** Critical role for Mdm2 central zinc finger in mediating ribosomal protein interaction that is affected by cancer-associated *Mdm2* mutations. *Mol Cell Biol.* 2007 Feb; 27(3):1056-68.
31. Mikael S. Lindström, Chad Deisenroth, and **Yanping Zhang.** Putting a finger on growth surveillance: Insight into MDM2 zinc finger-ribosomal protein interactions. *Cell Cycle*, 2007 Feb 18;6(4):434-437. (Review)
32. Min Huang, Koji Itahana, **Yanping Zhang,** and Beverly Mitchell. Guanine nucleotide depletion inhibits pre-ribosomal RNA synthesis and causes dislocalization of nucleolar proteins. *Leukemia Res*, 2008 Jan;32(1):131-41.
33. Koji Itahana, Hua Mao, Aiwen Jin, Hilary Clegg, Yoko Itahana, Mikael S. Lindström, Krishna P. Bhat, Virginia L. Godfrey, and **Yanping Zhang.** Targeted inactivation of Mdm2 E3 ubiquitin ligase activity in the mouse reveals novel mechanistic insights into p53 regulation. *Cancer Cell*, 2007 Oct 12:355–366 (Cover article).
34. Hilary Clegg, Koji Itahana, and **Yanping Zhang.** Unlocking the Mdm2-p53 loop: Ubiquitination is the key. *Cell Cycle*, 2008 Feb 1;7(3):1-6. (Review)
35. Koji Itahana and **Yanping Zhang.** Mitochondrial p32 is a critical mediator of ARF-induced apoptosis. *Cancer Cell*, 2008, Vol 13:542–553 (Featured article).
36. Mikael S. Lindström and **Yanping Zhang.** Physical and functional interactions between nucleolar B23/NPM and ribosomal protein S9 in cell growth and proliferation. *J Biol Chem.* 2008 Jun 6;283(23):15568-76.
37. Yoko Itahana, Hengming Ke, and **Yanping Zhang.** p53 oligomerization is essential for C-terminal lysine acetylation. (in revision, *J Biol Chem*).

### C. Research Support

<p>2R01-CA100302 National Cancer Institute Regulation of Mdm2 by the ribosomal protein L11 This study is to understand the regulatory pathway controlled by L11-Mdm2 interaction.</p>	<p>(Zhang)</p>	<p>12/1/2008-11/30/2013</p>
<p>1R01CA127770 National Cancer Institute In vivo function of Mdm2 E3 ubiquitin ligase This study is to understand the Mdm2 E3 ubiquitin ligase in a mouse model.</p>	<p>(Zhang)</p>	<p>7/1/2008-6/30/2013</p>

1416-08 (Zhang) 07/01/2007-06/30/2012  
Leukemia and Lymphoma Society  
Targeting B23/NPM in leukemia and lymphoma  
This study will examine the feasibility of inhibiting cancer cell through targeting NPM. It will also investigate the potential of NPM as a molecular target for cancer therapy.

MGO-114790 (Zhang) 01/01/2008-12/31/2012  
American Cancer Society  
Cellular Functions and Biochemical Mechanisms of ARF  
This study will examine the biological function of the mitochondrial protein p32 in apoptosis and the mechanism of p32 regulation by tumor suppressor ARF.

LF01-116-1 (Zhang) 01/01/2001-12/31/2008  
Burroughs Wellcome Fund  
The ARF-MDM2-p53 Tumor Suppression Pathway.  
The goal of this study is to identify novel functional pathways/partners of p14ARF.