**10/18/2024**

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**Education and Training:**

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**UNDERGRADUATE:**

1969-1973 West Virginia Institute of Technology B.S., 1973 Biology

 Montgomery, WV

**GRADUATE:**

1973-1980 West Virginia University Ph.D., 1980 W. Kaczmarczk, Ph.D.

 Morgantown, WV Genetics

**POSTGRADUATE:**

1980-1982 Mayo Foundation Post-Doc Carlo Veneziale, M.D., Ph.D.

 Rochester, MN Biochemistry

1982-1984 Mayo Clinic Post-Doc Henry Homburger, M.D.

 Rochester, MN Clinical Immunology

**Appointments and Positions:**

**ACADEMIC:**

1987-1989 University of Pittsburgh Research Associate in

 Pittsburgh, PA Radiation Oncology

1989-1990 University of Pittsburgh Research Instructor in

 Pittsburgh, PA Radiation Oncology

1990-2000 University of Pittsburgh Research Assistant Professor

 Pittsburgh, PA Research Division

 Radiation Oncology

2000 - 2010 University of Pittsburgh Research Associate Professor

 Pittsburgh, PA Research Division

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2010 – Present University of Pittsburgh Research Professor

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**NON-ACADEMIC:**

1980-1982 Mayo Foundation Postdoctoral Fellow in Cell Biology

 Rochester, MN

1982-1984 Mayo Foundation Special Projects Associate in Clinical Rochester, MN Immunology

1984-1987 Allegheny-Singer Research Foundation Immunochemist

 Pittsburgh, PA

**Memberships In Professional And Scientific Societies:**

American Association of Cancer Research 1989

American Society of Gene Therapy 1998

American Society of Hematology 1995

American Society for Therapeutic Radiology and Oncology 2003

International Society of Hematology 1995

Radiation Research Society 1989

**Honors:**

Alumnus of the year, West Virginia University 1996

Institute of Technology

**Publications:**

***Peer Reviewed Articles:***

1. **Epperly MW**, Donofrio J, Barham S, Veneziale CM. Nuclear protein matrix of seminal vesicle epithelium. J Steroid Biochem 20:691-697, 1984.
2. Veneziale C, **Epperly MW**, Barham S, Norvitch ME, Moore JT. Seminal vesicle epithelial individual cell growth and cell replenishment. In: Control of Growth and Proliferation. Carlo Veneziale (ed), Van Nostrand Reinhold, New York, NY, pp. 1-10, 1984.
3. **Epperly MW**, Barham S, Norvitch M, Holicky E, Moore J, Veneziale CM. The growth of individual seminal vesicle epithelial cells and their proliferation. Proc Soc Exp Biol Med 178:443-456, 1985.
4. **Epperly MW**, Bloomer WD. Systemic radiotherapy using auger and alpha emitting radionuclides. Chemtech 21:744-749, 1991.
5. **Epperly MW**, Damodaran KM, McLaughlin WH, Pillai KMR, Bloomer WD. Radiotoxicity of 17a[125]iodovinyl-11B-methoxyestradiol in MCF-7 human breast cancer cells. J Steroid Biochem Molec Biol 39:729-734, 1992.
6. Papadopoulou MV, **Epperly MW**, Shields DS, Bloomer WD. Radiosensitization and hypoxic cell toxicity of NLA-1 and NLA-2, two new bioreductive compounds. Japanese J Cancer Res 83:410-414, 1992.
7. Prezioso J, **Epperly MW**, Bloomer WD. Effects of tyrosine activity on the cytoxicity of 4-S-cysteaminyl phenol and N-acetyl-4-S-cysteaminyl phenol in melanoma cells. Cancer Letters 63:73-79, 1992.
8. Ranadive GN, Rosenzweig HS, **Epperly MW**, S Bloomer WD. A technique to prepare boronated B72.3 monoclonal antibody for boron neutron capture therapy. Nucl Med Biol 20:1-6, 1993.
9. Ranadive GN, Rosenzweig HS, **Epperly MW**, Sesky T, Bloomer WD. A new method of technetium-99m labelling of monoclonal antibodies through sugar residues. A study with TAG-72 specific CC49 antibody. Nucl Med Biol, 20:719-726, 1993.
10. Koros AMC, Tobin MJ, **Epperly MW**, Levine G, McGinley JR. 186-Rhenium monoclonal antibody targets human small cell lung cancer cells in athymic nude mice: rapid screening model for therapy. Anticancer Res 13:1953-1956, 1993.
11. Damodaran KM, **Epperly MW**, Pillai KMR, Bloomer WD. A facile and improved synthesis of 17a-(2-[E]-{125-I}-iodovinyl)-19-nortestosterone, a no-carrier added ligand for progesterone receptor analyses. J Labelled Compounds Radiopharm 34:17-26, 1994.
12. **Epperly MW**, Deutsch M. 5-Iodo-2-deoxyuridine as cytotoxic chemotherapy and as a possible radiosensitizer in a mouse ovarian ascites tumor model. Radiation Oncol Invest 1:334-338, 1994.
13. Rosenzweig HS, Ranadive GN, Sesky T, **Epperly MW**, Bloomer WD. A novel method for the non-chromatographic purification of technetium-99m-labelled monoclonal antibodies: a study with B72.3 monoclonal antibody. Nucl Med Biol 21:171-178, 1994.
14. Jonnalagadda SS, Mokotoff M, Swanson DP, Brown ML, **Epperly MW**. 111-Indium-labelled laminin peptide fragments as potential diagnostic agents for metastatic cancers. Proc 13th Am Peptide Symp, Peptides: Chemistry, Structure, and Biology. RS Hodges and JA Smith (eds) ESCOM: Leiden, pp. 854-856, 1994.
15. Papdopoulou MV, Miller A, Sesky T, **Epperly MW**, Bloomer WD. Potentiation of antineoplastic drugs in vitro and in vivo by DNA intercalating bioreductive agents. Radiat Oncol Invest 1:206-217, 1994.
16. **Epperly MW**, Santucci MA, Reed J, Shields D, Halloran A, Greenberger JS. Expression of the human BCL-2 transgene increases the radiation resistance of a hematopoietic progenitor cell line. Radiat Oncol Invest 2:77-84, 1994.
17. Kalend AM, Bloomer WD, **Epperly MW**. Dosimetric consequences of 10-B(n,a)7-Li reaction occurring at the cellular membrane. Int J Radiat Oncol Biol Phys 31(1):171-178, 1995.
18. **Epperly MW**, Berry LM, Halloran A, Griffin J, Sherr J, Greenberger JS. Inhibition of G1 phase arrest induced by ionizing radiation in hematopoietic cells by overexpression in genes involved in the G1/S phase transition.  Radiat Res 143:245-254, 1995.
19. Rosenstein M, **Epperly MW**, Hughey R, Prezioso J, Greenberger JS. Overexpression of the gamma glutamyltranspeptidase transgene does not alter the gamma-irradiation sensitivity of the IB3-1 normal bronchoepithelial or A549 human lung carcinoma cell line. Radiat Oncol Invest 3(1):9-16, 1995.
20. Znati C, Rosenstein M, Boucher Y, **Epperly MW**, Bloomer WD, Jain RK. Effect of radiation on interstitial fluid pressure and oxygenation in a human tumor xenograft. Cancer Res 56:964-968, 1996.
21. Greenberger JS, Anderson J, Berry LA, **Epperly MW**, Cronkite EP, Boggs SS. Effects of irradiation of CBA/Ca mice on hematopoietic stem cells and stromal cells in long term bone marrow cultures. Leukemia 10(3):514-527, 1996.
22. Greenberger JS, **Epperly MW**, Zeevi A, Brunson KW, Goltry KL, Pogue-Geile KL, Bray J, Berry LA. Stromal cell involvement in leukemogenesis and carcinogenesis. In Vivo 10:1-18, 1996.
23. Greenberger JS, **Epperly MW**, Jahroudi N, Pogue-Geile KL, Berry LA, Bray J, Goltry KL. Role of bone marrow stromal cells in irradiation leukemogenesis. Acta Haematologica 96:1-15, 1996.
24. Balk ML, Bray J, Day C, **Epperly MW**, Greenberger JS, Evans CH, Niyibize C. Effect of rhBMP-2 on the osteogenic potential of bone marrow stromal cells from an osteogenesis imperfecta mouse (*oim*). Bone 21(1):7-15, 1997.
25. Feero WG, Rosenblatt JD, Huard J, Watkins SC, **Epperly MW**, Clemens PR, Kochanek S, Glorioso JC, Patridge TA, Hoffman EP. Viral gene delivery to skeletal muscle: insights on maturation-dependent loss of fiber infectivity for adenovirus and herpes simplex type I viral vectors. Hum Gene Ther 8:371, 1997.
26. **Epperly MW**, Bray JA, Kraeger S, Zwacka R, Engelhardt J, Travis E, Greenberger JS. Prevention of late effects of irradiation lung damage by manganese superoxide dismutase gene therapy. Gene Ther 5:196-208, 1998.
27. Greenberger JS, Bahri S, Jett J, Belani C, Kalend A, **Epperly MW**. Considerations in optimizing radiation therapy for non-small cell lung cancer. (International Symposium on Thoracic Malignancies). Chest 113(1):465-525, 1998.
28. Zwacka RM, Dudus L, **Epperly MW**, Greenberger JS, Engelhardt JF. Redox gene therapy protects against ionizing radiation-induced apoptosis. Hum Gene Ther 9:1381-1386, 1998.
29. Floyde SS, Clemens PR, Lin P, Day CS, Kochanek S, Ontell MR, Yang J, Hauschka SD, Moreland MS, Morgan J, Feero GW, **Epperly MW**, Huard J. Ex vivo gene transfer using adenovirus-mediated full-length dystrophin delivery to mature dystrophic muscles. Gene Ther 5(1):19-30, 1998.
30. Goltry KL, **Epperly, MW**, Greenberger JS. Induction of serum amyloid A inflammatory response genes in irradiated bone marrow cells. Radiat Res 149(6):570-578, 1998.
31. **Epperly MW**, Bray JA, Krager S, Berry LA, Gooding W, Engelhardt JF, Zwacka R, Travis EL, Greenberger JS. Intratracheal injection of adenovirus containing the human MnSOD transgene protects athymic nude mice from irradiation-induced organizing alveolitis. Int J Radiat Oncol Phys 43(1):169-181, 1999.
32. **Epperly MW,** Bray JA, Carlos TM, Prochownik E, Greenberger JS. Biology of marrow stromal cell lines derived from long-term bone marrow cultures of Trp53-deficient mice. Radiat Res 152:29-40, 1999.
33. **Epperly MW**, Travis EL, Sikora C, Greenberger JS. Magnesium superoxide dismutase (MnSOD) plasmid/liposome pulmonary radioprotective gene therapy: Modulation of irradiation-induced mRNA for IL-1, TNF-, and TGF-ß correlates with delay of organizing alveolitis/fibrosis. Biology of Blood and Marrow Transplantation, 5:204-214, 1999.
34. **Epperly MW**, Bray JA, Esocobar P, Bigbee WL, Watkins S, Greenberger JS. Overexpression of the human MnSOD transgene subclones of murine hematopoietic progenitor cell line 32D cl 3 decreases irradiation-induced apoptosis but does not alter G2/M or G1/S phase cell cycle arrest. Radiat. Oncol. Invest, 7:331-342, 1999.
35. Stickle RL, **Epperly MW**, Klein E, Bray JA, Greenberger JS. Prevention of irradiation-induced esophagitis by intraesophageal plasmid/liposome delivery of the human manganese superoxide dismutase (MnSOD) transgene. Radiat. Oncol. Invest. 7(6):204-217, 1999.
36. **Epperly MW**, Sikora C, Defilippi S, Bray J, Koe G, Liggitt D, Luketich JD, Greenberger JS. Plasmid/liposome transfer of the human manganese superoxide dismutase (MnSOD) transgene prevents ionizing irradiation-induced apoptosis in human esophagus organ explant culture. Radiat Oncol Invest., 90(3):128-137, 2000.
37. Gorbunov N V, Pogue-Geile KL, **Epperly MW,** Bigbee WL, Draviam R, Day BW, Wald N, Watkins SC, Greenberger JS. Role of the nitric oxide synthase 2 pathway in the response of bone marrow stromal cells to high doses of ionizing radiation. Radiat Res, 154: 73-86, 2000.
38. Pruchnic R, Cao BH, Peterson ZQ, Xiao X, Li J, Samulski RJ, **Epperly MW**, Huard J. The use of adeno-associated virus to circumvent the maturation-dependent viral transduction of muscle fibers. Hum Gene Ther, 11:521-536, 2000.
39. Greenberger JS, **Epperly MW,** Luketich J, Gooding W, Belani C. Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) gene therapy protection of the esophagus from chemoradiotherapy damage during treatment of locally unresectable non-small cell lung cancer (NSCLC). Clinical Lung Cancer, 1(4):302-308, 2000.
40. **Epperly MW,** Defilippi S, Sikora C, Gretton J, Kalend K, Greenberger JS. Intratracheal injection of manganese superoxide dismutase (MnSOD) plasmid/liposomes protects normal lung but not orthotopic tumors from irradiation. Gene Ther, 7(12):1011-1018, 2000.
41. **Epperly MW,** Epstein CJ, Travis EL, Greenberger JS. Decreased pulmonary radiation resistance of manganese superoxide dismutase (MnSOD)-deficient mice is corrected by human manganese superoxide dismutase-plasmid/liposome (*SOD2*-PL) intratracheal gene therapy. Radiat. Res., 154(4):365-374, 2000.
42. Pearce LL, **Epperly MW,** Greenberger JS, Pitt B, Peterson J. Identification of respiratory complexes I and III as mitochondrial sites of damage following exposure to ionizing radiation and nitric oxide. Nitric Oxide: Biology and Chemistry, 5(2):128-136, 2001.
43. **Epperly MW**, Kagan VE, Sikora CA, Gretton JE, Defilippi SJ, Bar-Sagi D, Greenberger JS. Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) administration protects mice from esophagitis associated with fractionated irradiation. Int. J. Cancer (Radiat. Oncol. Invest.), 96(4):221-233, 2001.
44. **Epperly MW,** Gretton JA, DeFilippi SJ, Sikora CA, Liggitt D, Koe G, Greenberger JS. Modulation of radiation-induced cytokine elevation associated with esophagitis and esophageal stricture by manganese superoxide dismutase-plasmid/liposome (*SOD*-PL) gene therapy. Radiat. Res., 155:2-14, 2001.
45. **Epperly** MW, Travis EL, Whitsett JA, Epstein CJ, Greenberger JS. Overexpression of manganese superoxide dismutase (MnSOD) in whole lung or alveolar type II (AT-II) cells of MnSOD transgenic mice does not provide intrinsic lung irradiation protection. Radiat. Oncol. Invest., 96:11-21, 2001.
46. Greenberger JS, Kagan VE, Pearce L, Boriseniao G, Tyurina Y, and **Epperly MW**. Modulation of redox signal transduction pathways in the treatment of cancer. Antioxidants Redox Signaling, 3(3):347-359, 2001.
47. **Epperly MW**, Sikora CA, DeFilippi SJ, Gretton JE, Bar-Sagi D, Carlos T, Guo HL, Greenberger JS. Pulmonary irradiation-induced expression of VCAM-1 and ICAM-1 is decreased by MnSOD-PL gene therapy. Biol. Blood Bone Marrow Transplant. Vol. No. 4:175-187, 2002.
48. **Epperly MW**, Sikora C, Defilippi S, Gretton J, Zhan Q, Kufe DW, Greenberger JS. MnSOD inhibits irradiation-induced apoptosis by stabilization of the mitochondrial membrane against the effects of SAP kinases p38 and Jnk1 translocation. Radiation Res. 157:568-577, 2002.
49. Kanai AJ, Zeidel ML, Lavelle JP, Greenberger JS, Birder LA, de Groat WC, Apodaca GL, Meyers SA, Ramage R, VanBibber MM, **Epperly MW**. Manganese superoxide dismutase gene therapy protects against irradiation-induced cystitis. Am. J. of Physiology (Renal Physiology), 44:1152-1160, 2002.
50. **Epperly MW**, Defilippi S, Sikora C, Gretton J, Greenberger JS. Radioprotection of lung and esophagus by overexpression of the human manganese superoxide dismutase transgene. Military Medicine, 167(1): 071, 2002.
51. **Epperly MW**, Guo HL, Jefferson M, Wong S, Gretton J, Bernarding M, Bar-Sagi D, Greenberger JS. Cell phenotype specific duration of expression of epitope-tagged HA-MnSOD in cells of the murine lung following intratracheal plasmid liposome gene therapy. Gen Therapy, 10:163-171, 2003.
52. Guo HL, Seixas-Silva JA, **Epperly MW**, Gretton JE, Shin DM, Greenberger JS. Prevention of irradiation-induced oral cavity mucositis by plasmid/liposome delivery of the human manganese superoxide dismutase (MnSOD) transgene. Radiation Research, 159:361-370, 2003.
53. Guo Hongliang, **Epperly MW**, Bernarding Michael, Nie Suhua, Gretton Joan, Jefferson Mia, and Greenberger Joel S. Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) intratracheal gene therapy reduction of irradiation-induced inflammatory cytokines does not protect orthotopic lewis lung carcinomas. In Vivo, 17:13-22, 2003.
54. Greenberger JS, **Epperly MW**, Gretton J, Jefferson M, Nie S, Bernarding M, Kagan V, Guo HL. Radioprotective gene therapy. Current Gene Therapy, 3:183-195, 2003.
55. Wolfe D, **Epperly MW**, Guo HL, Huang S, Liu K, Glorioso JC, Greenberger J, Blumberg D. Gene transfer of human manganese superoxide dismutase (MnSOD) protects small intestinal villi from radiation injury. SSAT Digestive Disorders, Week of June 7, GI Surgery, 2003.
56. **G**uo HL, Wolfe D, **Epperly MW**, Huang S, Liu K, Glorioso JC, Greenberger JS, and Blumberg D. Gene transfer of human manganese superoxide dismutase protects small intestinal villi from radiation injury. J Gastrointest Surg 7:229-236, 2003.
57. **Epperly MW**, Guo HL, Gretton JE, and Greenberger JS. Bone marrow origin of myofibroblasts in irradiation pulmonary fibrosis. Am J Respir Cell Mol Biol 29:213-224, 2003.
58. Perry Y, **Epperly MW**, Finkelstein S, Klein ED, Greenberger JS, and James Leuketich. An Animal Model of Photodynamic Therapy Induced Proceedings of SPIE Vol 4949 Lasers in Surgery: Advanced Characterization, Therapeutics and Systems XIII, Edited by Lawrence S. Bass, Nikiforos Kollias, Reza S. Malek, Abraham Katzir, Udayan K. Shah, Brian J.F. Wong, Eugene A. Trowers, Timothy A. Woodward, Werner T. W. de Riese, David S. Robinson, Hans-Dieter Reidenbach, Keith D. Paulsen, and Kenton W. Gregory, (SPIE, Bellingham, WA, 2003, pages 395-404
59. **Epperly MW**, Bernarding M, Gretton J, Jefferson M, Nie S, Greenberger JS. Overexpression of the transgene for manganese superoxide dismutase (MnSOD) in 32D cl 3 cells prevents apoptosis induction by TNF-α, IL-3 withdrawal and ionizing irradiation. Experimental Hematology 31 (6):465-474, 2003.
60. **Epperly MW**, Guo HL, Bernarding M, Gretton J, Jefferson M, Greenberger JS. Delayed intratracheal injection of Manganese Superoxide Dismutase (MnSOD)-plasmid/liposomes provides suboptimal protection against irradiation-induced pulmonary injury compared to treatment before irradiation. Gene Ther Mol Biol, 7:61-68, 2003.
61. Cao B. Zheng B. Jankowski RJ. Kimura S. Ikezawa M. Deasy B. Cummins J. **Epperly** M. Qu-Petersen Z. Huard J. Muscle stem cells differentiate into haematopoietic lineages but retain myogenic potential. Nature Cell Biology. 5(7):640-6, 2003*.*
62. **Epperly MW**, Osipov AN, Martin I, Kawai K, Borisenko GG, Jefferson M, Bernarding M, Greenberger JS, Kagan VE. Ascorbate as a “redox-sensor” and protector against irradiation-induced oxidative stress in 32D cl 3 hematopoietic cells and subclones overexpressing human manganese Superoxide Dismutase. IJROBP, 58(3):851-861, 2004.
63. **Epperly MW**, Gretton JE, Bernarding M, Nie S, Rasul B, Greenberger JS. Mitochondrial localization of superoxide dismutase is required for decreasing radiation induced cell damage. Radiation Research 160 (5):568-578, 2003.
64. Kanai A, **Epperly MW**, Pearce L, Birder L, Zeidel M, Meyers S, Greenberger J, deGroat W, Apodaca G, Peterson J. Differing roles of mitochondrial nitric oxide synthase in cardiomyocytes and urothelial cells. Am. J. Physiol. Heart Circ. Physiol. 286:H13-H21, 2004.
65. **Epperly MW**, Hongliang G, Shields D, Zhang X, Flanders K, Lambert P, Greenberger JS. Correlation of ionizing irradiation-induced late pulmonary fibrosis with long-term bone marrow culture fibroblast progenitor cell biology in mice homozygous deletion recombinant negative for endothelial cell adhesion molecules. In Vivo, 18:1-14, 2004.
66. Wolfe D, Wechuck JB, Krisky DM, Goff JP, Goins WF, Ozuer A, **Epperly M**, Greenberger JS, Fink DJ, Glorioso JC. Delivery of herpes simplex virus-based vectors to stem cells. Methods Mol. Biol., 246:339-52, 2004.
67. Greenberger JS, **Epperly MW**. Radioprotective antioxidant gene therapy: potential mechanisms of action. Gene Therapy and Molecular Biology (GTMB), 8:31-44, 2004.
68. Greenberger Joel S, **Epperly Michael W**. Pleiotrophic stem cell and tissue effects of ionizing irradiation protection by MnSOD-plasmid liposome gene therapy. In “Progress in Gene Therapy”, Frank Columbus, Ed., Nova Science Publications.
69. Thomas Sufi M, Zeng Qing, **Epperly Michael**, Gooding William E, Pastan Ira, Greenberger Joel S, Grandis Jennifer Rubin. Abrogation of head and neck squamous cell carcinoma growth by epidermal growth factor receptor ligand fused to Pseudomonas exotoxin transforming growth factor α-PE38. Clinical Cancer Research, 10:7079-7087, 2004..
70. Amundson Sally A, Grace Marcy B, McLeland Christopher B, **Epperly Michael W**, Yeager Andrew, Zhan Qimin, Greenberger Joel S, Fornace Albert J., Jr. Human in vivo radiation-induced biomarkers: gene expression changes in radiotherapy patients. Cancer Research, 64:6368-6371, 2004.
71. **Michael W. Epperly,** Hongliang Guo, Hongmei Shen, Yunyun Niu, XichenZhang, Mia Jefferson, Christine Sikora, Joel S. Greenberger. Bone marrow origin of cells with capacity for homing and differentiation to esophageal squamous epithelium, Radiation Research, 162:233-240, 2004.
72. **Michael W. Epperly,** Hongmei Shen, Mia Jefferson, and Joel S. Greenberger. In Vitro Differentiation capacity of esophageal progenitor cells with capacity for homing and repopulation of the ionizing irradiation-damaged esophagus. In Vivo 18:675-686, 2004.
73. **Epperly MW**, Carpenter M, Agarwal A, Mitra P, Nie S, Greenberger JS. Intra-oral manganese superoxide dismutase plasmid liposome radioprotective gene therapy decreases ionizing irradiation-induced murine mucosal cell cycling and apoptosis. In Vivo, 18:401-410, 2004.
74. Perry Y, **Epperly MW**, Fernando HC, Klein E, Finkelstein S, Greenberger JS, Leuketich JD. Photodynamic Therapy induced esophageal stricture—an animal model: from mouse to pig. J Surgical Res. 123:67-74, 2005
75. Carpenter Matthew, **Epperly Michael W**, Agarwal Anurag, Nie Suhua, Hricisak Lauren, Niu Yunyun, Greenberger Joel S. Inhalation delivery of manganese superoxide dismutase-plasmid/liposomes (MnSOD-PL) protects the murine lung from irradiation damage. Gene Therapy, 12:686-693, 2005.
76. **Epperly Michael W**, Cao Shaonan, Goff Julie, Shields Donna, Zhou Shuanhu, Glowacki Julie, Greenberger Joel. Increased longevity of hematopoiesis in continuous bone marrow cultures and adipocytogenesis in marrow stromal cells derived from SMAD3-/- mice. Experimental Hematology, 33(3): 353-362, 2005.
77. **N**iu Yunyun, Shen Hongmei, **Epperly Michael**, Zhang Xichen, Nie Suhua, Cao Shaonan, and Greenberger Joel S. Protection of Esophageal Multi-lineage progenitors of squamous epithelium (stem cells) from ionizing irradiation by manganese superoxide dismutase-plamsid/liposome (MnSOD-PL) gene therapy. In Vivo 19:965-974, 2005.
78. **Epperly Michael W**, Tyurina Yulia Y, Nie Suhua, Niu Yunyun, Zhang Xichen, Kagan Valerian and Greenberger Joel S. MnSOD-plasmid liposome gene therapy decreases ionizing irradiation-induced lipid peroxidation of the esophagus. In Vivo 19:997-1004, 2005.
79. Lechpammer Stanislav, **Epperly Michael W**, Zhou Shuanhu, Nie Shuna, Glowacki Julie, Greenberger Joel S. Antioxidant pool regulated adipocyte differentiation Sod2-/- bone marrow stromal cells. Experimental Hematology, 33:1201-1208, 2005.
80. Pearce Linda L, Kanai Anthony, **Epperly Michael W**., and Peterson Jim. Nitrosative stress results in irreversible inhibition of purified mitochondrial complexes I and III without modification of cofactors. Nitric Oxide, Biology and Chemistry. 13 (4):254-263, 2005.
81. **Epperly Michael W**, Goff Julie, Zhang Xichen, Shields Donna, Wang Hong, Shen, Hongmei, Franicola Darcy, Bahnson Alfred, Greenberger Emily E, Greenberger Joel S. Increased radioresistance, G2M checkpoint inhibition and impaired migratory capacity of bone marrow stromal cell lines derived from SMAD3-/- mice. Rad Research, 165:671-677, 2006.
82. **Epperly Michael W**, Greenberger Emily E, Franicola Darcy, Jacobs Samuel, Greenberger Joel S. Thalidomide radiosensitization of normal murine hematopoietic but not squamous cell carcinoma or multiple myeloma tumor cell lines. In Vivo, 20:333-340, 2006.
83. **Epperly Michael W,** Francicola Darcy, Zhang Xichen, Nie Suhua, Wang Hong, Bahnson Aflred B, Shields Donna S, Goff Julie P, Shen Hongmei, and Greenberger Joel S. Reduced irradiation pulmonary fibrosis and stromal cell migration in Smad3 -/- marrow chimeric mice. In Vivo, 20:573-582, 2006.
84. **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Nie Suhua, Greenberger Joel S. Effect of EGFR receptor antagonists gefitinib (Iressa) and C225 (Cetuximab) on MnSOD-Plasmid Liposome transgene radiosensitization of a murine squamous cell carcinoma cell line. In Vivo, 20 (6B):791-796, 2006.
85. **Epperly Michael W**, Shields Donna, Franicola Darcy, Zhang Xichen, Cao Shaonan, Carlos Timothy, Greenberger Joel S. Bone marrow from CD18-/- (MAC-1-/-) homozygous deletion recombinant negative mice demonstrates increased longevity in long-term bone marrow culture and decreased contribution to irradiation pulmonary damage. In Vivo, 20:431-438, 2006.
86. Kagan VE, Tyurina YY, Bayir H, Chu CT, Kapralov AA, Vlasova II, Belikova NA, Tyurin VA, Amoscato A, **Epperly M**, Greenberger J, DeKosky S, Shvedova AA and Jiang J. The “pro-apoptotic genies” get out of mitochondria: oxidative lipidomics and redox activity of cytochrome c/cardiolipin complexes. Chemico-Biological Interactions, Vol 163, Issues 1-2, 27 October, 2006 pages 15-28.
87. Greenberger Joel S, **Epperly Michael W**. Antioxidant therapeutic approaches toward amelioration of the pulmonary pathophysiological damaging effects of ionizing irradiation. Current Respiratory Medicine Reviews, 3:29-37, 2007
88. **Epperly, Michael W**, Wegner R, Kanai Anthony J, Kagan Valerian, Greenberger, Emily E, Nie, Suhua, and Greenberger, Joel S. Effects of MnSOD-Plasmid Liposome Gene Therapy on Antioxidant Levels in Irradiated Murine Oral Cavity Orthotopic Tumors. Radiation Research, 167 (3):289-297, 2007.
89. **Epperly Michael W**, Cao Shaonan, Zhang Xichen, Franicola Darcy, Kanai Anthony J, Greenberger Emily E, Epperly Laura D, Greenberger Joel S. Increased longevity of hematopoiesis in continuous bone marrow cultures derived from mtNOS-/- homozygous recombinant negative mice correlates with increased radioresistance of hematopoietic and bone marrow stromal cells. Experimental Hematology, 35 (1):137-145, 2007.
90. Kanai A. Zabbarova I. Amoscato A. Epperly **M**. Xiao J. Wipf P. Mitochondrial targeting of radioprotectants using peptidyl conjugates. Organic & Biomolecular Chemistry. 5(2):307-9, 2007 Jan 21.
91. **Epperly Michael**, Jin ShunQian, Nie Suhua, Cao Shaonan, Zhang Xichen, Franicola Darcy, Fink Mitchell, Greenberger Joel S. Ethyl pyruvate, a potentially effective total body irradiation damage mitigator. Radiation Research 168: 552-559, 2007.
92. **Epperly MW**, Epperly LD, Niu YY, Zhang X, Franicola D, and Greenberger JS. Overexpression of MnSOD transgene product protects cryopreserved bone marrow hematopoietic progenitor cells from ionizing irradiation, Radiation Research 168: 560-566, 2007.
93. Belikova Natalia A, Jiang Jianfei, Tyurina Yulia Y, Zhao Qing, **Epperly Michael W**, Greenberger Joel, Kagan Valerian E. Cardiolipin specific peroxidase reactions of cytochrome c in mitochondria during irradiation induced apoptosis. International Journal of Radiation Oncology, Biology, Physics, 69:176-186, 2007.
94. Niu Yunyun, **Epperly Michael W**, Shen Hongmei, Smith Tracy, Lewis Dale, Gollin Susanne, Greenberger Joel S. Intraesophageal MnSOD-Plasmid Liposome administration enhances engraftment and self-renewal capacity of bone marrow derived progenitors of esophageal squamous epithelium. Gene Therapy, 15:347-356, 2008.
95. Greenberger Joel S, **Epperly Michael W**. Antioxidant gene therapeutic approaches to normal tissue radioprotection and tumor radiosensitization. In Vivo, 21 (2): 141-146, 2007.
96. Jiang J., Belikova N.A., Hoye A.T., Zhao Q., **Epperly M.W**., Greenberger J.S., Wipf P. and Kagan V.E. A mitochondria-targeted nitroxides/hemigramicidin S conjugate protects mouse embryonic cells against gamma irradiation. International Journal of Radiation Oncology, Biology, Physics, 70 (3):816-825, 2008.
97. Tyurin VA, **Epperly Michael W**, Greenberger Joel S, and Kagan Valerian E. Oxidative lipidomics of irradiation-induced intestinal injury. Free Radical Biology and Medicine, 44 (3): 299-314, 2008.
98. Zhou Shuanhu, Greenberger Joel S, **Epperly Michael W**, Goff Julie P, Adler Carolyn, LeBoff Meryl S, and Glowacki Julie. Age-related intrinsic changes in human bone marrow-derived mesenchymal stem cells and their differentiation to osteoblasts. Aging Cell, 7(3):335-343, 2008.
99. Qiu Wei, Carson-Walter Eleanor B, Liu Hongtao, **Epperly Michael**, Greenberger Joel S, Zambetti Gerard P, Zhang Lin, and Yu Jian. Puma regulates intestinal progenitor cell radiosensitivity and gastrointestinal syndrome. Cell Stem Cell 2:576-583, 2008.
100. **Epperly Michael W**, Dixon Tracy, Wang Hong, Schlesselman James, Franicola Darcy, and Greenberger Joel S. Modulation of Total Body Irradiation Induced Life Shortening by Systemic Intravenous MnSOD-Plasmid Liposome Gene Therapy. Radiation Research, 170 (4):437-443, 2008.
101. Zhang Xichen, **Epperly Michael W**, Kay Mark A, Chen Zhi-Ying, Smith Tracey, Franicola Darcy, Greenberger Benjamin A, Komanduri Paavani, Greenberger Joel S. Mini circle plasmid containing the human manganese superoxide dismutase (MnSOD) transgene confers radioprotection in vitro and in vivo. Human Gene Therapy, 19:820-826, 2008.
102. Fujita Takeo, **Epperly Michael W**, Zou Hui, Greenberger Joel S, Wan Yong. Regulation of the anaphase-promoting complex-separase cascade by transforming growth factor-β modulates mitotic progression in bone marrow stromal cells. Molec. Cell Biol., 19:5446-5455, 2008.
103. **Epperly Michael W**, Melendez JA, Zhang Xichen, Nie Suhua, Pierce Linda, Peterson James, Franicola Darcy, Dixon Tracy, Greenberger Benjamin A, Komanduri Paavani, Wang Hong, and Greenberger Joel S. Mitochondrial Targeting of a Catalase Transgene Product by plasmid liposomes increases radioresistance in vitro and in vivo. Rad Res 171:588-595, 2009.
104. Greenberger JS, **Epperly M**. Bone marrow-derived stem cells and radiation response. Semin. Radiat. Oncol., 19:133-139, 2009.
105. Goff Julie P, Shields Donna S, Seki Mineaki, Choi Serah, **Epperly Michael W**, Dixon Tracy, Wang Hong, Bakkenist Christopher J, Dertinger Stephen, Torous Dorothea K, Wittschieben John, Wood Richard D, Greenberger Joel S. Loss of DNA polymerase Ө (POLQ) causes radiosensitization of bone marrow stromal cells in vitro and alters hematopoietic response to irradiation in vivo. Rad. Res., 172:165-174, 2009.
106. **Epperly Michael W**., Rugo Rebecca, Cao Shaonan, Wang Hong, Franicola Darcy, Goff Julie P, Shen Hongmei, Zhang Xichen, Wiktor-Brown Dominika, Engelward Bevin, and Greenberger Joel S. Investigation of the effects of aging on homologous recombination in long-term bone marrow cultures. In Vivo, 23:669-678, 2009.
107. Jiang Jianfei, McDonald Peter, Dixon Tracy M, Franicola Darcy, Zhang Xichen, Nie Suhua, Epperly Laura D, Kagan Valerian E, Lazo John S, **Epperly Michael W**, Greenberger Joel S. Synthetic protection short interfering RNA screen reveals glyburide as a novel radioprotector. Rad. Res. 172 (4):414-422, 2009.
108. Rajagopalan Malolan S, Gupta Kanika, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Wang Hong, Zhao Hong, Tyurin Vladimir A, Kagan Valerian E, Wipf Peter, Kanai Anthony, and Greenberger Joel S. The mitochondria-targeted nitroxide JP4-039 augments potentially lethal irradiation damage repair. In Vivo 23:717-726, 2009.
109. Tyurina YY, Tyurin Vladimir A, Kapralova Valentina I, Amoscato Andrew A, **Epperly Michael W**, Greenberger Joel S, and Kagan Valerian E. Mass-spectrometric characterization of phospholipids and their hydroperoxide derivatives in vivo: effects of total body irradiation, Methods in Molecular Biology, 580:153-83, 2009.
110. Pearce Linda L, Martinez-Bosch Sandra, Manzano Elisenda Lopez, Winnica Daniel E, **Epperly Michael W**, and Peterson Jim. The resistance of electron-transport chain Fe-S clusters to oxidative damage during the reaction of peroxynitrite with mitochondrial complex II and rat-heart pericardium. Nitric Oxide, 20 (3):135-42, 2009.
111. Sahu RP, **Epperly MW**, and Srivastava SK. Benzyl isothiocyanante sensitizes human pancreatic cancer cells to radiation therapy. Frontiers in Bioscience, 1:568-576, 2009.
112. **Epperly MW**, Lai Sy, Kanai AJ, Mason N, Lopresi B, Dixon T, Franicola D, Niu Y, Wilson WR, and Greenberger JS. Effectiveness of combined modality radiotherapy of orthotopic human squamous cell carcinomas in Nu/Nu mice using cetuximab, tirapazamine and MnSOD-plasmid liposome gene therapy. In Vivo, 24(1):1-8, 2010.
113. **Epperly MW**, Franicola D, Shields D, Rwigema JC, Stone B, Zhang X, McBride W, Geroges G, Wipf P, and Greenberger JS. Screening of antimirorbial agents for in vitro radiation protection and mitigation capacity, including those used in supportive care regimens for bone marrow transplant recipients. In Vivo 24(1):9-19, 2010.
114. Niu Y, Wang H, Wiktor-Brown D, Rugo R, Shen H, Hug MS, Engelward B, **Epperly M**, and Greenberger JS. Irradiated esophageal cells are protected from radiation-induced recombination by MnSOD gene therapy. Radiation Research 173(4):453-461, 2010.
115. Gokhale A, Rwigema JC, **Epperly MW**, Glowacki J, Wang H, Wipf P, Goff JP, Dixon T, Patrene K, and Greenberger JS. Small molecule GS-nitroxide ameliorates ionizing irradiation-induced delay in bone wound healing in a novel murine model. In Vivo 24:377-386, 2010.
116. Rajagopalan MS, Stone B, Rwigema JC, Salimi U, **Epperly MW**, Goff J, Franicola D, Dixon T, Cao S, Zhang X, Buchholz BM, Bauer AJ, Bakkenist C, Wang H, and Greenberger JS. Intraesophageal manganese superoxide dismutase-plasmid liposomes ameliorates novel total-body and thoracic radition sensitivity of NOS1-/- Mice. Radiation Research, 174 (3):297-312, 2010.
117. Eghtesad S, Zheng H, Nakai H, **Epperly MW**, and Clemens PR. Effects of irradiating adult mdx mice before full-length dystrophin cDNA transfer on host anti-dystrophin immunity. Gene Therapy 17:1181-1190, 2010.
118. **Epperly Michael W**, Rwigema Jean-Claude M, Li Song, Gao Xiang, Wipf Peter, Goff Julie, Wang Hong, Franicola Darcy, Shen Hongmei, Kagan Valerian, Bernard Mark, and Greenberger Joel S. Intraesophageal administration of GS-nitroxide (JP4-039) protects against ionizing irradiation-induced esophagitis. In Vivo, 24(6):811-821, 2010.
119. Tarhini AA, Belani CP, Luketich JD, Argiris A, Ramalingam SS, Gooding W, Pennathur A, Petro D, Kane K, Liggitt D, Champiousmith T, Zhang X, **Epperly MW**, and Greenberger JS. A phase I study of concurrent chemotherapy (paclitaxel and carboplatin) and thoracic radiotherapy with swallowed manganese superoxide dismutase (MnSOD) plasmid liposome (PL) protection in patients with locally advanced stage III non-small cell lung cancer. Human Gene Therapy 22:336-342, 2011.
120. Mustata G, Li M, Zevola N, Bakan A, Zhang L, **Epperly M**, Greenberger JS, Yu J, and Bahar I. Development of small-molecule PUMA inhibitors for mitigating radiation-induced cell death. Current Topics in Medicinal Chemistry 11:281-290, 2011.
121. Koide K, Song F, Garner AL, Greenberger JS, and **Epperly MW**. The use of 3,5,4’-Tri-O-acetylresveratrol as a potential pro-drug for Resveratrol protects mice from γ-irradiation-induced death. ACS Med Chem Lett, 2:270-274, 2011.
122. **Epperly Michael W**, Smith Tracy, Zhang Xichen, Greenberger Benjamin, Komanduri Paavani, Wang Hong, and Greenberger Joel S. Modulation of in utero total body irradiation induced newborn mouse growth retardation by maternal manganese superoxide dismutase-plamid liposome (MnSOD-PL) gene therapy. Gene Therapy, 18:579-583, 2011.
123. Jahnukainen Kirsi, Ehmcke Jens, Quader Mubina A, Huq M Saiful, **Epperly Michael W**, Hergenrother Scott, Murmio Mirja, and Schlatt Stefan. Testicular recovery after irradiation differs in prepubertal and pubertal non-human primates, and can be enhanced by autologous germ cell transplantation. Human Reproduction, 2011.
124. **Epperly Michael W**, Wang Hong, Jones Jeffrey A, Dixon Tracy, Montesinos Carlos A, and Greenberger Joel S. Antioxidant-Chemoprevention diet ameliorates late effects of total-body irradiation and supplements radioprotection by MnSOD-plasmid liposome administration. Radiation Research, 175:759-765, 2011.
125. Goff Julie P, **Epperly Michael W**, Shields Donna, Wipf Peter, Dixon Tracy, and Greenberger Joel S. Radiobiologic effects of GS-nitroxide (JP4-039) in the hematopoietic syndrome. In Vivo, 25:315-324, 2011.
126. Tyurina Yulia Y, Tyurin Vladimir A, Kapralova Valentyna I, Wasserloos Karla, Mosher Mackenzie, **Epperly Michael**, Greenberger Joel, Pitt Bruce R, and Kagan Valerian E. Oxidative lipidomics of γ-irradiation induced lung injury: Mass-spectrometric characterization of cardiolipin and phosphatidylserine peroxidation. Rad. Res., 175:610-621, 2011.
127. Rwigema Jean-Claude M, Beck Barbara, Wang Wei, Doemling Alexander, **Epperly** **Michael W**, Shields Donna, Goff Julie P, Franicola Darcy, Dixon Tracy, Frantz Marie-Celine, Wipf Peter, Tyurina Yulia, Kagan Valerian E, Wang Hong, and Greenberger Joel S. Two strategies for the development of mitochondrion-targeted small molecule radiation damage mitigators. Int J Radiation Oncology Biol Phys, 80:860-868, 2011.
128. Tai Hao-Chih, Zhu Xiaocheng, Lin Yih Jyh, Hara Hidetaka, **Epperly Michael W**, Quader Mubina, and Cooper David K. Attempted depletion of passenger leukocytes by irradiation in pigs, Journal of Transplantation, 2011:Article ID928759, doi:10.1155/2011/928759.
129. Atkinson Jeffery, Kapralov Alexandr A, Yanamala Naveena, Tyurina Yulia Y, Amoscato Andrew A, Pearce Linda, Peterson Jim, Huang Zhentai, Jiang Jianfei, Samhan-Arias Alejandro K, Maeda Akihiro, Feng Weihong, Wasserloos Karla, Belikova Natalia A, Tyurin Vladimir A, Wang Hong, Fletcher Jackie, Wang Yongsheng, Vlasova Irina I, Klein-Setharaman Judith, Stoyanovsky Detcho A, Bayir Hulya, Pitt Bruce R, **Epperly Michael W**, Greenberger Joel S, and Kagan Valerian V. A mitochondria-targeted inhibitor of cytochrome c peroxidase mitigates radiation-induced death, Nature Communications, 2:497 doi:10.1038/ncomms1499, 2011.
130. Kim H, Bernard ME, Flickinger Jr. J, **Epperly MW**, Wang H, Dixon TM, Shields D, Houghton F, Zhang X, and Greenberger JS. The autophagy-inducing drug carbamazepine is a radiation protector and mitigator, Int J Radiat Biol 87 (10):1052-1060, 2011.
131. Stoyanovsky Detcho A, Huang Zhentai, Jiang Jianfei, Belikova Natalia A, Tyurin Vladimir, **Epperly Michael W**, Greenberger Joel S, Bayir Hulya, and Kagan Valerian E. A manganese-porphyrin complex decomposes hydrogen peroxide, compartmentalizes into mitochondria, inhibits apoptosis, and acts as a radiation mitigator in vivo. J.ACS Medicinal Chemistry Letters, 362:21-34, 2011.
132. Bernard Mark E, Kim Hyun, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Houghton Frank, Shields Donna, Wang Hong, Bakkenist Christopher J, Frantz Marie-Celine, Wipf Peter, Greenberger Joel S. GS-nitroxide (JP4-039) mediated radioprotection of human Fanconi Anemia cell lines. Radiation Research, 176:603-612, 2011.
133. Kim Hyun, Bernard Mark E, **Epperly Michael W**, Shen Hongmei, Amoscato Andrew, Dixon Tracy M, Doemling Alexander S, Li Song, Gao Xiang, Wipf Peter, Wang Hong, Zhang Xichen, Kagan Valerian E, and Greenberger Joel S. Amelioration of radiation esophagitis by orally administered p53/mdm2/mdm4 inhibitor (BEB55) or GS-Nitroxide. In Vivo, 25(6):841-849, 2011.
134. Bernard Mark E, Kim Hyun, Hebist Berhane, Rwigema Jean-Claude, **Epperly Michael W**, Kelley Eric E, Murdoch Geoffery H, Dixon Tracy, Wang Hong, and Greenberger Joel S. Role of the esophageal vagus neural pathway in ionizing irradiation-induced seizures in Nitric Oxide Synthase-1 homologous recombination negative NOS1-/- mice. In Vivo, 25(6):861-870, 2011.
135. Bernard Mark E, Kim Hyun, Rajagopalan Mallan S, Stone Brandon, Salimi Umar, Rwigema Jean-Claude, **Epperly Michael W**, Shen Hongmei, Goff Julie, Franicola Darcy, Dixon Tracy, Cao Shaonan, Zhang Xichen, Reynolds Susan D, Wang Hong, Stolz Donna B, and Greenberger Joel S. Repopulation of the irradiation damaged lung with marrow derived cells. In Vivo, 26:9-18, 2012.
136. Greenberger Joel S, Kagan Valerian, Bayir Hulya, Lazo John, Wipf Peter, Li Song, Gao Xiang, Clump David, and Epperly Michael W. Mitochondrial targeted small molecule radiation protectors and radiation mitigators. Frontiers in Radiation Oncology, 1 (article 59):1-12, 2012.
137. O'Sullivan R, Greenberger JS, Goff J, Cao S, Kingston KA, Zhou S, Dixon T, Houghton FD, **Epperly MW**, Wang H, Glowacki J. Dysregulated in vitro hematopoiesis, radiosensitivity, proliferation, and osteoblastogenesis with marrow from SAMP6 mice. Exp Hematol. 40:499-509, 2012.
138. Pearce Linda L, Zhang Xichen, Martinez-Bosch Sandra, Kerr Patrick P, Khlangwiset Pornsri, **Epperly Michael W**, Fink Mitchell P, Greenberger Joel S, and Peterson Jim. L-arginine is a radioprotector for hematopoietic progenitor cells. Radiation Research, 177 (6):792-803, 2012.
139. Manni ML, **Epperly MW**, Han W, Blackwell TS, Duncan SR, Piganelli JD, and Oury TD. Leukocyte-derived extracellular superoxide dismutase does not contribute to airspace EC-SOD after interstitial pulmonary injury. American Journal of Physiology-Lung Cellular & Molecular Physiology, 302 (1):L160-L166, 2012.
140. Zellefrow CD, Sharlow ER, **Epperly MW**, Reese CE, Shun T, Lira A, Greenberger JS, and Lazo JS. Identification of druggable targets for radiation mitigation using a small interfering RNA screening assay. Radiation Research, 178 (3):150-159, 2012.
141. **Epperly MW**, Bahary N, Quader M, Dewald V, and Greenberger JS. The zebra fish-Dano rerio-is a useful model for measuring the effects of small molecule mitigators of late effects of ionizing irradiation. In Vivo 26(6):889-897, 2012.
142. Greenberger Joel S, Kagan Valerian, Bayir Hulya, Lazo John, Wipf Peter, Li Song, Gao Xiang, Clump David, and **Epperly Michael W**. Mitochondrial targeted small molecule radiation protectors and radiation mitigators. Frontiers in Radiation Oncology, 1 (article 59):1-12, 2012.
143. Samhan-Arias AK, Ji J, Demidova OM, Sparvero LJ, FengW, Tyurina YY, **Epperly MW**, Shvedova AA, Greenberger JS, Bayir H, Kagan VE, and Amoscato AA. Oxidized phospholipids as biomarkers of tissue and cell damage with a focus on cardiolipin. Biochimica et Biophysica Acta. 1818 (10): 2413-2423, 2012.
144. Miao Weimin, Feng Richard Xu, Park Moo-Rim, Gu Haihui, Hu Linping, Kang Jin Wook, Ma Shihui, Liang Paulina H, Li Yanxin, Cheng Haizi, Yu Hui, **Epperly Michael**, Greenberger Joel, and Cheng Tao. Hematopoietic stem cell regeneration enhanced by ectopic expression of ROS-detoxifying enzymes in transplant mice. Molecular Therapy, 21(2):423-432, 2013.
145. Frantz Marie-Celine, Skoda EM, Sacher JR, **Epperly Michael W**, Goff Julie P, Greenberger JS, and Wipf P. Synthesis of analogs of the radiation mitigator JP4-039 and visualization of BODIPY derivatives in mitochondria. Organic & Biomolecular Chemistry, 11(25):4147-4153, 2013. PMID:23715589.
146. Nasto LA. Wang D. Robinson AR. Clauson CL. Ngo K. Dong Q. Roughley P. **Epperly M.** Huq SM. Pola E. Sowa G. Robbins PD. Kang J. Niedernhofer LJ. Vo NV. Genotoxic stress accelerates age-associated degenerative changes in intervertebral discs. Mechanisms of Ageing & Development. 134(1-2):35-42, 2013.
147. Kalash R, Berhane H, Goff J, Houghton F, **Epperly MW**, Dixon T, Zhang X, Sprachman MM, Wipf P, Franicola D, Wang H, and Greenberger JS. Effects of thoracic irradiation on pulmonary endothelial compared to alveolar type-II cels in fibrosis-prone C57BL/6NTac mice. In Vivo, 27:291-297, 2013.
148. **Epperly MW**, Chaillet JR, Kalash R, Shaffer B, Goff J, Franicola D, Zhang X, Dixon T, Houghton F, Wang H, Berhane H, Romero C, Kim JH, and Greenberger JS. Conditional radioresistance of tet-inducible manganese superoxide dismutase bone marrow stromal cell lines. Radiat Res 180:189-204, 2013.
149. Gomez-Casal R, Bhattacharya C, Ganesh N, Bailey L, Basse P, Gibson M, **Epperly M**, and Levina V. Non-small cell lung cancer cells survived ionizing radiation treatment display cancer stem cell and epithelial-meschymal transition phenotypes. Molecular Cancer **12**:94 doi:10.1186/1476-4598-12-94 2013.
150. **Epperly M**, Berhane H, Cao S, Shields D, Franicola D, Goff J, Zhang X, Wang H, Friedlander R and Greenberger JS. Increased longevity of hematopoiesis in continuous marrow cultures and radiation resistance of marrow stromal and hematopoietic progenitor cells from caspase-1 homozygous recombinant-negative (knockout) mice. In Vivo 27:419-430, 2013.
151. Berhane H, **Epperly MW**, Cao S, Goff JP, Franicola D, Wang H, and Greenberger JS. Radioresistance of bone marrow stromal and hematopoietic progenitor cell lines derived from Nrf2 -/- homozygous deletion recombinant-negative mice. In Vivo 27:571-582, 2013.
152. Kalash R, **Epperly MW**, Goff J, Dixon T, Sprachman MM, Zhang X, Shields D, Cao S, Franicola D, Wipf P, Berhane H, Au J, and Greenberger JS. Amelioration of Irradiation Pulmonary Fibrosis by a Water-Soluble Bi-functional Sulfoxide Radiation Mitigator (MMS350). Radiation Research 180:474-490, 2013.
153. Gao X, Huang Y, Makhov AM, **Epperly M**, Lu J, Grab S, Zhang P, Rohan L, Xie XQ, Wipf P, Greenberger J, Li S. Nanoassembly of surfactants with interfacial drug-interactive motifs as tailor-designed drug carriers. Molecular Pharmaceutics. 10 (1):187-198, 2013
154. Lazo JS, Sharlow ER, **Epperly MW**, Sharlow, Lira A, Leimgruber S, Skoda EM, Wipf P, and Greenberger JS. Pharmacologic profiling of phosphoinositide 3-kinase inhibitors as mitigators of ionizing radiation-induced cell death. Journal of Pharmacology and Experimental Therapeutics, 347 (3):669-680, 2013.
155. Goff JP, Shields DS, Wang H, Skoda EM, Sprachman MM, Wipf P, Garapati VK, Atkinson J, London B, Lazo JS, Kagan V, **Epperly MW** and Greenberger JS. Evaluation of potential ionizing irradiation protectors and mitigators using clonogenic survival of human umbilical cord blood hematopoietic progenitor cells. Exp Hematol, 41(11):957-966, 2013.
156. Jones, JA, **Epperly, M**, Law, J, et al. Space Radiation Hazards and Strategies for Astronaut/Cosmonaut Protection. Radiation Safety 58(3):5-23 2013
157. Kanter DJ, O’Brien MB, Shi XH, Chu T, Mishima T, Beriwal S, **Epperly MW**, Wipf P, Greenberger JS, Sadovsky Y. PL-13-10114/the impact of ionizing radiation on placental trophoblasts. Placenta, PL13-10114, 1-7, 2014.
158. Kalash R, Berhane H, Yang Y, **Epperly MW**, Wang H, Dixon T, Rhieu B, Greenberger JS, and Huq, MS. Improved survival of mice after total body irradiation with 10 MV photon, 2400 MU/min SRS Beam. In Vivo, 28 (1): 1-12, 2014.
159. Berhane H, **Epperly MW**, Goff J, Kalash R, Cao S, Franicola D, Zhang X, Shields D, Houghton F, Wang H, Wipf P, Parmar K, and Greenberger JS. Radiologic differences between bone marrow stromal and hematopoietic progenitor cell lines from Fanconi anemia (Fancd2-/-) mice. Radiation Res. 181:76-89, 2014.
160. Berhane H, Shinde A, Kalash R, Xu K, **Epperly MW**,. Goff J, Franicola D, Zhang X, Dixon T, Shields D, Wang H, Wipf P, Li S, Gao X, and Greenberger JS. Amelioration of radiation-induced oral cavity mucositis and distant bone marrow suppression in Fanconi anemia FancD2-/- (FVB/n) mice by intraoral GS-nitroxide JP4-039. Radiation Res 182:35-49, 2014.
161. Kalash R, Berhane H, Au J, Rhieu BH, **Epperly MW**, Goff J, Dixon T, Wang H, Zhang X, Franicola D, Shinde A, and Greengerger JS. Differences in irradiated lung gene transcription between fibrosis-prone C57BL/6NHsd and fibrosis-resistant C3H/HeNHsd mice. In Vivo 28(2): 147-171, 2014.
162. **Epperly MW**, Goff JP, Franicola D, Wang H, Wipf P, Li S, and Greenberger JS. Esophageal radioprotection by swallowed JP4-039/F15 in thoracic-irradiated mice with transgenic lung tumors. In Vivo 28(4):435-440, 2014.
163. Rhieu BH, **Epperly MW**, Cao S, Goff J, Shields, D, Franicola D, Wang H, and Greenberger JS. Improved longevity of hematopoiesis in long-term bone marrow cultures and reduced irradiation-induced pulmonary fibrosis in Toll-like receptor-4 deletion recombinant-negative mice. In Vivo 28(4):441-448, 2014.
164. Rhieu BH, **Epperly MW**, Cao S, Franicol D, Shields D, Goff J, Wang H, and Greenberger JS.. Increased hematopoiesis in long term bone marrow cultures and reduced irradiation-induced pulmonary fibrosis in von Willebrand factor homologous deletion recombinant mice. In Vivo 28(4):449-456, 2014.
165. Shinde A, **Epperly MW**, Cao S, Franicola D, Shields D, Wang H, Wipf P, Sprachman MM, and Greenberger JS. Effects of the bifunctional sulfoxide MMS350, a radiation mitigator, on hematopoiesis in long-term bone marrow cultures and on radioresistance of marrow stromal cell lines. In Vivo 28(4) 457-465, 2014.
166. Greenberger JS, Berhane H, Shinde A, Rhieu BH, Bernard M, Wipf P, Skoda EM, and **Epperly MW**. Can radiosensitivity associated with defects in DNA repair be overcome by mitochondrial-targeted antioxidant radioprotectors. Frontiers in Oncology, doi:103389/fonc.2014.00024, 2014.
167. Tyurina YY, Poloyac SM, Tyurin VA, Kapralov AA, Jiang J, Anthonymuthu TS, Kapralova VI, Vikulina AS, Jung MY, **Epperly MW**, Mohammadyani D, Klein-Seetharaman J, Jackson TC, Kochanek PM, Pitt BR, Greenberger JS, Vladimirov YA, Bayir H, and Kagan VE. A mitochondrial pathway for biosynthesis of lipid mediators, Nature Chemistry, 6(6):542-552, 2014.
168. Shinde A, **Epperly MW**, Cao S. Holt D, Goff J, Shields D, Franicola D, Wipf P, Wang H, and Greenberger JS. Improved hematopoiesis in GS-nitroxide (JP4-039)-treated mouse long-term bone marrow cultures and radioresistance of derived bone marrow stromal cell lines. In Vivo. 28(5): 699-708, 2014.
169. Rhieu BH, Shinde A, **Epperly MW**, Dixon T, Wang H, Chaillet R, and Greenberger JS.

