

Curriculum Vitae

Bruce Blumberg

Professor

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EDUCATION

Rutgers University, Camden, NJ

University of California, L.A., CA

A.B. Biology 1973-1976

Ph.D. Biology 1982-1987

RESEARCH AND PROFESSIONAL EXPERIENCE

- 2008- Professor, Depts. of Developmental and Cell Biology, Pharmaceutical Sciences and Biomedical Engineering, University of California, Irvine
- 2004-2008 Associate Professor, Depts. of Developmental and Cell Biology and Biomedical Engineering, University of California, Irvine.
- 2007-2008 Associate Professor, Dept. of Pharmaceutical Sciences, University of California, Irvine
- 2002-2004 Assistant Professor, Dept. of Biomedical Engineering, University of California, Irvine, CA (Joint appointment)
- 1998-2004 Assistant Professor, Dept. of Developmental and Cell Biology, University of California, Irvine, CA
- 1992-1998 Staff Scientist, Gene Expression Laboratory, Salk Institute for Biological Studies, La Jolla, CA
- 1988-1992 Postdoctoral Fellow in the laboratory of Dr. Edward De Robertis in the Department of Biological Chemistry, the University of California Los Angeles, School of Medicine, Los Angeles, California
- 1987-1988 Postdoctoral Fellow in the laboratory of Dr. Markku Kurkinen in the Department of Medicine, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, Piscataway, New Jersey
- 1982-1987 Graduate Student with Dr. John H. Fessler, Molecular Biology Institute, UCLA

UCI AFFILIATIONS

- 2003-present Institute for Genomics and Bioinformatics – track coordinator Functional Genomics
- 2000–present Institute for Genomics and Bioinformatics
- 1998-present Cancer Research Institute

HONORS AND AWARDS

- 2017 Invited Special Lecture - Japan Society of Toxicology, Yokohama, Japan (07/2017)
- 2016 Saphier Family Lecture and Grand Rounds - Alpert Medical School, Brown University, Providence, RI (05/2016)
- 2015 Invited Special Lecture - University of Washington Graduate School Public

- Lecture Series on Obesity, Seattle, WA (05/2015)
- 2014 Invited Keynote Speaker – Annual Meeting of the American Gynecological and Obstetrical Society, Chicago, IL (09/2014).
- 2013 Invited Keynote Speaker, Annual Meeting of Environment and Health Fund, Tel Aviv, Israel (12/2013).
- 2013 Invited Keynote Speaker – Japanese Society for Hygiene Annual Meeting, Kanazawa, Japan (03/2013)
- 2012 Elected as a fellow of the American Association for the Advancement of Science (AAAS).
- 2012 Invited Keynote Speaker - Japanese Society for Endocrine Disruptor Research, Tokyo, Japan.
- 2012 Invited Keynote Speaker - 28th Annual Symposium of the European Society for Comparative Physiology and Biochemistry, Bilbao, Spain.
- 2012 Invited Keynote Speaker - University of Pennsylvania 6th Annual Symposium for the Center of Excellence in Environmental Toxicology, Philadelphia, PA.
- 2012 Invited Keynote Speaker - Grand Rounds - University of Pittsburgh Medical School.
- 2011 Invited Keynote Speaker - University of Cincinnati - Breast Cancer and the Environment Research Programs. November, 2011.
- 2011 Invited Keynote Speaker - "Chemicals, Obesity and Diabetes - How Science leads us to action", Colby College, Waterville, ME. October, 2011.
- 2011 Invited special "State of the Art lecture" - Teratology Society Annual Meeting, San Diego, June, 2011
- 2009 UCI Undergraduate Research Opportunities Program (UROP) Faculty mentor of the month (November, 2009)
- 2006 Invited Plenary Lecturer, International Workshop on the Latest Concepts in Developmental Biology, Los Cocos, Cordoba, Argentina
- 2005 Invited Plenary Lecturer, "International Conference on the Promising Next Generation Technology of Toxicogenomics in Drug & Food Safety and Environmental Human Health" – 2nd annual meeting of the Korean Society of Toxicogenomics and Toxicoproteomics, Seoul, Korea
- 2005 Invited Keynote Speaker, 8th Vitamin K and Bone Meeting, Tokyo, Japan
- 2004 Invited Speaker and Special U.S. Delegate to the Ministry of Environment, Japan, 7th International Symposium on Environmental Endocrine Disrupters, Nagoya, Japan
- 2004 Invited U.S. Delegate, OECD/IPCS Workshop on Toxicogenomics, Kyoto, Japan
- 2004 Invited Special Lecture, 22nd Annual Meeting of the Japanese Society for Bone and Mineral Research, Osaka, Japan
- 1989-1992 Recipient NIH-NRSA
- 1988-1991 Postdoctoral Scholar of the Lucille P. Markey Charitable Trust
- 1983-1986 Recipient USPHS Tumor and Cell Biology Training Grant
- 1977 Elected member of Athenaeum Honor Society of Rutgers University

PUBLICATIONS

1. **Blumberg, B.**, Fessler, L.I., Kurkinen, M., and Fessler, J.H. (1986). Biosynthesis and supramolecular assembly of procollagen IV in neonatal lung. *J. Cell Biol.* **103**, 1711-1719.

2. **Blumberg, B.** (1986). Collagen Genes, pp. 748-749. in Uitto, J. moderator. Biochemistry of collagen in diseases. *Ann. Intern. Med.* 105, 740-756.
3. Kurkinen, M., Condon, M.R., **Blumberg, B.**, Barlow, D., Quinones, S., Saus, J., and Pihlajaniemi, T. (1987). Extensive homology between the carboxyl-terminal peptides of mouse $\alpha 1(\text{IV})$ and $\alpha 2(\text{IV})$ collagen. *J. Biol. Chem.* **262**, 8496-8499.
4. **Blumberg, B.**, MacKrell, A.J., Olson, P.F., Kurkinen, M., Monson, J.M., Natzle, J.E., and Fessler, J.H. (1987). Basement membrane procollagen IV and its specialized carboxyl domain are conserved in *Drosophila*, mouse, and human. *J. Biol. Chem.* **262**, 5947-5950.
5. MacKrell, A.J., **Blumberg, B.**, Haynes, S., and Fessler, J.H. (1988). The lethal *myospheroid* gene of *Drosophila* encodes a membrane protein homologous to vertebrate integrin beta-subunits. *Proc. Natl. Acad. Sci. (U.S.A.)* **85**, 2633-2637.
6. **Blumberg, B.**, MacKrell, A.J., and Fessler, J.H. (1988). *Drosophila* basement membrane procollagen $\alpha 1(\text{IV})$: II. Complete cDNA sequence, genomic structure and general implications for supramolecular assemblies. *J. Biol. Chem.* **263**, 18328-18337.
7. Muthukumaran, G., **Blumberg, B.**, and Kurkinen, M. (1989). The complete primary structure for the $\alpha 1$ -chain of mouse collagen IV: Differential evolution of collagen IV domains. *J. Biol. Chem.* **264**, 6310-6317.
8. Saus, J., Quinones, S., MacKrell, A., **Blumberg, B.**, Muthukumaran, G., Pihlajaniemi, T., and Kurkinen, M. (1989). The complete primary structure of mouse $\alpha 2(\text{IV})$ collagen: Alignment with mouse $\alpha 1(\text{IV})$ collagen. *J. Biol. Chem.* **264**, 6318-6324.
9. **Blumberg, B.**, and Kurkinen, M. (1990). Structure and evolution of collagen IV genes. In *Extracellular Matrix Genes*, L. J. Sandell and C. D. Boyd, eds. (San Diego: Academic Press), pp. 115-135.
10. **Blumberg, B.**^s, Wright, C.V.E., De Robertis, E.M., and Cho, K.W.Y. (1991) Organizer-specific homeobox genes from *Xenopus laevis* embryos. *Science* **253**, 194-196.
11. Cho, K.W.Y., **Blumberg, B.**, Steinbeisser, H., and De Robertis, E.M. (1991). Molecular nature of Spemann's organizer: the role of the *Xenopus* homeobox gene *gooseoid*. *Cell* **67**, 1111-1120.
12. Cho, K.W.Y., **Blumberg, B.**, and De Robertis, E.M. (1991). Cooperation between mesoderm-inducing growth factors and retinoic acid in *Xenopus* axis formation. *Seminars in Developmental Biology* **2**, 393-403.
13. **Blumberg, B.**, Mangelsdorf, D.J., Dyck, J., Bittner, D.A., Evans, R.M., and De Robertis, E.M. (1992). Multiple retinoid-responsive receptors in a single cell: families of RXRs and RARs in the *Xenopus* egg. *Proc. Natl. Acad. Sci. (U.S.A.)* **89**, 2321-2325.
14. Blum, M., Gaunt, S.J., Cho, K.W., Steinbeisser, H., **Blumberg, B.**, Bittner, D., and De Robertis, E.M. (1992) Gastrulation in the mouse: the role of the homeobox gene *gooseoid*. *Cell* **69**, 1097-1106.
15. Gont, L.K., Steinbeisser, H., **Blumberg, B.**, and De Robertis, E.M. (1993) Tail formation as a continuation of gastrulation: the multiple cell populations of the *Xenopus* tailbud derive from the late blastopore lip. *Development* **119**, 991-1004.

