

CURRICULUM VITAE

Name: Xian Kui “John” Zhang

Address:

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Citizenship: United States

Education:

Ph.D., Microbiology & Immunology, Hokkaido University, Sapporo, Japan, (1986-1989)

M.S., Microbiology, Hokkaido University, Sapporo, Japan, (1983-1986)

D.V.M., Veterinary Medicine, Hebei Agricultural University,
Baoding, China, (1978-1982)

Postdoctoral Training:

Postdoctoral fellow, Laboratories of Molecular Oncology, NCI-NIH, Frederick Cancer
Research & Development Center, (1991-1993)

Postdoctoral fellow, Center for Molecular and Structural biology, Medical University of
South Carolina (1994-1997)

Faculty Appointments:

2006-present Assistant Professor, Div. Rheumatology & Immunology, Dept. Medicine,
Medical University of South Carolina(MUSC), Charleston, SC

1997-2005 Research Assistant Professor, Div. Rheumatology & Immunology, Dept.
Medicine, Medical University of South Carolina(MUSC), Charleston, SC

Awards:

Xian “John” Zhang, DVM, Ph.D.

1983, Chinese Department of Education Fellowship.

1998, Cold Spring Harbor Laboratory Scholarship for course study.

Membership in Professional/Scientific Societies:

The American Association of Immunologists. 2007-present

American Association for Cancer Research, 1995-1998.

Japanese Society for Veterinary Medical Science, 1986-1991.

Society of Japanese Virologists, 1987-1991.

Committee and other Service:

Charleston VA Institutional Animal Care and Use Committee member, 2004-present.

Scientific Director of MUSC Antibody Facility, 1997-present.

Teaching responsibilities:

2008-present: Emmanuel Reyes-Cortes (graduate student), mentor and advisory committee member
1997-present: As the Director of MUSC Antibody Facility, provided advise and consult to more than eighty graduate students and Post-doctoral fellow at MUSC on designing immunological assay etc.

2004-2008 Sarah Bradshaw, (Graduate student) advisory committee member

2005-2006 Yumei Chen, Post-doctoral fellow

2005, Christine Chong, summer student

2003, Antibody and its application @ course for graduate students.

Current Research Supports:

1. Mechanisms of autoreactive B cell development in a lupus animal model.

Total direct cost: \$150,000

Principal Investigator: Xian Zhang, DVM, Ph.D.

Agency: NIH/NIAMS R03 AR054546

Period: 6/2007-5/2010

2. Development of new hybridomas against tumor antigens.

Total direct cost: \$35,400

Principal Investigator: Xian-Kui “John” Zhang

Agency: Neogenix Oncology Inc

Type: grant

period: 4/1/08-8/31/09

3. Role of Fli-1 Gene in Pathogenic B cell development

Principal Investigator: Xian-Kui “John” Zhang

Total direct cost: \$662,400

Agency: Veterans Administration

Type: Merit Review

Period: 10/1/2008-9/30/2011

Completed

Impact of fli-1 expression on lupus disease development.

Principal Investigator: Xian Zhang, DVM, Ph.D.

Total direct cost: \$368,314

Agency: NIH/NIAMSK01 AR051385

Period: 9/2005-8/2008

Xian "John" Zhang, DVM, Ph.D.

Development of novel monoclonal antibodies for the diagnosis and treatment of cancer

Principal Investigator: Xian-Kui (John) Zhang

Total direct cost: \$100,000

Agency: Neogenix Oncology Inc

Type: grant

period: 7/1/05-12/31/06

Contract is to help test and develop novel monoclonal antibodies for the diagnosis and treatment of cancer.

Role of PPAR α in SLE

Principal Investigator: Gary Gilkeson, M.D.

Agency: NIAMS

Type: NIH RO1 AR47451

Period 4/01/01-3/31/06

The study aims to assess the role of PPAR α in SLE and the use of PPAR α agonists as treatment for SLE.

Dr. Zhang is a co-investigator (until activation of K award in 9/05).

Role of complement factor B in the pathogenesis of SLE

Principal Investigator: Gary Gilkeson, M.D.

Agency: NIAID

Type: NIH R01 AI47469

Period 4/1/00-3/31/05

Study aims to further define the role of Factor B in immune complex mediated diseases and activation of C3.

Dr. Zhang is a co-investigator (until activation of K award in 9/05).

