

# EXHIBIT 1

**BAER DECLARATION  
EXHIBIT 1**

**CURRICULUM VITAE**

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1987 - 1990: Assistant Professor  
Department of Microbiology  
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## BIBLIOGRAPHY

Richard Baer, Ph.D.

1. Baer, R.J., and Dubin, D.T. (1980) The sequence of a possible 5S RNA-equivalent in hamster mitochondria. *Nucl. Acids Res.* 8: 3603-3610.
2. Baer, R.J., and Dubin, D.T. (1980) The 3'-terminal sequence of the small subunit ribosomal RNA from hamster mitochondria. *Nucl. Acids Res.* 8: 4927-4941.
3. Dubin, D.T., and Baer, R.J. (1980) The sequence and structure analysis of mitochondrial ribosomal RNA from hamster cells. *IN: The Organization and Expression of the Mitochondrial Genome* (Kroon and Saccone, Eds.), Elsevier North Holland, pp. 231-240.
4. Dubin, D.T., Timko, K.D., and Baer, R.J. (1981) The 3'-terminus of the large ribosomal subunit ("16S") RNA from hamster mitochondria is ragged and oligoadenylated. *Cell* 23: 271-278.
5. Baer, R.J., and Dubin, D.T. (1981) Methylated regions of hamster mitochondrial ribosomal RNA: Structural and functional correlates. *Nucl. Acids Res.* 9: 323-337.
6. Deininger, P.L., Bankier, A., Farrell, P., Baer, R., and Barrell, B. (1982) Sequence analysis and *in vitro* transcription of portions of the Epstein-Barr virus genome. *J. Cell. Biochem.* 19: 267-274.
7. Bankier, A.T., Deininger, P.L., Satchwell, S.C., Baer, R., Farrell, P.J., and Barrell, B.G. (1983) DNA sequence analysis of the *EcoR*I Dhet fragment of B95-8 Epstein-Barr virus containing the terminal repeat sequences. *Mol. Biol. Med.* 1: 425-445.
8. Rabbitts, T.H., Hamlyn, P.H., and Baer, R. (1983) Altered nucleotide sequence of a translocated *c-myc* gene in Burkitt's lymphoma. *Nature* 306: 760-765.
9. Rabbitts, T.H., Forster, A., Baer, R., and Hamlyn, P.H. (1983) Transcriptional enhancer identified near the human C $\mu$  immunoglobulin heavy chain gene is unavailable to the translocated *c-myc* gene in a Burkitt's lymphoma. *Nature* 306: 806-809.
10. Rabbitts, T.H., Baer, R., Davis, M., Forster, A., Hamlyn, P., and Malcolm, S. (1984) The *c-myc* gene paradox in Burkitt's lymphoma chromosomal translocation. *Curr. Topics Microbiol. Immunol.* 113: 166-171.
11. Rabbitts, T.H., Forster, A., Hamlyn, P., and Baer, R. (1984) Effect of somatic mutation within translocated *c-myc* genes in Burkitt's lymphoma. *Nature* 309: 592-597.
12. Baer, R., Bankier, A.T., Biggin, M.D., Deininger, P.L., Farrell, P.J., Gibson, T.J., Hatfull, G., Hudson, G.S., Satchwell, S., Seguin, C., Tuffnell, P.S., and Barrell, B.G. (1984) DNA sequence and expression of the B95-8 Epstein-Barr virus genome. *Nature* 310: 207-211.
13. Bankier, A.T., Dietrich, W., Baer, R., Barrell, B.G., Colbere-Garapin, F., Fleckenstein, B., and Bodemer, W. (1985) Terminal repetitive sequences in Herpesvirus Saimiri virion DNA. *J. Virol.* 55: 133-139.
14. Baer, R., Chen, K.C., Smith, S., and Rabbitts, T.H. (1985) Fusion of an immunoglobulin variable gene and a T-cell receptor constant gene in the chromosome 14 inversion associated with T-cell tumors. *Cell* 43: 705-713.

