

Curriculum Vitae—Research
Cheryl L. Jorcyk, Ph.D.
Department of Biological Sciences
Boise State University

Business Address:

Boise State University
Department of Biological Sciences
Science Building, Room 227
1910 University Drive
Boise, ID 83725-1515

Office: (208) 426-4287
E-mail: cjorcyk@boisestate.edu

Home Address:

1207 North 6th Street
Boise, ID 83702
(208) 331-1174

Lab: (208) 426-4805
Fax: (208) 426-1040

Education:

1984-1991 Doctor of Philosophy (Biology), The Johns Hopkins University, Baltimore, MD
1979-1983 Bachelor of Science (Biology), Pennsylvania State University, State College, PA

Awards and Societies:

2012 Golden Apple Award—Boise State University
2011 Business Women of the Year Honoree—Idaho Business Review
2008 Health Hero Educator Honoree—Idaho Business Review
1998-present American Association for Cancer Research, Active Member
1998-present American Association for the Advancement of Science, Member
1998-2009 Sigma Xi Scientific Research Society, Boise State University Chapter, Full Member
1998-present Idaho Academy of Science, Member
1995-1997 American Association for Cancer Research, Associate Member
1992-1997 Intramural Research Training Award, Postdoctoral Fellowship, NIH
1982-1983 The Hammond Biological Scholarship and Award

Grant Review Panels:

2013 California Breast Cancer Research Program (CBCRP), Clinical, Prevention, & Biological Sciences Study Section
2011-present Department of Defense (DOD), Congressionally Directed Medical Research Program (CDMRP) Breast Cancer Pathobiology-2 Panel.
2011 California Tobacco-Related Disease Research Program (TRDRP), Cancer Study Section.
2010-2011 Department of Defense (DOD), Congressionally Directed Medical Research Program (CDMRP) Breast Cancer Immunology/Endocrinology Panel.
2009 NIH, CSR, Challenge Grant Program, Bioengineering Sciences and Technologies Panel.
2008 Department of Defense (DOD), Congressionally Directed Medical Research Program (CDMRP) Prostate Cancer Immunology Panel.
2008 Department of Defense (DOD), Congressionally Directed Medical Research Program (CDMRP) Prostate Cancer Pathology Panel. Ad-hoc Reviewer.
2007-2010 California Breast Cancer Research Program (CBCRP), Pathology Study Section.
2006-2007 Cancer Research UK. Ad-hoc Reviewer.
2006 Veterans Administration (VA) Merit Grant Program. Ad-hoc Reviewer.

Patents and Patent Disclosures:

2009 Boise State University Invention Disclosure “Simple Agarose Gel for Analyzing RNA Quality”. BSTU.006P 10/14/2009.

Professional Experience:

- 2011-present Full Professor, Department of Biological Sciences, Boise State University, Boise, ID. Determination of the role of the cytokine oncostatin M in tumor progression and metastasis.
- 2010-present Affiliate Associate Professor, Department of Microbiology, Molecular Biology, and Biochemistry (currently being reorganized), College of Agriculture and Life Sciences, University of Idaho, Moscow, ID.
- 2007-2010 Director of Undergraduate Studies, Department of Biological Sciences, Boise State University, Boise, ID.
- 2003-2011 Associate Professor, Department of Biological Sciences, Boise State University, Boise, ID. Determination of the role of the cytokine oncostatin M in tumor progression and metastasis.
- 2001-2009 Affiliate Member, Chronic Illness Research Center (formally called the Cancer Prevention and Research Center, Washington State University, Pullman, WA.
- 1998-present Affiliate Member, Cancer Research Section, Mountain States Tumor and Medical Research Institute (MSTMRI), Boise, ID.
- 1999-2003 Project Director, J.A. & Kathryn Albertson Foundation grant. Student Research Fellowships and Hands-On Science Education Reform for Vallivue and Kuna School Districts.
- 1997-2003 Assistant Professor, Department of Biology, Boise State University, Boise, ID. Elucidation of molecular mechanisms involved in tumor progression utilizing mouse prostate and mammary cell lines.
- 1995 Instructor, Frederick Community College, Frederick, MD. Lecturer for a Nutrition class; involved the complete organization and teaching of this course.
- 1994 Instructor, Frederick Community College, Frederick, MD. Lecturer and Laboratory Instructor for Introductory Biology; consisted of two 75-minute lectures and one three-hour lab section per week.
- 1992-1997 Postdoctoral Fellow with Dr. Jeffrey E. Green, Laboratory of Molecular Oncology, NCI, NIH, Frederick, MD. Studying prostate cancer and tumor progression by the establishment of cell lines from transgenic mice expressing SV40 large T-antigen. Utilizing the transgenic mice as a model for immunotherapy treatment of prostate and mammary cancers. Studying the function of the cellular oncogene, Ets-1, by utilizing 1) homologous recombination in ES cells to produce mice lacking a functional Ets-1 protein; 2) mice producing transgenic ETS proteins.
- 1985-1991 Doctoral Student with Dr. Takis Papas, mentored by Dr. Denise Watson at NCI-Frederick, The Johns Hopkins University, Baltimore, MD. Doctoral Dissertation: "The Human *Ets1* Gene: Genomic Structure, Promoter Characterization and Alternative Splicing."

Publications:

1. Lautenberger, J. A., Seth, A., **Jorcyk, C.** and Papas, T. S.: Useful modifications of the Escherichia coli expression plasmid pJL6. *Gene Anal. Tech.* 1: 63-66, 1984.
2. Samuel, K. P., Lautenberger, J. A., **Jorcyk, C. L.**, Josephs, S., Wong-Staal, F. and Papas, T. S.: Diagnostic potential for human malignancies of bacterially produced HTLV-I envelope protein. *Science* 226: 1094-1097, 1984.

3. Sisk, W. P., Chirikjian, J. G., Lautenberger, J. A., **Jorcyk, C.**, Papas, T. S., Berman, M. L., Zagursky, R. and Court, D. L.: A plasmid vector for cloning and expression of gene segments: expression of an HTLV-I envelope gene segment. *Gene* 48: 183-193, 1986.
4. Schweinfest, C. W., **Jorcyk, C. L.**, Fujiwara, S. and Papas, T. S.: A heat shock inducible eukaryotic expression vector. *Gene* 71: 207-210, 1988.
5. Koizumi, S., Fisher, R. J., Fujiwara, S., **Jorcyk, C. L.**, Bhat, N. K., Seth, A. and Papas, T. S.: Isoforms of the human *ets-1* protein: Generation by alternative splicing and differential phosphorylation. *Oncogene* 5: 675-681, 1990.
6. Schweinfest, C. W., **Jorcyk, C. L.** and Papas, T. S.: Efficient inducible expression of HIV-1 tat cDNA in transfected T-cells. In Streilein, J.W., Ahmad, F., Bialy, H., Black, S., Blomberg, B., Chin, Y.H., Lopez, D., Malek, T., Podack, E.R., Rabin, M.B., Stein-Streilein, J., Van Brunt, J. and Whelan, W.J. (Eds.): *Advances in Gene Technology: The Molecular Biology of Immune Diseases and the Immune Response*, Oxford, IRL Press, 1990, p. 31.
7. Papas, T. S., Blair, D. G., Watson, D. K., Yuan, C. C., Ruscetti, S. K., Fujiwara, S., Seth, A. K., Fisher, R. J., Bhat, N. K., Mavrothalassitis, G., Koizumi, S., **Jorcyk, C. L.**, Schweinfest, C. W. and Ascione, R.: The ETS family of genes: Structural analysis, gene projects, and involvement in neoplasia and other pathologies. In Patterson, D. and Epstein, C.J. (Eds.): *Molecular Genetics of Chromosome 21 and Down Syndrome*. New York, Wiley-Liss, 1990, pp. 137-168.
8. Papas, T. S., Watson, D. K., Sacchi, N., Fujiwara, S., Seth, A. K., Fisher, R. J., Bhat, N. K., Mavrothalassitis, G., Koizumi, S., **Jorcyk, C. L.**, Schweinfest, C. W., Kottaridis, S. D. and Ascione, R.: The ETS family of genes in leukemia and Down syndrome. *Am. J. Med. Genet.* (Suppl.) 7: 251-261, 1990.
9. Watson, D. K., Mavrothalassitis, G. J., **Jorcyk, C. L.**, Smyth, F. E. and Papas, T. S.: Molecular organization and differential polyadenylation sites of the human ETS2 gene. *Oncogene* 5: 1521-1527, 1990.
10. Papas, T. S., Blair, D. G., Watson, D. K., Yuan, C.-C., Ruscetti, S. K., Fujiwara, S., Seth, A. K., Fisher, R. J., Bhat, N. K., Mavrothalassitis, G., Koizumi, S., **Jorcyk, C. L.**, Schweinfest, C. W. and Ascione, R.: The ETS family of genes: Structural analysis, gene products, and involvement in neoplasia and other pathologies. *Prog. Clin. Biol. Res.* 360: 137-168, 1990.
11. **Jorcyk, C. L.**, Watson, D. K., Mavrothalassitis, G. J. and Papas, T. S.: The human ETS1 gene: Genomic structure, promoter characterization and alternative splicing. *Oncogene* 6: 523-534, 1991.
12. **Jorcyk, C. L.**, Watson, D. K., Mavrothalassitis, G. J. and Papas, T. S.: Regulation and processing of the human ETS1 gene. *Miami Short Rep.* 1: 78, 1991.
13. Shibata, M.-A., Maroulakou, I. G., **Jorcyk, C. L.**, Gold, L. G., Ward, J. M. and Green, J. E.: p53-independent apoptosis during mammary tumor progression in C3(1)/SV40 large T antigen transgenic mice: suppression of apoptosis during the transition from preneoplasia to carcinoma. *Cancer Res.* 56: 2998-3003, 1996.
14. Wigginton, J. M., Komschlies, K. L., Green, J. E., Cox, G. W., **Jorcyk, C. L.**, Back, T. C., Franco, J. L., Brunda, M. J. and Wiltrout, R. H.: Evaluation of the antitumor activity of the interleukin-12/pulse interleukin-2 combination. *Ann. N.Y. Acad. Sci.* 795: 434-439, 1996.
15. **Jorcyk, C. L.**, Garrett, L. J., Watson, D. K., Maroulakou, I. G. and Green, J. E.: Multiple