Role of nitric oxide in systemic lupus erythematosus

Principal Investigator: Gary S. Gilkeson, M.D.

Agency: NIAMS

Type: NIH RO1 AR45476

Period 4/1/99-2/28/08

Aims to study the utility of nitric oxide (NO) as a marker of lupus disease activity as well as its potential as a therapeutic target. Seeks to define the tissue effects of NO in disease, the immune mediators that lead to NO production, and if PBMC apoptosis is aberrant in human lupus and the role NO plays in apoptosis in human lupus. Coinvestigator (until activation of K award in 9/05).

Molecular Mechanisms of Anti-DNA Production and Pathogenicity

Principal Investigator: Gary S. Gilkeson, M.D.

Agency: Veterans Administration

Type: Merit Review

Period:

10/1/95-

9/30/2005

The major goal of this project is to define the molecular features of anti-DNA pathogenicity, assess V gene usage and VH CDR3 sequence in lupus mice.

Role of ETS Genes in Transformation and Differentiation

Dennis Watson (PI)

National Cancer Institute P01 CA78582

08/1/99-07/31/04

The major goal of this project is to study the role of ETS gene family members in early development, embryogenesis, and how aberrant expression of ETS genes family members can lead to cancer. Dr. Zhang was a co-investigator on this project.

Publication:

1. Molano, I, Mathenia, J., Ruiz, P., Gilkeson, G., **Zhang, X**. Decreased expression of Fli-1 in bone marrow derived hematopoietic cells significantly affects disease development in MRL/*lpr* mice. (in preparation)
2. Methenia, J., Reyes-Cortes, E.O., Molano, J., Ruiz, P., Gilkeson, G., **Zhang, X**. The effects of Fli-1 transcription factor on lupus disease development in NZM2410 mice. ((in preparation)
3. Bradshaw, S., Zheng, W-J., Tsoib, L-C., Gilkeson, G., **Zhang, X-K**. A role for Fli-1 in B cell proliferation: implications for SLE pathogenesis. Clin Immunol. 129; 19-30, 2008.
4. **Zhang, X.K**. Moussa, O., LaRue, A., Bradshaw, S., Molano, I., Spyropoulos, D.D., Gilkeson, G., Watson, D.K: The transcription factor Fli-1 modulates marginal zone and follicular B cell development. J Immunol., 181: 1644-1654, 2008.
5. Crosby MB. **Zhang J**. Nowling TM. Svenson JL. Nicol CJ. Gonzalez FJ. Gilkeson GS. Inflammatory modulation of PPAR gamma expression and activity. Cli. Immunol. 118(2-3):276-83, 2006.
6. **Zhang, Xk**, Watson DK.: The FLI-1 Transcription Factor is a Short-lived Phosphoprotein in T cells. J Biochemistry. 137(3):297-302, 2005.
7. Crosby MB, Svenson JL, **Zhang X**, Nicol CJ, Gonzalez FJ, Gilkeson G.: PAPR γ is not necessary for synthetic PPAR γ agonist inhibition of iNOS and Nitric Oxide. J Pharmacol Exp Ther. 312: 69-76. 2005.
8. **Zhang XK**, Gallant S, Molano I, Moussa OM, Ruiz P, Spyropoulos DD, Watson DK, Gilkeson G.: Decreased Expression of the Ets Family Transcription Factor Fli-1 Markedly Prolongs Survival and Significantly Reduces Renal Disease in MRL/*lpr* Mice . J Immunol 173: 6481-6489. 2004.
9. Molano I, Redmond S, Ruiz P, **Zhang J**, Gilkeson G. Effect of TdT deficiency on disease expression in MRL/*lpr* mice. Clin Immunol. 2003 Jun;107(3):186-97.
10. Chew, L-J, Pan, H, Yu, J, Tian, S, Huang, W-Q, **Zhang, J**, Pang, S, Li, LY: A novel secreted splice variant of vascular endothelial cell growth inhibitor. The FASEB Journal, 16,(7)742-14, 2002
11. Lieberson, R, Mowen, KA, McBride, KD, Leautaud, V, **Zhang, X**, Suh, WK, Wu, L, Glimcher, LH. Tumor necrosis factor receptor-associated factor (TRAF)2 represses the T helper cell type 2 response through NFAT-interacting protein (NIP45). Journal of perimental Medicine. 194 (1): 89-98 2001
12. Szabo, S. J., Kim, S. T., Costa, G. L., **Zhang, X.**, Fathman, C. G., Glimcher, L. H.: A Novel Transcription factor, T-bet, Directs Th1 Lineage Commitment. Cell. 100: 655-699. 2000
13. Reimold, A.M., Etkin, A., Clauss, I., Perkins, A., Friend, D. S., **Zhang, X.**, Horton, H. F., Scott, A., orkin, S. H., Byrne, M.C., Grusby, M. J., Glimcher, L. H. : An Essential Role in Liver Development for transcription Factor XBP-1. Gene and Development. 14 (2):152-157. 2000.
14. Burger, A.M., **Zhang, X.-K.**, Li, H., Ostrtowski, J. L., Beatty, B., Venanzoni, M., Papas, T., Seth, A.: Down-regulation of T1A12/mac25, A novel insulin-like growth factor binding protein related gene, is associated with disease progression in breast carcinomas. Oncogene, 16:2459-2467, 1998.
15. Burger AM. **Zhang X**. Seth A. Detection of novel genes that are up-regulated (Di12) or down-egulated (T1A12) with disease progression in breast cancer. European Journal of Cancer Prevention. 7 Suppl 1:S29-35, 1998 Feb.