16. Gardiner D.M., **Blumberg, B.**, Bryant, S.V. (1993) Expression of homeobox genes in limb regeneration. *Progress in Clinical and Biological Research*, **383A**, 31-40.
17. Kliewer, S.A., Forman, B., **Blumberg, B.**, Ong, E.S., Borgmeyer, U., Mangelsdorf, D.J., Umesono, K., and Evans, R.M. (1994) Differential expression and activation of a family of murine peroxisome proliferator-activated receptors. *Proc. Natl. Acad. Sci. (USA)* **91**, 7355-7359.
18. Forman, B.M., Chen, J., **Blumberg, B.**, Kliewer, S.A., Henshaw, R., Ong, E.S., and Evans, R.M. (1994) Cross-talk among ROR α 1 and the Rev-erb family of orphan nuclear receptors. *Mol. Endocrinol.* **8**, 1253-1261.
19. Nelson, R.E., Fessler, L.I., Takagi, Y., **Blumberg, B.**, Keene, D.R., Olson, P.F., Parker, C.G., and Fessler, J.H. (1994) Peroxidasin: a novel enzyme-matrix protein of *Drosophila* development. *EMBO J.* **13**, 3438-3447.
20. Gardiner, D.M., **Blumberg, B.**, Komine, Y., and Bryant, S.V. (1995) Regulation of HoxA expression in developing and regenerating axolotl limbs. *Development* **121**, 1731-1741.
21. Greene, M.E., **Blumberg, B.**, McBride, O.W., Yi, H.F., Kronquist, K., Kwan, K., Hsieh, L., Greene, G., and Nimer, S.D. (1995) Isolation of the human peroxisome proliferator activated receptor γ cDNA: Expression in hematopoietic cells and chromosomal mapping. *Gene Expression* **4**, 281-299.
22. Hawley, S., Wunnenberg-Stapleton, K., Hashimoto, C., Laurent, M., Watabe, T., **Blumberg, B.**, and Cho, K.W.Y. (1995). Disruption of BMP signals in embryonic *Xenopus* ectoderm leads to direct neural induction. *Genes Dev.* **9**, 2923-2935.
23. Mangelsdorf, D.J., Thummel, C., Beato, M., Herrlich, P., Schutz, G., Umesono, K., **Blumberg, B.**, Kastner, P., Mark, M., Chambon, P., and Evans, R.M. (1995). The nuclear receptor superfamily: The second decade. *Cell* **83**, 835-839.
24. **Blumberg, B.**, Bolado, J., Derguini, F., Craig, A., Moreno, T.A., Chakravarti, D., Heyman, R.A., Buck, J., and Evans, R.M. (1996). Identification of novel retinoic acid receptor ligands from *Xenopus*. *Proc. Natl. Acad. Sci. (USA)* **93**, 4873-4890.
25. Ackhar, C., Derguini, F., **Blumberg, B.**, Langston, A., Levin, A., Speck, J., Evans, R.M., Bolado, J., Jr., Buck, J. and Gudas, L.J. (1996). 4-oxo-Retinol, a natural ligand and transactivator of the retinoic acid receptors. *Proc. Natl. Acad. Sci. (USA)* **93**, 4891-4896.
26. Mullen, L.M., Bryant, S.V., Torok, M.A., **Blumberg, B.**, and Gardiner, D.M. (1996). Nerve dependency of regeneration: the role of Distal-less and FGF signaling in amphibian limb regeneration. *Development* **122**, 3487-3497.
27. **Blumberg, B.**, Bolado, J., Moreno, T.A., Kintner, C., Evans, R.M., and Papalopulu, N. (1997). An essential role for retinoid signaling in anteroposterior neural patterning. *Development* **124**, 373-379.
28. Bellefroid, E., Bourguignon, C., Bouwmeester, T., Rausch, O., **Blumberg, B.**, Pieler, T. (1997). Transcription regulation and alternative splicing of an early zygotic gene encoding two structurally distinct zinc finger proteins in *Xenopus laevis*. *Mech. Dev.* **63**, 99-108.
29. **Blumberg, B.** (1997). An essential role for retinoid signaling in anteroposterior neural specification and neuronal differentiation. *Seminars Cell Dev. Biol.* **8**, 417-428.

30. Pillemer, G., Epstein, M., **Blumberg, B.**, Yisraeli, J.K., De Robertis, E.M., Steinbeisser, H., and Fainsod, A. (1998). Nested expression and sequential downregulation of the *Xenopus caudal* genes along the anterior-posterior axis. *Mech. Dev.* **71**, 196-196.
31. Greene, M. E., **Blumberg, B.**, Kwan, K., Hsieh, L., Greene, G. L., and Nimer, S. D. (1997). Isolation and cloning of human peroxisome proliferator activated receptor gamma cDNA. *Adv Exp Med Biol*, 253-60.
32. **Blumberg, B[§]**, Kang, H., Bolado, J., Chen, H., Craig, A.G., Moreno, T.A., Umesono, K., Perlmann, T., De Robertis, E.M., and Evans, R.M. (1998) BXR, an embryonic orphan nuclear receptor activated by a novel class of endogenous benzoate metabolites. *Genes Dev.*, **12**, 1269-1277. **§Blumberg is corresponding author**
33. Ryan, A.K., **Blumberg, B.***, Rodriguez-Esteban, C., Yonei-Tamura, S., Tamura, K., Tsukui, T., de la Pena, J., Sabbagh, W., Greenwald, J., Choe, S., Norris, D.P., Robertson, E.J., Evans, R.M., Rosenfeld, M.G., and Izpisua-Belmonte, J.C. (1998) Pitx2 determines left-right asymmetry of internal organs in vertebrates. *Nature*, **394**, 545-551. ***Blumberg is joint first author**
34. **Blumberg, B[§]** and Evans, R.M. (1998) Orphan nuclear receptors – new ligands and new possibilities. *Genes Dev.*, **12**, 3149-3155. **§Blumberg is corresponding author**
35. **Blumberg, B.[§]**, Juguilon, H., Sabbagh, W, Bolado, J., van Meter, C., Ong, E.S., and Evans, R.M. (1998) SXR, a novel steroid and xenobiotic-sensing nuclear receptor. *Genes Dev.*, **12**, 3195-3205. **§Blumberg is corresponding author**
36. **Blumberg, B.**, and Izpisúa Belmonte, J. C. (1999) Subtractive hybridization and cDNA library construction. *Methods in Molecular Biology*, **97**, 555-574.
37. Tsukui, T. Capdevila, J., Yonei Tamura, S., Ruiz-Lozano, P., Rodriguez-Esteban, C., Tamura, K., Magallon, J., Chandraratna, R.A.S., Chien, K., Evans, R.M., **Blumberg, B.**, and Izpisúa Belmonte, J.C. (1999). Multiple Left-right Asymmetry Defects in *Shh^{-/-}* Mutant Mice Unveil a Convergence of the Shh and Retinoic Acid Pathways in the Control of Lefty-1. *Proc. Natl. Acad. Sci. (U.S.A.)*, **96**, 11376-11381.
38. Xie, W., Barwick, J. L., Downes, M., **Blumberg, B.**, Simon, C. M., Nelson, M. C., Neuschwander-Tetri, B. A., Brunt, E. M., Guzelian, P. S., and Evans, R. M. (2000). Humanized xenobiotic response in mice expressing nuclear receptor SXR. *Nature* **406**, 435-439.
39. Xie, W., Barwick, J. L., Simon, C. M., Pierce, A., Safe, S., **Blumberg, B.**, Guzelian, P. S., and Evans, R. M. (2000). Reciprocal activation of target CYP genes by nuclear receptors SXR/PXR and CAR. *Genes Dev.*, **14**, 3014-3023.
40. Koide, T., Downes, M., Chandraratna, R.A.S., **Blumberg, B[§]** and Umesono, K. (2001) Active repression of RAR signaling is required for head formation. *Genes Dev.*, **15**, 2111-2121. **§Blumberg is the corresponding author and all experiments in this paper were done in Blumberg's laboratory under his supervision and funding. Dr. Umesono is listed as last author to honor the memory of a deceased friend, colleague and collaborator.**
41. Gabriel, W., **Blumberg, B.**, Sutton, S., Place, A.R., and Lance, V.A. (2001). Alligator aromatase cDNA sequence and its expression in embryos at male and female incubation temperatures. *J. Exp. Zool.*, **290**, 439-448.