Organ-specific responses of total body irradiated doxycycline-inducible manganese superoxide dismutase tet/tet mice. In Vivo 28:1033-1044, 2014.

1. Glowacki J, Mizuno S, Kung J, Goff J, **Epperly M**, Dixon T, Wang H, and Greenberger JS, Effects of mouse genotype on bone wound healing and irradiation-induced delay of healing. In Vivo 28(2):189-196, 2014.
2. Stoyanovsky DA, Jiang J, Murphy MP, **Epperly M**, Zhang X, Li S, Greenberger J, Kagan V, and Bayir H. Design and synthesis of a mitochondria-targeted mimic of glutathione peroxidase, MitoEbselen-2, as a radiation mitigator. ACS Med Chem Lett, 5 (12):1304-1307, 2014.
3. Leibowitz BJ, Wei L, Zhang L, Ping X, **Epperly M**, Greenberger, Cheng T, and Yu J. Ionizing irradiation induces acute haematopoietic syndrome and gastrointestinal syndrome independently in mice. Nature Communications 5:3494, 2014.
4. Wang X, Wei L, Cramer JM, Leibowitz BJ, Judge C, **Epperly M**, Greenberger J, Wang E, Lagasse E, Zhang L and Yu J. Pharmacologically blocking p53-dependent, apoptosis protects intestinal stem cells and mice from radiation. Sci Rep 5:8566, doi: 10:1038/srep08566, 2015.
5. Oczypok EA, Milutinovic PS, Alcorn JF, Khare A, Crum LT, Manni ML, **Epperly MW**, Pawluk AM, Ray A, Oury TD. Pulmonary receptor for advanced glycation end-products promotes asthma pathogenesis through IL-33 and accumulation of group 2 innate lymphoid cells. J Allergy Clin Immunol. 2015 Apr 27. pii: S0091-6749(15)00409-1. PubMed PMID: 25930197.
6. Gomez-Casal R, Bhattacharya C, **Epperly MW**, Basse P, Wang H, Wang H, Proia DA, Greenberger JS, Socinski MA and Levina V. The HSP90 inhibitor ganetespib radiosensitizes human lung adenocarcinoma cells. 2015, May 22 7(2):876-907 Cancers 7:876-907; doi10.3390/cancers7020814.
7. Wang Y, Li W, Patel SS, Cong J, Zhang N, Sabbatino F, Liu X, Qi Y, Huang P, Lee H, Taghian A, Li JJ, DeLeo AB, Ferrone S, **Epperly MW**, Ferrone CR, Ly A, Brachtel EF, Wang X. Blocking the formation of radiation-induced breast cancer stem cells. Oncotarget. 5(11):3743-55, 2015.
8. Gomez-Casal R, **Epperly MW**, Wang H, Proia DA, Greenberger JS and Levina V. Radioresistant human lung adenocarcinoma cells that survived multiple fractions of ionizing radiation are sensitive to HSP 90 inhibition. Oncotarget 6 (42):44306-44322.doi:10.18632/oncotarget.6248, 2015.
9. Greenberger J, Kagan V, Bayir H, Wipf, and **Epperly MW**. Antioxidant approaches to management of ionizing irradiation injury. Antioxidants. Jan 23; 4 (1): 82-101. Doi: 10.3390/antiox4010082, 2015.
10. Shinde A, Berhane H, Rhieu BH, Kalash R, Xu K, Goff J, **Epperly MW**, Franicola D, Zhang X, Dixon T, Shields D, Wang H, Wipf P, Parmar K, Guinan E, Kagan jV, Tyurin V, Ferris RL, Zhang X, Li S, and Greenberger JS. Intraoral mitochondrial-targeted GS-nitroxide, JP4-039, radioprotects normal tissue in tumor-bearing radiosensitiviefancd2 (-/-) (C57BL/6) mice. Radiat Res, 185 (2):134-150, doi:10.1667/RR14035.1.Epub 2016 Jan 20, 2016.PMID:26789701
11. Huang Z, Epperly M, Watkins SC, Greenberger JS, Kagan VE, and Bayir H. Necrostatin-1 rescues mice from lethal irradiation. Biochim Biophys Acta, 1862(4):850-856. Doi:10.106/j.bbadis.2016.01.014. Epub 2016 Jan 20, 2016.
12. Sharlow ER, Leimgruber S, Lira A, McConnell MJ, Norambuena A, Bloom GS, **Epperly MW**, Greenberger JS, and Lazo JS. A small molecule screen exposes mTOR signaling pathway involvement in radiation-induced apoptosis. ACS Chem Biol. 11(5):1428-1437, 2016. PMID: 26938669​.
13. Zhang X, Hou W, **Epperly MW**, Rigatti L, Wang H, Franicola D, Sivanathan A, Greenberger JS. Evolution of Malignant plasmacytoma cell lines from K14E7 Fancd2-/- mouse long term bone marrow cultures. Oncotarget 7(42): 68449-68472. 2016. PMID: 27637088.
14. Song X, Sie Y, Kang R, Hou W, Sun X, **Epperly MW,** Greenberger JS, Tang D. Fancd2 protects against bone marrow injury from ferroptosis. Biochem Biophys Res Commun. Nov 18:480 (3):443-449. Doi: 10.1016/j.bbrc.2016.10.068. PMID:27773819.
15. Brand RM, **Epperly MW**, Stottlemyer JM, Skoda EM, Gao X, Li S, Hug S, Wipf P Kagan VE, Greenberger JS, Falo LD Jr. A topical mitochondria-targeted redox cycling nitroxide mitigates oxidative stress induced skin damage. J Invert Dermatol. 137(3): 576-586, 2017 PMID:27794421.
16. Wei L, Leibowitz BJ, Wang X, **Epperly M**, Greenberger J, Zhang L, Yu J. Inhibition of CDK4/6 protects against radiation-induced intestinal injury in mice. J Clin Invest. Nov 1:126 (11):4076-4087, 1016.doi:10.1172/JCI88410. PMID:27701148.
17. **Epperly Michael W**, Sacher Joshua R, Krainz Tanja, Zhang Xiaolin, Wipf Peter, Liang Mary, Fisher Renee, Li Song, Wang Hong, and Greenberger Joel S.  Effectiveness of analogues of the GS-nitroxide, JP4-039, as total body radiation mitigators.  In Vivo, 31: 39-44, 2017, PMID: 28064218.
18. **Epperly Michael W**, Rhieu BH, Franicola Darcy, Dixon Tracy, Cao Shaonan, Zhang Xichen, Shields Donna, Wang Hong, Wipf Peter, and Greenberger Joel S.  Induction of TGF-β by irradiation or chemotherapy in Fanconi Anemia (FA) mouse marrow is modulated by small molecule radiation mitigators JP4-039 and MMS350.  In Vivo, 31: 159-168, 2017, PMID 28358965.
19. **Epperly MW**, Zhang X, Fisher R, Franicola D, Shields D, Quickel M, Hankey-Giblin P, Hong W, and Greenberger JS. Reduced competitive repopulation capacity of totipotential hematopoietic stem cells in the bone marrow for Friend Virus infected Fv-2-resistant mice. In Vivo, 31 (3): 313-320, 2017. PMID: 28438857
20. **Epperly MW**, Rhieu BH, Franicola D, Dixon T, Cao S, Zhang X, Shields D, Wang H, Wipf P, and Greenberger JS. Induction of TGF-ẞ by irradiation or chemtotherapy in Fanconi Anemia (FA) mouse bone marrow is modulated by small molecule radiation mitigators JP4-039 and MMS350, In Vivo 31(2):159-168, 2017, PMID:28358695.
21. Tyurina Yulia Y, Shrivastava Indira, Tyurin Vladimir A, Mao Gaowei, Dar Haider, Watkins Simon, **Epperly Michael**, Bahar Ivet, Shvedova Anna A, Pitt Bruce, Mallampalli Rama, Sadovsky Yoel, Gabrilovich Dmitry, Greenberger Joel S, Bayir Hulya, and Kagan Valerian E. “Only a life lived for others is worth living:” Redox signaling by oxygenated phospholipids in cell fate decisions. Antioxidant and Redox Signaling, 2017. Oct 16.doi:10.1089/ars.2017.7124. PMID: 28835115.
22. Steinman Justin, **Epperly Michael**, Hou Wen, Willis John, Wang Hong, Fisher Renee, McCaw Travis, Kagan Valerian, Bayir Hulya, Yu Jian, Wipf Peter, Li Song, Huq M Saiful, and Greenberger Joel S. Improved total-body irradiation survival by delivery of two radiation mitigators that target distinct cell death pathways. Radiat. Res. 189(1):68-83, 2018. PMID 29140165
23. Wei Liang, Leibowitz Brian J, **Epperly Michael**, Cheng Bi, Wipf Peter, Li Song, Steinman Justin, Zhang Lin, Greenberger Joel, Yu Jian. The GS-nitroxide JP4-039 improves intestinal barrier and stem cell recovery in irradiated mice. Sci Rep. 2018 Feb 1:8(1):2072. Doi:10.1038/s41598-018-20370-9. PMID 27701148
24. Christner Susan, Guo Jianxia, Parise Robert A, **Epperly Michael W**, Greenberger Joel S, Beumer Jan H, and Eiseman Julie L. Liquid chromatography-tandem mass spectrometric assay for the quantitation of the novel radiation protective agent and radiation mitigator JP4-039 in murine plasma. J Pharm Biomed ANAL 2018 Feb 20;150:169-175. Doi:10.1016/j.jpba.2017.12.023. Epub 2917 Dec12. PMID 29245086
25. Bellare A, **Epperly MW**, Greenberger JS, Fisher R, and Glowacki J. Development of tensile strength methodology for murine skin wound healing. MethodsX, 5 (Apr 16):337-344, 2018. PMID 30050753
26. Willis J, **Epperly MW**, Fisher R, Zhang X, Shields D, Hou W, Wang H, Li S, Wipf P, Parmar K, Guinan E, Steinman J, and Greenberger JS. Amelioration of Head and Neck Radiation-Induced Mucositis and Distant Marrow Suppression in Fanca-/- and Fancg-/- Mice by Intraoral Administration of GS-Nitroxide (JP4-039). Radiat Res. 189(6):560-578, 2018.
27. Brand Rhonda M, Wipf Peter, Durham Austin, **Epperly Michael W**, Greenberger Joel S, and Falo, Louis D, Jr. Targeting mitochondrial oxidative stress to mitigate UV-induced skin damage. Frontiers in Pharmacology, Aug 20; 9:920, doi: 10.3389/fphar.2018.00920, 2018.PMID 30177881
28. **Epperly MW**, Wipf P, Fisher R, Franicola D, Beumer J, Li S, Brand RM, Falo LD Jr, Erdos G, and Greenberger JS. Evaluation of Different Formulations and routes for the delivery of the ionizing radiation mitigator GS-nitroxide (JP4-039). In Vivo, 32(5):1009-1023, 2018. PMID:30150422
29. Krainz T, Lamade AM, Du L, MaskreyTS, Calderon MJ, Watkins SC, **Epperly MW**, Greenberger JS, Bayir H, Wipf P and Clark RSB. Synthesis and evaluation of a mitochondria-targeting poly (ADP-ribose) polymerase-1 inhibitor. ACS Chem Biol. 13 (10):2868-2879, 2018 doi: 10.1021/acschenbio.8b00423. Epub 2018 Sep 14.PMID:30184433.
30. Sivananthan A, Shields D, Fisher R, Hou W, Zhang X, Franicola D, **Epperly MW**, Wipf and Greenberger JS. Continuous one year oral administration of the radiation mitigator, MMS350, after total-body irradiation restores bone marrow stromal cell proliferative capacity and reduces senescence in Fanconi Anemia (Fanca-/-) mice. Radiat Res. 191(2):139-153, 2019. Doi: 10.1667/RR15199.1 PMID:30499383.
31. Zhang X, Fisher R, Shields D, Hou W, Franicola D, Wang H, **Epperly MW**, Rigatti L, and Greenberger JS. Malignant transformation of Fanconi anemia complementation group D2-deficient (Fancd2-/-) hematopoietic progenitor cells by a single HPV16 oncogene. In Vivo 33(2): 303-311, 2019. PMID 30804107.
32. Ejaz A, **Epperly MW**, Hou W, Greenberger JS, and Rubin PJ. Adipose-derived stem cell therapy ameliorates ionizing irradiation fibrosis (RIF) via hepatocyte growth factor mediated TGF-beta down regulation and recruitment of bone marrow cells. Stem Cells Mar12 doi:10.1002/stem.3000, 2019. PMID 30861238.
33. **Epperly MW**, Fisher R, Rigatti L, Watkins S, Hou W, Shields D, Franicola D, Bayir H, Wang H, Thermozier S, Henderson A, Donnelly C, Wipf P, and Greenberger JS. Amelioration of Amyotrophic Lateral Sclerosis in SOD1G93A Mice by M2 Microglia from Transplanted Marrow, In Vivo, 33(3):675-688, 2019.
34. Tyurina YY, St Croix CM, Watkins SC, Watson AM, **Epperly MW**, Anthonymuthu TS, Kisin ER, Viasova II, Krysko O, Krysko DV, Kapralov AA, Dar HH, Tyurin VA, Amoscato AA, Popova EN, Bolevich SB, Timashev PS, Kellum JA, Wenzel SE, Mallampalli RK, Greenberger JS, Bayir H, Shedova AA and Kagan VE. Redox (phosphor)lipidomics of signaling in inflammation and programmed cell death. Journal of Leukocyte Biology, 106(1):57-81, 2019, PMID 31071242
35. Thermozier S, Zhang X, Hou W, Fisher R, **Epperly MW**, Liu B, Bahar I, Wang H and Greenberger JS. Radioresistance of serpinb3a-/- mice and derived hematopoietic and marrow stromal cell lines. Radiation Research, 192(3):267-281, 2019
36. Thermozier S, Hou W, Zhang X, Shields D, Fisher R, Bayir H, Kagan V, Yu J, Liu B, Bahar I, Epperly MW, Wipf P, Wang H, Hug SM, and Greenberger JS. Anti-ferroptosis drug enhances total-body irradiation mitigation by drugs that block apoptosis and necroptosis. Radiation Research 193(5):435-450, 2020. PMID: 32134361.
37. Quinn TJ; Ding X; Li X; Wilson GD; Buelow K; Sivananthan A; Thermozier S; Henderson A; **Epperly MW**; Franicola D; Wipf P; Greenberger JS; Stevens CW; and Kabolizadeh P. In Vivo. 33(6):1757-1766, 2019 Nov-Dec.

## Zhang X; Fisher R; Hou W; Shields D; Epperly MW; Wang H; Wei L; Leibowitz BJ; Yu J; Alexander LM; VAN Pijkeren JP; Watkins S; Wipf P; Greenberger JS [Second-generation Probiotics Producing IL-22 Increase Survival of Mice After Total Body Irradiation.](http://ovidsp.dc2.ovid.com/sp-4.04.0a/ovidweb.cgi?&S=IAJAFPBLDAEBKKKLJPBKGGBFIJJKAA00&Complete+Reference=S.sh.22%7c1%7c1&Counter5=SS_view_found_complete%7c31882461%7cmedall%7cmedline%7cprem&Counter5Data=31882461%7cmedall%7cmedline%7cprem) In Vivo. 34(1):39-50, 2020 Jan-Feb.[209. Epperly MW; Fisher R; Zhang X; Hou W; Shields D; Wipf P; Wang H; Thermozier S; Greenberger JS. Fanconi Anemia Mouse Genotype-specific Mitigation of Total Body Irradiation by GS-Nitroxide JP4-039.](http://ovidsp.dc2.ovid.com/sp-4.04.0a/ovidweb.cgi?&S=IAJAFPBLDAEBKKKLJPBKGGBFIJJKAA00&Complete+Reference=S.sh.22%7c2%7c1&Counter5=SS_view_found_complete%7c31882460%7cmedall%7cmedline%7cprem&Counter5Data=31882460%7cmedall%7cmedline%7cprem) Epperly MW In Vivo. 34(1):33-38, 2020 Jan-Feb.

