

BIOGRAPHICAL SKETCH

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NAME Steffi Oesterreich, Ph.D.	POSITION TITLE Associate Professor of Medicine
eRA COMMONS USER NAME steffio	

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
Humboldt University, Berlin, Germany	B.S.	1984-1989	Biochemistry
Humboldt University/Max-Delbrueck-Center for Molecular Medicine, Berlin-Buch, Germany	Ph.D.	1989-1992	Molecular Biology
UT Health Science Center at San Antonio	Postdoctoral Fellow	1992-1996	Breast Cancer

Professional Experience

1996-1998	Instructor, Dept of Medicine, Division of Medical Oncology, UT Health Science Center at San Antonio, TX.
9/1/98-5/99	Assistant Professor, Dept of Medicine, Div. of Medical Oncology, UT Health Science Center at San Antonio, TX.
8/99-10/04	Adjunct Assistant Professor, Dept. of Mol & Cell Biology, Baylor College of Medicine, Houston, TX.
6/99-10/04	Assistant Professor, Dept. of Medicine, Baylor College of Medicine, Houston, TX.
10/04-present	Associate Professor, Dept. of Medicine, Dept. of Mol & Cell Biology, Baylor College of Medicine, Houston, TX.

Honors and Awards

1990	HOECHST Ph.D. Award
1993	Postdoctoral Fellowship Grant from Susan G. Komen Breast Cancer Foundation
1995	SPORE Development Grant
1996	Howard Hughes Institutional Grant
1998	Howard Temin Award (K01), Career Development Grant (NIH)
2000	Chao Award/ Baylor College of Medicine
2002	American Cancer Society Research Scholar Grant (ranked #1 of 47-declined due to overlap with R01)
2002	Women's Health Research Award (Women in Endocrinology)

Publications (from a total of 37)

- Hansen RK, **Oesterreich S**, Lemieux P, Sarge KD, Fuqua SA. Quercetin inhibits heat shock protein induction but not heat shock factor DNA-binding in human breast carcinoma cells. *Biochem Biophys Res Commun* 239:851-856, 1997.
- Oesterreich S**, Lee AV, Sullivan TM, Samuel SK, Davie JR, Fuqua SAW. Novel nuclear matrix protein HET binds to and influences activity of the hsp27 promoter in human breast cancer cells. *J Cell Biochem* 67:275-286, 1997.
- Oesterreich S**, Hilsenbeck SG, Allred DC, Ciocca D, Chamness GC, Osborne CK, Fuqua SAW. The small heat shock protein HSP27 is not an independent prognostic marker in axillary lymph node-negative breast cancer patients. *Clin Cancer Res* 2:1199-1206, 1996.
- Dupont BR, Garcia DK, Naylor SL, **Oesterreich S**. Assignment of SAFB encoding hsp27 ERE-TATA binding protein (HET)/scaffold attachment factor B (SAF-B) to human chromosome 19 band p13. *Cytogenet Cell Genet* 79:284-285, 1997.