42. **Blumberg, B.** (2001) Identification of Nuclear Hormone Receptor Homologs by Screening Libraries with Highly Degenerate Oligonucleotide Probes, *Methods in Molecular Biology* **176**, 119-129.
43. Grün, F., Venkatesan, R.N., Tabb, M.M., Zhou, C., Cao, J., Hemmati, D., and **Blumberg, B.** (2002). Benzoate X receptors alpha and beta are pharmacologically distinct and do not function as xenobiotic receptors. *J. Biol. Chem.* **277**, 43691-43697.
44. Tabb, M.M., Zhou, C., and **Blumberg, B.** (2003) SXR and the Xenobiotic Response. In Toxicogenomics (T. Inoue, W.D. Pennie, Eds. Springer Verlag, Tokyo).
45. Zhou, C. and **Blumberg, B.** (2003) Overlapping Gene Structure of Human VLCAD and DLG4, *Gene*, **305**, 161-166.
46. Weston, A.D., **Blumberg, B.**, and Underhill, T.M. (2003). Active repression by unliganded retinoid receptors in development: less is sometimes more. *J. Cell Biol.*, **161**, 223-228.
47. Grün, F., and **Blumberg, B.** (2003). Identification of Novel Nuclear Hormone Receptor Ligands by Activity-Guided Purification. *Methods in Enzymology*, **364**, 3-24.
48. Tabb, M.M., Sun, A., Zhou, C., Grün, F., Errandi, J., Romero, K., Pham, H., Inoue, S., Mallick, S., Lin, M., Forman, B.M., and **Blumberg, B.** (2003) Vitamin K2 regulation of bone homeostasis is mediated by the orphan receptor, SXR. *J. Biol. Chem.* **278**, 43919-43927.
49. **Blumberg, B.** (2003). Hormonal Regulation. In Genetics, Robinson, Richard, ed. New York: Macmillan Reference USA.
50. Gardiner, D., Ndayibagira, A., Grün, F., and **Blumberg, B.** (2003). Deformed Frogs and Environmental Retinoids. *Pure and Applied Chemistry*, **75** (11-12), 2264-2273.
51. Peng, J., Riggs, B.L., Ogino, H., and **Blumberg, B.** (2003) Construction of a set of full-length enriched cDNA libraries as genomics tools for *Xenopus tropicalis* research. *Current Genomics*, **4**, 635-644.
52. Zhou, C., Tabb, M.M., Sadatrafiei, A., Grün, F., Sun, A., and **Blumberg, B.** (2004) Hyperforin, the Active Component of St. John's Wort, Induces IL-8 Gene Expression in Human Intestinal Epithelial Cells via a MAPK-dependent, NF- κ B-independent Pathway, *J. Clin. Immunol.*, **24**, 623-636.
53. Tabb, M.M., Kholodovych, V., Grün, F., Zhou, C., Welsh, W.J., and **Blumberg, B.** (2004) Highly chlorinated PCBs inhibit the human xenobiotic response mediated by the Steroid and Xenobiotic Receptor (SXR) *Environmental Health Perspectives*, **112**, 163-169.
54. Shiotsugu, J., Katsuyama, Y., Arima, K., Baxter, A., Koide, T., Song, J., Chandraratna, R.A.S., and **Blumberg, B.** (2004) Multiple points of interaction between retinoic acid and FGF signaling during embryonic axis formation. *Development*, **131**, 2653-2667.
55. Carrasco, A.E., and **Blumberg, B.** (2004) A critical role for retinoid receptors in axial patterning and neuronal differentiation. In Vertebrate Organizer, (H. Grunz Ed. Springer Verlag, Berlin) pp. 279-298.
56. Zhou, C. Tabb, M.M., Sadatrafiei, A., Grün, F., and **Blumberg, B.** (2004) Tocotrienols activate the steroid and xenobiotic receptor, SXR, and selectively regulate expression of its target genes *Drug Metab. Dispos.*, **32**, 1075-1082.

57. Arima, K., Shiotsugu, J., Niu, R., Khandpur, R., Martinez, M., Shin, Y., Koide, T., Cho, K.W.Y., Kitayama, A., Ueno, N., Chandraratna, R.A.S., and **Blumberg, B.** (2005) Global analysis of RAR-responsive genes in the *Xenopus* neurula using cDNA microarrays. *Dev. Dyn.*, **232**, 414-431
58. Miki Y., Suzuki T., Tazawa C., **Blumberg B.**, Sasano H. (2005) Steroid and xenobiotic receptor (SXR), cytochrome P450 3A4 and multidrug resistance gene 1 in human adult and fetal tissues. *Mol Cell Endocrinol.* **231**, 75-85.
59. Gunderson, M.P., Kohno, S., Blumberg, B., Iguchi, T., and Guillette, L.J. Jr. (2006) Up-regulation of the alligator CYP3A77 gene by toxaphene and dexamethasone and its short term effect on plasma testosterone concentrations. *Aquatic Toxicology*, **78**, 272-283.
60. Zhou, C.C., Tabb, M.M., Nelson, E.L., Grün, F., Verma, S., Sadatrafieci, A., Lin, M., Mallick, S., Forman, B.M., Thummel, K.E., and **Blumberg, B.** (2006) Mutual repression between steroid and xenobiotic receptor and NF- κ B signaling pathways links xenobiotic metabolism and inflammation. *J. Clin. Invest*, **116**, 2280-2289.
61. Grün, F., Watanabe, H., Zamanian, Z., Maeda, L., Arima, K., Chubacha, R., Gardiner, D.M., Iguchi, T., Kanno, J., and **Blumberg, B.** (2006) Endocrine disrupting organotin compounds are potent inducers of adipogenesis in vertebrates. *Mol Endocrinol.*, **20**, 2141-2155.
62. Miki, Y., Suzuki, T., Kitada, K., Yabuki, N., Moriya, T., Ishida, T., Ohuchi, N., **Blumberg, B.**, and Sasano, H. (2006) Expression of the steroid and xenobiotic receptor (SXR) and its target gene, organic anion transporting polypeptide-A (OATP-A) in human breast carcinoma. *Cancer Research* **66**, 535-542.
63. Tabb, M.M., and **Blumberg, B.** (2006). New modes of action for endocrine disrupting chemicals. *Molecular Endocrinology*, **20**, 475-482.
64. Grün, F., and **Blumberg, B.** (2006) Environmental obesogens: organotins and endocrine disruption via nuclear receptor signaling. *Endocrinology*, **147**, S50-S55.
65. Ichikawa, T., Horie-Inoue, K., **Blumberg, B.**, and Inoue, S. (2006) Steroid and Xenobiotic Receptor SXR Mediates Vitamin K2-activated Transcription of Extracellular Matrix-related Genes and Collagen Accumulation in Osteoblastic Cells. *J. Biol. Chem.*, **281**, 16927-16934.
66. Zhou, C.C., Assem, M., Tay, J.C., Watkins, P.B., **Blumberg, B.**, Schuetz, E.G., and Thummel, K.E. (2006) Steroid and Xenobiotic receptor and vitamin D receptor crosstalk mediates CYP24 expression and drug-induced osteomalacia. *J. Clin. Invest*, **116**, 1703-1712.
67. Mensah-Osman, E. J.; Thomas, D. G.; Tabb, M. M.; Larios, J. M.; Hughes, D. P.; Giordano, T. J.; Lizyness, M. L.; Rae, J. M.; **Blumberg, B.**; Hollenberg, P. F.; Baker, L. H. (2007) Expression levels and activation of a PXR variant are directly related to drug resistance in osteosarcoma cell lines. *Cancer*, **109**, 957-965.
68. Zhou, C.; Poulton, E. J.; Grun, F.; Bammler, T. K.; **Blumberg, B.**; Thummel, K. E.; Eaton, D. L. (2007) The dietary isothiocyanate sulforaphane is an antagonist of the human steroid and xenobiotic nuclear receptor. *Mol Pharmacol*, **71**, 220-229.
69. Iguchi, T., Katsu, Y., Horiguchi, T., Watanabe, H., **Blumberg, B.** and Ohta, Y. (2007) Endocrine disrupting organotin compounds are potent inducers of imposex in gastropods and adipogenesis in vertebrates. *Mol. Cell. Toxicol.*, **3**, 1-10, 2007.