1. Kim E, Erdos G, Huang S, Kenniston TW, Balmert SC, Carey CD, Stalin Raj V, **Epperly MW**, Blimstra WB, Haagmans BL, Korkmaz E, Falo LD, and Gambotto A. Microneedle array delivered recombinant coronavirus vaccines: Immunogenicity and rapid translational development, EBioMedicine, doi.org/10.1016/j.ebiom.2020.102743 2352-3964/© 2020. PMID 32249203
2. Chinnapaka S , Yang K, Samadi Y, Epperly, Hou W, Greenberger JS, Ejaz A and Rubin P. Allogeneic adipose-derived stem cells mitigate acute radiation syndrome by the rescue of damaged bone marrow cells from Apoptosis. Stem Cells Translational Medicine, 10(7):1095-1114, doi: 10.1002/sctm.20-0455. Epub 2021. PMID: 33724714.
3. Rodríguez A, Yang C, Furutani E, García de Teresa B, Velázquez M, Filiatrault J, Sambel LA, Phan T, Flores-Guzmán P, Sánchez S, Monsiváis Orozco A, Mayani H, Bolukbasi OV, Färkkilä A, **Epperly M**, Greenberger J, Shimamura A, Frías S, Grompe M, Parmar K, D'Andrea AD. Inhibition of TGF-β1 and TGF-β3 promotes hematopoiesis in Fanconi anemia. Experimental Hematology 93:70-84.e4, doi: 10.1016/j.exphem.2020.11.002 Epub 2020. Nov7. 2021. PMID:33166613.
4. Glowacki J, Epperly MW, Bellare A, Wipf P, and Greenberger JS. Combined injury: irradiation with skin or bone wounds in rodent models. Journal of Radiological Protection, 41(4), 2021. Nov 15;41(4). Doi:10.1088/1361-6498/ac125b. PMID 34233299.
5. Mukherjee A, Epperly MW, Shields D, Hou W, Fisher R, Hamade D, Wang H, Saiful Huq, Bao R, Tabib T, Monier D, Watkins S, Calderon M and Greenberger JS. Ionizing irradiation-induced FGR in senescent cells mediates fibrosis. Cell Death Discovery 7(1):349, 2021. PMID: 34772919.
6. Mukherjee A, Epperly MW, Fisher R, Hou W, Wang H, Greenberger JS and Ortiz LA. Silica induced lung fibrosis is associated with senescence, Fgr, and recruitment of bone marrow monocye/macrophages. In Vivo 35(6):3053-3066, 2021. doi: 10.21873/invivo.12601. PMID 34697137.
7. Li K, Epperly MW, Barreto GA, Greenberger JS, and Methe BA. Longitudinal fecal microbiome study of total body irradiated mice treated with radiation mitigators identifies bacterial associations with survival. Frontiers in Cellular and Infection Microbiolgy 11:715396, doi: 10.3389/fcimb.2021.715396. eCollection 2021. PMID 34621689.
8. Epperly MW, Shields D, Fisher R, Hou W, Wang H, Hamade DF, Mukherjee A, and Greenberger JS. Radiation-induced senescence in p16+/LUC mouse lung compared to bone marrow multilineage hematiopoietic progenitor cells. Radiation Research 196(3):235-249, 2021. PMID: 34087939.
9. Leibowitz BJ, Zhao G, Wei L, Ruan H, Epperly M, Chen L, Lu X, Greenberger JS, Zhang L, and Yu J. Interferon β drives intestinal regeneration after radiation. Science Advances 7(41):eabi5253, 2021. PMID: 34613772.
10. Montesinos CA, Khalid R, Cristea O, Greenberger JS, Epperly MW, Lemon JA, Boreham DR, Popov D, Gorthi G, Ramjumar N, and Jones JA. Space radiation protection countermeasures in microgravity and Planetary Exploration. Life 11(8):829. Doi: 10.3390/life11080829. 2021. PMID: 34440577.
11. Epperly MW, Shields D, Fisher R, Hou W, Hamade DF, Mukherjee A, and Greenberger JS. Radiation-induced senescence in p16+/LUC mouse lung compared to bone marrow multilineage hematopoietic progenitor cells, Radiat Res, 196(3):235-249, 2021 doi: 10.1667/RADE-20-00286.1 PMID 34087939.
12. Greenberger JS, Mukherjee A, and Epperly MW. Gene therapy for systemic or organ specific delivery of manganese superoxide dismutase. Antioxidants 10(7), 1057; doi.org/10.3390/antiox10071057, 2021. PMID:

1. Kagan VE, Tyurina YY, Vlasova II, Kapralov AA, Amoscato AA, Anthonyouthu TS, Tyurin VA, Shrivastava IH, Cinemre FB, Lamade A, Epperly MW, Greenberger JS, Beezhold DH, Mallampalli RK, Srivastava AK, Bayir H, and Shvedova AA. Frontiers in Endocrinology 11:628079. Doi:10.3389/fendo.2020.628079. 2021 PMID: 33679610.
2. Dar HH, Epperly MW, Tyurin VA, Amoscato AA, Anthonymuthu TS, Souryavong AB, Kapralov AA, Shurin GV, Samovich SN, St. Croix CM, Watkins SC, Wenzel SE, Mallampalli RK, Greenberger JS, Bayir H, Kagan VE and Tuurina YY. P. aeruginosa augments irradiation injury vis 15-lipoxygenase-catalyzed generation of 15-HpETE-PE and induction of theft-ferroptosis. JCI Insight 7(4), 2022 02 22. PMID 35041620
3. Lamade AM, Wu L, DarHH, Mentrup HL, Shrivastava IH, Epperly MW, St. CroixCM, Tyurina YY, Anthonymuthu TS, Yang q, Kapralov AA, Huang Z, Mao G, Amoscato AA, Hier ZE, Artyukhova MA Shurin G, Rosenbaum JC, Gough PF, Bertin J VanDenmark AP, Watkins SC, Mollen KP, Bahar I, Greenberger JS, Kagan VE, Whalen MJ, and Bayir H. Inactivation of RIP3 kinase sensitizes to 15LOX/PEBP1-mediated ferroptotic death. Redox Biology 50:102232, 2022 PMID 35101798.
4. Espinal A, Epperly MW, Mukherjee A, Fisher R, Shields D, Wang H, Huq MS, Hamade DF, Vlad AM, Coffman L, Buckanovich R, Yu J, Leibowitz BJ, van Pijkeren JP, Patel RB, Stolz D, Watkins S, Ejaz A, and Greenberger JS. Intestinal radiation protection and mitigation by second-generation probiotic *Lactobacillus-reuteri* engineered to deliver interleukin-22. International Journal of Molecular Sciences 23(10):2022. PMID: 35628427.
5. Hamade DF, Expinal A, Yu J, Leibowitz BJ, Fisher R, Hou w, Shields D, van Pijkeren JP, Mukherjee Z, Epperly MS, Vlad AM, Coffman L, Wang H, Huq SM, Patel R, Huang J, and Greenberger JS. Lactobacillus reuteri releasing IL-22 (LR\_IL-22) facilitates intestinal radioprotection for whole-abdomen irradiation (WAAI) of ovarian cancer, Radiation Research 198(1): 89-105,2022. PMID:35446961.
6. Zhong J, Chen J, Oyekan AA, Epperly MW, Greenberger JS, Lee JY, Sowa GA, and Vo NV. Ionizing radiation induces disc annulus fibrosis senescence and matrix catabolism via MMP-mediated pathways. International Journal of Molecular Sciences 23(7): 2022. PMID 35409374.
7. Surucu Y, Bengur FB, Yang KS, Schilling BK, Baker JS, Shabbir S, Fisher R, Epperly MW, Greenberger JS, Rubin JP, and Ejaz E. Establishment of a robust and reproducible model of radiation-induced skin and muscle fibrosis. Journal of Visualized Experiments 186:08 3 2022. PMID 36121259.
8. Rodriguez A, Epperly M, Filiatrault J, Velazquez M, Yang C, McQueen K, Sambel LA, Nguyen H, Iyer DR, Juarez U, Avala-Cambrano C, Martignetti DB, Frias S, Fisher R, Parmar K, Greenberger JS, and D’Andrea AD, TGFbeta pathway is required for viable gestation of Fanconi anemia embryos. PLOS Genetics. 18(11):e1010459, 2022, PMID: 36441774
9. Hamade DF, Epperly MW, Fisher R, Hou W, Shields D, van Pijkeren JP, Mukherjee A, Yu J, Leibowitz BJ, Vlad AM, Coffman L, Wang H, Huq MS, Huang Z, Rogers CJ, Greenberger JS. [Release of Interferon-β (IFN-β) from Probiotic Limosilactobacillus reuteri-IFN-β (LR-IFN-β) Mitigates Gastrointestinal Acute Radiation Syndrome (GI-ARS) following Whole Abdominal Irradiation.](https://pubmed.ncbi.nlm.nih.gov/36980556/) Cancers (Basel). 2023 Mar 8;15(6):1670. doi: 10.3390/cancers15061670.PMID: 36980556
10. Mukherjee A, Epperly MW, Fisher R, Hou W. Shields D, Huh S, Pifer PM, Mulherkar R, Wilhite TJ, Wang H, Wipf P, Greenberger JS. Inhibition of tyrosine kinase Fgr prevents radiation-induced pulmonary fibrosis (RIPF). Cell Death Discovery. 9(1):252, 2023, PMID: 37460469.
11. Dar HH, Mikulska-Ruminska K, Tyurina YY, Luci DK, Yasgar A, Samovich SN, Kapralov AA, Souryavong AB, Tyurin VA, Amoscato AA, Epperly MW, Shurin GV, Stanley M, Holman TR, St Croix CM, Watkins SC, VanDemark AP, Zakharov AV, Simeonov A, Marugan J, Mailampalli RK, Wenzel SE, Greenberger JS, Rai G, Bayir H, Bahar I, and Kagan VE. Discovering selective antiferroptotic inbitors of the 15LOX/PEBP1 complex noninterfering with biosynehesis of lipid mediators. Proceeding of the National Academy of Sciences of the United States of America. 120(25):e2218896120, 2023 Jun 20 PMID: 37327313.
12. Mukherjee A, Epperly MW, Fisher R, Shields D, Hou W, Pennathur A, Leuketich J, Wang H, and Greenberger JS. Carcinogen 4-Nitroquinoloine Oxide (4-NQO) induces Oncostatin-M (OSM) in Esophageal Cells. In Vivo. 37(2):506-518, 2023 PMID:36881075.
13. Soysal E, Castellano E, Korkmaz A, Mullett SJ, Kim-Campbell N, Epperly M, Wendell S, Kagan Ve, Bayir H, [Vitamin C Is Mandatory for the Tricarboxylic Acid Cycle Production of ,Antiinflammatory Itaconate.](https://pubmed.ncbi.nlm.nih.gov/37782815/) Redox Health Study Group, Am J Respir Crit Care Med, 2023 Dec 1;208(11):1234-1238. doi: 10.1164/rccm.202304-0636LE.PMID: 37782815
14. Epperly MW, Mukherjee A, Fisher R, Shields D, Hou W, Wang H, Rigatti LH, Green A, Hug MS, Greenberger JS, [Chemical Carcinogen (Dimethyl-benzanthracene) Induced Transplantable Cancer in Fanconi Anemia (Fanca-/-) Mice.](https://pubmed.ncbi.nlm.nih.gov/37905617/)In Vivo. 2023 Nov-Dec;37(6):2421-2432. doi: 10.21873/invivo.13347.PMID: 37905617.
15. Chinnapaka S, Yang KS, Surucu Y, Bengur FB, Arellano JA, Tirmizi Z, Malekzadeh H, Epperly MS Hou W, Greenberger JS, Rubin JP, Ejaz A, [Human adipose ECM alleviates radiation-induced skin fibrosis via endothelial cell-mediated M2 macrophage polarization.](https://pubmed.ncbi.nlm.nih.gov/37705953/) iScience. 2023 Aug 17;26(9):107660. doi: 10.1016/j.isci.2023.107660. eCollection 2023 Sep 15. PMID: 37705953.
16. Malekzadeh H, Surucu Y, Chinnapaka S, Yang KS, Arelano JA, Samadi Y, Epperly MW, Greenberger JS, Rubin JP, Ejaz A. Metformin and adipose-derived stem cell combination therapy alleviates radiation-induced skin fibrosis in mice. Stem Cell Research & Therapy. 15 (1):13, 2024. <https://dx.doi.org/10.1186/s1328>. PMID 38185658
17. Hamade DF, Epperly MW, Fisher R, Hou W, Shields D, van Pijkeren JP, Mukherjee A, Leibowitz BJ, Coffman L, Wang H, Huq MS, Huang Z, Rogers CJ, Vlad A, and Greenberger JS. Genetically Engineered Probiotic *Limosilactobacillus reuteri* Releasing IL-22 (LR-IL-22) Modifies Tumor Cells Microenvironment Enabling Irradiation in Ovarian Cancer, Cancers 2024, 16(3), 474; [https://doi.org/10.3390/cancers. PMID: 16030474](https://doi.org/10.3390/cancers.%20PMID%3A%2016030474)
18. Richter B, Epperly M, Tyurina Y, Shurin G, Johnson C, Korkmaz A, Gao Y, Scott J, Greenberger J, Kagan V, Bayir H. Enhancing survival after ionizing radiation exposure through mitigation of pyroptosis. Biochimica et Biophysica Acta - Molecular Basis of Disease. 1870(7):167434, 2024. <https://dx.doi.org/10.1016/j.bba.> PMID: 39053669
19. Wu YL, Christodoulou AG, Beumer JH, Rigatti LH, Fisher R, Ross M, Watkins S, Cortes DRE, Ruck C, Manzoor S, Wyman SK, Stapleton MC, Goetzman E, Bharathi S, Wipf P, Wang H, Tan T, Christner SM, Guo J, Lo CWY, Epperly MW, Greenberger JS. Mitigation of fetal radiation injury from mid-gestation total-body irradiation by maternal administration of mitochondrial-targeted GS-nitroxide JP4-039. *Radiation Research. 202(3):565-579, 2024.* <https://dx.doi.org/10.1667/RADE>. PMID 39074819.
20. Greenberger JS, Hou W, Shields D, Fisher R, Epperly MW, Sarkaria I, Wipf P, Wang H. SARS-CoV-2 spike protein induces oxidative stress and senescence in mouse and human lung. *In Vivo. 38(4):1546-1556, 2024 Jul-Aug.* <https://dx.doi.org/10.21873/Invi>. PMID 38936937.
21. Adeghate JO, Epperly MW, Davoli KA, Lathrop KL, Wipf P, Hou W Fisher R, Thermozier S, Hug MS, Sahel JA, Greenberger JS, Eller AW. JP4\_039, a mitochondria-targeted nitroxice, mititgates the effect of apoptosis and inflammatory cell migration in the irradiated mouse retina. *International Journal of Molecular Sciences. 25(12), 2024 Jun 13.* <https://dx.doi.org/10.3390/ijms2>. PMID: 38928220.

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**Publications in Non-Peer-Reviewed Journals:**

1. Greenberger JS, Epperly MW, Luketich J, Gooding W, Belani C. Manganese superoxide dismutase plasmid/liposome (MnSOD-PL) gene therapy protection of the esophagus from chemoradiotherapy damage during treatment of locally unresectable non-small cell lung cancer (NSCLC). Clinical Lung Cancer, 1(4):302-308, 2000.

2. Greenberger JS, Goff J, **Epperly MW**, Bahnson A, Koebler D, Shields DS,

Huard J, Yanez-Hanley, Houck RK. Combinatorial cell culture applications to tissue engineering*. Textbook on Tisue Engineering and Biodegradable Equivalents: Scientific*

*and Clinical Applications* , KU Lewandrowski, D. Wise, D.J. Trantolo, J.D.

Gresser, MJ, Yaszemski, and DE Altobelli (Eds), Cambridge Scientific, Inc., Marcel Decker: New York, NY, pp. 691-708, 2002.

3. Perry Y, **Epperly MW**, Finkelstein S, Klein ED, Greenberger JS, and James Leuketich. An Animal Model of Photodynamic Therapy Induced Proceedings of SPIE Vol 4949 Lasers in Surgery: Advanced Characterization, Therapeutics and Systems XIII, Edited by Lawrence S. Bass, Nikiforos Kollias, Reza S. Malek, Abraham Katzir, Udayan K. Shah, Brian J.F. Wong, Eugene A. Trowers, Timothy A. Woodward, Werner T. W. de Riese, David S. Robinson, Hans-Dieter Reidenbach, Keith D. Paulsen, and Kenton W. Gregory, (SPIE, Bellingham, WA, 2003) pages 395-404.

4. Greenberger J S, Epperly M W, Gretton J, Jefferson M, Nie S, Bernarding M, Kagan V, Guo H-L. Radioprotective gene therapy. Current Gene Therapy, 3:183-195, 2003.

5. Wolfe D, Wechuck JB, Krisky DM, Goff JP, Goins WF, Ozuer A, **Epperly ME**, Greenberger JS, Fink DJ, Glorioso JC. Related Articles, Links Delivery of herpes simplex virus-based vectors to stem cells. Methods Mol Biol. 2004;246:339-52.

1. Greenberger, Joel S., and **Epperly, Michael W.** Pleiotrophic Stem Cell and Tissue,

Effects of Ionizing Irradiation Protection by MnSOD-Plasmid Liposome Gene Therapy, Gene Therapy in Cancer, Editor: Grace W. Redberrry, Nova Science Publishers, Inc. pg 191-215, 2005.

1. Greenberger Joel S, **Epperly Michael W**. Radioprotective gene therapy: current status

and future goals. In: Vile, Richard G. (Ed.), Viral Therapy of Cancer. Wiley Publications: 2005.

1. Kagan VE, Tyurina YY, Bayir H, Chu CT, Kapralov AV, Vlasova II, Belikova NA,

 Tyurin VA, Amoscato A, **Epperly M**, Greenberger J, DeKosky S, Shvedova AA, Jiang J. The “pro-apoptotic genies” get out of mitochondria: oxidative lipidomics and redox activity of cytochrome c/Cardiolipin complexes. Chem Biol Interactions.

1. Greenberger Joel S, **Epperly Michael W**. Antioxidant therapeutic approaches toward

 amelioration of ionizing irradiation – induced pulmonary injury. In: Current Respiratory Medicine Reviews, 3:29-37, 2007.

10. Greenberger J S, **Epperly M W**. “Stem Cells and Radiation Responses” In Seminars in Radiation Oncology, (R. P. Hill, Editor), 19 (2):133-139, 2009

11. Greenberger Joel S, Kagan Valerian, Peterson James, **Epperly Michael**. “Radiation Protection by MnSOD-Plasmid Liposome Gene Therapy” in Oxidative Stress (Spitz, Ed.), Wiley Publisher, 2009.

12. Greenberger Joel S, **Epperly Michael W**. Chapter “Bioengineering of Irradiated Normal Tissues by Bone Marrow Stem Cells”. In Textbook of Radiation, (Philip Rubin and Casarett, eds.), 2009.

13. Greenberger JS, and **Epperly MW**. Bone marrow-derived stem cells and radiation response. Seminars in Radiation Oncology, 19 (2):133-139, 2009.

14. Greenberger Joel S, Kagan Valerian, Peterson James, Epperly Michael. “Radiation Protection by MnSOD-Plasmid Liposome Gene Therapy” in Oxidative Stress in Cancer Therapy (Douglas R.Spitz, Kenneth J. Dornfeld, Koyamangalath Krishnan, David Guis, Eds.), Chapter 19, Humana Press, pp. 387-406, 2011.

15. Greenberger Joel S and Epperly Michael W. “Gene Therapy in Radiotherapy of Cancer”, In Gene Therapy for Cancer (Stanton Gerson, M.D., Ed.), 2011.

16. Greenberger Joel S and Epperly Michael W. “Bioengineering of Irradiated Normal Tissues by Bone Marrow Stem Cells. Alert-Adverse Late Effects of Cancer Treatment. Springer-Verlag Berlin Heidelberg, 2013.