- regulatory regions control the expression of the Ets-1 protooncogene in the developing mouse: vascular expression conferred by intron I. *Cellular and Molecular Biology* 42: 211-225, 1997.
16. **Jorcyk, C. L.**, Liu, M.-L., Maroulakou, I. G., Shibata, M.-A., Komschlies, K. L., McPhaul, M. J., Resau, J. H. and Green, J. E.: Development and characterization of a mouse prostate adenocarcinoma cell line: ductal formation determined by extracellular matrix. *The Prostate* 34: 10-22, 1998.
 17. Maroulakou, I. G., Shibata, M.-A., **Jorcyk, C. L.**, Chen, A., Ward, J. M. and Green, J. E.: Loss of p53 expression is associated with mammary tumor metastases in C3(1)/TAG transgenic mice. *Molecular Carcinogenesis* 19: 168-174, 1997.
 18. Ward, J., Konishi, N., Ohshima, M., Lamb, P.L., **Jorcyk, C.** and Barrett, J.: Kail1 expression in paraffin embedded sections of prostate cell lines and normal, hyperplastic and neoplastic human prostate. *Pathology International* 48: 87-92, 1998.
 19. Shibata, M.-A., **Jorcyk, C. L.**, Devor, D., Yoshidome, K., Rulong, S., Resau, J., Roche, N., Roberts, A., Ward, J., and Green, J. E.: Altered expression of transforming growth factor β s during urethral and bulbourethral gland tumor progression in transgenic mice carrying the androgen-responsive C3(1) 5' flanking region fused to SV40 large T antigen. *Carcinogenesis* 19: 195-205, 1998.
 20. Shibata, M.-A., **Jorcyk, C. L.**, Liu, M.-L., Yoshidome, K., Gold, L., Green, J. E.: The C3(1)/SV40 T antigen transgenic mouse model of prostate and mammary cancer. *Toxicologic Pathology* 26: 177-182, 1998.
 21. Yoshidome, K., Shibata, M.-A., Maroulakou, I. G., Liu, M.-L., **Jorcyk, C. L.**, Gold, L. G., Welch, V. N., and Green, J. E.: Genetic alterations in the development of mammary and prostate cancer in the C(3)1/Tag transgenic mouse model (Review). *International Journal of Oncology* 12: 449-453, 1998.
 22. Liu, M.-L., Von Lintig, F. C., Liyange, M., Shibata, M.-A., **Jorcyk, C. L.**, Ried, T., Boss, G. R. and Green, J. E.: Amplification of Ki-ras and elevation of MAP kinase activity during mammary tumor progression in C3(1)/SV40 tag transgenic mice. *Oncogene* 18: 2403-2411, 1998.
 23. Maroulakou, I. G., Shibata, M.-A., Anver, M., **Jorcyk, C. L.**, Liu, M.-L., Roche, N., Roberts, A. B., Tsarfaty, I., Reseau, J., Ward, J., and Green, J. E.: Heterotopic endochondrial ossification with mixed tumor formation in C3(1)/Tag transgenic mice is associated with elevated TGF-beta1 and BMP-2 expression. *Oncogene* 18: 5435-5447, 1999.
 24. Shibata, M.-A., Yoshidome, K., Shibata, E., **Jorcyk, C.L.** and Green, J.E.: Suppression of mammary carcinoma growth *in vitro* and *in vivo* by inducible expression of the Cdk inhibitor p21. *Cancer Gene Therapy* 1: 1-10, 2000.
 25. Green, J.E., Shibata, M.A., Yoshidome, K., Kiu, M.L., **Jorcyk, C.**, Anver, M.R., Wigginton, J., Wiltout, R., Shibata, E., Kaczmarczyk, S., Wang, W., Liu, Z.Y., Calvo, A. and Couldrey, C.: The C3(1)/SV40 T-antigen transgenic mouse model of mammary cancer: ductal epithelial cell targeting with multistage progression to carcinoma. *Oncogene* 19: 1020-1027, 2000.
 26. Wigginton, J.M., Park, J.W., Gruys, M.E., Young, H.A., **Jorcyk, C.L.**, Back, T.C., Brunda, M.J., Strieter, R.M., Ward, J., Green, J.E. and Wiltout, R.H.: Complete regression of established spontaneous mammary carcinoma and the therapeutic prevention of genetically programmed neoplastic transition by IL-12/pulse IL-2: induction of local T cell infiltration, fas/fas ligand gene expression, and mammary epithelial apoptosis. *J. Immunol.* 166: 1156-1168, 2001.
 27. Calvo, A., Xiao, N., Simon, R., Kang, J., Best, C., Emmert-Buck, M., **Jorcyk, C.L.**, and Green, J.E.: Identification of genes in prostate tumor progression by cDNA microarray analysis in an

- in vitro* model derived from C3(1)/T-antigen transgenic mice: down-regulation of selenoprotein-P in mouse and human prostate cancer. **Cancer Research** 62: 5325-35, 2002.
28. Soares, C., Shibata, M.-A., Green, J.E. and **Jorcyk, C.L.**: Development of PIN and prostate adenocarcinoma cell lines: a model system for multistage tumor progression. **Neoplasia** 4: 112-120, 2002.
 29. Holzer, R.G., MacDougall, C., Atwood, C., Green, J.E., and **Jorcyk, C.L.**: Development and characterization of a progressive series of hormone-responsive mammary adenocarcinoma cell lines derived from the C3(1)/SV40 Large T-antigen transgenic mouse model. **Breast Cancer Research and Treatment** 77: 65-76, 2003.
 30. Holzer, R.G., Tommack, M., Schlekeway, E., Ryan, R.E, and **Jorcyk, C.L.**: Oncostatin M induces the detachment of a reservoir of invasive mammary carcinoma cells: the role of cyclooxygenase-2. **Clinical and Experimental Metastasis** 21:167-176, 2004.
 31. MacDougall, C.A., Ide, A., Soares, C., Vargas, M., Holzer, R.G., and **Jorcyk, C.L.**: Involvement of the hepatocyte growth factor-met receptor signaling loop with the classical “3M” pathways in tumor progression of mouse prostate adenocarcinoma cells. **The Prostate** 64: 139-149, 2005.
 32. Queen, M.M., Ryan, R.E., Holzer, R.G., Keller-Peck, C.R., and **Jorcyk, C.L.**: Breast cancer cells stimulate neutrophils to produce Oncostatin M: potential implications for tumor progression. **Cancer Research** 65: 8896-8904, 2005.
 33. **Jorcyk, C.L.**, Holzer, R.G., and Ryan, R.E.: Oncostatin M induces detachment and enhanced metastatic capacity in T-47D human breast carcinoma cells. **Cytokine** 33:323-336, 2006.
 34. Halsted, KC, Bowen, KB, Bond, L, Jorcyk, CL, Fyffe, WE, Kronz, JD, Oxford, JT. Collagen alpha1(XI) in normal and malignant breast tissue. **Modern Pathology** 21:1246-54, 2008.
 35. Jackiewicz, Z., **Jorcyk, C.L.**, Kolev, M., and Zubik-Kowal, B. Correlation between animal and mathematical models for prostate cancer progression. **Computation and Mathematical Methods in Medicine** iFirst article, 1-12, 2009.
 36. Graugnard, E., Cox, A., Lee, J., **Jorcyk, C.L.**, Yurke, B., and Hughes, W.L. Kinetics of DNA and RNA hybridization in serum and serum-SDS. **IEEE Transactions on Nanotechnology** 9, 603, 2010. PMID: 20967137
 37. Graugnard, E., Cox, A., Lee, J., **Jorcyk, C.L.**, Yurke, B., and Hughes, W.L. Operation of a DNA-based autocatalytic network in serum. **Lecture Notes in Computer Science**, 6518, 83, 2011.
 38. Zubik-Kowal, B., **Jorcyk, C.L.**, and Kolev, M. Numerical experiments for mammary adenocarcinoma cell progression. **Integral Methods in Science and Engineering**, Springer, 2011, book chapter.
 39. Tawara, K. and **Jorcyk, C.L.** Clinical significance of interleukin-6 (IL-6) in cancer metastasis to bone: potential of anti-IL-6 therapies. **Cancer Management and Research** 3, 177-89, 2011. PMID: 21625400
 40. Aranda P.S., LaJoie D.M., **Jorcyk C.L.** Bleach gel: a simple agarose gel for analyzing RNA quality. **Electrophoresis** 33, 366-9, 2012. PMID: 22222980
 41. **Jorcyk, C.L.**, Kolev, M., Tawara, K., and Zubik-Kowal, B. Experimental versus numerical data for breast cancer progression. **Journal of Nonlinear Analysis: Real World Applications** 13, 78-84, 2012.
 42. Bolin, C.*, Sutherland, C.*, Tawara, K., and **Jorcyk, C.L.** Novel mouse mammary cell lines for

in vivo bioluminescence imaging (BLI) of bone metastasis. *Biol Proced* 14, 6-12, 2012. PMID: 22510147.

43. Bolin, C*, Tawara, K*, Sutherland, C, Redshaw, J, Aranda, P, Moselhy, J Anderson, R, and **Jorcyk C.L.** Oncostatin M promotes mammary tumor metastasis to bone and osteolytic bone degradation. *Genes Cancer* 3, 117-30, 2012. PMID: 23050044.

Manuscripts Submitted or in Preparation:

1. Nadelson, L, **Jorcyk, C**, Yang, D, Smith, J, Matson, S, Cornell, K, and Husting, V. I just don't trust them: the development and validation of an assessment instrument to measure trust in science and scientists". In revision at *School Science and Mathematics*.
2. Ryan, R, Mellor, L, Martin, B, Jacob, R, McDougal, O, **Jorcyk, CL***, and Oxford, JT*. Oncostatin M binds to extracellular matrix in a bioactive conformation: implications for inflammation and metastasis. Submitted to *J Biol Chem*.
3. Bolin, C*, Koncinsky, J*, Tawara, K, Moselhy, J, Ryan, R, Garbow, J, and **Jorcyk, CL**. Oncostatin M promotes breast cancer invasion and early stages of metastasis. In preparation.
4. Tawara, K, Nandakumar, M, Fox, R, Chang, D, Oler, A, Ide, A, Ryan, R, and **Jorcyk, CL**. Differential expression of VEGF in breast cancer cells induced by IL-6 cytokines. In preparation.
5. Yu, GX., Ngam, P., Woodward, J., Tawara, K., and **Jorcyk, C.L.** RSeq^{Dis-Quan}, a tool for RNASeq analysis: the study of myeloid-derived suppressor cells (MDSCs) in metastatic breast cancer. In preparation for *Nucleic Acids Research*.

