

## CURRICULUM VITAE

**NAME:** Nancy Jane Shelby, PhD

**OFFICE:** Division of Health Sciences  
Montana State University  
310 Leon Johnson Hall  
PO Box 173080  
Bozeman, MT 59717-3080  
Telephone: 406-994-4411  
FAX: 406- 994-4398  
E-mail: jshelby@montana.edu

**PERSONAL DATA:** Place of birth: Powell, Wyoming  
Citizenship: USA

**EDUCATION:** PhD, 1993; University of Utah, College of Social and Behavioral Science  
Areas of Concentration: Psychoneuroimmunology, Medical Sociology, Social Psychology, Stress and Illness, Death and Dying  
MS, 1991; University of Utah, College of Social and Behavioral Science  
Medical Sociology  
BS, 1988; University of Utah College of Social and Behavioral Science  
Psychology

### ADMINISTRATIVE EXPERIENCE:

Executive Director (replacing Vice Provost) for Health Sciences, Montana State University (July 2009-present)  
Bacterin, Inc., Belgrade, Montana VP for Research and Development (2005-2007)  
U.S. Tissue and Cell, Director of Research, Salt Lake City, Utah (2000-2005)  
University of Utah College of Medicine  
Director, Surgery Research Laboratories 1995 - 2001  
Director, Surgery Immunology Laboratory 1984 –1995

### ACADEMIC APPOINTMENTS:

Montana State University Division of Health Sciences

Executive Director, July 2009 to present  
US Healthcare Systems

University of Washington School of Medicine –

Affiliate Professor, Medical Education and Biomedical Informatics  
Montana WWAMI Medical Education Program, Course Chair, June 2010 to present  
Medical Information and Decision Making

Montana State University College of Letters and Science

Adjunct Professor, Department of Sociology, 2009  
Sociology of Health and Medicine  
Adjunct Assistant Professor, Department of Sociology, 1992  
Social Psychology; Family and Marriage; Minorities in Society

#### University of Utah School of Medicine

Associate Professor of Surgery (1998 to May, 2005) (tenure; May, 2000)  
Assistant Professor of Surgery (1994 to 1998)  
Medical School Course-Research Course in Department of Surgery 2002-2005  
Faculty Director-Resident Research Department of Surgery (Research Methodology and Research Projects) 1984-2001

#### University of Utah College of Social & Behavioral Science

Adjunct Associate Professor, Department of Sociology (1992 to 2005)  
Research Assistant Professor, Department of Psychology (1994 to 1997)  
Medical Sociology; Social Psychology; Alternative Medicine (Medicinal Chem 313);  
Sociology of Mental Health; Stress, Health and Immunology (Soc 695), Death and Dying

#### Walden University

Faculty and Course Developer:  
Graduate course – Health Services Quantitative and Qualitative Statistics  
Summer Semester 2000

### **PROFESSIONAL EXPERIENCE:**

#### Board of Trustees

Member Board of Trustees; American Burn Association, 1997-2000.  
Member Board of Trustees; American Burn Association Education and Research Foundation, 2001-2004.

#### Scientific Advisory Boards

Co Chair Bacterin International, Inc., 2003-2008  
Member US Tissue and Cell, Inc., 2000-2005

#### Federal Scientific Review Panels

Member Native American Research Centers for Health (NARCHVI), 2009  
Member National Institutes for Health Center for Scientific Review Special Emphasis Panel Review Groups, 2004, 2005, 2006, 2007, 2008, 2009  
Member National Cancer Institute Scientific Review Group, 2005, 2006, 2007  
Member Office of Naval Research Grant Review Panel, 2004; 2007  
Member American Institute Biologic Sciences- Scientific Review Panel/ Department of Defense, Military Trauma, 2006, 2007, 2008, 2009, 2010, 2011

### **PROFESSIONAL PUBLICATIONS**

#### Journal Articles (selected >150)

1. Erickson J and Shelby J. Cooperative Spirit: Montana WWAMI and Montana AHEC. *J National AHEC Organization*, in press, 2010.
2. Yang YI, Hyeong-in K, Min-Young C, Sung-Hee S, Min-Jeong S, Ji-Yeon S, Won-Hee J, Young-Chul Y, Kang-Joo C, Soon-Ho C, and Shelby J. (2010) *Ex Vivo Organ Culture of Adipose Tissue for In Situ Mobilization of Adipose-Derived Stem Cells and Defining the Stem Cell Niche.* *J Cellular Physiology* 224: 807-816, 2010.
3. Liu Y, Cai S, Zheng Shu X, Shelby J., and Prestwich G (2007) Release of Basic Fibroblast Growth Factor from a Crosslinked Glycosaminoglycan Hydrogel Promotes Wound Healing. *Wound Repair and Regeneration*, 15 245-251.
4. Peattie, R.A., Nayate, A., Firpo, M. A., Shelby, J., Fisher, R.J., Prestwich, G.D., (2004) Stimulation of in vivo angiogenesis by cytokine-loaded hyaluronic acid hydrogel implants and potential gene expression mechanisms for new vessel growth. *Biomaterials* Jun:25(14):2789-98.