70. Kumagai, J., Fujimura, T., Takahashi, S., Urano, T., Ogushi, T., Horie-Inoue, K., Ouchi, Y., Kitamura, T., Muramatsu, M., **Blumberg, B.** & Inoue, S. (2007). Cytochrome P450 2B6 is a growth-inhibitory and prognostic factor for prostate cancer. *The Prostate* **67**, 1029-37.
71. Grün, F., and **Blumberg, B.** (2007) Perturbed nuclear receptor signaling by environmental obesogens as emerging factors in the obesity crisis. *Reviews in Endocrinology and Metabolism*, **8**, 161-171.
72. Ichikawa, T., Horie-Inoue, K., Ikeda, K., **Blumberg, B.**, and Inoue, S., (2007) Vitamin K2 induces phosphorylation of protein kinase A and expression of novel target genes in osteoblastic cells. *J. Molec. Endocrinol.*, **39**, 239-247.
73. Iguchi, T., Watanabe, H., Ohta, Y., and **Blumberg, B.** (2008) Developmental effects: oestrogen induced vaginal changes and organotin induced adipogenesis. *International Journal of Andrology*, **31**, 263-268.
74. Milnes, M.R., Garcia, A., Grossman, E., Grun, F., Shiotsugu, J., Tabb, M.M., Kawashima, Y., Katsu, Y., Watanabe, H., Iguchi, T., and Blumberg, B. (2008) Activation of Steroid and Xenobiotic Receptor (SXR, NR1I2) and its orthologs in laboratory, toxicological and genome model species. *Environ. Health. Perspect.*, **116**, 880–885.
75. Blumberg, B., and Belmonte, J. C. (2008) Subtractive hybridization and cDNA library construction. *Methods in Molecular Biology*, 461, 569-587. (updated version of #36).
76. Johnson, K.R., Hsu, T., and Blumberg, B. (2008) Tocotrienols activate the steroid and xenobiotic receptor, SXR, to modulate small molecule metabolism. In: Preedy, V. and Watson, R.R., editors. *Tocotrienols: Vitamin E Beyond Tocopherols*. Taylor and Francis, Boca Raton, FL. 2008, pp.331-339.
77. Verma, S., Tabb, M.M., and Blumberg, B. (2009) Activation of the steroid and xenobiotic receptor, SXR, induces apoptosis in breast cancer cells. *BMC Cancer* 9:3
78. Zhou, C., Verma, S., **Blumberg, B.** (2009) The steroid and xenobiotic receptor (SXR), beyond xenobiotic metabolism. *Nucl Recept Signal* 7,e001
79. Grün, F., and **Blumberg, B.** (2009) Endocrine disrupters as obesogens. *Molecular and Cellular Endocrinology*, **304**, 19-29.
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 87. Janesick A.S., **Blumberg B.** The Role of Environmental Obesogens in the Obesity Epidemic. In: Lustig RH, editor. *Obesity Before Birth*: Springer US; 2011. p. 383-399.
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 93. Schug, T.T., Janesick, A., **Blumberg, B.**, and Heindel, J.J. (2011) Endocrine disrupting chemicals and disease susceptibility. *J. Steroid Biochem. Molec. Biol.*, **127**, 204-215. PMCID:3220783, PMID:21899826.
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97. Casey, S.C. and **Blumberg, B.**, (2012) The Steroid and Xenobiotic Receptor Negatively Regulates B-1 Cell Progenitors in the Fetal Liver. *Molec. Endocrinol.*, **26**, 916-25. PMCID: 3355537. PMID:22496360.
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 124. Janesick, A.S., Dimastrogiovanni, G, Vanek, L., Boulos, C., Chamorro-Garcia, R., and **Blumberg, B**. (2016). On the utility of ToxCast™ and ToxPi as methods for identifying new obesogens. *Environ Health Perspect*, 124(8), 1214-1226. PMID: 26757984.
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131. Zhu J, Janesick A, Wu L, Hu L, Tang W, **Blumberg B**, et al. The unexpected teratogenicity of RXR antagonist UVI3003 via activation of PPAR γ in *Xenopus tropicalis*. (2017). *Toxicol Appl Pharmacol*, 314:91-7.
132. Janesick AS, Dimastrogiovanni G, Chamorro-Garcia R, **Blumberg B**. (2017) Reply to "Comment on 'On the Utility of ToxCast and ToxPi as Methods for Identifying New Obesogens'". *Environ Health Perspect*, 125(1):A12-A4.
133. Heindel, JJ, **Blumberg, B**, Cave, M, Machtinger, R, Mantovani, A, Mendez, MA, Nadal, A, Palanza, P, Panzica, G, Sargis, R, Vandenberg, LN, Vom Saal, F. (2017) Metabolism disrupting chemicals and metabolic disorders. *Reprod Toxicol* 68: 3-33. PMID: PMC5365353
134. Vandenberg, LN, **Blumberg, B**, Antoniou, MN, Benbrook, CM, Carroll, L, Colborn, T, Everett, LG, Hansen, M, Landrigan, PJ, Lanphear, BP, Mesnage, R, Vom Saal, FS, Welshons, WV, Myers, JP. (2017) Is it time to reassess current safety standards for glyphosate-based herbicides? *J Epidemiol Community Health* 71(6): 613-8.
135. Janesick, A, Tang, W, Nguyen, TTL, **Blumberg, B**. (2017) RAR β 2 is required for vertebrate somitogenesis. *Development* 144(11): 1997-2008.
136. Chamorro-García R, **Blumberg B**. (2017). Endocrine Disrupting Chemicals, Obesogens, and the Obesity Epidemic. In: Bergeron N, Siri-Tarino P, Bray GA, Krauss RM, editors. (Nutrition and Cardiometabolic Health, pp. 603-14). Boca Raton, FL: CRC Press.
137. Vandenberg LN, **Blumberg B**. (2017). Alternative Approaches to Dose–Response Modeling of Toxicological Endpoints for Risk Assessment: Nonmonotonic Dose Responses for Endocrine Disruptors. In: McQueen CA, Eaton DL, editors. (Comprehensive Toxicology, 3rd Edition, pp. in press). Oxford, UK: Elsevier.
138. Bornman, MS, Aneck-Hahn, NH, de Jager, C, Wagenaar, GM, Bouwman, H, Barnhoorn, IEJ, Patrick, SM, Vandenberg, LN, Kortenkamp, A, **Blumberg, B**, Kimmins, S, Jegou, B, Auger, J, DiGangi, J, Heindel, JJ. (2017) Endocrine Disruptors and Health Effects in Africa: A Call for Action. *Environ Health Perspect* 125(8): 085005.
139. Shoucri, BM, Martinez, ES, Abreo, TJ, Hung, VT, Moosova, Z, Shioda, T, **Blumberg, B**. (2017) Retinoid X Receptor Activation Alters the Chromatin Landscape To Commit Mesenchymal Stem Cells to the Adipose Lineage. *Endocrinology* 158(10): 3109-25. PMID: PMC5659689
140. Chamorro-Garcia, R, Diaz-Castillo, C, Shoucri, BM, Kach, H, Leavitt, R, Shioda, T, **Blumberg, B**. (2017) Ancestral perinatal obesogen exposure results in a transgenerational thrifty phenotype in mice. *Nat Commun* 8(1): 2012. PMID: PMC5722856

141. Janesick, A, Tang, W, Shioda, T, **Blumberg, B.** (2018) Znf703 is a novel RAR γ target gene expressed during mesoderm development. *Development (Cambridge, England)*, in revision.

OTHER PUBLICATIONS - PART OF A LARGER WORK

- State of the Science of Endocrine Disrupting Chemicals - 2012 (2013) Edited by Åke Bergman, Jerrold J. Heindel, Susan Jobling, Karen A. Kidd and R. Thomas Zoeller. United Nations Environmental Programme (ISBN:978-92-807-3274-0) and World Health Organization (ISBN:978-92-4-150503-1) 260pp.

I and my graduate student Stephanie Casey wrote a significant portion of Chapter 2.11, specifically 2.11.1-2.11.2, pp 163-169. This publication was commissioned by UNEP and the WHO and extensively peer-reviewed as noted on pp. iv-v.

PATENTS

- Mouse peroxisome proliferator-activated receptor gamma – US 5,861,274
- Human peroxisome proliferator-activated receptor gamma – US 6,200,802
- Human peroxisome proliferators-activated receptor gamma compositions and methods - US 6,815,168
- High throughput functional screening of cDNAs – US 6,274,321
- Method, polypeptides, nucleotide sequence of XOR-6 (BXR), a vitamin D-like receptor from Xenopus – US 6,391,847
- Steroid-activated nuclear receptors and uses therefore (SXR) - US 6,756,491, US 6,809,178
- Transgenic mice expressing a human SXR receptor polypeptide – US 6,984,773

INVITED SEMINARS AND SYMPOSIA

1998

- Invited speaker - Dept. of Developmental and Cell Biology, UCI, (10/1998).
- Invited speaker MoLAR, The City of Hope National Medical Center (10/1998).
- Invited speaker - Dept. of Medicine, UCLA School of Medicine, Harbor UCLA Medical Center (11/1998).
- Invited speaker - Dept. of Biological Chemistry, UCI School of Medicine (11/1998).
- Invited speaker - NSF Workshop on Amphibian Malformations (11/1998)
- Invited speaker - Dept. of Microbiology and Molecular Genetics, UCI School of Medicine (11/1998).
- Invited speaker - Dept. of Biochemistry and Molecular Biology, University of Southern California School of Medicine (12/1998).

1999

- Invited Speaker, Keystone Symposium on Endocrine Disrupters, Granlibakken, CA (2/1999).
- Institute for Human Nutrition, Columbia University College of Physicians and Surgeons (4/1999).
- Invited speaker - Dept. of Pharmacology, Cornell University Medical College (4/1999).
- Invited speaker - Dept. of Physiology and Biophysics, UCI School of Medicine (10/1999).
- Invited speaker- UCI Cancer Center Conference (10/1999)
- Invited speaker e.hormone 1999, Tulane University Medical School (10/1999)

- Invited speaker - University of Freiburg, Freiburg, Germany (11/1999).
- Invited speaker - Dept of Biosciences at Novum, Karolinska Institute, Huddinge Sweden (11/1999)(2 seminars)
- Invited speaker - Ludwig Institute for Cancer Research, Karolinska Institute, Karolinska, Sweden (11/1999).
- Invited speaker - International Symposium on Environmental Endocrine Disrupters '99, Kobe, Japan, (12/1999).
- Invited speaker - Institute of Molecular and Cellular Biosciences, Department of Molecular Biology, University of Tokyo, Tokyo, Japan (12/1999).
- Invited speaker - Dept of Geriatric Medicine, University of Tokyo Medical School, Tokyo, Japan (12/1999).
- Invited speaker - National Institute for Basic Biology, Okazaki National Research Institutes, Okazaki Japan (12/1999).
- Invited speaker - Nara Advanced Institute of Science and Technology, Nara Japan (12/1999).
- Invited speaker - Osaka Biosciences Institute, Osaka, Japan (12/1999).