Current Research Support:

W.M. Keck Foundation (Hughes, PI; Jorcyk, Co-PI)	8/1/2011 – 7/31/2016
Medical Research/Science and Engineering Research Programs	\$1,000,000
Synthetic DNA reactions for low-cost diagnosis and treatment of disease.	

Mountain States Tumor and Medical Research Institute (Jorcyk, PI)	06/12/11 – 05/31/13
Seed Grant Program	\$7,500
Does oncostatin M confer drug resistance to tumor cells via induction of lung resistance protein?	

Susan G. Komen for the Cure KG100513 (Jorcyk, PI)	6/21/2010 – 6/20/2014
Susan G. Komen Breast Cancer Research Program	\$600,000
Analysis of oncostatin M in breast cancer metastasis to bone for the purpose of inhibiting disease progression.	

ACS RSG-09-276-01-CSM (Jorcyk, PI)	7/1/2009 – 6/30/2014
American Cancer Society Research Scholar Grant	\$720,000
Breast cancer metastasis to the bone: the role of oncostatin M.	

NIH NCI R15CA137510 (Jorcyk, PI)	4/1/2009 – 3/30/2013
Oncostatin M-induced VEGF in human breast cancer is HIF1 α -mediated.	\$211,500

NASA NNX10AN29A (Jorcyk, Oxford, Rohn, Mitchell, Co-PIs)	10/01/2010 – 9/30/2013
Molecular mechanisms of cellular mechanoreception in bone.	\$749,916

NIH NCRR P20RR016454 (Bohach, PI; Jorcyk, Team Member)	4/1/2009 – 3/31/2014
Idaho IDeA Network for Biomedical Research Excellence.	Total = ~\$15,000,000

Coll1a1 function during development, structure and signaling is to address osteoblast-osteoclast cell signaling.

M.J. Murdock Charitable Trust (Jorcyk, PI) 06/01/2012—01/31/2015
Partners in Science Program. \$14,000
Regulation of oncostatin M by the extracellular matrix protein Coll1a1: potential effects on breast cancer metastasis.

Pending Grants:

NIH NCI R01 (Jorcyk, PI) Submitted 02/05/2013
OSM induces breast tumor invasion and early stages of metastasis. \$2,442,431

Research Completed (since 2003):

J.A. & Kathryn Albertson Foundation (Jorcyk, PI) 01/02/99--06/30/03
General operating expenses. \$500,000 total; Jorcyk Lab, \$176,660
Graduate and undergraduate fellowships for cancer research.

M.J. Murdock Charitable Trust (Jorcyk, PI) 05/01/02 – 01/31/04
Partners in Science Program. \$14,000
Characterization of genes involved in the prostate cancer to metastasis conversion.

NIH P20 RR16454 (Jorcyk, PI) 09/01/02 --08/31/03
NIH/NCCR ~\$35,000
Oncostatin M enhances metastatic potential.

Boise State University (Jorcyk, PI) 05/01/03–04/30/04
Faculty Research Initiated Grants \$5,000
Oncostatin M-treated breast cancer cells stimulate new blood vessel formation.

Mountain States Tumor and Medical Research Institute (Jorcyk, PI) 05/12/03 –05/11/04
Seed Grant Program \$5,000
Effects of neutrophil-derived oncostatin M in a breast tumor environment.

NIH R01 CA104470 (Jorcyk, Collaborator; Magnuson, PI) 09/01/03 – 08/31/08
Contribution of Pim-1 kinase to cell survival. N/A

M.J. Murdock Charitable Trust (Jorcyk, PI) 05/01/04 – 01/31/06
Partners in Science Program. \$14,000
Determination of the receptor utilized by oncostatin M to promote metastatic characteristics in MDA-MB-231 breast cancer cells.

Sigma Xi (Jorcyk, PI) 05/01/04 – 04/30/05
Grants in Aid Program. \$2,000
Induction of epithelial cell-secreted proteases by neutrophil-derived oncostatin M.

Mountain States Tumor and Medical Research Institute (Jorcyk, PI) 05/12/04 –05/11/05
Seed Grant Program \$5,000
Determination of the receptor utilized by OSM to promote metastatic characteristics in T47D human breast cancer cells.

NIH P20 RR16454 (Jorcyk, Investigator; Laskowski, PI) 07/01/04 – 06/03/09
NIH/NCCR (Jorcyk) \$395,000
Oncostatin M induces VEGF in human breast carcinoma cells.

NIH R15 CA106274 (Jorcyk, PI) 03/01/05 – 02/28/08
NIH/NCI \$186,893
Oncostatin M induces VEGF-mediated angiogenesis.

Boise State University (Jorcyk, PI) Faculty Research Initiated Grants Determination of a role for oncostatin M in breast cancer metastasis to bone.	07/01/05 –06/30/06 \$15,000
Mountain States Tumor and Medical Research Institute (Jorcyk, PI) St. Luke's/Seed Grant Program Development of OSMR-beta mouse mammary carcinoma cell lines.	05/01/07 –04/30/08 \$5,000
NIH, ITHS (Jorcyk, PI) Small Pilot Project Translational Grant The role of tumor cell-derived oncostatin M in breast cancer metastasis to bone.	05/01/09 – 04/30/10 \$14,000
Mountain States Tumor and Medical Research Institute (Jorcyk, PI) Seed Grant Program Knockdown of OSM-induced HIF1alpha by RNAi.	05/01/09 –04/30/10 \$7,500
MSTMRI (Jorcyk, Collaborator; Yu, PI) Seed Grant Program Myeloid-derived suppressor cell (MDSC) gene expression in normal tissue versus metastatic breast cancer.	05/01/09 –04/30/10 \$7,500
MISE (Cornell, PI; Jorcyk, Collaborator) Merck Institute for Science Education Merck AAAS Undergraduate Science Research Program	4/1/2008–3/31/2011 \$60,000
HERC Idaho State Board of Education (Jorcyk, Co-PI) Musculoskeletal Research.	7/01/2007 – 6/30/2011 ~\$1,000,000

Miscellaneous Recent Awards and Grants:

College of Arts and Sciences (COAS) Travel Award	06/22/11 \$400
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Invited Speaker Presentations (since 2003):

Breast cancer: a role for Oncostatin M? Albertson's College, Caldwell, ID. November 17th, 2003. **Regional.**

Breast cancer: a role for Oncostatin M? College of Engineering, Boise State University, Boise, ID. November 21st, 2003. **Regional.**

Oncostatin M: promoting the phenotype of metastatic breast cancer, University of Texas at San Antonio, San Antonio, TX, April 16th, 2004. **National.**

Oncostatin M induces VEGF in human breast carcinoma cells: stimulation of angiogenesis *in vitro* and *in vivo*, 3rd Annual BRIN Conference, Idaho State University, Pocatello, ID, August 9th-11th, 2004. **Regional.**

Neutrophil-derived oncostatin M: potential implications for breast cancer progression, 2nd Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 8th, 2005. **Regional..**

Neutrophil-derived oncostatin M: potential implications for breast cancer progression, Idaho State University, Department of Biological Sciences, Pocatello, ID, November 17th, 2005. **Regional.**

Neutrophil-derived oncostatin M: potential implications for breast cancer progression, AACR (American Association for Cancer Research) Special Conference on Cancer, Proteases, and Tumor Microenvironment, Bonita Springs, FL, December 1st, 2005. **International.**

Breast cancer: the design of targeted therapies. Idaho Society of Radiological Technology Conference, Boise, ID. April 29th, 2006. **Regional.**

Researching breast cancer. eGirls Conference, Boise State University, Boise, ID. June 16th, 2006. **Regional.**

Breast cancer research at Boise State University, Boise State Foundation Board, Boise State University, Boise, ID. July 20th, 2006. **Regional.**

Oncostatin M induces vascular endothelial growth factor in human breast cancer cells and promotes angiogenesis. 3rd Annual INBRE Conference, Northern Idaho College, Coeur d'Alene, ID, August 8th, 2006. **Regional.**

Neutrophil-derived oncostatin M: potential implications for breast cancer progression. 11th World Congress on Advances in Oncology, Crete, Greece. October 13th, 2006. **International.**

Neutrophil-derived Oncostatin M: potential implications for breast cancer progression. University of Nevada at Reno. Reno, NV, May 1st, 2007. **Regional.**

Oncostatin M is a potential target for inhibiting breast tumor progression. American Association for the Advancement of Science (AAAS) Pacific Division Annual Conference. Boise, ID, June 20th, 2007. **Regional.**

Oncostatin M-induced HIF1 α in human breast cancer. Annual INBRE Conference in Moscow, ID, August 6th-9th, 2007. **Regional.**

The role of oncostatin M in breast cancer. CAMBR (Center for Advanced Microelectronics and Biomolecular Research) Symposium. Post Falls, WA, October 12th, 2007. **Regional.**

Breast cancer metastasis to bone. IAS (Idaho Academy of Sciences) 50th Annual Conference, College of Western Idaho, Nampa, ID, March 28th, 2008. **Regional.**

Oncostatin M as a potential target for inhibiting breast tumor progression. College of Idaho, Caldwell, ID, May 16th, 2008. **Regional.**

Oncostatin M is a potential target for inhibiting breast tumor metastasis. AAAS (American Association for the Advancement of Sciences) Pacific Division Annual Conference, Waimea, HI, June 18th, 2008. **Regional.**

The role of oncostatin M in breast tumor progression and metastasis. The Peter MacCallum Cancer Centre Anderson Lab, Melbourne, Australia, November 18th, 2008. **International.**

A role for oncostatin M in osteoclastogenesis and breast cancer metastasis to bone? 5th Annual INBRE Conference, Boise State University, Boise, ID, August 4th – 6th, 2008. **Regional.**

The role of oncostatin M in breast tumor progression and metastasis. 1st Annual Idaho INBRE Symposium, Boise, ID, April 4th, 2009. **Regional.**

The role of oncostatin M in breast tumor progression and metastasis. 3rd Annual Workshop for Small Animal Imaging, St. Louis, MS, June 21st, 2009. **National.**

A role for oncostatin M in breast cancer metastasis to bone. University of Idaho, Department of Microbiology, Molecular Biology, and Biochemistry, Moscow, ID, April 29th, 2010.

Regional.

