

Curriculum Vitae

Date prepared: 4/10

1. CARMEN JOSEPH MARSIT

Assistant Professor
Division of Biology and Medicine
Department of Pathology and Laboratory Medicine
Department of Community Health

2. HOME ADDRESS

Providence, RI 02908

3. EDUCATION

2000	B.S.	Lafayette College, Easton, PA, 2000	Biochemistry (<i>Summa cum laude</i>)
2004	Ph.D.	Harvard University, Cambridge, MA, 2004	Biological Sciences in Public Health Dissertation: Somatic Alterations in Tobacco-Related Solid Tumors

4. PROFESSIONAL APPOINTMENTS

2004-2005	NIH/NIEHS Post-doctoral Fellow, Department of Genetics and Complex Disease, Harvard School of Public Health
2005-2006	Research Associate, Department of Genetics and Complex Diseases, Harvard School of Public Health
2007-present	Assistant Professor of Medical Science, Department of Pathology and Laboratory Medicine, Brown University

5. COMPLETED PUBLICATIONS

A. BOOKS/MONOGRAPHS

None

B. CHAPTERS IN BOOKS

1. **Marsit, C.J.**, LaMontagne, A.D., Kelsey, K.T. Biological Markers in Occupational and Environmental Medicine. In: Rosenstock, L., Cullen, M.R., Brodtkin, C.A., and Redlich, C.A. Textbook of Clinical Occupational and Environmental Medicine (2nd edition). Philadelphia: Elsevier, Inc. 2005:139-46.

C. REFEREED JOURNAL ARTICLES

1. Young, B.A., Meltzer, K., and **Marsit, C.**, *Scratching the Surface of Mimicry: Sound Production through Scale Abrasion in Snakes*. Hamadryad, 1999. **24**: p. 29-38.
2. Young, B.A., Meltzer, K., **Marsit, C.**, and Abishahin, G., *Cloacal popping in snakes*. Journal of Herpetology, 1999. **33**(4): p. 557-566.
3. Young, B.A., **Marsit, C.**, and Meltzer, K., *Comparative morphology of the cloacal scent gland in snakes (Serpentes: Reptilia)*. Anat Rec, 1999. **256**(2): p. 127-38.
4. **Marsit, C.J.**, Fried, B., and Sherma, J., *Carbohydrate analysis, by high performance thin layer chromatography, of Cerithidea californica (Gastropoda : Prosobranchia)*. J Liquid Chromatography Related Technologies, 2000. **23**(15): p. 2413-7.
5. **Marsit, C.J.**, Fried, B., and Sherma, J., *Neutral lipids in cercariae, encysted metacercariae, and rediae of Echinostoma caproni*. J Helminthol, 2000. **74**(4): p. 365-7.
6. **Marsit, C.J.**, Fried, B., and Sherma, J., *High-performance thin-layer chromatographic analysis of lutein and beta-carotene in Cerithidia californica (Gastropoda) infected with two species of larval trematodes*. J Parasitol, 2000. **86**(3): p. 635-6.
7. **Marsit, C.J.**, Fried, B., and Sherma, J., *Neutral lipids in cercariae, encysted metacercariae, and rediae of Zygoctyle lunata*. J Parasitol, 2000. **86**(5): p. 1162-3.
8. **Marsit, C.J.**, Hasegawa, M., Hirao, T., Kim, D.H., Aldape, K., Hinds, P.W., Wiencke, J.K., Nelson, H.H., and Kelsey, K.T., *Loss of heterozygosity of chromosome 3p21 is associated with mutant TP53 and better patient survival in non-small-cell lung cancer*. Cancer Res, 2004. **64**(23): p. 8702-7.
9. **Marsit, C.J.**, Liu, M., Nelson, H.H., Posner, M., Suzuki, M., and Kelsey, K.T., *Inactivation of the Fanconi anemia/BRCA pathway in lung and oral cancers: implications for treatment and survival*. Oncogene, 2004. **23**(4): p. 1000-4.
10. **Marsit, C.J.**, Wiencke, J.K., Liu, M., and Kelsey, K.T., *The race associated allele of Semaphorin 3B (SEMA3B) T415I and its role in lung cancer in African-Americans and Latino-Americans*. Carcinogenesis, 2005. **26**(8): p. 1446-9.
11. **Marsit, C.J.**, Karagas, M.R., Andrew, A., Liu, M., Danaee, H., Schned, A.R., Nelson, H.H., and Kelsey, K.T., *Epigenetic inactivation of SFRP genes and TP53 alteration act jointly as markers of invasive bladder cancer*. Cancer Res, 2005. **65**(16): p. 7081-5.
12. **Marsit, C.J.**, Zheng, S., Aldape, K., Hinds, P.W., Nelson, H.H., Wiencke, J.K., and Kelsey, K.T., *PTEN expression in non-small-cell lung cancer: evaluating its relation to tumor characteristics, allelic loss, and epigenetic alteration*. Hum Pathol, 2005. **36**(7): p. 768-76.

13. **Marsit, C.J.**, Kim, D.H., Liu, M., Hinds, P.W., Wiencke, J.K., Nelson, H.H., and Kelsey, K.T., *Hypermethylation of RASSF1A and BLU tumor suppressor genes in non-small cell lung cancer: implications for tobacco smoking during adolescence*. *Int J Cancer*, 2005. **114**(2): p. 219-23.
14. Hirao, S., Hirao, T., **Marsit, C.J.**, Hirao, Y., Schned, A., Devi-Ashok, T., Nelson, H.H., Andrew, A., Karagas, M.R., and Kelsey, K.T., *Loss of heterozygosity on chromosome 9q and p53 alterations in human bladder cancer*. *Cancer*, 2005. **104**(9): p. 1918-23.
15. **Marsit, C.J.**, Okpukpara, C., Danaee, H., and Kelsey, K.T., *Epigenetic silencing of the PRSS3 putative tumor suppressor gene in non-small cell lung cancer*. *Mol Carcinog*, 2005. **44**(2): p. 146-50.
16. Nelson, H.H., Wilkojmen, M., **Marsit, C.J.**, and Kelsey, K.T., *TP53 mutation, allelism and survival in non-small cell lung cancer*. *Carcinogenesis*, 2005. **26**(10): p. 1770-3.
17. **Marsit, C.J.**, Wiencke, J.K., Nelson, H.H., Kim, D.H., Hinds, P.W., Aldape, K., and Kelsey, K.T., *Alterations of 9p in squamous cell carcinoma and adenocarcinoma of the lung: association with smoking, TP53, and survival*. *Cancer Genet Cytogenet*, 2005. **162**(2): p. 115-21.
18. **Marsit, C.J.**, Karagas, M.R., Danaee, H., Liu, M., Andrew, A., Schned, A., Nelson, H.H., and Kelsey, K.T., *Carcinogen exposure and gene promoter hypermethylation in bladder cancer*. *Carcinogenesis*, 2006. **27**(1): p. 112-6.
19. Peters, E.S., McClean, M.D., **Marsit, C.J.**, Lockett, B., and Kelsey, K.T., *Glutathione S-transferase polymorphisms and the synergy of alcohol and tobacco in oral, pharyngeal, and laryngeal carcinoma*. *Cancer Epidemiol Biomarkers Prev*, 2006. **15**(11): p. 2196-202.
20. **Marsit, C.J.**, Houseman, E.A., Christensen, B.C., Eddy, K., Bueno, R., Sugarbaker, D.J., Nelson, H.H., Karagas, M.R., and Kelsey, K.T., *Examination of a CpG island methylator phenotype and implications of methylation profiles in solid tumors*. *Cancer Res*, 2006. **66**(21): p. 10621-9.
21. **Marsit, C.J.**, Eddy, K., and Kelsey, K.T., *MicroRNA responses to cellular stress*. *Cancer Res*, 2006. **66**(22): p. 10843-8.
22. **Marsit, C.J.**, McClean, M.D., Furniss, C.S., and Kelsey, K.T., *Epigenetic inactivation of the SFRP genes is associated with drinking, smoking and HPV in head and neck squamous cell carcinoma*. *Int J Cancer*, 2006. **119**(8): p. 1761-6.
23. **Marsit, C.J.**, Karagas, M.R., Schned, A., and Kelsey, K.T., *Carcinogen exposure and epigenetic silencing in bladder cancer*. *Ann N Y Acad Sci*, 2006. **1076**: p. 810-21.
24. Christensen, B.C., Marsit, C.J., Welsh, M.M., Nelson, H.H., & Kelsey, K.T. *Genome-wide alterations in CpG island methylation induced by arsenite*. *Eur J Oncol*, 2007. **12**(1): p. 1-5.