16. Burger, A., Li, H., **Zhang, X.-K.**, Pienkowska, M., Venanzoni, M., Vournakis, J., Papas, T., Seth, A.: Breast cancer genome anatomy: correlation of morphological changes in breast carcinomas with expression of the novel gene product Di12. *Oncogene*, 16: 327-333, 1998.
17. Chen, S-L., **Zhang, X.K.**, Halverson, D.O., Byeon, M.K., Schweinfest, C.W., Ferris, D.K., Bhat, N.K.: Characterization of human N8 protein. *Oncogene*, 15:2577-2588, 1997.
18. Zhou, H., Su, H.S., **Zhang, X.K.**, Douhan, J., Glimcher, L.H.: C II TA-Dependent and independent class II MHC expression revealed by a dominant negative mutant. *J. Immunology*, 158:4741-4749, 1997.
19. Athanasiou, M., Clausen, P.A., Mavrothalassitis, G.J., **Zhang, X.-K.**, Watson, D.K., Blair, D.G.: Increased expression of the ETS-related transcription factor Fli-1/ERGB correlates with and can induce the megakaryocytic phenotype. *Cell Growth & Differentiation*. 7: 1525-1534.
20. Hodge, D. R., Robinson, L., Watson, D. K., Lautenberger, J., **Zhang, X.-K.**, Venanzoni, M., Seth, A.: Interaction of ERGB/Fli-1 proteins with DNA is modulated by spacing between multiple binding sites as well as phosphorylation. *Oncogene*, 12: 11-18, 1996.
21. Byeon, M.K., Westerman, M. A., Maroulakou, I. G., Henderson, K. W., Suster, S., **Zhang, X.-K.**, Papas, T. S., Vesely, J., Willingham, M. C., Green, J. E., Schweinfest, C. W.: The Down-Regulated in Adenoma (DRA) gene encodes an intestine-specific membrane glycoprotein. *Oncogene*, 12:387-396, 1996.
22. Watson, D. K., Vanek, P. G., **Zhang, X.-K.**, Graber, M. W., Schweinfest, C. W.: Gene cloning II: Screening and sequencing of genes. *The Immune Consequences of Trauma, Shock, and Sepsis: Mechanisms and Therapeutic Approaches* (Faist, E., Baue, A.E., Thijs, L., Eds). Pabst Science Publishers, 215-228, 1996.
23. Schweinfest, W. C., Graber, M. W., **Zhang, X.-K.**, Vanek, P. G., Watson, D. K.: Gene cloning I: Preparation of DNA Libraries. *The Immune Consequences of Trauma, Shock, and Sepsis: Mechanisms and Therapeutic Approaches* (Faist, E., Baue, A.E., Thijs, L., Eds). Pabst Science Publishers, 229-242, 1996.
24. **Zhang, X.K.**, Papas, T.S., Bhat, N.K. and Watson, D. K.: Generation and characterization of monoclonal antibodies against the ERGB/Fli-1 transcription factor. *Hybridoma* 14: 563-569, 1995.
25. Seth, A., Robinson, L., Panayiotakis, A., Thompson, D. M., D. R. Hodge, D. R., **Zhang, X.-K.**, Watson, D. K., Ozato, K., Papas, T.: The EndoA enhancer contains multiple ETS binding site repeats and is regulated by ETS proteins. *Oncogene* 9: 469-477, 1994.
26. Suzuki, H., **Zhang, X.**, Sobel, M. E., N. Kondoh, N., Papas, T., Bhat, N. K.: Expression and regulation of the 67-Kda laminin receptor and its precursor gene in lymphoid cells. *International J. of Oncology*. 6: 1049-1056, 1993.
27. Koizumi, S., Sugiura, M., **Zhang, X.-K.**, Yamamoto, K., Iwanaga, M., Imai, S., Osato, T.: Simultaneous expression of T-cell and myeloid cell phenotypes in eight newly established HTLV-I-positive T cell lines. *Jap. J. Cancer Res*. 83: 929-932, 1992.
28. Koizumi, S., **Zhang, X.-K.**, Imai, S., Sugiura, M., Usui, N., Osato, T.: Infection of the HTLV-1-harboring T-lymphoblastoid line MT-2 by Epstein-Barr virus. *Virology*. 188: 859-863, 1992.
29. Kawamura, K., **Zhang, X.-K.**, Arikawa, J., Takashima, I., Dempo, K., Hashimoto, N.: Susceptibility of Laboratory and wild rodents to rattus or apodemus-type hantavirus. *Acta Virol* 35: 54-63, 1991.

