BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Liang Shan, M.D., Ph.D.	Assistant Professor

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
Shandong University Medical School, China	B.S.	1985	Medicine
Shandong University Medical School, China	M.D.	1990	Surgery
Wakayama Medical Univ. School of Med., Japan	Ph.D.	1999	Pathology

Employment:

1990 - 1991 **Resident (Surgery)**, Shandong University Medical School, China
1991 - 1993 **Visiting Doctor (Surgery)**, Shandong University Medical School, China
1993 - 1995 **Research Fellow (Pathology)**, Wakayama Medical University School of Medicine, Japan
1998 - 2000 **JSPS Fellow** (the Japan Society for the Promotion of Science), The Ministry of Education, Science, Sports and Culture, Japan
2000 - 2004 **Postdoctoral Fellow**, NCI, NIH
2005 - present **Assistant Professor**, Department of Radiology, Howard University

Honors, Grants and Prizes

2005-2009 US Army Medical Commend (USAMCAA W81XWH-05-1-0291), Collaborator
2007 Charles & Mary latham Fund #7023185, PI
1998-2000 Research Fellow of the Japan Society for the Promotion of Science, Grant-in-Aid for Young Scientists by the Ministry of Education, Science, Sports and Culture of Japan
1995 Research Grant from the Sasakawa Health Science Foundation, Japan, PI
1992 Second prize from the Association of Shandong Province Sciences, China, for research project "Dynamic pathologic changes of the hepatobiliary system in experimental pigment cholelithiasis"

Cloning of rat Id4 gene: GenBank accession No. AF468681

Memberships

1. Chinese Society of Cancer (member number: 12375)
2. Japanese Society of Pathology (member number: 008136)
3. American Association for Cancer Research (member number: 76724)
4. Society for Molecular Imaging

Publications

1. Shan L, Wang S, Korotcov A, Sridhar R, Wang PC: Bioluminescent Animal Models of Human Breast Cancer for Tumor Biomass Evaluation and Metastasis Detection. Ethnicity & Disease, 2007 in press
2. Shan L, Wang S, Sridhar R, Bhujwalla ZM, Paul C. Wang PC: A Dual Probe with Fluorescent and Magnetic Properties for Imaging Solid Tumor Xenografts. Mol Imaging, 6:85-95, 2007