5. Kirker KR, Luo Y, Morris SE, Shelby J, Prestwich GD. (2004) Glycosaminoglycan hydrogel films as a supplemental wound dressing material for donor sites. *J Burn Care Rehabil.* 25(3):276-86.
6. Miller, S.C., Bowman, B.M., Siska, C.C., Shelby, J. (2002) Effects of thermal injury on skeletal metabolism in two strains of mice. *Calcif Tissue Int.* 71(5):429-36.
7. Kirker K, Luo Y, Nielson JH, Shelby J, Prestwich GD. (2002) Glycosaminoglycan hydrogel films for wound dressing. *Biomaterials* 23: 3661-3671.
8. Affleck DG, Bull DA, Albanil A, Shao Y, Brady J, Eichwald EJ, Shelby J. (2001) Interleukin-18 production following murine cardiac transplantation: correlation with histologic rejection and the induction of IFN-gamma. *J Interferon Cytokine Res* 21: 1-9.
9. Ritter M, Su Z, Yao A, Zubair I, Xu S, Shelby J, Barry WH. (2001) Myocyte function and [Ca<sup>2+</sup>] homeostasis during early allogeneic heart transplant rejection. *Transplantation.* Nov 27;72(10):1603-7.
10. Ritter M, Menon S, Liping Z, Xu S, Shelby J, Barry WH. (2001) Functional importance and caffeine sensitivity of ryanodine receptors in primary lymphocytes. *International Immunopharm* 1: 339-347.
11. Ritter M, Su Z, Xu S, Shelby J, Barry WH. (2000) Cardiac unloading alters contractility and calcium homeostasis in ventricular myocytes. *J Mol Cell Cardiology* 32(4):577-84.
12. Menon SG, Zhao L, Xu S, Samlowski WE, Shelby J, McGregor J, Barry WH. (1998) Relative importance of cytotoxic T lymphocytes (CTL) and nitric oxide (NO) dependent cytotoxicity in contractile dysfunction of rejecting murine cardiac allografts. *Transplantation* 66: 413-419.
13. Shao W, Edelman L, Sullivan D, Nelson EW, Shelby J. Long-term cytokine alterations following allogeneic blood transfusion. *J Investigative Medicine* 46: 161-7, 1998.
14. Sullivan D, Edelman LS, Shelby J, Shao Y, Hinson DM, Barton RG. (1998) Distinct effects of allogeneic blood transfusion on splenocyte cytokine production after hemorrhagic shock. *J Surg Research* 75: 54-60.
15. Scaife ER, Mone MC, Shelby J, Nelson EW. (1997) Characteristics of kidneys offered as paybacks in the zero-antigen mismatch sharing policy. *Transplant Proc.* 29(8):3441-3.
16. Edelman L, Miller S, Shao WR, Morris S, Shelby J. (1997) Effects of thermal injury on bone metabolism: A murine model. *J-Burn-Care-Rehabil.* 18(6): 483-489.
17. White W, Zhang L, Shelby J, Trautman M, Perkins S, Hammond E, and Shaddy R. (1997) Myocardial apoptosis in a heterotopic murine heart transplant model of chronic rejection and graft vasculopathy. *J Heart and Lung Transplantation*, 16 (2), 250-255.
18. Barton, RG, Saffle JR, Morris SE, Mone ME, Davis B, Shelby J. (1997) Resuscitation of thermally injured patients utilizing oxygen transport criteria as goals of therapy. *J Burn Care Rehab* 18: 1-9.
19. Carlquist JF, Edelman LS, White W, Shelby J, Anderson JL. (1996) Cytokines and rejection of mouse cardiac allografts. *Transplantation* 62:1160-1166.
20. Sullivan DJ, Shelby J, Shao Y, Affleck DG, Hinson DM, Barton RG. (1996) Melatonin and a 21-aminosteroid attenuate shock after hemorrhage, but differentially affect serum cytokines. *J of Surgical Research* 64:13-19.
21. Saffle JR, Sullivan JJ, Shelby J, Morris SE, Mone M. (1996) Return to work as a measure of outcome in adults hospitalized for acute burn treatment. *JBCR* 17:353-361.
22. Winslow G, Shelby J, Nelson EW, Morris S, Barton R, Saffle JR. (1996) Influence of allogeneic blood transfusion on natural killer cell activity in burn injured mice. *JBCR.*, 17; 117-123.
23. Ensley D, Ives M, Zhao L, McMillian M, Shelby J, Barry W. (1994) Effects of alloimmune injury on contraction and relaxation in cultured myocytes and intact cardiac allografts. *J Amer College of Cardiology*, 24: 1769-78.
24. Bishop DK, Li W, Chan S, Ensley D, Shelby J, Eichwald EJ. (1994) Helper T lymphocyte unresponsiveness to cardiac allografts following transient depletion of CD4 positive cells: Implications for cellular and humoral responses. *Transplantation* 58: 576-580.
25. Carlquist J, Shelby J, Greenwood JH, Hammond ME, Anderson JL. (1994) Histoincompatibility-