***Abstracts:***

1. **Epperly MW**, Kaczmarczyk W. Separation of maize DNA-dependent RNA polymerase by high pressure liquid chromatography. Proc FASEB 38:401, 1979.
2. **Epperly MW**, Donofrio J. Androgen binding by the nuclear protein matrix of seminal vesicle epithelium. J Cell Science 810:215A, 1981.
3. **Epperly MW**, Newman DC, Homburger HA. Development of a radioligand receptor binding assay for measurement of neuroleptic drugs in serum. Clin Res 31:716A, 1983.
4. Newman DC, **Epperly MW**, Sangarasivam BA, Homburger HA, Maruta J. Serum neuroleptic levels in schizophrenic patients. Clin Res 32:741A, 1984.
5. **Epperly MW**, Rzceznik J, Adatepe M. Estimation of absorbed radiation dose to tumor and major organs from 131-I-labelled B72.3 monoclonal antibody. J Nucl Med 29:900, 1988.
6. Bloomer WD, **Epperly MW**, Damodaran KM, Miller AL, Paris MW. Cytotoxicity of a 125-I-labelled estrogen in estrogen receptor-positive cells. Proc 38TH Annual Meeting of the Radiation Research Society, April 7-12, 1990.
7. Ranadive GN, Rosenzweig HS, **Epperly MW**, Bloomer WD. Preferential iodination of the Fc region of the B72.3 monoclonal antibody. Presented at the Third Conference on Radioimmunodetection and Radioimmunotherapy of Cancer, Princeton, NJ (11/90).
8. Rosenzweig HS, Ranadive GN, **Epperly MW**, Bloomer WD. Effects of Fab iodination on the immunoreactivity of a monoclonal antibody. Presented at the Third Conference on Radioimmunodetection and Radioimmunotherapy of Cancer, Princeton, NJ (11/90).
9. **Epperly MW**, Deutsch M, Fisher E. Intraperitoneal (IP) 5-iodo-2-deoxyundine (IUDR) infusions in the mouse ovarian ascites tumor model. Radiation Research, A Twentieth Century Perspective. Vol. 1, Congress Abstracts, p. 452, 1991.
10. Papadopoulou-Rosenzweig MV, **Epperly MW**, Mainwaring A, Bloomer WD: Sensitization of CCNU by two new bioreductive agents. Cancer Res 32:318, 1991.
11. **Epperly MW**, Deutsch M. Intraperitoneal (IP) 5-iodo-2-deoxyuridine (IUDR) infusions and/or radiation in the mouse ovarian ascites tumor model. Cancer Res 32:412, 1991.
12. Randive GN, Rosenzweig HS, **Epperly MW**, Bloomer WD. Preferential iodination of the Fc region of monoclonal antibodies. J Nucl Med 32:985, 1991.
13. Rosenzweig HS, Randive GN, **Epperly MW**, Nanda A, Bloomer WD. Preservation of the immunoreactivity of a monoclonal antibody by the selective iodination of the Fc fragment. J Nucl Med 32:1100, 1991.
14. Kalend AM, Bloomer WD, **Epperly MW**, Flickinger JC, Maitz A, Wu A. Cellular energy and track densities by Monte Carlo simulation of the 10-B(n,a)7-Li reaction in human cell lines assayed with monoclonal antibodies. Medical Physics 18(3):662, 1991.
15. Papadopoulou MV, **Epperly MW**, Mainwaring A, Bloomer WD. Radiosensitization and hypoxic cell toxicity of 9-[3-(2-nitro-1-imidazolyl) propylamino]-acridine (NLA-1) and 9-(2-(2-nitro-1-imidazolyl)ethylamimo)-acridine (NLA-2), two new bioreductive compounds. Presented at the Thirty-Nineth Annual Meeting of the Radiation Research Society, Salt Lake City, UT (1991).
16. Papadopoulou MV, **Epperly MW**, Mainwaring A, Bloomer WD. Potentiation of antineoplastic drugs in vitro and in vivo by DNA intercalating bioreductive agents. Cancer Res 33:438, 1992.
17. Deutsch M, **Epperly MW**. Intraperitoneal 5-iodo-2-deoxyuridine treatment of the C3H mouse ovarian ascites tumor model. Proceedings of ASCO 11:107, 1992.
18. Kalend AM, Bloomer WD, **Epperly MW**, Flickinger JC, Maitz AH, Wu A: Microdosimetric spectra of the 10-B(n,a)7-Li fragments in cells: physical implications on boron content in BNCT. Medical Physics 19:837, 1992.
19. Ranadive GN, Rosenzweig HS, **Epperly MW**, Sesky T, Bloomer WD. A new method of technetium 99m-labelling of monoclonal antibodies through sugar residues. A study with TAG-72 specific CC-49 antibody. Presented at the Fourth Conference on Radioimmunodetection and Radioimmunotherapy of Cancer, Princeton, NJ (September 17-19, 1992).
20. Rosenzweig HS, Ranadive GN, Sesky T, **Epperly MW**, Bloomer WD. A solid phase cleaning resin for the non-chromatographic purification of technetium-99m-labelled monoclonal antibodies. Presented at the Fourth Conference on Radioimmunodetection and Radioimmunotherapy of Cancer, Princeton, NJ (September 17-19, 1992).
21. Damodaran KM, **Epperly MW**, Bloomer WD. Use of ferric sulfate as an oxidant in the iododestannylation of E-17a-(2-tributylstannylvinyl)-19-nortestosterone: an improved synthesis of E-17a-19-nortestosterone. Presented at the Fortieth Annual Meeting of the Radiation Research Society, Dallas, TX (March 20-25, 1992).
22. Pappo I, Wasserman K, Tahara H, **Epperly MW**, Bryant J, Lotze MT, Rosenstein MM. The systemic administration or local delivery of IL-12 combined with radiation (RT) delays the growth of a virulent murine melanoma. Presented at The Twenty-Seventh Annual Meeting of the Association For Academic Surgery, Hershey, PA (November 10-13, 1993).
23. Deutsch M, **Epperly MW**. Intraperitoneal (IP) and intravenous (IV) 5-iodo-2-deoxyurindine (IUDR) +/- radiation (RT) in the treatment of the mouse ovarian ascites tumor model. Proceedings of ASCO 12:128, 1993.
24. Koros AMC, **Epperly MW**, Levine G, Tobin MJ, McGinley JR. 186-Rhenium-HNK1 monoclonal antibody targets human small-cell lung cancer cells in nude mice: rapid screening model for therapy. Cancer Res 34:223, 1993.
25. **Epperly MW**, Deutsch M. Kinetics of iododeoxyuridine delivered as intraperitoneal infusion or injections in a mouse ascites tumor model. Cancer Res 34:360, 1993.
26. Swanson D, **Epperly MW**, Brown ML, Sastry J, Mokotoff, Reissman. In-111 laminin peptide fragments for malignant tumor detection. J Nucl Med 34:231P, 1993.
27. Sastry J, Mokotoff M, Swanson DP, Brown ML, **Epperly MW**. In-111-labelled laminin peptide fragments as potential diagnostic agents for metastatic cancers. J Cellular Biochem 17C:233, 1993.
28. **Epperly MW**, Reed JC, Santucci MA, Anderson J, Greenberger JS. Effect of the BCL-2 gene expression on radiation sensitivity *in vitro* of the murine hematopoietic progenitor cell line 32D cl 3. Presented at the 42ND Annual Meeting of the Radiation Research Society, Nashville, TN (April 29 - May 4, 1994). Radiation Research Society, pp. 234: 510A, 1994.
29. **Epperly MW**, Ando K, Greenberger JS. Expression of transgenes for cyclin D2 or D3 results in an increased radioresistance in 32D cl 3 cells. ISEH Meeting, Minneapolis, MN ( August 21-25, 1994.) Exp Hematol 22(8):699, 1994.
30. **Epperly MW**, Hallahan DE, Kufe DW, Weichselbaum R, Greenberger JS. Manganese superoxide dismutase transgene increases the radioresistance of hematopoietic progenitor cell lines. ISEH Meeting, Minneapolis, MN (August 21-25, 1994). Exp Hematol 22(8):790, 1994.
31. **Epperly MW**, Berry LA, Halloran A, Greenberger JS. Overexpression of the cyclin D1, D2 or D3 alters radiation sensitivity of the murine hematopoietic progenitor cell line 32D cl 3. The 36TH Annual Meeting of the American Society of Hematology, Nashville, TN (December 1-4, 1994). Blood 84(10):Suppl. #1;39A, 1994.
32. **Epperly MW**, Greenberger JS. Inhibition of apoptosis by the overexpression of manganese superoxide dismutase (MnSOD) in 32D cl 3 hematopoietic progenitor cells. International Society for Experimental Hematology Meeting, Dusseldorf, Germany (August 25 - September 1, 1995). Exp Hematol 23(8):820, 1995.
33. Greenberger JS, **Epperly MW**, Fisher AM, Cote GJ, Goldring SM, Glowacki J. Hematopoietic progenitor cells expressing the transgene for human calcitonin receptor bind in a “juxtacrine” pair with bone marrow stromal cells expressing the transgene for human calcitonin. International Society for Experimental Hematology Meeting, Dusseldorf, Germany (August 25 - September 1, 1995). Exp Hematol 23(8):750, 1995.
34. **Epperly MW**, Berry L, Halloran A, Reed JC, Greenberger JS. Inhibition of radiation-induced G1 arrest by overexpression of either the D-type cyclins, cdk-4 or bcl-2 in the IL-3-dependent 32D cl 3 hematopoietic progenitor cell lines. Proc. of the 43RD Annual Meeting of the Radiation Research Society, San Jose, CA, April 1-6, 1995). Radiat Res, 206:26-407, 1995.
35. **Epperly MW**, Fisher AM, Berry LA, Bray JA, Greenberger JS. Binding of the human calcitonin receptor located on 32D cl 3 murine hematopoietic cells to human calcitonin expressed on GPI stromal cells results in enhanced cobblestone island formation. American Society of Hematology Meeting, Seattle, WA (December 1-5, 1995). Blood, 86(10):Suppl.#1:662A, 1995.
36. **Epperly MW**, Berry LA, Bray JA, Greenberger JS. Overexpression of MnSOD in the 32D cl 3 hematopoietic progenitor cell line prevents apoptotic DNA strand breaks resulting from irradiation and IL-3 withdrawal. American Society of Hematology Meeting, Seattle, WA ( December 1-5, 1995). Blood 86(10):Suppl.#1:413A, 1995.
37. Zwacka R, Zhang Y, **Epperly MW**, Greenberger JS, Engelhardt JF. Ectopic adenoviral-mediated expression of MnSOD and Cu/ZnSOD in radioprotective gene therapy. Gene Therapy of Acquired Diseases Meeting, Nashville, TN (October 19-21, 1995).
38. **Epperly MW**, Jahroudi N, Rosenstein M, Shields D, Engelhardt J, Huang L, Greenberger JS. Protection of the lung from ionizing irradiation damage by inhalation gene therapy. The 37TH Annual Scientific Meeting of the American Society for Therapeutic Radiology & Oncology, Miami Beach, FL (October 8-11, 1995). Int. J Rad Oncol Biol Phys 32(Suppl #1):173, 1995.
39. **Epperly MW,** Zeevi A, Berry LA, Greenberger JS. Protection of the lung from irradiation-induced damage by inhalation of liposome-MnSOD plasmid complex. Presented at the 44TH Annual Meeting of the Radiation Research Society, Chicago, IL (April 14-17, 1996). Proc. of the Radiat. Res. Soc. Annual Meeting, pp. 07-118, 1996.
40. Greenberger JS, Bray JA, Glowacki J, **Epperly MW**. Op/op bone marrow stromal cells expressing transgenes for cell surface M-CSF protein can support osteoclastogenesis. The 38TH Annual Meeting of ASH, Orlando, FL (December 6-10, 1996). Blood 88(10):Supp#1:738, 1996.
41. **Epperly MW**, Bray JA, Glowacki J, Boggs SS, Patrene K, Greenberger JS. Ovariectomy of C57BL/6J mice increases bone marrow cell capacity for osteoclast formation in cocultures of purified cell populations. The 38TH Annual Meeting of ASH, Orlando, FL (December 6-10, 1996). Blood 88(10):Supp#1:3185, 1996.
42. **Epperly MW**, Bray JA, Greenberger JS, Corey S. Lyn and Syk differentially regulate apoptosis in irradiated B lymphocytes and contribute to G-CSF’s anti-apoptotic effects in B lymphocytes that ectopically express G-CSFR. The 38TH Annual Meeting of ASH, Orlando, FL (December 6-10, 1996). Blood 88(10):Supp#1:773, 1996.
43. Greenberger JS, **Epperly MW**, Jahroudi N, Pogue-Geile KL, Goltry KL, Bray JA. Effects of ionizing irradiation on the hematopoietic microenvironment. Proc. of the 45TH Annual Meeting of the Radiation Research Society, Providence, RI (5/97), S17-02, pp. 87, 1997.
44. **Epperly MW**, Bray JA, Greenberger JS, Corey S. Differential effects on apoptosis of lyn and syk in irradiated B lymphocytes. Proc. of the 45TH Annual Meeting of the Radiation Research Society, Providence, RI (5/97), P25-511, pp. 224, 1997.
45. **Epperly MW**, Berry LA, Bray J, Kraeger S, Fisher A, Essenwein A, Zwacka R, Engelhardt JF, Travis EL, Greenberger JS. Intratracheal manganese superoxide dismutase gene therapy for prevention of irradiation-induced lung damage. The 39TH Annual Meeting of ASTRO, Orlando, FL (October 19-22, 1997). Int J Radiat Oncol Biol Phys 39(Suppl. #1):208, A149, 1997.
46. Greenberger JS, **Epperly MW**, Goltry KL, Bray JA, Jahroudi N. Stromal cells of the hematopoietic microenvironment: Transplantability, inductive role in hematopoiesis, and response to ionizing irradiation. The 10TH  Symposium on Molecular Biology of Hematopoiesis and Treatment of Leukemias and Lymphomas, Hamburg, Germany (July 2-6, 1997). Acta Hematol 98: (Suppl. #1):31, 1997.
47. Glowacki J, Mizuno S, **Epperly MW**, Greenberger JS. Juxtacrine mechanisms of osteoclastogenesis. Bone and the Hematopoietic and Immune Systems: A Scientific Workshop, Bethesda, MD (August 5-6, 1997).
48. **Epperly MW**, Bray JA, Greenberger JS. Increased hematopoietic activity in long-term bone marrow cultures from p53 recombinant deficient mice. The 39TH Annual Meeting & Exposition of the American Society of Hematology, San Diego, CA (December 5-9, 1997). Blood 90(10):Suppl. #1:490A, 1997.
49. **Epperly MW**, Bray JA, Krager S, Berry LA, Gooding W, Engelhardt JF, Zwacka R, Travis EL, Greenberger JS. Intratracheal injection of an adenovirus containing a human MnSOD transgene protects against irradiation-induced lung damage. The 89TH Annual Meeting of the AACR, New Orleans, LA (March 28 - April 1, 1998). Proc. of the AACR 39:515A (#3505), 1998.
50. **Epperly MW**, Krager S, Bray JA, Stickle R, Berry LM, Zwacka R, Engelhardt JF, Travis EL, Greenberger JS. Intrapulmonary expression of a MnSOD transgene protects the lung from ionizing irradiation damage. The 46TH Annual Meeting of the Radiation Research Society, Louisville, KY (April 25-29, 1998), p. 121, #P07-124.
51. **Epperly MW**, Bray JA, Escobar P, Watkins SC, Bigbee WL, Greenberger JS. Increased radioresistance by overexpression of human MnSOD in the hematopoietic progenitor cell line 32D cl 3. The 46TH Annual Meeting of the Radiation Research Society, Louisville, KY (April 25-29, 1998), p. 122, #P07-125.
52. Stickle R, **Epperly MW**, Greenberger JS. Plasmid/liposome delivery of the human MNSOD transgene to the murine esophagus for prevention of irradiation-induced esophagitis. The 1ST Annual Meeting Of the American Society Of Gene Therapy, Seattle, WA (May 28-31, 1998), p. 60A (238).
53. **Epperly MW**, Shiffer C, Escobar P, Bray JA, Watkins SC, Bigbee WL, Greenberger JS. Overexpression of MnSOD *in vitro* increases the radioresistance of 32D cl 3 hematopoietic progenitor cells. The 89TH Annual Meeting of the AACR, New Orleans, LA (March 28 - April 1, 1998). Proc of the AACR 39:78A (#532), 1998.
54. **Epperly MW**, Bray JA, Escobar P, Bigbee WL, Greenberger JS. Overexpression of a human MnSOD transgene protects the hematopoietic progenitor cell line 32D cl 3 from irradiation-induced damage. The 27TH Annual Meeting of the International Society of Experimental Hematology, Vancouver, BC, Canada (August 1-5, 1998). Exp Hematol 26(8):721, 1998.
55. **Epperly MW**, Bray JA, Escobar P, Bigbee WL, Watkins SC, Greenberger JS. Overexpression of the human MnSOD transgene in vitro protects 32D cl 3 murine hematopoietic progenitor cells from irradiation-induced apoptosis. The 40TH Annual Scientific Meeting of ASTRO, Phoenix, AZ (October 25-29, 1998). IJROBP 42(1): Suppl. P125 (#23), 1998.
56. Stickle RL, **Epperly MW**, Greenberger JS. Prevention of irradiation-induced esophagitis by intraesophageal plasmid/liposome delivery of the human manganese superoxide dismutase (MnSOD) transgene. The 40TH Annual Scientific Meeting of ASTRO, Phoenix, AZ (October 25-29, 1998). IJROBP 42(1): Suppl. P238 (#2822), 1998.
57. **Epperly MW**, Bray J, Bash S, Berry L, Greenberger JS. Human MnSOD transgene expression in 32D cl 3 murine hematopoietic progenitor cells protects against irradiation apoptosis through decreased caspase 3 and PARP activation. The 40TH Annual Meeting of ASH, Miami Beach, FL (December 4-8, 1998).  Blood 92(10):Suppl.#1: P197A (#802), 1998.
58. **Epperly MW**, Bray JA, Bash S. Greenberger JS. Overexpression of MnSOD in 32D cl 3 cells increases irradiation resistance by stabilization of the mitochondrial membrane and inhibition of caspase-3 and PARP activation. The 90TH Annual Meeting of the AACR (April 10-14, 1999). AACR 40:551 (#3634), 1999.
59. **Epperly MW**, Deutsch M. Irradiation plus intraperitoneal delivery of iododeoxyuridine results in increased survival of mice bearing an ascites tumor. The 90TH Annual Meeting of the AACR (April 10-14, 1999). AACR 40:9(Abstract #978), 1999.
60. Greenberger JS, Bray JA, Defilippi S, Sikora C, **Epperly MW**. Radioprotective gene therapy for prevention of ionizing irradiation-induced pulmonary damage and esophagitis. The 2nd Annual Meeting of the American Society of Gene Therapy, Washington, DC (June 9-13, 1999). ASGT 28A:(#109), 1999.
61. **Epperly MW**, Defilippi S, Bray JA, Sikora C, Luketich JD, Koe G, Liggitt D, Greenberger JS. Overexpression of manganese superoxide dismutase in human esophagus protects against irradiation-induced apoptosis. The 2nd Annual Meeting of the American Society of Gene Therapy Washington, DC (June 9-13, 1999). ASGT 170A(#674), 1999.
62. **Epperly MW**, Bray JA, Sikora C, Greenberger JS. Pulmonary radioprotective intratracheal injections of MnSOD plasmid/liposomes do not protect orthotopic lung tumors from irradiation. The 2nd Annual Meeting of the American Society of Gene Therapy, Washington, DC (June 9-13, 1999). ASGT 172A:(#680), 1999.
63. Pruchnic R, Cao BH, Qu Z, Xiao X, Li J, Samulski RJ, **Epperly MW**, Huard J. The transduction of muscle fiber with adeno-associated virus is fiber type dependent. The 2nd Annual Meeting of the American Society of Gene Therapy, Washington, DC (June 9-13, 1999).
64. **Epperly MA**, Bray JA, Defilippi S, Greenberger JS. Overexpression of manganese superoxide dismutase in the 32D cl 3 murine hematopoietic progenitor cell line prevents apoptosis induced by ionizing irradiation, IL-3 withdrawal, or exposure to TNF-. The 28TH Annual Meeting of the International Society of Experimental Hematology, Monte Carlo, Monaco (July 10-14, 1999). Exp Hematol 27(7):56(#78), 1999.
65. **Epperly MW,** Bray J, Sikora C, Greenberger JS. Pulmonary radioprotective intratracheal injections of MnSOD plasmid/liposomes do not protect orthotopic lung tumors from irradiation. The 11TH International Conference of Radiation Research, Dublin, Ireland (July 18-23, 1999).
66. **Epperly MW**, Bray JA, Sikora C, Greenberger JS. Pulmonary radioprotective intratracheal injections of MnSOD plasmid/liposomes do not protect orthotopic lung tumors from irradiation. The 2nd Annual Meeting of the American Society of Gene Therapy, Washington, DC, June 9-13, 1999. ASGT, 172A:(#680), 1999.
67. Gorbunov NV, **Epperly MW**, Bigbee KL, Pogue-Geile KL, Draviam R, Day B, Wald N, Greenberger JS. Radiation-induced activation of nitric oxide synthase II (NOS II) in D2XRII murine bone marrow stromal cells.  Experimental Biology 99, Washington, DC (April 17-21, 1999). FASEB J., 13(4):(Abstract#254.22), 1999.
68. Greenberger JS, Bray JA, Sikora C, **Epperly MA**. Radioprotection of the lung by intratracheal injections of MnSOD plasmid/liposome complex does not protect orthotopic lung tumors. The 40TH Annual Meeting of ASTRO, Phoenix, AZ (October 25-29, 1999).
69. Lavelle J, **Epperly MW**, Bray JA, Defilippi S, Zeidel M, Greenberger JS. Prevention of irradiation-induced bladder damage by MnSOD plasmid/liposome gene therapy. The 40TH Annual Meeting of ASTRO, Phoenix, AZ (October 25-29, 1999).
70. **Epperly MW**, Bray JA, Defilippi S, Greenberger JS. Human MnSOD transgene expression inhibits apoptosis induced by IL-3 withdrawal or TNF- as well as ionizing irradiation in 32D cl 3 murine hematopoietic progenitor cells. The 40TH Annual Meeting of ASTRO, Phoenix, AZ, October 25-29, 1999. IJROBP, 45(3):294 (#2031), 1999.
71. Bray JA, **Epperly MW**, Defilippi S, Koe G, Liggitt D, Luketich J, Greenberger JS. Prevention of irradiation-induced apoptosis in human esophagus sections *in vitro* by overexpression of the manganese superoxide dismutase transgene. The 40TH Annual Meeting of ASTRO, Phoenix, AZ, October 25-29, 1999. IJROBP, 45(3):302 (#2048), 1999.
72. Boggs SS, Patrene K, Lu J, **Epperly MW**, Greenberger JS. The op/op stromal cell line derived from bone marrow of osteopetrotic mice is the only one of many tested that supports proliferation and development of NK cells from their precursors. The 28th Annual Meeting of the International Society of Experimental Hematology, Monte Carlo, Monaco (July 10-14, 1999). Exp. Hematol., 27(7):37(#4), 1999.
73. **Epperly MW**, Defilippi S, Sikora C, Greenberger JS. Mitochondrial protection inhibits apoptosis in 32D cl 3 murine hematopoietic progenitor cell lines overexpressing MnSOD, Bcl-2, or Bcl-xl. The 41ST Annual Meeting of the American Society of Hematology, New Orleans, LA, December 3-7, 1999. Blood, 94(10):Suppl. #1:480A (#2145), 1999.
74. Wong HY, **Epperly MW**, Godfrey T, Greenberger JS, Luketich JD. MnSOD overexpression protects normal cells during photodynamic therapy (PDT). Eastern-Atlantic Student Research Forum, Miami, FL, February 23-26, 2000. ESRF:2000 Program & Abstract Book, p. 66 (Abstract #P06).
75. Wong HY, **Epperly MW**, Godfrey T, Greenberger JS, Luketich JD. Manganese superoxide dismutase (MnSOD) gene insertion protects normal cells during photodynamic therapy. Medical Student Research Forum, Galveston, Texas, 2000.
76. Wong HS, **Epperly MW**, Godfrey T, Greenberger JS, Luketich J. Manganese superoxide dismutase (MnSOD) gene insertion protects normal cells during photodynamic therapy (PDT). The 80TH Annual Meeting Of The American Assoc. of Thoracic Surgery, Year 2000.
77. **Epperly MW**, Sikora C, Epstein CJ, Travis EL, Greenberger JS. Intratracheal administration of MnSOD plasmid/liposome (PL) complex improves the decreased pulmonary radiation resistance of SOD2 deficient mice. The 47TH Annual Scientific Meeting of the Radiation Research Society, Albuquerque, New Mexico, April 29 - May 3, 2000. Radiation Research Program Abstract Book, p. 145 (Abstract #P315), 2000.
78. **Epperly MW**, Defilippi S, Gretton J, Sikora C, Greenberger JS. MnSOD-PL complex protects normal lung but not orthotopic 3LL Lewis lung carcinoma from irradiation. The 47TH Annual Scientific Meeting of the Radiation Research Society, Albuquerque, New Mexico, April 29 - May 3, 2000. Radiation Research Program Abstract Book, p. 115 (Abstract #P193), 2000.
79. **Epperly MW**, Sikora C, Defilippi S, Gretton J, Greenberger JS. Expression of human MnSOD or Bcl-xl transgene blocks irradiation apoptosis by stabilization of the mitochondrial membrane. The 47TH Annual Scientific Meeting of the Radiation Research Society, Albuquerque, New Mexico, April 29 - May 3, 2000. Radiation Research Program Abstract Book, p. 72 (Abstract #P19), 2000.
80. **Epperly MW**, Gretton J, Defilippi S, Liggitt D, Koe G, Greenberger JS. Prevention of irradiation-induced esophagitis by intraesophageal injection of MnSOD-plasmid/liposome complex. The 47TH Annual Scientific Meeting of the Radiation Research Society, Albuquerque, New Mexico, April 29 - May 3, 2000. Radiation Research Program Abstract Book, p. 114 (Abstract #P192), 2000.
81. Greenberger JS, **Epperly MW**, Lavelle J, Zeidel M. Radioprotective gene therapy using MnSOD plasmid/liposomes. SOD Conference, Institute Pasteur, France, May 18-20, 2000.
82. **Epperly MW**, Defilipi SJ, Gretton JE, Liggitt D, Koe G, Greenberger JS. Intraesophageal injection of clinical grade manganese superoxide dismutase (MnSOD) plasmid/liposome (PL) complex blocks irradiation-induced murine esophagitis. ASGT Third Annual Meeting, Denver, CO, May 31 - June 4, 2000. Molecular Therapy, 1(5):S160 (Abstract#415), 2000.
83. Greenberger JS, Defilipi SJ, Sikora CA, Gretton JE, **Epperly MW**. Overexpression of the human manganese superoxide dismutase (MnSOD) transgene prevents irradiation-induced apoptosis by stabilization of the mitochondria. ASGT Third Annual Meeting, Denver, CO, May 31 - June 4, 2000. Molecular Therapy, 1(5):S129 (Abstract#329), 2000.
84. **Epperly MW**, Defilippi SJ, Sikora CA, Gretton JE, Pierce L, Peterson J, Kagan V, Greenberger JS. Overexpression of the human MnSOD transgene prevents irradiation apoptosis of 32D cl 3 hematopoietic progenitor cells by stabilization of the mitochondria. The 29th Annual Scientific Meeting of the International Society Of Experimental Hematology, Tampa, FL July 8-11, 2000. Exp. Hematol., 28(7):Suppl. #1:35 (Abstract #14), 2000.
85. **Epperly MW**, Defilippi SJ, Gretton JE, Sikora C, Greenberger JS. Intratracheal injection of MnSOD plasmid/liposome (MnSOD-PL) protects normal lung but not orthotopic thoracic tumors from irradiation. The 29th Annual Scientific Meeting of the International Society Of Experimental Hematology, Tampa, FL July 8-11, 2000. Exp. Hematol., 28(7):Suppl. #1:36 (Abstract #16), 2000.
86. Greenberger JS, Defilippi SJ, Gretton JE, Liggitt HD, Koe G, **Epperly MW**. Irradiation-induced murine esophagitis is blocked by intraesophageal injection of clinical grade MnSOD plasmid/liposome (MnSOD-PL) complex. The 42nd Annual Meeting of the American Society For Therapeutic Radiology and Oncology, Boston, MA, October 22-26, 2000. IJROBP, 48(3):(Suppl.#2000):157, p.190, 2000.
87. **Epperly MW**, Sikora CA, Defilippi SJ, Greenberger JS. Overexpression of the MnSOD transgene in murine hematopoietic progenitor cell line 32D cl 3 reduces reactive oxygen species (ROS) production following irradiation. The 42nd Annual Meeting of the American Society For Therapeutic Radiology and Oncology, Boston, MA, October 22-26, 2000 (Abstract #1460). IJROBP, 48(3):(Suppl.#2000):2022, p.276, 2000.
88. Lavelle JP, **Epperly MW**, Defilippi SJ, Zeidel ML, Kalend AM, Greenberger JS. Reduction of irradiation-induced cystitis by MnSOD plasmid/liposome (MnSOD-PL) gene therapy. The 42nd Annual Meeting of the American Society For Therapeutic Radiology and Oncology, Boston, MA, October 22-26, 2000. ASTRO (Abstract #1477), 2000. IJROBP, 48(3):(Suppl.#2000):2034, p.281, 2000.
89. **Epperly MW**, DeFilippi SJ, Sikora CA, Gretton JA, Belani CP, Luketich JD, Liggitt D, Koe G, Greenberger JS. Intraesophageal injection of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) protects the murine esophagus from ionizing irradiation-induced esophagitis and late esophageal stricture. The 8TH Annual Meeting of the European Society of Gene Therapy, Stockholm, Sweden, October 7-10, 2000. Gene Medicine, 2(Suppl. #5):68, 2000.
90. Greenberger JS, **Epperly MW**, DeFilippi SJ, Gretton JA, Sikora CA. Pulmonary radioprotective intratracheal manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) injection does not protect orthotopic Lewis lung carcinoma from irradiation killing. The 8TH Annual Meeting of the European Society of Gene Therapy, Stockholm, Sweden, October 7-10, 2000. Gene Medicine, 2(Suppl. #5):68, 2000.
91. Wong HY, **Epperly MW,** Godfrey T, Greenberger JS, Luketich JD. Inflammatory cytokine mRNA level elevation following esophageal photodynamic therapy in mice and in humans. International Organization For Statistical Studies on Diseases of the Esophagus (O.E.S.O.). World Congress, September 2-6, 2000. Paris, France. (Panel No. 77).
92. Wong HY, **Epperly MW,** Godfrey T, Greenberger JS, Luketich JD. Overexpression of the human manganese superoxide dismutase (MnSOD) transgene protects 32D cl 3 hematopoietic progenitor cells from photodynamic therapy-induced apoptosis: potential implication for Barrett’s esophagus. International Organization For Statistical Studies on Diseases of the Esophagus (O.E.S.O.). World Congress, September 2-6, 2000. Paris, France. (Panel No. 78).
93. Gorbunov NV, **Epperly MW,** Bigbee WL, Draviam R, Morris JE, Greenberger JS, Thrall BD. Activation of nuclear factor kß, nitric oxide synthase II (iNOS), and Tp53 in response of bone marrow stromal cells to the oxidative stress induced by hydrogen peroxide (H2O2). The Seventh Annual Meeting of the Oxygen Society, November 16, 20, 2000, San Diego, CA, (Abstract #161).
94. Greenberger JS, Sikora CA, Defilippi SJ, Gretton JE, **Epperly MW.** Inhibition of irradiation-induced apoptosis in 32D cl 3 cells by overexpression of the manganese superoxide dismutase (MnSOD) transgene is through reduction of reactive oxygen species (ROS). The 42nd Annual Meeting of ASH. The Moscone Convention Center, San Francisco, CA. December 1-5, 2000. Blood, 96(11):81a (Abstract #344), 2000.
95. **Epperly MW,** Sikora CA, Defillip SJ, Gretton JE, Greenberger JS. Irradiation-induced inflammatory MRNA levels differ between bone marrow stromal cells compared to hematopoietic progenitor cells. The 42nd Annual Meeting of ASH. The Moscone Convention Center, San Francisco, CA. December 1-5, 2000. Blood, 96(11):132b (Abstract #4261), 2000.
96. Blumberg D, **Epperly MW,** Jefferson M, Liu K, Cook T, Chung J, Kibbe M, Greenberger JS, Billiar T. Gene therapy with the human inducible nitric oxide synthase gene radiosensitizes human cancer cells. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 21-25, 2001 (p. 110, #p07-97).
97. Blumberg D, Cook T, **Epperly MW,** Jefferson M, Liu K, Kibbe M, Greenberger JS, Robbins P, Billiar T. Adenoviral delivery of WT p53 augments the cytotoxicity of nitric oxide and radiation in human colon cancer cells associated with an increased S phase, G2M arrest, and apoptosis. The Ninety-Second Annual Meeting of AACR, Ernest N. Morial Convention Center, New Orleans, LA. March 24-28, 2001.
98. **Epperly MW,** Gretton JE, Defilippi SJ, Sikora CA, Bar-Sagi D, Archer HM, Greenberger JS. Hemagglutinin (HA) epitope-tagged manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) gene therapy to the esophagus: Prevention of irradiation-induced esophagitis. The Ninety-Second Annual Meeting of AACR, Ernest N. Morial Convention Center, New Orleans, LA. March 24-28, 2001.
99. Greenberger JS, Sikora CA, Defilippi SJ, Gretton JE, **Epperly MW**. Irradiation-induced inflammatory mRNA levels differ between bone marrow stromal cells compared to hematopoietic progenitor cells. The Ninety-Second Annual Meeting of AACR, Ernest N. Morial Convention Center, New Orleans, LA. March 24-28, 2001.
100. Greenberger JS, **Epperly MW,** Sikora CA, Defilippi SJ, Gretton JE, Liggitt D, Koe G, Luketich JD, Belani CP. Optimization of therapeutic ratio in chemoradiotherapy of non-small cell lung carcinoma (NSCLC) by manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) radioprotective gene therapy. The 37th ASCO Annual Meeting, Moscone Convention Center, San Francisco, CA, May 12-15, 2001.
101. **Epperly MW,** Lavelle JP, Defilippi SJ, Kalend AM, Zeidel ML, Greenberger JS. Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) gene therapy prevents irradiation-induced cystitis. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto, Rico, April 21-25, 2001.
102. **Epperly MW,** Goff JP, Sikora CA, Shields DS, Greenberger JS. Bone marrow origin of esophageal stem cells. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto, Rico, April 21-25, 2001.
103. Blumberg D, **Epperly MW,** Jefferson M, Liu K, Cook T, Chung J, Kibbe M, Greenberger JS, Billiar T. Gene therapy with the human inducible nitric oxide synthase gene radiosensitizes human cancer cells. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto, Rico, April 21-25, 2001.
104. **Epperly MW,** Sikora CA, Perez RG, Zigmond MJ, Greenberger JS. Overexpression of the manganese superoxide dismutase (MnSOD) transgene blocks induction of apoptosis by 6hydroxydopamine in a murine dopaminergic cell line. The 4TH Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). (Abstract# 331).
105. **Epperly MW,** Guo HL, Jefferson M, Cook T, Sikora CA, Greenberger JS, Blumberg D. Intratumoral injections of adenovirus containing inducible nitric oxide synthase transgene (iNOS) sensitizes SNU-1040 human colon tumors to ionizing irradiation. The 4TH Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). (Abstract #602).
106. **Epperly MW,** Goff JP, Shields DS, Sikora CA, Bar-Sagi, Greenberger JS. Bone marrow-derived esophageal stem cells (ESCs) are targets for manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) radioprotective gene therapy. The 4TH Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). (Abstract #619).
107. Greenberger JS, Gretton JE, DeFilippi SJ, Sikora CA, **Epperly MW**. Esophageal radioprotection in the lung cancer patient by MnSOD-PL gene therapy. Meeting for Advances In Lung Cancer, Rountop, TX , March 2001.
108. Greenberger JS, Sikora CA, DeFilippi SJ, Gretton JE, **Epperly MW**. Bone marrow stromal cell involvement in irradiation pulmonary fibrosis. The 30TH Annual Meeting of the International Society for Experimental Hematology (ISEH). Tokyo, Japan. August 25, 28, 2001.
109. **Epperly MW**, Sikora CA, Shields DS, Goff JP, Greenberger JS. Bone marrow origin of esophageal stem cells. The 30TH Annual Meeting of the International Society for Experimental Hematology (ISEH). Tokyo, Japan. August 25, 28, 2001.
110. Greenberger JS, **Epperly MW**, Sikora CA, Defilippi SJ, Gretton JE, Liggitt D, Koe G, Luketich JD, Belani CP. Optimization of therapeutic ratio in chemoradiotherapy of non-small cell lung carcinoma (NSCLC) by manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) radioprotective gene therapy. The 37th ASCO Annual Meeting, Moscone Convention Center, San Francisco, CA, May 12-15, 2001. Proc. of ASCO 2001, 20:260A (#1037), 2001.
111. **Epperly MW**, Lavelle JP, Defilippi SJ, Kalend AM, Zeidel ML, Greenberger JS. Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) gene therapy prevents irradiation-induced cystitis. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 21-25, 2001 (p. 111, #p07-98).
112. **Epperly MW**, Goff JP, Sikora CA, Shields DS, Greenberger JS. Bone marrow origin of esophageal stem cells. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 21-25, 2001 (p. 109, #p07-91).
113. Blumberg D, **Epperly MW**, Jefferson M, Liu K, Cook T, Chung J, Kibbe M, Greenberger JS, Billiar T. Gene therapy with the human inducible nitric oxide synthase gene radiosensitizes human cancer cells. The 48th Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 21-25, 2001 (p. 110, #p07-97).
114. **Epperly MW,** Sikora CA, Perez RG, Zigmond MJ, Greenberger JS. Overexpression of the manganese superoxide dismutase (MnSOD) transgene blocks induction of apoptosis by 6 hydroxydopamine in a murine dopaminergic cell line. The 4th Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). (Abstract #331). Molecular Therapy, 3(5):5116, 2001.
115. **Epperly MW**, Guo HL, Jefferson M, Cook T, Sikora CA, Greenberger JS, Blumberg D. Intratumoral injections of adenovirus containing inducible nitric oxide synthase transgene (iNOS) sensitizes SNU-1040 human colon tumors to ionizing irradiation. The 4th Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). (Abstract #602). Molecular Therapy, 3(5):5211, 2001.
116. **Epperly MW,** Goff JP, Shields DS, Sikora CA, Bar-Sagi, Greenberger JS. Bone marrow-derived esophageal stem cells (ESCs) are targets for manganese superoxide dismutase-plasmid/liposome (MnSOD PL) radioprotective gene therapy. The 4th Annual Meeting of the American Society of Gene Therapy, Seattle, WA (May 30 - June 3, 2001). Vol. 3(5): 5216, (Abstract #619), 2001.
117. Greenberger JS, Gretton JE, DeFilippi SJ, Sikora CA, **Epperly MW**. Esophageal radioprotection in the lung cancer patient by MnSOD-PL gene therapy. Meeting for Advances In Lung Cancer, Rountop, TX, March 2001.
118. Greenberger JS, Sikora CA, DeFilippi SJ, Gretton JE, **Epperly MW**. Bone marrow stromal cell involvement in irradiation pulmonary fibrosis. The 30th Annual Meeting of the International Society for Experimental Hematology (ISEH). Tokyo, Japan. August 25, 28, 2001. Exp. Hematol., 29(8):Suppl. #1:86 (Abstract #337), 2001.
119. **Epperly MW**, Sikora CA, Shields DS, Goff JP, Greenberger JS. Bone marrow origin of esophageal stem cells. The 30th Annual Meeting of the International Society for Experimental Hematology (ISEH). Tokyo, Japan. August 25, 28, 2001. Exp. Hematol., 29(8):Suppl. #1:85 (Abstract #336), 2001.
120. Zigmond MJ, **Epperly MW**, Sikora CA, Perez R, Greenberger JS. Dopaminergic neurons are protected from ionizing irradiation and 6-hydroxydopamine-induced apoptosis by overexpression of the manganese superoxide dismutase (MnSOD) transgene. The 43rd Annual Meeting of the American Society for the Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA, November 4-8, 2001. IJROBP, 51(3):Suppl. #1:231, (Abstract #2013), 2001.
121. Greenberger JS, DeFilippi SJ, Gretton JE, Sikora CA, Archer HA, Bar-Sagi D, **Epperly MW**. Bone marrow origin of esophageal stem cells. The 43rd Annual Meeting of the American Society for the Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA, November 4-8, 2001. IJROBP, 51(3):Suppl. #1:130 (Abstract #232), 2001.
122. **Epperly MW**, Sikora CA, Gretton JE, DeFilippi SJ, Greenberger JS. Late upregulation of VCAM-1 and ICAM-1 in irradiated murine pulmonary endothelial and lung parenchymal cells precedes recruitment of bone marrow-derived macrophages and fibrosis. The 43rd Annual Meeting of the American Society for the Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA, November 4-8, 2001. IJROBP, 51(3):Suppl. #1:129 (Abstract #230), 2001.
123. Greenberger JS, **Epperly MW**, Sikora CA, Defilippi SJ, Gretton JE, Luketich JD, Belani C, Liggitt D, Koe G. Optimization of therapeutic ratio in chemoradiotherapy of non-small cell lung carcinoma (NSCLC) by manganese Superoxide dismutase-plasmid/liposome (MnSOD-PL) radioprotective gene therapy. The 9th SPORE Investigator’s Workshop, Omni Shoreham Hotel, Washington, DC, July 15-17, 2001 (Page 25).
124. **Epperly MW,** Gretton JE, Sikora CA, Greenberger JS. Importance of mitochondrial localization of Superoxide dismutase in preventing irradiation-induced apoptosis. The American Society of Hematology 43rd Annual Meeting and Exposition, Orlando, FL, December 7-11, 2001. Blood, 98(11):555a (Abstract #2320), 2001.
125. Guo HL, **Epperly MW**, Wolfe DP, Glorioso JC, Greenberger JS, Blumberg D. Overexpression of manganese Superoxide dismutase (MnSOD) protects against murine intestinal damage induced by total body irradiation. The American Society of Hematology 43rd Annual Meeting and Exposition, Orlando, FL, December 7-11, 2001. Blood, 98(11):213a (Abstract #895), 2001.
126. Sikora CA, **Epperly MW**, Chang J, Goff JP, Shields DS, Guo HL, Greenberger JS. Bone marrow provides a source of stem cells to replace irradiation-damaged esophagus. The American Society of Hematology 43rd Annual Meeting and Exposition, Orlando, FL, December 7-11, 2001. Blood, 98(11):545a (Abstract #2287), 2001.
127. Greenberger JS, Defilippi SJ, Jefferson M, Gretton JE, **Epperly MW**. Involvement of the pulmonary vasculature in development of irradiation lung fibrosis. The American Society of Hematology 43rd Annual Meeting and Exposition, Orlando, FL, December 7-11, 2001. Blood, 98(11):384a (Abstract #1617), 2001.
128. Chang J, **Epperly MW,** Greenberger JS. Increased survival of cyropreserved hematopoietic cells by overexpression of manganese Superoxide dismutase (MnSOD) which decreases production of reactive oxygen species (ROS during thawing. The American Society of Hematology 43rd Annual Meeting and Exposition, Orlando, FL, December 7-11, 2001. Blood, 98(11):182a (Abstract #766), 2001.
129. Blumberg D, **Epperly MW**, Guo HL, Wolfe D, Liu K, Billiar T, Glorioso J, Greenberger JS. Overexpression of manganese Superoxide dismutase (MnSOD) protects against murine intestinal damage induced by total body irradiation (TBI). Society of University Surgeons 63rd Annual Meeting, Honolulu, Hawaii, February 14-16, 2002.
130. **Epperly MW,** Guo HL, Jefferson M, Gretton JE, Greenberger JS. Pathogenesis of irradiation-induced lung fibrosis. The 93rd Annual Meeting of the American Association for Cancer Research. San Francisco, CA, April 6-10, 2002.
131. Guo HL, Seixas-Silva, Jr. J, Gretton J**, Epperly MW**, Shin D, Greenberger JS. Manganese Superoxide dismutase-plasmid/liposome (MnSOD-PL) complex prevents mucositis of the oral cavity without protecting head and neck tumor xenografts. The 93rd Annual Meeting of the American Association for Cancer Research. San Francisco, CA, April 6-10, 2002.
132. Greenberger JS, Guo HL, Chang J, Gretton JE, **Epperly MW**. Esophageal stem cell (ESC) involvement in protection of the esophagus from irradiation damage. The 93rd Annual Meeting of the American Association for Cancer Research. San Francisco, CA, April 6-10, 2002.
133. Guo HL, Seixas-Silva, Jr. J, **Epperly MW**, Gretton JE, Shin D, Greenberger JS. Manganese Superoxide dismutas-plasmid/liposome (MnSOD-PL) complex protects the oral cavity from irradiation-induced mucositis. The 49th Radiation Research Society Annual Scientific Meeting. Reno Nevada, April 20-24, 2002.
134. **Epperly MW,** Gretton JE, Jefferson M, Bernarding M, Greenberger JS. Localization of Superoxide dismutase to the mitochondria is required for radioprotection of cells *in vitro*. The 49th Radiation Research Society Annual Scientific Meeting. Reno Nevada, April 20-24, 2002.
135. Osipov AN, Martin I, Borisenko GG, **Epperly MW**, Greenberger JS, Kagan VE. Ascorbate as a “redox-sensor” and protector against gamma-irradiation-induced oxidative stress: EPR evidence in 32D cl 3 and MnSOD-transfected 32D 2C6 cells. The 49th Radiation Research Society Annual Scientific Meeting. Reno Nevada, April 20-24, 2002.
136. Seixas-Silva J, Guo H, **Epperly MW**, Gretton JE, Shin DM, Greenberger JS. Title: Manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) complex prevents irradiation-induced mucositis of the oral cavity. ASGT, Boston (06/02), No. 830, p. 5272, Molecular Therapy, Vol. 5, No. 5, 2002.
137. Guo H, Wolfe DP, Huang S, **Epperly MW**, Greenberger JS, Glorioso J, Blumberg D. Title: Herpes simplex virus containing the human manganese superoxide dismutase transgene (HSV-MnSOD) protects the intestine from irradiation damage. ASGT, Boston (06/02), p. 5272, No. 831, Molecular Therapy, Vol. 5, No. 5, 2002.
138. Goff JP, Shields DS, Wechuck JB, Wolfe D, Huang S, Hanley KA, Goins WF, **Epperly MW**, Glorioso J, Greenberger JS. Title: Gene transfer of MnSOD to CD34+Thy-1+lin- human cord blood cells using herpes simplex virus type 1 vectors. ASGT, Boston (06/02), p. 5407, No. 1249, Molecular Therapy, Vol. 5, No. 5, 2002.
139. **Epperly MW**, Greenberger JS, Guo HL, Gretton JE, Jefferson M. Title: Protection of pulmonary endothelial cells from irradiation by overexpression of manganese superoxide dismutase-plasmid/liposome complexes. 31st. Annual Meeting International Society for Experimental Hematology, Montreal, Canada, July 5 – 9, 2002, Exp. Hematol. Vol. 30 (2002) 37 + 46, No. 6, Suppl. #1, # 193, p. 85, 2002.
140. **Epperly MW**, Greenberger JS, Gretton JE, Jefferson M, Bernarding M. Title: The importance of mitochondrial localization for the prevention irradiation-induced apoptosis by manganese superoxide dismutase. 31st. Annual Meeting International Society for Experimental Hematology, Montreal, Canada, July 5 – 9, 2002, Exp. Hematol. Vol. 30, No. 6, Suppl. #1, p. 52, # 63, 2002.
141. **Epperly MW**, Guo HL, Greenberger JS. Title: Bone marrow cells contribute to irradiation-induced pulmonary fibrosis. 31st. Annual Meeting International Society for Experimental Hematology, Montreal, Canada, July 5 – 9, 2002, Exp. Hematol. Vol. 30, No. 6, Suppl. #1, p. 101, # 258, 2002.
142. Goff JP, Shields DS, Wechuck JB, Wolfe D, Huang S, Hanley KA, Goins WF, **Epperly MW**, Glorioso J, Greenberger JS. Title: MnSOD gene transfer to CD34+Thy-1+lin- human cord blood cells using herpes simplex virus type 1 vectors. 31st. Annual Meeting International Society for Experimental Hematology, Montreal, Canada, July 5 – 9, 2002, Exp. Hematol. Vol. 30, No. 6, Suppl. #1, p. 68, # 127, 2002.
143. Kagan V, **Epperly MW**, Jefferson M, Bernarding M, Greenberger JS. Title: In vitro and in vivo detection of irradiation-induced free radicals. ASTRO, IJROBP #82, P. 50, Vol. 54, No. 2, Suppl., 2002.
144. Greenberger JS, Nie S, Jefferson M, Bernarding M, Gretton JE, Guo HL, Bar-Sagi D, Archer H, **Epperly MW**. Title: Time course of increased manganese superoxide dismutase (MnSOD) biochemical activity and C types specific expression in lungs of C57BL/6J mice intratracheally injected with MnSOD plasmid/liposome complex (MnSOD-PL). ASTRO, IJROBP, #2008, Vol. 54, p. 217, No. 2 Suppl., 2002.
145. **Epperly MW**, Jefferson M, Guo HL, Gretton JE, Bernarding M, Greenberger JS. Title: Pre-but not post irradiation intratracheal injection of manganese superoxide dismutase-plasmid/liposomes (MnSOD-PL) protects the lung from irradiation damage. ASTRO, IJROBP, #129, Vol. 54, p. 77, No. 2 Suppl., 2002.
146. Goff JP, Hanley KA, Shields DS, Wechuck JB, Wolfe D, **Epperly MW**, Greenberger JS. Title: Gene transfer of MnSOD to CD34+ and CD34+Thy-1+lin- human cord blood cells using a herpes simplex virus vector. Proc. AACR, Vol. 43, March, 2002, Abstract #2944, p. 594.
147. Greenberger JS, Gretton J, Jefferson M, Guo HL, **Epperly MW**. Title: Cell phenotype specific differential kinetics of expression of intratracheal delivered MnSOD-plasmid liposome gene therapy for pulmonary radiation protection. Frontiers in Cancer Prevention Research, Boston, Massachusetts, October 14 – 18, 2002, Proc. AACR Meeting, Abstract #B105, p. 105, 2002.
148. Greenberger JS, Gretton J, Jefferson M, Bernarding M, **Epperly MW**. Title: Cellular pathophysiology of ionizing irradiation induced organizing alveolitis/fibrosis. A.S.C.B. 42nd. Annual Meeting, San Francisco, California, December 14 – 18, 2002, 12/03. Molecular Biology of the Cell, Vol. 13, Supplement, p. 13a, #70, 2002.
149. Greenberger J, Jefferson M, Gretton J, Bernarding M, **Epperly MW**. Protection of normal tissues from ionizing irradiation damage by MnSOD-plasmid liposome gene therapy. Advances In Translational Radiation Oncology: From Molecular Signals to Cancer Care, Lugano, Switzerland, March 16, 2003 – March 19, 2003.
150. **Epperly MW**, Shen H, Jefferson M, Bernarding M, Greenberger JS. Title: Injection of esophageal stem cells following irradiation of the esophagus prevents irradiation-induced esophagitis and prolongs survival in a mouse model. ASH, Philadelphia, PA, December, 2002. Blood, Vol. 100, No. 11, p. 1536, #4100, 2002.
151. **Epperly MW**, Guo HL, Jefferson M, Gretton JE, Bernarding M, Greenberger JS. Title: Bone marrow involvement in the development of irradiation-induced fibrosis of the lung. ASH, Philadelphia, PA, December, 2002. Blood, Vol. 100, No. 11, p. 730a, #2881, 2002.
152. Guo HL, Seixas-Silva JA, **Epperly MW**, Gretton JE, Shin, DM, Bar-Sagi D, Archer H, Greenberger JS. Title: Decrease in irradiation-induced oral cavity mucositis by plasmid/liposome delivery of the human manganese superoxide dismutase (MnSOD) transgene. ASH, Philadelphia, PA, December, 2002. Blood, Vol. 100, No. 11, p. 656a, #2580, 2002.
153. Goff JP, Shields DS, Wechuck JB, Huang S, Wolfe D, **Epperly MW**, Glorioso JC, Greenberger JS. Title: Use of herpes simplex virus type 1 vectors for MnSOD gene transfer to CD34+Thy-1+lin- human cord blood cells. Blood, Vol. 100, No. 11, p. 486b, #5529, 2002.
154. Greenberger JS, Guo HL, Jefferson M, Gretton J, Bernarding M, **Epperly MW**. Title: Irradiation-induced fibrosis of the lung is prevented by both pre- and post-irradiation intratracheal injection of manganese superoxide dismutase-plasmid/liposome (MNSOD-PL). AACR, Toronto, Ontario, Canada, April 5 – 9, 2003. Proceedings 94th Annual Meeting, Vol. 44, p. 1408, #6142, March, 2003.
155. **Epperly MW**, Jefferson M, Bernarding M, Guo HL, Gretton J, Cheng J, Chen M, Greenberger JS. Title: Isolation of esophageal stem cells from the esophagus or bone marrow. AACR, Toronto, Ontario, Canada, April 5 – 9, 2003. Proceedings 94th Annual Meeting, Vol. 44, p. 988, #4320, March, 2003.
156. Guo HL, **Epperly MW**, Greenberger JS. Title: Increased expression of the MnSOD transgene in murine lungs at the time of late fibrosis associated increased irradiation-induced cytokine expression improves survival. ASGT, June, 2003.
157. **Epperly MW**, Guo HL, Greenberger JS. Title: Increased adhesion molecule expression precedes irradiation-induced fibrosis. ASGT, June, 2003.
158. Perry Y, **Epperly MW**, Greenberger JS, Luketich JD. Title: Development of PDT-induced esophageal stricture is decreased by therapeutic local overexpression of the MnSOD transgene. ASGT, June, 2003.
159. **Epperly MW**, Guo HL, Greenberger JS. Title: Increased productivity of long-term bone marrow cultures from E-Selectin knockout mice compared to L-Selectin, VCAM or ICAM knockout mice. ISEH, July, 2003.
160. **Epperly MW**, Jefferson M, Chang J, Chen M, Greenberger JS. Title: Regeneration of the esophagus by esophageal and hematopoietic stem cells. ISEH, July, 2003.
161. Guo HL, **Epperly MW**, Greenberger JS. Title: RRS-Delayed administration of MnSOD-PL following irradiation results in increased survival of irradiated mice. RRS, June, 2003.
162. Greenberger JS, Guo HL, **Epperly MW**. Title: RRS-Absence of L-Selectin results in increased survival following pulmonary irradiation. RRS, June, 2003.
163. **Epperly MW**, Perry Y, Luketich JD, Greenberger JS. Title: RRS-Prevention of PDT-induced esophageal stricture by MnSOD-PL gene therapy. RRS, June, 2003.
164. Greenberger JS, Guo HL, **Epperly MW**. Title: Role of adhesion molecules in irradiation-induced organizing alveolitis/fibrosis in C57BL/6J mice. ASTRO, September, 2003.
165. **Epperly MW**, Guo HL, Greenberger JS. Title: Intratracheal administration of Manganese Superoxide Dismutase-Plasmid/Liposomes following irradiation provides protection from lung irradiation damage. ASTRO, September, 2003.
166. Guo HL, **Epperly MW**, Liggitt D, Koe G, Greenberger JS. Title: Inhalation of freeze-dried Manganese Superoxide Dismutase-Plasmid/Liposome produces detectable transgene product expression in the lungs of C57BL/6J mice. ASTRO, September, 2003.

167.A Greenberger JS, Guo H, Nie S, Zhang X, **Epperly MW**. Title: Mitochondrial localization of Superoxide Dismutase transgene product is required for conferral of ionizing irradiation resistance. The American Society for Cell Biology 43rd Annual Meeting, Moscone Convention Center, San Francisco, CA, December 13 – 17, 2003. Molecular Biology of the Cell, Vol. 14, Nov., 2003, p. 420a, #2350.

168.A **Epperly MW**, Osipov AN, Martin I, Kawai KK, Barisenko GB, Jefferson M, Bernarding M, Greenberger JS, Kagan VE. Title: MnSOD protection of 32D cl 3 hematopoietic cells against irradiation-induced oxidative stress: Role of ascorbate and Thiols. SPORE Investigator’s Meeting, Bethesda, Maryland, July, 2003.

169.A Greenberger JS, Shen H, Zhang X, Carpenter M, **Epperly MW**. Title: Protection of esophageal stem cells from irradiation damage by overexpression of manganese superoxide dismutase (MnSOD). ASH, December, 2003. Blood, Vol. 102(11), Nov. 16, 2003, #4296, p. 147b.

170.A **Epperly MW**, Carpenter M, Guo H, Greenberger JS. Title: Pulmonary ionizing radiation protection by inhalation delivery of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL). ASH, December, 2003. Blood, Vol. 102(11), Nov. 16, 2003, #5716, p. 210b.

171.A **Epperly MW**, Nie S, Zhang X, Hsu A, Greenberger JS. Title: Overexpression of MnSOD in 32D cl 3 murine hematopoietic progenitor cells increases overall antioxidant activity. ASH, December, 2003. Blood, Vol. 102(11), Nov. 16, 2003, #4411, p. 174b.