Oncostatin M as a potential target for inhibiting breast cancer metastasis to bone. American Association for the Advancement of Science (AAAS) Pacific Division Annual Conference, Ashland, OR, June 14th, 2010. **Regional.**

Extracellular matrix modulates cell signaling. 7th Annual INBRE Conference, University of Idaho, Moscow, ID, August 2nd-4th, 2010. **Regional.**

Understanding breast cancer progression. Boise State University, Department of Materials Science and Engineering, Boise, ID. September 24th, 2010. **Regional.**

Oncostatin M: potential target for inhibiting breast cancer metastasis to bone. American Association for the Advancement of Science (AAAS) Pacific Division Annual Conference, University of San Diego, San Diego, CA. June 12th-15th, 2011. **Regional.**

Cross-talk between bone metastatic mammary tumor cells and bone microenvironment. International Bone and Mineral Society Workshop (IBMS), Sun Valley, ID. July 30th - August 3rd, 2011. **International.**

Breast cancer innovative research and treatment. 1st Annual Susan G. Komen Moving Through Breast Cancer Symposium, September 17th, 2011. **Regional.**

Breast cancer and oncostatin M: research and treatment. Department of Chemistry and Biochemistry. Boise State University, Boise, ID. October 21st, 2011. **Regional.**

Understanding breast cancer genetics and targeted therapies. Annual Breast Care Services Conference. St. Luke's Regional Medical Center Mountain States Tumor Institute, Meridian, ID. November 12th, 2011. **Regional.**

Why support cancer research? American Cancer Society Team Captain Summit Conference, Boise, ID, February 11, 2012. **Regional.**

Does diet really make a difference when it comes to breast cancer? Boise State University's Honor College Friday Forum, Boise State University, Boise, ID, February 17, 2012. **Regional.**

Metastatic breast cancer: development of targeted therapies. Idaho Society for Radiology Technicians, Boise, ID, April 21, 2012. **Regional.**

Breast cancer metastasis: a role for the inflammatory cytokine oncostatin M. AAAS Pacific Division Annual Conference, June 24, 2012. **Regional.**

Why support cancer research? Ada County American Cancer Society Relay for Life, Boise, ID, July 13, 2012. **Regional.**

Why support cancer research? Tampa American Cancer Society Laureate Society, Tampa, FL, October 10, 2012. **National.**

Why support cancer research? American Cancer Society Great West Summit, Sun Valley, ID, October 27, 2012. **Regional.**

Mechanisms of OSM-induced tumor progression and cancer therapy. Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 18, 2013. **Regional.**

BSU Teaching Experience:

Formal Class Instruction:

- Molecular Cell and Genetics Laboratory (BIOL 344 and BIOL 344G)
- Molecular Biology of Cancer (BIOL 541 and BIOL 441)
- Molecular Biology of Cancer Service Learning (BIOL 541SL and BIOL 441SL)
- Advanced Topics in Molecular Biological Techniques (BIOL 565 and BIOL 465)
- Molecular Studies of Biomedical Topics (BIOL 566 and BIOL 466)
- Advanced Topics in Cancer Molecular Biology (BIOL 598 and BIOL 498)
- Biol 597 Scientific Writing (Biol 597)
- Lab Discussion Group (BIOL 595 and BIOL 497)
- Genetics (BIOL 343)
- Cell Biology (BIOL 301)
- Bioinformatics (BIOL 597 and BIOL 497)
- Proposal Writing (BMOL 606)

Thesis Advisor for Masters Students:

- Lynda Zhang M.S. in Biology, July 30, 2000
- Kurt Lindsay Received M.D. from Oregon Health Sciences Institute, 2005
- Colin Soares M.S. in Biology, March 22, 2002
- Ryan Holzer M.S. in Biology, March 12, 2003
- Marisa Queen M.S. in Biology, March 11, 2005
- Alex Ide M.S. in Biology, March 16, 2005
- Amanda Bruesch M.S. in Biology, September 14, 2007
- David Chang Commodities Trader
- Patrick Aranda M.S. in Biology, October 7, 2009
- Ken Tawara M.S. in Biology, March 23, 2011
- Madhuri Nandakumar Current M.S. student
- Hunter Covert Transitioned to PhD Program
- Jordan Koncinsky Current M.S. student
- Jake Goyden Current M.S. student

Thesis Advisor for Biomolecular Sciences PhD Program (started 08/12):

- Ken Tawara, MS
- Hunter Covert

Department of Biological Sciences Graduate Student Thesis Committees:

- Michael Davis (Dr. Troy Rohn)
- Sorcha Cusack (Dr. Julie Oxford)
- Ryan Medeck (Dr. Julie Oxford)
- Jodie Newman (Dr. Troy Rohn)
- Tim O'Donnell (Dr. Bob Rychert)
- Amy Couch (Dr. Henry Charlier)
- Alma Hodzic (Dr. Denise Wingett)
- Nathan Hoskins (Dr. Julie Oxford)
- Kendra Coonse (Dr. Julie Oxford)
- Ming Fang (Dr. Julie Oxford)
- Ashley McCartney (Dr. Kristen Mitchell)
- Stephanie Wyler (Dr. Kristin Mitchell)
- Emily Schmid (Dr. Kristen Mitchell)

- Wendy Harvey (Dr. Kristen Mitchell)
- Jonathan Reeck (Dr. Julie Oxford)
- Neda Shefa (Dr. Julie Oxford)
- Anthony Hafez (Dr. Julie Oxford)
- Tyler Wines (Dr. Juliette Tinker)

Graduate Student Thesis Committees from other Universities:

- Kyle Rosenke Ph.D. from University of Idaho (Dr. Lee Fortunato), August 9, 2006

Postdoctoral Fellows:

- Dr. Sujatha Kadaba, 2007
- Dr. Celeste Bolin, started January 11th, 2010
- Dr. Jim Moselhy, started November 10th, 2010

Research Associates:

- Dollie LaJoie, B.S., started August 23rd, 2010
- Dr. Randall Ryan, started October 25th, 2010
- Ken Tawara, M.S., started March 24, 2011
- Erik Stoll, B.S. started September 12, 2011

Mentor for High School Students:

- Chris Anderson Treasure Valley Math and Science Center
- Charles Bin Boise High School

Mentor for Undergraduate Students:

- Barbara Smith
- Erick Schlekeway Attended Medical School
- Matt Tommack
- Brooke McCuskey
- Anna Hemphill
- Kencee Amyx Attended Medical School
- Brian Byrne Attended Medical School
- Andrew Oler Attended Ph.D. Program
- Lee Rooney Accepted into Medical School
- Tshering Sherpa Attended Ph.D. Program
- Jenny Stear Attended Medical School
- Tyrell Simpkins Attended D.O./Ph.D. Program
- Deidre Barrera
- Amanda Bruesch Attended M.S. Program at Boise State University
- Christine MacDougal Attended Ph.D. Program, Completed Law School
(from University of Georgia)
- Loni Connell Completed Medical School
- Dan Henbest Completed Medical School (D.O. Program)
- Kelly Katula (from BYU-Idaho)
- Jonathan Lee MD, Fellowship at University of Utah
(from BYU-Idaho)
- Jeff Redshaw (from BYU-Idaho)
- Mary Lewis Attended Ph.D. Program (from College of Idaho)
- Bengt Phung
- Ryan Fox
- Stephen-David Spelter
- Logan Miller (from BYU-Idaho)

- Kara Jackson
- Caleb Sutherland Attending University of Arizona PhD Program
- Dollie Thompson Attending University of Utah PhD Program
- Farhad Mangal Graduating as a Top Ten Scholar at Boise State (05/13)
- Krista DeCoursey (from BYU-Idaho)
- Maygen Cardova
- Rachael Anderson (from BYU-Idaho)
- Maryam Sabetian Will start at University of Washington Medical School
- Nicole Ankenbrandt STEP/STEM Student
- Jamie Hicks
- Danielle Hedeem Currently in lab
- Robert Navert Currently in lab (transfer from Tulane, LO)

Mentor for Medical Students:

- Jeff Walker University of Washington
- Joe Deaver University of Washington
- Camille Asher University of Washington

Presentations: (Poster Presentations including Student Oral and Poster Presentations since 2003)

Microarray analysis comparing the PIN cell line, Pr-111, and the prostate adenocarcinoma cell line, Pr-14₂. Amy Ambrosier, Colin R. Soares, Peter S. Nelson, and Cheryl L. Jorcyk. Murdock Charitable Trust's Partners in Science Meeting, San Diego, CA, January 16-18, 2003. *Regional*.

Oncostatin M induces cyclooxygenase (Cox)-2, and stimulates Cox-2-mediated detachment of a reservoir of invasive cells in mammary carcinoma. Ryan Holzer, Eric Schlekeway, Randy Ryan and Cheryl Jorcyk. 94th Annual Meeting for the American Association for Cancer Research (AACR), Washington, DC, July 11-14, 2003. *National*.

The Effects of OSM-induced VEGF on HUVECs: An *in-vitro* Angiogenesis Assay. Kencee K. Amyx, Alexander E. Ide, Ryan G. Holzer and Cheryl L. Jorcyk, 2nd Annual BRIN Conference, Boise, ID, August 11-13, 2003. *Regional*.

Oncostatin M Promotes *in vitro* Angiogenesis Through Induction of Vascular Endothelial Growth Factor in Mammary Carcinoma. (Oral Presentation), Alex Ide and Cheryl L. Jorcyk, 2nd Annual BRIN Conference, Boise, ID, August 11-13, 2003. *Regional*.

Oncostatin M (OSM) stimulates the detachment of a reservoir of invasive mammary carcinoma cells: the role of cyclooxygenase-2. (Oral Presentation), Ryan G. Holzer and Cheryl L. Jorcyk, 2nd Annual BRIN Conference, Boise, ID, August 11-13, 2003. *Regional*.

Effects of Neutrophil-derived Oncostatin M (OSM) on Breast Cancer Cells. (Oral Presentation), Marisa Queen and Cheryl L. Jorcyk, 2nd Annual BRIN Conference, Boise, ID, August 11-13, 2003. *Regional*.

Oncostatin M Induces Cell Detachment and Enhances the Metastatic Capacity of T-47D Human Breast Carcinoma Cells. Cheryl L. Jorcyk, Ryan G. Holzer, and Randall E. Ryan. AACR Special Conference on Breast Cancer, Huntington Beach, CA, Oct. 9-12, 2003. *National*.

Development of a Tool To Study Breast Cancer Metastasis: MDA-MB-231 Cells Designed to Overexpress Oncostatin M. Brooke McCuskey, Marisa Queen, and Cheryl L. Jorcyk. Idaho Academy of Sciences Conference, March 25th -27th, 2004. (Awarded 2nd place for Graduate Student Poster Presentations.) *Regional*.