- associated differences in the phenotypes of murine cardiac allograft infiltrating T cells. *Immunology* 82: 149-156.
26. Bastian, NR., Xu S., Shao XL, Shelby J., Granger, DL., Hibbs, JB. (1994) N omega -monoethyl-L-arginine inhibits nitric oxide production in murine cardiac allografts but does not affect graft rejection. *Biochim-Biophys-Acta* 1226: 225.
  27. Cole BC, Ahmed E, Araneo BA, Shelby J., Kamerath C, Wei S, McCall S, Atkin CL. (1993) Immunomodulation in vivo by the mycoplasma arthritides superantigen, MAM. *Clinical Infectious Diseases* 17: S163.
  28. Carlquist J, Shelby J., Shao Y, Greenwood JA, Hammond E, Anderson J. (1993) Accelerated rejection of murine cardiac allografts in murine cytomegalovirus infected recipients; lack of haplotype specificity. *J Clin Investigation* 91: 2602-2608.
  29. Araneo B, Shelby J., Li Gang-Zhou, Ku WW, Daynes RA. (1993) Administration of DHEA to burned mice preserves normal immunologic competence. *Archives of Surgery* 128: 318-325.
  30. Schweizer MP., Olsen JI, Shelby J., Saffle JR, Meyer M, Jensen P, Nagel TL. (1993) Noninvasive assessment of metabolism in wounded skin by <sup>31</sup>P-NMR in vivo. *J Trauma* 33: 828-833.
  31. Mueller C, Shao Y, Altermatt HJ, Hess MW, Shelby J. (1993) The effect of cyclosporine treatment on the expression of genes encoding granzyme A and perforin in the infiltrate of mouse heart transplants. *Transplantation* 55:139.
  32. Shelby J., Sullivan JJ, Groussman M, Gray, R., Saffle J. Severe burn injury: (1992) Effects on psychological and immunological function in non-injured close relatives. *JBCR*13:58.
  33. Bishop DK, Shelby J., Eichwald EJ. (1992) Mobilization of T lymphocytes following cardiac transplantation: Evidence that CD4-positive cells are required for cytotoxic T lymphocyte activation, inflammatory endothelial development, graft infiltration, and acute allograft rejection. *Transplantation* 53:849-857.
  34. Bishop DK, Shelby J., Eichwald EJ. (1991) Functional analysis of donor reactive T cells infiltrating heterotopic cardiac transplants: Effect of anti-CD4 mAb in vivo. *Transplant Proceedings* 23:287.
  35. Shao YL, Shelby J., Hisatake G, Kern ER, Nelson EW, Gay WA. (1991) Accelerated cardiac allograft rejection in murine cytomegalovirus-infected C3H recipients. *Transplant Proc* 23:129.
  36. Hisatake G, Bishop K, Shelby J., Sullivan J, Shao YL, Eichwald EJ. (1991) Intraperitoneal sensitization and the transplanted mouse heart. *Transplantation* 51:858.
  37. Erickson EJ, Saffle JR, Morris SE, Eichwald EJ, Sullivan JJ, Shelby J. (1991) Bacterial translocation (BT) is prolonged in burned mice infected with cytomegalovirus. *J Burn Care and Rehab* 12:454.
  38. Farley DE, Shelby J., Alexander D, Scott JR. (1991) The effect of two new immunosuppressive agents, FK 506 and Didemnin B, in murine pregnancy. *Transplantation* 52:106.
  39. Woodley SL, McMillan M, Shelby J., Lynch DH, Roberts L, Ensley RD, Barry WH. (1991) Myocyte injury produced by cytotoxic T-Lymphocytes. *Circulation* 83:1410-1418.
  40. Mueller C, Shelby J., Weissman IL, Perinat-Frey T, Eichwald EJ. (1991) Expression of the protease gene HF as a marker in rejecting allogeneic murine heart transplants. *Transplantation* 51:514.
  41. Erickson EJ, Saffle JR, Morris SE, Sullivan JJ, Eichwald EJ, Shelby J. (1990) Cytomegalovirus infection promotes bacterial translocation in thermally injured mice. *J BRC* 11:428.
  42. Carlquist JF, Shelby J., Hammond EM, Greenwood JH, Anderson JL. (1990) Recovery and phenotypic identification of *in vivo*-activated lymphocytes from mouse cardiac allografts. *Transplantation* 50:349.
  43. Saffle JR, Larson CM, Sullivan J, Shelby J. (1990) The continuing challenge of burn care in the elderly. *Surgery* 108:534.
  44. Nagel TL, Alderman DW, Schoenborn RR, Hendrickson M, Shelby J., Saffle J, Schweizer MP. (1990) The slotted crossover surface coil: a detector for *in vivo* NMR of skin. *Magnetic Resonance in Medicine* 16:252.
  45. Shelby J., Saffle JR, Kern ER. (1989) Delayed type hypersensitivity (DTH) response and skin graft survival in 9-(1,3-dihydroxy-2-propoxymethyl) guanine (DHPG) treated mice. *Transplantation*