25. **Marsit, C.J.**, Houseman, E.A., Schned, A.R., Karagas, M.R., and Kelsey, K.T. *Promoter hypermethylation is associated with current smoking, age, gender and survival in bladder cancer*. *Carcinogenesis*, 2007. **28**(8): p. 1745-51.
26. Schned, A., Andrew, A., **Marsit, C.**, Morris, S., Zens, S., Kelsey, K., and Karagas, M., *The effect of chronic arsenic exposure from drinking water on the pathologic characteristics of urothelial tumors in a non-selected patient population with bladder cancer*. *Virchows Archiv*, 2007. **451**(2): p. 124-124.
27. Houseman, E.A., **Marsit, C.**, Karagas, M., and Ryan, L.M., *Penalized item response theory models: application to epigenetic alterations in bladder cancer*. *Biometrics*, 2007. **63**(4): p. 1269-77.
28. Hsiung, D.T., **Marsit, C.J.**, Houseman, E.A., Eddy, K., Furniss, C.S., McClean, M.D., and Kelsey, K.T., *Global DNA methylation level in whole blood as a biomarker in head and neck squamous cell carcinoma*. *Cancer Epidemiol Biomarkers Prev*, 2007. **16**(1): p. 108-14.
29. Pyeon, D., Newton, M.A., Lambert, P.F., den Boon, J.A., Sengupta, S., **Marsit, C.J.**, Woodworth, C.D., Connor, J.P., Haugen, T.H., Smith, E.M., Kelsey, K.T., Turek, L.P., and Ahlquist, P., *Fundamental differences in cell cycle deregulation in human papillomavirus-positive and human papillomavirus-negative head/neck and cervical cancers*. *Cancer Res*, 2007. **67**(10): p. 4605-19.
30. Schned, A.R., Andrew, A.S., **Marsit, C.J.**, Zens, M.S., Kelsey, K.T., and Karagas, M.R., *Survival following the diagnosis of noninvasive bladder cancer: WHO/International Society of Urological Pathology versus WHO classification systems*. *J Urol*, 2007. **178**(4 Pt 1): p. 1196-200; discussion 1200.
31. Schned, A.R., Andrew, A.S., **Marsit, C.J.**, Kelsey, K.T., Zens, M.S., and Karagas, M.R., *Histological classification and stage of newly diagnosed bladder cancer in a population-based study from the Northeastern United States*. *Scand J Urol Nephrol*, 2008. **42**(3): p. 237-42.
32. Furniss, C.S., **Marsit, C.J.**, Houseman, E.A., Eddy, K., and Kelsey, K.T., *Line region hypomethylation is associated with lifestyle and differs by human papillomavirus status in head and neck squamous cell carcinomas*. *Cancer Epidemiol Biomarkers Prev*, 2008. **17**(4): p. 966-71.
33. **Marsit, C.J.**, Black, C.C., Posner, M.R., and Kelsey, K.T., *A genotype-phenotype examination of cyclin D1 on risk and outcome of squamous cell carcinoma of the head and neck*. *Clin Cancer Res*, 2008. **14**(8): p. 2371-7.
34. Christensen, B.C., Godleski, J.J., **Marsit, C.J.**, Houseman, E.A., Lopez-Fagundo, C.Y., Longacker, J.L., Bueno, R., Sugarbaker, D.J., Nelson, H.H., and Kelsey, K.T., *Asbestos exposure predicts cell cycle control gene promoter methylation in pleural mesothelioma*. *Carcinogenesis*, 2008. **29**(8): p. 1555-9.

35. **Marsit, C.J.**, Posner, M.R., McClean, M.D., and Kelsey, K.T., *Hypermethylation of E-cadherin is an independent predictor of improved survival in head and neck squamous cell carcinoma*. *Cancer*, 2008. **113**(7): p. 1566-71.
36. Christensen, B.C., Godleski, J.J., Roelofs, C.R., Longacker, J.L., Bueno, R., Sugarbaker, D.J., **Marsit, C.J.**, Nelson, H.H., and Kelsey, K.T., *Asbestos burden predicts survival in pleural mesothelioma*. *Environ Health Perspect*, 2008. **116**(6): p. 723-6.
37. Houseman, E.A., Christensen, B.C., Yeh, R.-F., **Marsit, C.J.**, Karagas, M.R., Wensch, M.R., Nelson, H.H., Wiemels, J., Zheng, S., Wiencke, J.K., and Kelsey, K.T., *Model-based Clustering of Methylation Array Data: A Recursive-partitioning Algorithm for High-Dimensional Data Arising as a Mixture of Beta Distributions*. *BMC Bioinformatics*, 2008. **9**: p. 365-80.
38. Peters, E.S., Lockett, B.G., Applebaum, K.M., **Marsit, C.J.**, McClean, M.D., and Kelsey, K.T., *Dairy products, leanness, and head and neck squamous cell carcinoma*. *Head Neck*, 2008. **30**(9): p. 1193-205.
39. Wiemels, J.L., Hofmann, J., Kang, M., Selzer, R., Green, R., Zhou, M., Zhong, S., Zhang, L., Smith, M.T., **Marsit, C.**, Loh, M., Buffler, P., and Yeh, R-F. *Chromosome 12p Deletions in TEL-AML1 Childhood Acute Lymphoblastic Leukemia are Associated with Retrotransposon Elements and Occur Postnatally*. *Cancer Res*, 2008. **68**(23):9935-44.
40. Christensen, B.C., Houseman, E.A., Yeh, R.F., Godleski, J.G., Bueno, R., Sugarbaker, D.J., Karagas, M.R., Wensch, M.R., Wiemels, J.L., Zheng, S., **Marsit, C.J.**, Nelson, H.H., Wiencke, J.K., and Kelsey, K.T. *Epigenetic Profiles Distinguish Pleural Mesothelioma from Normal Pleura and Predict Lung Asbestos Burden and Clinical Outcome*. *Cancer Res* 2009. **69**(1):227-34.
41. **Marsit, C.J.**, Christensen, B.C., Houseman, E.A., Karagas, M.R., Wensch, M.R., Yeh, R-F., Nelson, H.H., Wiemels, J.L., Zheng, S., Posner, M.R., McClean, M.D., Wiencke, J.K., and Kelsey, K.T. *Epigenetic Profiling Reveals Etiologically Distinct Patterns of DNA Methylation in Head and Neck Squamous Cell Carcinoma*. *Carcinogenesis* 2009; **30**(3):416-22.
42. Meyer, M.S., Applebaum, K.M., Furniss, C.S., Peters, E.S., Lockett, B.G., Smith, J. F., Bryan, J., McClean, M.D., **Marsit, C.**, and Kelsey, K.T. *Human Papillomavirus Type 16 Modifies the Association between Fruit Consumption and Head and Neck Squamous Cell Carcinoma*. *Cancer Epidemiol Biomarkers Prev*, 2008. **17**(12):3419-26.
43. **Marsit, C.J.**, Houseman, E.A., Nelson, H.H., and Kelsey, K.T. *Genetic and Epigenetic Tumor Suppressor Gene Silencing are Distinct Molecular Phenotypes Driven by Growth Promoting Mutations in NonSmall Cell Lung Cancer*. *J Cancer Epidemiology*, 2009 (epub ahead of print).
44. Avissar, M., Christensen, B.C., Kelsey, K.T., and **Marsit, C.J.** *A MicroRNA Expression Ratio is Predictive of Head and Neck Squamous Cell Carcinoma*. *Clin Cancer Res*, 2009. **15**(8):2850-5.