The Effects of OSM-induced VEGF on Endothelial Cell Tube Formation. Kencee K. Amyx, Alexander E. Ide, Ryan G. Holzer and Cheryl L. Jorcyk. Idaho Academy of Sciences Conference, March 25th -27th, 2004. *Regional*.

Oncostatin M Induces Detachment and Enhances the Metastatic Capacity of T-47D Human Breast Carcinoma Cells. Cheryl L. Jorcyk, Ryan G. Holzer, and Randall E. Ryan. 95th Annual Meeting for the American Association for Cancer Research (AACR), Orlando, FL, March 27th-31st, 2004. *National*.

Breast Cancer Cells Co-cultured with Neutrophils Express Endogenous Oncostatin M (OSM). Marisa Queen, Alexander Ide, Kencee Amyx, Barbara Smith¹, Randy Ryan, and Cheryl Jorcyk. 95th Annual Meeting for the American Association for Cancer Research (AACR), Orlando, FL, March 27th-31st, 2004. *National*.

Protein Characterization Illuminates the Effects of Oncostatin M in Breast Cancer: 2 Dimensional Polyacrylamide Gel Electrophoresis of MB-MDA231 Cells. Pernilla Stridh-Igo; Kencee Amyx; Cheryl Jorcyk; Julie Oxford; and Sheryl Hawkes. 1st Annual Boise State University Undergraduate Research Day, Boise State University, Boise, ID, April 19th, 2004. *Regional*.

The Role of Oncostatin M in Human Microvascular Endothelial Cell Proliferation. Lee Rooney, Adrian Pauw, Alex Ide and Cheryl L. Jorcyk. 1st Annual Boise State University Undergraduate Research Day, Boise State University, Boise, ID, April 19th, 2004. *Regional*.

Neutrophils Co-Cultured with Breast Cancer Cells Express Endogenous Oncostatin M (OSM). (Oral Presentation) Marisa Queen, Alexander Ide, Kencee Amyx, Barbara Smith, Randy Ryan, and Cheryl Jorcyk. 3rd Annual BRIN Conference, Idaho State University, Pocatello, ID, August 9th-11th, 2004. *Regional*.

OSM and Breast Cancer Metastasis to the Bone. Andrew Oler and Cheryl L. Jorcyk. 3rd Annual BRIN Conference, Idaho State University, Pocatello, ID, August 9th-11th, 2004. *Regional*.

Does Oncostatin M have a Role in Breast Cancer Metastasis to the Bone? Andrew Oler and Cheryl Jorcyk. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

Oncostatin M Induction of Vascular Endothelial Growth Factor in Human Breast Cancer Cells Promotes Angiogenesis. Alexander Ide, Ryan Holzer, Kencee Amyx and Cheryl Jorcyk. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

Development of Tools to Study Breast Cancer Metastasis: MDA-MB-231 Cells Designed to Overexpress Oncostatin M. Amanda J. Bruesch, Tshering Sherpa, Brooke McCuskey, and Cheryl Jorcyk. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

Evaluation of OSM-Receptor In Normal Human Breast Tissue, Breast Carcinoma, and Metastatic Carcinoma. Byrne B, Queen M, Jorcyk C. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

The Role of Oncostatin M in Human Microvascular Endothelial Cell Proliferation. Lee O. Rooney, Alexander E. Ide, and Cheryl L. Jorcyk. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

Neutrophils Co-cultured with Human Breast Cancer Cells Express Endogenous Oncostatin M (OSM). Marisa Queen, Alexander Ide, Lee Rooney, Randy Ryan, and Cheryl Jorcyk. 4th Annual Northwest Cancer Conference (NWCC), Spokane, WA, November 11th-13th, 2004. *Regional*.

Determination of the Receptor Utilized by Oncostatin M (OSM) to Promote Metastatic Characteristics in MDA-MB-231 Human Breast Cancer Cells. Heidi Pluska and Cheryl L. Jorcyk. MJ Murdock Charitable Trust's Partners in Science Meeting, San Diego, CA, January 13th-15th, 2005. *Regional*.

Breast cancer cells stimulate neutrophils to produce oncostatin M: potential implications for tumor progression. Marisa M. Queen, Alexander E. Ide, Ryan G. Holzer, Randall E. Ryan, and Cheryl L. Jorcyk. Keystone Symposium on Microenvironment of the Tumor, Banff, British Columbia, Canada, February 5th-10th, 2005. *International*.

Oncostatin M Induction of Vascular Endothelial Growth Factor in Human Breast Cancer Cells Promotes Angiogenesis. Alexander Ide, Ryan Holzer, Kencee Amyx, and Cheryl Jorcyk. 96th Annual Meeting for the American Association for Cancer Research (AACR), Anaheim, CA, April 16th-20th, 2005. *National*.

Neutrophils Co-cultured with Human Breast Cancer Cells Express Endogenous Oncostatin M (OSM). Marisa Queen, Alexander Ide, Lee Rooney, Randy Ryan, and Cheryl Jorcyk. 96th Annual Meeting for the American Association for Cancer Research (AACR), Anaheim, CA, April 16th-20th, 2005. *National*.

Evaluation of OSM-Receptor In Normal Human Breast Tissue, Breast Carcinoma, and Metastatic Carcinoma. Stear J, Byrne B, Queen M, Jorcyk C. 2nd Annual Boise State University Undergraduate Research Day, Boise State University, Boise, ID, April 11th 2005. *Regional*.

Initiating Oncostatin M in vivo Studies. (Oral Presentation) Amanda J. Bruesch and Cheryl L. Jorcyk. 2nd Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 7th-10th, 2005. *Regional*.

The Role of Oncostatin M in Prostate Cancer. David H. Chang and Cheryl L. Jorcyk. 2ⁿ Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 7th-10th, 2005. *Regional*.

GM-CSF from Breast Cancer Cells Triggers Expression of Oncostatin M (OSM) by Neutrophils During Co-culture. Soma Ganguly, Marisa M. Queen, and Cheryl L. Jorcyk. 2nd Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 7th-10th, 2005. *Regional*.

Signaling of OSM-induced VEGF in human breast and prostate cancer cell lines. Andrew J. Oler, Alexander E. Ide, David Chang, Cheryl L. Jorcyk. 2nd Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 7th-10th, 2005. *Regional*.

Oncostatin M-Receptor evaluation in normal, carcinoma, and metastatic human tissue. Stear Jenny, Byrne Brian, Queen Marisa, Jorcyk Cheryl. 2nd Annual INBRE Conference, Northwest Nazarene University, Nampa, ID, August 7th-10th, 2005. *Regional*.

Breast cancer cells stimulate neutrophils to produce oncostatin M: potential implications for tumor progression. Marisa M. Queen, Alexander E. Ide, Ryan G. Holzer, Randall E. Ryan, and Cheryl L. Jorcyk. AACR Special Conference on Cancer, Proteases, and Tumor Microenvironment, Bonita Springs, FL, November 30th-December 4th, 2005. *National*.

Determination of the Receptor Utilized by Oncostatin M (OSM) to Promote Metastatic Characteristics in MDA-MB-231 Human Breast Cancer Cells. Heidi Pluska and Cheryl L. Jorcyk. MJ Murdock Charitable Trust's Partners in Science Meeting, San Diego, CA, January 12th-14th, 2006. *Regional*.

The role of oncostatin M in prostate cancer. David Chang, Andrew Oler, and Cheryl Jorcyk. 97th Annual Meeting for the American Association for Cancer Research (AACR), Washington, DC, March 29th-April 5th, 2006. *National*.

Oncostatin M Induction of Vascular Endothelial Growth Factor in Human Breast Cancer Cells Promotes Angiogenesis. Alexander Ide, Ryan Holzer, Marisa Queen, Andrew Oler, Amanda Bruesch, Kencee Amyx, Randy Ryan, and Cheryl Jorcyk. 97th Annual Meeting for the American Association for Cancer Research (AACR), Washington, DC, March 29th-April 5th, 2006. *National*.

Colon cancer: a role for oncostatin M in tumor cell progression? Tyrell Simkins and Cheryl Jorcyk. 3rd Annual Boise State University Undergraduate Research Day, Boise State University, Boise, ID, April 17th 2006. *Regional*.

In vivo oncostatin M studies—in progress. (Oral Presentation). Amanda Bruesch, Dan Henbest, and Cheryl Jorcyk. 3rd Annual INBRE Conference, Northern Idaho College, Coeur d'Alene, ID, August 6th-8th, 2006. *Regional*.

Knocking down oncostatin M receptor beta expression in tumor cells utilizing RNA interference. (Oral Presentation). Patrick Aranda and Cheryl Jorcyk. 3rd Annual INBRE Conference, Northern Idaho College, Coeur d'Alene, ID, August 6th-8th, 2006. *Regional*.

The role of oncostatin M in prostate cancer. Jonathan Lee, David Change, Andrew Oler, and Cheryl Jorcyk. 3rd Annual INBRE Conference, Northern Idaho College, Coeur d'Alene, ID, August 6th-8th, 2006. *Regional*.

Does Oncostatin M play a role in colorectal cancer? Tyrell Simkins and Cheryl L. Jorcyk. 4th Annual Boise State University Undergraduate Research Day, Boise State University, Boise, ID, April 16, 2007. *Regional*.

The clinical significance of Oncostatin M and its receptors in breast cancer. AAAS (American Association for the Advancement of Science) Pacific Division Annual Conference. (Oral Presentation) Sujatha Kadaba, Karen Halsted, Kara Bowen, Laura Bond, William Fyffe, Joseph Kronz, and Cheryl L. Jorcyk. Boise, ID. June 20, 2007. *Regional*.

Oncostatin M induces VEGF through HIF1alpha. (Oral Presentation) AAAS (American Association for the Advancement of Science) Pacific Division Annual Conference. David Chang and Cheryl L. Jorcyk. June 20, 2007. Boise, ID. *Regional*.

Breast cancer stimulation of osteoclast differentiation: the role of Oncostatin M. (Oral Presentation) AAAS (American Association for the Advancement of Science) Pacific Division Annual Conference. Ken Tawara, Patrick Aranda, Sujatha Kadaba, Andrew Oler, and Cheryl L. Jorcyk. June 20, 2007. Boise, ID. *Regional*.

Breast cancer: confirming oncostatin's role in tumor progression *in vivo*. AAAS (American Association for the Advancement of Science) Pacific Division Annual Conference. Amanda Bruesch and Cheryl L. Jorcyk. June 20, 2007. Boise, ID. *Regional*.