- Proceedings* 21:1150.
46. Hendrickson M, Shelby J, Sullivan JJ, Saffle JR. (1989) Naloxone inhibits the in vivo immunosuppressive effects of morphine and thermal injury in mice. *JBRC* 10:494.
  47. Hisatake G, Hammond E, Ives M, Griffith J, Shelby J, Eichwald EJ. (1989) Hyperacute rejection of the transplanted mouse heart. *Transplantation* 47:996.
  48. Samlowski WE, Shelby J, Robertson BA, Daynes RA. (1989) Depression of the induction of murine delayed-type hypersensitivity responses without prolongation of cardiac allograft survival by intravenous neuraminidase-treated allogeneic lymphocytes. *Transplantation* 47:560.
  49. Shelby J, Hisatake G. (1988) Effect of Ibuprofen and Interleukin-2 on transfusion-induced suppression of cell mediated immunity. *Arch of Surgery* 123:1397.
  50. Ives MM, Shelby J, Eichwald EJ. (1988) H-Y and the transplanted mouse heart. *Immunogenetics* 27:137.
  51. Krob MJ, Shelby J. (1988) Enhanced skin allograft survival in H-2 compatible cyclosporine treated mice. *Journal of Trauma* 28(2):225.
  52. Shelby J. (1988) The role of eicosanoids in the transfusion effect. *Transplant Proceedings* 20:1217.
  53. Nelson EW, Adkins TP, Kern ER, Shelby J. (1988) Blood transfusion in MCMV infected mice. *Transplant Proceedings* 20:1143.
  54. Ames SA, Shelby J, Roberts LK, Nelson EW. (1988) Factors in transfusion-related enhanced tumor growth. *Transplant Proceedings* 20:1121.
  55. Shelby J, Ives MM, Freeman TR. (1988) Effect of restricting PGE availability on the host versus graft response in mice. *Transplantation Proceedings* 20:316.
  56. Merrell SW, Shelby J, Freeman T, Saffle JR. (1988) Effect of exchange transfusion on cell-mediated immune function following thermal injury. *Journal of Trauma* 28(2):184.
  57. Freeman T, Shelby J. (1988) Effect of anti-PGE anti-body on cell-mediated immune response in thermally injured mice. *Journal of Trauma* 28(2):190.
  58. Shelby J, Saffle JR, Kern ER. (1988) Transmission of cytomegalovirus infection in mice by skin grafts. *Journal of Trauma* 28(2):203.
  59. Muskett A, Burton N, Eichwald EJ, Shelby J, Hendrickson M, Sullivan JJ. (1987) The effect of antiplatelet drugs on graft atherosclerosis in rat heterotopic cardiac allografts. *Transplant Proceedings* 19:74.
  60. Eichwald EJ, Shelby J (1987) Is delayed type hypersensitivity the pathway to hyperacute rejection of mouse hearts? *Transplantation Proceedings* 19:426.
  61. Shelby J, Marushack MM, Nelson EW. (1987) Effect of prostaglandin inhibitors on transfusion-induced immune suppression. *Transplantation Proceedings* 19:1435.
  62. Marushack MM, Snider GR, Muka M, Nelson EW, Maxwell JG, Shelby J. (1987) Prolonged heart allograft survival following postoperative blood transfusion. *Transplantation Proceedings* 19:1420.
  63. Nelson EW, Eichwald EJ, Shelby J. (1987) Increased ultra-violet radiation induced skin cancers in cyclosporine treated mice. *Transplantation Proceedings* 19:526.
  64. Muskett A, Burton NA, Eichwald EJ, Shelby J, Hendrickson M, Sullivan JJ. (1987) Accelerated atherosclerosis in cardiac allografts: The effect of platelet inhibitors and the relationship to urinary thromboxane excretion. *Surgical Forum*, November:288.
  65. Shelby J. (1987) Transfusion-induced immunosuppression. *J Burn Care and Rehabilitation* 8:546.
  66. Eichwald EJ, Shelby J. (1987) Footpad and popliteal lymph node responses to H-Y. *Transplantation* 44:320.
  67. Shelby J, Shanley J. (1987) Transfer of murine cytomegalovirus by syngeneic skin grafts. *Transplantation* 44:318.
  68. Scott JR, Hendrickson M, Lash S, Shelby J. (1987) Pregnancy after tubo-ovarian transplantation. *Obstetrics and Gynecology* 70(2):229.
  69. Eichwald EJ, Shelby J. (1987) Serum and cell mediated responses in tolerance and hyperacute rejection of transplanted mouse hearts. *Transplantation* 43:520.
  70. Shelby J, Merrell SW. (1987) In vivo monitoring of postburn immune response. *J Trauma* 27:213.