45. Applebaum, K.M., McClean, M.D., Nelson, H.H., **Marsit, C.J.**, Christensen, B.C., and Kelsey, K.T. *Smoking Modifies the Relationship between XRCC1 Haplotypes and HPV16-negative Head and Neck Squamous Cell Carcinoma*. *Int J Cancer*, 2009. 124(11):2690-6.
46. Andrew, A.S., Gui, J., Sanderson, A.C., Mason, R.A., Morlock, E.V., Schned, A.R., Kelsey, K.T., **Marsit, C.J.**, Moore, J.H., and Karagas, M.R. *Bladder Cancer SNP Panel Predicts Susceptibility and Survival*. *Human Genetics*, 2009. 125(5-6):527-39.
47. Chen, A.A., **Marsit, C.J.**, Christensen, B.C., Houseman, E.A., McClean, M.D., Smith, J.F., Bryan, J.T., Posner, M.R., Nelson, H.H., and Kelsey, K.T. *Genetic Variation in the Vitamin C Transporter, SLC23A2, Modifies the Risk of HPV-16 Associated Head and Neck Cancer*. *Carcinogenesis*, 2009. 30(6):977-81.
48. Christensen, B.C., Moyer, B.J., Avissar, M., Ouellet, L.G., Plaza, S., McClean, M.D., **Marsit, C.J.**, and Kelsey, K.T. *A let-7 microRNA binding site polymorphism in the KRAS 3' UTR is associated with reduced survival in oral cancers*. *Carcinogenesis*, 2009. 30(6):1003-7.
49. Baris, D., Karagas, M.R., Verrill, C., Johnson, A., Andrew, A.S., **Marsit, C.J.**, Schwenn, M., Colt, J.S., Cherala, S., Samanic, C., Waddell, R., Cantor, K.P., Schned, A.R., Rothman, N., Lubin, J., Fraumeni Jr., J.F., Hoover, R.N., Kelsey, K.T., and Silverman, D.T. *A Case-Control Study of Smoking and Bladder Cancer Risk: Emergent Patterns Over Time*. *JNCI*, 2009, 101(22): 1553-61.
50. Christensen, B.C., **Marsit, C.J.**, Houseman, E.A., Godleski, J.G., Longacker, J.L., Zheng, S., Yeh, R-F., Wensch, M.R., Wiemels, J.L., Karagas, M.R., Bueno, R., Sugarbaker, D.J., Nelson, H.H., Wiencke, J.K., and Kelsey, K.T. *Differentiation of lung adenocarcinoma, pleural mesothelioma, and nonmalignant pulmonary tissues using DNA methylation profiles*. *Cancer Research*, 2009. 69(15): 6315-21.
51. Maccani, M., and **Marsit, C.J.** *Epigenetics and Imprinting in the Placenta*. *Am J Reprod Immunol*, 2009. 62: 78-89.
52. Andrew, A.S., Mason, R.A., Kelsey, K.T., Schned, A.R., **Marsit, C.J.**, Nelson, H.H., and Karagas, M.R. *DNA Repair Genotype Interacts with Arsenic Exposure to Increase Bladder Cancer Risk*. *Toxicol Lett*, 2009. 187(1):10-4.
53. Mason, R.A., Morlock, E.V., Karagas, M.R., Kelsey, K.T., **Marsit, C.J.**, Schned, A.R., and Andrew, A.S. *EGFR Pathway Polymorphisms and Bladder Cancer Susceptibility and Prognosis*. *Carcinogenesis*, 2009. 30(7): 1155-60.
54. Houseman, E.A., Christensen, B.C., Karagas, M.R., Wensch, M.R., Nelson, H.H., Wiemels, J.L., Zheng, S., Wiencke, J.K., Kelsey, K.T., and **Marsit, C.J.** *Copy number variation has little impact on bead-array-based measure of DNA methylation*. *Bioinformatics*, 2009. 25(16): 1999-2005.