5. Lemieux P, **Oesterreich S**, Lawrence JA, Steeg PS, Hilsenbeck SG, Harvey JM, Fuqua SAW. The small heat shock protein hsp27 increases invasiveness but decreases motility of breast cancer cells. *Invasion Metastasis* 17:113-123, 1997.
6. Samuel SK, Spencer VA, Bajno L, Sun J-M, Holth LT, **Oesterreich S**, Davie JR. *In situ* cross-linking by cisplatin of nuclear matrix bound transcription factors to nuclear DNA of human breast cancer cells. *Cancer Research* 58:3004-3008, 1998.
7. Lemieux P, Harvey J, Guise T, Dallas M, **Oesterreich S**, Yin YY, Selander K, Fuqua S. Low Cell Motility Induced by hsp27 overexpression decreases osteolytic bone metastasis in human breast cancer cells in vivo. *J Bone Miner Res* 14:1-6, 1999.
8. Hansen RK, Parra I, Lemieux P, **Oesterreich S**, Hilsenbeck SG, Fuqua SAW. Hsp27 overexpression inhibits doxorubicin-induced apoptosis in human breast cancer cells. *Breast Cancer Research and Treatment* 1425:1-10, 1999.
9. **Oesterreich S.**, Fuqua S.A.W. Tumor Suppressor Genes in Breast Cancer. *Endocrine-Related Cancer*, 6:405-419, 1999.
10. **Oesterreich S**, Zhang Q, Hopp T, Fuqua SAW, Michaelis M, Zhao HH, Davie JR, Osborne CK, Lee AV. Tamoxifen-bound estrogen receptor strongly interacts with the nuclear matrix protein HET/SAF-B, a novel inhibitor of estrogen receptor-mediated transactivation. *Mol Endocrinology* 14:369-382, 2000.
11. Lee AV, Gooch LJ, **Oesterreich S**, Guler RL, Yee D. IGF-1 induced degradation of insulin receptor substrate-1 is mediated by the 26S proteasome and blocked by phosphatidylinositol 3'-kinase inhibition. *Mol Cell Biol* 20:1489-1496, 2000.
12. Townson S, Zhang Q-P, Clark GM, Osborne CK, Lee AV, **Oesterreich S**. HET/SAF-B overexpression causes growth arrest and multinuclearity and is associated with aneuploidy in human breast cancer. *Clin Cancer Res*. 6:3788-3796. 2000.
13. **Oesterreich S**, Allred DC, Mohsin SK, Zhang Q, Wong H, Lee AV, Osborne CK, O'Connell P. High rates of loss of heterozygosity on chromosome 19p13 in human breast cancer. *Br J Cancer* 84:493-498 2001.
14. **Oesterreich S**, Zhang P, Guler RL, Sun XH, Curran, EM, Welshons, WV, Osborne, CK, Lee AV. Re-expression of estrogen receptor alpha in estrogen receptor alpha-negative MCF-7 cells restores both estrogen and insulin-like growth factor-mediated signaling and growth. *Cancer Res* 61:5771-5777, 2001.
15. Lee AV, Cui X and **Oesterreich S**. Cross talk among estrogen receptor, epidermal growth factor, and insulin-like growth factor signaling in human breast cancer. *Clin Cancer Res* 7:4429S-4435S, 2001.
16. Lee AV, Schiff R, Cui X, Sachdev D, Yee D, Gilmore AP, Streuli CH, **Oesterreich S**, Hadsell DL. New mechanisms of signal transduction inhibitor action: receptor tyrosine kinase down-regulation and blockade of signal transactivation. *Clin Cancer Res* 9(1 Pt 2):516S-23S, 2003.
17. Cui X, Zhang P, Deng W, **Oesterreich S**, Lu Y, Mills G, Lee AV. IGF-I inhibits progesterone receptor expression in breast cancer cells via the PI3K/Akt/mTOR pathway: Progesterone receptor as a potential indicator of growth factor activity in breast cancer. *Mol Endocrinology* 17:575-88, 2003.
18. Townson S, Dobrzycka KM, Lee AV, Air M, Deng W, Kang K, Jiang S, Michaelis K, **Oesterreich S**. SAFB2- A new SAFB homolog and estrogen receptor corepressor. *J Biol Chem*. 278:20059-68, 2003.
19. Lee AV, Zhang P, Ivanova M, Bonnette S, **Oesterreich S**, Rosen JM, Grimm S, Hovey RC, Vonderhaar BK, Kahn CR, Torres D, George J, Mohsin S, Allred DC, Hadsell DL. Developmental and hormonal signals dramatically alter the localization and abundance of insulin receptor substrate proteins in the mammary gland. *Endocrinology*.144:2683-94, 2003.
20. **Oesterreich S**, Deng W, Jiang S, Cui X, Ivanova M, Schiff R, Kang K, Hadsell D, Behrens J, Lee AV. Estrogen-mediated downregulation of E-cadherin in breast cancer cells. *Cancer Res* 63:5203-8, 2003.
21. Dobrzycka KM, Townson SM, Jiang S, **Oesterreich S**. Estrogen receptor corepressors- A role in human breast cancer? *Endocrine-related Cancer*, 10: 517-36, 2003.
22. **Oesterreich S**. Scaffold Attachment Factor SAFB1 and SAFB2: Innocent Bystanders or Critical Players in Breast Tumorigenesis?" *Journal of Cellular Biochemistry*, 90:653-61, 2003.
23. Townson SM, Kang K, Lee AV, and **Oesterreich S**. A Structure-Function Analysis of the ER α Corepressor SAFB1: Identification of a Potent Transcriptional Repression Domain. *J Biol Chem*. 279:26074-81, 2004.
24. Ivanova M, Dobrzycka KM, Jiang S, Michaelis K, Meyer R, Kang K, Adkins B, Barski OA, Divisova J, Lee AV, **Oesterreich S**. Scaffold attachment factor SAFB1 functions in development, growth, and reproduction. *Molecular and Cellular Biology*. In Press.