2000

- Invited speaker - Dept of Molecular Biology, University of Southern California, Los Angeles, CA (1/2000).
- Invited speaker - X-Cepto Therapeutics, San Diego, CA (1/2000)
- Invited Speaker (two seminars) – International Symposium on the Biology of Reproduction and Embryonic Development, Buenos Aires, Argentina (3/2000)
- Invited speaker - Centro de Biotecnologia do Estado do Rio Grande do Sul, Porto Alegre, Brazil (4/2000).
- Invited Speaker - UCI Cancer Center Symposium (5/2000).
- Invited Speaker - Gordon Research Conference on Environmental Endocrine Disrupters Plymouth, MA (6/2000)
- Invited speaker - Allergan, Inc. Irvine, CA (12/2000).
- Invited speaker - Dept of Biological Sciences, California State University, Long Beach (10/2000).
- Invited speaker - Dept. of Molecular Biology and Biochemistry, UCI (11/2000).
- Invited Speaker –Symposium on Xenobiotics and Nuclear Receptor Signaling in Endocrine Disruption, Tokyo, Japan (11/2000)
- Invited speaker - Dept of Integrative Biosciences, Okazaki National Research Institutes, Okazaki Japan (11/2000).
- Invited speaker - Dept of Transgenic Technology, Kumamoto University, Kumamoto, Japan (11/2000).
- Invited speaker - Saitama Medical School, Saitama, Japan (11/2000).
- Invited speaker - Dept. of Developmental Biology, University of Tokyo, Tokyo, Japan (11/2000).
- Invited speaker - National Institute of Health Sciences, Tokyo, Japan (11/2000) (2 seminars)
- Invited speaker - X-Cepto Therapeutics, San Diego, CA (12/2000).
- Invited Speaker - Chemicals in the Environment: Hazards for Human Development – Symposium at UCI (12/2000).

2001

- Invited speaker - Center for the Reproduction of Endangered Species, Zoological Society of San Diego, CA (1/2001)
- Invited speaker - Dept. of Medicine, UCLA School of Medicine, Harbor UCLA Medical Center (3/2001)
- Invited Speaker - 45th International NIBB Conference, Okazaki, Japan (3/2001).
- Invited speaker - Orphan Nuclear Receptors – Biology and Ligand Identification, Sunnyvale, CA (5/2001).
- Invited speaker – Gordon Research Conference on Hormonal Carcinogenesis, Meriden, NH (07/2001) (Lecture given by Dr. Michelle Tabb in my place).
- Invited speaker - 14th International Congress of Developmental Biology, Kyoto, Japan (7/2001)
- Invited speaker - National Institute of Health Sciences, Tokyo, Japan (7/2001).
- Invited speaker - Environmental Hormone Research - Topics in Japan and USA, Tokyo, Japan (7/2001).
- Invited speaker - Tohoku University Dept of Biological Sciences (11/2001)
- Invited speaker - Tohoku University Medical School (11/2001)
- Invited speaker – Toxicogenomics International Forum – 2001, Tokyo, Japan (11/2001)
- Invited speaker - Dept. of Pharmacology, UCI (11/2001)
- Invited speaker - Dept. of Biological Chemistry, UCI (11/2001)
- Invited speaker – International Symposium on Environmental Endocrine Disrupters - 2001, Tskuba, Japan (12/2001)

2002

- Invited speaker - VA Medical Center, Long Beach, CA (5/2002)
- Invited Speaker – Genetic and Genomic Tools for *Xenopus Tropicalis*, Cambridge, UK (8/2002)
- Invited speaker - Regents Point Men’s Forum, Irvine, CA (10/2002)
- Invited Speaker SCOPE/IUPAC International Symposium on Endocrine Active Substances, Yokohama, Japan (11/2002)

2003

- Invited Speaker - The Environmental Risks of Endocrine Disrupters, Matsuyama, Japan (1/2003)
- Invited Speaker – NIHS Meeting on Progress in Endocrine Disrupter Research, Tokyo, Japan (1/2003)
- Invited speaker - National Institutes of Health Sciences, Tokyo, Japan (1/2003)
- Invited speaker - National Institute for Basic Biology, Okazaki, Japan (1/2003)
- Invited speaker - Academy of Lifelong Learning, Irvine, CA (2/2003)
- Invited Speaker, Ecotoxicogenomics, National Institute for Basic Biology Symposium, Okazaki, Japan (10/2003)
- Invited Speaker, Toxicogenomics International Forum - 2003, Tokyo, Japan (10/2003)
- Invited speaker - Saitama University Medical School, Saitama, Japan (10/2003)
- Invited speaker - National Institutes of Health Sciences, Tokyo, Japan (10/2003)

2004

- Invited speaker – UCI Department of Environmental and Community Medicine (1/2004)
- Invited Speaker – Keystone Symposium – Orphan Brothers (3/2004)
- Invited speaker - Dept. of Stem Cell Research, Pochon Cha Medical School, Seoul, Korea (8/2004)

- Invited speaker - National Institute of Health Sciences, Tokyo, Japan (8/2004)
- Invited Speaker, Eisai Summer Symposium in Molecular Biology, Tokyo, Japan (8/2004)
- Invited Special lecturer- Japanese Society for Bone and Mineral Research, Osaka, Japan (8/2004)
- Invited speaker - Environmental and Occupational Health Sciences Institute, UMDNJ, Piscataway, NJ (09/2004)
- Invited speaker - UCI Department of Molecular Biology and Biochemistry (09/2004)
- Invited Speaker, NCRR Directors Meeting, Bethesda, MD (10/2004)
- Invited Speaker, Toxicogenomics International Forum – 2004, Kyoto, Japan (10/2004)
- Invited U.S. Delegate, OECD/IPCS Workshop on Toxicogenomics, Kyoto, Japan (10/2004)
- Invited Speaker, STAR Human Health Symposium, Philadelphia, PA (10/2004)
- Invited speaker, International Symposium on Steroid Hormone Receptor Superfamily and Molecular Signaling, Trivandrum, India (11/2004) (lecture given in my place by graduate student Suman Verma).
- Invited speaker - UCI Cancer Center Retreat (11/2004)
- Invited speaker - University of Texas, Austin, Division of Toxicology, Austin, TX (12/2004)
- Invited speaker - University of Texas, Austin, Neuroendocrinology, Austin, TX (12/2004)
- Invited speaker - University of Tokyo, Komaba campus, Tokyo, Japan, (12/2004)
- Invited speaker - University of Tokyo, Hongo campus, Tokyo, Japan (12/2004)
- Invited Speaker and US delegate to the Ministry of the Environment, Japan, 7th International Symposium on Environmental Endocrine Disrupters, Nagoya, Japan (12/2004)

2005

- Invited Speaker, 1st International Conference on the Promotion of Xenopus Functional Genomics, Okazaki, Japan (01/2005)
- Invited Keynote Speaker, 8th Vitamin K and Bone Meeting, Tokyo, Japan (02/2005)
- Invited speaker, Department of Defense, ERA of Hope symposium, Philadelphia, PA (06/2005) (lecture given in my place by Project Scientist Dr. Michelle Tabb)
- Invited Speaker, “Forum on Endocrine Disrupting Chemicals” at the 87th Annual Meeting of The Endocrine Society, San Diego, CA (06/2005)
- Invited Speaker, JRC/EOHSI workshop entitled “Modifiers of Chemical Toxicity: Implications for Human Health Risk Assessment”, Poros/Athens Greece (06/2005)
- Invited Plenary Lecturer, "International Conference on the Promising Next Generation Technology of Toxicogenomics in Drug & Food Safety and Environmental Human Health" – 2nd annual meeting of the Korean Society of Toxicogenomics and Toxicoproteomics, Seoul, Korea (10/2005)
- Invited Speaker, "Toxicogenomics: Promising Next Generation Technology of Safety Evaluation for Human Health" Muju, Korea (11/2005)
- Invited Speaker, Eisai Symposium in Molecular Biology, Tokyo, Japan (11/2005)
- Invited Speaker, National Institute of Health Sciences, Tokyo, Japan (11/2005)
- Invited Speaker, Osaka University, Osaka, Japan (11/2005)
- Invited Speaker, Tohoku Medical School, Sendai, Japan (11/2005)
- Invited Speaker, Institute for Development, Aging and Cancer, Tohoku University, Sendai, Japan (11/2005)
- Invited Special Lecture, 3rd Research Conference in Genomic Medicine Frontier Symposium - Institute of Genomic Medicine, Saitama University Medical School, Saitama, Japan (11/2005)