55. Christensen, B.C., Houseman, E.A., **Marsit, C.J.**, Zheng, S., Wrensch, M.R., Wiemels, J.L., Nelson, H.H., Karagas, M.R., Padbury, J.F., Bueno, R., Sugarbaker, D.J., Yeh, R.F., Wiencke, J.K., Kelsey, K.T. *Aging and environmental exposures alter tissue-specific DNA methylation dependent upon CpG island context.* PLoS Genetics, 2009. 5, e1000602.
56. Liang, C., McClean, M.D., **Marsit, C.J.**, Christensen, B.C., Peters, E., Nelson, H.H., and Kelsey, K.T. *A population-based case-control study of marijuana use and head and neck squamous cell carcinoma.* Cancer Prev Res, 2009. 2(8):759-68.
57. Dietrich, K., Schned, A., Fortuny, J., Heaney, J., **Marsit, C.**, Kelsey, K.T., & Karagas, M.R. *Glucocorticoid therapy and risk of bladder cancer.* Br J Cancer 2009, 101(8):1316-20.
58. Nelson, H.H., Christensen, B.C., Plaza, S.L., Wiencke, J.K., **Marsit, C.J.**, & Kelsey, K.T. *KRAS mutation, KRAS-LCS6 polymorphism, and non-small cell lung cancer.* Lung Cancer 2009 (*Epub ahead of print*).
59. Kwong, R.C., Karagas, M.R., Kelsey, K.T., Mason, R.A., Tanyos, S.A., Schned, A.R., **Marsit, C.J.**, & Andrew, A.S. *Arsenic exposure predicts bladder cancer survival in a US population.* World J Urol 2009 (*Epub ahead of print*).
60. Avissar, M., McClean, M.D., Kelsey, K.T., & **Marsit, C.J.** *MicroRNA Expression in Head and Neck Cancer Associates with Alcohol Consumption and Survival.* Carcinogenesis 2009, 30(12):2059-63.
61. Wilhelm, C.S., Kelsey, K.T., Butler, R., Plaza, S., Gagne, L., Zens, M.S., Andrew, A.S., Morris, S., Nelson, H.H., Schned, A.R., Karagas, M.R., & **Marsit, C.J.** *Implications of LINE1 Methylation for Bladder Cancer Risk in Women.* Clin Cancer Res 2010, 16(5):1682-9.
62. Gee, G.V., Koestler, D.C., Christensen, B.C., Sugarbaker, D.J., Ugolini, D., Ivaldi, G.P., Resnick, M.B., Houseman, E.A., Kelsey, K.T., & **Marsit, C.J.** *Downregulated MicroRNAs in the Differential Diagnosis of Malignant Pleural Mesothelioma.* Int J Cancer 2010 (*Epub ahead of print*).
63. Poage, G.M., Christensen, B.C., Houseman, E.A., McClean, M.D., Wiencke, J.K., Posner, M.R., Clark, J.R., Nelson, H.H., **Marsit, C.J.**, & Kelsey, K.T. *Genetic and epigenetic somatic alterations in head and neck squamous cell carcinomas are globally coordinated but not locally targeted.* PLoS One 2010, 5(3): e9651.
64. Christensen, B.C., Houseman, E.A., Poage, G., Godleski, J.J., Bueno, R., Sugarbaker, D.J., Wiencke, J.K., Nelson, H.H., **Marsit, C.J.**, & Kelsey, K.T. *Integrated profiling of DNA methylation and copy number reveals global, not local correlation between epigenetic and genetic alterations in pleural mesothelioma.* Cancer Res 2010 (*in press*).
65. Avissar, M., Veiga, K., Uhl, K., Moen, E., Maccani, M., Gagne, L., & **Marsit, C.J.** *Bisphenol A Exposure Leads to MicroRNA Alterations in Placental Cell Lines.* Reprod Toxicol 2010 (*in press*).

D. NON-REFEREED JOURNAL ARTICLES

None

E. BOOK REVIEWS

None

F. ABSTRACTS (poster presentations only)

1. **Marsit, C.J.**, Zheng, S., Aldape, K., Peters, E.S., Wiencke, J.K., and Kelsey, K.T. *Loss of protein expression and promoter CpG island hypermethylation of PTEN in oral and non-small cell lung cancers.* Proc Am Assoc Cancer Res 44:443, 2003
2. Wiencke, J.K., Zheng, S., Smith, M., Zhang, L., Ma, X., Wiemels, J., **Marsit, C.**, Kelsey, K., and Buffler, P. *Methylation of a transcribed PTEN pseudogene (ψ PTEN) in pediatric leukemia is associated with subtypes of common ALL containing t(12;21) translocation.* Proc Am Assoc Cancer Res 44:822, 2003.
3. **Marsit, C.J.**, Hasegawa, M., Liu, M., Kim, D-H., Hirao, T., Nelson, H.H., Wiencke, J.K., and Kelsey, K.T. *Teenage smoking is associated with alterations of the chromosome 3p21.3 in non-small cell lung cancer.* Proc Am Assoc Cancer Res 45, 2003.
4. **Marsit, C.J.**, Karagas, M., Danaee, H., Liu, M., Andrew, A., Schned, A., and Kelsey, K.T. *Tobacco smoking and arsenic exposure are associated with tumor suppressor gene hypermethylation in bladder cancer.* Proc Am Assoc Cancer Res 46, 2005.
5. **Marsit, C.J.**, Houseman, E.A., Christensen, B., Heffernan, K., Bueno, R., Sugarbaker, D., Karagas, M.R., and Kelsey, K.T. *A promoter hypermethylation profile of solid tumors: implications for a methylator phenotype and diagnostic utility.* Proc Am Assoc Cancer Res 47, 2006.
6. Christensen, B.C., **Marsit, C.J.**, Fletcher, J.A., Bueno, R., Sugarbaker, D.J., and Kelsey, K.T. *SFRP5 silencing predicts poor survival in human mesothelioma.* Proc Am Assoc Cancer Res 47, 2006.
7. Christensen, B.C., **Marsit, C.J.**, Nelson, H.H., Godleski, J.J., Bueno, R., Sugarbaker, D.S., and Kelsey, K.T. *Asbestos Burden, Epigenetic Silencing, and Survival in Malignant Pleural Mesothelioma.* 8th International Conference of the International Mesothelioma Interest Group (IMIG), 2006.
8. Schned A.R., Andrew A.S., **Marsit C.J.**, Kelsey K.T., Zens M.S., and Karagas M.R. *Survival following the diagnosis of non-invasive bladder cancer: WHO/ISUP vs. WHO classification systems.* Mod Pathol 2007; 20(suppl 2):174A.
9. **Marsit, C.J.**, Houseman, E.A, Kraunz, K.S., McClean, M.D., and Kelsey, K.T. *DNA hypermethylation and homozygous deletion are distinct molecular phenotypes in head and neck squamous cell carcinoma.* Proc Am Assoc Cancer Res 48, 2007.

10. Christensen, B.C., Longacker, J.L., **Marsit, C.J.**, Houseman, E.A., Nelson, H.H., Godleski, J.J., Bueno, R., Sugarbaker, D.J., and Kelsey, K.T. *Asbestos burden, epigenetic silencing, and survival in malignant pleural mesothelioma*. Proc Am Assoc Cancer Res 48, 2007.
11. Chen, A.A., Houseman, E.A., Christensen, B.C., **Marsit, C.J.**, Posner, M.R., and Kelsey, K.T. *Gene environment interactions and susceptibility to HPV16-associated head and neck squamous cell carcinoma*. Proc Am Assoc Cancer Res 48, 2007.
12. **Marsit, C.J.**, Avissar, M., Christensen, B.C., and Kelsey, K.T. *Examination of miRNA Profiles in Head and Neck Squamous Cell Carcinomas*. AACR Special Conference: The Role of Non-Coding RNAs in Cancer, 2007.
13. Christensen, B.C., Houseman, E.A., Yeh, R-F., Godleski, J.G., Bueno, R., Sugarbaker, D.J., Karagas, M.R., Wensch, M.R., Wiemels, J.L., Zheng, S., **Marsit, C.J.**, Nelson, H.H., Wiencke, J.K., and Kelsey, K.T. *Methylation profiling of peripheral blood and tumor DNA in malignant pleural mesothelioma patients*. Proc Am Assoc Cancer Res 49, 2008.
14. Avissar, M., Christensen, B.C., Kelsey, K.T., and **Marsit, C.J.** *A role for miRNAs in the etiology of head and neck squamous cell carcinoma*. Proc Am Assoc Cancer Res 49, 2008.
15. Zhong, S., Xiao, Y., Yeh, R-F., Tran, A., Kang, M., Hofmann, J., Zhou, M., Diakos, C., Christensen, B.C., Houseman, E.A., Karagas, M.R., Wensch, M.R., Zheng, S., **Marsit, C.J.**, Nelson, H.H., Kelsey, K.T., Wiencke, J.K., and Wiemels, J.L. *Genome-wide scanning of epigenomic alterations in childhood leukemia*. Proc Am Assoc Cancer Res, 49, 2008.
16. Wiencke, J.K., Houseman, E.A., Zheng, S., Kogan, D.H., McBride, S., Christensen, B.C., Yeh, R.F., Karagas, M.R., Wensch, M.R., Wiemels, J.L., **Marsit, C.J.**, Nelson, H.H., Kelsey, K.T., and Berger, M.S. *Methylation profiling with the Illumina cancer panel distinguishes glioma subtypes*. Proc Am Assoc Cancer Res, 49, 2008.
17. Xiao, Y., Wiemels, J.L., Wiencke, J.K., Zheng, S., Wensch, M.R., Christensen, B.C., **Marsit, C.J.**, Kelsey, K.T., Houseman, E.A., Nelson, H.H., Karagas, M.R., and Yeh, R.F. *Analysis of high-throughput DNA methylation bead arrays utilizing Bayesian genotyping algorithms*. Int Conf Biomed Engineering Informatics, 2008.
18. Christensen, B.C., Houseman, E.A., Yeh, R.F., Godleski, J.G., Bueno, R., Sugarbaker, D.J., Karagas, M.R., Wensch, M.R., Wiemels, J.L., Zheng, S., **Marsit, C.J.**, Nelson, H.H., Wiencke, J.K., and Kelsey, K.T. *Epigenetic profiles as biomarkers of disease, asbestos burden, and patient outcome in pleural mesothelioma*. Am Assoc Cancer Res; Cancer Epigenetics, 2008.
19. **Marsit, C.J.***, Christensen, B.C.*, Houseman, E.A., Karagas, M.R., Wensch, M.R., Yeh, R.F., Nelson, H.H., Wiemels, J.L., Zheng, S., Posner, M.R., McClean M.D., Wiencke, J.K., and Kelsey, K.T. *Profiles of DNA methylation in head and neck squamous cell carcinoma: etiology and clinical significance*. Am Assoc Cancer Res; Cancer Epigenetics, 2008. *Contributed equally

