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Bob G. Sanders
Professor
Section of Molecular Genetics & Microbiology
School of Biological Sciences
University of Texas at Austin

EDUCATION

1954 B.A. Degree in Biology, Concord College, Athens, WV
1958 M.Ed. Degree in Biological Sciences, Pennsylvania State University, University Park, PA
1961 Ph.D. Degree in Genetics, Pennsylvania State University, University Park, PA
1964-1966 USPHS Postdoctoral Fellow, California Institute of Technology, Pasadena, CA

TEACHING EXPERIENCE

1999-Present Professor, School of Biological Sciences, Section of Molecular Genetics & Microbiology, The University of Texas at Austin
2003-Present Courtesy appointment to the faculty of the Division of Pharmacology & Toxicology, College of Pharmacy, The University of Texas at Austin
1985-1995 Associate Dean for Research and Development, College of Natural Sciences, The University of Texas at Austin
1973-1999 Professor, Department of Zoology (until reorganization into School of Biological Sciences) University of Texas at Austin
1968-1973 Associate Professor, Department of Zoology, The University of Texas at Austin
1966-1968 Assistant Professor, Department of Biology, California Institute of Technology
1964-1966 USPHS Postdoctoral Fellow, California Institute of Technology with Dr. Ray D. Owen
1961-1964 Assistant Professor of Biology, Lafayette College

Undergraduate Courses Taught (current plus 5 previous complete calendar year periods):

Spring 2010: BIO 309F Heredity, Evolution, and Society (49690, 49695, 49700, 49705; total of 89 students); TC 660HB Thesis Course-W (43645) Plan II Thesis Supervisor for Megan Gilbert; TC 660HA Thesis Course (43640) Plan II Second Reader for Jennifer Ginestra

Spring 2009: BIO 309F Heredity, Evolution, and Society (49340, 49345, 49350, 49355; total of 90 students)

Fall 2009: BIO 347 Biology and Genetics of Immune Disorders (51910, 51915, 51920, 51925; total of 89 students); Plan II Thesis Supervisor for Megan Gilbert; Plan II Second Reader for Jennifer Ginestra

Spring 2008: BIO 347 Biology and Genetics of Immune Disorders (52180, 52185, 52190, 52195; total of 80 students.)

Fall 2008: BIO 347 Biology and Genetics of Immune Disorders (52365, 52370, 52375, 52380; total of 80 students)

Spring 2007: BIO 309F Heredity, Evolution, and Society (49790, 49795, 49800, 49805, 49810; total of 85 students)

Fall 2007: BIO 347 Biology and Genetics of Immune Disorders (53370, 53375, 53380, 53385; total of 71 students); BIO 377 Undergraduate research (Courtney Wendel)

Spring 2006: BIO 309F Heredity, Evolution, and Society (48965, 48970, 48975, 48980, 48985)

Fall 2006: BIO 347 Biology and Genetics of Immune Disorders (53205, 53210, 53215, 53220, 53225; total of 103 students)

Spring 2005: BIO 309F Heredity, Evolution, and Society (47640, 47645, 47650, 47655, 47660; total of 84 students); NTR 379H Honors Tutorial Course-W (Lauren Oliver); Lab experience (Ammy Peterson)

Fall 2005: BIO 347 Biology and Genetics of Immune Disorders (50945, 50950, 50955, 50960, 50965; total of 97 students)

Graduate Courses Taught (current plus 5 previous complete calendar year periods):

Spring 2010: MOL 699R (52200) Dissertation (Richa Tiwary); MOL 699W (52215) Dissertation (Sook-Kyung Park)

Summer 2010: MOL W399W (90070) Dissertation (Sook-Kyung Park and Richa Tiwary)

Spring 2009: MOL 592 (52145) Research Problems (Richa Tiwary); MOL 999W (52215) Dissertation (Sook-Kyung Park)

Summer 2009: MOL W392 (89765) Research Problems (Richa Tiwary); MOL W399W Dissertation (Sook-Kyung Park)

Fall 2009: MOL 592 (52890) Research Problems (Richa Tiwary); MOL 699R (52940) Dissertation (Sook-Kyung Park)