2006

- Invited Speaker, Omix Informatics Symposium, Tokyo, Japan (03/2006)
- Invited Lecturer, Special Course in Omics-Based Medicine, Tokyo Medical and Dental University, Tokyo, Japan (3/2006)
- Invited Plenary Lecturer - International Workshop on the Latest Concepts in Developmental Biology, Los Cocos, Cordoba, Argentina (04/2006)
- Invited speaker, 11th International Xenopus meeting, Kazusa, Tokyo, Japan (09/2006)
- Invited speaker, Boston University, Boston, MA (11/2006)
- Invited panelist, Johns Hopkins University Genetics and Public Policy Center, Genetic Perspectives on Policy Series, National Press Club, Washington, DC (12/2006)

2007

- Invited speaker – University of California, Riverside, CA (01/2007)
- Invited speaker – Center for Reproduction of Endangered Species, San Diego Zoo, San Diego, CA (02/07)
- Invited speaker – AAAS Annual Meeting, San Francisco, CA (02/2007)
- Invited speaker – Endocrine Society, Toronto, Canada (06/2007)
- Invited speaker – International Union of Toxicology, Montreal, Canada (07/2007)
- Invited speaker – 5th International Symposium on the Developmental Origins of Health and Disease, Perth, Australia (11/07)
- Invited speaker – Nutritional Sciences Symposium, University of California, Irvine, CA (11/2008)

2008

- Invited Speaker – University of Bergen, Bergen, Norway (02/2008)
- Invited Speaker – University of Victoria, Victoria, British Columbia, Canada (04/2008)
- Invited Speaker – University of Alabama, Birmingham, AL (04/2008)
- Invited Speaker – Healthy Environment Forum, Oregon Environmental Council, Portland, OR (04/2008)
- Invited Speaker – 16th European Congress on Obesity, Geneva, Switzerland (05/2008)
- Invited Speaker – 35th Annual Meeting of Japanese Society of Toxicology, Tokyo, Japan (06/2008)
- Invited Speaker – 73rd Annual Symposium of the Florida Dietetic Association, Boca Raton, FL (07/2008)
- Invited Speaker – 12th Annual Xenopus Meeting, Mosel, Germany, (09/2008)
- Invited Speaker – Nuclear Receptors as molecular sensors and transcriptional regulators, Bergen Norway (09/2008)
- Invited Speaker – Nuclear Receptors, Hidalgo Conference, Saitama University Medical School, Saitama, Japan (10/2008)
- Invited Speaker – National Institute of Natural Sciences, Okazaki, Japan (10/2008)
- Invited Speaker - Chem-Bioinformatics Annual Meeting 2008 – Tokyo Japan (10/2008)
- Invited Speaker – Green Chemistry – Irvine, CA (11/2008)

2009

- Invited Speaker – LifeChips, U.C. Irvine (02/2009)
- Invited Speaker – Grand Rounds, Center for Occupational and Environmental Health, U.C. Irvine (04/2009)

- Invited participant - Managing Contaminants of Emerging Concern in California: A Workshop to Develop Processes for Prioritizing, Monitoring, and Determining Thresholds of Concern” – Santa Ana, CA (04/2009)
- Invited Panelist – Collaborative on Health and Environment Partnership on metabolic syndrome (05/2009)
- Invited Speaker - Green Chemistry & Environmental Health: Science Innovation for the 21st Century, Erice International Seminars on Planetary Emergencies – Erice, Italy (08/2009)
- Invited Keynote Speaker - 26th Annual “Current Advances in Pediatrics” Conference, Newport Beach, CA (10/2009)
- Invited panelist – “Environmental Toxins & Human Health” – Sustainable Novato/Marin community foundation (10/2009)
- Invited Speaker – “PPTOX II: Role of Environmental Stressors in the Developmental Origins of Disease” – Miami, FL (12/2009)

2010

- Invited panelist - Healthy People 2010, Loma Linda, CA (03/2010).
- Invited speaker - Nutracon 2010, Anaheim, CA (03/2010).
- Invited Speaker – American Academy of Dermatology National Meeting – Miami, FL (03/2010).
- Invited Speaker - Grand Rounds, Division of Endocrinology, U.C. Irvine (03/2010).
- Invited Speaker – Gordon Research Conference on Environmental Endocrine Disrupters – Les Diablerets, Switzerland (06/2010).
- Invited Speaker - University of Uppsala, Sweden (06/2010).
- Invited Speaker - University of California, Berkeley (06/2010)
- Invited Speaker - Division of Environmental Justice, Office of the Attorney General, California, Oakland, CA (06/2010)
- Invited Speaker - The 12th Asian-Pacific Congress of Clinical Biochemistry, Seoul Korea (10/2010)
- Invited Speaker - Saitama University Medical School, Research Center for Genomic Medicine, Saitama, Japan (10/2010)
- Invited Speaker - National Academy of Sciences Workshop on Emerging Science for Environmental Health Decisions - Use of In Utero and Post-Natal Indicators to Predict Health Outcomes later in Life, Washington, DC (10/2010).
- Invited Speaker - Citizens Water Advocacy Group, Verde Watershed Association "Forum on the Recharge of Treated Wastewater to Groundwater: A Good Idea?", Prescott, AZ, (11/2010).
- Invited Speaker - University of Kentucky, (12/2010).
- Invited Speaker - University of Kentucky Superfund Workshop (12/2010).

2011

- Invited Speaker - National Toxicology Program Workshop: Role of Environmental Chemicals in the Development of Diabetes and Obesity, Raleigh, NC (01/2011)
- Invited Speaker - Congress on Steroid Research, Chicago, IL (03/2011)
- Invited Speaker - Green Chemistry and Environmental Health Sciences: Tools and Guidelines for Next Generation Materials, San Francisco, CA (03/2011)
- Invited Speaker - 6th Copenhagen Workshop on Endocrine Disrupters, Copenhagen Denmark (04/2011).
- Invited Speaker - U.S. Environmental Protection Agency, Chapel Hill, NC (05/2011).

- Invited Speaker - European Obesity Society Annual Meeting, Istanbul, Turkey (05/2011).
- Invited Speaker - University of Athens, Athens, Greece (05/2011).
- Invited Speaker - 5th International Conference on Green and Sustainable Chemistry, Washington, DC (06/2011).
- Invited Speaker - Endocrine Society Annual Meeting, Boston, MA (06/2011).
- Invited Speaker - "State of the Art lecture" - Teratology Society Annual Meeting, San Diego, CA (06/2011)
- Invited Speaker and Panelist - 6th Biennial Childhood Obesity Conference, San Diego, CA (06/2011).
- Invited Speaker and Panelist - Centers for Disease Control Workshop on Putting Scientific Evidence into Public Health Practice: Identifying Opportunities for Cancer Prevention During Pre-Adolescence and Adolescence, Atlanta, GA (08/2011).
- Invited Speaker - International Workshop on Endocrine Disrupting Chemicals, Montalbano, Elicona, Messina, Italy (09/2011)
- Invited Speaker - 7th World Congress on the Developmental Origins of Health and Disease, Portland, OR (09/2011).
- Invited Speaker - University of Illinois, Champaign Urbana (10/2011).
- Invited Speaker - Society of Environmental Journalists, Miami, FL (10/2011).
- Invited Speaker - Grand Rounds - Charlotte Promersberger Johnson Lectureship, Medical College of Wisconsin, Milwaukee, WI (10/2011) Invitation declined due to scheduling conflict.
- Invited Speaker - Colby College, Waterville, ME (10/2011).
- Invited Keynote Speaker - "Chemicals, Obesity and Diabetes: How Science Leads Us to Action", Colby College, Waterville, ME (10/2011).
- Invited Keynote speaker - University of Cincinnati - Breast Cancer and the Environment Research Programs (11/2011).
- Invited speaker - Harvard School of Public Health, Boston, MA (12/2011).
- Invited speaker - German Research Center for Environmental Health, Helmholtz Zentrum München (12/2011).

2012

- Invited Speaker - International Symposium on Nuclear Receptors and Health, University of Tokyo, Tokyo, Japan (01/2012).
- Invited Speaker - University of Tokyo, Tokyo, Japan (01/2012).
- Invited Speaker - Research Center for Genomic Medicine, Saitama University Medical School, Saitama, Japan (01/2012).
- Invited Speaker - National Institutes of Health Sciences, Tokyo, Japan (01/2012).
- Invited Speaker - Environmental Defense Fund Workshop on Epigenetics, San Francisco, CA (02/2012).
- Invited Speaker - Pesticides: Domestic and International Perspectives from Science, Law, and Governance. UC. Irvine (04/2012).
- Invited Keynote Speaker, Grand Rounds - University of Pittsburgh Medical School (04/2012).
- Invited Speaker - PPTOXIII - Paris, France (05/2012)..
- Invited Keynote Speaker - 6th Annual Center of Excellence in Environmental Toxicology (CEET) Symposium, University of Pennsylvania Medical School (06/2012).