30. **Zhang, X.-K.**, Takashima, I., Hashimoto, N.: Characteristics of passive immunity against hantavirus infection in rats. *Arch. Virol.* 105: 235-246, 1989.
31. **Zhang, Xian-Kui**, Takashima, Ikuo, Mori, Fumiaki, Hashimoto, Nobuo: Comparison of virulence between two strains of rattus serotype hemorrhagic fever with renal syndrome (HFRS) virus in newborn rats. *Microbiol. Immunol.* 33: 195-205, 1988.
32. **Zhang, X.-K.**, Takashima, I., Hashimoto, N.: Role of maternal antibody in protection from hemorrhagic fever with renal syndrome virus infection in rats. *Arch. Virol.* 103: 253-265, 1988.
33. **Zhang, Xian-kui.**: Serological survey of influenza in avian species using enzyme-linked immunosorbent assay (ELISA). *Jan. J. Vet. Res.* 34: 169, 1986.
34. Jiang, H.H., **Zhang, X.-K.**: Etiological survey of avian colibacillosis in chickens. *Chin. J. Vet. Sci.* 6: 34, 1984.

Selected Meeting presentation and Abstract:

1. **Zhang, X.K.**, Kawamura, K., Takahashi, I., Hashimoto, N. Studies on maternal immunity against hantavirus infection in rats. Proceedings of 103rd conference of Japanese Society for Veterinary Medical Science. Tokyo, 1987.
2. **Zhang, X.k.**, Takashima, I., Hashimoto, N. Functions of maternal antibodies against HFRS virus infections in rats. Proceeding of 35th conference of Society of Japanese Virologists, Kyoto, 1987.
3. **Zhang, X.K.**, Takahashi, I., Hashimoto, N. Antigenic and virulence comparison of HFRS virus from rats. Proceedings of 105th conference of Japanese Society for Veterinary Medical Science. Tokyo, 1988.
4. **Zhang, X.K.**, Takahashi, I., Hashimoto, N. Passive immunity against hantavirus infection in rats. Proceedings of 107th conference of Japanese Society for Veterinary Medical Science. Tokyo, 1989.
5. Lan, M-Y., **Zhang, X-k.**, Arikawa, J., Takashima, I., Hashimoto, N. Epidemiological studies of hantavirus infection in rats. Proceedings of 107th conference of Japanese Society for Veterinary Medical Science. Tokyo, 1989.
6. Mori, F., Itakura, C., **Zhang, X.K.**, Takashima, I., Hashimoto, N. Histopathological studies in neurovirulence of rattus serotype hantavirus infection in newborn rats. Proceedings of 107th conference of Japanese Society for Veterinary Medical Science. Tokyo, 1989.
7. Arukawa, J., Lan, M.Y., **Zhang, X.K.**, Takashima, I., Hashimoto, N. Epidemiological studies of hantavirus infection among urban rats in Japan. Proceedings of 1st international Conference of HFRS. Seoul, South Korea, 1989.
8. Koizumi, S., **Zhang, X.K.**, Sugiura, M., Osato, T. Expression of T-cell and myeloid cell phenotypes in newly established HTLV-I—positive T cell line. Proceedings of Hakkaido Conference for Medical Science. Sapporo, Japan. 1991.
9. **Zhang, X-K.**, Watson, D.K., Papas, T. Characterization of ERGB/Fli-1 oncoprotein. Eleventh Annual Meeting on Oncogenes. Frederick, MD, 1995.
10. **Zhang, X.K.**, Watson, D., Bhat, N., Papas, T. Phosphorylation of the ERGB/Fli-1 protein. Eighty-seventh annual meeting of the American association for cancer research. Washington, DC, 1996.
11. Burger, A., **Zhang, X.K.**, Cronin, B., Parkerm D., Li, H., Seth, A. Analysis of DiTiA12 gene product in sera and tissue of breast cancer patients. Eighty-seventh annual meeting of the American association for cancer research. Washington, DC, 1996.