20. Maccani, M., Avissar, M., Veiga, K., Schussel, S., Gagne, L., Padbury, J.F., and **Marsit, C.J.** *Role of Epigenetics in Environmental Health, Development, and Disease*. Rhode Island Research Alliance Symposium, 2008.
21. Vasconcelos, G., Christensen, B.C., Zhong, S., Zhou, M., Houseman, E.A., **Marsit, C.J.**, Karagas, M.R., Wensch, M.R., Yeh, R.F., Nelson, H.H., Zheng, S., Kelsey, K.T., Wiencke, J.K., Buffler, P., Pombo-de-Oliveira, M., and Wiemels, J.L. *Epigenetic profiling of childhood leukemia reveals distinct patterns that associate with cytogenetic subtypes and history of infection to Parvovirus B19*. Am Soc Hematology, 2008.
22. Avissar, M., McClean, M.D., Kelsey, K.T., and **Marsit, C.J.** *MicroRNA Alterations are Associated with Exposures and Clinical Features in Head and Neck Squamous Cell Carcinoma*. Proc Am Assoc Cancer Res, 50, 2009.
23. Poage, G.M., Christensen, B.C., **Marsit, C.J.**, Houseman, E.A., Karagas, M.R., Wensch, M.R., Yeh, R.F., Nelson, H.H., Wiemels, J.L., Zheng, S., Posner, M.R., McClean, M.D., Wiencke, J.K., and Kelsey, K.T. *DNA methylation profiles are associated with specific genome-wide copy number alteration profiles in head and neck squamous cell carcinoma*. Proc Am Assoc Cancer Res, 50, 2009.
24. Christensen, B.C., Houseman, E.A., **Marsit, C.J.**, Zheng, S., Wensch, M.R., Wiemels, J.L., Nelson, H.H., Karagas, M.R., Padbury, J.F., Bueno, R., Sugarbaker, D.J., Yeh, R.F., Wiencke, J.K., and Kelsey, K.T. *Environmental Exposures and Aging are Associated with Tissue-specific Alterations in DNA Methylation at Cancer-related CpG Loci in Normal Tissues*. Proc Am Assoc Cancer Res, 50, 2009.
25. **Marsit, C.J.**, Christensen, B.C., Houseman, E.A., Nelson, H.H., Wensch, M.R., Wiemels, J.L., Zheng, S., Wiencke, J.K., Schned, A.R., Karagas, M.R., Kelsey, K.T. *CpG Methylation Arrays Define Novel Genes Associated with Invasive Bladder Cancer*. Proc Am Assoc Cancer Res, 50, 2009.
26. Christensen, B.C., Kelsey, K.T., Houseman, E.A., **Marsit, C.J.**, Zheng, S., Wensch, M.R., Wiemels, J.L., Nelson, H.H., Karagas, M.R., Kushi, L. H., Kwan, M.L., & Wiencke, J.K. *Breast carcinoma DNA methylation profiles are associated with tumor size, alcohol intake, and folate intake*. Am Assoc Cancer Res; Cancer Epigenetics, 2010.
27. Banister, C.E., Koestler, D., Maccani, M., Houseman, E.A., Padbury, J.F., and **Marsit, C.J.** *Global Methylation Patterning of Placenta from Intrauterine Growth Restricted (IUGR) and Small for Gestational Age (SGA) Pregnancies*. Society for Gynecological Investigation Annual Meeting, 2010.
28. Maccani, M.A., Koestler, D., Banister, C.E., Padbury, J.F., Houseman, E.A., and **Marsit, C.J.** *MicroRNA Expression Profiles are Associated with Growth Restriction in the Human Placenta*. Society for Gynecological Investigation Annual Meeting, 2010.

29. Poage, G.M., Christensen, B.C., Houseman, E.A., McClean, M.D., Wiencke, J.K., Posner, M.R., Clark, J.R., Nelson, H.H., **Marsit, C.J.**, & Kelsey, K.T. *Concurrent gene promoter hypermethylation and allele loss occurs infrequently in head and neck squamous cell carcinomas.* Proc Am Assoc Cancer Res, 51, 2010.
30. Gee, G.V., Koestler, D.C., Christensen, B.C., Sugarbaker, D.J., Ugolini, D., Ivaldi, G.P., Resnick, M.B., Houseman, E.A., Kelsey, K.T., & **Marsit, C.J.** *MicroRNAs regulation wnt Signalling are downregulated in malignant pleural mesothelioma.* Proc Am Assoc Cancer Res, 51, 2010.
31. Liang, C., **Marsit, C.**, McClean, M., Nelson, H., Kelsey, K.T. *A Post-Genome-wide Association Study: Gene and Environment Interaction in the Risk of Head and Neck Carcinoma.* Proc Am Assoc Cancer Res, 51, 2010. (minisymposium)
32. Christensen, B.C., Kelsey, K.T., Houseman, E.A., **Marsit, C.J.**, Zheng, S., Wrensch, M.R., Wiemels, J.L., Nelson, H.H., Karagas, M.R., Kushi, L.H., Kwan, M., Wiencke, J.K. *Breast Carcinoma DNA Methylation Profiles are Associated with Tumor Size, Alcohol Intake, and Folate Intake.* Proc Am Assoc Cancer Res, 51, 2010. (minisymposium).
33. Wilhelm, C.S., Kelsey, K.T., Butler, R., Plaza, S., Gagne, L., Zens, M.S., Andrew, A.S., Morris, S., Nelson, H.H., Schned, A.R., Karagas, M.R., and **Marsit, C.J.** *Implications of LINE1 Methylation for Bladder Cancer Risk in Women.* Proc Am Assoc Cancer Res, 51, 2010.
34. Menard, H.L., Yuan, J-M., **Marsit, C.J.**, Wilhelm, C.S., Nelson, H.H., and Kelsey, K.T. *Body Mass Index Interacts with DNA Global Methylation Levels to Predict Bladder Cancer in the Shanghai Bladder Cancer Study.* Proc Am Assoc Cancer Res, 51, 2010