- Invited Speaker - International Symposium - "Why are we concerned about endocrine disruptors", Stockholm, Sweden (06/2012).
- Invited Keynote Speaker - 28th International Congress - European Society for Comparative Physiology and Biochemistry, Bilbao Spain (09/2012).
- Invited Speaker - Centre de Recerca en Epidemiologia Ambiental (CREAL), Barcelona, Spain (09/2012).
- Invited Speaker - University of California, Berkeley (09/2012).
- Invited Speaker - University of Rochester (10/2012).
- Invited Speaker - Green Chemistry and Environmental Health Sciences: Tools and Guidelines for Next Generation Materials, Tarrytown, NY (10/2012).
- Invited Speaker - University of Arizona, Tuscon, AZ (10/2012).
- Invited Speaker - 15th International Congress on Hormonal Steroids and Hormones & Cancer, Kanazawa, Japan (11/2012).
- Invited Speaker - National Institute of Natural Sciences, Okazaki, Japan (11/2012)
- Invited Speaker - University of Southern California, Los Angeles, CA (11/2012).
- Invited Speaker - PNRPE (French Endocrine Disruptor Research Programme) "Recent advances on the environmental and health effects of endocrine disruptors", Paris, France (12/2012).
- Invited Keynote Speaker - 15th Society Meeting of the Japan Society of Endocrine Disrupters Research, Tokyo, Japan (12/2012).
- Invited Speaker - Gunma University Graduate School of Medicine, Gunma, Japan (12/2012).
- Invited Speaker - National Institute of Environmental Sciences, Tsukuba, Japan (12/2012).

2013

- Invited Speaker, Environmental Defense Fund Symposium on Toxicity Testing in the 21st Century, Washington, DC (01/2013).
- Invited Speaker - Preventive Medicine 2013 - Annual Conference of the Society for Preventive Medicine, Phoenix, AZ (02/2013).
- Invited Special Keynote Lecture - 83rd Annual Meeting of the Japanese Society for Hygiene, Kanazawa, Japan (03/2013).
- Invited Speaker - Kanazawa University, Kanazawa, Japan (03/2013).
- Invited Speaker - Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan (03/2013)
- Invited Speaker, University of Rochester (04/2013).
- Invited Speaker - 5th International Meeting on Indigenous Child Health - Portland, OR (04/2013).
- Invited Speaker – University of Southern California Center for Diabetes and Obesity Research (04/2013).
- Invited Speaker – Grand Rounds, Medical University of South Carolina, Charlestown, SC (04/2013).
- Invited Speaker - Hollings Marine Laboratory, Medical University of South Carolina, Charleston, SC (04/2013).
- Invited Speaker – Green Chemistry and Engineering Annual Meeting, Washington, DC (06/2013).
- Invited Speaker – American Diabetes Association Annual Meeting, Chicago, IL (06/2013).
- Invited Speaker - 2nd Africa Conference on Epigenetics, Reproduction, Environment, Nairobi, Kenya (08/2013).
- Invited Speaker - Duke University, Durham, NC (09/2013).

- Invited Speaker – Massachusetts General Hospital, Boston, MA (09/2013).
- Invited Speaker - United States Senate, Washington, DC (09/2013)
- Invited Speaker - OBELIX - EU Program on Environmental Chemicals and Obesity, Brussels, Belgium (10/2013).
- Invited Speaker - Institute for Environmental Studies, VU University, Amsterdam, Netherlands (10/2013).
- Invited Speaker - 8th International Congress on Developmental Origins of Health and Disease, Singapore (11/2013).
- Invited Speaker - 58 Annual Meeting of The Argentine Society for Clinic Research, Mar del Plata, Argentina (11/2013).
- Invited Speaker – University of Buenos Aires, Buenos Aires, Argentina (11/2013)
- Invited Keynote Speaker, Annual Meeting of Environment and Health Fund, Tel Aviv, Israel (12/2013).

2014

- Invited Speaker – University of California, Riverside (01/2014).
- Invited Speaker – NIEHS Grantee meeting, Durham, NC (02/2014).
- Invited Speaker – University of Basel, Basel, Switzerland (03/2014).
- Invited Speaker – SAPP/GREEN Toxicology meeting, University Hospital, Zürich, Switzerland (03/2014).
- Invited Speaker – University of Lausanne, Lausanne, Switzerland (03/2014).
- Invited Speaker – University of Geneva, Geneva Switzerland (03/2014).
- Invited Speaker – Society of Toxicology Annual Meeting, Phoenix, AZ (03/2014).
- Invited Speaker – 2014 NIEHS Environmental Health Sciences Core Centers Meeting, Los Angeles, CA (04/2014).
- Invited Speaker – University of California, Davis (04/2014).
- Invited Keynote Speaker – MoLAR, Los Angeles, CA (04/2014).
- Invited Participant – Endocrine Society/European Union meeting on establishing policy for endocrine disrupting chemicals - Paris, France (04/2014).
- Co-chair and session leader – Gordon Research Conference on Environmental Endocrine Disruptors, Barga, Italy (05/2014).
- Invited delegate – Obesity/Diabetes/Metabolic Syndrome and the role of Endocrine Disruptors, University of Parma, Italy (05/2014).
- Invited Speaker – Gordon Research Conference on Environmental Sciences: Water, Holderness, NH (06/2014) Invitation accepted - talk given by postdoctoral fellow Raquel Chamorro Garcia in my place.
- Invited Delegate – Safety of commonly used herbicides - Erice International Seminars on Planetary Emergencies – Erice, Italy (08/2014) Invitation accepted, but meeting was cancelled and rescheduled.
- Invited Speaker – University of North Carolina, Chapel Hill, NC (09/2014).
- Invited Speaker – NIEHS Scientific Advisory Council Meeting, Durham, NC (09/2014).
- Invited Speaker – Annual Meeting of the American Gynecological and Obstetrical Society, Chicago, IL (09/2014).
- Invited Speaker - University of Missouri, Columbia, MO (10/2014).
- Invited Participant – Endocrine Society/European Union meeting on establishing policy for endocrine disrupting chemicals, Amsterdam, Netherlands (10/2014).

- Invited Session Chair – Prenatal Programming and Toxicology IV (PPTOXIV), Boston, MA (10/2014).
- Invited Speaker – International Symposium on Endocrine Disruptors and the Developmental Origins of Health and Disease, Tokyo, Japan (11/2014).
- Invited Speaker – University of Tsukuba, Tsukuba, Japan (11/2014).

2015

- Invited Participant - University of Tsukuba Symposium on Top Global University Project, Tsukuba, Japan (02/2015).
- Invited Speaker - Institute of Medicine/National Academy of Sciences Roundtable on Environmental Health Sciences, Research and Medicine: "The Interplay Between Environmental Factors and Obesity, Durham, NC (03/2015).
- Invited Session Chair - ENDO-2015, Endocrine Society Annual Meeting, San Diego, CA (03/2015).
- Invited Speaker – University of Washington, Seattle, WA (05/2015).
- Invited Participant - EPA/NIEHS Workshop - Strengthening the Scientific Basis for Chemical Safety Assessments, Research Triangle Park, NC (07/2015)
- Invited Speaker - American Association of Naturopathic Physicians Annual Meeting, Oakland, CA (08/2015).
- Invited Delegate – 48th Session of the International Seminars on Planetary Emergencies and Associated Meetings Erice, Italy (08/2015)
- Invited Speaker - Institute of Environmental Assessment and Water Research, Spanish Council for Scientific Research, Dept. of Environmental Chemistry, Barcelona, Spain (09/2015).
- Invited Speaker - 2nd International Workshop on Obesity and Environmental Contaminants, University of Uppsala, Uppsala, Sweden (10/2015).
- Invited Speaker - 1st African Conference on Health Effects of Endocrine Disruptors - Challenges and Opportunities, Kruger National Park, South Africa (10/2015).
- Invited Speaker - 63rd NIBB Conference, Environment to Bioresponses, Okazaki, Japan (11/2015) Invitation accepted.

