

Curriculum Vitae

Julie Zhang

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Education

M.S. 2000

Food Science and Human Nutrition,
University of Missouri, Columbia, MO

M.D. 1993

Clinical Medicine, Qingdao Medical College,
University of Qingdao, Qingdao Shandong, China

Professional and Research Experience

Lab Manager, 2013-present

Department of Exercise Science and Health Promotion, Florida Atlantic
University, Boca Raton, FL

- Coordinate all Exercise & Health Promotion (ESHP) faculty research, exercise physiology/exercise testing labs and various other classes that utilize the ESHP lab.
- Assist with faculty research, such as handling blood, ELISA's, western blot and Confocal imaging, etc.
- Teach ESHP students laboratory skills and maintain environmental health and safety approval.
- Revise and keep current ESHP lab manuals and any additional support materials.
- Conduct informative laboratory tours for potential students, and other ESHP guests.
- Meet all ESHP research department deadlines and other assigned research duties.

Lab Manager, 2009-2013

Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL

- Trained and supervised graduate and undergraduate students to conduct genetics and molecular biology experiments.
- Screened a *C. elegans* RNAi library to look for autophagy suppressors and characterized the putative suppressors.

- Conducted a yeast two-hybrid screening to identify protein partners of a *C. elegans* zinc finger protein.
- Examined the mitochondrial function in *C. elegans* autophagy mutants by measuring the total ATP production in whole worms and ATP production in vitro using purified mitochondria to investigate the mechanisms by which autophagy regulates aging.
- Performed protein expression, purification and generation of antibodies, and molecular cloning to construct various *C. elegans* expression plasmids.
- Was Responsible for lab maintenance such as equipments maintenance and supply orders.

Senior Research Associate, 2008-2009

Department of Pediatrics, University of Texas Southwestern Medical Center at Dallas, Dallas, TX.

- Successfully selected several Zinc Finger Nucleases (ZFNs) for homologous recombination-mediated gene targeting and gene therapy of disease-related genes in human using a bacteria two-hybrid selection system.
- Further tested these ZFNs for mutation correction in FT-293 cells by Single Strand Annealing Assay using a FACS machine.
- Was responsible for lab supply orders.

Research Associate, 2006-2008 & Research Assistant II, 2004-2006

Department of Pharmacology and Green Center for Reproductive Biology Sciences, University of Texas Southwestern Medical Center at Dallas, Dallas, TX.

- Successfully cloned a mutant construct of Centrosomin (Cnn), a major protein component of *Drosophila* centrosomes, by deleting 13 amino acids which are a conserved domain in human homolog.
- Microinjected Cnn constructs into *Drosophila* embryos to generate the transgenic flies which were screened, mapped, and crossed into Cnn null flies.
- Studied the gene functions in embryonic and neuroblastic systems.
- Made GST, GFP, Flag constructs of this domain and performed GST pull down and GFP IP.
- Was responsible for laboratory maintenance, including ordering supplies, maintaining equipment, etc.
- Worked collaboratively with other faculty members, postdoctoral fellows, and graduate students.

Research Specialist, 2000-2002

Department of Veterinary Medicine & Surgery, University of Missouri, Columbia, MO,

To develop and evaluate tumor-targeting radiopharmaceuticals for diagnostic imaging and targeted radiotherapy of cancer, I focused on three targeting systems: radiolabeled monoclonal antibodies (mAbs) or immunotoxins for direct targeting,

antibody pretargeting using radiolabeled biotin/streptavidin, and radiolabeled peptide-peptide nucleic acid conjugates (peptide-PNAs) targeting cellular oncogene expression.

- Using protein G affinity chromatography, purified mAb CC49, which targets tumor-associated glycoprotein-72 expressed in a wide variety of adenocarcinomas.
- Synthesized, and purified, and characterized radiometal chelate conjugates of CC49, as well as those of mAb BR96 and immunotoxin BR96 scFv-PE40 against the Lewis^y tumor-associated antigen.
- Evaluated the cytotoxicity and immunoreactivity of conjugates with human tumor cell lines and purified antigens, respectively, using MTT, ELISA, and HPLC assays.
- Developed and performed *in vivo* biological studies of biotin/streptavidin pretargeted radiopharmaceuticals in xenograft-bearing nude mice, which demonstrated extremely favorable tumor targeting and whole body clearance properties, allowing the research to be extended to treatment of human and veterinary cancer patients.
- Synthesized the human *bcl-2* mRNA using *in vitro* transcription and purified the mRNA.
- Designed and executed Northern blot studies to evaluate radiolabeled peptide-PNA hybridization.
- Established molecular biology techniques in the lab and was responsible for training other group members.
- Transfected human *bcl-2* gene into NIH 3T3 mouse fibroblasts to establish an *in vitro* model of *bcl-2* mRNA targeting, using electroporation, lipofectamine, and reporter gene techniques.
- Performed cell uptake, internalization, and efflux studies of radiolabeled peptide-PNAs in human lymphoma cells expressing high and low levels of *bcl-2* mRNA.
- Analyzed, interpreted, and reported data to principal investigator and made recommendations for future experiments. I wrote manuscripts for publication in peer-reviewed journals.

Physician, 1993-1996

Shengli Oil Field General Hospital, Shandong, China

- Took care of inpatients by analysis of diagnostic data such as X-ray, CT, MRI and blood counting, prescribed medicines for treatment of different diseases, and wrote case reports.