172.A **Epperly M**, Perry Y, Greenberger J, Luketich J. Title: Therapeutic local overexpression of the manganese superoxide dismutase (MnSOD) – transgene prevents photodynamic therapy damage to normal esophageal mucosa. In: Optical Methods for Tumor Treatment and Detection: Mechanisms and Techniques in Photodynamic Therapy, part of the International Symposium on Biomedical Optics 2004, 24 – 29 January 2004 in San Jose, California, USA.

173.A Carpenter M, Agarwal A, Nie S, Hricisak L, **Epperly MW**, Greenberger JS. Title: Inhalation delivery of manganese superoxide dismutase-plasmid/liposomes (MnSOD-PL) to the mouse lung for fractionated radioprotection. AACR, 2004.

174.A **Epperly MW**, Perry Y, Luketich JD, Greenberger JS. Title: Prevention of PDT-induced porcine esophageal stricture by overexpression of manganese superoxide dismutase (MnSOD). AACR, 2004.

175.A Greenberger JS, Nie S, Hsu A, Zhang X, **Epperly MW**. Title: Increased antioxidant pool size in subclonal lines of 32D cl 3 overexpressing MnSOD protects cells from ionizing irradiation. AACR, 2004.

176.A Kagan VE, Tyurin VA, Tyurina YY, Amoscato AA, Kanai AJ, Peterson J, **Epperly MW**, Greenberger J. Title: Redox enhancement of tumor cell sensitivity to apoptosis: radiation-induced oxidation of cardiolipin. Lung Spore Meeting, 2004.

177.A **Epperly MW**, Kagan VE, Tyurin VA, Tyurina YY, Amoscato AA, Kanai AJ, Peterson J, Greenberger J. Title: Reduction in nNOS activity decrease the magnitude of cardiolipin modification following irradiation. Radiation Research Society (RRS), St. Louis, MO, July, 2004.

178.A Carpenter M, Agarwal A, Nie S, Hricisak L, **Epperly MW**, Greenberger JS. Title: Inhalation delivery of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) complexes to mouse lung protects against irradiation-induced organizing alveolitis. Radiation Research Society (RRS), St. Louis, MO, July, 2004.

179.A **Epperly M**, Birder L, Meyers S, Greenberger J, Kanai A. Title: Inhibition/absence of mitochondrial nitric oxide synthase protects the bladder urothelium against radiation damage. Radiation Research Society (RRS), St. Louis, MO, July, 2004.

180.A Agarwal A, **Epperly MW**, Perry Y, Luketich JD, Greenberger JS. Title: Prevention of photodynamic therapy (PDT)-induced porcine esophageal stricture by overexpression of manganese superoxide dismutase (MnSOD). Radiation Research Society (RRS), St. Louis, MO, July, 2004.

181.A Niu YY, **Epperly MW**, Shen H, Greenberger JS. Title: Prevention of irradiation-induced esophagitis by injection of cells from the bone marrow or esophagus. Radiation Research Society (RRS), St. Louis, MO, July, 2004.

182.A Carpenter M, Agarwal A, Nie S, Hricisak L, Epperly MW, Greenberger, JSPrevention of irradiation-induced organizing alveolitis by inhalation delivery of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) complexes to mouse lung. The American Society of Gene Therapy, June 4, 2004, Abstract 513, pg 81.

183.A Agarwal A, Epperly MW, Perry Y, Luketich JD, Greenberger JS. Overexpression of manganese superoxide dismutase (MnSOD) prevents photodynamic therapy (PDT)-induced porcine esophageal stricture. The American Society of Gene Therapy, June 3-6, 2004, Abstract 671, pg 92.

184.A Niu YY, Epperly MW, Shen H, Greenberger JS. Injection of progenitor cells from the bone marrow or esophagus prevents irradiation-induced esophagitis. The American Society of Gene Therapy, June 3-6, 2004, Abstract 673, pg 92.

185.A Greenberger JS, Kanai AJ, Kagan VE, **Epperly MW**. Title: Overexpression of manganese superoxide dismutase (MnSOD) results in increased overall antioxidant levels and decrease in reactive oxygen species (ROS) following irradiation. ISEH, 2004. Experimental Hematology, Vol. 32, 2004, Abstract #43, pg. 41.

186.A. **Epperly Michael W**, Cao Shaonan, Shields Donna, Greenberger Joel S. Title: Altered bone marrow stromal cell microenvironment in long term bone marrow cultures (LTBMCs) from manganese superoxide dismutase (MnSOD) and SMAD 3 knockout mice. ISEH, New Orleans, August, 2004. Experimental Hematology, Vol. 32, 2004, Abstract #174, pg. 73.

187.A. Niu Yun Yun, **Epperly Michael W**, Shen Hongmei, Greenberger Joel S. Title: Side population cells from the bone marrow or esophagus prevent irradiation-induced esophagitis. ISEH, New Orleans, August, 2004. Experimental Hematology, Vol. 32, 2004, Abstract #44, pg. 42.

188.A.Carpenter Matthew, Agarwal Anurag, **Epperly Michael W**, Nie Suhua, Hricisak Lauren, Greenberger Joel S. Title: Inhalation delivery of Hemagglutinin epitope-tagged manganese superoxide dismutase-plasmid/liposome (HA-MnSOD-PL) complexes to the lung protects against fractionated irradiation lung damage. ASTRO, Atlanta, GA, October, 2004. IJROBP, Vol. 60, No. 1, Suppl. p. S172, #71, 2004.

189.A Greenberger Joel S, Bahary Nathan, **Epperly Michael W**. Title: Development of irradiation-induced muscle fibrosis in the zebrafish. ASTRO, Atlanta, GA, October, 2004. IJROBP, Vol. 60, No. 1, Suppl. p. 5376, #2067, 2004.

190.A. Niu Yun Yun, **Epperly Michael W**, Zhang Xichen, Carpenter Matthew, Greenberger Joel S. Title: Prevention of irradiation-induced esophagitis by injections of bone marrow or esophageal stem cells. ASTRO, Atlanta, GA, October, 2004. IJROBP, Vol. 60, No. 1, Suppl. p. S176, #77, 2004.

191.A. Agarwal Anurag, Perry Yaron, **Epperly Michael W**, Luketich James D, Greenberger Joel S. Title: Prevention of photodynamic therapy (PDT)-induced esophageal stricture by overexpression of manganese superoxide dismutase (MnSOD). ASTRO, Atlanta, GA, October, 2004. IJROBP, Vol. 60, No. 1, Suppl. p. S355, #2028, 2004.

192.A Greenberger Joel S, Carpenter Matthew, Agarwal Anurag, Nie Suhua, Hricisak Lauren, **Epperly Michael W**. Title: Prevention of irradiation-induced organizing alveolitis by inhalation delivery of manganese superoxide dismutase-plasmid liposome (MnSOD-PL) complexes to mouse lung. Lung SPORE Investigational Meeting, Washington, DC, July, 2004.

193.A Zhou Shuanhu, Cao Shaonon, Greenberger Joel, **Epperly Michael**, Lechpammer Stanislav, Glowacki Julie. Title: Role of Smad3 in TGF-β’s inhibition of adipocyte differentiation of marrow stromal cells. ASBMR, 2004.

194.A **Epperly Michael W**, Greenberger Joel, Bahary Nathan. Title: Modeling radiation fibrosis in the zebrafish. 7F Conference, July, 2004.

195.A. Cao Shaonan, Zhou Shuanhu, **Epperly Michael** W, Glowacki Julie, Shields Donna, Greenberger Joel S. Increased adipocytogenesis and hematopoiesis in long-term bone marrow cultures from SMAD3-/- mice. ASH, San Diego, California, 12/4 – 7/04. Blood, 104, No. 11, Part 1, p. 366a, #1298, 2004.

196. A. **Epperly Michael W**, Lechpammer Stanislav, Nie Shuha, Glowacki Julie, Greenberger Joel S. Adipocyte differentiation of SOD2-/- mouse bone marrow stromal cells is associated with decreased antioxidant reserves and is reversed by the antioxidant WR2721 (Amifostine). ASH, San Diego, California, 12/04. Blood, 104, No. 11, Part 1, p. 644a, #2342, 2004.

197.A. Shen Hongmei, Niu Yun Yun, **Epperly Michael W**, Greenberger Joel S. Decreased irradiation-induced apoptosis in murine hematopoietic side population cells compared to non-side population cells. ASH, San Diego, California, 12/04. Blood, 104, No. 11, Part 2, p. 1466, #4241, 2004.

198.A **Epperly Michael** W, Bahary Nathan, Greenberger Joel S. Increased antioxidant expression prevents irradiation-induced fibrosis in the Zebrafish muscle. AACR, 3/05.

199A. Niu Yunyun, Stabile Laura, Zhang Xichen, **Epperly Michael W**, Siegfried Jill, Greenberger Joel S. Transfection of orthotopic lung tumors or tumor cells with c-Met antisense plasmid/liposome complexes increases irradiation sensitivity. AACR, 3/05

200.A.Wegner Rodney, Nie Suhua, Zhang Xichen, **Epperly Michael W**, Greenberger JS, Increased expression of manganese superoxide dismutase (MnSOD) preserves antioxidant levels in irradiated normal tissue but not tumor cells. AACR, 3/05.

201A. **Epperly Michael W**, Nie Suhua, Zhang Xichen, Greenberger Joel S. Increased antioxidant levels following MnSOD-PL transfection results in increased radioprotection of normal tissue but not tumor cells. ASGT, 2005.

202A. Niu Yunyun, Stabile Laura, **Epperly Michael W**, Siegfried Jill, Greenberger Joel S. C-Met antisense plasmid liposome complex increases radiation sensitivity of lung tumor cells in vivo or in vitro. ASGT, 2005.

203A. **Epperly Michael W**, Zhang Xichen, Hricisak Lauren, Cao Shaonan, Greenberger Joel S. Smad3-/- bone marrow stromal cells are radioresistant. ISEH, 7/29 – 8/2/05.

204A. Niu Yunyun, Shen Hongmei, **Epperly Michael W**, Greenberger Joel S. Side population (SP) cells isolated from bone marrow or esophagus are radiation resistant. ISEH, 7/29 – 8/2/05.

205A. Glowacki Julie, Lechpammer Stanislav, **Epperly Michael W**, Zhou Shuanhu, Nie Suhua, Greenberger Joel S. Regulation of adipocyte differentiation in mouse marrow stromal cells by level of antioxidant reserves. ISEH, 7/29 – 8/2/05.

206A. **Epperly Michael W**, Fink Mitchell P, Hricisak Lauren, Zhang Xichen, Greenberger Joel S. Novel small molecule radioprotective agents. ISEH, 7/29 – 8/2/05.

207A. Greenberger Joel S, Zhang Xichen, Hricisak Lauren, **Epperly Michael W**. Mice chimeric for Smad3-/- bone marrow stromal cells demonstrate decreased irradiation lung fibrosis. ISEH, 7/29 – 8/2/05.

208A. **Epperly Michael W**, Niu Yunyun, Hricisak Lauren, Greenberger Joel S. Inhibition of macrophage migration to the lungs decreases irradiation pulmonary fibrosis. ISEH, 7/29 – 8/2/05.

209A**. Epperly Michael W**, Zhang Xichen, Hricisak Lauren, Cao Shaonan, Greenberger Joel S. Absence of the Smad3 gene product increases radation resistance of bone marrow stromal cells. Radiation Research, Denver, Colorado, 10/15 – 10/19/05.

210A. **Epperly Michael W**, Fink Mitchell, Hricisak Lauren, Zhang Xichen, Greenberger Joel S. Incubation of 32D cl 3 factor-dependent hematopoietic cells in ethyl Pyruvate (EP) increases radiation resistance. Radiation Research, Denver, Colorado, 10/15 – 10/19/05.

211A. Bahary Nathan, **Epperly Michael W,** Quadar Mubina, Greenberger Joel S. Small molecule antioxidants prevent ionizing irradiation induced fibrosis in the adult Zebrafish. Radiation Research, Denver, Colorado, 10/15 – 10/19/05.

212A. Greenberger Joel S, Hricisak Lauren, **Epperly Michael W**. In a model of irradiation retreatment of the lung (simulating radiotherapy for lung cancer local recurrence), normal lung tolerance is increased by administration of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL). ASTRO, Denver, Colorado, 10/15 – 10/19/05.

213A. **Epperly Michael W**, Liggitt Dennis, Greenberger Joel S. Systemic intravenous (IV) as well as local administration of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) displays no detectable toxicity while offering protection from irradiation-induced damage. ASTRO, Denver, Colorado, 10/15 – 10/19/05.

214A. **Epperly Michael W**, Carlos Timothy, Zhang Xichen, Niu Yunyun, Greenberger Joel S. Role of bone marrow derived macrophages and stromal cells in irradiation-induced pulmonary fibrosis. ASTRO, Denver, Colorado, 10/15 – 10/19/05.

215A. Greenberger Joel S., Niu Yunyun, Zhang Xichen, Cao Shaonan, Carlos Timothy, and **Epperly Michael W**. Two cellular components of bone marrow origin contribute to pulmonary irradiation fibrosis. Blood 106:405a, 2005.

216A. Niu Yunyun, Wipf Peter, Zhang Xichen, Greenberger Emily E., Franicola Darcy, **Epperly** **Michael W**., Kagan Valerian E., Fink Mitchell P., and Greenberger Joel S. Development of new small molecule bone marrow radiprotectors. Blood 106:129b, 2005.

217A. Cao Shaonan, Greenberger Emily E, **Epperly Michael W,** Kanai Anthony J, and Greenberger Joel S. Absence of nNOS increases longevity of long term bone marrow cultures and radiation resistance. Blood 106:130b, 2005.

218A. **Epperly Michael W**, Cao Shaonan, Zhang Xichen, Greenberger Emily E, and Greenberger Joel S. Expression of Smad3 transgene restores radiosensitivity and migratory capacity to a Smad 3 -/- clonal bone marrow stromal cell line. Blood 106:157b, 2005.

219A. Greenberger Emily E, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Jacobs Samuel, and Greenberger Joel S. Thalidomide sensitizes 32D cl 3 hematopoietic progenitor cells to ionizing irradiation. Blood 106:368b, 2005.

220A. Zhou S, Mueller SM, Amato I, Adler C, **Epperly MW**, Greenberger JS, Glowacki J. Age-related intrinsic changes in human marrow stromal cells and their differentiation to osteoblasts. Orthopedic Research Society, Atlanta, GA, 3/5 – 3/8/06 (submitted).

221A. Niu Yunyun, **Epperly Michael W**, Kagan Valerian E, Greenberger Joel S. Increased expression of MnSOD in the esophagus increases engraftment of bone marrow origin stem cells following irradiation. AACR, 4/06.

222A. **Epperly Michael W**, Kagan Valerian E, Kanai Anthony J, Wipf Peter, Amoscato Andrew A, Greenberger Joel S. Development of small molecule mitochondria-targeted antioxidants for radioprotection. AACR, 4/06.

223A. Greenberger Emily E, Epperly Michael W, Franicola Darcy, Zhang Xichen, Jacobs Samuel, Greenberger Joel S. Hematopoietic progenitor cell line 32D cl 3 and squamous cancer cell line SCC-VII are sensitized to ionizing irradiation by thalidomide. AACR, 4/06.

224A. Greenberger Joel S, Cao Shaonan, Zhang Xichen, Greenberger Emily E, Goff Julie P, Wang Hong, Bahnson Al, Shields Donna, Franicola Darcy, **Epperly Michael W**. The Smad3 transgene product restores radiosensitivity and migratory capacity to Smad3-/- clonal bone marrow stromal cell lines. AFIP, San Francisco, CA, 3/31 – 4/4/06.

225A.Grace MB, Germana A, Amundson SA, Fu D, Jackson WE, Miller AC, Greenberger JS, **Epperly MW**, Fornace AJ, Ledney GD, Blakely WF. Quantitative expression of p53 and STAT3 dependent genes in relevant models for biodosimetry applications. Biodos/EPR Conference, Bethesda, Maryland, July, 2006.

226A. **Epperly Michael W**, Nie Suhua, Kanai Anthony, Greenberger Joel S. Manganese superoxide dismutase-plasmid liposome (MnSOD-PL) transgenic effects on irradiation-induced reactive oxygen species (ROS) in normal tissue also destabilize antioxidant pools in orthotopic oral cavity tumors. ASGT, 2006.

227A. **Epperly Michael W**, Niu Yunyun, Greenberger Joel S. Intravenous (I.V.) administration of manganese superoxide dismutase-plasmid liposome (MnSOD-PL) complex protects mice from whole body irradiation. ASGT, 2006.

**228A. Greenberger Joel S, Niu Yunyun, Epperly** Michael W. In a model of irradiation retreatment of the murine lung, gene therapy with manganese superoxide dismutase-plasmid liposome (MnSOD-PL) increases with lung tolerance. ASGT, 2006.

229A. Niu Yunyun, **Epperly Michael W**, Greenberger Joel S. Pretreatment of the esophagus with manganese superoxide dismutase-plasmid liposome (MnSOD-PL) complex increases migration and proliferation of marrow stem cell progenitors of esophageal squamous epithelium. ASGT, 2006.

230A. **Epperly Michael W**, Cao Shaonan, Zhang Xichen, Niu Yunyun, Greenberger Joel S. Mitochondrial/neuronal nitric oxide synthase (NOS1) homologous recombinant negative (-/-) mouse hematopoietic progenitor cells are radioresistant and age resistant in Long Term Marrow Culture. Radiation Research, Philadelphia, PA, 11/06. p. 85, #PS-127, 2006.

231A. **Epperly Michael W**, Wipf Peter, Franicola Darcy, Amoscato Andrew, Kagan Valerian, Peterson James, Kanai Anthony, Greenberger Joel S. Peptide linker localization of small molecule NOS inhibitors to the mitochondria induces radiation resistance. Radiation Research, Philadelphia, PA, 11/06. p. 83, #PS-122, 2006.

232A. Fink Mitchell, **Epperly Michael W**, Niu Yunyun, Franicola Darcy, Greenberger Emily E, Jin ShunQian, Greenberger Joel S. In vivo or in vitro delivery of ethyl pyruvate (EP) is radioprotective and is a radiation damage mitigator. Radiation Research, Philadelphia, PA, 11/06. p. 83, #PS-122, 2006.

233A. Niu Yunyun, **Epperly Michael W**, Shen Hongmei, Greenberger Joel S. Increased migration and proliferation of marrow-derived stem cell progenitors of esophageal squamous epithelium into the esophagus of irradiated mice pretreated with MnSOD-PL. Radiation Research, Philadelphia, PA, 11/06. p. 89, #PS-142, 2006.

234A. Greenberger Joel S, **Epperly Michael W**, Nie Suhua, Kanai Anthony. Destabilization of antioxidant pools in orthotopic oral cavity tumors by overexpression of manganese superoxide dismutase-plasmid/liposomes (MnSOD-PL). Radiation Research, Philadelphia, PA, 11/06. p. 85, #PS-127, 2006.

235A. Belikova Natalia A, Jiang Jianfei, Tyurina Yulia Y, Zhao Qing, **Epperly Michael W**, Greenberger Joel, Kagan, Valerian E. Redox catalysis by cytochrome c regulates irradiation induced apoptosis in HeLa cells. Radiation Research Society, 4/06. p. 115, #PS-239, 2006.

236A. Bayir Hulya, Huang Z, **Epperly Michael W**, Greenberger Joel S, Kagan Valerian E. Nitration of MnSOD as a hallmark of irradiation induced damage. Radiation Research Society, 4/06. p. 78, #PS-093, 2006.

237A. Greenberger Joel S, Niu Yunyun, Zhang Xichen, Franicola Darcy, **Epperly Michael W**. TGFβ mediates migration and proliferation of bone marrow stromal cells into the lungs of irradiated mice. ASTRO, 2006. IJROBP, 68, #3 Supplement, p. 5551, #2615, 2006.

238A. Nie Suhua, **Epperly Michael W**, Zhang Xichen, Greenberger Joel S. Inhibition of the epidermal growth factor receptor (EGFR) increases in vitro radiosensitization of SCC-VII squamous cell carcinoma cells. ASTRO, 2006. IJROBP, 68, #3 Supplement, p. 5598, #2700, 2006.

239A. **Epperly Michael W**, Niu Yunyun, Greenberger Joel S. Intravenous injection of manganese superoxide dismutase plasmid-liposome (MnSOD-PL) complex or MnSOD mimetic EUK-134 protects mice from whole body irradiation (WBI). ASTRO, 2006. IJROBP, 68, #3 Supplement, p. 5571, #2650, 2006.

240A. Greenberger Joel S, Niu Yunyun, Zhang Xichen, Franicola Darcy, **Epperly Michael W**. An intact TGFβ signal transduction pathway is required for migration and proliferation of bone marrow stromal cells to the irradiated lung. ISEH, 9/06. Exp. Heme., 34(9):46, #44, 2006.

241A. **Epperly Michael W**, Niu Yunyun, Greenberger Joel S. Intravenous injection of manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) complex protects mice from whole body irradiation (WBI). ISEH, 9/06. Exp. Heme., 34(9):50, #58, 2006.

242A. Cao Shaonan, **Epperly Michael W**, Zhang Xichen, Niu Yunyun, Greenberger Emily E, Greenberger Joel S. Radioresistance of hematopoietic progenitors and increased longevity of long-term bone marrow cultures (LTBMCs) from mitochondrial /neuronal nitric oxide synthase (NOS1) homologous deletion recombinant negative (-/-) mice. ISEH, 9/06. Exp. Heme., 34(9):83, #186, 2006.

243A. Niu Yunyun, **Epperly Michael W**, Shen Hongmei, Greenberger Joel S. Marrow-derived stem cell progenitors of esophageal squamous epithelium have increased migration to and proliferation in the manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) pretreated esophagus of irradiated first and second generation recipient mice. ISEH, 9/06. Exp. Heme., 34(9):79, #172, 2006.

246A. Goff JP, Wang H, Bahnson AB, Shields DS, Zhang X, **Epperly MW**, Greenberger JS. Increased migratory capacity of Lewis Lung Carcinoma cells in response to irradiation. ISEH, 9/06. Exp. Heme., 34(9):78, #167, 2006.

247A. **Epperly Michael W**, Franicola Darcy, Smith Tracey, Greenberger Joel S. Intravenous injection of manganese superoxide dismutase plasmid/liposome complexes (MnSOD-PL) protects the bone marrow from irradiation damage. ASH, 12/06. Blood, 108(11):465b, #5476, 2006.

248A **Epperly Michael W**, Epperly Laura D, Franicola Darcy, Zhang Xicheng, Smith Tracey, Greenberger Joel S. Transfection of bone marrow cells in vitro or in vivo prior to cryopreservation with manganese superoxide dismutase (MnSOD-PL) protects frozen cells from ionizing irradiation. Blood, 108(11):377b, #5151, 2006.

249A **Epperly Michael** **W**, Niu Yunyun, Shen Hongmei, Greenberger Joel S. Plasmid/liposome complexes (MnSOD-PL) before irradiation results in increased migration and proliferation of marrow-derived stem cell progenitors in the esophageal squamous epithelium. ASH, 12/06. Blood, 108(11):466b, #5478, 2006.

250A. **Epperly Michael W**, Greenberger Joel S, Cao Shaonan, Franicola Darcy, Shen Hongmei, Greenberger Emily E, Epperly Laura D, Zhang Xicheng. Neuronal/mitochondrial nitric oxide synthase homologous deletion recombinant negative mice (nos1-/-) long-term bone marrow cultures (LTBMCs) demonstrate increased longevity and radioresistance of derived cell lines. ASH, 12/06. Blood, 108(11):395a, #1355, 2006.

251A. Zhou S, Mueller SM, Amato I, Adler C, **Epperly MW**, Greenberger JS, Glowacki J. Age-related intrinsic changes in human marrow stromal cells and their differentiation to osteoblasts. Proceeding ASBMR, M253, p. 5392, 2006.

252A. Greenberger Joel S, Smith Tracy, Schlesselman James, **Epperly Michael W**. Systemic stable radioprotection by intravenous administration of manganese superoxide dismutase-plasmid liposomes. ASGT, Seattle, Washington, 5/30 – 6/3/07.

253A.Niu Yunyun, **Epperly Michael W**, Greenberger Joel S. Intraesophageal manganese superoxide dismutase plasmid/liposome (MnSOD-PL) administration before irradiation increases intravenous engraftment of esophageal stem cells. ASGT, Seattle, Washington, 5/30 – 6/3/07.

254A. Zhang Xichen, **Epperly Michael W**, Kay Mark, Chen Zhi-Ying, Smith Tracy, Franicola Darcy, Greenberger Joel S. Minicircle plasmid containing the human manganese superoxide dismutase (MnSOD) transgene confers radioprotection to cells in vivo. ASGT, Seattle, Washington, 5/30 – 6/3/07.

255A. **Epperly Michael W**, Melendez Andres, Zhang Xichen, Franicola Darcy, Smith Tracy, Greenberger Joel S. Overexpression of mitochondrial localized (mt)-catalase further increases radioresistance induced by MnSOD overexpression in 32D cl 3 murine hematopoietic progenitor cells. ASGT, Seattle, Washington, 5/30 – 6/3/07.

256A. Goff Julie P., **Epperly Michael W**, Shields Donna, Smith Tracey, Seki Mineaki, Wittschieben John, Wood Richard D, Greenberger Joel S. Mice with absence of the PolQ polymerase have increased irradiation induced peripheral blood cell micronuclei and show radiosensitization of marrow stromal cells in vitro. ICRR, San Francisco, CA, 7/25/07, p. 222, abstract #P54089, 2007.

257A. Niu Yunyun, **Epperly Michael W**, Shen Hongmei, Greenberger Joel S. Intraesophageal manganese superoxide dismutase plasmid/liposome (MnSOD-PL) administration before irradiation increases engraftment of intravenously injected esophageal stem cells. ICRR, San Francisco, CA, 7/25/07, p. 154, abstract #P53030, 2007.

258A. Zhang Xichen, **Epperly Michael W**, Kay Mark A, Chen Zhi-Ying, Smith Tracy, Franicola Darcy, Greenberger Joel. Minicircle plasmid delivery of the human manganese superoxide dismutase (MnSOD) transgene using a minicircle plasmid confers radioprotection 32D cl 3 hematopoietic progenitor cells in vivo. ICRR, San Francisco, CA, 7/25/07, p. 190, abstract #P53157, 2007.

259A Epperly Michael W, Melendez J Andres, Zhang Xichen, Franicola Darcy, Smith Tracy, Greenberger Joel S. Mitochondrial targeting of a catalase transgene product further increases radioresistance induced by MnSOD overexpression in 32D cl 3 murine hematopoietic progenitor cells. ICRR, San Francisco, CA, 7/25/07, p. 137, abstract #P52147, 2007.

260A. Greenberger Joel S, Smith Tracy, Schlesselman James J, **Epperly Michael W**. Absence of delayed negative sequelae in intravenous administration of manganese superoxide dismutase-plasmid liposome therapy protected survivors of total body irradiation. ICRR, San Francisco, CA, 7/25/07, p. 189, abstract #P53155, 2007.

261A. Greenberger Joel S, Smith Tracy, Schlesselman James J, **Epperly Michael W**. In a mouse model intravenous administration of manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) protects against whole body irradiation. ASTRO, Los Angeles, CA, 11/07. IJROBP, 69(#3, Suppl.):S619, #2759, 2007.

262A. Goff Julie P, **Epperly Michael W**, Shields Donna, Smith Tracy, Seki M, Wittschieben J, Wood Rick, Greenberger Joel S. Cells lacking the Polq polymerase are more sensitive to ionizing irradiation in vitro and in vivo. ASTRO, Los Angeles, CA, 11/07. IJROBP, 69(#3, Suppl.):S53, #112, 2007.

263A. **Epperly Michael,** Nie Y, Shen Hongmei, Greenberger Joel S. Intraesophageal administration of manganese superoxide dismutase plasmid/liposomes (MnSOD-PL) pre-irradiation results in increased engraftment of bone marrow progenitors of esophageal stem cells. ASTRO, Los Angeles, CA, 11/07. IJROBP, 69(#3, Suppl.):S41, #74, 2007.

264A. **Epperly Michael W**, Zhang Xichen, Kay M A, Chen Z, Smith Tracy, Franicola Darcy, Greenberger Joel S. A minicircle plasmid containing the human manganese superoxide dismutase (MnSOD) transgene confers radioprotection to cells in vitro. ASTRO, Los Angeles, CA, 11/07. IJROBP, 69(#3 Suppl.):S42, #78, 2007.

265A. **Epperly Michael W**, Melendez J, Zhang Xichen, Franicola Darcy, Smith Tracy, Greenberger Joel S. Radioresistance induced by MnSOD overexpression in 32D cl 3 murine hematopoietic progenitor cells is further increased by localization of a catalase transgene product to the mitochondria. ASTRO, Los Angeles, CA, 11/07. IJROBP, 69(#3 Suppl.):S610, #2739, 2007.

266A.Niu Yunyun, **Epperly Michael W**, Shen Hongmei, Greenberger Joel S. Increased engraftment of bone marrow progenitors of esophageal stem cells resulting from pre-irradiation intraesophageal administration of manganese superoxide dismutase plasmid/liposome complexes (MnSOD-PL). ISEH, 8/07. Exp. Heme., 35:i. – v., p. 119, #p. 233, 36th ISEH, Hamburg, Germany, 2007.

267A. Greenberger Joel S, Smith Tracy, Schlesselman James J, **Epperly Michael W**. In a mouse model intravenous administration of manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) protects against whole body irradiation. ISEH, 8/07. Exp. Heme., 35:i. – v., p. 82, # p123, 36th ISEH, Hamburg, Germany, 2007.

269A. Goff Julie P, **Epperly Michael W**, Shields Donna, Smith Tracy, Seki Mineaki, Wittschieben John, Wood Richard D, Greenberger Joel S. Increased radiation sensitivity in cells lacking the PolQ polymerase in vitro and in vivo. ISEH, 8/07. Exp. Heme, 35:i. – v., p. 113, #p215, 36th ISEh, Hamburg, Germany, 2007.

270A. Goff Julie P, **Epperly Michael W**, Shields Donna S, Smith Tracy, Seki Mineaki, Wang Hong, Wittschieben John, Wood Richard D, Dertinger Stephen, Torous Dorothea, Greenberger Joel S. Cells lacking the PolQ Polymerase are moderately sensitive to ionizing radiation and the oxidant induced toxicity of paraquat and bleomycin. ASH, December, 2007. Blood, Vol. 110, # 11, # 4037, p. 78B, 2007.

271A. Rugo Rebecca E, **Epperly Michael W**, Franicola Darcy, Greenberger Ben, Kimanduri Paavani, Wang Hong, Greenberger Joel S, Engelward Bevin P. DNA methylransferases modulates the bystander effect in mouse embryonic stem cells. ASH, December, 2007. Blood, Vol. 110, #11, #4154, p. 107B, 2007.

272A. **Epperly Michael W**, Franicola Darcy, Dixon Tracy, Zhang Xichen, Komanduri Paavani, Greenberger Benjamin, Wipf Peter, Koide Kazunori, Greenberger Joel S. Bone marrow small molecule radioprotectors. ASH, December, 2007. Blood, Vol. 110, #11, #4096, p. 93B, 2007.

273A. Niu Yunyun, **Epperly, Michael W**, Shen Hongmei, Greenberger Joel S. Increased engraftment of bone marrow progenitors of esophageal stem cells by intraesophageal administration of manganese superoxide dismutase plasmid/liposomes (MnSOD-PL) 24 hours before irradiation. ASH, December, 2007. Blood, Vol. 110, #11, #3695, p. 1079A, 2007.

274A. **Epperly Michael W**, Melendez J Andres, Zhang Xichen, Franicola Darcy, Smith Tracy, Greenberger Benjamin, Komanduri Paavani, Greenberger Joel S. Increased radioresistance of 32Dcl3 muring hematopoietic progenitor cells by mitochondrial targeting of a catalase transgene product. ASH, December, 2007. Blood, Vol. 110, #11, #513B, p. 3670, 2007.

275A. Greenberger Joel S, Smith Tracy, Schlesselman James J, **Epperly Michael W**. Intravenous administration of manganese superoxide dismutase-plasmid liposomes (MnSO-PL) in a mouse model protects against whole body irradiation. ASH, December, 2007. Blood, Vol. 110, # 11, # 2600, p. 766A, 2007.

276A. Zhang Xichen, **Epperly Michael W**, Kay Mark A, Chen Zhi-Ying, Smith Tracy, Franicola Darcy, Greenberger Benjamin, Komanduri Paavani, Greenberger Joel S. Minicircle plasmid containing the human manganese superoxide dismutase (MnSOD) transgene confers radioprotection to hematopoietic progenitor cell line 32Dcl 3. ASH, December, 2007. Blood, Vol. 110, # 11, # 5178, p. 367B, 2007.

277A. Glowacki J, Zhou S, Greenberger JS, **Epperly MW**, Goff JP, Adler C, LeBoff MS. Age-related intrinsic changes in human bone marrow-derived mesenchymal stem cells and their differentiation to osteoblasts. J. B. M. R. (WO31), 22:Suppl. No. 1, p. 5370, 2007.

278A. Wollstein Gadi, Townsend Kelly, **Epperly Michael W**, Schuman Joel S, Greenberger Joel S. Manganese superoxide dismutase (MnSOD) in-vivo effect on post-radiation cataract. Research Meeting in Ophthalmology.

 279A. **Epperly Michael W**, Franicola Darcy, Dixon Tracy, Zhang Xichen, Komanduri Paveni, Greenberger Benjamin, Koide Kazunori, Greenberger Joel S. Acetylated resveratrol is radioprotective of murine bone marrow. AACR, 05/08.

280A. Greenberger Joel S, Smith Tracy, Schlesselman James J, Wang Hong, **Epperly Michael W**. Radioprotection from total body irradiation using manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) does not result in long term toxicity. AACR, 05/08.

281A Zhang Xichen, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Greenberger Benjamin A, Komanduri Pavani, Chen Zhi-Ying, Kay Mark A, Greenberger Joel S. Manganese superoxide dismutase minicircle plasmid/liposome complex (mc-MnSOD-PL) is as effective as a full length Manganese Superoxide Dismutase Plasmid/Liposome Complex (MnSOD-PL) in radioprotection. ASGT, 06/08.

282A. **Epperly Michael W**, Zhang Xichen, Dixon Tracy, Franicola Darcy, Melendez J Andres, Greenberger Benjamin A, Komanduri Paavani, Greenberger Joel S. Overexpression of mitochondrially targeted catalase and manganese superoxide dismutase (MnSOD) in 32D cl 3 mouse hematopoietic progenitor cells increases antioxidant levels and radioresistance. ASGT, 06/08.

283A. Greenberger Joel S, Smith Tracy, Wang Hong, Schlesselman James, Franicola Darcy, **Epperly Michael W**. Systemic intravenous manganese superoxide plasmid/liposome complex (MnSOD-PL) protects mice from total body irradiation with no increased carcinogenesis. ASGT, 06/08.

 284A. Xu Feng, Park Moo-Rim, Yu Hui, Hu Xiaoxia, **Epperly Michael**, Greenberger Joel, Cheng Tao. Hematopoietic stem cell repopulation modulated by MnSOD-PL in irradiated recipients. ASGT, 06/08.

285A. **Epperly Michael W**, Zhang Xichen, Dixon Tracy, Franicola Darcy, Melendez J A, Greenberger Benjamin A, Komanduri Paavani, Greenberger Joel S. Increased mitochondrial expression of catalase and manganese superoxide dismutase (MnSOD) results in increased antioxidant levels and radioresistance. RRS, 2008. Proc. RRS 54th Annual Mtg., Boston, MA, #PS3549, p. 91, 2008.

286A. Koide K, **Epperly M W**, Franicola D, Dixon T, Zhang X, Komanduri P, Greenberger B, Greenberger J S. Acetylated resveratrol: A new small molecule radioprotector. ASTRO, 2008. IJROBP, 72(1) Suppl. 2008, #3174, p. 5697, 2008.

287A. Greenberger Joel S, Dixon Tracy, Wang Hong, Schlesselman James, Franicola Darcy, **Epperly Michael W**. Intravenous injection of manganese superoxide dismutase-plasmid liposomes prior to total body irradiation of male and female mice improves survival with no increase in irradiation-induced cancers. RRS, 2008. Proc. RRS 54th Annual Mtg., Boston, MA, #PS3535, p. 87, 2008.

288A. Greenberger Joel S, Dixon Tracy, Franicola Darcy, Niu Yunyun, Zhang Xichen, **Epperly Michael W**. Manganese superoxide dismutase (MnSOD)-plasmid liposomes, C225, and Tirapazamine combination enhances radiotherapy of human orthotopic oral cavity squamous tumors. ASTRO, 2008. IJROBP, 72(1) Suppl. 2008, #1119, p. 56, 2008.

289A**. Epperly Michael W**, Pierce Joshua G, Dixon Tracy, Franicola Darcy, Wipf Peter, Greenberger Joel S. The mitochondrial targeted GS-nitroxide JP4-039 is radioprotective in vitro and in vivo. ASTRO, 2008. IJROBP, 72(1) Suppl. 2008, #181, p. 582, 2008.

290A. Greenberger Joel S, Dixon Tracy, Wang Hong, Schlesselman James, Franicola Darcy, **Epperly Michael W**. Improved survival with no increase in irradiation-induced cancers following intravenous injection of manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) prior to total body irradiation. ISEH, 2008. Exp. Heme., 36:(Suppl. 1) S1-S99, p. 056, 2008.

291A. Zhang Xichen, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Greenberger Benjamin A, Komanduri Paavani, Chen Zhi-Ying, Kay Mark A, Greenberger Joel S. Manganese superoxide dismutase transgene delivered as a mincircle plasmid/liposome complex (mc-MnSOD-PL) is protective against total body irradiation. RRS, 2008. Proc. RRS 54th Annual Mtg., Boston, MA, #PS3536, p. 87, 2008.

