

## BIOGRAPHICAL SKETCH

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|  |  |           |                          |
|--|--|-----------|--------------------------|
| NAME<br>Zhao-Jun Liu   | POSITION TITLE<br>Research Assistant Professor |           |                          |
| eRA COMMONS USER NAME<br>LIUZHAO   |  |           |                          |
| EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.) |  |           |                          |
| INSTITUTION AND LOCATION   | DEGREE<br>(if applicable)                      | YEAR(s)   | FIELD OF STUDY           |
| Shanghai Second Military Medical University,<br>CHINA  | M.D.   | 1983      | Medicine                 |
| Osaka University, JAPAN  | Ph.D.  | 1996      | Molecular & Cell Biology |
| Kobe University, JAPAN   | Post-Doctor                                    | 1996-1998 | Molecular & Cell Biology |

### A. Positions and Honors.

#### Professional Positions:

- 1998-2000 Visiting Associate, NIAMS, National Institute of Health, Bethesda, MD  
2000-2005 Senior Scientist, The Wistar Institute, Philadelphia, PA  
2005-2007 Research Assistant Professor, Department of Surgery, School of Medicine,  
University of Pennsylvania, Philadelphia, PA  
2007-pres Research Associate Professor Surgery, Leonard M. Miller School of Medicine,  
University of Miami, Miami, FL.

#### Awards and Honors:

- 1987 Outstanding Young Immunologist Award, Chinese Society of Immunology  
1991-1996 PhD Fellowship awarded by Ministry of Education and Science of Japan  
1996-1998 Research Fellowship awarded by Japan Society for the Promotion of Science (JSPS)  
1996-1998 Research Grant (¥2,000,000) awarded by Japan Society for the Promotion of Science (JSPS)

### B. Selected Peer-Reviewed Publications (in chronological order).

1. Minami Y, Oishi I, **Liu ZJ**, Nakagawa S, Miyazaki T, Taniguchi T. Signal transduction mediated by the reconstituted IL-2 receptor: Evidence for a cell type-specific function of IL-2 receptor beta-chain. *Journal of Immunology* 152(12):5680-5690, 1994.
2. Miyazaki T, Kawahara A, Fujii H, Nakagawa Y, Minami Y, **Liu ZJ**, Oishi I, Silvennoinen O, Witthuhn BA, Ihle JN, Taniguchi T. Functional activation of Jak1 and Jak3 by selective association with IL-2 receptor subunits. *Science* 266(5187):1045-1047, 1994.
3. Miyazaki T\*, **Liu ZJ**\*, Kawahara A, Minami Y, Yamada K, Tsujimoto Y, Barsoumian EL, Perlmutter RM, Taniguchi T. Three distinct IL-2 signaling pathways mediated by bcl-2, c-myc and lck cooperate in hematopoietic cell proliferation. *Cell* 81(2):223-231, 1995. (\*co-first author, equal contribution).
4. Miyazaki T, **Liu ZJ**, Taniguchi T. Selective cooperation of HTLV-1-encoded p40tax-1 with cellular oncoproteins in the induction of hematopoietic cell proliferation. *Oncogene* 12(11): 2403-2408, 1996.
5. Oishi I, Sugiyama S, **Liu ZJ**, Yamamura H, Nishida Y, Minami Y. A novel Drosophila receptor tyrosine kinase expressed specifically in the nervous system: Unique structural features and implication in developmental signaling. *Journal of Biological Chemistry* 272(18):11916-11923, 1997.