Spring 2008: MOL 692 (53320) Research Problems (Sook-Kyung Park); MOL 892 (53330) Research Problems (Richa Tiwary)

Summer 2008: MOL W392 (91555) Research Problems (Sook-Kyung Park)

Fall 2008: BIO 698B (54295) Thesis (Wenwen Sun); MOL 190 (54415) Seminar in Molecular Biology (Sook-Kyung Park); MOL 592 (54440) Research Problems (Richa Tiwary); MOL 892 (54455) Research Problems (Sook-Kyung Park); NTR 999W (57860) Dissertation (Paul Brian Latimer)

Spring 2007: MOL 992 (522765) Research Problems (Sook-Kyung Park); BIO 698A (52615) Thesis (Wenwen Sun)

Summer 2007: BIO W698B (91260) Thesis (Wenwen Sun); NTR W399W (92895) Dissertation (Paul Latimer); BIO S382 (91655) Advanced Study and Research (Richa Tiwary)

Fall 2007: BIO 698B (54295) Thesis (Wenwen Sun); MOL 190 (54415) Seminar in Molecular Biology (Sook-Kyung Park); MOL 592 (54440) Research Problems (Richa Tiwary); MOL 892 (54455) Research Problems (Sook-Kyung Park); NTR 999W (57860) Dissertation (Paul Brian Latimer)

Spring 2006: MOL 999W Dissertation (Rachel Marie Snyder); NTR 999W Dissertation (Paul Brian Latimer); BIO 999W Dissertation (Li Jia, Jeesun Kim, Pei Wang); BIO 382 Advanced Study and Research (Wenwen Sun)

Summer 2006: BIO W382 Advanced Study and Research (Wenwen Sun); W399W Dissertation (Pei Wang, Jeesun Kim, Li Jia); MOL W392 Research Problems (Sook-Kyung Park); MOL W399W Dissertation (Rachel Marie Snyder); W399W Dissertation (Paul Brian Latimer)

Fall 2006: MOL 592 (54255) Research Problems (Sook Kyung Park); NTR 999W (5730) Dissertation (Paul Brian Latimer)

Spring 2005: MOL 698A (50625) Thesis (Shelley Best); NTR 999W (55240) Dissertation (Paul Latimer, Ming-Chieh Shun); MOL 492 (50580) Research Problems (Rachel Synder); BIO 699W (50495) Dissertation (Li Jia, Pei Wang); BIO 399R (50475) Dissertation (Jeesun Kim); BIO 392 (50255) Advanced Study and Research (Hangwen Li, Wei Niu, Wenwen Sun)

Summer 2005: BIO W382 (90505) Advanced Study and Research (Wenwen Sun); BIO W399W (90545) Dissertation (Li Jia, Jeesun Kim, Pei Wang); MOL W392 (91000) Research Problems (Rachel

Snyder); NTR W399R (92360) Dissertation (Paul Latimer; NTR W399W (92375) Dissertation Ming-Chieh Shun)

Fall 2005: BIO 382 (51685) Advanced Study and Research (Wenwen Sun); BIO 699R (51940) Dissertation (Li Jia, Pei Wang); BIO 399W (51935) Dissertation (Jessun Kim); MOL 699R (52090) Dissertation (Rachel Snyder); NTR 392-3 (56380) Nutrition and Cancer (Jocelyn Jones); NTR 999W (56460) Dissertation (Paul Latimer, Ming-Chieh Shun)

Published Articles In Peer-Reviewed Journals:

(Current 10 year period)