71. Muskett A, Burton N, Eichwald EJ, Shelby J, Hendrickson M, Sullivan JJ. (1987) The effect of antiplatelet drugs on graft atherosclerosis in rat heterotopic cardiac allografts. *Transplant Proceedings* 19:74.
72. Eichwald EJ Shelby J. (1987) Is delayed type hypersensitivity the pathway to hyperacute rejection of mouse hearts? *Transplantation Proceedings* 19:426.
73. Shelby J, Marushack MM, Nelson EW. (1987) Effect of prostaglandin inhibitors on transfusion-induced immune suppression. *Transplantation Proceedings* 19:1435.
74. Marushack MM, Snider GR, Muka M, Nelson EW, Maxwell JG, Shelby J. (1987) Prolonged heart allograft survival following postoperative blood transfusion. *Transplantation Proceedings* 19:1420.
75. Nelson EW, Eichwald EJ, Shelby J. (1987) Increased ultra-violet radiation induced skin cancers in cyclosporine treated mice. *Transplantation Proceedings* 19:526.
76. Shelby J, Marushack MM, Nelson EW. (1986) Prostaglandin production and suppressor cell induction in transfusion-induced immune suppression. *Transplantation* 43:113.
77. Nelson EW, Shelby J. (1986) Lymphoma in chronically immunosuppressed hairless HRS/J mice. *Surg Forum* 37:355.
78. Merrell SW, Shelby J, Saffle JR, Krueger GG, Navar PD. (1986) An in vivo test of viability for cryopreserved human skin. *Current Surgery* 43:296.
79. Shelby J, Wakely E, Jorgensen C, Eichwald EJ. (1986) Cell mediated hyperacute rejection. VI. Prolonged survival of heterotopic heart transplants. *Journal of Surgical Research* 40:133.
80. Krob MJ, Shelby J. (1986) Immunosuppressive effects of burn injury and nonspecific blood transfusion. *J of Trauma* 26:
81. Shelby J, Krob MJ. (1986) Transfusion induced sensitization to skin allografts in burned mice. *J of Trauma* 26:54.
82. Perry LL, Williams IR, Shelby J. (1986) Anti I-A immunotherapy in transplantation: Inhibition of skin and heart transplant rejection by induction of donor specific immunosuppression. *Transplantation Proceedings* 18(4):910.
83. Shelby J, Fick J, Kolegraff RJ, Wakely E, Corry RJ. (1985) Prolonged heart allograft survival induced by massive preoperative blood transfusions. *Transplantation* 40(1):113.
84. Wakely E, Shelby J, Corry RJ. (1985) The effect of peripheral blood components on allograft survival. *Transplantation* 40(1):113.
85. Sugimoto K, Shelby J, Corry RJ. (1985) Effects of cyclosporine and blood transfusion on cardiac xenografts in combination of rat and mouse. *Nippon-Geka-Gakkai-Zasshi* 86:1444-9.
86. Sugimoto K, Shelby J, Corry RJ. (1985) The effect of cyclosporine on cardiac xenograft survival. *Transplantation* 39(2):218.
87. Shelby J, Wakely E, Corry RJ. (1985) Splenectomy abrogates the improved graft survival achieved by donor-specific transfusion. *Transplantation Proceedings* 17(1):1083.
88. Shelby J, Wakely E, Corry RJ. (1984) Suppressor cell induction in donor-specific transfused mouse heart recipients. *Surgery* 96:296.
89. Shelby J, Wakely E, Corry RJ. (1985) Splenectomy abrogates the improved graft survival achieved by donor-specific transfusion. *Transplantation Proceedings* 17(1):1083.
90. Schulak JA, Shelby J, Wakely E, Corry RJ. (1983) Prolonged heart allograft survival in cyclosporine treated presensitized rats. *Transplantation Proceedings* 15:2969.
91. Shelby J, Billingsley A, Ball M, Corry RJ. (1983) Prolonged allograft and xenograft survival by nonspecific blood transfusion. *Transplantation Proceedings* 15(1):969.
92. Cram A, Domayer M, Shelby J. (1983) Human skin storage techniques: A study utilizing a nude mouse recipient. *J of Trauma* 23(10):924.
93. Shanley JD, Billingsley A, Shelby J, Corry RJ (1983) Transfer of murine cytomegalovirus infection by heart transplantation. *Transplantation* 36(5):584.
94. Schulak JA, Monson D, Shelby J, Corry RJ. (1983) Abrogation of second set rejection with cyclosporine A. *Transplantation* 36(3):289.
95. Shelby J, Corry RJ. (1982) The primarily vascularized mouse heart transplant as a model for the

