

BIOGRAPHICAL SKETCH

NAME FURTH, PRISCILLA A., MD	POSITION TITLE Professor of Oncology
eRA COMMONS USER NAME pfurth	

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
Brown University, Providence, RI	ScB	1971-1975	Psychology(Physiological)
Yale University, New Haven, CT	MD	1975-1979	Medicine
Mount Sinai Medical Center, New York, NY	Residency	1979-1982	Internal Medicine
Harvard, Brigham/Beth Israel/Farber, Boston, MA	Fellowship	1982-1985	Infectious Disease
LTVB, NCI, NIH, Bethesda, MD	Post-doc	1989-1992	Tumor Virus Biology

A. Positions and Honors Employment

1977-79	Instructor, Law and the Biomedical Sciences, Yale University, New Haven, CT
1983-85	Instructor, Medicine/Infectious Diseases, Harvard Medical School, Boston, MA
1985-89; 1993-99	Assistant Professor of Medicine, University of Maryland, Baltimore, MD
1989-92	Senior Staff Fellow, LTVB, NCI/NIH, Bethesda, MD
1992-93	Visiting Scientist, Max Planck Institute of Biophysical Chemistry, Göttingen, Germany
1996-99	Assistant Professor of Physiology, University of Maryland, Baltimore, MD
1999-2001	Associate Professor of Medicine (tenure) and Physiology, Univ. of MD, Baltimore, MD
2001-present	Professor of Oncology (tenure), Lombardi Comp Cancer Cent, Georgetown Univ, Wash DC
2006-present	Director, Cellular and Molecular Biology Division, Department of Oncology, Georgetown U

Other Experience and Professional Memberships

2007-present	Chair, Committee on Appointments and Promotions, Georgetown Univ Med Center
2005-present	Member, Center for Sex Differences, Georgetown University, Wash DC
1996-2003	Member, Graduate Faculty, Univ MD, Baltimore, MD
1996-2001	Member, IHV, Greenebaum CC, Center Repro Stud, Mol Cell Biol, Human Genetics, Univ MD
1999-2001	Member, Molecular and Cell Biology Program, Univ MD, Baltimore, MD
1997-present	Review Boards: Current Member, Cancer Genetics Study Section. Past: NCI, NIDDK and NIDR at NIH, DOD, Mass Breast Cancer (Chair-2 yrs), Cal Breast Cancer Prog, Avon-NCI Progress for Patients, Israel Science Foundation, Komen Foundation, Marsha Rivkin Foundation
1998-present	Editorial Boards, <i>J Mammary Gland Biology Neoplasia</i> ; <i>Breast Cancer Research</i>

Honors 1975, Eva A. Moar Premium, Sigma Xi, Brown Univ, Prov, RI; 1989, Specialist Award, UMD, Balt, MD; 1989, Natl Research Coun Assoc, Wash, DC; 1992, Humboldt Fellowship Award, Göttingen, Germany

B. Selected peer-reviewed publications (From a total of 100 peer reviewed publications)

1. Furth PA, St. Onge L, Böger H, Gruss P, Gossen M, Kistner A, Bujard H, Hennighausen L. Temporal control of gene expression in transgenic mice by a tet responsive promoter. PNAS 1994,91:9302-9306.
2. Ewald, D, Li, M, Efrat, S, Wall, RJ, Furth, PA*, Hennighausen, L*. Time-sensitive reversal of hyperplasia in transgenic mice expressing SV40 T antigen. Science 1996,273:1384-1386. *equal contrib
3. Li, M, Liu, X, Robinson, G, Bar-Peled, U, Wagner, K, Young, W, Hennighausen, L, Furth, PA. Mammary derived signals activate PCD during mammary gland involution. PNAS 1997,94:3425-3430.
4. Schorr, K, Li, M, Lewis, A, Heredia, A, Lewis, B, Knudson, M, Korsmeyer, S, Jäger, R, Weiher, H, Furth, PA. Gain of Bcl-2 is more potent than Bax loss in regulating MEC. Cancer Research, 1999, 59:2541-2545.
5. Schorr, K and Furth, PA. Induction of bcl-x_L expression in mammary epithelial cells is glucocorticoid but not Stat 5 dependent. Cancer Research 2000,60:5950-5953.
6. Xu, X, Qiao, W, Linke, SP, Li, W-M, Li, C, Furth, PA, Harris, CC and Deng, C-X. Genetic Interactions between tumor suppressors BRCA1 and p53 in apoptosis, cell cycle, genomic stability and tumorigenesis. Nature Genetics, 2001, 28:266-271.
7. Hruska, KS, Tilli, MT, Ren, S, Cotarla, I, Kwong, T, Li, M, Fondell, JD, Hewitt, JA, Koos, RD, Furth, PA*, Flaws, JA⁺. Conditional over-expression ERα in trans mouse model. Trans Res 2002,11: 361-372. *equal