15. Rabbitts, T.H., Baer, R., Forster, A., and Rabbitts, P.H. (1985) Disrupted expression of the *c-myc* oncogene in Burkitt's lymphoma. *In: Molecular Biology of Tumor Cells* (Wahren, B., Holm, G., Hammerstrom, S., and Perlmann, P., Eds.), Raven Press, New York, pp. 29-38.
16. Baer, R., LeFranc, M.-P., Minowada, J., Forster, A., Stinson, M.A., and Rabbitts, T.H. (1986) Structure and rearrangement of the human T-cell receptor  $\alpha$  chain gene. *Mol. Biol. Med.* 3: 265-277.
17. LeFranc, M.-P., Forster, A., Baer, R., Stinson, A., and Rabbitts, T.H. (1986) Diversity and rearrangement of the human T-cell rearranging  $\gamma$  genes: Nine germ-line variable genes belonging to two subgroups. *Cell* 45: 237-246.
18. Rabbitts, T.H., Baer, R., Chen, K.C., Forster, A., LeFranc, M.-P., Smith, S., and Stinson, M.A. (1986) A fusion gene of immunoglobulin and T cell receptor DNA segments in a chromosome inversion of T cell leukemia. *In: Regulation of Immune Gene Expression* (Feldman, M., and McMichael, A., Eds.), The Humana Press, pp. 155-165.
19. Kennaugh, A.A., Butterworth, S.V., Hollis, R., Baer, R., Rabbitts, T.H., and Taylor, A.M.R. (1986) The chromosome breakpoint at 14q32 in an ataxia telangiectasia t(14;14) T-cell clone is different from the 14q32 breakpoint in Burkitt's and an inv(14) T-cell lymphoma. *Hum. Genet.* 73: 254-259.
20. Rabbitts, T.H., Baer, R., Chen, K.C., Forster, A., LeFranc, M.-P., and Stinson, M.A. (1986) Rearrangement of the human T cell receptor  $\alpha$  chain gene and involvement in a marker chromosome inversion 14(q11;q32) in T cell lymphoma. *In: Primary Immunodeficiency Diseases* (Eibl, M.M., and Rosen, F.S., Eds.), Elsevier, pp. 145-151.
21. Rabbitts, T.H., Baer, R., Buluwela, L., Mengle-Gaw, L., Taylor, A.M., and Rabbitts, P.H. (1986) Molecular genetics of antigen receptors and associated abnormalities in human leukemias. *Cold Spring Harbor Symp. Quant. Biol.* 51: 923-930.
22. Foroni, L., Foldi, J., Matutes, E., Catovsky, D., O'Connor, N.J., Baer, R., Forster, A., Rabbitts, T.H., and Luzzatto, L. (1987)  $\alpha$ ,  $\beta$  and  $\gamma$  T-cell receptor genes: rearrangements correlate with haematological phenotype in T cell leukaemias. *Br. J. Haematol.* 67: 307-318.
23. Baer, R., Forster, A., and Rabbitts, T.H. (1987) The mechanism of chromosome 14 inversion in a human T cell lymphoma. *Cell* 50: 97-105.
24. Baer, R., Heppell, A., Taylor, A.M.R., Rabbitts, P.H., Boullier, B., and Rabbitts, T.H. (1987) The breakpoint of an inversion chromosome 14 in a T cell leukaemia; sequences downstream of the immunoglobulin heavy chain locus implicated in tumorigenesis. *Proc. Natl. Acad. Sci. USA* 84: 9069-9073.
25. Mengle-Gaw, L., Willard, H.F., Smith, C.I.E., Hammarstrom, L., Fischer, P., Sherrington, P., Lucas, G., Thompson, P.W., Baer, R., and Rabbitts, T.H. (1987) Human T-cell tumours containing chromosome 14 inversion or translocation with breakpoints proximal to immunoglobulin joining regions at 14q32. *EMBO J.* 6: 2273-2280.
26. Boehm, T., Baer, R., Lavenir, I., Forster, A., Waters, J.J., Nacheva, E., and Rabbitts, T.H. (1988) A chromosome translocation t(11;14) in a human leukemia involving the T

cell receptor C $\delta$  locus on chromosome 14q11 and a transcriptionally active region of chromosome 11p15. *EMBO J.* 7: 385-394.