292A. Koide Kazunori, **Epperly Michael W**, Franicola Darcy, Dixon Tracy, Zhang Xichen, Komanduri Paveni, Greenberger Benjamin, Greenberger Joel S. Acetylated resveratrol: A new small molecule radioprotector against irradiation induced hematopoietic syndrome. ISEH, 2008. Exp. Heme., 36: (Suppl.1) S1-S99, p. 064, 2008.

293A. **Epperly Michael W**, Pierce Joshua G, Dixon Tracy, Franicola Darcy, Wipf Peter, Greenberger Joel S. The mitochondrial targeted GS-nitroxide JP4-039 protects against irradiation induced damage in vitro and in vivo. ISEH, 2008. Exp. Heme., 36: (Suppl 1) S1 – S99, p. 066, 2008.

294A. Greenberger Joel, Wipf Peter, Kagan Valerian, Zhang Xichen, **Epperly Michael**. Mitochondrial targeted antioxidants protect against total body irradiation induced hematopoietic syndrome, and mitigate against irradiation induced life shortening. BioDose, Hanover, N.H., 2008.

295A. **Epperly Michael W**, Pierce Joshua G, Dixon Tracy, Franicola Darcy, Nie Suhua, Zhang Xichen, Vlasova Irina I, Wipf Peter, Kagan Valerian, Greenberger Joel. A mitochondrially targeted nitroxide JP4-039 protects and mitigates against total body irradiation induced hematopoietic syndrome. Annual Meeting of the American Society of Hematology, 112:2008.

295A. Gupta Kanika, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Pierce Joshua G, Wipf Peter, Greenberger Joel. Mitigation of irradiation induced potentially lethal damage (PLD) in hematopoietic cells by mitochondrial localized GS-Nitroxide, JP4-039. Annual Meeting of The American Society of Hematology 112: 2008.

297A. McDonald Peter R, Jiang Jian Fei, Dixon Tracy, Franicola Darcy, Zhang Xichen, Nie Suhua, Epperly Laura, Kagan Valerian, Lazo John, **Epperly Michael W**, Greenberger Joel S. Druggable genome siRNA-screening identifies Glybenclamide as a radioprotector against total body irradiation. Annual Meeting of the American Society of Hematology, 112:191, 2008.

298A. Zabbarova Irina, **Epperly Michael**, Greenberger Joel, and Kanai Anthony. Selective colonic irradiation induces urinary bladder overactivity. Exp. Biol., 2009.

299A. Gokhale Abhay S, **Epperly Michael**, Glowacki Julie, Smith Tracy, Patrene Ken, Roodman G David, and Greenberger Joel S. Antioxidant therapy ameliorates ionizing irradiation induced delay in bone wound healing. AACR, 2009.

300A. Rajagopalan Malolan S, Gupta Kanika, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Kagan Valerian E, Wipf Peter, and Greenberger Joel S. The mitochondrial targeted nitroxide JP4-039 augments potentially lethal irradiation damage repair. AACR, 2009.

301A. Rajagopalan Malolan S, **Epperly Michael W**, Franicola Darcy, Dixon Tracy, Cao Shaonan, Niu Yunyun, and Greenberger Joel S. Thoracic radiosensitivity of homozygous deletion recombinant negative nitric oxide synthase 1 (NOS1-/-) mice is accompanied by paradoxical radioresistance of mesenchymal stem cells in vitro. AACR, 2009.

302A. Gokhale Abhay S, **Epperly Michael**, Glowacki Julie, Smith Tracy, Patrene Ken, Roodman G David, Greenberger Joel S. Manganese superoxide dismutase plasmid/liposome complex gene therapy ameliorates ionizing irradiation-induced delay in bone wound healing. ASGT, May, 2009.

303A. Gokhale Abhay S, **Epperly Michael W**, Smith Tracy, Patrene Ken, Roodman G David, Greenberger Joel S, Glowacki Julie. Intravenous MnSOD-PL administration ameliorates ionizing irradiation induced delay in osseous wound healing. ASGT, May, 2009.

304A. Rajagopalan Malolan S, Gupta Kanika, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Wang Hong, Zhao Hong, Kagan Valerian E, Wipf Peter, Kanai Anthony, and Greenberger Joel S. Potentially lethal damage repair is enhanced by the mitochondrial targeted nitroxide JP4-039. ASTRO, 11/09. Vol. 75, No. 3, PS 550, #2822, 2009.

305A. Gokhale Abhay S, **Epperly Michael**, Glowacki Julie, Wang Hong, Wipf Peter, Dixon Tracey, Patrene Ken, and Greenberger Joel S. Small molecule GS-nitroxide ameliorates the ionizing irradiation-induced delay in bone wound healing measured in a novel murine model. ASTRO, 11/09. Vol. 75, No. 3, PS 551, #2823, 2009.

306A. Gokhale Abhay S, **Epperly Michael W**, Glowacki Julie, and Greenberger Joel S. Irradiation inhibits human bone marrow stromal cell differentiation to osteoblasts in vitro. Rad.Res.Soc., 10/09. Proc. 55th Annual Mtg. 10/4 – 10/7/09, PS1.29, p. 63, 2009.

307A**. Epperly Michael** **W**, Rugo Rebecca, Cao Shaonan, Wang Hong, Franicola Darcy, Goff Julie P, Shen Hongmei, Zhang Xichen, Wiktor-Brown Dominika, Engelward Bevin, and Greenberger Joel S. Investigation of the effects of aging on homologous recombination in long term bone marrow cultures. Rad. Res. Soc., 10/09. Proc. 55th Annual Mtg. 10/4 – 10/7/09, PS4.50, p. 114, 2009.

308A. **Epperly Micahel W**, Dixon Tracey M, Komanduri Paavani, Greenberger Benjamin A, Wang Hong, and Greenbergr Joel S. Maternal administration of manganese superoxide dismutase plasmid/liposome administration protects fetal mice from total body irradiation. Rad. Res. Soc., 10/09. Proc. 55th Annual Mtg. 10/4 – 10/7/09, PS6.32, p. 141, 2009.

309A. Rajagopalan Malolan S, **Epperly Michael W**, Stripp Barry R, Reynolds Susan D, Shen Hongmei, Dixon Tracey, Franicola Darcy, Zhang Xichen, Niu Yunyun, and Greenberger Joel S. Thoracic irradiation depletes clara cell secretory protein expressing murine lung progenitor cells. Rad. Res. Soc., 10/09. Proc. 55th Annual Mtg. 10/4 – 10/7/09, PS4.19, p. 107, 2009.

310A. Niu Yunyun, Wang Hong, Wiktor-Brown Dominika, Rugo Rebecca, Shen Hongmei, Huq Saiful, Engelward Bevin, **Epperly Michael**, and Greenberger Joel S. Manganese superoxide dismutase plasmid liposome complex protects irradiated esophageal cells from homologous recombination. Rad. Res. Soc., 10/09. Proc. 55th Annual Mtg. 10/4 – 10/7/09, PS4.48, p. 114, 2009.

311A. Goff Julie P, **Epperly Michael W**, Rugo Rebecca, Cao Shaonan, Wang Hong, Franicola Darcy, Shen Hongmei, Zhang Xichen, Wiktor-Brown Dominika, Engelward Bevin, and Greenberger Joel S. The effects of aging on homologous recombination in long term bone marrow cultures. ISEH, 2009.

312A. Gokhale Abhay S, **Epperly Michael**, Glowacki Julie, Smith Tracy, Patrene Ken, Roodman G David, and Greenberger Joel S. Systemic MnSOD-PL administration ameliorates ionizing irradiation induced delay in osseous wound healing. ISEH, 2009.

313A. Rajagopalan Malolan S, Gupta Kanika, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Kagan Valerian E, Wipf Peter, and Greenberger Joel S. Potentially lethal irradiation damage repair is augmented by a mitochondrial targeted nitroxide JP4-039. ISEH, 2009.

314A. **Epperly Michael**, Cao Shaonan, Yu Jian, and Greenberger Joel S. Uninhibited mitochondrial anti-apoptotic proteins in PUMA-/- mice results in increased longevity of long-term bone marrow cultures and radioresistance of derived hematopoietic progenitor cell lines. ISEH, 2009.

315A. Glowacki J, Gokhale AS, **Epperly M**, Wipf P, Smith TD, Patrene K, Greenberger JS. Irradiation-induced delay in bone wound repair in mice is mitigated by GS-nitroxide therapy. O.R.S., 2009.

316A. Stone Brandon, Rajagopalpan Malolan, Rwigema Jean-Claude, Salimi Umar, Dixon Tracy, Franicola Darcy, Goff Julie, **Epperly Michael W**, Bauer Anthony, Greenberger Joel. Moduation of neuronal nitric oxide synthase (NOS1) sensitized NOS1-/- mice to total body irradiation. Blood 114 (22):4597, 2009.

317A. Salimi Umar, Rajagopalan Malolan, Rwigema Jean-Claude, Dixon Tracy, Shen Hongmei, **Epperly Michael W**, Stirpp Barry, Greenberger Joel. Homing and engraftment of bone marrow derived cells in irradiated mouse lungs. Blood 114 (22): 4600, 2009.

318A. Rwigema J, Gokhale A S, **Epperly M,** Glowacki J, Wang H, Smith T, Patrene K, Wipf P, and Greenberger J S. Mitochondrial targeted nitroxide JP4-039 ameliorates irradiation-induced delay in bone wound healing and may have role as anti-osteoporosis therapy in acute fracture situations in the elderly. Am. Geriatrics Soc., 5/12 – 15/10, Orlando, Florida.

319A. **Epperly Michael W**, Rajagopalan Malolan S, Rwigema Jean-Claude, Stone Brandon, Goff Julie, Dixon Tracy M, Franicola Darcy, and Greenberger Joel S. Esophageal administration of manganese superoxide dismutase plasmid liposome (MnSOD-PL) reverses thoracic irradiation sensitivity of niric oxide synthase one homologous recombinant negative (NOS-1-/-) mouse. AACR, 2010.

320A. Schillo RE, Tarhini AA, Belani CP, Luketich JD, Argiris A, Ramalingam SS, Liggit D, Championsmith T, **Epperly MW**, and Greenberger JS. A phase I study of concurrent chemotherapy (Paclitaxel and Carboplatin) and thoracic radiotherapy with swallowed manganese superoxide dismutase (MnSOD) plasmid liposome (PL) protection in patients with locally advanced stage III non-small cell lung cancer. ASCO, 2010.

321A. **Epperly Michael W,** Jones Jeffrey A, Montesinos Carlos, Dixon Tracy M, Wang Hong, and Greenberger Joel S. Consumption of a high antioxidant diet decreases life shortening in mice after total body irradiation. Rad. Res. Society, Maui, Hawaii, 10/10.

322A. Rwigema Jean-Claude, **Epperly Michael W**, Shields Donna, Franicola Darcy, Dixon Tracy, Doemling Alexander, and Greenberger Joel S. Small molecule inhibitors of p53/MDM2/MDM4 mitigate against ionizing irradiation damage in vitro and in vivo. Rad. Res. Society, Maui, Hawaii, 10/10.

323A. Greenberger Joel S, Dixon Tracy M, Franicola Darcy, Wipf Peter, and **Epperly Michael W.** Mitochondrial targeted peptide-like molecule (PLM) conjugated to 4-amino-tempo (JP4-039) mitigates against the ionizing irradiation induced hematopoietic syndrome. Rad. Res. Society, Maui, Hawaii, 10/10.

324A. Atkinson Jeffrey, Kapralov Alexandr, Huang Zhentai, Belikova Natalia A, Yanamala Naveena, Jiang Jianfei, Klein-Seetharaman Judith, **Epperly Michael W**, Stoyanovsky Detcho A, Greenberger Joel S, and Kagan Valerian E. Mitochondria-targeted ligands of heme-iron in cytochrome c as novel radioprotectors/radiomitigators. Rad. Res. Society, Maui, Hawaii, 10/10.

325A. Greenberger Joel S, Luketich James D, Gooding William, Pennathur Arjun, Petro Daniel, Kane Kevin, Zhang Xichen, **Epperly Michael W**, Belani Chandra, Argiris Ethan, Ramaglingam Suresh, Liggitt Denny, Championsmith Anthony, and Tarhini Ahmad. A phase I study demonstrating manganese superoxide dismutase plasmid liposome complex (MnSOD-PL) reduction of esophagitis following standard chemoradiation in surgically unresectable stage III NSCLC. ASTRO, 11/10/10. Int. J. Radiat. Oncol. Biol. Phys., 78(Suppl.,3):S201, #1135, 2010.

326A. Rwigema Jean-Claude, Kelley Eric, **Epperly Michael W**, Wipf Peter, and Greenberger Joel S. Effects of manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) and mitochondrial targeted GS-nitroxide JP4-039 on oxidative stress in irradiated murine glial and neuronal cells may have therapeutic implications for ionizing radiation-induced neurocognitive impairment. ASTRO, 11/10/10.

327A. Rajagopalan Malolan S, Rwigema Jean-Claude, Stone Brandon, **Epperly Michael W**, Goff Julie, Dixon Tracy, Franicola Darcy, and Greenberger Joel S. Esophageal administration of manganese superoxide dismutase plasmid liposome complex (MnSOD-PL) protects nitric oxide synthase one homologous recombinant negative (NOS1-/-) mice from thoracic irradiation. ASTRO, 11/10/10.

328A. Rwigema Jean-Claude, Gokhale Abhay S, **Epperly Michael**, Glowacki Julie, Dixon Tracy, Patrene Ken, Roodman G David, Wipf Peter, and Greenberger Joel S. Manganese superoxide dismutase plasmid/lipid complex (MnSOD-PL) and JP4-039 ameliorate irradiation-induced delay in bone wound healing. ASTRO, 11/10/10.

329A. **Epperly M**, Brand R, Stottlemyer J, Dixon T M, Gao X, Li S, Huq S, Wipf P, Falo L D, and Greenberger J S. Topical application of GS-nitroxide JP4-039 emulsion mitigation ionizing irradiation induced skin burns. ASTRO, 11/10/10. Int. J. Radiat. Oncol. Biol. Phys., 78(Suppl. 3):S634, #2965, 2010.

330A. **Epperly Michael W**, Jones Jeffrey A, Montesinos Carlos, Dixon Tracy M, Wang Hong, and Greenberger Joel S. Consumption of a high antioxidant diet decreases life shortening in mice after total body irradiation, Implications for chronic radiation exposure. Chronic Rad. Cheliabiask, Russia, 2010.

331A. Rajagopalan Malolan S, Rwigema Jean-Claude, Gokhale Abhay, Glowacki Julie, Frantz Marie-Celine, Wipf Peter, Doemling Alexander, Beck Barbara, Wang Wei, Li Song, Gao Xiang, **Epperly Michael W**, and Greenberger Joel S. Novel Mitochondrial targeted radiation mitigators. India Conference on Radiation Mitigators, India, October, 2010.

332A. Flickinger, Jr., John, Shields Donna, **Epperly Michael W**, Zhang Xichen, and Greenberger Joel S. Carbamazepine, an autophage inducing drug, protects and mitigates irradiation damage to the murine hematopoietic cell line 32D cl 3. ASH, 2010. Blood, 116(21):1797, #4772, 2010.

333A. Goff Julie P, Wang Hong, **Epperly Michael W**, Shields Donna, Dixon Tracy M, Cao Shaonan, Franicola Darcy, and Greenberger Joel S. Effects of sublethal irradiation on murine bone marrow. ASH, 2010. Blood, 116(21):922, #2243, 2010.

334A. Kanter David, Shi Xiao-Hua, Beriwal Sushil, **Epperly Michael W**, Greenberger Joel S, and Sadovsky Yoel. Ionizing radiation causes cell injury in primary human trophoblasts. SGI 58th Annual Scientific Meeting, 2010.

335A. **Epperly Michael W**, Greenberger Joel S, Kim Hyun, Bernard Mark, Dixon Tracy, Franicola Darcy, Wipf Peter, Li Song, Gao Xiang, Kagan Valerian, and Amoscato Andrew. Swallowed small molecule GS-nitroxide, JP4-039, protects the irradiated esophagus. AACR, 2011.

336A. Bernard Mark E, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Shields Donna, Houghton Frank, Bakkenist Christopher J, Guinan Eva C, Kannan Neeta, and Greenberger Joel S. Distinct radiosensitivities of human FANCG-/- and FANC-D2-/- cell lines. AACR, 2011.

337A. Kim Hyun, Bernard Mark, Flickinger Jr. John, **Epperly Michael W**, Wang Hong, Dixon Tracy M, Shields Donna, Houghton Frank, and Greenberger Joel S. The autophagy inducing drug carbamazepine is a radiation protector and mitigator. AACR, 2011.

338A. **Epperly Michael W**, Wang H, Jones Jeffrey A, Dixon Tracy, Montesinos Carlos A, and Greenberger Joel S. Further amelioration of the late effects of total body irradiation (TBI) by manganese superoxide dismutase plasmid/liposome (MnSOD-PL) gene therapy supplemented by a continuous antioxidant-chemopreventive diet. ASGT, 2011.

339A. Islam Zahid, **Epperly Michael W**, Mehdi Haider, Greenberger Joel S, and London Barry. Altered cardiac effects of total body irradiation in NOS1-/- Mice. AHA, 2011.

340A. Islam Zahid, **Epperly Michael W**, Mehdi Haider, Greenberger Joel S, and London Barry. Cardiac conduction defect may contribute to total body irradiation sensitivity of NOS1 knockout mice. The International Society of Heart Research, North American Section Meeting in Philadelphia on 22-25th May, 2011.

341A. Kim H, Bernard M, Flickinger J, **Epperly MW**, Wang H, Dixon TM, Shields D, Houghton F, Zhang X, and Greenberger JS. The autophagy inducing drug carbamazepine is a radiation protector and mitigator. ASTRO, 2011. pp.S192, #1074, IJROBP, Vol. 81, No. 2, Suppl., 2011.

342A. Kim H, Bernard M, **Epperly MW**, Shen H, Dixon TM, Amoscato AA, Doemling AS, Li S, Gao X, Wipf, P, et al. Intraesophageal administration of GS-Nitroxide (JP4-039) and p53/mdm2/mdm4 inhibitor (BEB55) ameliorates radiation esophagitis. ASTRO, 2011. pp. S024, #1079, IJROBP, Vol. 81, No. 2, Suppl., 2011.

343A. Kim H, Bernard M, Kanter D, Shi X, Beriwal S, **Epperly MW**, Shields D, Houghton F, Greenberger JS, and Sadovsky Y. Ionizing radiation causes cell injury in primary human trophoblasts. Proceedings of the 53rd Annual ASTRO Meeting, p. S717, IJROBP, Vol. 81, No. 2, #3061, 2011.

344A. Bernard Mark E, Kim Hyun, Rwigema Jean-Claude, **Epperly Michael W**, Dixon Tracy, Kelley Eric, and Greenberger Joel S. Effects of vagotomy on the radiosensitivity of NOS1-/- mice. ASTRO, 2011.

345A. Bernard Mark E, **Epperly Michael W**, Franicola Darcy, Zhang Xichen, Shields Donna, Houghton Frank, Bakkenist Christopher J, and Greenberger Joel S. GS-Nitroxide (JP4-039) mediated radioprotection of human Fanconi Anemia cell lines. ASTRO, 2011.

346A. O’Sullivan R. P., Greenberger J.S., Cao S., **Epperly M**., and Glowacki J. In vitro hematopoiesis and osteoblastogenesis with marrow from SAMP6 and SAMR1 mice. S.B.M.R., 2011.

347A. **Epperly Michael W**, O’Sullivan Regina P., Cao Shaonan, Dixon Tracy, Goff Julie P., Glowacki Julie, and Greenberger Joel S. Senescence accelerated mice (SAMP6) show poorer bone wound healing following irradiation. A.R.S., 2011.

348A. Greenberger Joel S, Lazo John S., Shields Donna, Dixon Tracy, Sharlow Elizabeth R., and **Epperly Michael W**. P13 kinase inhibitor LY294002 is both a radioprotector and mitigator. Rad. Research Society, 2011.

349A. Kim Hyun, Bernard Mark, Farkas Amy, **Epperly Michael W**, Shields Donna, Dixon Tracy M, Houghton Frank, Franicola Darcy, Zhang Xichen, Wang Hong, and Greenberger Joel S. Radiation dose protection and mitigation by Carbamazepine (CBZ) is autophagy independent. R.R. S. , 2011.

350A. Bernard ME, Kim H, Rwigema JC, Kelley EE, **Epperly MW**, Wipf P, and Greenberger JS. Effects of manganese superoxide dismutase-plasmid liposomes (MnSOD-PL) and mitochondrial targeted GS-nitroxide JP4-039 on oxidative stress in irradiated murine glial and neuronal cells. R.R.S., 2011.

351A. Kim Hyun, Bernard Mark E, Farkas Amy, Houghton Frank, Shields Donna, Goff Julie, Dixon Tracy, Zhang Xichen, **Epperly Michael**, and Greenberger Joel S. Ionizing irradiation protection and mitigation by Carbamazepine is p53 and autophagy independent. ASH, 2011. Blood, 118, No. 21, p. 1456, #3400, 2011.

352A. **Epperly Michael W**, O’Sullivan Regina P, Cao Shaonan, Dixon Tracy, Goff Julie P, Glowacki Julie, and Greenberger Joel S. Dysregulated bone wound healing and marrow function in senescence accelerated mice (SamP6). ASH, 2011. Blood, 118, No. 21, p. 1461, #3415, 2011.

353A. XuFeng Richard, Park Moo-Rim, Miao Weimin, Yu Hui, **Epperly Michael W**, Greenberger Joel S, and Cheng Tao. Hematopoietic stem cell repopulation modulated by ROS-detoxifying enzymes. ASH 2011, Blood, 118, No. 21, p. 1786, # 4172, 2011.

354A. Kanter David, O’Brien Matthew B, Beriwal Sushil, **Epperly Michael W**, Greenberger Joel S, and Sadovsky Yoel. The effect of ionizing radiation on murine fetal growth. S.G.I., 59th Scientific Meeting, San Diego, CA, 3/21 – 24/12.

355A. **Epperly Michael W**, Chaillet J Richard, Cao Shaonan, Zhang Xichen, and Greenberger Joel S. Use of MnSOD tet on transgenic mice as a model for evaluating irradiation protection and mitigation. AACR, May, 2012.

356A. Goff Julie P, Skoda Erin, Li Song, Gao Xiang, **Epperly Michael W**, Franicola Darcy, Houghton Frank, Wipf Peter, and Greenberger Joel S. Localization of mitochondrial targeted GS-nitroxide JP4-039 BODIPY FL conjugate during radioprotection and mitigation in vivo. AACR, May, 2012.

357A.Goff Julie, Shields Donna, Wang Hong, Skoda Erin, Sprachman Melissa, Wipf Peter, Atkinson Jeffrey, **Epperly Michael**, Kagan Valerian E, Lazo John S, and Greenberger Joel S. Identification of ionizing irradiation damage mitigators by evaluation of clonogenic survival of human umbilical cord blood progenitor cells. ASTRO, Boston, MA, September, 2012. P.S680, IJROBP, Vol. 84 (Suppl. 35), 2012, #2229.

358A. **Epperly Michael W**, Cao Shaonan, Dixon Tracy, Goff Julie P, Glowacki Julie, Wipf Peter, and Greenberger Joel S. Irradiation inhibition of bone repair in SAMP6 mice. ASTRO, Boston, MA, September, 2012. P. S674, IJROBP, Vol. 84 (Suppl. 35), 2012, #3214.

359A. Yang Yong, **Epperly Michael W**, Dixon Tracy M, Heron Dwight E, Greenberger Joel S, and Huq M Saiful. Total body irradiation at high dose rate using a True Beam accelerator results in increased survival in a mouse model. ASTRO, Boston, MA, September, 2012. P. S162, IJROBP, Vol. 84 (Suppl. 35), 2012, #3700.

360A. Kalash Ronny, Chaillet Richard, Houghton Frank, Zhang Xichen, **Epperly Michael W**, Cao Shaonan, and Greenberger Joel S. Irradiation induction of mRNA for redox-sensitive promoters and inflammatory cytokines in conditional Manganese Superoxide Dismutase (MnSOD) tet on-/- mouse bone marrow stromal cells. ASTRO, Boston, MA, September, 2012. P. S673, IJROBP, Vol. 84 (Suppl. 35), 2012, #5211.

361A. Kalash Ronny, Zhang Xichen, Houghton Frank, **Epperly Michael** W, Dixon Tracy M, and Greenberger Joel S. Elevated pulmonary MnSOD and endothelial gene expression heralds the onset of irradiation fibrosis. ASTRO, Boston, MA, September, 2012. P. S678, IJROBP, Vol. 84 (Suppl. 35), 2012, #3224.

362A. Sprachman Melissa M, **Epperly Michael W**, Wipf Peter, Shields Donna, Dixon Tracy M, Cao Shaonan, Goff Julie, and Greenberger Joel S. MMS350: a novel bifunctional sulfoxide with radiation protection and mitigation properties. ASTRO, Boston, MA, September, 2012. P. S680, IJROBP, Vol. 84 (Suppl. 35), 2012, #3228.

363A. **Epperly Michael W**, Chaillet J Richard, Goff Julie, Kalash Ronny, Shaffer Ben, Franicola Darcy, Houghton Frank, Cao Shaonan, Zhang Xichen, and Greenberger Joel S. Induction of MnSOD expression in MnSOD tet-on-/- murine bone marrow stromal cell lines correlates with temporal radiation resistance. ASTRO, Boston, MA, September, 2012. P. S677, IJROBP, Vol. 84 (Suppl. 35), 2012, #3223.

364A. Berhane Hebist, **Epperly Michael W**, Dixon Tracy M, Cao Shaonan, Shields Donna, Wipf Peter, Li Song, Gao Xiang, and Greenberger Joel S. Oral delivery of mitochondrial targeted GS-nitroxide JP4-039 protects Fanconi Anemia (FA) D2-/- mice from irradiation mucositis. ASTRO, Boston, MA, September, 2012. P. S677, IJROBP, Vol. 84 (Suppl. 35), 2012, #3222.

365A. Greenberger Joel S, Goff Julie P, Dixon Tracy M, Kim Hyun, Skoda Erin, Wipf Peter, Wang Hong, Li Song, Gao Xiang, and **Epperly Michael W**. Intraesophageal administration of radioprotector GS-Nitroxide (JP4-039) does not protect LSL-K-ras transgenic lung tumors. Radiation Research Society, October, 2012.

366A. **Epperly Michael W**, Cao Shaonan, Smith Tracy M, Friedlander Robert, and Greenberger Joel S. Lack of radioresistance of Caspase-1 homologous deletion recombinant negative mice. Radiation Research Society, October, 2012.

367A. Goff Julie, **Epperly Michael W**, Dixon Tracy M, Sprachman Melissa M, Wipf Peter, Zhang Xichen, and Greenberger Joel S. Live imaging of Luciferase positive bone marrow stromal cell migration to form radiation pulmonary fibrosis. Radiation Research Society, October, 2012.

368A. Kanter David, O’Brien Matthew B, Shi Xiao-Hua, Beriwal Sushil, **Epperly Michael W**, Greenberger Joel S, and Sadovsky Yoel. The effect of ionizing radiation on murine fetal growth. S.G.I. Conference, 2012.

269A. Houghton Frank, **Epperly Michael W**, Chaillet J Richard, Cao Shaonan, Zhang Xichen, and Greenberger Joel S. Use of MnSOD tet on transgenic mice as a model for evaluating irradiation protection. UPCI Retreat, 6/12.

370A. Kanter David, O’Brien Matthew B, Beriwal Sushil, **Epperly Michael W**, Greenberger Joel S, and Sadovsky Yoel. The effect of ionizing radiation on murine fetal growth. UPCI Retreat, 6/12.

371A. Kalash Ronny, Houghton Frank, Zhang Xichen, Wang Hong, **Epperly Michael W**, and Greenberger Joel S. Pulmonary endothelial cell irradiation damage signaling initiates late fibrosis. ASH, 12/12.

372A. Goff Julie, Dixon Tracy M, **Epperly Michael W**, Sprachman Melissa M, Wipf Peter, Zhang Xichen, and Greenberger Joel S. Serial imaging of luciferase positive bone marrow stromal cell migration to form radiation pulmonary fibrosis. ASH, 12/12.

373A. Berhane Hebist, **Epperly Michael W**, Cao Shaonan, Zhang Xichen, Shields Donna, Goff Julie, Sprachman Melissa, Wipf Peter, Li Song, Gao Xiang, and Greenberger Joel S. Diminished oxidative stress responses in bone marrow stromal cell lines derived from Fanconi Anemia (FancD2-/-) mice. ASH, 12/12.

374A. Lazo John S, **Epperly Michael W**, Sharlow Elizabeth R, Lira Ana, Skoda Erin, Wipf Peter, Kagan Valerian, and Greenberger Joel S. Disruption of the PI3K axis abrogates ionizing radiation-inducd cell death. Exp. Biology Annual Meeting, 2013.

375A. Kalash Ronny, Houghton Frank, Berhane Hebist, Wipf Peter, Shields Donna, **Epperly Michael W**, Chaillet J Richard, Cao Shaonan, Zhang Xichen, and Greenberger Joel S. GS nitroxide (JP4-039) induces radiation resistance of conditional MnSOD tet/tet murine bone marrow stromal cells. AACR, 2013.

376A. Berhane Hebist, Goff Julie P, Kalash Ronny, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, and Greenberger Joel S. In field head and neck irradiation radiosensitivity of FancD2-/- mice and bystander effect reduction of distant marrow hematopoietic progenitor cells. AACR, 2013.

377A. Berhane Hebist, **Epperly Michael W**, Franicola Darcy, Goff Julie, Zhang Xichen, Shields Donna, Cao Shaonan, and Greenberger Joel S. Diminished oxidative stress responses and DNA repair in irradiated FancD2-/- mouse bone marrow stromal cell lines. ACRO, 2013.

389A. Kalash Ronny, Houghton Frank, Berhane Hebist, Chaillet J Richard, Zhang Xichen, Cao Shaonan, **Epperly Michael W,** Sprachman Melissa, Wipf Peter, and Greenberger Joel S. Small molecule radioprotectors JP4-039 and MMS350 alter irradiation induction of mRNA for redox-sensitive promoters and inflammatory cytokines in conditional Manganese Superoxide Dismutase (MnSOD) tet/tet mouse bone marrow stromal cell lines. ACRO, 2013.

390A. Houghton Frank, **Epperly Michael W**, Zhang Xichen, Nimgaonkar Vishwajit, and Greenberger Joel S. Radiosensitivity of human induced pluripotent stem cells (hiPSC) detectable by cell cycle analysis. ACGCT, 2013.

391A Kalash Ronny, Berhane Hebist, Goff Julie, Zhang Xichen, **Epperly Michael W**, and Greenberger Joel S. Different epigenetic changes in the irradiated lungs of fibrosis-prone C57BL/6NHsd compared to fibrosis-resistant C3Hf/Kam mice. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #3018, p. S627, 2013.

392A. Kalash Ronny, Berhane Hebist, Goff Julie, Zhang Xichen, **Epperly Michael W**, and Greenberger Joel S. Significant differences in thoracic irradiation induced pulmonary gene transcripts between fibrosis-prone C57BL/6NHsd compared to fibrosis-resistant C3H/Hen mice. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #275, p. S112, 2013.

393A. Berhane Hebist, Kalash Ronny, **Epperly Michael W**, Goff Julie, Franicola Darcy, Zhang Xichen, Shields Donna, Cao Shaonan, Houghton Frank, and Greenberger Joel S. Radiobiologic differences between bone marrow stromal cells (mesenchymal stem cells) and hematopoietic progenitor cells from Fanconi Anemia (FancD2-/-) mice. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #52, p. S22, 2013.

394A. Berhane Hebist, Kalash Ronny, Goff Julie, **Epperly Michael**, Franicola Darcy, Dixon Tracy, Shields Donna, and Greenberger Joel. Radiosensitivity of the oropharyngeal mucosa of FancD2-/- mice correlates to novel gene expression responses to head and neck irradiation. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #1112, p. S53, 2013.

395A. Goff Julie, Kalash Ronny, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Sprachman Melissa M, Zhang Xichen, Cao Shaonan, Wipf Peter, and Greenberger Joel S. Reduction of late pulmonary fibrosis in thoracic irradiated C57BL/6HNsd mice by a water soluble radiation mitigator, MMS350. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #142, p. S639, 2013.

396A. Goff Julie, Dixon Tracy, **Epperly Michael W**, Kalash Ronny, Sprachman Melissa M, Zhang Xichen, Cao Shaonan, Wipf Peter, and Greenberger Joel S. Late pulmonary fibrotic phase specific homing of luciferase+ bone marrow stromal cells to the irradiated C57BL/6HNsd mouse lung. ASTRO, Atlanta, GA, 2013. IJROBP, 83(25), Supplement #278, p. S113, 2013.

397A**. Epperly M**, Sprachman M, Dixon T, Goff J, Shields D, Zhang X, Wipf P, and Greenberger J. MMS350: A water soluble radiation protector and mitigator. IJROBP, 27(23), Supplement, # 3144, p. S638, 2013.

398A. Houghton Frank, D’Aiuto Leonard, **Epperly Michael** W, Zhang Xichen, Nimgaonkar Vishwajit, and Greenberger Joel S. Relative radiosensitivity of human inducible pluripotent stem cells (hiPSC) compared to parent fibroblast line and cells of differentiated neural rosettes. ASTRO, Atlanta, GA, 2013.

399A. Berhane Hebist, Zhang Xichen, Kalash Ronny, **Epperly Michael**, Shields Donna, and Greenberger Joel S. Targeting radioprotectants based on low levels of mitohchondria and mtDNA in tumor cell lines. ASTRO, Atlanta, GA, 2013.

400A. Kalash Ronny, Berhane Hebist, **Epperly Michael W**, Yang Yong, Dixon Tracy M, Heron Dwight E, Greenberger Joel S, and Huq M Saiful. Gene transcript responses in 10MV photon at 2400 MU/min total body irradiated C57LBL/6NTac mice correlate with increased survival compared to the same TBI dose using 6MV photons or lower dose rates. ASTRO, Atlanta, GA, 2013. IJROBP, 87(25), Supplement, #120, p. S53, 2013.

401A. Berhane Hebist, Kalash Ronny, Goff Julie, **Epperly Michael**, Dixon Tracy, Franicola Darcy, Shields Donna, Zhang Xichen, Li Song, Guo Xiang, Wipf Peter, and Greenberger Joel. Amelioration of Fanconi Anemia (FancD2-/-) mouse head and neck irradiation toxicity by intraoral JP4-039. Radiation Research Society, New Orleans, LA, 2013.

402A. Kalash Ronny, Berhane Hebist, Zhang Xichen, **Epperly Michael**, Goff Julie, Shields Donna, Wang Hong, and Greenberger Joel S. Strategy of normal tissue radioprotection based on decreased mtDNA and increased cell cycle check point proteins in tumors. Radiation Research Society, New Orleans, LA, 2013.

403A. Berhane Hebist, Kalash Ronny, **Epperly Michael W**, Yang Yong, Dixon Tracy M, Heron Dwight E, Greenberger Joel S, and Huq M Saiful. Unexpected organ specific gene transcript response to clinical 10MV photons at 2400 MU/min and survival advantage in total body irradiated C57BL/6NTac mice. Radiation Research Society, New Orleans, LA, 2013.

404A. Kalash Ronny, Berhane Hebist, Goff Julie, Dixon Tracy M, Zhang Xichen, **Epperly Michael W**, Wang Hong, and Greenberger Joel S. Thoracic irradiation induced pulmonary gene transcripts significantly differ between fibrosis-prone C57BL/6HNsd and fibrosis-resistant C3H/Hen mice. Radiation Research Society, New Orleans, LA, 2013.

405A. Berhane Hebist, Kalash Ronny, **Epperly Michael**, Goff Julie, Franicola Darcy, Zhang Xichen, Shields Donna, Cao Shaonan, Houghton Frank, and Greenberger Joel. Selective radioresistance of bone marrow hematopoietic progenitor cells compared to stromal cells from Fanconi Anemia (Fancd2-/-) mice. Poster Presentations/Experimental Hematology, 41: S23-S75, P1155, pg. S63, 2013.

406A. Greenberger Joel S, Wipf Peter, Skoda Erin M, Sacher Joshua R, Brand Rhonda, Falo Louis, Li Song, Gao Xiang, and **Epperly Michael W**. Delivery of ionizing irradiation mitigator, JP4-039, by biodegradable skin patches. Mitigation and Treatment, Baltimore, MD, 7/30 – 8/2/13.

407A. Greenberger Joel S, Kalash Ronny, Goff Julie P, Sprachman Melissa, Berhane Hebist, Dixon Tracy, Zhang Xichen, Wipf Peter, and **Epperly Michael W**. Late irradiation pulmonary fibrosis is ameliorated by a water soluble radiation mitigator MMS350 in drinking water. Mitigation and Treatment, Baltimore, MD, 7/30 – 8/2/13.

408A. Kagan VE, Tyurin VA, Poloyac SM, **Epperly MW**, Greenberger JS, Bayir H, and Tyurina YY. Mitochondrial cardiolipin as a substrate for cytochrome c-catalyzed production of oxygenated lipid mediators, 52nd. Annual Meeting for Society of Toxicology; The Toxicologist: Suppl. 1, V. 132, Abstract #2009, p. 428, March 10-14, 2013, San Antonio, TX.

409A. Star A, Kapralov A, Amoscato A, Tyurin V, Seo W, **Epperly M**, Greenberger J, Tyurina Y, and Kagan V. Development of a mitochondria-targeted nano-complex of Imidazole-substituted Oleic Acid as a radiomitigator. 52nd Annual Meeting for Society of Toxicology; The Toxicologist: Suppl. 1, V. 132, Abstract #2010, p. 428, March 10-14, 2013, San Antonio, TX.