8. Desai, K, Xiao, N, Wang, W, Gangi, L, Greene, J, Powell, J, Dickson, R, Furth, P, Hunter, K, Kucherlapati, R, Simon, R, Liu, E, Green, JE. Initiating oncogenic event determines gene-expression patterns. PNAS 2002, 99:6967-72.
9. Capuco, AV, Li, M, Long, E, Ren, S, Hruska, K, Schorr, K and Furth, PA. Concurrent pregnancy retards mammary involution. Biol Repro 2002, 66:1471-1476.
10. Ren, S, Cai, HR, Li, M and Furth, PA. Loss of Stat5a delays mammary cancer progression in a mouse model. Oncogene 2002, 21: 4335-4339.
11. Clevenger, CV, Furth, PA, Hankinson, S and Schuler, L. The role of prolactin in mammary carcinoma. Endocrine Reviews 2003, 24:1-27.
12. Li, M, Ren, S, Tilli, MT, Flaws, JA, Lubet, R, Grubbs, CJ and Furth, PA. Chemoprevention of mammary carcinogenesis in a transgenic mouse model by α -Difluoromethylornithine (DFMO) in the diet is associated with decreased cyclin D1 activity. Oncogene 2003, 22:2568-2572.
13. Xu, X, Aprelikova, O, Moens, P, Deng, CX, Furth, PA. Impaired meiotic DNA damage repair lack of crossing over during spermatogenesis in BRCA1 full-length deficient mice. Dev 2003, 130:2001-2012.
14. Tilli, MT and Furth, PA. Conditional mouse models demonstrate oncogene-dependent differences in tumor maintenance and recurrence. Breast Cancer Res 2003; 5:202-205.
15. Jamerson, MH, Johnson, MD, Furth, PA, and Dickson, RB. Early Parity Significantly Elevates Mammary Tumor Incidence in MMTV-*c-myc* Transgenic Mice. Transgenic Research 2003, 12: 747-750.
16. Tilli, MT, Frech, MS, Steed, ME, Hruska, KS, Johnson, MD, Flaws, JA, and Furth, PA. Introduction of ER α into the tTA/Tag conditional model precipitates the development of estrogen responsive mammary adenocarcinoma. Am J Pathology 2003, 163:1713-1719.
17. Tilli, MT, Hudgins, SL, Frech, MS, Halama, ED, Renou, J-P, and Furth, PA. Loss of PP2A Expression Correlates with Phosphorylation of DP-1 and Reversal of Dysplasia through Differentiation in a Conditional Mouse Model of Cancer Progression. Cancer Research 2003, 63: 7668-7673.
18. Pei XF, Noble MS, Davoli MA, Rosfjord, E, Tilli MT, Furth PA, Russell R, Johnson MD, Dickson, RB. Explant-Cell Culture of Primary Mammary Tumors. In Vitro Cell Dev Biol Anim, 2004, 40:14-21.
19. Taylor, G, Wolff, T, Khanna, N, Furth, P, and Langenberg, P. Genital dysplasia in HIV infected women. J Am Board Fam Prac 2004, 17:108-13.
20. Cotarla, I, Ren, S, Zhang, Y, Gehan, E, Singh, B and Furth, PA. Stat5a is tyrosine phosphorylated and nuclear localized in a high proportion of human breast cancers. Int J Cancer 2004, 108: 665-671.
21. Abaan, OD, Levenson, A, Khan, O, Furth, PA, Üren, A, Toretsky, JA. PTPL1 is a Direct Transcriptional Target of EWS-FLI1 and Modulates Ewing's Sarcoma Tumorigenesis. Oncogene 2005, 24:2715-22.
22. Jamerson, MH, Johnson, MD, Korsmeyer, SJ, Furth, PA, Dickson, RB. Bax regulates c-Myc-induced mammary tumor apoptosis but not proliferation in MMTV-*c-myc* transgenic mice. BrJCancer 2004; 91:1372-9.
23. Tilli, MT, Reiter, R, Oh, AS, Henke, RT, McDonnell, K, Gallicano, GI, Furth, PA*, Riegel, AT*. Over-expression of an N-terminally truncated isoform of the nuclear receptor coactivator AIB1/ACTR leads to altered proliferation of mammary epithelial cells in transgenic mice. Mol Endo 2005; 19:644-56.
24. Frech, MS, Halama, ED, Tilli, MT, Singh, B, Gunther, EJ, Chodosh, LA, Flaws, JA, Furth, PA. Deregulated ER α Expression in Mammary Epithelial Cells of Transgenic Mice Results in the Development of DCIS. Cancer Research 2005, 65: 681-85.
25. Jones, LP, Li, M, Halama, ED, Ma, Y, Lubet, R, Grubbs, CJ, Deng, C-X, Rosen, EM, Furth, PA. Promotion of mammary cancer development by tamoxifen in a mouse model of Brca1. Oncogene 2005, 24:3554-62.
26. Bachelier, R, Xu, X, Li, C, Quao, W, Furth, PA, Lubet, RA, and Deng, C-X. Effect of bilateral oophorectomy on mammary tumor formation in BRCA1 mutant mice. Oncol. Reports 2005, 14:1117-20.
27. Parrish, A*, Halama, E*, Tilli, MT, Freedman, M, Furth, PA. Reflectance Confocal Microscopy for Characterization of Mammary Ductal Structures and Development of Neoplasia in Genetically Engineered Mouse Models of Breast Cancer. J Biomed Optics 2005, 10:51602-8. *equal
28. Frech, MS*, Jones, LP*, Furth, PA. Validation of transgenic models of breast cancer: Ductal Carcinoma In Situ (DCIS) and Brca1 mutation-related breast cancer. Breast Cancer Online, 2005, in press. *equal
29. Ma, Y, Katiyar, P, Jones, LP, Fan, S, Zhang, Y, Furth, PA, Rosen, EM. Breast Cancer Susceptibility Gene BRCA1 Regulates Prog Receptor Signaling in Mammary Epithelial Cells. Mol Endo 2006 20:14-34.
30. Katiyar, P, Ma, Y, Fan, S, Pestell, RG, Furth*, Rosen, EM*. Regulation of Progesterone Receptor Signaling by BRCA1 in Mammary Cancer. Nuclear Receptor Signaling, 2006; 4:e006. Epub Apr 28. *equal
31. Tomic, D, Frech, MS, Babus, JK, Gupta, RK, Furth, PA, Koos, RD, Flaws, JA. Methoxychlor Induces Atresia of Antral Follicles in ER α Overexpressing Mice. Toxicological Sciences, 2006, in press.