27. Rabbitts, P.H., Douglas, J., Fisher, P., Nacheva, E., Karpas, A., Catovsky, D., Melo, J.V., Baer, R., Stinson, M.A., and Rabbitts, T.H. (1988) Chromosome abnormalities at 11q13 in B cell tumours. *Oncogene* 3: 99-103.
28. Baer, R., Boehm, T., Yssel, H., Spits, H., and Rabbitts, T.H. (1988) Complex rearrangements within the human J $\delta$ -C $\delta$ /J $\alpha$ -C $\alpha$  locus and aberrant recombination between J $\alpha$  segments. *EMBO J.* 7: 1661-1668.
29. Baer, R., Forster, A., Lavenir, I., and Rabbitts, T.H. (1988) Immunoglobulin Vh genes are transcribed by T cells in association with a new 5' exon. *J. Exp. Med.* 167: 2011-2016.
30. Yoffe, G., Schneider, N., Van Dyk, L., Yang, C.Y.-C., Siciliano, M., Buchanan, G., Capra, J.D., and Baer, R. (1989) The chromosome translocation (11;14)(p13;q11) associated with T cell acute lymphocytic leukemia: An 11p13 breakpoint cluster region. *Blood* 74: 374-379.
31. Cheng, J.-T., Yang, C.Y.-C., Hernandez, J., Embrey, J., and Baer, R. (1990) The chromosome translocation (11;14)(p13;q11) associated with T cell acute leukemia: Asymmetric diversification of the translocation junctions. *J. Exp. Med.* 171: 489-501.
32. Chen, Q., Cheng, J.-T., Tsai, L.-H., Schneider, N., Buchanan, G., Carroll, A., Crist, W., Ozanne, B., Siciliano, M.J., and Baer, R. (1990) The *tal* gene undergoes chromosome translocation in T cell leukemia and potentially encodes a helix-loop-helix protein. *EMBO J.* 9: 415-424.
33. Brown, L., Cheng, J.-T., Chen, Q., Siciliano, M.J., Crist, W., Buchanan, G., and Baer, R. (1990) Site-specific recombination of the *tal-1* gene is a common occurrence in human T cell leukemia. *EMBO J.* 9: 3343-3351.
34. Chen, Q., Yang, C.Y.-C., Tsan, J.T., Xia, Y., Ragab, A.H., Peiper, S.C., Carroll, A., and Baer, R. (1990) Coding sequences of the *tal-1* gene are disrupted by chromosome translocation in human T cell leukemia. *J. Exp. Med.* 172: 1403-1408.
35. Jonsson, O.G., Kitchens, R.L., Baer, R.J., Buchanan, G.R., and Smith, R.G. (1991) Rearrangements of the *tal-1* locus as clonal markers for T-cell acute lymphoblastic leukemia. *J. Clin. Invest.* 87: 2029-2035.
36. Hsu, H.-L., Cheng, J.-T., Chen, Q., and Baer, R. (1991) Enhancer binding activity of the Tal-1 oncoprotein in association with the E47/E12 helix-loop-helix proteins. *Mol. Cell. Biol.* 11: 3037-3042.
37. Xia, Y., Brown, L., Yang, C.Y.-C., Tsan, J.T., Siciliano, M.J., Espinosa III, R., Le Beau, M.M. and Baer, R. (1991) *TAL2*, a helix-loop-helix gene activated by the (7;9)(q34;q32) translocation in human T cell leukemia. *Proc. Natl. Acad. Sci. USA* 88: 11416-11420.
38. Xia, Y., Brown, L., Tsan, J.T., Yang, C.Y.-C., Siciliano, M.J., Crist, W.M., Carroll, A.J. and Baer, R. (1992) The translocation (1;14)(p34;q11) in human T cell leukemia: chromosome breakage 25 kilobasepairs downstream of the *TAL1* proto-oncogene. *Genes, Chrom. & Cancer* 4: 211-216.
39. Brown, L., Espinosa III, R., Le Beau, M.M., Siciliano, M.J., and Baer, R. (1992) *HEN1*

and *HEN2*: A subgroup of basic helix-loop-helix genes that are co-expressed in a human neuroblastoma. Proc. Natl. Acad. Sci. USA 89: 8492-8496.