G. INVITED LECTURES:

2005 University of California – San Francisco Cancer Center, San Francisco, CA, USA *SFRP Gene Methylation and p53 Alteration in Bladder Cancer.*

2005 Dartmouth Medical School, Lebanon, New Hampshire, USA *A Case-only Approach to Understanding the Mechanisms Involved in Bladder Cancer.*

2005 Framing the Future in Light of the Past: Living in a Chemical World, Conference of the Collegium Ramazinni. Bologna, Italy *Carcinogen exposure and epigenetic silencing in bladder cancer.*

2006 Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Spain *Epigenetic Alterations in Exposure-related Disease.*

2006 Pathology Research and Teaching Rounds, Department of Pathology and Laboratory Medicine, Brown University, Providence, RI *Epigenetic Alterations in Environmental Pathology.*

2007 Pathobiology Seminar Series, Program in Pathobiology, Brown University, Providence, RI *Epigenetics in Cancer Biology and Toxicology*

2007 Pediatrics Research Colloquium, Women and Infants Hospital, Providence, RI *Epigenetics in Cancer Biology and Toxicology*

2007 Pathology Grand Rounds, Rhode Island Hospital, Providence, RI *Epigenetics in Cancer Biology and Toxicology*

2007 COBRE Center for Cancer Research Development Seminar, Rhode Island Hospital, Providence, RI *Epigenetics in Cancer Biology and Toxicology*

2007 AACR Special Conference: Advances and Challenges in Aerodigestive Epithelial Cancer: Genetics, Diagnosis, and Therapy. Charleston, SC. Does DNA hypermethylation and genetic deletion occur as distinct pathways in aerodigestive malignancy?

2007 Lafayette Leadership Institute, Lafayette College, Easton, PA *Survival Skills for Effective Leaders*

2008 Pediatric Research Colloquium, Women and Infants Hospital, Providence, RI *Epigenetics, Exposures, and Fetal Programming*

2008 Environmental Health Seminar, Boston University School of Public Health, Boston, MA *Epigenetics in Environmental Health*

2008 Nutmeg Conference, Marine Biological Laboratories, Woods Hole, MA. *Epigenetics in Toxicology and Cancer Biology*

2008 Obstetric Resident Core Curriculum Presentation, Women and Infants Hospital, Providence, RI *Epigenetics, Exposures, and Fetal Programming*

2009 Clinical Epidemiology Seminar, Dartmouth Medical School, Lebanon, NH *Clinical and Etiological Significance of Epigenetic Profiles in Bladder Cancer.*

2009 Cancer Center Seminar Series, Masonic Cancer Center, University of Minnesota, Minneapolis, MN *Clinical and Etiological Significance of Epigenetic Profiles in Bladder Cancer.*

2009 Flight Attendants Medical Research Institute 8th Annual Symposium, Boston, MA *Clinical and Etiological Significance of Epigenetic Profiles in Bladder Cancer.*

2009 American Society of Reproductive Immunology Annual Conference, Orlando, FL *Epigenetics and Imprinting in the Placenta*

2009 Mesothelioma Applied Research Foundation International Symposium on Malignant Mesothelioma, Washington, DC. *MicroRNA Alterations in Malignant Pleural Mesothelioma as Biomarkers of Disease*

2009 Office of Women's Health, NIH, The Warren Alpert Medical School of Brown University, and Women and Infants Hospital, Moving into the Future: New Dimensions and Strategies for Women's Health Research for the NIH, Providence, RI. *Beyond the Barker Hypothesis: Lifespan Implications of the Intrauterine Environment*

2009 Mt. Sinai School of Medicine, New York, NY *Placenta Epigenetics – Clinical and Environmental Implications*

2009 Rhode Island Research Alliance 2nd Annual Meeting, Providence, RI *Epigenetic Alterations as Markers of the Intrauterine Environment*

2009 Superfund Research Program Annual Meeting, New York, NY. *Epigenetics and Toxicology* Session Co-Chair.

2009 Grand Rounds, Rhode Island Hospital, Department of Oncology, Providence, RI. *Clinical Importance of Epigenetic Profiles in Bladder Cancer*

2009 Program in Epidemiology Seminar Series, Department of Community Health, Brown University, Providence, RI. *Clinical Importance of Epigenetic Profiles in Bladder Cancer*

H. PAPERS READ

1. **Marsit, C.J.**, Bueno, R., and Kelsey, K.T. *Promoter hypermethylation defines clonal fields in lung cancer patients*. AACR Special Conference on Chromatin, Chromosomes, and Cancer Epigenetics, Kona, Hawaii, 2004.
2. **Marsit, C.J.**, Houseman, E.A., Kraunz, K.S., McClean, M.D., and Kelsey, K.T. *Does DNA hypermethylation and genetic deletion occur as distinct pathways in aerodigestive malignancy?* AACR Special Conference Advances and Challenges in Aerodigestive Epithelial Cancer: Genetics, Diagnosis, and Therapy, Charleston, South Carolina, 2007.
3. Christensen, B.C., Avissar, M., Nelson, H.H., Bueno, R., Sugarbaker, D.J., Kelsey, K.T., and **Marsit, C.J.** *MicroRNA Alterations in Malignant Pleural Mesothelioma as Biomarkers of Disease*. 9th International Conference of the International Mesothelioma Interest Group (IMIG), Amsterdam, the Netherlands, 2008.
4. **Marsit, C.J.**, Houseman, E.A., Christensen, B.C., Gagne, L., Wensch, M.R., Nelson, H.H., Wiemels, J., Zheng, S., Wiencke, J.K., Andrew, A.S., Schned, A.R., Karagas, M.R., & Kelsey, K.T. *DNA Methylation Arrays Identify HOXB2 and KRT13 Methylation as Markers of Invasive Bladder Cancer and Poor Patient Survival*. Am Assoc Cancer Res; Cancer Epigenetics, San Juan, Puerto Rico, 2010.

I. WORK IN REVIEW

1. **Marsit, C.J.**, Houseman, E.A., Christensen, B.C., Gagne, L., Wensch, M.R., Nelson, H.H., Wiemels, J., Zheng, S., Wiencke, J.K., Andrew, A.S., Schned, A.R., Karagas, M.R., & Kelsey, K.T. *DNA Methylation Arrays Identify HOXB2 and KRT13 Methylation as Markers of Invasive Bladder Cancer and Poor Patient Survival*.
2. Zheng, S., Houseman, E.A., Morrison, Z., Wensch, M.R., Patoka, J., Ramos, C., Haas-Kogan, D.A., McBride, S., **Marsit, C.**, Christensen, B., Stokoe, D., Wiemels, J., Chang, S., Prados, M., Tihan, T., Vandenberg, S., Kelsey, K.T., Berger, M.S., & Wiencke, J.K. *DNA hypermethylation profiles associated with glioma subtypes and EZH2 and IGFBP2 mRNA expression*.