Honors and Awards

1. Staff Development Award, University of Missouri, Columbia, MO, for presentation at The 49th Society of Nuclear Medicine Annual Meeting in Los Angeles, CA, 2002
2. Award of “Angel in White” title, Shengli Old Field General Hospital, 1995
3. Distinguished Student Scholarship and Distinguished Academic Performance Scholarship, Qingdao Medical College, 1988-1993

Publications

1. Kimberly A. Wilson, Abbye E. McEwen, Shondra M. Pruett-Miller, **Jiuli Zhang**, Eric J. Kildebeck, and Matthew H. Porteus, Expanding the Repertoire of Target Sites for Zinc Finger Nuclease-Mediated Modification, *Molecular Therapy-Nucleic Acids*. Accepted
2. **Zhang, J.** and Megraw T.L., Proper Recruitment of γ -Tubulin and D-TACC/Msps to Embryonic Drosophila Centrosomes Requires Centrosomin Motif 1 *Mol. Biol. Cell* 18: 4037-4049 2007.
3. Bryan, J.N., Lewis, M.R., Henry, C.J., Owen, N.K., **Zhang, J.**, Mohsin, H., Jia, F., Sivaguru, G., and Anderson, C.J., Development of a Two-Antibody Model for Evaluation of Copper-64 Radioimmunotherapy. *Vet. Comp. Oncol.*, 2: 82-90, 2004.
4. Lewis, M.R.*, **Zhang, J.***, Jia, F., Owen, N.K., Cutler, C.S., Embree, M.F., Schultz, J., Theodore, L.J., Ketring, A.R., Jurisson, S.S., and Axworthy, D.B., Biological comparison of ^{149}Pm -, ^{166}Ho -, and ^{177}Lu -DOTA-biotin pretargeted by CC49 scFv-streptavidin fusion protein in xenograft-bearing nude mice. *Nucl. Med. Biol.*, 31: 213-223, 2004. *The first two authors contributed equally to this work.
5. Lewis, M.R., Jia, F., Gallazzi, F., Wang, Y., **Zhang, J.**, Shenoy, N., Lever, S.Z., and Hannink, M., Radiometal-Labeled Peptide-PNA Conjugates for Targeting *bcl-2* Expression: Preparation, Characterization, and in Vitro mRNA Binding. *Bioconjugate Chem.* 13: 1176-1180, 2002.
6. Gruen, I.U., Adhikari, K., Li, C., Li, Y., Lin, B., **Zhang, J.**, and Fernando, L.N., Changes in the Profile of Genistein, Daidzein and their Conjugates During Thermal Processing of Tofu. *J. Agric. Food Chem.* 49: 2839-2843, 2001.
7. Jiang, Z., and **Zhang, J.**, Rare Case of Atypical Hyperthyroidism with Hypothyroid Symptoms. Review of Complicated and Rare Diseases. Huanghe Press, China, 1995.

Manuscripts under preparation

1. Justin Minnerly*, **Jiuli Zhang***, Rebecca Aldunate, Herbert Weissbach and Kailiang Jia. Msra mediates dietary restriction-induced lifespan extension in *C. elegans*. To be submitted. *co-first author.
2. **Jiuli Zhang**, Justin Minnerly and Kailiang Jia. Autophagy-mediated ATP production influences *C. elegans* lifespan. To be submitted.
3. Justin Minnerly*, **Jiuli Zhang*** and Kailiang Jia. Tissue-specific activities of autophagy in *C. elegans* insulin-like signaling pathway. To be submitted. *co-first author.

4. **Jiuli Zhang**, Justin Minnerly, Qihua Sun, Nancy Rice, Beth Levine and Kailiang Jia. Regulation of *C. elegans* lifespan by a novel zinc finger protein. To be submitted.
5. **Zhang, J.** and Megraw T.L., Cnn Motif 1 binds Msps to regulate microtubule assembly at Centrosomes. To be submitted.

Abstracts

1. **Zhang, J.** and Megraw T.L., Centrosomin Motif 1 regulates microtubule assembly at Centrosomes. 47th Annual ASCB Meeting, Washington, DC, December 2007.
2. **Zhang, J.** and Megraw T.L., Centrosomin Domain 1 is required for Recruitment of Gamma Tubulin to Centrosomes. 47th Annual Drosophila Research Conference, Houston, TX, March 2006.
3. Jia, F., Gallazzi, F., Shenoy, N., **Zhang, J.**, Lever, S.Z., Hannink, M., and Lewis, M.R., Lymphoma Cell Uptake and Retention of Radiolabeled *bcl-2* Antisense Peptide-PNA Conjugates. J. Nucl. Med. 44: 370P, 2003.
4. **Zhang, J.**, Owen, N.K., Cutler, C.S., Embree, M.F., Jia, F., Mazuru, D., Lewis, A.D., Schultz, J., Theodore, L.J., Ketring, A.R., Jurisson, S.S., Axworthy, D.B., and Lewis, M.R., Biodistributions of Streptavidin/CC49 scFv4-pretargeted ¹⁴⁹Pm-, ¹⁶⁶Ho- and ¹⁷⁷Lu-DOTA-biotin in Tumor-bearing Mice. J. Nucl. Med. 43: 268P, 2002.
5. Hudson, M.J., **Zhang, J.**, Owen, N.K., Jia, F., Schultz, J., Theodore, L.J., Jurisson, S.S., Axworthy, D.B., and Lewis, M.R., Comparison of lutetium-177 radiopharmaceuticals for conventional and pretargeted radioimmunotherapy. Annual Biomedical Research Conference for Minority Students, New Orleans, LA, November 2002.
6. Lewis, M.R., Henry, C.J., **Zhang, J.**, and Siegall, C.B., Radiolabeling of SGN-10 and cBR96 for Imaging and Therapy of Canine Carcinomas. Veterinary Cancer Society 2001 Proceedings, 80, 2001.