Knocking down Oncostatin M Receptor beta expression in tumor cells: utilizing RNAi for selective mRNA cleavage. AAAS (American Association for the Advancement of Science) Pacific Division Annual Conference. Patrick Aranda and Cheryl L. Jorcyk. June 20, 2007. Boise, ID. *Regional*.

Oncostatin M's role in breast tumor progression *in vivo*. 4th Annual INBRE Conference. Amanda Bruesch and Cheryl L. Jorcyk. August 6, 2007, University of Idaho, Moscow, ID. *Regional*.

Knocking down Oncostatin M receptor beta expression in tumor cells. 4th Annual INBRE Conference. Patrick Aranda and Cheryl L. Jorcyk. August 6, 2007, University of Idaho, Moscow, ID. *Regional*.

Breast cancer stimulation of osteoclast differentiation: the role of Oncostatin M. 4th Annual INBRE Conference. Ken Tawara, Andrew Oler, Sujatha Kadaba, and Cheryl L. Jorcyk. August 6, 2007, University of Idaho, Moscow, ID. *Regional*.

The effect of Oncostatin M on hypoxia-inducible factor 1 alpha and cyclooxygenase-2 gene expression in human breast cancer cells. 4th Annual INBRE Conference. Bengt Phung, Arthur Ayers, and Cheryl L. Jorcyk. August 6, 2007, University of Idaho, Moscow, ID. *Regional*.

The effect of Oncostatin M on integrin expression in human breast cancer cells. 4th Annual INBRE Conference. Mary Lewis and Cheryl L. Jorcyk. August 6, 2007, University of Idaho, Moscow, ID. *Regional*.

Oncostatin M induces VEGF through HIF1a in human breast cancer cells. AACR (American Association for Cancer Research) Special Conference on Breast Cancer. Cheryl L. Jorcyk. October 18, 2007. San Diego, CA. *National*.

OSM elevates RUNX2 mRNA expression in human breast cancer cells. Bengt Phung, Cheryl L. Jorcyk, and Sara Hegglund. 16th Annual Murdock College Science Research Program Conference. November, 2, 2007, Portland, OR. *National*.

OSM elevates RUNX2 mRNA expression in human breast cancer cells. Bengt Phung, Cheryl L. Jorcyk, Sara J. Hegglund. 99th Annual Meeting for the American Association for Cancer (AACR), San Diego, April 12-16th, 2008. *National*.

Breast cancer cell stimulation of osteoclast differentiation and activity: the role of oncostatin M. Ken Tawara, Sujatha Kadaba, Andrew Oler, Cheryl L. Jorcyk 99th Annual Meeting for the American Association for Cancer (AACR), San Diego, April 12-16th, 2008. *National*.

Oncostatin M receptor knockdown in mammary carcinoma cells: the role of OSM signaling in tumor progression and metastasis. Patrick S. Aranda, Ken Tawara, Cheryl L. Jorcyk. 99th Annual Meeting for the American Association for Cancer (AACR), San Diego, April 12-16th, 2008. *National*.

OSM induces VEGF through regulation of HIF1a. David H. Chang, Sujatha Kadaba, Bengt Phung, Alexander Ide, and Cheryl L. Jorcyk. 99th Annual Meeting for the American Association for Cancer (AACR), San Diego, April 12-16th, 2008. *National*.

Using siRNA to modify the expression of OSM in mammary cancer cells in vitro. Jeff Redshaw, Patrick Aranda, Kelly Katula, and Cheryl L. Jorcyk. 5th Annual Boise State University Undergraduate Research Conference, Boise State University, Boise, ID, April 14th, 2008. *Regional*.

Human breast cancer cell metastatic potential is reduced by the combination of OSM and a HIF1a inhibitor. Ryan K. Fox, Amanda Bruesch, Cheryl L. Jorcyk. 5th Annual Boise State University Undergraduate Research Conference, Boise State University, Boise, ID, April 14th, 2008. *Regional*.

Using siRNA to modify the expression of OSM in mammary cancer cells in vitro. Jeff Redshaw, Patrick Aranda, Kelly Katula, and Cheryl L. Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 27-29, 2008. *Regional*.

Human breast cancer cell metastatic potential is reduced by the combination of OSM and a HIF1a inhibitor. Ryan K. Fox, Amanda Bruesch, Cheryl L. Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 27-29, 2008. *Regional*.

A Tetracycline-inducible plasmid construct for controlling oncostatin M expression in breast cancer cell lines. Jeffrey C. Walker and Cheryl L. Jorcyk. The American Federation for Medical Research Western Regional Meeting, Carmel, CA, January 31-February 2, 2008. *Regional*.

Using shRNA to reduce the expression of mouse OSM in mouse mammary cancer cells in vitro. Jeff Redshaw, Patrick Aranda, Kelly Katula, and Cheryl Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Cancer Switches: developing an inducible plasmid to control oncostatin M expression in human and murine breast cancer cell lines. Jeffrey C. Walker and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Tomato fluorescent expression in breast cancer metastasis. Kara Jackson and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Oncostatin M: the role of mammary cancer progression in an orthotopic In vivo mouse model. Ken Tawara, Sujatha Kadaba, and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

The effects of knockdown expression of HIF1a and VEGF: angiogenesis in breast cancer. Logan J. Miller, Patrick Aranda, Jeff Walker, and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Oncostatin M receptor knockdown in mammary carcinoma cells: the role of OSM signaling in tumor progression and metastasis. Patrick S. Aranda, Ken Tawara, and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Investigations on the effects of HIF1a inhibitors on the metastatic potential of human breast cancer cells. Ryan K. Fox, Amanda J. Bruesch, and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

The relationship of OSM Receptor expression and colitis-associated colorectal cancer in mice. Stephan-David Spelter, Tyrell Simkins, Ken Tawara, and Cheryl L. Jorcyk. 5th Annual INBRE Conference, August 4-6, 2008, Boise, ID. *Regional*.

Investigating the role of carbonyl reductase in anthracycline drug resistance. Ryan Morton, Christopher Ewing, Cheryl L. Jorcyk, and Henry Charlier. 237th American Chemical Society National Meeting, Salt Lake City, UT, March 22nd – 26th, 2009. *National*.

Breast cancer cell stimulation of osteoclast differentiation and activity: the role of oncostatin M. Ken Tawara, Sujatha Kadaba, Andrew Oler, and Cheryl L. Jorcyk. 100th Annual Meeting for the American Cancer Society, Denver, CO, April 18th – 22nd, 2009. *National*.

Development of bioluminescent mammary cancer cells with knocked down expression of OSM for detection of bone metastasis *in vivo*. Caleb Sutherland, Jeff Redshaw, Ken Tawara, and Cheryl L. Jorcyk. 6th Annual Boise State University Undergraduate Research Conference, Boise State University, Boise, ID, April 20th, 2009. *Regional*.

The role of OSM in breast cancer cell-promoted osteoclastogenesis. Farhad Mangal, Ken Tawara, and Cheryl L. Jorcyk. 6th Annual Boise State University Undergraduate Research Conference, Boise State University, Boise, ID, April 20th, 2009. *Regional*.

The role of oncostatin M in breast cancer metastasis to bone. Ken Tawara and Cheryl L. Jorcyk. International Bone and Mineral Society (IBMS) Workshop on Musculoskeletal Biology in Sun Valley, ID August 8th-12th, 2009. *International*.

OSM-induced RunX2 in human breast cancer cells (not exact title). The Endocrine Society's 91st Annual Meeting, Washington, D.C., June 10th – 13th, 2009. *National*.

Point-of-contact, DNA-based amplifier for detecting cancer-related micro-RNAs in blood serum. (Oral presentation) Elton Graugnard, Amber Cox, William L. Hughes, Jeunghoon Lee, Cheryl L. Jorcyk, William B. Knowlton, and Bernard Yurke. 2009 Nanoelectronic Devices for Defense Security (Nano-DDS), Fort Lauderdale, FL, September 28th – October 2nd, 2009. *National*.

Point-of-contact, DNA-based Amplifier for Detecting Cancer-Related Micro-RNAs in Blood Serum. Graugnard, E., Cox, A., Lee, J., Jorcyk, C.L., Yurke, B., and Hughes, W.L. Oral & Paper Presentation, Nanoelectronic Devices for Defense & Security Conference, Fort Lauderdale, FL, Sept. 28-Oct. 2, 2009. *National*.

A role for oncostatin M in breast cancer metastasis. Ken Tawara, Caleb Sutherland, Rachael Anderson, and Cheryl L. Jorcyk. Keystone Symposium on Cancer and Inflammation in Keystone, CO February 7th-12th, 2010. *National*.

Breast cancer cell regulation of osteoclast differentiation and activity: the role of oncostatin M. Ken Tawara, Andrew Oler, and Cheryl L. Jorcyk. Miami 2010 Winter Symposium on Targeting Cancer Invasion and Metastasis in Miami Beach, FL, February 21st-24th, 2010. *National*.

Point-of-Contact, DNA-Based Amplifier for Detecting Cancer-Related Micro-RNA in Blood Serum. Graugnard, E., Cox, A., Lee, J., Jorcyk, C.L., Yurke, B., and Hughes, W.L. Abstract & Poster Presentation, 7th Annual Conference on Foundations of Nanoscience, Snowbird, UT, April 27-30, 2010. *National*.

Reaction Kinetics of a DNA-Based Amplifier for use in Detection of Cancer-Related miRNA. Cox, A., Graugnard, E., Hughes, W.L., Lee, J., Jorcyk, C.L., and Yurke, B. Abstract & Poster Presentation, 7th Annual Conference on Foundations of Nanoscience, Snowbird, UT, April 27-30, 2010. *National*.

Operation of a DNA-based autocatalytic amplifier in human serum. Graugnard, E., Cox, A., Lee, J., Jorcyk, C.L., Yurke, B., and Hughes, W.L. 16th International Conference on DNA Computing and Molecular Programming, Hong Kong, China. June 14-17, 2010. *International*.