40. Cheng, J.-T., Hsu, H.-L., Hwang, L.-Y., and Baer, R. (1993) Products of the *TAL1* oncogene: Basic helix-loop-helix proteins phosphorylated at serine residues. *Oncogene* 8: 677-683.
41. Cheng, J.-T., Cobb, M.H., and Baer, R. (1993) Phosphorylation of the *TAL1* oncoprotein by the extracellular signal-regulated protein kinase ERK1. *Mol. Cell. Biol.* 13: 801-808.
42. Bash, R.O., Crist, W.M., Shuster, J.J., Link, M.P., Amylon, M., Pullen, J., Carroll, A.J., Buchanan, G.R., Smith, R.G., and Baer, R. (1993) Clinical features and outcome of T-cell acute lymphoblastic leukemia in childhood with respect to alterations at the *TAL1* locus. A Pediatric Oncology Group Study. *Blood* 81: 2110-2117.
43. Hwang, L.-Y., Siegelman, M., Davis, L., Oppenheimer-Marks, N. and Baer, R. (1993) Expression of the *TAL1* proto-oncogene in cultured endothelial cells and blood vessels of the spleen. *Oncogene* 8: 3043-3046.
44. Baer, R. (1993) *TAL1*, *TAL2*, and *LYL1*: A family of basic helix-loop-helix proteins implicated in T cell acute leukemia. *Semin. Cancer Biol.* 4: 341-347.
45. Brown, L. and Baer, R. (1994) *HEN1* encodes a 20-kilodalton phosphoprotein that binds an extended E-box motif as a homodimer. *Mol. Cell. Biol.* 14: 1245-1255.
46. Hsu, H.-L., Huang, L., Tsan, J.T., Funk, W., Wright, W.E., Hu, J.-S., Kingston, R.E., and Baer, R. (1994) Preferred sequences for DNA recognition by the *TAL1* helix-loop-helix proteins. *Mol. Cell. Biol.* 14: 1256-1265.
47. Doyle, K., Zhang, Y., Baer, R., and Bina, M. (1994) Distinguishable patterns of protein-DNA interactions involving complexes of basic helix-loop-helix proteins. *J. Biol. Chem.* 269: 12099-12105.
48. Xia, Y., Hwang, L.-Y., Cobb, M.H., and Baer, R. (1994) Products of the *TAL2* oncogene in leukemic T cells: bHLH phosphoproteins with DNA-binding activity. *Oncogene* 9: 1437-1446.
49. Hsu, H.-L., Wadman, I., and Baer, R. (1994) Formation of *in vivo* complexes between the *TAL1* and E2A polypeptides of leukemic T cells. *Proc. Natl. Acad. Sci. USA.* 91: 3181-3185.
50. Hsu, H.-L., Wadman, I., Tsan, J.T., and Baer, R. (1994) Positive and negative transcriptional control by the *TAL1* helix-loop-helix protein. *Proc. Natl. Acad. Sci. USA.* 91: 5947-5951.
51. Wadman, I., Li, J., Bash, R.O., Forster, A., Osada, H., Rabbitts, T.H., and Baer, R. (1994) Specific *in vivo* association between the bHLH and LIM proteins implicated in human T cell leukemia. *EMBO J.* 13: 4831-4839.
52. Valge-Archer, V.E., Osada, H., Warren, A.J., Forster, A., Li, J., Baer, R., and Rabbitts, T. H. (1994) The LIM protein RBTN2 and the bHLH protein *TAL1* are present in a complex in erythroid cells. *Proc. Natl. Acad. Sci. USA.* 91: 8617-8621.
53. Wadman, I.A., Hsu, H.-L., and Baer, R. (1994) The MAP kinase phosphorylation site of