32. Greenfeld CR, Babus JK, Furth PA, Marion S, Hoyer PB, Flaws JA. BAX is involved in regulating follicular growth, but is dispensable for follicle atresia in adult mouse ovaries. *Reproduction*. 2007 133:107-116.
33. Tomic D, Frech MS, Babus JK, Symonds D, Furth PA, Koos RD, Flaws JA. Effects of ERalpha overexpression on female reproduction in mice. *Reprod Toxicol*. 2007, 23:317-25.
34. Greenfeld, CR, Pepling, ME, Babus, JK, Furth, PA and Flaws, JA. BAX Regulates Follicular Endowment in Mice. *Reproduction* 2007, 133:865-76.
35. Herschkowitz, J., Simin, ., Weigman, VJ, Mikaelian, I, Usary, J, Hu, Z, Rasmussen, KE, Jones, LP, Assefnia, S, Chandrasekharan, S, Backlund, MG, Yin, Y, Khramtsov, AI, Glazer, RI, Brown, PH, Green, JE, Kopelovich, L, Furth, PA, Palazzo, JP, Olopade, OI, Bernard, PS, Churchill, GA, Van Dyke, T and Perou, CM. Identification of conserved gene expression features of murine breast carcinoma models relative to each other and to human cancers. *Genome Biology*, 2007, 8:R76.
36. Tilli, MT, Cabrera, MC, Parrish, AR, Torre, KM, Sidawy, MK, Gallagher, AL, Makariou, E, Polin, SA, Liu, MC and Furth, PA. Real-Time Imaging and Characterization of Human Breast Tissue by Reflectance Confocal Microscopy. *Journal of Biomedical Optics*, 2007, 10:051602.
37. Jones, LP, Tilli, MT, Assefnia, S, Torre, K, Halama, ED, Parrish, A, Rosen EM, and Furth, PA. Activation of estrogen signaling pathways collaborates with loss of Brca1 to promote development of ERα negative and ERα positive mammary preneoplasia and cancer. *Oncogene*, 2007, Jul 23; [Epub ahead of print].