Effects of oncostatin M on breast cancer metastatic potential. Caleb Sutherland, Ken Tawara, and Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Developing 4T1.2 and 4T1-luc2 cells that overexpress full-length and truncated oncostatin M inducibly and constitutively. Dollie LaJoie, Hunter Covert, Jeff Walker, Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Establishing human breast cancer cells that inducibly express oncostatin M. Hunter Covert, Dollie LaJoie, Joe Deaver, and Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Will exogenous oncostatin M induce production of oncostatin M? Jordan Koncinsky and Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Development of 66c14 murine mammary carcinoma cells having constitutive expression of truncation oncostatin M. Rachael Anderson, Dollie LaJoie, Ken Tawara, and Cheryl

L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

The role of oncostatin M (OSM) in osteoclast differentiation and activity in an in vitro model of breast cancer metastasis to bone. (*Oral Presentation*) Celeste Bolin and Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Hypoxia inducible factor 1 alpha plays a role in mammary cancer cell-mediated bone destruction. (*Oral Presentation*) Ken Tawara and Cheryl L. Jorcyk. 7th Annual INBRE Conference, August 2-4, 2010, University of Idaho, Moscow, ID. *Regional*.

Synergistic Role of Oncostatin M and IL-1B in an Arthritic Induced Cell Culture Model System. Liliana Mellor, Julie Oxford, and Cheryl L. Jorcyk. Orthopaedic Research Society (ORS) Annual Conference, January 13th-16th, 2011, Long Beach, CA. *International*.

Breast cancer cell-mediated osteoclast differentiation is upregulated by oncostatin M through HIF1alpha, VEGF, and IL-6. Ken Tawara and Cheryl Jorcyk. 1st Annual Boise State University Graduate Research Conference. (*Oral Presentation*) Boise State University, March 18th, 2011. *Regional*.

The effect of oncostatin M (OSM) on regulating RAB11a and TEF-1 gene expression in human breast cancer. Nicole Ankenbrandt and Cheryl Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

Models for evaluating mechanisms of breast cancer metastasis to bone regulated by Oncostatin M (OSM). Celeste Bolin, Ken Tawara, Caleb Sutherland, Robin Anderson, and Cheryl L. Jorcyk. (*Oral Presentation*) Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

DNA reaction networks operated in serum and blood for cancer detection. Elton Graugnard, Amber Cox, Jessica Minick, Jeunghoon Lee, Cheryl Jorcyk, Bernard Yurke, and William L. Hughes. (*Oral Presentation*) Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

Quantitative analysis of mammary carcinoma cell metastasis to bone. Jim Moselhy, Ken Tawara, Jeff Redshaw, Celeste Bolin, Robin Anderson, and Cheryl L. Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

Molecular mechanisms of IL-6 family cytokine-induced VEGF in breast cancer. Madhuri Nandakumar; Randall Ryan; Ryan Fox; Cheryl Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

The role of Oncostatin M (OSM) in regulating osteogenesis in vitro. Maryam Sabetian, Celeste Bolin, and Cheryl Jorcyk. Idaho Academy of Sciences Annual Conference, Boise, ID, March 31st–April 1st, 2011. *Regional*.

Mechanisms of oncostatin M (OSM)-mediated breast cancer metastasis to bone: evidence for a role in osteoclastogenesis. Celeste Bolin, Ken Tawara, Caleb Sutherland, Robin Anderson, and Cheryl Jorcyk. 102nd American Association for Cancer Research (AACR), Orlando, FL, April 2nd–6th, 2011. *National*.

Molecular mechanisms of OSM-induced VEGF in Breast cancer. Madhuri Nandakumar, Ryan Fox, and Cheryl Jorcyk. 102nd American Association for Cancer Research (AACR), Orlando, FL, April 2nd–6th, 2011. *National*.

The effect of oncostatin M (OSM) on regulating RAB11a and TEF-1 gene expression in human breast cancer. Nicole Ankenbrandt and Cheryl Jorcyk. 8th Annual Boise State

University Undergraduate Research Conference, Boise State University, Boise, ID, April 11th, 2011. *Regional*.

The role of Oncostatin M (OSM) in regulating osteogenesis in vitro. Maryam Sabetian, Celeste Bolin, and Cheryl Jorcyk. 8th Annual Boise State University Undergraduate Research Conference, Boise State University, Boise, ID, April 11th, 2011. *Regional*.

Operation of a DNA-based nanomachine in human blood. Jessica Minick, Elton Graugnard, Jeunghoon Lee, Cheryl L. Jorcyk, Bernard Yurke, and William L. Hughes. IEEE Nano 2011 Conference, Portland, OR. August 15th-19th, 2011. *International*.

Novel mouse mammary cell lines for *in vivo* bioluminescence imaging (BLI) of bone metastasis. Celeste Bolin, Caleb Sutherland, Ken Tawara, Jim Moselhy, Robin Anderson, and Cheryl L. Jorcyk. (Oral Presentation) International Bone and Mineral Society Workshop (IBMS), Sun Valley, ID. July 30th - August 3rd, 2011. *International*.

The role of oncostatin M (OSM) in regulating osteogenesis in vitro. Maryam Sabetian, Jake Goyden, Celeste Bolin, and Cheryl L. Jorcyk. 8th Annual INBRE Conference, August 1-3, 2011, University of Idaho, Moscow, ID. *Regional*.

Epithelial-mesenchymal transition and oncostatin M: involvement in metastasis? (Oral Presentation) 8th Annual INBRE Conference, August 1-3, 2011, University of Idaho, Moscow, ID. *Regional*.

Cross-talk between bone metastatic mammary tumor cells and bone microenvironment. Celeste Bolin and Cheryl L. Jorcyk. (Oral Presentation) 8th Annual INBRE Conference, August 1-3, 2011, University of Idaho, Moscow, ID. *Regional*.

Synthetic DNA Reactions for Low-cost Diagnosis of Cancer. Elton Graugnard, Jessica Minick, Natalya Hallstrom, Jeunghoon Lee, Cheryl Jorcyk, Bernard Yurke, and William L. Hughes. NIH-Frederick Cancer Detection and Diagnostics Technologies for Global Health Conference, August 22nd-23rd, 2011, Frederick, MD. *National*.

The novel role of oncostatin M and IL-1b in articular Cartilage Degradation. Liliana Mellor, Cheryl L. Jorcyk, and Julie Oxford. American Society for Bone and Mineral Research (ASBMR) Annual Conference, September 16-20th, 2011, San Diego, CA. *International*.

A novel potential target for inhibiting breast cancer metastasis to bone. Cheryl L. Jorcyk, Henry & Elsa Jiler American Cancer Society Professors Meeting, October 30th to November 2nd, 2011, Braselton, GA. *National*.

An important role for the IL-6 cytokine oncostatin M in breast cancer metastasis to bone. Celeste Bolin, Ken Tawara, Jeff Redshaw, Caleb Sutherland, Joel Garbow, Robin Anderson, and Cheryl Jorcyk. International Bone and Mineral Society Cancer-Induced Bone Disease Conference, November 30th to December 3rd, 2011, Chicago, IL. *International*.

Extracellular matrix regulates bioavailability of proinflammatory cytokines influencing bone formation. J. R. T. Oxford, R. Ryan, L. Mellor, C. J. Jorcyk, T. T. Rohn, K. A. Mitchell. NASA Human Research Program Investigators' Workshop, February 16, 2012. Houston, TX. *National*.

Synergistic role of oncostatin M and IL-1beta in an arthritic-induced cell culture model system. Liliana Mellor, Julie Oxford, and Cheryl L Jorcyk. Orthopedic Research Society, San Francisco, CA, February 1, 2012. *International*.

Do human Multiple Myeloma cells express OSM? Danielle Hedeem and Cheryl L. Jorcyk, Boise State University Undergraduate Research Conference, April 16, 2012. *Regional*.

Discovering novel anti-bacterial/anti-parasite/anti-cancer/carbonyl reductase cardiotoxicity therapeutics. Matthew Caylor, Daniela Olivas, Kate Jette, Andy Coombs, Ashley Magin, Kenneth Cornel, Henry A. Charlier, Cheryl L. Jorcyk, Rajesh Nagarajan, and Dong Xu, Boise State University Undergraduate Research Conference, April 16, 2012. *Regional*.

Does oncostatin M induce morphological changes in human breast cancer cells? Nicole Ankenbrandt, Hunter Covert, and Cheryl L. Jorcyk, Boise State University Undergraduate Research Conference, April 16, 2012. *Regional*.

Novel mouse mammary cell lines for in vivo bioluminescence imaging (BLI) of bone metastasis. Celeste Bolin, Caleb Sutherland, Ken Tawara, Jim Moselhy, and Cheryl L. Jorcyk, Boise VA Medical Center Research Building Grand Opening, April 27, 2012. *Regional*.

The inflammatory cytokine oncostatin M promotes mammary tumor metastasis to bone and osteolytic bone degradation. Celeste Bolin, Ken Tawara, Caleb Sutherland, Jeff Redshaw, Patrick Aranda, Jim Moselhy, Robin Anderson, and Cheryl L. Jorcyk, Keystone Symposium on Inflammation and Cancer, Dublin, Ireland, May 20, 2012. *International*.

Characterization of lung metastasis in an inflammatory cytokine model of breast cancer. (Oral Presentation). Celeste Bolin, Joel Garbow, Ken Tawara, Jeff Redshaw, Robin Anderson, and Cheryl Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

A role for inflammatory cytokines in breast cancer EMT (Oral Presentation). Hunter Covert, Nicole Ankenbrandt, Randy Ryan and Cheryl Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Interactions of osteoblasts, inflammation, and the extracellular matrix in simulated free fall (Oral Presentation). Jake Goyden, Benjamin Davis, Julia Oxford, and Cheryl Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Quantitative evaluation of the inductive effects of OSM-signaling on breast cancer metastasis to bone. (Oral Presentation). Jim Moselhy, Ken Tawara, Jeff Redshaw, Celeste Bolin, Robin Anderson, and Cheryl Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

A molecular mechanism for metastatic breast cancer-mediated bone destruction.. (Oral Presentation). Ken Tawara and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Oncostatin M interacts with ECM components: implications for chronic inflammation and tumor metastasis (Oral Presentation). Randall Ryan, Bryan Martin, Liliana Mellor, Owen McDougal, Reed Jacob, Julia Oxford, and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Do human multiple myeloma cells express OSM and inflammatory cytokines. Danielle Hedeon, Dollie LaJoie, and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Tetracycline-inducible overexpression of human oncostatin M in breast cancer. Dollie LaJoie and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

In vitro investigation of cytokine-induced osteoclastogenesis by mammary tumor cells. Erik Stoll, Celeste Bolin, and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Role of IL-6 family cytokines in breast tumor cell expression of VEGF. Madhuri Nandakumar, Danielle Hedeem, and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Does oncostatin M induce morphological changes in human breast cancer cells? Nicole Ankenbrandt, Hunter Covert, and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 24, 2012. *Regional*.