410A. Berhane H, Kalash R, **Epperly MW**, Goff J, Cao S, Franicola D, Zhang X, Shields D, Houghton F, Wang H, Sprachman M, Wipf P, Guinan E, Parmar K, and Greenberger JS. Radiobiologic differences between bone marrow stromal and hematopoietic progenitor cell lines from Fanconi Anemia (Fancd2-/-) mice. FARS, Houston, TX, 11/13.

411A. Berhane H, Kalash R, **Epperly MW**, Goff J, Franicola D, Xu M, Zhang X, Dixon T, Shields D, Wang H, Wipf P, and Greenberger JS. Head and neck irradiation sensitivity and distant bone marrow suppression in Fancd2-/- (FVB/N) mice is ameliorated by intraoral GS-nitroxide, JP4-039. FARS, Houston, TX, 11/13.

412A. Berhane Hebist, Goff Julie, **Epperly Michael W**, Xu Karen, Kalash Ronny, Franicola Darcy, Zhang Xichen, Li Song, Gao Xiang, Dixon Tracy, Shields Donna, Wang Hong, Wipf Peter, Parmar Kalindi, Ferris Robert, and Greenberger Joel S. Intraoral GS-nitroxide JP4-039 protects oral/oropharyngeal mucosa but not orthotopic tumors in Fancd2-/- (C57BL/6) mice. FARS, Houston, TX, 11/13.

413A.Berhane Hebist, Xu Man, Goff Julie, Kalash Ronny, **Epperly Michael**, Dixon Tracy, Shields Donna, Franicola Darcy, Li Song, Gao Xiang, Wipf Peter, and Greenberger Joel. Intraoral GS-nitroxide (JP4-039) reduces local and distant marrow suppression toxicities in head and neck irradiated Fancd2-/- (FVB/N) mice. ASH, December, 2013.

414A. Kalash Ronny, Au Jeremiah, **Epperly Michael**, Goff Julie, Dixon Tracy, Franicola Darcy, and Greenberger Joel. Pulmonary irradiation fibrosis is preceded by increased endothelial gene expression. ASH, December, 2013.

415A**. Epperly Michael**, Kalash Ronny, Berhane Hebist, Goff Julie, Dixon Tracy, Zhang Xichen, Wang Hong, and Greenberger Joel. Distinct patterns of lung gene transcript induction in thoracic irradiated fibrosis-prone C57BL/6NHsd compared to fibrosis-resistant C3H/HeN mice. Poster Presentations/Experimental Hematology, 41: S23-S75, P1172, pg. S67, 2013.

416A. Shinde Ashwin, Fairman Jeff, **Epperly Michael W**, Dixon Tracy M, and Greenberger Joel S. Manganese superoxide dismutase plasmid liposome complex (MnSOD-PL) protects the murine oral cavity from irradiation induced mucositis. ASGT, 2014.

417A. Rhieu Byung, Shinde Ashwin, Kalash Ronny, Goff Julie P, Franicola Darcy, Dixon Tracy, Zhang Xichen, **Epperly Michael W,** Wipf Peter, Li Song, and Greenberger Joel S. Mesenchymal stem cells as a delivery system for anti-fibrotic genes to areas of irradiation-induced pulmonary fibrosis. ASGT, 2014.

418A. Holt Douglas, Minkoff David, **Epperly Michael W**, Wang Hong, Huq Saiful, Nimgaonkar Vishwajit, and Greenberger Joel S. Radiosensitivity of human induced pluripotent stem cells compared to parental fibroblasts. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3454, p. 5782, 2014.

419A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael W**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Dixon Tracy, and Greenberger Joel S. Intraoral JP4-039 ameliorates irradiation-induced mucositis in tumor-bearing Fanconi anemia (FA) mouse model. ASCO, 2014.

420A. Rhieu Byung Han, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Goff Julie, Zhang Xichen, Wang Hong, Chaillet Richard, and Greenberger Joel S. Organ specific levels of MnSOD in TET-inducible manganese superoxide dismutase mice. ASTRO, 2014, Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3528, p. 5810, 2014.

421A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael W**, Shields Donna, Cao Shaonan, Zhang Xicehn, Dixon Tracy, Greenberger Joel S. Disperate gene transcript patterns between radiosensitive bone marrow stromal and radioresistant hematopoietic cell lines from Fanconi anemia (FA) (Fancd2-/-) C57BL/6 mice. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3526, p. 5809, 2014.

422A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Dixon Tracy, and Greenberger Joel S. Intraoral JP4-039 ameliorates irradiation-induced mucositis during effective treatment of orthotopic tumors in Fanconi anemia (FA) (Fancd2-/-) C57BL/6 mice. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3442, 2014.

423A.Rhie Byung Han, **Epperly Michael W**, Cao Shaonan, Goff Julie, Shields Donna, Franicola Darcy, Wang Hong, and Greenberger Joel S. Reduced radiation pulmonary fibrosis in Toll-like Receptor-4 (TLR4) deletion recombinant negative mice. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #331, p. 5150, 2014; and Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3530, p. 5810, 2014.

424A.Shinde Ashwin, Rhieu Byung Han, **Epperly Michael W**, Wang Hong, Shields Donna, Franicola Darcy, Zhang Xichen, Dixon Tracy, Wipf Peter, Sprachman Melissa, and Greenberger Joel S. Radiation mitigator drugs JP4-039 and MMS350 effects on gene transcripts specific to radiosensitive Fanconi anemia Fancd2-/- (C57BL/6) bone marrow stromal cells. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3441, p. 5777, 2014.

425A. Rhieu Byung Han, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Goff Julie, Zhang Xichen, Chaillet Richard, and Greenberger Joel S. Doxycycline-dependence of total body irradiation (TBI) induction of stress-response genes in MnSOD tet/tet mice. ASTRO, 2014. Int. J. Radiat. Onc. Biol. Phys., 90(15): Suppl., #3528, p. 5810, 2014.

426A.Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael W**, Wang Hong, Shields Donna, Cao Shaonan, Zhang Xichen, Dixon Tracy, and Greenberger Joel S. Distinct RNA transcript signatures in radiosensitive bone marrow stromal compared to radioresistant hematopoietic cell lines from Fanconi Anemia (FA) (Fancd2-/-) FVB/N mice. RRS, Las Vegas, NV, 2014.

427A. Rhieu Byung Han, Shinde Ashwin, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Goff Julie, Zhang Xichen, Wang Hong, and Greenberger Joel S. Doxycycline alters total body irradiation (TBI) induction of RNA transcripts in C57BL/6NHsd mice. RRS, Las Vegas, NV, 2014.

428A. Rhieu Byung Han, Shinde Ashwin, **Epperly Michael W,** Dixon Tracy, Franicola Darcy, Goff Julie, Zhang Xichen, Wang Hong, Chaillet Richard, and Greenberger Joel S. Organ-specific total body irradiation (TBI) induction of RNA transcripts in MnSODtet/tet mice. RRS, Las Vegas, NV, 2014.

429A. Shinde Ashwin, Rhieu Byung Han, **Epperly Michael W**, Wang Hong, Shields Donna, Franicola Darcy, Zhang Xichen, Dixon Tracy, Wipf Peter, Sprachman Melissa M, and Greenberger Joel S. Radiation mitigator drugs JP4-039 and MMS350 alter RNA transcription in radiosensitive Fanconi Anemia Fancd2-/- (FVB/N) bone marrow stromal cells. RRS, Las Vegas, NV, 2014.

430A. Rhieu Byung Han, Shinde Ashwin, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Goff Julie, Zhang Xichen, Wang Hong, Chaillet Richard, and Greenberger Joel S. Organ-specific total body irradiation (TBI) induction of antioxidant RNA transcripts in MnSODtet/tet mice. ISEH, 2014. Exp. Hematol, 42:532, #P1039, 2014.

431A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Dixon Tracy, and Greenberger Joel S. Intraoral mitochondrial-targeted GS-nitroxide JP4-039 ameliorates irradiation-induced mucositis and gene transcript biomarkers in head and neck tumor-bearing Fanconi Anemia (FA) (Fancd2-/-) mice. ISEH, 2014. Exp. Hematol, 42: 532, #P1038, 2014.

432A. Shinde Ashwin, Rhieu Byung Han, Franicola Darcy, Dixon Tracy, Wipf Peter, **Epperly Michael W**, and Greenberger Joel S. Intraoral JP4-039/F15 protects normal oral cavity of irradiated Fancd2-/- (C57BL/6) mice without protecting orthotopic tumors. Fanconi Anemia Research Foundation, Bethesda, MD, 9/18/14. FARF, Bethesda, MD, 9/21/14, p. 62.

433A. Rhieu Byung Han, Shinde Ashwin, Zhang Xichen, Wang Hong, Wipf Peter, **Epperly Michael W**, and Greenberger Joel S. Reduced irradiation or chemotherapy induced TGF-β in Fancd2-/- mouse marrow by JP4-039 and MMS350. Fanconi Anemia Research Foundation, Bethesda, MD, 9/18/14. FARF, Bethesda, MD, p. 48, September, 2014.

434A. Rhieu Byung Han, Shinde Ashwin, **Epperly Michael W**, Dixon Tracy, Zhang Xichen, Wang Hong, Chaillet Richard, and Greenberger Joel S. Organ-specific total body irradiation (TBI) induction of antioxidant RNA transcripts in MnSODtet/tet mice. UPCI Retreat, Pittsburgh, PA, July, 2014.

435A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Dixon Tracy, and Greenberger Joel S. Intraoral GS-nitroxide JP4-039 in novel F15 emulsion ameliorates irradiation-induced mucositis without affecting tumor kill in tumor bearing Fanconi Anemia (FA) (Fancd2-/-) C57BL/6 mice. UPCI Retreat, Pittsburgh, PA, July, 2014.

436A. Shinde Ashwin, Rhieu Byung Han, **Epperly Michael W**, Shields Donna, Cao Shaonan, and Greenberger Joel S. Fancd2-/- oral cavity cells have increased mitochondrial content. F.A.R.F. Meeting, Bethesda, MD, October, 2014. FARF, Bethesda, MD, p. 69, September, 2014.

437A**. Epperly Michael W**, Rhieu Byung Han, Shinde Ashwin, Shields Donna, and Greenberger Joel S. Increased Fancd2-/- bone marrow hematopoietic colony forming cell sensitivity to Transforming Growth Factor-Beta (TGF-β). F.A.R.F. Meeting, Bethesda, MD, October, 2014. FARF, Bethesda, MD, p. 48, September, 2014.

438A**. Epperly Michael W**, Glowacki Julie, and Greenberger Joel S. GS-nitroxide, JP4-039, is an effective mitigator of combined injury (Irradiation plus bone fracture). RITN/CMCR Meeting, Bethesda, Maryland, Oct. 8 – 10, 2014.

439A. Shinde Ashwin, Berhane Hebist, **Epperly Michael W**, Parmar Kalindi, Guinan Eva, and Greenberger Joel S. Mitochondria targeted radiation mitigator, GS-nitroxide, JP4-039, is effective in DNA damage response deficient Fanconi Anemia (Fancd2-/-) mice. RITN/CMCR Meeting, Bethesda, Maryland, Oct. 8 – 10, 2014.

440A**. Epperly Michael W**, He Sherry, Willis John, Shields Donna, Zhang Xichen, Wipf Peter, and Greenberger Joel S. Radiation mitigators GS nitroxide JP4-039 and bifunctional sulfoxide MMS350 are mitochondrial antioxidants. RITN/CMCR Meeting, Bethesda, Maryland, Oct. 8 – 10, 2014.

441A. Brand Rhonda, **Epperly Michael W**, Dixon Tracy, Falo, Jr. Louis D, and Greenberger Joel S. Cutaneous delivery of JP4-039 using microneedle arrays (MNAs) effectively mitigates Total Body Irradiation (TBI). RITN/CMCR Meeting, Bethesda, Maryland, Oct. 8 – 10, 2014.

442A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Li Song, Dixon Tracy, Greenberger Joel S. Intraoral mitochondrial-targeted GS nitroxide JP4-039 ameliorates radiation-induced mucositis and normalizes gene transcript biomarkers in oral cavity tissue, but not in orthotopic tumor-tumor-bearing Fanconi Anemia (FA) (Fancd2-/-) mice. ASH, December, 2014.

443A. Shinde Ashwin, Rhieu Byung Han, Berhane Hebist, **Epperly Michael**, Guinan Eva, Parmar Kalindi, Wang Hong, Franicola Darcy, Zhang Xichen, Li Song, Dixon Tracy, Greenberger Joel S. Intraoral mitochondrial-targeted GS nitroxide JP4-039 ameliorates radiation-induced mucositis in orthotopic tumor-bearing Fanconi Anemia (FA) (Fancd2-/-) mice. ASH, December, 2014.

444A. **Epperly Michael W**, Shinde Ashwin, Berhane Hebist, Rhieu Byung Han, Kalash Ronny, Xu Karen, Goff Julie, Franicola Darcy, Zhang Xichen, Dixon Tracy, Shields Donna, Wang Hong, Wipf Peter, Kalindi Parmar, Guinan Eva, Kagan Valerian, Tyurina Yulia, Ferris Robert L, Li Song, and Greenberger Joel S. Intraoral administration of mitochondrial targeted GS-nitroxide (JP4-039) radioprotects the oral mucosa but not orthotopic tumors in Fancd2-/- mice. AACR, Philadelphia, PA, April 18 – 22, 2015.

445A**.Epperly Michael W**, Cao Shaonan, Zhang Xichen, Wang Hong, Franicola Darcy, Dixon Tracy, and Greenberger Joel S. Long term bone marrow cultures from K14/E7 Fancd2-/- (129/Sv) mice show suppressed duration of hematopoiesis. AACR, Philadelphia, PA, April 18 – 22, 2015.

446A. Brand Rhonda, Erdos Geza, **Epperly Michael W**, Dixon Tracy M, Franicola Darcy, Falo Louis, Wipf Peter, and Greenberger Joel S. Effective topical delivery of radiomitigator GS-nitroxide (JP4-039) by microneedle arrays. ASTRO, San Antonio, TX, October 19 – 21, 2015.

447A. Bayir Hulya, **Epperly Michael W**, Kagan Valerian E, Wang Hong, and Greenberger Joel S. A combined injury model (total body irradiation and traumatic brain injury) for evaluation of radiation mitigators. ASTRO, San Antonio, TX, October 19 – 21, 2015.

448A. Greenberger Joel S, Shinde Ashwin, Berhane Hebist, Dixon Tracy M, Franicola Darcy, Li Song, Wipf Peter, Kagan Valerian, Parmar Kalindi, Guinan Eva, and **Epperly Michael W**. Mitochondrial localization of GS-nitroxide JP4-039 delivered in intraoral emulsion ameliorates radiation mucositis in Fanconi Anemia (FA) Fancd2-/- mice. ASTRO, San Antonio, TX, October 19-21, 2015.

449A**. Epperly Michael W**, Dixon Tracy M, Li Song, Wipf Peter, and Greenberger Joel S. Improved survival and development of E13 fetal mice by JP4-039/F14 treatment of pregnant females at 24 hours after total body irradiation (TBI). ASTRO, San Antonio, TX, October 19-21, 2015.

450A. Stoyanovsky Detcho A, Jiang Jianfei, Murphy Michael, **Epperly Michael**, Li Song, Greenberger Joel, Kagan Valerian, and Bayir Hulya. Mitigation of irradiation damage in vitro and in vivo by mitochondrial targeted glutathione peroxidase 4 mimic mito-ebselen. ASTRO, San Antonio, TX, October 19-21, 2015.

451A. Brand Rhonda M, Erdos Geza, **Epperly Michael W**, Dixon Tracy M, Franicola Darcy, Falo, Jr. Louis D, Wipf Peter, and Greenberger Joel S. Effective topical delivery of radiomitigator GS-nitroxide (JP4-039) by microneedle arrays. ASTRO, San Antonio, TX, October 19-21, 2015.

452A. Zhang Xichen, Shiva Sruti, Wang Yinna, E**pperly Michael W**, Franicola Darcy, and Greenberger Joel S. Radiosensitive Fanconi Anemia (FA) Fancd2-/- bone marrow stromal cells have abnormal mitochondria. Radiation Research Society, Weston, Florida, 9/19-9/22/15, PS 2-01, P129, 2015.

453A. Greenberger Joel S, Shields Donna, Dixon Tracy, and **Epperly Michael W**. TGF-β sensitivity of radiosensitive Fancd2-/- mouse bone marrow. Radiation Research Society, Weston, Florida, 9/19-9/22/15, PS 2-09, P130, 2015..

454A. Cao Shaonan, **Epperly Michael W**, Dixon Tracy, Shields Donna, Zhang Xichen, and Greenberger Joel S. Smad3-/- Fancd2-/- double knockout (DKO) mice display some Radiobiologic phenotypes of Fancd2-/- and some of SMAD3-/- mice. Radiation Research Society, Weston, Florida, 9/19-9/22/15, PS 2-07, P132, 2015.

455A. **Epperly Michael W**, Cao Shaonan, Zhang Xichen, Franicola Darcy, Dixon Tracy, and Greenberger Joel S. Human Papilloma Virus E7 oncogene induced radioresistance of cell lines derived from K14E7 Fancd2-/- mouse long-term bone marrow cultures (LTBMCs). Radiation Research Society, Weston, Florida, 9/19-9/22/15, PS 2-06, P. 132, 2015.

446A. Fidan Emin, **Epperly Michael W**, Wang Hong, Kagan Valerian E, Greenberger Joel S, and Bayir Hulya. Combined head injury plus radiation exposure shifts systemic response to radiation from anti- to pro-inflammatory. Neuroscience National Meeting, 2015.

447A.. Jones JA, Johnston D, Montesinos CA, Putcha L, Wu H, Ansari R, **Epperly M**, Karouia F, Popov D, Hasse G, Shurshakov V, Safrikin AV, and Greenberger JS. Development of countermeasures for radiation exposure and oxidative stress during exploration class space missions. International Academy of Astronautics 2015 IAA Humans in Space Symposium, Prague, Czech Republic, 6-29-15 – 7-3-15, S28, P 92, 2015.

448A. . Stoyanovsky Detcho A, Jiang Jianfei, Murphy Michael, **Epperly Michael**, Li Song, Greenberger Joel, Kagan Valerian, and Bayir Hulya. Mitochondrial targeted glutathione peroxidase 4 mimic mito-ebselen mitigates irradiation damage. R.I.T.N., June, 2015.

449A. . **Epperly Michael W**, Dixon Tracy M, He Siping, Shields Donna, Wipf Peter, Li Song, and Greenberger Joel S. Administration of two radiation mitigators: GS-JP4-039 and water soluble oxetanyl sulfoxide MMS350 improves total body irradiation (TBI) survival superior to one alone. R.I.T.N., June, 2015.

450A. . Cao Shaonan, **Epperly Michael W**, Dixon Tracy, Shields Donna, Zhang Xichen, and Greenberger Joel S. Abrogation of TGFB signaling does not rescue the radiosensitive phenotype of hematopoiesis in Smad3-/- Fancd2-/- double knockout (DKO) mice. R.I.T.N., June, 2015.

451A. Bayir Hulya, **Epperly Michael W**, Fidan Emin, Wang Hong, Kagan Valerian E, and Greenberger Joel S. Combined total body irradiation and traumatic brain injury in mice produces expected increased brain inflammatory response. R.I.T.N., June, 2015.

452A. **Epperly Michael**, Brand Rhonda, Wipf Peter, Falo Lou, Erdos Geza, and Greenberger Joel S. Delivery of radiation mitigator JP4-039 by topical microneedle arrays (MNAs). R.I.T.N., June, 2015.

453A. Greenberger Joel S, Cao Shaonan, Dixon Tracy, Shields Donna, Zhang Xichen, and **Epperly Michael W**. Abrogation of TGF-B signaling in double knockout (DKO) Smad3-/- Fancd2-/- mice does not alter radiosensitivity of bone marrow stromal cells. Fanconi Anemia Research Fund (FARF), Toronto, Ontario, Canada, 9/15, P57.

454A. **Epperly Michael W**, Shields Donna, Cao Shaonan, Zhang Xichen, Dixon Tracy, Wipf Peter, and Greenberger Joel S. Radioprotection of Fancg-/- mouse oral cavity by mitochondrial targeted JP4-039. Fanconi Anemia Research Fund (FARF), Toronto, Ontario, Canada, 9/15, P32.

455A. Jones Jeffrey, Karouia Fathi, **Epperly Michael**, Montesinos Carlos, Petrosino Joseph, Cristea Octav, and Greenberger Joel. Intestinal microbiome: Considerations of radiation exposure and health effects for exploration class space flight. IAA/HIS Meeting, Prague, Czech., 2015.

456A. Falvello Virginia, **Epperly Michael W**, Dixon Tracy, Franicola Darcy, Zhang Xichen, and Greenberger Joel S. Production of TGF-β is increased in the bone marrow of double knockout (DKO) SMAD3-/- Fancd2-/- mice. American Society of Hematology, Orlando, Florida, 12/5 – 12/8/15.

457A. Sivanathan Aranee, Zhang Xichen, Franicola Darcy, Cao Shaonan, Shields Donna, **Epperly Michael W**, and Greenberger Joel S. Transformed phenotype of bone marrow stromal cell lines derived from K14E7 Fancd2-/-mice. American Society of Hematology, Orlando, Florida, 12/5 – 12/8/15.

458A. Chen Katherine, Franicola Darcy, Shields Donna, **Epperly Michael W**, Zhang Xichen, and Greenberger JS. Radiosensitivity of Fancd2-/- mouse bone marrow stromal cells is not altered by abrogation of TGF-β signaling. American Society of Hematology, Orlando, Florida, 12/5 – 12/8/15.

459A. Chen Zean, Franicola Darcy, Shields Donna, **Epperly Michael W**, Zhang Xichen, and Greenberger Joel S. DNA cross-linking agent sensitivity of Fanconi Anemia (FA) cells is preserved in double knockout (DKO) SMAD3-/- Fancd2-/- mouse cell lines. American Society of Hematology, Orlando, Florida, 12/5 – 12/8/15.

460A. Gomez-Casal Roberto, Bhattacharya Chitralekha, **Epperly Michael**, Proia David, Wang Hong, Socinski Mark, Greenberger Joel, and Levina Vera. HSP90 inhibitor ganetespib eradicates cancer stem cells in human non-small cell lung cancer. Radiation Research Society Meeting, Weston, Florida, 2015, (P26-09), P236.

462A. Jones Jeffrey, Karouia Fathi, **Epperly Michael**, Montesinos Carlos, Petrosino Joseph, Cristea Octav, and Greenberger Joel. Intestinal microbiome: Considerations of radiation exposure and health effects for exploration class space flight. Radiation Research Society Meeting, Weston, Florida, 2015, (S12-02), P56.

463A. **Epperly Michael W**, Dixon Tracy, Li Song, Wipf, Peter, and Greenberger Joel S. Effects of radiation mitigator JP4-039 on total body irradiation (TBI) induced proinflammatory proteins in bone marrow. Radiation Research Society Meeting, Weston, Florida, 2015, (PS2-03), P. 130.

464A. **Epperly MW**, Rigatti L, Dixon TM, Li S, Wipf P, and Greenberger JS. JP4-039/F14 treatment of E13 pregnant mice 24 hours after total body irradiation (TBI) improves survival, growth, and development of fetal mice. American Association for Cancer Research (AACR), New Orleans, LA, 2016.

465A. Greenberger JS, Rigatti L, Sivanathan A, Cao S, Zhang X, Shields D, Franicola D, and **Epperly MW**. Expression of the HPV E7 oncogene in K14E7 Fancd2-/- mouse long term bone marrow culture derived hematopoietic cells produces malignant plasmacytomas. American Association for Cancer Research (AACR), New Orleans, LA, 2016.

466A. Greenberger J, Rigatti L, Hou W, Sivanathan A, Zhang X, Shields D, Franicola D, and **Epperly M**. The Human papilloma virus (HPV) E7 oncogene reverses the radioresistance of Fancd2-/- mouse hematopoietic progenitor cells, and generates malignant plasmacytomas. Poster Presentations/Experimental Hematology, 44:S56-S110, 2016. ISEH, San Diego, CA, 2016.

467A. **Epperly M**, Shen H, Zhang X, Franicola D, Shields D, and Greenberger J. Radiation fibrosis resistant SMAD3-/- mice demonstrate superior donor bone marrow stem cell transplantation capacity by competitive repopulation assay. Poster Presentations/Experimental Hematology, 44:S56-S110, 2016. ISEH, San Diego, Ca, 2016.

468A. **Epperly MW**, Krainz T, Zhang X, Li S, Wipf P, and Greenberger JS. Novel small molecule mitochondrial targeted nitroxides mitigate total body irradiation. ASTRO, Boston, MA, 2016.

469A. Greenberger JS, Rigatti L, Hou W, Sivanathan A, Zhang X, Shields D, Franicola D, and **Epperly MW**. Human papilloma virus (HPV) E7 oncogene mediated squamous cell malignancy of the oropharynx and cervix in K14E7 Fancd2-/- mice also causes hematopoietic cell radiosensitivity and malignant B cell transformation. ASTRO, Boston, MA, 2016.

470A. **Epperly MW**, Rigatti L, Li S, Wipf, P, and Greenberger JS. Small molecule GS-nitroxide radiation mitigator, JP4-039/F14, is safe and effective in pregnant E13.5 mice. ASTRO, Boston, MA, 2016.

471A. Franicola D**, Epperly MW**, Wipf P, and Greenberger JS. The small molecule GS-nitroxide radiation mitigator, JP4-039, alters total body irradiation (TBI) induced gene expression in bone marrow of C57BL/6NTac mice. ASTRO, Boston, MA, 2016.

472A. Rigatti L, **Epperly MW**, Li S, Wipf, P, and Greenberger JS. Total body irradiation killing of fetal mice in E13.5 pregnant C57BL/6 females is mitigated by the GS-nitroxide JP4-039 delivered 24 hrs after exposure. Radiation Research Society Annual Meeting, Hawaii, 2016.

473A. **Epperly MW**, Shen HM, Zhang X, Franicola D, Shields D, and Greenberger JS. Radiation fibrosis resistant Smad3-/- mice demonstrate superior donor bone marrow stem cell transplantation capacity by competitive repopulation assay. Radiation Research Society Annual Meeting, Hawaii, 2016.

474A. Greenberger JS, Rigatti L, Hou W, Sivanathan A, Zhang X, Shields D, Franicola D, and **Epperly MW**. The human papilloma virus (HPV) E7 oncogene reverses the radioresistance of Fancd2-/- mouse hematopoietic progenitor cells and generates malignant plasmacytomas. Radiation Research Society Annual Meeting, Hawaii, 2016.

475A. Franicola Darcy, **Epperly Michael W**, Bayir Hulya, Kagan Valerian E, and Greenberger Joel S. Necrostatin-1 is a potent radiation mitigator which decreases total body irradiation induced signatures of inflammatory cell recruitment. Radiation Research Society Annual Meeting, Hawaii, 2016.

476A. Greenberger Joel S, Rigatti Lora, Hou Wen, Zhang Xichen, Shields Donna, Sivanathan Aranee, Franicola Darcy, and **Epperly Michael W**. Effects of the human papillomavirus (HPV) E7 oncogene on Fancd2-/- mouse marrow hematopoiesis, radiation sensitivity of different cell lineages, and generation of malignant plasmacytomas, Fanconi Anemia Research Fund Annual Meeting, Seattle, Washington, September, 2016.

477A. Greenberger Joel S, Cao Shaonan, Dixon Tracy, Shields Donna, Zhang Xichen, and **Epperly Michael W**. Marrow from a second strain of double knockout (DKO) SMAD3-/- Fancd2-/- mice (Uniform 129/Sv background) shows marked reduction of duration of hematopoiesis in continuous bone marrow cultures. Fanconi Anemia Research Fund Annual Meeting, Seattle, Washington, September, 2016.

478A. Willis J, **Epperly MW**, Zhang X, Fisher R, Liang M, Wipf P, and Greenberger JS. Amelioration of irradiation induced oral cavity mucositis in Fanca-/- mice using JP4-039 in a novel oral emulsion. Fanconi Anemia Research Fund (FARF) Meeting, Seattle, WA, September, 2016.

479A. Thermozier S, **Epperly MW**, Franicola D, Zhang X, Fisher R, Shields D, Wang H, Willis JA, Luke C, Silverman GA, and Greenberget JS. Hematopoietic progenitor cells from the bone marrow of Serpin3A-/- mice are radioresistant. ASH Meeting, San Diego, CA, December, 2016, Blood, 128:2680, 2016.

480A. Keppel K, **Epperly MW**, Shields D, Hou W, Franicola D, Zhang X, Fisher R, and Greenberger JS. Radiation resistance of double knockout (DKO) Smad3-/- Fancd2-/- (129/Sv) mouse bone marrow stromal cell lines. ASH Meeting, San Diego, CA, December, 2016, Blood, 128:3901, 2016.

481A. O’Connor KW, Vidal-Cardenas S, Zhang H, Rodrigues A, Moreau L, Yang C, **Epperly M**, Grompe M, Shimamura A, Greenberger J, Parmar K, and D’Andrea AD. Hyperactive non-canonical TGF-β pathway signaling in Fanconi anemia bone marrow stromal cells contributes to growth suppression. ASH Meeting, San Diego, CA, December, 2016, Blood, 128:1039, 2016.

482A. Steinman Justin, **Epperly Michael**, Willis John, Wang Hong, Fisher Renee, Kagan Valerian, Bayir Hulya, Yu Jian, Wipf Peter, Li Song, Huq M Saiful, and Greenberger Joel S. Sequential delivery of ionizing radiation mitigators based on plasma, intestine, and bone marrow protein signatures. ASTRO, San Diego, CA, September, 2017.

483A. Tyurina Yulia Y, Tyurin Vladimir A, Amoscato Andrew A, Anthonymuthu Tami, **Epperly Michael W**, Watkins Simon S, Greenberger Joel S, Bayir Hulya, and Kagan Valerian E. Identification and quantification of esterified hepoxillin A3 in the ileum of mice after total body irradiation using oxidative phospholipidomics. ASMS, Indianapolis, IN, 2017.

484A. Glowacki Julie, Bellare Anuj, Greenberger Joel, Fisher Renee, Wipf Peter, **Epperly Michael W**. A murine combined injury model of total body irradiation and skin wound is mitigated using MMS350. ASTRO, San Diego, CA, September, 2017.

485A. **Epperly Michael W**, Fisher Renee, Rigatti Lora H, Garman Robert, Li Song, Wipf Peter, and Greenberger Joel S. Total body irradiation induced fetal brain developmental retardation in E13.5 pregnant C57BL/6Tac mice is mitigated by delayed maternal administration of JP4-039. ASTRO, San Diego, CA, September, 2017.

486A. Greenberger Joel S, Willis John, Hou Wen, Shields Donna, Zhang Xichen, and **Epperly Michael W**. Mouse Fanconi Anemia (FA) Fancd2-/- bone marrow stromal cells demonstrate ionizing irradiation induced senescence. ASTRO, San Diego, CA, September, 2017.

487A. Willis John, **Epperly Michael W**, Fisher Renee, and Greenberger Joel S. Amelioration of radiation induced oral cavity mucositis and bone marrow suppression in Fanca-/- and Fancg-/- mice using JP4-039 in novel oral liposomes. ASTRO, San Diego, CA, September, 2017.

480A. Steinman Justin, **Epperly Michael**, Willis John, Wang Hong, Fisher Renee, Yu Jian, Wipf Peter, Li Song, Huq M Saiful, Bayir Hulya, Kagan Valerian, and Greenberger Joel S. Optimal time of delivery of two radiation mitigators JP4-039 and Necrostatin-1 based on modification of irradiation induced plasma, intestine, and bone marrow protein by the first drug. Radiation Research Society, Can Cun, Mexico, October, 2017.

481A. **Epperly Michael W**, Bellare Anuj, Greenberger Joel, Fisher Renee, Wipf Peter, and Glowacki Julie. A murine combined injury model of total body irradiation and skin wound for evaluation of radiation mitigators. Radiation Research Society, Can Cun, Mexico, October, 2017.

482A. Morgan Gina M, Kutschke William, Matasic Daniel, **Epperly Michael W**, Greenberger Joel S, Kalen Amanda, Waldron Timothy, Schoenfield Joshua, McCormick Michael, Yoon Jin-Young, Spitz Douglas, and London Barry. The radiation mitigator MMS350 prevents bradyarrhythmias in irradiated mice. Am Soc Cardiology, 3/17 (submitted).

483A. Willis John, **Epperly Michael W**, Fisher Renee, Wipf Peter, Li Song, and Greenberger Joel S. Intraoral GS-nitroxide (JP4-039) ameliorates radiation induced oral mucositis and distant (abscopal) bone marrow suppression in head and neck irradiated Fanconi Anemia (FA) Fanca-/- and Fancg-/- mice. Radiation Research Society Annual Meeting, Cancun, Mexico, October 17, 2017.

484A. Rigatti Lora H, **Epperly Michael W**, Bayir Hulya, Fisher Renee, Garman Robert, Wipf Peter, Li Song, and Greenberger Joel S. Mitigation of 3 Gy total body irradiation (TBI) induced E13.5 mouse fetal brain damage by maternal administration of JP4-039 on E14.5. Radiation Research Society Annual Meeting, Cancun, Mexico, October 17, 2017.

485A. Greenberger Joel S, Willis John, Hou Wen, Shields Donna, Zhang Xichen, and **Epperly Michael W**. Irradiation accelerated senescence in mouse Fanconi Anemia (FA) Fancd2-/- bone marrow stromal cells. Radiation Research Society Annual Meeting, Cancun, Mexico, October 17, 2017.

486A. Willis John, **Epperly Michael W**, Fisher Renee, Wipf Peter, Li Song, Parmar Kalindi, Guinan Eva, Greenberger Joel S. Amelioration of radiation induced oral mucositis and distant (abscopal) bone marrow suppression by intraoral mitochondria-targeted GS-nitroxide (JP4-039) in head and neck irradiated Fanconi Anemia (FA) Fanca-/- and Fancg-/- mice. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

487A. Greenberger Joel S, Willis John, Hou Wen, Shields Donna, Zhang Xichen, **Epperly MW**. Fanconi Anemia (FA) mouse bone marrow stromal cells demonstrate increased irradiation induced senescence. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

488A. Franicola Darcy, **Epperly Michael W**, Zhang Xichen, Fisher Renee, Greenberger Joel S. Bone marrow stromal cell lines from Fanconi Anemia (FA) Fancg-/- and Fanca-/- as well as Fancd2-/- mice have abnormal mitochondria. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

489A. Greenberger Joel S, Fisher Renee, Zhang Xichen, Rodriguez Alfredo, D’Andrea Alan, Parmar Kalindi, Guinan Eva, **Epperly Michael W**. Reduced breeding frequency of Smad3-/- (C57BL/6) Fancd2-/- (C57BL/6) and Smad3-/- (C57Bl/6) Fancd2-/- (129/Sv) double knockout (DKO) mice compared to other breeding combinations. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

490A. Zhang Xichen, **Epperly Michael W**, Shields Donna, Fisher Renee, Greenberger Joel S. A single HPV E6 or E7 oncogene transforms Fancd2-/- (129/Sv) but not Fancd2+/+ IL-3 dependent hematopoietic cell lines to factor independence. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

491A. Hou Wen, **Epperly Michael W**, Zhang Xichen, Shields Donna, and Greenberger Joel. Metformin is a radioprotector of Fancd2-/- (129/Sv and C57BL/6) bone marrow stromal cell lines in vitro. Fanconi Anemia Scientific Symposium, Atlanta, GA, September, 2017.

492A. Ejaz A, **Epperly MW**, Fisher R, Zhang X, Johngrass M, Schusterman MA, Kokai LE, Greenberger JS, and Rubin JP. Molecular basis of adipose-derived stem cell (ASC) therapy for management of radiation-induced fibrosis (RIF). International Federation for Adipose Therapeutics and Sicence (IFATS) Meeting, Miami, FL, 11-30-17 – 12-3-17.

493A Sivananthan AP, Zhang X, Hou W, Shields DS, Fisher R, Epperly M, Greenberger JS. Increased irradiation-induced senescence in Fanconi Anemia (FA) mice. AACR Annual Meeting. Chicago, IL, April 14-18, 2018.

494A. Ejaz A, Epperly M, Fisher R, Zhang X, Johngrass M, Schusterman A, Kokai L, Greenberger JS, and Rubin JP. Molecular basis of adipose-derived stem cells therapy for management of radiation induced fibrosis (RIF). AACR Annual Meeting, Chicago, IL, April 14-18, 2018.

495A. Epperly MW, Zhang X, Wipf P, and Greenberger JS. Fancd2-/- (129/Sv) IL-3 Dependent Hematopoietic Progenitor Cells, and HPV (E6) Transformed Malignant Cell Lines in a Novel Assay for Normal Stem Cells Specific Metformin-Analogue Induced Cell Cycle Arrest. FARF Annual Meeting, Newport Beach, California. Sept 27-30, 2018.

496A. Zhang X, Rigatti L, Epperly MW, and Greenberger JS. Malignant Transformation of IL-3 Dependent Fancd2-/- Hematopoietic Progenitor Cells by Single Human Papillomavirus E6 or E7 Oncogene, FARF Annual Meeting, Newport Beach, California. Sept 27-30, 2018.

497A. Quinn TJ, Ding X, Wilson GD, Sivananthan A, Thermozier S, Henderson A, Epperly MW, Franicola D, Wipf P, Greenberger JS, Stevens CW, and Kabolizadeh P. Intraoral JP4-039/Miglyol-812-N Amelioration of Proton Irradiation Induced Oral Cavity Toxicity in Fanca-/- Mice. FARF Annual Meeting, Newport Beach, California. Sept 27-30, 2018.