6. **Liu ZJ**, Ueda T, Miyazaki T, Tanaka N, Mine S, Tanaka Y, Taniguchi T, Yamamura H, Minami Y. A critical role for cyclin C in promotion of the hematopoietic cell cycle by cooperation with c-Myc. *Molecular & Cellular Biology* 18(6):3445-3454, 1998.
7. **Liu ZJ**, Tanaka Y, Mine S, Morinobu A, Yagita H, Okumura K, Taniguchi T, Yamamura H, Minami Y. Functional cooperation of cyclin C and c-Myc in mediating homotypic cell adhesion via very late antigen-4 activation and vascular cell adhesion molecule-1 induction. *Blood* 92(12):4700-4711, 1998.
8. Oishi I, Takeuchi S, Hashimoto R, Nagabukuro A, Ueda T, **Liu ZJ**, Hatta T, Akira S, Matsuda Y, Yamamura H, Otani H, Minami Y. Spatio-temporally regulated expression of receptor tyrosine kinases, mRor1, mRor2, during mouse development: Implications in development and function of the nervous system. *Genes to Cells* 4(1):41-56, 1999.
9. **Liu ZJ**, Tanaka Y, Fujimoto H, Mine S, Morinobu A, Yagita H, Okumura K, Oishi I, Udagawa J, Yamamura H, Minami Y. A novel role for H-Ras in the regulation of very late antigen-4 integrin and VCAM-1 via c-Myc-dependent and -independent mechanisms. *Journal of Immunology* 163(9):4901-4908, 1999.
10. Sauter ER, Nesbit M, Tichansky D, **Liu ZJ**, Shirakawa T, Palazzo J, Herlyn M. Fibroblast growth factor-binding protein expression changes with disease progression in clinical and experimental human squamous epithelium. *International Journal of Cancer* 92(3):374-381, 2001.
11. Fujimoto H, Tanaka Y, **Liu ZJ**, Yagita H, Okumura K, Kosugi A, Morinobu A, Umehara H, Yamamura H, Minami Y. Down-regulation of alpha6 integrin, an anti-oncogene product, by functional cooperation of H-Ras and c-Myc. *Genes to Cells* 6(4):337-343, 2001.
12. **Liu ZJ**, Haleem-Smith H, Chen H, Metzger H. Unexpected signals in a system subject to kinetic proofreading. *Proceedings of the National Academy of Sciences of the United States of America* 98(13):7289-7294, 2001.
13. Velazquez OC, Snyder R, **Liu ZJ**, Fairman RM, Herlyn M. Fibroblast-dependent differentiation of human microvascular endothelial cells into capillary-like 3-dimensional networks. *FASEB Journal* 16(10):1316-1318, 2002.
14. **Liu ZJ**, Shirakawa T, Li Y, Soma A, Oka M, Dotto GP, Fairman RM, Velázquez OC, Herlyn M. Regulation of Notch1 and Dll4 by vascular endothelial growth factor in arterial endothelial cells: Implications for modulating arteriogenesis and angiogenesis. *Molecular & Cellular Biology* 23(1):14-25, 2003.
15. Gruss CJ, Satyamoorthy K, Berking C, Lininger J, Nesbit M, Schaidt H, **Liu ZJ**, Oka M, Hsu MY, Shirakawa T, Li G, Bogenrieder T, Carmeliet P, El-Deiry WS, Eck SL, Rao JS, Baker AH, Bennet JT, Crombleholme TM, Velazquez O, Karmacharya J, Margolis DJ, Wilson JM, Detmar M, Skobe M, Robbins PD, Buck C, Herlyn M. Stroma formation and angiogenesis by overexpression of growth factors, cytokines, and proteolytic enzymes in human skin grafted to SCID mice. *Journal of Investigative Dermatology* 120(4):683-692, 2003.
16. **Liu ZJ**, Snyder R, Soma A, Shirakawa T, Ziober BL, Fairman RM, Herlyn M, Velazquez OC. VEGF-A and alphaVbeta3 integrin synergistically rescue angiogenesis via N-Ras and PI3-K signaling in human microvascular endothelial cells. *FASEB Journal* 17(13):1931-1933, 2003.
17. Bauer SM, Bauer RJ, **Liu ZJ**, Chen H, Goldstein L, Velazquez OC. Vascular endothelial growth factor-C promotes vasculogenesis, angiogenesis, and collagen constriction in three-dimensional collagen gels. *Journal of Vascular Surgery*. 41(4):699-707, 2005.
18. Balint K, Xiao M, Pinnix CC, Soma A, Veres I, Juhasz I, Brown EJ, Capobianco AJ, Herlyn M, **Liu ZJ**\*. Activation of Notch1 signaling is required for beta-catenin-mediated human primary melanoma progression. *Journal of Clinical Investigation* 115(11):3166-3176, 2005. (\*corresponding author)
19. **Liu ZJ**, Xiao M, Balint K, Smalley KSM, Brafford P, Qiu R, Pinnix CC, Li X, and Herlyn M. Notch1 signaling promotes primary melanoma progression by activating MAPK/PI3K-Akt pathways and upregulating N-cadherin expression. *Cancer Research* 66(8):4182-4190, 2006.
20. **Liu ZJ**, Xiao M, Balint K, Soma A, Pinnix CC, Capobianco AJ, Velazquez OC, and Herlyn M. Inhibition of endothelial cell proliferation by Notch1 signaling is mediated by repressing MAPK and PI3K/Akt pathways and requires MAML1. *FASEB Journal*, 20(7):1009-11, 2006.

21. Goldstein LJ, Gallagher KA, Bauer SM, Bauer RJ, Baireddy V, **Liu ZJ**, Buerk DJ, Thom SR, Velazquez OC. Endothelial progenitor cell release into circulation is triggered by hyperoxia-induced increases in bone marrow nitric oxide. *Stem Cells*, 24(10):2309–2318, 2006
22. Fukunaga M, Martinez G, **Liu ZJ**, Kalabis J, Mrass P, Weninger W, Planque N, Perbal B, Firth SM, Baxter RC and Herlyn M. CCN3 controls proliferation and localization of melanocytes in the human epidermis. *Journal of Cell Biology*, 175(4):563-569, 2006
23. Gallagher KA\*, **Liu ZJ\***, Xiao M, Chen H, Goldstein LJ, Buerk DG, Nedeau A, Thom SR, and Velazquez OC. Diabetic impairments in NO-mediated endothelial progenitor-cell mobilization and homing are reversed by hyperoxia and SDF-1 $\alpha$ . *Journal of Clinical Investigation* 117(5):1249-59, 2007. (\***co-first author, equal contribution**).

### C. Research Support.

*Active:*

#### **Bone Marrow-Derived Fibroblasts in Skin Wound Healing**

Principal Investigator: Omaida C. Velazquez

Agency: National Institutes of Health

**Type: R01-DK071084      Period: 2006 – 2011**

Role in this project: as a Co-Investigator: The overall objective is to investigate the contribution of bone marrow-derived fibroblasts to wound healing.

No Overlap

#### **Pending:**

#### **Recruiting Activated Endothelial Progenitor Cells To Wounds by Hyperoxia & SDF-1 $\alpha$**

Co-Investigator

Principal Investigator: Omaida C. Velazquez, MD

Agency: National Institutes of Health

**Type: R01**

**Overlap: None**

#### **Notch signaling in determining endothelial cell lineage differentiation**

Principal Investigator: Zhao-Jun Liu

Co-Investigator: Omaida C. Velazquez

Agency: National Institutes of Health

**Type: R21**

**Overlap: None**