Inflammatory cytokines and drug resistance in breast cancer. Jamie Hicks, Cheryl L. Jorcyk, and Randall Ryan. Boise State University Summer Undergraduate Research Conference, July 27, 2012. *Regional*.

Human multiple myeloma cells and inflammatory cytokines. Danielle Hedeem and Cheryl L. Jorcyk. Annual Idaho INBRE Conference, August 6, 2012. *Regional*.

Inflammatory cytokines and drug resistance in breast cancer. Jamie Hicks, Cheryl L. Jorcyk, and Randall Ryan. Annual Idaho INBRE Conference, August 6, 2012. *Regional*.

Potential effects on breast cancer metastasis. Arn Allemand, Dallas Trole, Julia Oxford, and Cheryl L. Jorcyk, Murdock Charitable Trust Partners in Science Conference, Vancouver, WA, August 9, 2012. *National*.

Extracellular matrix protein binding to inflammatory cytokines: potential regulation of cancer metastasis. Dallas Trole, Arn Allemand, Julia Oxford, and Cheryl L. Jorcyk. Murdock Charitable Trust Partners in Science Conference, Vancouver, WA, August 9, 2012. *National*.

The inflammatory cytokine oncostatin M is a potent inducer of mammary tumor metastasis. Celeste Bolin, Ken Tawara, Jim Moselhy, Joel Garbow, Robin Anderson, and Cheryl L. Jorcyk, Metastasis Research Society Conference, Brisbane, Australia, September 9, 2012. *International*.

OSM-induced cathepsin D in breast cancer invasion and metastasis. Jordan B. Koncinsky, Randall Ryan, and Cheryl L. Jorcyk. AACR Special Conference on Tumor Invasion and Metastasis, San Diego, CA, January 20, 2013. *International*.

Evidence for the inflammatory cytokine oncostatin M promoting breast cancer metastasis to bone. Celeste Bolin, Ken Tawara, Jim Moselhy, Joel Garbow, Robin Anderson, and Cheryl L. Jorcyk. St. Luke's Regional Medical Center 1st Annual Research Symposium, Boise, ID, February 1, 2013. *Regional*.

The role of inflammatory cytokines in metastatic prostate cancer. Robert Navert, Danielle Hedeem, Erik Stoll, Randall E. Ryan, and Cheryl L. Jorcyk. American Association for the Advancement of Science (AAAS) Pacific Division Annual Conference, June 24, 2013. *Regional*.

Oncostatin M is a proinflammatory cytokine capable of exerting long term biological effects via its binding to ECM components in a bioactive conformation. Randall Ryan, Bryan Martin, Liliana Mellor, Owen McDougal, Julia Oxford and Cheryl L. Jorcyk. AACR Annual Meeting, April 6, 2013. *International*.

Multiple Myeloma and The Effects of Secreted Inflammatory Cytokines in the Bone Marrow Microenvironment. Danielle Hedeem and Cheryl L. Jorcyk. Annual Undergraduate Research Conference, Boise State University, April 15, 2013. *Regional*.

The role of inflammatory cytokines in metastatic prostate cancer. Robert Navert, Danielle Hedeem, Erik Stoll, Randall E. Ryan, and Cheryl L. Jorcyk. Annual Undergraduate Research Conference, Boise State University, April 15, 2013. *Regional*.

Development of Novel Small Molecule Inhibitors of Cytokine Signaling. (Oral Presentation). Jim Moselhy and Cheryl L. Jorcyk. AAAS Pacific Division Annual Conference, June 18, 2013. *Regional*.

Professional Service (Partial list since 2003):

Manuscript Reviewer, numerous journals including *Cancer Research*, *Molecular Cancer Research*, *Molecular Cell Research*, *International Journal of Cancer*, *BMC Cancer*, *Clinical and Experimental Metastasis*, the *International Journal of Biochemistry and Cell Biology*, the *American Journal of Pathology*, *Cytokine*, *Experimental Cell Research*, the *Archives of Biochemistry and Biophysics*, *Clinical and Experimental Metastasis*, and *FEBS*.

Member, VA Research and Development Biosafety Committee. Department of Veterans Affairs Medical Center, Boise, ID, 1999-2006.

Member, Southern Idaho Science Collaborative (SISC). Nampa, ID, 1999-2005.

Community Scientist, Vallivue School District Hands-On Science Reform Program. Spring 2003.

Participant, St. Luke's Regional Medical Center's Mountain States Tumor Institute (MSTI) oncology seminar/dinner presentations, 2003-present.

Member, Washington State University Cancer Prevention and Research Center (CPRC) Conference Committee. Washington State University, Pullman, WA. Spring 2004.

Member, Discovery Center of Idaho (DCI) Education Committee. Boise, ID, 2004-2007.

Affiliate Member, BioIdaho. Boise, ID 2004-2007.

Member, BioIdaho Planning Committee, Hosted first BioBreak event at the Idaho State Laboratories, Boise, ID, 2004 the BioIdaho Legislature Dinner, Boise, ID, 2005, and the BioIdaho Legislative Luncheon, Boise, ID, 2007.

Northwest Regional Officer, Sigma Xi Honorary Science Society, 2005-2006.

Member, Idaho Comprehensive Cancer Collaborative (ICCC) Cancer Prevention Subcommittee. Boise, ID, 2005-present.

CDC Grant participant, Idaho Comprehensive Cancer Collaborative (ICCC). Boise, ID. 2005.

Vice-President, Sigma Xi Honorary Science Society. Boise State University Chapter, 2005-2006.

Lobbyist, National Cancer Institute, NIH. Lobbied for cancer funding to Idaho Senators and Congressmen on Capital Hill, Washington DC, 2006.

Member, MentorNet. Designed to provide mentors to young researcher around the country, 2006.

President, Sigma Xi Honorary Research Society Chapter. Boise State University, Boise, ID, 2007-2008.

Lobbyist, American Cancer Society. Lobbied for cancer funding to Idaho state legislators, Boise, ID, 2009.

Council Member, American Association for the Advancement of Science (AAAS) Pacific Division. 2011-present.

Co-organizer, American Association for the Advancement of Science (AAAS) Pacific Division Annual Conference Organizer for June 2012 Conference in Boise, ID.

Executive Committee Member, Idaho Academy of Sciences (IAS). 2011-present.

Human Subjects Researcher, First Boise State University faculty to submit a Human Subjects protocol (IRB) to St. Luke's Regional Medical Center, Mountain States Tumor Institute (MSTI) for clinical research, 2012.

University Research-related Service (Partial list since 2003):

Member, Graduate Studies Oversight Committee (GSOC). The Department of Biology, Boise State University, 2000-2006.

Host for Seminar Speakers, Department of Biological Sciences Seminar Series, Boise State University, 2003-present.

Member, IACUC (Institutional Animal Care and Use Committee). Boise State University, 2005-2006.

Member, Biomolecular Sciences Ph.D. Planning Committee. (Chair, Molecular & Cellular Biology Section). Boise State University, 2005-2006.

Vice-President, Sigma Xi Honorary Science Society. Boise State University Chapter, 2005-2006.

Member, Premedical Student Summer Fellowship Grant Review Committee. The Department of Biology, Boise State University, 2006.

President, Sigma Xi Honorary Research Society Chapter. Boise State University, Boise, ID, 2007-2008.

Member, IACUC (Institutional Animal Care and Use Committee). Boise State University, 2007-2008.

Member, IRB (Internal Review Board). Biomedical Human Subjects, Boise State University, 2008-2010.

Co-Chair, Internal Review Board (IRB) Committee. Boise State University, 2010-present.

Member, Research Committee. Department of Biological Sciences, Boise State University, Boise, ID 2010-present.

Presenter, Capital Day at the Idaho State Capital for Boise State University, 2011.

Lab Tour Guide, Multiple lab tours on HeLa cells and HeLa cell-related cancer research for *The Immortal Life of Henrietta Lacks* Campus Read Program, Boise State University, Boise, ID, 2011-2012.

Member, STEM Research Education Committee. Boise State University 2011-present.

Mentor, Boise State University New Faculty Mentoring Program, for Alark Joshi (Department of Computer Science), Boise State University, Boise, ID, 2011-present.

Podcaster, Beyond the Blue, Boise State University, Boise, ID, 2011.

Lecturer, The Osher Institute, "Breast Cancer: Research and Treatment", Boise State University, 2011.

Community Service (Partial list since 2003):

Friendly Consultant, Canyon County Public Defender's Office (for Alexander B. Biggs, Attorney at Law), Boise, ID, 2003.

Member, Southern Idaho Science Collaborative (SISC). This group of individuals is addressing how science is taught in K-12. This committee consists of members from the Boise, Meridian, Nampa, and Vallivue School Districts, as well as individuals from Boise State University, Micron, and Hewlett Packard. Nampa, ID, 2003-2005.

Judge, Invent Idaho, Discovery Center, Boise, ID, 2004-2006.

Participant, Idaho State Legislative Luncheon, Boise, ID, January 14th, 2004.

Mentor, Heidi Pluska, High School AP Chemistry teacher at Boise High School, Boise, ID. Together we had a Murdock Charitable Trust Partners in Science Grant. She will take her lab experience and new knowledge back to the classroom, Boise, ID, 2005-2006.

Member, Discovery Center of Idaho (DCI) Education Committee, Boise, ID. This committee replaced SISC (see above) and consists of members from the Boise, Meridian, Nampa, and Vallivue School Districts, as well as individuals from Boise State University, Micron, and Hewlett Packard. Fall 2005-2007.

Member, Idaho Comprehensive Cancer Collaborative, which deals with cancer statewide, including Prevention, Diagnosis, Treatment, and Aftercare. 2005-present.

Presentations and Lab Tours, Elementary School students (1st and 5th graders), Junior High School students (7th graders), and High School students (9th and 12th graders), Boise, ID, 2005-present.

News Stories, CBS Channel 2, ABC Channel 6, Fox Channel 12, *The Idaho Statesman*, Boise State University *Focus Magazine*, and BioIdaho Magazine, 2005-present.

Facilitator, Biology of Cancer Service Learning (Biol 541SL and Biol 441SL). Students met with cancer patients and family members of cancer patients from St. Alphonsus Regional Medical Center and Boise State University to answer questions and discuss cancer causes and treatments, Boise, ID, 2006-present.

Meetings, American Cancer Society, Boise, ID, 2008.

Meetings, St. Luke's Regional Medical Center and St. Alphonsus Regional Medical Center Meeting, Boise, ID 2008-present.