498A. Ejaz A, Epperly MW, Greenberger JS, Huq MS, and Rubin P. Adipocyte Stem Cells Ameliorate Total Body Irradiation Induced Hematopoietic Syndrome and Late Radiation Fibrosis. ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018. IJROBP, 102:35, PS187, #1060, 2018

499A. Greenberger JS, Fisher R, Donnelly C, Watkins S, Ross M, Rigatti R, and Epperly MW. Total Body Irradiation and Bone Marrow Transplant Significantly Extends the Paralysis Free Interval in Amyotrophic Lateral Sclerosis Mice (SOD1G93A), ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018. IJROBP, 102:35, PS73, #145, 2018

500A. Epperly MW, Wipf P, Fisher R, and Greenberger JS. Ionizing Irradiation Mitigator GS-nitroxide (JP4-039) is Deliverable in an I.M. Formulation Suitable for Self-Administration, ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018. 102:35, SU40, #2393, 2018.

501A. Kabolizadeh P, Ding X, Quinn T, Wilson G, Sivananthan A, Epperly MW, Franicola D, Greenberger JS and Stevens C. ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018.

502A Thermozier S, Epperly MW, Franicola D, Zhang X, Fisher R, Shields D, Wang H, Willis JA, Luke C, Silverman GA, and Greenberger JS. Bone Marrow Hematopoietic Progenitor Cells from Serpinb3A-/- Mice Are Radioresistant, ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018.

503A. Greenberger JS, Fisher R, Donnelly C, Watkins S, Ross M, Rigatti L, and Epperly MW. Total Body Irradiation and Bone Marrow Transplant Significantly Extends the Paralysis Free Interval in Amyotrophic Lateral Sclerosis Mice (SOD1G93A). ASTRO Annual Meeting. San Antonio, TX, Oct. 21-24, 2018.

504A. Tyurin Vladimir, Ting Hsiu-Chi, Reynolds Christian A, Tyurina Yulia Y, Yu Wenxi, Liang Zhuqing, Stoyanovsky Detcho A, Greenberger Joel S, Bayir Hulya, Anthonymuthu Tamil S, Greenberg Miriam L, Kagan Valerian E. Differential LC-MS study of CLD1-driven diversification of cardiolipins inΔ12-desaturasetransfected yeast cells. ASMS Society Meeting, San Diego, CA, June 3-7, 2018.

505A. Sivananthan AP, Shields DS, Fisher R, Franicola D, Hou W, Zhang X, Wipf P, Epperly M, Greenberger JS. Effects of total body irradiation and the radiation mitigator MMS350 on senescence in Fanconi Anemia, Fanca-/- mice. ASTRO Annual Meeting, San Antonio, TX, October 21-24, 2018. IJROBP, 103(3), SU40, #2397, 2018

506A.Ejaz A, Epperly MW, Greenberger JS, Huq MS, and Rubin P. Enhanced total body irradiation mitigation by adipocyte stem cells (ASCs) added to JP4-039. Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018.

507A. Greenberger JS, Fisher R, Donnelly C, Watkins S, Ross M, Rigatti L, and Epperly MW. Significant amelioration of paralysis in Amyotrophic Lateral Sclerosis mice (SOD1G93A) by total body irradiation and bone marrow transplant Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018.

508A Epperly MW, Wipf P, and Greenberger JS.Ionizing irradiation mitigation by intramuscular (I.M.) delivered GS-nitroxide (JP4-039) in a self-administration formulation, Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018.

509A Quinn TJ, Ding X, Wilson GD, Sivananthan A, Epperly MW, Franicola D, Wipf P, Greenberger JS, Stevens CW, and Kabolizadeh P. The mitochondrial targeted GS-nitroxide JP4-039 protects Fanconi Anemia (Fanca-/-) mouse marrow stromal cell lines from proton irradiation, Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018

510A. Ejaz A, Epperly MW, Greenberger JS, Huq MS, and Rubin P. Late radiation fibrosis is reduced by injection of adipocyte stem cells, Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018.

511A. Sivananthan A, Fisher R, Shields D, Zhang X, Franicola D, Epperly MW, Wipf P, and Greenberger JS. The Radiation Mitigator, MMS350, Ameliorates Irradiation Induced Senescence in Fanconi Anemia, Fanca-/-, mice, Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018

512A. Thermozier S, Epperly MW, Franicola D, Zhang X, Fisher R, Shields D, Wang H, Willis JA, Luke C, Silverman GA, and Greenberger JS. Hemopoietic progenitor cells from the bone marrow of Serpinb3A-/- mice are radioresistant. Radiation Research Society Annual Meeting. Chicago, IL, September 23-26, 2018.

513A. Rodriguez Alfredo, Yang Chunyu, Epperly Michael, Sambel Larissa, Grompe Markus, Parmar Kalindi, Greenberger Joel, and D’Andrea Alan. Hyperactive TGF-β pathway signaling is required for viable gestation during the development of Fanconi Anemia mice. 30th Fanconi Anemia Research Fund Scientific Symposium, Newport Beach, CA, 9/27 – 9/30/18.

514A: Henderson Andrew, Epperly Michael W, Fisher Renee, Shields Donna, Zhang Xichen, Rigatti Lora, Donnelly Christopher, Watkins Simon, and Greenberger Joel S. Increased longevity of continuous bone marrow cultures and radioresistance of bone marrow stromal cells from SODG93A ALS (Amyotrophic Lateral Sclerosis) mice. American Society of Hematology (ASH) 60th Annual Meeting, San Diego, CA, December 1-4, 2018.

515A. Henderson A, Epperly MW, Fisher R, Shields D, Zhang X, Rigatti L, Donnelly C, Watkins S and Greemberger JS. Increased Longevity of Continuous Bone Marrow Cultures and Radioresistance of Bone Marrow Stromal Cells from SOD1G93A ALS (Amyotrophic Lateral Sclerosis) Mice. AACR Annual Meeting, Atlanta, GA March 29-April 3, 2019,

516A. Thermozier S, Epperly M, Franicola D, Zhang X, Fisher R, Shields D, Wang H, Willis J, Luke C, Silverman G, and Greenberger J. Serpinb3a-/- mice are radioresistant. AACR Annual Meeting, Atlanta, GA, March 29-April 3, 2019.

517A. Tyurin Vladimir, Tyurina Yulia, Amoscato Andrew, Sparovero Louis J, Epperly Michael, St. Croix Claudette, Watson Alan, Watkins Simon, Greenberger Joel, Bayir Hulya, and Kagan Valerian. An inhibitor of iPLA2ƴ, R-BEL, prevents lipid mediator generation in the ileum and leads to radiomitigation after total body irradiation. ASSMS Annual Meeting, Atlanta, GA, June 2 – 6, 2019, Submitted 1/28/19.

518A: Epperly Michael W, Thermozier Stephanie, Fisher Renee, Hou Wen, Wipf Peter, Bayir Hulya, Kagan Valerian, and Greenberger Joel S. Mitigation of total body irradiation by small molecule mitigators that target 3 distinct cell death pathways. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

519A: Ejaz Asim, Epperly Michael W, Greenberger Joel S, Huq M Saiful, and Rubin Peter. Adipocyte stem cells ameliorate total body irradiation induced hematopoietic syndrome and late radiation fibrosis. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

520A: Tyurin Vladimir, Tyurina Yulia, Amoscato Andrew, Sparovero Louis J, Epperly Michael W, St. Croix Claudette, Watson Alan, Watkins Simon, Greenberger Joel, Bayir Hulya, and Kagan Valerian. R-BEL mitigates total body irradiation by inhibiting iPLA2ƴ which prevents lipid mediator generation in the ileum. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

521A: Thermozier Stepanie, Epperly Michael W, Franicola Darcy, Zhang Xichen, Fisher Renee, Shields Donna, Wang Hong, Luke Cliff, Silverman Gary, and Greenberger Joel S. Radioresistance of Serpinb3a-/- mice and derived hematopoietic and marrow stromal cell lines. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

522A: Tian J, Rogers M, Epperly MW, Firek B, Fisher R, Novak EA, Mollen KP, Greenberger JS, and Morowitz MJ. The gut microbe Akkermansia muciniphilia increases after radiation injury and can be supplemented by gavage to improve survival in radiated mice. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

523A: Quinn Thomas J, Ding Xuanfeng, Li Xiaoqiang, Wilson George D, Buelow Katie, Sivananthan Aranee, Thermozier Stephanie, Henderson Andrew, Epperly Michael W, Franicola Darcy, Wipf Peter, Greenberger Joel S, Stevens Craig W, and Kabolizadeh Peyman. JP4-039 induced amelioration of mucositis and abscopal bone marrow suppression in Fanconi Anemia Fanca-/- mice during pencil beam scanning proton therapy. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

524A: Eller Andrew, Thermozier Stephanie, Epperly Michael W, Fisher Renee, Hou Wen, Hug Saiful, Wipf Peter, Haley Marsha, Sahel Jose-Alain, and Greenberger Joel S. Intraocular injection of JP4-039 protects the retina from radiation induced apoptosis. ASTRO Annual Meeting, Chicago, IL, September 15-18, 2019.

525A: Greenberger Joel S, Fisher Renee, Zhang Xichen, Hou Wen, Shields Donna, Wipf Peter, and Epperly Michael. Mitochondrial targeted GS-nitroxide, JP4-039, mitigates total body irradiation (TBI) of Fanca-/- mice. Fanconi Anemia Research Fund Annual Meeting, Chicago, IL, September, 2019.

526A: Li Kelvin, Fisher Renee, Epperly Michael, Methe Barbara, and Greenberger Joel S. Stabilization of intestinal *Lactobacillus* correlates with successful total body irradiation mitigation. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

527A: Greenberger Joel S, Fisher Renee, Hou Wen, Zhang Xichen, Shields Donna, van Pijkeren Jan-Peter, Yu Jian, Bayir Hulya, Kagan Valerian, Wipf Peter, Watkins Simon, and Epperly Michael W. Total body irradiation mitigation by enteric administration of *Lactobacillus reuteri* secreting IL-22. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

528A: Tyurin Vladimir, Tyurina Yulia, Amoscato Andrew, Sparvero Louis J, Epperly Michael W, St. Croix Claudette, Watson Alan, Watkins Simon, Greenberger Joel, Bayir Hulya, and Kagan Valerian. Inhibition of neutrophil migration into the irradiated intestine by calcium independent phospholipase A2 gamma inhibitor, R-Bel, mitigates ionizing irradiation-induced damage. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

529A: Eller Andrew, Thermozier Stephanie, Epperly Michael, Wipf Peter, Huq M Saiful, Haley Marsha, and Greenberger Joel S. Intravitreous administration of JP4-039 ameliorates ionizing irradiation-induced apoptosis of the retina. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

530A: Thermozier Stephanie, Epperly Michael Hou Wen, Zhang Xichen, Fisher Renee, Shields Donna, Yu Jian, Bayir Hulya, Kagan Valerian, and Greenberger Joel S. Radiation mitigation by signature (biomarker) directed sequential administration of three drugs, which block ferroptosis, necroptosis, and apoptosis. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

531A: Bayir Hulya, Epperly Michael, Fisher Renee, Zhang Xichen, Hou Wen, Shields Donna, Greenberger Joel S, Wipf Peter, and Kagan Valerian. Ionizing irradiation-induced parthanatos, a second mitochondrial-based cell death pathway. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

532A: Greenberger Joel S, Fisher Renee, Zhang Xichen, Hou Wen, Shields Donna, Wipf Peter, and Epperly Michael W. Mitochondrial targeted GS-nitroxide, JP4-039, mitigates total body irradiation (TBI) of Fanca-/- mice. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

533A: Beumer Jan H, Guo Jianxia, Christner Susan M, Parise Robert A, Wipf Peter, Epperly Michael W, Greenberger Joel S, Eiseman Julie L. Bioavailability and tissue distribution of JP4-039 after intramuscular administration to female C57BL/6 mice. Radiation Research Society Annual Meeting, San Diego, CA, November, 2019.

534A: Adeghate Jennifer, Fisher Renee, Hou Wen, Davoli Katherine, Epperly Michael W, Hug Mohammed Saiful, Wipf Peter, Sahel Jose-Alain, Greenberger Joel S, and Eller Andrew W. A novel agent in prevention of Acute Radiation Toxicity in the Mouse Retina. ARVO Annual Meeting Abstract, June 2021.

535A. MukherjeeA, Epperly, MW, Shields D, Hou W, Fisher R, Hamade DF, and GreenbergerJS. Radiation Induced and FACS-Sorted Senescent tdTOMp16+ Cells Upregulate Profibrotic Gene Expression in Mesenchymal Stem Cells (Stromal Cells). ASTRO Annual Meeting, Chicago, IL. September 2021.

536A. Hamade DF, Epperly MW, Fisher R, Hou W, Mukherjee A, and Greenberger JS. ***Second-***Generation Probiotic *Lactobacillus reuteri* producing IL-22 (LR-IL-22) Protects the Intestine to Facilitate Whole Abdomen Irradiation (WAI) in Ovarian Cancer. ASTRO Annual Meeting, Chicago IL September 2021.

537A. Hamade DF, M.D., Hou W, Fisher R, Mukherjee A, Epperly MW, Ph.D., Espinal A, and Greenberger JS, M.D. Second-Generation Probiotic *Lactobacillus reuteri* producing IL-22 (LR-IL-22) Protects the Intestine and Facilitates Whole Abdomen Irradiation (WAI) for Diffuse Widespread Ovarian Cancer. Radiation Research Annual Meeting, San Juan, Puerto Rico October 2021.

538A. Mukherjee A, Epperly M, Shields D, Hou W, Fisher R, Hamade D and Greenberger JS. Radiation induced and FACS-sorted senescent tdTOMp16+ cells upregulate profibrotic genes in target cell lines via induction of Fgr tyrosine kinase. Radiation Research Annual Meeting San Juan, Puerto Rico, October 2021.

539A. Rogers CJ, Epperly MW, Whitener R, Miller T, Axtelle J, Greenberger JS, Menon N. Development of a long-term release radiation protector and mitigator suitable for austere environments. Radiation Research Society, San Juan, Puerto Rico, October, 2021.

540A: Rogers CJ, Epperly MW, Ho M-H, Whitener R, Axtelle J, Greenberger JS, Menon N. An orally administered GI-ARS mitigator to target delivery of therapeutic cytokines to the intestine. Radiation Research Society, San Juan, Puerto Rico, October, 2021.

541A: Wu Y, Epperly M, Fisher R, Greenberger JS, Lo C. Probing mitochondrial function in intact fetal brains with in vivo gating-free motion-and-time-resolved 4D oxy-wavelet MRI in a fetal irradiation injury mouse model. ISMRM and SMRT Annual Meeting & Exhibition, May 15-20, 2021, Virtual Meeting.

542A: Adeghate J, Fisher R, Hou W, Davoli K, Epperly MW, Huq MS, Wipf P, Sahel J-A, Greenberger J, Eller AW. A novel agent in prevention of acute radiation toxicity in the mouse retina. ARVO Annual Meeting, June 2021. Investigative Ophthalmology & Visual Science, 62:3290, 2021.

543A: Mukherjee A, Epperly MW, Shields D, Hou W, Fisher R, Greenberger JS. Fancd2-/- mice demonstrate increased chemical carcinogen and ionizing irradiation induced epithelial cell senescence and OSM. Fanconi Anemia Research Fund Symposium 2022, Austin, Texas, September 8-11, 2022.

544A: Mukherjee A, Epperly MW, Shields D, Hou W, Fisher R, Greenberger JS. Induction of Fgr in senescent cells, mediates radiation-induced pulmonary fibrosis. Radiation Research Society Annual Meeting, Waikoloa Village, Hawaii, October 16-19, 2022.

545A: Rogers C, Ko M-H, Menon N, Epperly M, Greenberger JS. An orally administered GI-ARS mitigator to target delivery of therapeutic IFN-β to the intestine. Radiation Research Society Annual Meeting, Waikoloa Village, Hawaii, October 16-19, 2022.

546A: Epperly MW, Espinal A, Hamade DF, Shields D, Fisher R, Hou W, Wang H, Mukherjee A, Yu J, van Pijkeren JP, Greenberger JS. Oral administration of *Lactobacillus reuteri* releasing Interleukin-22 (LR-IL-22) ameliorates radiation induced loss of endothelial and Lgr5+GFP+ epithelial stem cells. Radiation Research Society Annual Meeting, Waikoloa Village, Hawaii, October 16-19, 2022.

547A: Greenberger JS, Epperly MW, Mukherjee A, Shields D, Fisher R, Pennathur A, Luketich J, Hou W. Expression of OSM in senescent esophageal cells during gastroesophageal carcinogenesis. Radiation Research Society Annual Meeting, Waikoloa Village, Hawaii, October 16-19, 2022.

548A: Dierdorff JM, Mehdi H, Elmonzer M, Greiner A, Kutschke WJ, Yoon J-Y, Prathivadhi-Bhayankaram S, Morgan GM, Wipf P, Epperly MW, Greenberger JS, London B. Sex difference following cardiac-targeted irradiaton in mice. AHA Annual Meeting 2022, Chicago, IL, November 5-7, 2022.

549A: Dutt S, Soto L, Viswanathan V, Melemenidis S, Grover V, Natarajan S, Loo P, Lau B, Kapadia N, Lee HCR, Ashraf MR, Manjappa R, Skinner L, Surucu M, Yu AS, Casey K, Greenberger JS, Epperly M, Graves EE, Rankin EB, Loo, Jr. BW. Abdominal FLASH irradiation spares radiation-induced intestinal injury in mice with impaired double strand DNA break repair. FRPT (Flash Radiotherapy and Particle Therapy) Meeting, Barcelona, Spain, November 30, 2022 – December 2, 2022.

550A: Mukherjee A, Epperly MW, Shields D, Hou W, Fisher R, Greenberger JS. Fancd2-/- mice demonstrate increased chemical carcinogen and irradiation induced epithelial cell senescence and OSM. FARF, San Antonio, TX, Septembe, 2022.

551A: Epperly MW, Espinal A, Hamade DF, Shields D, Fisher R, Hou W, Wang H, Mukherjee A, Yu J, van Pijkeren JP, Greenberger JS. Oral administration of Lactobacillus reuteri releasing interleukin-22 (LR-IL-22) ameliorates radiation induced loss of endothelial and Lgr5+GFP+ epithelial stem cells. Hillman Cancer Center Retreat, Pittsburgh, PA, August, 2022.

552A: Hamade DF, Epperly MW, Fisher R, Hou W, Shields D, van Pijkeren J-P, Mukherjee A, Yu J, Leibowitz BJ, Vlad AM, Coffman L, Wang H, Huq MS, Huang Z, Rogers CL, Greenberger JS. Intraoral gavage of second generation probiotic Lactobacillus reuteri releasing IFN-β (LR-IFN-β) mitigates intestinal irradiation toxicity and improves survival during whole abdomen irradiation (WAI). ASTRO, San Diego, CA, 10/1/23 – 10/4/23.

553A: Hamade DF, Epperly MW, Fisher R, Hou W, van Pijkeren J-P, Mukherjee A, Yu J, Leibowitz BJ, Vlad AM, Coffman L, Wang H, Huq MS, Huang J, Rogers C, Greenberger JS. Second generation probiotic Limosilactobacillus reuteri delivering IFN-β (LR-IFN-β) decreases radiation toxicity and improves survival after whole abdomen irradiation (WAI). Radiation Research Society Meeting, 4/23, Montreal, Canada.

554A: Dierdorff JM, Mehdi H, Elmonzer M, Greiner A, Current K, Yoon J-Y, Prathivadhi-Bhayankaram SV, Morgan GM, Kutschke WJ, Wipf P, Epperly MW, Allen BG, Spitz DR, Greenberger JS, London B. Susceptibility to cardiac-targeted irradiation in wild-type and NOS1 haploinsufficient mice. American Heart Association, 6/9/23.

***Presentations***

1. **Epperly MW**, Jahroudi N, Rosenstein M, Shields D, Engelhardt J, Huang L, Greenberger JS. Protection of the lung from ionizing irradiation damage by inhalation gene therapy. The 37TH Annual Scientific Meeting of the American Society for Therapeutic Radiology & Oncology, Miami Beach, FL (October 8-11, 1995).
2. **Epperly MW**, Shiffer C, Escobar P, Bray JA, Watkins SC, Bigbee WL, Greenberger JS. Overexpression of MnSOD *in vitro* increases the radioresistance of 32D cl 3 hematopoietic progenitor cells. The 89TH Annual Meeting of the AACR, New Orleans, LA (March 28 - April 1, 1998).
3. **Epperly MW**, Bray JA, Escobar P, Bigbee WL, Watkins SC, Greenberger JS. Overexpression of the human MnSOD transgene in vitro protects 32D cl 3 murine hematopoietic progenitor cells from irradiation-induced apoptosis. The 40TH Annual Scientific Meeting of ASTRO, Phoenix, AZ (October 25-29, 1998).
4. **Epperly MW**, Bray JA, Defilippi S, Greenberger JS. Overexpression of manganese superoxide dismutase in the 32D cl 3 murine hematopoietic progenitor cell line prevents apoptosis induced by ionizing irradiation, IL-3 withdrawal, or exposure to TNF-. The 28TH Annual Meeting of the International Society of Experimental Hematology, Monte Carlo, Monaco (July 10-14, 1999).
5. **Epperly MW**, Defilippi S, Sikora C, Gretton J, Greenberger JS. Radioprotection of lung and esophagus by overexpression of the human MnSOD transgene. International Conference on Low-Level Radiation Injury and Medical Countermeasures. Sponsored by the Armed Forces Radiobiology Research Institute, Bethesda, MD, November 8-10, 1999. LLR-99 (Session 2. Prevention and Treatments; Session 2B. Protective Devices and Strategies, p. 33.
6. **Epperly MW**, Defilippi SJ, Sikora CA, Gretton JE, Pierce L, Peterson J, Kagan V, Greenberger JS. Overexpression of the human MnSOD transgene prevents irradiation apoptosis of 32D cl 3 hematopoietic progenitor cells by stabilization of the mitochondria. The 29th Annual Scientific Meeting of the International Society Of Experimental Hematology, Tampa, FL, July 8-11, 2000. Exp. Hematol., 28(7):Suppl. #1:35 (Abstract #14), 2000.
7. **Epperly MW**, Sikora CA, Gretton JE, DeFilippi SJ, Greenberger JS. Late upregulation of VCAM-1 and ICAM-1 in irradiated murine pulmonary endothelial and lung parenchymal cells precedes recruitment of bone marrow-derived macrophages and fibrosis. The 43rd Annual Meeting of the American Society for the Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA, November 4-8, 2001.
8. **Epperly MW**, Greenberger JS, Gretton JE, Jefferson M, Bernarding M. Title: The importance of mitochondrial localization for the prevention irradiation-induced apoptosis by manganese superoxide dismutase. 31st. Annual Meeting International Society for Experimental Hematology, Montreal, Canada, July 5 – 9, 2002.
9. **Epperly MW**, Jefferson M, Guo HL, Gretton JE, Bernarding M, Greenberger JS. Title: Pre-but not post irradiation intratracheal injection of manganese superoxide dismutase-plasmid/liposomes (MnSOD-PL) protects the lung from irradiation damage. The 44th Annual Meeting of the American Society for the Therapeutic Radiology and Oncology, New Orleans, La, October 6 – 10, 2002.

**Professional Activities:**

**TEACHING:**

Dr. Epperly is the Course Director for the Radiobiology Course taught to the Radiation Oncology residents. Dr. Epperly was involved with establishment of the Radiobiology Course since the inception of the Radiation Oncology Residency Program in 2000. Dr. Epperly has been involved in the laboratory training of three medical students who have taken a one-year leave of absence between their third and fourth year of medical school to work in his lab to gain research experience before completing medical school. Other medical students have spent one rotation of their medical school experience in his laboratory to determine whether they wanted to pursue further research opportunities. Dr. Epperly has been involved in the training of two Ph.D. students and two postdoctoral fellows. Dr. Epperly has also been responsible for the Radiation Oncology Research Seminars.

**SUMMARY OF CURRENT RESEARCH FUNDING**

**ACTIVE**

2U19AI068021-11(Greenberger) 09/01/15-08/31/20 3.6 calendar months

NIH/NIAID

CMCR “**Signature-Directed, Sequential Delivery of Radiation Mitigators**”

Project I

The goal of Project 1 of the CMCR grant is to develop new drugs to mitigate irradiation damage by targeting antioxidant and other small molecules to the mitochondria.

2U19AI068021-11 (Greenberger) 09/01/15-08/31/20 3.0 calendar months

NIH/NIAID

CMCR “**Signature-Directed, Sequential Delivery of Radiation Mitigators**”

Core C

The goal of Core C of the CMCR grant is to support the four projects in the CMCR grant by in vitro and in vivo analysis of the ability of the new compounds to mitigate against irradiation damage.

2RO1 DK071085 (Kanai) 04/01/13 – 03/31/18 0.86 calendar months

NIH **“Roles of Nitric Oxide”** The goal of this grant is to investigate the role of nitric oxide in

radiation damage to the urinary bladder.

RO1 GM102989-01 (Li) 07/01/13 – 04/30/17 0.96 calendar months

NIH “**Rational Design of Lipidic Vectors for Mitochondria-Targeted Antioxidants**” The goal of this project is to design new liposomal vector for the delivery of antioxidants to the mitochondria.

**PRIOR**

RO1 GM102989-01 (Li) 07/01/13 – 04/30/17 0.96 calendar months

NIH “**Rational Design of Lipidic Vectors for Mitochondria-Targeted Antioxidants**” The goal of this project is to design new liposomal vector for the delivery of antioxidants to the mitochondria.

1U19A168021-01 (PI: Joel S. Greenberger, M.D.) 09/01/10-08/31/15

Co-Investigator Project 1 and Director of Core F: Michael W. Epperly, Ph.D. 20% Effort

**“Mitochondrial Targets Against Radiation Damage”**

NIH/NIAID Center for Medical Countermeasures Against Radiation (CMCR)

The goal of this project is to develop radioprotector/mitigator drugs focused on neutralizing mitochondrial specific steps in early response to irradiation damage which will prevent irreversible cell death.

NIH-2R01CA119927-08A1 (PI: Joel S. Greenberger, M.D.) 02/01/06-01/31/11

Co-Investigator: Michael W. Epperly, Ph.D. 15% Effort

**“Mechanism of Irradiation Pulmonary Fibrosis”**

The goal of this grant is define critical steps in irradiation pulmonary fibrosis and identify new targets for therapeutic intervention, thereby decreasing patient side effects and facilitating dose escalation in the initial treatment or retreatment of recurrent thoracic cancers.

BARDA/HHS HHS0100200800062C (PI: Joel S. Greenberger, M.D.) 09/16/08-09/15/09

Co-Investigator: Michael W. Epperly, Ph.D. 20% effort

**“Novel Mitochondrial Targeted Drugs for Treatment of the Irradiation-Induced Hematopoietic Syndrome”**

This contract will develop the optimal GS-nitroxide drug (JP4-039) from a library of novel small molecules to be a new mitigator when delivered 24 hours after irradiation to enhance bone marrow stromal cell recovery and improve engraftment of circulating marrow stromal and hematopoietic stem cell progenitors in the irradiation damaged hematopoietic microenvironment.

NIH-1-R01-DK071085-1-DRG/NIH (PI: Anthony Kanai, Ph.D.) 4/01/05-03/31/10

Co-Investigator: Michael W. Epperly, Ph.D. 10% effort

**“Roles of Nitric Oxide and Superoxide in Cystitis”**

The goal of this project is to investigate the production of nitric oxide and superoxide in the bladder following irradiation and their involvement in irradiation-induced cystitis of the bladder.

NIH-RC1-A1081284 (PI: Louis D. Falo, M.D.) 09/10/08-09/10/10

Co-Investigator: Michael W. Epperly, Ph.D. 10% effort

**“Novel Cutaneous Radiation Injury Countermeasures”**

The goal of this project is do develop new small molecule drugs and delivery systems to deliver the drugs to the skin to prevent irradiation induced damage to the skin.

NIH-R01-CA83876-06 (PI: Joel S. Greenberger, M.D.) 08/02/06-06/30/11

Co-Investigator: Michael W. Epperly, Ph.D. 25% Effort

**“Gene Therapy Reduction of Radiotherapy Esophagitis”**

The goal of this grant is to expand the molecular mechanism of esophageal radiation protection by MnSOD-PL administration.

1-R01-HL60132 – Competitive Renewal – DRG/NIH 2/01/02 - 1/31/07

PI: Joel S. Greenberger, M.D. $39,056

Co-Investigator: Michael W. Epperly, Ph.D. (15% effort)

**“Lung Radiation Protection by MnSOD-Transgene Therapy”**

The goal of this grant will be to use validated, genetically modified animal models along with quantitative

molecular methods to elucidate the cellular mechanism of irradiation lung fibrosis and the level(s) at which

epitope-hemagglutinin (HA)-tagged manganese superoxide dismutase (MnSOD) transgene therapy protects.

1-R01-CA92389-01A1 04/01/03 - 03/31/07

PI: Andrew A. Amoscato, M.D. $28,752

Co-Investigator: Michael W. Epperly, Ph.D. (5% effort)

“**Radiation-Induced Ceramide Generation”**

The goal of this grant is to look at the effect of irradiation on mitochondrial ceramide and its role in irradiation-induced apoptosis.

1-R01-CA83876-02 07/01/02 - 06/30/06

PI: Joel S. Greenberger, M.D. $30,158

Co-Investigator: Michael W. Epperly, Ph.D. (27.5% effort)

**“Gene Therapy Reduction of Radiotherapy Esophagitis”**

The goal of this grant is to expand the molecular mechanisms of esophageal radiation protection by MnSOD-PL and the involvement of esophageal stem cells in irradiation protection.

 1-RO1-CA-101837-01A2-DRG/NIH 1/01/05 - 12/31/08

**“MnSOD-PL Irradiation Protection of the Oral Cavity”** $9,847

PI: Joel S. Greenberger, M.D. (10% effort)

Co-Investigator: Michael W. Epperly, Ph.D.

The goal of this grant is to investigate the protection of the oral cavity from irradiation damage by administration of MnSOD-PL, and to determine the effects of increased expression of MnSOD in on the antioxidant levels in tumors of the head and neck and normal tissue of the oral cavity.

NIH 1R01-CA92389-01A1

Lung Cancer SPORE (PI: Jill Siegfried, Ph.D.) 04/01/01 – 01/01/05

(Project #4: PI: Joel S. Greenberger, M.D., Co-I: Michael Epperly, Ph.D.) $17,145 (20% effort)

**"Protection of esophagus and normal lung from chemoradiotherapy (CRT) damage with radiosensitization of tumor in non-small cell lung carcinoma (NSCLC) patients by manganese superoxide dismutase-plasmid/liposome (MnSOD-PL) gene therapy."**

The goal of this project is to demonstrate in clinical trials that overexpression of MnSOD in normal tissue

protects against irradiation and chemotherapy (chemoradiotherapy - CRT)-induced damage; demonstrate in a

clinical trial that MnSOD-PL administration to the esophagus will result in decreased esophagitis in lung

cancer patients undergoing CRT; that the optimal biological effective dose, safety of MnSOD-PL, and

prevention of esophagitis will be evaluated; and that the studies in this project should lead to an improved

quality of life for lung cancer patients requiring CRT.

# LIST OF CURRENT RESEARCH INTERESTS

1. Use of gene therapy for protection of normal tissue from irradiation damage.

2. Development of new small molecules to protect tissue from irradiation damage.

3. Effects of irradiation on bone healing.

4. Use of antioxidant diets to protect astronauts from irradiation exposure during space travel.

5. Use of stem cells in repair of irradiation damage.

**RESEARCH PLANS**

Irradiation exposure has a dramatic effect of tissues in the body. It can result in alteration of many cellular activities such as development of fibrosis or cancer, premature aging or death. Currently, there is little that can be done to protect people from irradiation. Development of new methods of treating people exposed to irradiation needs to be intensified. To effectively develop ways to prevent the effects of irradiation, we must understand the mechanism of irradiation induced damage. In the past we have demonstrated the importance of stabilizing the mitochondria in the protection of the cell from irradiation. Many of the methods for preventing tissue damage from irradiation will use modalities which will protect the mitochondria. This may involve gene therapy techniques using plasmids carrying transgenes for proteins such as manganese superoxide dismutase or catalase as well as development of new small molecules that will deliver antioxidants to the mitochondria. We will also be investigating new diets which contain high levels of antioxidants to see if these diets can lead to increased concentrations of antioxidants in cells accompanied by increased survival following irradiation. The use of stem cells may have a profound effect on the repair of irradiated tissues. We have already demonstrated that increased expression of MnSOD at the time of irradiation results in increased migration of bone marrow stem cells to the irradiated damage resulting in increased survival. We will continue to investigate how hematopoietic stem cells or tissue specific stem cells can aid in the repair of irradiation damage. The overall objective of the lab will be to better understand the effects of irradiation on tissues and the development of new modalities to prevent the irradiation damage.

**Patents:**

1. Inventors: Drs. G. Ranadive, H.S. Rosenzweig, **M. W. Epperly**, and W.D. Bloomer

 Organization: University of Pittsburgh

 Title: “**Regioselective chemical modification of monoclonal antibodies**”

 Frederick H. Colen, Esquire

 Reed, Smith, Shaw & McClay

 435 Sixth Street

 Pittsburgh, PA 15219-1996

 US Patent Application Serial No. 07/613,127, Filed 11/14/90

 US Patent #5,208,008; Issued 5/4/93

 2. Inventor: Maria Papadopoulou-Rosenzweig, **Michael W. Epperly**, William D. Bloomer.

 Title: **Acridine-Intercalator Based Hypoxia Selective Cytotoxins**.

 US Patent: US 5,294,715

 Issued: March 15, 1994.

3. Inventor: **Michael W. Epperly, Ph.D**., Joel S. Greenberger, M.D., Jianfei, Jiang, Ph.D., Valerian

 E. Kagan, Ph.D., John S. Lazo, Ph.D., and Peter R. McDonald, Ph.D.

 Title: “**Radioprotective Agents**”

 United States Patent Application No. 8,883,852

 Issued November 11, 2014

 Webb reference:6527-112733

 Pitt Reference: 01830 0002.0158PCTUS.

4. Inventor: Peter Wipf, Ph.D., Natalia A. Belikova, Ph.D., Jianfei Jiang, Ph.D., Joel S. Greenberger, M.D., Joshua G. Pierce, Ph.D., and **Michael W. Epperly, Ph.D.**

Title: **“Use of Targeted Nitroxide Agents in Preventing, Mitigating and Treating Radiation Injury”**

US Patent Number: 8,822,541

Issued September 2, 2014

Pitt Reference number: 01734

Klarquist Reference number 8123-88710-03

5. Inventors: **Michael W. Epperly**, Abhay Sudhir Gokhale; Joel S. Greenberger, Peter Wipf;

Julianne Glowacki.

 Title: **“Use of Targeted Nitroxide Agents in Bone Healing”**

 Pitt Ref. No 01966

 Application No. 13/320,999 filed April 30, 2012

 US Patent No. 8,748,369 issued Date June 10, 2014.

6. Inventors: Michael W. Epperly, Joel S. Greenberger, Xiang Gao, Song Li, and Peter Wipf

Title: **“Intraesophageal Administration of Targeted Nitroxide Agents for Protection Against Ionizing Irradiation-Induced Esophagitis”**

Pitt Ref.: 02294

 JH Ref.: 0002.0233P

 Current Status: Submitted

 Submitted: 11/12/10, filed: 1/4/2019

 Allowed: 3/26/14 US Patent #2014/0199368A1, 16/240, 595

 Issued: 7/17/14

7. Inventors: Valerian E Kagan, Jeffrey Atkinson, Detcho A. Stoyanovsky, **Michael Epperly**, and Joel Greenberger.

Title: **“Mitochondria-Targeted Specific Inhibitors of Cytochrome C Peroxidase Activity and Cardiolipin Oxidation as Protectors and Mitigators of Irradiation Injury”**

 US Patent: US9,365,597

Date Issued: 7/14/16

8. Inventors: Peter Wipf, Joel S. Greenberger, **Michael W. Epperly**, and Melissa M. Sprachman

 Title: **“ Bifunctional Compounds”**

 Pitt Ref No.: 02601

 KS Ref. No.: 8123-90010-04

 Application No.: PCT/US2012/061109

 US Patent Number: 9,200,035.

 Date Issued 12/02/2015

9. Inventors: Peter Wipf, Joel S. Greenberger, **Michael W. Epperly**, Melissa M. Sprachman, Julie P. Goff,

 Title: **Bifunctional Compounds**

 US Patent 9,546,144

 Date Issued: 1/17/17.

10. Inventors: Xiang Gao, Peter Wipf, Song Li, **Michael W. Epperly**, and Joel S. Greenberger

Title: **“Formulations and Carrier Systems Including Compound Interactive Domains”**

Pitt Ref. No.: 02645

 Attorney Ref. No.: 12-041P (Bartony & Hare)

 Patent Number 10,172,795

 Awarded: 1/8/2019

11.Inventors: Michael W. Epperly, Joel S. Greenberger, Peter Wipf, Julianne Glowacki.

 Title: Compounds for Bone Healing

 Patent Number: US 10,251,860,B5

 Awarded: 4/9/2019.

**Service**

Institutional Animal Care and Use Committee, University of Pittsburgh, (7/2015 to present).

DLAR Operations Committee, University of Pittsburgh, (9/2015 to Present).

National Organizations:

American Society for Radiation Oncology—Cancer and Radiation Biology Subcommittee (2006 to 2009).

Community Organizations:

Boy Scouts of America—Committee Member for Troop 36 (2004 to 2009).