ONGOING RESEARCH SUPPORT

R01 CA97213 (Oesterreich) 8/1/02-7/31/07
NIH/NCI
ER Co-Repressor Function of SAFB in Breast Cancer
The major goal of this project is to define the mechanism of repression and the biological significance of the estrogen receptor corepressor SAFB.

P01 CA30195 (Osborne/Oesterreich) 4/1/04-3/31/09
NIH/NCI
Novel Gene Networks in Breast Development and Cancer Project 2 - "Scaffold Attachment Factors SAFB1/2 as Novel Breast Tumor Suppressor Genes"
The major goals of this large Program Project are to identify and characterize the role of novel genetic pathways, which are found to be important in the normal breast, in the pathogenesis and progression of human breast cancer. Dr. Oesterreich's specific project deals with the characterization of SAFB1 and SAFB2 as tumor suppressor genes, mainly through identification of mechanism(s) of inactivation, and generation and analysis of knockout mouse models.

W81XWH-04-1-0423 (Oesterreich) 3/15/04-3/14/07
Department of Defense
The Scaffold Attachment Factor SAFB1: A new player in G2/M checkpoint control?
The major goal of this project is to prove that SAFB1 is critical in G2/M checkpoint control and in resistance to G2/M blockers.

DAMD17-02-1-0286 (Lee) 4/1/02-3/31/05
DOD
A Unique Breast Cancer Cell Model for Studying Reported Functions of Membrane-localized Estrogen Receptor α
The major goal of this project is to create a unique and novel breast cancer cell line model that only expresses ER α in the membrane or cytoplasm and not in the nucleus. This model will then be used to study membrane or cytoplasmic ER α signaling.

RESEARCH COMPLETED IN THE LAST 3 YEARS

K01 CA77674-01(Oesterreich) 6/1/98-5/31/03
NIH/NCI
Temin Award: A New Nuclear Matrix Protein in Breast Cancer Growth
The major goal of this project is to determine the role of HET (hsp27-ERE-TATA binding protein) in proliferation of breast cancer cells.

BC971976 (Oesterreich) 9/30/98-9/29/01
DOD
IDEA Award: HET is a Novel Tumor Suppressor Gene in Human Breast Cancer
The major goal of this project is to determine whether HET is the tumor suppressor gene at 19p13 by doing LOH studies using additional markers, and by sequencing HET. We also propose to demonstrate that the neoplastic phenotype in breast cancer cells harboring HET mutations can be reversed by introduction of wildtype but not mutated HET.

None (Oesterreich) 7/1/00-6/30/03
BCM Dept of Med
CHAO Award: Is HET/SAF-B a tumor suppressor gene in breast cancer? Generation of a mouse model.
This grant is an institutional award. The major goal of this project is to generate a HET/SAF-B null mouse by gene targeting.