C. Research Support - Active

- | | | |
|---|-----------------------------|-----------------------|
| W81XWH-07-1-0588
Department of Defense Breast Cancer Research Program Synergy Award
Role of Impaired TGF-beta Signaling in Development of BRCA1-Deficient Breast Cancer
To determine if loss of Brca1 mediated decreases in TGF-beta family member expression contributes to breast cancer risk.
Role: Overall PI | Furth/Shields (Synergy PIs) | 09/01/07-08/31/09 |
| 5P30CA051008-16
NCI, NIH
Cancer Center Support Grant
Role: Program Leader of "Growth Regulation of Cancer" | Dritschilo (PI) | 09/30/90-04/30/07 |
| RO1CA 080000-06
NIH/NCI
Role of BRCA1 as a human tumor suppressor gene
To determine how loss of Brca1 may alter response to oxidative stress
Role: Co-investigator | Rosen (PI) | 09/28/2005 -6/30/2009 |
| W81XWH-05-1-0271
DOD Predoctoral Traineeship Award
Role of Stat5a Loss in Progression of ERα-Initiated Mammary Ductal Hyperplasia and DCIS
To define the role of Stat5a in ERα-initiated DCIS.
Role: Mentor | Miermont (PI) | 7/1/2005-6/30/2008 |
| RO1 CA112176
NIH/NCI
Progression and regression of mammary preneoplasia
To determine the roles of AIB1, AIB1Δ3, Cyclin D1 and loss of Brca1 in ERα-initiated mammary cancer
Role: PI | Furth (PI) | 12/23/2004-11/30/2009 |
| RO1CA113477-01
Role of AIB1 in growth factor signaling
NIH, NCI
To determine how over-expression and/or loss of expression of AIB1 alters growth factor signaling
Role: Co-PI | Riegel (PI) | 4/1/2005-3/31/2010 |

RO1CA82599-06 Rosen (PI) 1/05/2005-11/30/2009
 NIH/NCI
 Brca1 modulates estrogen response in breast ca
 To determine how estrogen ligand availability alters mammary cancer development in Brca1 deficient mice.
 Role: Co-investigator

R01CA89041 Furth (PI) 12/15/2000-8/31/20011
 NIH/NCI
 Mechanisms regulating reversal of pre- malignancy
 To define molecular mechanisms that block regression of premalignancy.
 Role: PI

W81XWH-05-1-0302 Frech (PI) 2/15/2005-2/14/2008
 DOD Predoctoral Traineeship Award
 Role of Cyclin D1 in Progression and Response to Chemo-prevention of ER α Initiated Hyperplasia and DCIS
 To define the role of Cyclin D1 in ER α -initiated DCIS.
 Role: Mentor

Completed

PDF0402441 Furth (PI) 5/1/2004-4/30/2007
 Susan G. Komen Breast Cancer Foundation
 The role of Brca1 in development and maintenance of genomic integrity in the terminal end bud

BCTR0503799 Rosen (PI) Furth (Co-I) 5/1/2005-4/30/2007
 Susan G. Komen Breast Cancer Foundation
 BRCA1 regulation of progesterone receptor function in breast cancer

BCTR0201320 Furth (PI) 5/1/2003-5/30/2006
 Susan G. Komen Breast Cancer Foundation
 Stat5a, ERalpha and Tamoxifen Resistance in Breast Cancer

MAO/RFP NO1-CN-25003-44 Grubbs (PI) Furth (PI:sub) 9/30/2002-3/31/2006
 NIH/NCI
 Screening for chemoprevention of breast cancer using a transgenic mouse with mutations in BRCA-1 and heterozygous knockout of the p53 gene

BC000716 Furth (PI) 10/1/2001-10/30/2004
 DOD
 ERalpha, EGF, and Prolactin Growth Pathways and Progression of Preneoplasia in Mouse Models

MAO/RFP NO1-CN- CN-05024. Grubbs (PI) Furth (PI:sub) 10/1/2000-9/30/2003
 NIH/NCI
 Screening for Chemopreventive Agents Employing A Transgenic Mouse With Mutations in BRCA-1 And Heterozygous Knockout of the p53 Tumor Suppressor Gene

R29CA68033 Furth (PI) 7/1/1996-6/30/2001
 NIH/NCI
 Bcl-2 Gene Family, Apoptosis Resistance and Breast Cancer

MAO/RFP NO1-CN-85076-46 Grubbs (PI) Furth (PI:sub) 10/1/1998-9/30/2000
 NIH/NCI
 Use of Transgenic Mouse Mammary Tumor Models for Chemopreventive Screening