- Yu, W., R. Tiwary, J. Li, S- K. Park, L. Jia, M. Simmons-Menchaca, B. G. Sanders, and K. Kline, 2010. α -TEA induces apoptosis of human breast cancer cells via activation of TRAIL/DR5 death receptor pathway. *Molecular Carcinogenesis*. In Press.
- Tiwary, R., W. Yu, J. Li, S- K. Park, B. G. Sanders, and K. Kline. 2010. Role of endoplasmic reticulum stress in α -TEA-mediated TRAIL/DR5 death receptor dependent apoptosis. *PLoS ONE*. Published online July 29, 2010: <http://dx.plos.org/10.1371/journal.pone.00011865>.
- Park, S. K., B. G. Sanders and K. Kline. 2010. Tocotrienols induce apoptosis in breast cancer cell lines via an endoplasmic reticulum stress-dependent increase in extrinsic death receptor signaling. *Breast Cancer Research and Treatment*. DOI 10.1007/s10549-010-0786-2 Published on line 16 February 2010.
- Shun, M-C., W. Yu, S-K. Park, B. G. Sanders and K. Kline. 2010. Downregulation of epidermal growth factor receptor expression contributes to α -TEA's proapoptotic effects in human ovarian cancer cell lines. *Journal of Oncology*. Vol. 2010, Article ID 824571, 11 pages, doi:10.1155/2010/824571.
- Latimer, P., M. Menchaca, R. M. Snyder, W. Yu, B. E. Gilbert, B. G. Sanders and K. Kline. 2009. Aerosol delivery of liposomal formulated paclitaxel and vitamin E analog reduces murine mammary tumor burden and metastases. *Experimental Biology and Medicine*. 234:1244-1252.
- Yu, W., L. Jia, S-K. Park, J. Li, A. Gopalan, M. Simmons-Menchaca, B. G. Sanders and K. Kline. 2009. Anticancer actions of natural and synthetic vitamin E forms: RRR- α -tocopherol blocks the anticancer actions of γ -tocopherol. *Molecular Nutrition and Food Research*. 53: 1573-1581.
- Yu, W., S. K. Park, L. Jia,, R. Tiwary, W. W. Scott, J. Li, P. Wang, M. Simmons-Menchaca, B. G. Sanders and K. Kline. 2008. RRR- γ -tocopherol induces human breast cancer cells to undergo apoptosis via death receptor 5 (DR5)-mediated apoptotic signaling. *Cancer Letters*. 259(2): 165-176.
- Riedel, S. B., S. M. Fischer, B. G. Sanders, and K. Kline. 2008. Vitamin E analog, α -tocopherol ether-linked acetic acid analog, alone and in combination with celecoxib, reduces multiplicity of ultraviolet-induced skin cancers in mice. *Anti-Cancer Drugs*. 19(2): 175-181.
- Snyder, R. M., W. Yu, L. Jia, B. G. Sanders, and K. Kline. 2008. Vitamin E analog α -TEA, methylseleninic acid, and trans-resveratrol in combination synergistically inhibit human breast cancer cell growth. *Nutrition and Cancer*. 60(3): 401-411.
- Wang, P., W. Yu, Z. Hu, L. Jia, V. R. Iyer, B. G. Sanders, and K. Kline. 2008. Involvement of JNK/p73/NOXA in vitamin E analog-induced apoptosis of human breast cancer cells. *Molecular Carcinogenesis*. 47:436-445.
- Yu, W., L. Jia, P. Wang, K. A. Lawson, M. Simmons-Menchaca, S-K. Park, LZ. Sun, B. G. Sanders, and K. Kline. 2008. In vitro and in vivo evaluation of anticancer actions of natural and synthetic vitamin E forms. *Molecular Nutrition and Food Research*. 52: 447-456.
- Jia, L., W. Yu, P. Wang, J. Li, B. G. Sanders, and K. Kline. 2008. Critical roles for JNK, c-Jun and Fas/FasL-signaling in vitamin E analog-induced apoptosis in human prostate cancer cells. *The Prostate*. 68:427-441.
- Jia, L., W. Yu, P. Wang, B. G. Sanders, and K. Kline. 2008. In vivo and in vitro studies of anticancer actions of α -TEA for human prostate cancer cells. *The Prostate*. 68: 849-860.
- Wang, P., L. Jia, B. G. Sanders, and K. Kline. 2007. Liposomal or nanoparticle α -TEA reduced 66cl-4 murine mammary cancer burden and metastasis. *Drug Delivery*. 14 (8):497-505.