3. Papaconstanou AD, Shanmugam I, Shan L, Schroeder IS, Qiu C, Yu M, Snyderwine EG. Gene expression profiling in the mammary gland of rats treated with 7,12-dimethylbenz[α]anthracene. Int J Cancer 118:17-24, 2006
4. Shan L, Yu M, Snyderwine EG. Global gene expression profiling of chemically-induced rat mammary gland carcinomas and adenomas. Toxicol Pathol 33:768-775, 2005
5. Qiu C, Shan L, Yu M, Snyderwine EG. Steroid hormone receptor expression and proliferation in rat mammary gland carcinomas induced by 2-amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine. Carcinogenesis 26:763-769, 2005
6. Shan L, Yu M, Snyderwine EG. Gene expression profiling of chemically-induced rat mammary gland cancer. Carcinogenesis 26:503-509, 2005
7. Shan L, Yu M, Clark B, Snyderwine EG. Possible role of Stat5a in rat mammary gland carcinogenesis. Breast Cancer Res Treat 88:263-272, 2004
8. Shan L, Yu M, Herman A.J. Schut, Snyderwine EG. Susceptibility of rats to mammary gland carcinogenesis by the food-derived carcinogen 2-amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine (PhIP) varies with age and is associated with the induction of differential gene expression. Am J Pathol 165:191-202, 2004
9. Shan L, Yu M, Qiu C, Snyderwine EG. Id4 regulates mammary epithelial cell growth and differentiation and is overexpressed in rat mammary gland carcinomas. Am J Pathol 163:2495-2502, 2003
10. Qiu C, Shan L, Yu M, Snyderwine EG. Deregulation of the cyclin D1/Cdk4 retinoblastoma pathway in rat mammary gland carcinomas induced by the food-derived carcinogen 2-amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine. Cancer Res 63:5674-5678, 2003
11. Qiu C, Yu M, Shan L, Snyderwine EG. Allelic imbalance and altered expression of genes in chromosome 2q11-2q16 from rat mammary gland carcinomas induced by 2-Amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine and 7,12-Dimethylbenz[α]anthracene. Oncogene 22:1253-1260, 2003
12. Shan L, He M, Yu M, Lee NH, Liu ET, Snyderwine EG. cDNA microarray profiling of normal rat mammary gland and rat mammary gland carcinomas induced by 2-Amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine and 7,12-Dimethylbenz[α]anthracene. Carcinogenesis 23(10):1561-1568, 2002
13. Yang Q, Shan L, Yoshimura G, Nakamura M, Nakamura Y, Suzuma T, Umemura T, Mori I, Sakurai T, Kakudo K. 5-Aza-2'-deoxycytidine induces retinoic acid receptor β2 demethylation, cell cycle arrest and growth inhibition in breast carcinoma cells. Anticancer Res 22:2753-2756, 2002
14. Segawa N, Kakamura M, Shan L, Utsunomiya H, Nakamura Y, Mori I, Katsuoka Y, Kakudo K. Expression and somatic mutation on androgen receptor gene in prostate cancer. Int J Urol 9:545-553, 2002.
15. Shan L, Rouhani SA, Schut HAJ, Snyderwine EG. 2-Amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine (PhIP) modulates lactogenic hormone-mediated differentiation and gene expression in HC11 mouse mammary epithelial cells. Cell Growth Diff 12:649-656, 2001
16. Shan L, Yang Q, Nakamura Y, Nakamura M, Mirauchi A, Tsujimoto M, Nakatani Y, Wakasa K, Mori I, and Kakudo K: Frequent loss of heterozygosity at 1p36.3 and p73 abnormality in parathyroid adenomas. Modern Pathol 14:273-278, 2001.
17. Yang Q, Mori I, Shan L, Nakamura M, Nakamura Y, Utsunomiya H, Yoshimura G, Suzuma T, Tamaki T, Umemura T, Sakurai T, Kakudo K. Biallelic inactivation of retinoic acid receptor β2 gene by epigenetic change in breast cancer. Am J Pathol 158:299-303, 2001
18. Yang Q, Yoshimura G, Sakurai T, Nakamura M, Nakamura Y, Shan L, Suzuma T, Tamaki T, Umemura T, Mori I, Kakudo K. Allelic loss of chromosome 3p24 correlates with tumor progression rather than with retinoic acid receptor β2 expression in breast carcinoma. Breast Cancer Res Treat 70:39-45, 2001
19. Segawa N, Mori I, Utsunomiya H, Kakamura M, Nakamura Y, Shan L, Kakudo K, Katsuoka Y. Prognostic significance of neuroendocrine differentiation, proliferation activity and androgen receptor expression in prostate cancer. Pathol Int 51:452-459, 2001
20. Yang Q, Shan L, Segawa N, Nakamura M, Nakamura Y, Mori I, Sakurai T, Kakudo K. Novel polymorphisms in prostate specific antigen gene and its association with prostate cancer. Anticancer Res 21(1A):197-200, 2001
21. Shan L, Yang Q, Nakamura M, Nakamura Y, Mori I, Sakurai T and Kakudo K: Active allele loss of the androgen receptor gene contributes to loss of androgen receptor expression in female breast cancer. Biochem Biophys Res Commun 275:488-492, 2000
22. Yang Q, Sakurai T, Yoshimura G, Shan L, Suzuma T, Tamaki T, Umemura T, Kokawa Y, Nakamura Y, Nakamura M, Tang W, Utsunomiya H, Mori I, and Kakado K: Expression of Bcl-2 but not Bax or p53 correlates