3. Sloan, C.D., Anderw, A., Schned, A., **Marsit, C.J.**, Kelsey, K.T., Moore, J.H., & Karagas, M.R. *A Population-Based Case-Control Study of Ancestries, Genetic Markers and Bladder Cancer Incidence in New Hampshire*
4. Christensen, B.C., Houseman, E.A., Zheng, S., **Marsit, C.J.**, Wiemels, J.L., Nelson, H.H., Karagas, M.R., Yeh, R-F., Haas-Kogan, D., McBride, S., Prados, M., Chang, S., Berger, M., Wrensch, M.R., Wiencke, J.K., & Kelsey, K.T. *Locus specific DNA hypomethylation predominates over hypermethylation events in high versus low grade glioma.*
5. Christensen, B.C., Kelsey, K.T., Houseman, E.A., **Marsit, C.J.**, Zheng, S., Wrensch, M.R., Wiemels, J.L., Nelson, H.H., Karagas, M.R., Kushi, L.H., Kwan, M., Wiencke, J.K. *Breast Carcinoma DNA Methylation Profiles are Associated with Tumor Size, Alcohol Intake, and Folate Intake.*

J. WORK IN PROGRESS

1. Wilhelm, C., Gagne, L., Banister, C., Padbury, J.P., & **Marsit, C.J.** *Placenta LINE1 methylation is associated with infant birthweight.*
2. Banister, C.E., Koestler, D., Maccani, M., Houseman, E.A., Padbury, J.F., and **Marsit, C.J.** *Global Methylation Patterning of Placenta from Intrauterine Growth Restricted (IUGR) and Small for Gestational Age (SGA) Pregnancies.*
3. Maccani, M.A., Koestler, D., Banister, C.E., Padbury, J.F., Houseman, E.A., and **Marsit, C.J.** *MicroRNA Expression Profiles are Associated with Maternal Cigarette Exposure in the Human Placenta.*
4. Wilhelm, C.S., Koester, D., Christensen, B.C., Houseman, E.A., Karagas, M.R., Kelsey, K.T., and **Marsit, C.J.** *Profiles of DNA Methylation are Associated with Risk Factors of Human Bladder Cancer.*

K. PATENTS AND COMMERCIAL PRODUCTS

1. US Patent: **Marsit, C.J.**, Karagas, M.R., Andrew, A.S, Liu, M., Kelsey, K.T. *Compositions and Methods for Detecting Markers of Cancer. USPTO Application #: 20090155786.*
2. US Patent: Christensen, B.C., Houseman, E.A., Yeh, R.F., Godleski, J.G., Bueno, R., Sugarbaker, D.J., Karagas, M.R., Wrensch, M.R., Wiemels, J.L., Zheng, S., **Marsit, C.J.**, Nelson, H.H., Wiencke, J.K., Kelsey, K.T. *Diagnosing, prognosing, and early detection of cancers by DNA methylation profiling. USPTO #: 61/222,558*
3. US Patent: Avissar, M., Christensen, B.C., Kelsey, K.T., **Marsit, C.J.** *Use of miRNA Expression Ratios to Diagnose Head and Neck Cancer*

6. RESEARCH GRANTS

Research Summary: The work in my laboratory is focused on understanding the genesis and contribution of somatic alterations in human disease, particularly focused on alterations of the cellular epigenome. The general goal of this work is a better mechanistic understanding of individual susceptibility to exposure-related exposure-related disease, and the development of novel markers of susceptibility.

A. ACTIVE

Young Clinical Scientist Award 052341 (Marsit) 07/01/06-06/30/09
Flight Attendants Medical Research Institute \$100,000/yr direct costs

Role of ETS on Somatic Alterations in Bladder Cancer
Role: PI

R01 CA121147 (Kelsey, PI) 09/01/07-02/28/11
NIH-NCI ~\$250,000/yr direct costs

The Molecular Epidemiology of Bladder Cancer
Role: Co-Investigator

P20 RR018728 (Padbury) 08/15/08-07/31/10
Project 4 Marsit (PI) ~\$160,000/yr project direct costs
COBRE for Perinatal Biology \$1,500,000/yr direct costs

NIH-NCRR Women and Infants Hospital of RI Subcontract
Epigenetic alterations as markers of the intrauterine environment
Role: Project IV PI

P42 ES013660 (Boekelheide) 04/01/09-03/31/14
Project 8 Marsit (PI) ~185,000/yr project direct costs
Reuse in Rhode Island \$1,997,000/yr direct costs

NIH-NIEHS Superfund Basic Research Program
Environment, Genetics and Epigenetics in a R.I. Birth Cohort
Role: Project VIII PI

P42 ES013660 (Boekelheide) 09/01/09-08/31/11
Project 8 Marsit (PI) 75,000/yr project direct costs
Reuse in Rhode Island

NIH-NIEHS Superfund Basic Research Program
Environment, Genetics and Epigenetics in a R.I. Birth Cohort (ARRA Supplement)
Role: Project VIII PI – Supplement

R01 CA100679 (Kelsey) 04/01/09-03/31/14
NIH-NCI ~\$250,000/yr direct costs

Patterns of Somatic Gene Alterations in Oral Cancer
Role: Co-Investigator

B. COMPLETED RESEARCH SUPPORT

P50 CA093683 (Kupper) 04/01/05-03/31/06
Skin SPORE Development Project (Nelson)
NIH-NCI (Harvard University Skin SPORE)
Patterns of Epigenetic Inactivation in Non-Melanoma Skin Cancer
Role: Co-Investigator

P20RR016457 (Shaikh) 01/01/08-04/40/08
Pilot Project (Marsit) \$15,000 direct costs
NIH-NCRR
RI-INBRE for Molecular Toxicology
Profile of miRNA expression alterations by endocrine disrupting toxicants
Role: Pilot Project PI

0548311 (O'Neil, PI) 01/01/08-12/31/08
Career Development Award (Marsit) ~\$13,000 direct costs
NSF-HRD
ADVANCE Institutional Transformation Award: Investing in Leadership
Potential and Faculty Opportunities at Brown University
Creating Opportunities for Collaboration and Scientific Discussion
Role: Award PI

MARF Grant Program (Marsit) 01/01/08-12/31/09
Mesothelioma Applied Research Foundation ~\$50,000/yr direct costs
**Array Based miRNA Expression and Methylation Profiling
of Normal and Tumorigenic Pleural Mesothelium**
Role: PI

Medical Research Grant (Marsit & Robins) 02/15/09-02/15/10
Rhode Island Foundation \$15,000 direct costs
**Epigenetic Effect of Oxygen Tension During Embryo Culture
In Assisted Reproductive Technologies**
Role – Co-PI

C. PENDING SUPPORT

R01CA149040 (Marsit) 07/01/10-06/30/14
NIH-NCI \$386,000/yr direct costs
Epigenetic Susceptibility to Bladder Cancer
Role: PI

R21MH091508 (Tyrka) 07/01/10-06/30/12
NIH-NIMH Butler Hospital Subcontract \$32,200/yr subcontract direct costs
**Childhood Maltreatment: Epigenetic Modulation of the
Glucocorticoid Receptor** \$150,000/yr project direct costs
Role: Co-investigator