12. **Zhang, J.**, Gallant, S., Molano, I., Spyropoulos, D., Ruiz, P., Watson, D.K., Gilkeson, G. Lowering expression of transcription factor Fli-1 significantly increases survival and reduces renal disease in MRL/lpr mice. Annual Scientific meeting of American College of Rheumatology, Orlando, 2003.
13. Crosby, M., Svenson, J., Zhang, J. Nicol, C., Gonzalez, F., Gilkeson, G. Synthetic PPAR-gamma Agonists Inhibit NO Production in the Absence of PPAR-gamma: Evidence for an Alternative Target for these Agents. Annual Scientific meeting of American College of Rheumatology, Orlando, 2003.
14. **Zhang, J.**, Gallant, S., Molano, I., Watson, D.K., Gilkeson, G. Reducing Expression of transcription factor Fli-1 significantly increases survival and reduces renal disease in MRL/lpr mice. The 12th international congress of immunology Montreal, QC , Canada.
15. Bradshaw, G., **Zhang, X.K.**, Gilkeson, G. The Role of Transcription Factor Fli-1 in B Cell Activities and Systemic Lupus Erythematosus. Annual Scientific meeting of American College of Rheumatology, San Diego. 2005.
16. **Zhang, J.**, Molano, I., Bradshaw, S., LaRue, M., Spyropoulos, D., Moussa, O., Watson, D.K., Gilkeson, G. Transcription factor Fli-1 is a negative regulator of marginal zone B cell development and positive regular of follicular B cell development. Annual Scientific meeting of American College of Rheumatology, Washington, DC. 2006
17. Bradshaw, G., **Zhang, X.K.**, Watson, D.K., Gilkeson, G. Fli-1 and B cell proliferation in systemic lupus erythematosus. Annual Scientific meeting of American College of Rheumatology, Washington, DC. 2006.
18. **Zhang, J.**, Molano, I., Gilkeson, G. Decreased Expression of Fli-1 in Bone Marrow Derived Hematopoietic Cells Significantly Affect Disease Development in MRL/lpr mice. Annual Scientific meeting of American College of Rheumatology, Boston, 2007.
19. Bradshaw, S., **Zhang, X.K.**, Watson, D.K., Molano, I., Gilkeson, G. Fli-1 in B Cell Proliferation and Systemic Lupus Erythematosus. Annual Scientific meeting of American College of Rheumatology, Boston, 2007.
20. **Zhang, X.**, Moussa, O., Bradshaw, S., LaRue, M., Molano, I., Spyropoulos, D., Watson, D.K., Gilkeson, G. The Fli-1 transcription factor modulates marginal zone and follicular B cell development in mice. The 13th international congress of immunology. Rio de Janeiro, Brazil. 2007
21. **Zhang, J.**, Molono, I., Methenia, J., Watson, DK., Gilkeson, G. Role of transcription factor Fli-1 in Ig production and class switching. Annual Scientific meeting of American College of Rheumatology, San Francisco, 2008.
22. **Zhang, X.**, Methenia, J., Reyes-Cortes, E., Molano, I., Gilkeson, Effect of expression Fli-1 transcription factor on lupus disease development in NZM2410 mice. 96th Annual meeting, The American Association of Immunologists. Seattle, 2009.