with *in vitro* resistance to a series of anticancer drugs in breast carcinoma. Breast Cancer Res Treat 61:211-216, 2000.
23. Yang Q, Sakurai T, Shan L, Yu Z, Yoshimura G, Suzuma T, Tamaki T, Umemura T, Nakamura Y, Nakamura M, Mori I, and Kakado K: Novel polymorphisms of prostate-specific antigen (PSA) gene associated with PSA mRNA expression in breast cancer. J Hum Genet 45:363-366, 2000.
24. Taniguchi E, Yang Q, Tang W, Nakamura Y, Shan L, Nakamura M, Sato M, Mori I, Sakurai T, and Kakudo K: Cytological grading of invasive breast carcinoma: correlation with clinicopathologic variables and predictive value of nodal metastasis. Acta Cytol 44:587-591, 2000.
25. Yang Q, Sakurai T, Shan L, Yoshimura G, Yu Z, Suzuma T, Tamaki T, Umemura T, Nakamura Y, Nakamura M, Utsunomiya H, Mori I and Kakado K: Thymidine phosphorylase expression correlates with tumor differentiation and Bcl-2 in invasive breast cancer. Breast Cancer 7:210-214, 2000.
26. Shan L, Nakamura Y, Nakamura M, Katsuhiko N, Kawahara K, Utsunomiya H, Yokoi T, Kakudo K. Clonal emegence in uremic parathyroid hyperplasia is not related to MEN 1 gene abnormality. Jpn J Cancer Res 90:965-969, 1999.
27. Kakudo K and Shan L. Recent advances in the molecular pathology of hyperparathyroidism. Endocrine Pathol 10:3-13, 1999 (review)
28. Kishikawa S, Shan L, Ogihara K, Utsunomiya H, Nakamura M, Nakamura Y, Naito A, Yokoi T, and Kakado K: Overexpression and genetic abnormality of p53 in parathyroid adenomas. Pathol Int 49:853-857, 1999.
29. Yang Q, Sakurai T, Jing X, Utsunomiya H, Shan L, Nakamura Y, Suzuma T, Yoshimura G, Umemura T, Kokawa Y, and Kakado K: Expression of Bcl-2, but not Bax, correlates with estrogen receptor status and tumor proliferation in invasive breast carcinoma. Pathol Int 49:775-780, 1999.
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34. Shan L, Nakamura Y, Nakamura M, Yokoi T, Kakudo K. Genetic alterations in the primary and secondary hyperparathyroidism. Pathol Int 48:569-574, 1998 (Review).
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38. Jing X, Yokoi T, Nakamura Y, Nakamura M, Shan L, Tomimoto S, Hano T, Kakudo K. Pulmonary capillary hemangiomatosis: an unique feature of congestive vasculopathy associated with hypertrophic cardiomyopathy. Arch Pathol Lab Med 122:94-96, 1998.
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42. Shan L, Nakamura Y, Nakamura M, Zhang Z, Jing X, Kara T, Yokoi T, Kakudo K. Synchronous and metachronous multicentric squamous cell carcinoma in the upper aerodigestive tract. Pathol Int 47:68-72, 1997.
43. Nakamura M, Zhang Z, Shan L, Hisa T, Sasaki M, Tsukino R, Yokoi T, Kaname A, Kakudo K. Allelic variants of human calcitonin receptor in the Japanese population. Hum Genet 99:38-41, 1997.

44. Zhang Z, Nakamura M, Taniguchi E, Shan L, Yokoi T, Kakudo K. A simple approach of single cell microdissection and molecular analysis. Analyt Quantit Cytol Histol 19:514-518, 1997.
45. Jing X, Nakamura Y, Nakamura M, Yokoi T, Shan L, Taniguchi E, Kakudo K. Detection of Epstein-Barr virus DNA in gastric carcinoma with lymphoid stroma. Viral Immunol 10:49-58, 1997.
46. Jing X, Nakamura Y, Nakamura M, Yokoi T, Shan L, Katayama N, Ota K, Tsuda T, Kakudo K. Massive kidney involvement of adult T-cell leukemia/lymphoma coincident with schistosomiasis japonica. Wakayama Med Reports 37:27-33, 1996.
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48. Shan L, Iwasaki A, Utsunomiya H, Kawano I, Matsuura N, Kobayashi A, Kuma K, Kakudo K. Immunoreactive characteristics and classification of hyperparathyroidism. Endocrine Pathol 6:145-152, 1995.
49. Shan L, Ishihara Y, Nakamura K, Jing X, Kawano I, Koujimoto Y, Kakudo K. Signet-ring cell carcinoma with varied malignant components in the urinary bladder. Wakayama Med Reports 36:45-49, 1995.
50. Iwasaki A, Shan L, Utsunomiya H, Kawano I, Matsuura N, Kobayashi A, Kanji K, Kakudo K. Quantitative analysis of stromal fat content of human parathyroid glands associated with thyroid diseases using computer image analysis. Pathol Int 45:483-486, 1995.
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54. Nakamura Y, Shan L, Kakudo K. "Thyroid and parathyroid gland tumor". In chapter 3B of "The Japanese Diseases and Pathology". pp279, 1999 (Japanese).
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56. Kakudo K and Shan L. Genetic abnormalities in hyperparathyroidism. Pathol Clin Med 16(6):671-675, 1998 (Review) (Japanese)
57. Nakamura M, Shan L, Kakudo K. Molecular diagnosis using pathological blocks. J Med Technol 42(2):765-768, 1998 (Review) (Japanese).
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65. Shan L, Shou N, Jing X. DNA diagnosis of the pancreatic adenocarcinoma. Chinese J Curr Adv In General Surg 2(1):7-8, 1999 (Review) (Chinese).