R21 HD067825 (Lester and Marsit) 12/01/10-11/30/12
NIH-NICHD Women and Infants Hospital Subcontract \$27,000/yr subcontract direct costs
Epigenetic Consequences of IUGR: Neurodevelopmental and Social Outcomes \$150,000/yr project direct costs
Role: Co-PI

R01 HD067611 (Chen and Marsit) 12/01/10-11/30/15
NIH-NICHD \$485,000/yr direct costs
Epigenetics in the interplay of prenatal growth, neurobehavior and environment
Role: Co-PI

7. SERVICE

A. UNIVERSITY SERVICE

Membership on Major Committees
Current:

Chair, Admissions Committee, Pathobiology Graduate Program, 2009-2010

Past:

Member, Clinical and Translational Science Award – Gene and Environment
Collaboratory Committee, 2007-2008
Member, Rhode Island Biobank Initiative – Questionnaire Design Committee, 2007-2008
Vice-Chair, Admissions Committee, Pathobiology Graduate Program, 2008
Member, Brown-IBM Partnership Grand Challenge Committee, 2008
Co-Chair, Pathobiology Seminar Series, Pathobiology Graduate Program, 2008-2009

Search Committees:

Staff Neonatologist/Open-rank Professor, Pediatrics, 2009-present
Assistant/Associate Professor, Environmental Epidemiology, 2007-2009

Other:

Trainer, Graduate Program in Pathobiology, Brown University, 2007-present
Trainer, Systems and Developmental Biology/Birth Defects Grant, Brown University,
2008-present
Trainer, Women's Health Research Grant, Women and Infants Hospital, 2008-present
Member, Office of the Vice President for Research Focus Group on Junior Faculty
Research Resources, 2008

B. PROFESSIONAL SERVICE

Member, Epidemiology Panel, Proposal Review, Flight Attendants Medical Research
Institute, 2006-2009
Reviewer, American Institute of Biological Sciences, 2007-present
Reviewer, Cancer Research UK, Cancer Research Training Fellowship

Associate Editor, *Journal of Cancer Epidemiology*, 2007-present
 Reviewer, US Army Medical Research and Materiel Command Grant Proposals, 2008
 Reviewer, National Functional Genomics Research Program Proposals, 2008
 Reviewer, Indo-US Science and Technology Forum, Smithsonian Institution, 2009
 Reviewer, British Lung Foundation Grants Program, 2009
 Editorial Board, *Journal of Cancer Epidemiology*
 Editorial Board, *Environmental Toxicology*
 Journal Reviewer: *Clinical Cancer Research; Carcinogenesis; British Journal of Cancer; Cancer Epidemiology, Biomarkers, and Prevention; Cancer; Human Reproduction; BMC Cancer; International Journal of Cancer; Molecular Carcinogenesis; Cancer Research; Epigenetics; European Journal of Cancer; The American Journal of Obstetrics and Gynecology; Reproduction, Fertility, and Development; Neurotoxicology Research; BMC Medical Genomics*
 Membership in Professional Organizations: *American Association for Cancer Research, American Society of Reproductive Immunology*

8. HONORS AND AWARDS

American Institute of Chemists Award, Lafayette College Department of Chemistry, 2000
 Phi Lambda Upsilon, Honors Society in Chemistry, Lafayette College, 2000
 Pre-doctoral Training Fellowship in Radiobiology, National Institute of Environmental Health Sciences, Harvard School of Public Health, 2000-2004
 Pathobiology of Cancer Fellowship, American Association for Cancer Research, 2002
 AACR-AFLAC Scholar in Training Award, American Association for Cancer Research, 2004
 AACR-AstraZeneca Scholar in Training Award, American Association for Cancer Research, 2005
 Flight Attendants Medical Research Institute, Young Clinical Scientist Award, 2006-present

9. TEACHING and MENTORING EXPERIENCE

Graduate Courses:

2006	ID518 (Integrated Cancer Biology, Harvard School of Public Health), Co-instructor, 5 students GCD 210 (Introduction to Cancer Biology, Harvard School of Public Health), 2 lecture hours in epigenetic in cancer biology, 30 students
2007	BIOL 286 (Molecular Mechanisms of Human Disease), 3 lecture hours in cancer biology and etiology, spring, 10 students BIOL 286 (Molecular Mechanisms of Human Disease), fall, 21 lecture hours, 14 students, Co-course leader BIOL 285 (Introduction to Faculty Research), 1 lecture hour, 14 students
2008	BIOL 182 (Environmental Health and Disease), 3 lecture hours, 46 students BIOL 286 (Molecular Mechanisms of Human Disease), fall, 27 lecture hours, 11 students, Course leader,
2009	BIOL 182 (Environmental Health and Disease), 2 lecture hours, 40 students BIOL 286 (Molecular Mechanisms of Human Disease), fall, 27 lecture hours, 11 students, Course Leader
2010	BIOL 182 (Environmental Health and Disease), 4 lecture hours, 40 students

Post-doctoral Trainees:	
Carolyn Banister, PhD	2009-present
Michele Avissar, PhD	2010-present
Graduate Trainees:	
Michele Avissar, PhD, Program in Pathobiology, “A Role for MicroRNA in the Etiology of Head and Neck Squamous Cell Carcinoma”	2007-2009
Matthew Maccani, Doctoral Candidate, Program in Pathobiology	2008-present
Charlotte Wilhelm, 2 nd year Graduate Student, Program in Epidemiology	2009-present
Graduate Rotation Students:	
Sara Pacheco, Rotation, Program in Pathobiology	2008
Jennifer Joukhader, Rotation, Program in Pathobiology	2009
Ann Saunders, Rotation, Program in Pathobiology	2009
Undergraduate Trainees:	
Keila Veiga, “MicroRNA Expression in Placental Cell Lines in Response to Bisphenol A Exposure”, (Honors Thesis: Advisor),	2007-2008
Stuart Schussel, “Vinclozolin Exposure and MicroRNA Expression in Testicular Cells”, (Honors Thesis: Advisor),	2007-2008
Kristen Uhl, “Role of miR-146a in Human Placenta” (Honors Thesis: Advisor)	2008-2009
Erika Moen “FANCF Methylation in Head and Neck Squamous Cell Carcinoma” (Honors Thesis: Advisor)	2008-2009
Amanda Filiberto “Gene-specific DNA Methylation Alterations in Human Placenta”	2009-present
Thesis Advisory Committees:	
Graham Poage, Doctoral Candidate, Program in Molecular Pharmacology and Physiology	2008-present
Nicholas Heger, Doctoral Candidate, Program in Pathobiology (Chair)	2009-present
Haley Menard, Doctoral Candidate, Program in Pathobiology	2009-present
Benjamin Moyer, Doctoral Candidate, Program in Pathobiology	2009-present
Caihua Liang, Doctoral Candidate, Program in Epidemiology	2009-present
Devin Koestler, Program in Biostatistics	2010-present
Camelia Saffarini, Program in Pathobiology	2010-present
Thesis Defense Committees:	
Rachel Rogers, M.Sc. “Response to Phthalate Exposure; Biological and Social Perspectives”, Brown University	2008
Anita S. Patel, Ph.D. “Immunity and non-melanoma skin cancer: environmental and genetic risk factors”, Harvard University	2008
Teaching Assistants Supervised:	
Vanessa Sanchez, Program in Pathobiology, Course: Biol 286	2008
Michele Avissar, Program in Pathobiology, Course: Biol 286	2009