- Yu, W., M-C. Shun, K. Anderson, H. Chen, B. G. Sanders, and K. Kline. 2006. α -TEA inhibits survival and enhances death pathways in cisplatin sensitive and resistant human ovarian cancer cells. *Apoptosis*. 11:1813-1823.
- Anderson, K., K. A. Lawson, M. Simmons-Menchaca, L-Z. Sun, B. G. Sanders and K. Kline. 2004. α -TEA plus cisplatin reduces human cisplatin-resistant ovarian cancer cell tumor burden and metastasis. *Experimental Biology and Medicine*. 229:1169-1176.
- Lawson, K.A., K. Anderson, M. Menchaca, J. Atkinson, L-Z. Sun, B. G. Sanders, and K. Kline. 2004. Comparison of vitamin E derivatives, α -TEA and VES in reduction of mouse mammary tumor burden and metastasis. *Experimental Biology and Medicine*. 229: 954-963
- Lawson, K. A., K. Anderson, R. M. Snyder, M. Simmons-Menchaca, J. Atkinson, L-Z. Sun, A. Bandyopadhyay, V. Knight, B. E. Gilbert, B. G. Sanders and K. Kline. 2004. Novel vitamin E analogue and 9-nitro-camptothecin administered as liposome aerosols decrease syngeneic mouse mammary tumor burden and inhibit metastasis. *Cancer Chemotherapy and Pharmacology*. 54:421-431.
- Zhang, S., K. A. Lawson, M. Simmons-Menchaca, L-Z. Sun, B. G. Sanders, and K. Kline. 2004. Vitamin E analog α -TEA and celecoxib alone and together reduce human MDA-MB-435-FL-GFP breast cancer burden and metastasis in nude mice. *Breast Cancer Research and Treatment*. 87: 111-121.
- Anderson, K., M. Simmons-Menchaca, K. A. Lawson, J. A. Atkinson, B. G. Sanders and K. Kline. 2004. Differential response of human ovarian cancer cells to induction of apoptosis by vitamin E succinate and vitamin E analog, α -TEA. *Cancer Research*. 64:4263-4269.
- Shun, M-C., W. Yu, A. Gapor, R. Parsons, J. Atkinson, B. G. Sanders, and K. Kline. 2004. Pro-apoptotic mechanisms of action of a novel vitamin E analog (α -TEA) and a naturally occurring form of vitamin E (δ -tocotrienol) in MDA-MB-435 human breast cancer cells. *Nutrition and Cancer*. 48:95-105.
- Yu, W., B. G. Sanders and K. Kline. 2003. RRR- α -tocopheryl succinate-induced apoptosis of human breast cancer cells involves Bax translocation to mitochondria. *Cancer Research*. 63: 2483-2491.
- Lawson, K.A., K. Anderson, M. Menchaca, J. Atkinson, L-Z. Sun, V. Knight, B. E. Gilbert, C. Conti, B. G. Sanders, and K. Kline. 2003. Novel vitamin E analogue decreases syngeneic mouse mammary tumor burden and reduces lung metastasis. *Molecular Cancer Therapeutics*. 2: 437-444.
- Yu, W., B. G. Sanders and K. Kline. 2002. RRR- α -tocopheryl succinate-induction of DNA synthesis arrest of human MDA-MB-435 cells involves TGF- β independent activation of p21 (Waf1/Cip1). *Nutrition and Cancer*. 43: 227-236.
- You, H., W. Yu, D. Munoz-Medellin, P. H. Brown, B. G. Sanders, and K. Kline. 2002. Role of extracellular signal-regulated kinase pathway in RRR- α -tocopheryl succinate-induced differentiation of human MDA-MB-435 breast cancer cells. *Molecular Carcinogenesis*. 4: 228-236.
- You, H., W. Yu, B. G. Sanders, and K. Kline. 2001. RRR- α -tocopheryl succinate induces MDA-MB-435 and MCF-7 human breast cancer cells to undergo differentiation. *Cell Growth & Differentiation*. 12: 471-480.
- Yu, W., Q. Y. Liao, F. M. Hantash, B. G. Sanders, and K. Kline. 2001. Activation of extracellular signal-regulated kinase and c-Jun-NH2-terminal kinase but not p38 mitogen-activated protein kinases is required for RRR- α -tocopheryl succinate-induced apoptosis of human breast cancer cells. *Cancer Research*. 61: 6569-6576.
- Israel, K., W. Yu, B. G. Sanders, and K. Kline. 2000. Vitamin E succinate (VES) induces apoptosis in human prostate cancer cells: Role for Fas in VES-triggered apoptosis. *Nutrition and Cancer*. 36: 90-100.