- TAL1 occurs within a transcriptional activation domain. *Oncogene* 9: 3713-3716.
54. Baer, R. (1994) *Bcl-2* breathes life into embryogenesis. *Amer. J. Pathol.* 145: 7-10.
  55. Bash, R.O., Hall, S., Timmons, C.F., Crist, W.M., Amylon, M., Smith, R.G., and Baer, R. (1995) Does activation of the *TAL1* gene occur in a majority of patients with T cell acute lymphoblastic leukemia? A Pediatric Oncology Group Study. *Blood* 86: 666-676.
  56. Condorelli, G., Vitelli, L., Valtieri, M., Marta, I., Montesoro, E., Lulli, V., Baer, R., and Peschle, C. (1995) Coordinate expression and developmental role of Id2 protein and TAL1/E2A heterodimer in erythroid progenitor differentiation. *Blood* 86: 164-175.
  57. Hwang, L.-Y. and Baer, R. (1995) The role of chromosome translocations in T cell acute leukemia. *Curr. Opin. Immunol.* 7: 659-664.
  58. Widhoph II, G.F., Pascual, V., Baer, R., Capra, J.D. (1995) Characterization and genomic mapping of a novel leader peptide associated with the human V<sub>H</sub>4-21 (V<sub>H</sub>4-34) gene segment. *Annals of the N.Y. Acad. of Sci.* 764: 62-71.
  59. Robinson, M.J., Harkins, P.C., Zhang, J., Baer, R., Haycock, J.W., Cobb, M.H., and Goldsmith, E.J. (1996) Mutation of position 52 in ERK2 creates a nonproductive binding mode for adenosine 5'-triphosphate. *Biochemistry* 35: 5641-5646.
  60. Larson, R.C., Lavenir, I., Larson, T.A., Baer, R., Warren, A.J., Wadman, I., Nottage, K., Rabbitts, T.H. (1996) Protein dimerization between Lmo2 and Tal1 alters thymocyte development and potentiates T cell tumorigenesis in transgenic mice. *EMBO J.* 15: 1021-1027.
  61. Wu, L.C., Wang, Z.W., Tsan, J.T., Spillman, M.A., Phung, A., Xu, X.L., Yang, M.-C.W., Hwang, L.-Y., Bowcock, A.M., Baer, R. (1996) Identification of a RING protein that can interact *in vivo* with the BRCA1 gene product. *Nature Genetics* 14: 430-440.
  62. Baer, R., L.-Y. Hwang, Bash, R.O. (1997) Transcription factors of the bHLH and LIM families: synergistic mediators of T cell acute leukemia? *Curr. Topics Microbiol. Immunol.* 220: 55-65.
  63. Tsan, J.T., Wang, Z., Jin, Y., Hwang, L.-Y., Bash, R.O., and Baer, R. (1997) Mammalian cells as hosts for two-hybrid studies of protein-protein interaction. *In The Yeast Two-hybrid System* (Bartel, P.L., and Fields S., Eds.), Oxford University Press, pp. 217-232.
  64. Jin, Y., Xu, X.L., Yang, M.-C.W., Wei, F., Ayi, T.C., Bowcock, A.M., and Baer, R. (1997) Cell cycle-dependent colocalization of BARD1 and BRCA1 in discrete nuclear domains. *Proc. Natl. Acad. Sci. USA*, 94: 12075-12080.
  65. Baer, R. (1998) Protein partners of the BRCA1 tumor suppressor. *Breast Disease* 10: 23-32.
  66. English, J.M., Pearson, G., Baer, R., and Cobb, M.H. (1998) Identification of substrates and regulators of the mitogen-activated protein kinase ERK5 using chimeric protein kinases. *J. Biol. Chem.*, 273: 3854-3860.
  67. Thai, T.H., Du, F., Tsan, J.T., Jin, Y., Phung, A., Spillman, M.A., Massa, H.F., Muller, C.Y., Ashfaq, R., Mathis, J.M., Miller, D.S., Trask, B.J., Baer, R., and Bowcock, A.M. (1998) Mutations in the BRCA1-associated RING domain (BARD1) gene in primary breast, ovarian, and uterine cancers. *Hum. Mol. Genet.* 7: 195-202.