2016

- Invited Speaker - EPA Temporal Exposures Workshop, Raleigh-Durham, NC (02/2016)
- Invited Speaker - Trans-NIH conference on transgenerational inheritance, Durham, NH (04/2016).
- Invited Speaker - Global Food Summit: From Crisis to Security, University of California, Irvine, CA (05/2016)
- Invited Speaker - Saphier Family Lecture, Women & Infants Hospital, Brown University, Providence, RI (06/2016)
- Invited Speaker - European Obesity Summit, Gothenburg, Sweden (06/2016).
- Invited Speaker - 42nd Annual Summer Meeting of The Toxicology Forum, Salt Lake City, UT (07/2016)
- Invited Speaker - 25 Years of Endocrine Disruptor Research at the NIEHS: Past Lessons and Future Directions (09/2016)
- Invited Speaker - Reproduction, Epigenetics, and Environment Conference, Kenya, Africa (10/2016)
- Invited Speaker - Princess Chulabhorn Science Congress, Bangkok, Thailand (11/2016)

- Invited Speaker - 50th Annual Meeting on Gene Families and Isozymes, San Juan, Puerto Rico (12/2016)

2017

- Invited Speaker - College and Professional Sports Dietetic Association, Scottsdale, AZ (05, 2017)
- Invited Special Lecture - Japan Society of Toxicology, Yokohama, Japan (07/2017)
- Invited Keynote Speaker - Wayne State University, Detroit, MI (10/2017)
- Invited Speaker - INSERM Symposium on DOHaD Research at the Exposome Era, Paris, France (11/2017)
- Invited Participant - Endocrine Disruption Strategies Workshop, Raleigh, NC (12/2017)

2018 (Invitations accepted)

- Invited Speaker - One Health, One Planet Symposium, Phipps Conservatory, Pittsburg, PA (03/2018)
- Invited Speaker - ENDO-2018 100th Annual Meeting of the Endocrine Society, Chicago, IL (03/2018)
- Invited Speaker - 57th Annual Meeting of the Society of Toxicology, San Antonio, TX (03/2018)
- Invited Speaker - 7th Seoul International Congress of Endocrinology and Metabolism, Seoul, Korea (04/2018)
- Invited Speaker - PPTOX-VI, Prenatal Programming and Toxicology, Tórshavn, Faroe Islands, Denmark (05/2018)
- Invited Participant - European Environment Agency workshop, Copenhagen, Denmark (06/2018)
- Invited Speaker - Gordon Research Conference on Environmental Endocrine Disruptors, Les Diablerets, Switzerland (06/2018)
- Invited Speaker - 2018 Africa Conference on Epigenetics/Reproduction and Environment) Nairobi, Kenya (08/2018)
- Invited Speaker - Food Packaging Forum Foundation workshop on “Predicting and ensuring the safety of food contact articles: New science and digital opportunities” Zurich, Switzerland (10/2018)

SERVICE

Service to Professional Societies

- NSF Workshop on Amphibian Malformations - session chair and conference co-organizer (with David M. Gardiner and Ken Muneoka) (11/1998).
- NIH Workshop on Genetic and Genomic Tools for the Zebrafish – Invited Participant (5/1999)
- NIH Workshop on Genetic and Genomic tools for *Xenopus* – invited participant (3/2000)
- Gordon Research Conference on Environmental Endocrine Disruptors – Session Chair (6/2000)
- NIH Workshop on developing *Xenopus tropicalis* as a leading system for genetic studies of vertebrate development – Estes Park, CO, invited participant and discussion leader for genomics (8/2000).
- Environmental Hormones Symposium 2000 – New Orleans, LA - invited discussant (10/2000).
- Session chair - Recent Progress in Endocrine Disruptor Research, 45th International NIBB Conference, Okazaki, Japan (3/2001).

- Co-organizer - Workshop on Development Under Environmental Effects, 14th International Congress of Developmental Biology, Kyoto, Japan (7/2001)
- Session chair – Toxicogenomics International Forum, Tokyo Japan (10/2001)
- Session chair – Toxicogenomics session – International Symposium on Endocrine Disrupting substances Tsukuba, Japan (12/2001)
- DOE Joint Genome Institute – Invited Participant for Strategy Session on sequencing the *Xenopus tropicalis* genome (3/2002)
- Session chair – 9th International Xenopus Meeting, Cambridge, UK (8/2002).
- Session chair – Ecotoxicogenomics , Okazaki, Japan (10/2003)
- Session chair – Keystone Symposium, Orphan Brothers (3/2004)
- Session chair – Toxicogenomics International Forum, Kyoto, Japan (10/2004)
- Session leader – NIEHS/EPA conference “Future Research on Endocrine Disruption: Translation of Basic and Animal Research to Understand Human Disease”, Durham, NC (8/2007)
- Organizing Committee – Chem-Bioinformatics Annual Meeting 2008 – Tokyo Japan 10/2008
- Session chair – Nuclear Receptors and Metabolic Syndrome, Chem-Bioinformatics Annual Meeting, 2008 – Tokyo, Japan 10/2008.
- Organizing Committee – Green Chemistry – Irvine, CA (11/2008).
- Organizing Committee - Congress on Steroid Research - Chicago, IL (03/2011)
- Organizing Committee - Green Chemistry and Environmental Health Sciences: Tools and Guidelines for Next Generation Materials, San Francisco, CA (03/2011)
- Scientific Advisory Committee - PPTOXIII, Paris, France (05/2012)
- Organizing committee - Green Chemistry and Environmental Health Sciences: Building the Path Forward for the Next Generation of Sustainable Chemicals - Tarrytown, NY (10/2012)
- Organizing Committee - Congress on Steroid Research - Chicago, IL (03/2013).
- Co-chair 2014 Gordon Research Conference on Environmental Endocrine Disrupters Barga, Italy (06/2014)
- Scientific Advisory Committee - PPTOXIV, Boston, MA (11/2014).
- Organizing Committee - Endocrine Disruption Strategies Workshop, Raleigh, NC (12/2017)

Service to the scientific community

- Editor of Xine – online Xenopus newsletter (2001-2012)
- DOE-JGI - Steering committee for the sequencing of the *Xenopus tropicalis* genome – member (2002-2010)
- DOE-JGI - Executive committee for the sequencing of the *Xenopus tropicalis* genome – member (2002-2010)
- Scientific Advisory Board, Science Communication Network (2011-present).
- Scientific Advisory Board, TiPED Green Chemistry (2010-present)

Consulting activities

- Scientific Advisory Board, X-Cepto Therapeutics (San Diego, CA) (1999 – 2003)
- Ad hoc consultant, Allergan, Inc (1999-2004)
- Nominated by NSF to serve on the EPA FIFRA Scientific Advisory Panel (2005)

University of California, Irvine Committees (current)

Campus-wide

- Faculty Senate Subcommittee on International Education (09-2017-present)
- Campus Laboratory Safety Committee (09-2017-present)
- Office of Information Technology (Networking and Academic Computing Services) faculty advisory committee (2001-present)

School of Biological Sciences

- Faculty Awards committee (09/2010-08/2013)
- Faculty Research and Travel Committee (09/2014-06/2017)
- Executive Committee of the Faculty (08/2015-09/2017)

Department of Developmental and Cell Biology

- Undergraduate Advisor, Developmental and Cell Biology Major (2004-present)
- Member, departmental senior advisory council (2007-present)
- Member, research and travel grant committee.

Organized research units

- Institute for Genomics and Bioinformatics – track coordinator - Functional Genomics (2003-present)

Other Campus Service

- Minority Bioscience Program - ad hoc advisor/mentor to students, participating in preparation for interviews, qualifying exams and such (2006-present)

University of California, Irvine Committees (past)

- BioSci computer committee – member (1998 – 1999)
- BioSci web site committee – member (2000)
- Executive Committee of the Faculty (2000 - 2001)
- Biomedical engineering facilities committee - member (1999 - 2000)
- Developmental and Cell Biology ad hoc curriculum committee (1998)
- Undergraduate Honors Committee, Developmental and Cell Biology (member 2007-2010)
- Natural Sciences II Planning Committee (2000-2003)
- Planning committee for new Developmental and Cell Biology and Genetics Majors (2003)
- BioSci machine shop committee – chairman (1998-2004)
- BioSci Dean's advisory committee on technology transfer (2000-2004)
- Institute for Genomics and Bioinformatics training grant steering committee (2002-2010)
- BioSci Computer Committee (2004-2006)
- Chou Family Cancer Center Seed Grant Review Committee (2004-2011)
- Developmental Biology Center – committee to evaluate undergraduate training grant applicants (2003)
- Academic Senate Council on Research, Computing and Library Resources (2003-2006)
- Academic Senate Honors Program Advisory Panel (2003-2005)
- School of Biological Sciences - Planning committee for new Developmental and Cell Biology Major – member (2003)
- School of Biological Sciences - planning committee for new Genetics Major member - (2003)
- BioSci Undergraduate Cabinet (2004-2007)
- NACS Telephone advisory committee (2006-2008)
- Academic Senate Council on Student Experience (2006-2008), Chair 2007-2008
- Academic Senate Cabinet 2007-2008

- Mentor, Cross Cultural Center Mentorship program (2006-2008)
- Academic advisor for MBGB program (2006-2008)
- Departmental representative to CMB (MBGB) curriculum committee (2007-2010)
- NACS Electronic Communications Funding Model Review Panel (2008-present)
- Co-Director, Chou Family Cancer Center, Program in the Developmental Biology of Cancer (2004-2011)
- Academic Senate Council on Faculty Welfare (09/2010-08/2013)
- Academic Senate Committee on Committees (09/2014-06/2017)

Other Campus Service (past)

- Environmental Sciences Training grant planning committee (2007)
- Interdisciplinary major in Environmental Sciences, organizing committee (2007)
- Departmental representative to Diversity FTE planning committee (2007)
- Faculty mentor – Cross Cultural Center Mentorship Program (2006-2009)
- Water 2050 IGERT planning committee (2007)
- Chairman – internal review committee for the Institute of Brain Aging and Dementia (2006)
- Stem Cell Research Center – committee to review postdoctoral fellowship applications (08/2006)