68. Ayi, T.-C., Tsan, J.T., Hwang, L.-Y., Bowcock, A.M., and Baer, R. (1998) Conservation of functional motifs in the murine ortholog of BARD1, the BRCA1-associated RING domain protein. *Oncogene* 17: 2143-2148.
69. Baer, R., and Lee, W.-H. (1998) Functional domains of the BRCA1 and BRCA2 proteins. *J. Mammary Gland Biol. Neoplasia* 3: 403-412.
70. Yu, X., Wu, L.C., Bowcock, A.M., Aronheim, A., and Baer, R. (1998) The carboxy-terminal (BRCT) domains of BRCA1 interact in vivo with CtIP, a protein implicated in the CtBP pathway of transcriptional repression. *J. Biol. Chem.* 273: 25388-25392.
71. Bucher, K., Sofroniew, M.V., Pannell, R., Impey, H., Smith, A.J., Torres, E.M., Dunnett, S.B., Jin, Y., Baer, R., and Rabbitts, T.H. (2000) The T cell oncogene Tal2 is necessary for normal development of the mouse brain. *Dev. Biol.* 227: 533-544.
72. Yu, X. and Baer, R. (2000) Nuclear localization and cell cycle-specific expression of CtIP, a protein that associates with the BRCA1 tumor suppressor. *J. Biol. Chem.* 275: 18541-18549.
73. Yoshikawa, K., Ogawa, T., Baer, R., Hemmi, H., Honda, K., Yamauchi, A., Inamoto, T., Ko, K., Yazumi, S., Motoda, H., Kodama, H., Noguchi, S., Gazdar, A.F., Yamaoka, Y., and Takahashi, R. (2000) Abnormal expression of BRCA1 and BRCA1-interactive DNA-repair proteins in breast carcinomas. *Int. J. Cancer* 88: 28-36.
74. Xu X.L., Wu L.C., Du F., Davis A., Peyton M., Tomizawa Y., Maitra A., Tomlinson G., Gazdar A.F., Weissman B.E., Bowcock A.M., Baer R., and Minna J.D. (2001) Inactivation of human SRBC, located within the 11p15.5-p15.4 tumor suppressor region, in breast and lung cancers. *Cancer Res.* 61: 7943-7949.
75. Baer, R. (2001) With the ends in sight: images from the BRCA1 tumor suppressor. *Nat. Struct. Biol.* 10: 822-824.
76. Wu-Baer, F. and Baer, R. (2001) Effect of DNA damage on a BRCA1 complex. *Nature* 414: 36.
77. Baer, R. and Ludwig, T. (2002) The BRCA1/BARD1 heterodimer: a tumor suppressor complex with ubiquitin E3 ligase activity. *Curr. Opin. Genet. Dev.* 12: 86-91.
78. Fabbro M., Rodriguez, J.A., Baer, R., and Henderson, B.R. (2002) BARD1 induces BRCA1 intranuclear foci formation by increasing RING-dependent BRCA1 nuclear import and inhibiting BRCA1 nuclear export. *J. Biol. Chem.* 277: 21315-21324.
79. McCarthy, E.E., Tok-Celebi, J., Baer, R., and Ludwig, T. (2003) Loss of Bard1, the heterodimeric partner of the Brca1 tumor suppressor, results in early embryonic lethality and chromosomal instability. *Mol. Cell. Biol.* 23: 5056-5063.
80. Khoo S., Griffen S.C., Xia, Y., Baer, R.J., German, M.S., and Cobb, M.H. (2003) Regulation of insulin gene transcription by extracellular-signal regulated protein kinases (ERK) 1 and 2 in pancreatic beta cells. *J. Biol. Chem.* 278: 32969-32977.
81. Westermarck, U., Reyngold, M., Olshen, A.B., Baer, R., Jasin, M., and Moynahan, M.E. (2003). BARD1 participates with BRCA1 in homology-directed repair of chromosome breaks. *Mol. Cell. Biol.* 23: 7926-7936.

82. Wu-Baer, F., Lagazon, K., Yuan, W., and Baer, R. (2003) The BRCA1/BARD1 heterodimer assembles polyubiquitin chains through an unconventional linkage involving lysine residue K6 of ubiquitin. *J. Biol. Chem.* 278: 34743-34746.
83. Li, M., Brooks, C.L., Wu-Baer, F., Chen, D., Baer, R., and Gu, W. (2003) Mono- vs. polyubiquitination: differential control of p53 fate by MDM2. *Science* 302: 1972-1975.
84. Choudhury, A.D., Xu, H., and Baer, R. (2004) Ubiquitination and proteasomal degradation of the BRCA1 tumor suppressor is regulated during cell cycle progression. *J. Biol. Chem.* 279: 33909-33918.
85. Kleiman, F.E., Wu-Baer, F., Fonseca, D., Kaneko, S., Baer, R., and Manley, J.L. (2005) BRCA1/BARD1 inhibition of mRNA 3' processing involves targeted degradation of RNA polymerase II. *Genes & Dev.* 19: 1227-1237.
86. Choudhury, A.D., Xu, H., Modi, A.P., Zhang, W., Ludwig, T., and Baer, R., (2005) Hyperphosphorylation of BARD1 tumor suppressor in mitotic cells. *J. Biol. Chem.* 280: 24669-24679.
87. Yu, X., Fu, S., Lai, M., Baer, R., and Chen, J. (2006) BRCA1 ubiquitinates its phosphorylation-dependent binding partner CtIP. *Genes & Dev.* 20: 1721-1726.
88. Lu, Y., Amleh, A., Sun, J., Jin, X., McCullough, S.D., Baer, R., Ren, D., Li, R., and Hu, Y. (2007) Ubiquitination and proteasome-mediated degradation of BRCA1 and BARD1 during steroidogenesis in human ovarian granulosa cells. *Mol. Endocrinol.* 21: 651-656.
89. You, H.-L., Eng, H.-L., Hsu S.-F., Chen, C.-M., Ye T.-C., Liao, W.-T., Huang, M.-Y., Baer, R. and Cheng, J.-T. (2007) A PKC-Sp1 signaling pathway induces early differentiation of human keratinocytes through upregulation of TSG101. *Cell. Signal.* 19: 1201-1211.
90. Wu M., Soler, D.R., Abba, M.C., Nunez M.I., Baer R., Hatzis, C., Llombart-Cussac, A., Llombart-Bosch, A., and Aldaz C.M. (2007) CtIP silencing as a novel mechanism of tamoxifen resistance in breast cancer. *Mol. Cancer Res.* 5: 1285-1295.
91. Laufer, M., Nandula, S.V., Modi, A.P., Wang, S., Jasin, M., Murty, V.V., Ludwig, T., and Baer, R. (2007) Structural requirements for the BARD1 tumor suppressor in chromosomal stability and homology-directed DNA repair. *J. Biol. Chem.* 282: 34325-34333.
92. Sartori, A.A., Lukas, C., Coates, J., Fu, S., Baer, R., Lukas, J., and Jackson, S.P. (2007) CtIP cooperates with the MRE11 complex to promote DNA end resection. *Nature* 450: 509-514.
93. Dupré, A., Boyer-Chatenet, L., Sattler, R.S., Modi, A.P., Lee J.-H., Nicolette M.L., Kopelovich, L., Jasin, M., Baer, R., Paull, T.T., and Gautier, J. (2007) Identification and characterization of an inhibitor of the MRE11-RAD50-NBS1 complex. *Nature Chemical Biology* 4: 119-125.
94. Shakya, R., Szabolcs, M., McCarthy, E.E., Ospina, E., Basso, K., Nandula, S.V., Murty, V.V., Baer, R., and Ludwig, T. (2008) A common basal-like phenotype for mammary carcinomas induced by conditional inactivation of the BARD1 and BRCA1 tumor suppressors. *Proc. Natl. Acad. Sci. USA* 105: 7040-7045.
95. Reid, L.J., Shakya, R., Modi, A.P., Lokshin, M., Cheng, J.-T., Jasin, M., Baer, R., and

Ludwig, T. (2008) The E3 ligase activity of BRCA1 is not essential for mammalian cell viability or homology-directed repair of double-strand DNA breaks. *Proc. Natl. Acad. Sci. USA* 105: 20876–20881.