- study of immune response. *Heart Transplantation* 2(1):32.
96. Corry RJ, Shelby J, David C, Heffner C, Billingsley A, Kelley SE. (1982) Is recipient priming with graft foreign antigen a prerequisite for the blood transfusion effect? *Transplant Proceedings* 14:391.
  97. Krueger GG, Chambers A, Shelby J. (1981) Involved and uninvolved skin from psoriatic subjects: Are they equally diseased: Assessment by analysis of skin transplanted to congenitally athymic (nude) mice. *J Clin Invest.* 68:
  98. Krueger GG, Shelby J. (1981) Biology of human skin transplanted to the nude mouse. I. Response to agents which modify epidermal proliferation. *J Invest Derm.*76(6):506.
  99. Steinmuller D, Shelby J. (1980) Lymphoid target cell replacement and refractoriness to graft-versus-host disease. *Transplantation* 30:313.
  100. Krueger GG, Chambers DA, Shelby J. (1980) Epidermal proliferation of nude mouse skin, pig skin, and pig skin grafts: failure of nude mouse skin to respond to the tumor promoter 12-O tetradecanoyl phorbol 13-acetate (TPA). *J Exp Med.* 152:1329.
  101. Krueger GG, Chambers DA, Shelby J. (1980) Comparative effect of proliferative agents on nude mouse skin, pig skin, and xenogeneic pig skin grafts to nudes. Proceedings of the Third International Workshop on Nude Mice, N Reed, J Rygaard (eds), Academic Press, New York.
  102. Kripke M, Lofgreen JS, Beard J, Jessup J, Fisher M. (1977) In vivo immune responses of mice during carcinogenesis by ultraviolet irradiation. *Journal National Cancer Institute* 59:1227.
  103. Steinmuller D, Lofgreen JS. (1977) The "SK" (skin-specific) rejection phenomenon as evidence of the natural role of acquired tolerance. *Transplantation Proceedings* 9:1385.
  104. Klein J, Chiang C, Lofgreen JS, et al. (1976) Participation of H-2 regions in heart-transplant rejection. *Transplantation* 22:384.
  105. Steinmuller D, Lofgreen JS. (1975) Heart allograft survival as a test for serum-blocking factors in classically tolerant mice. *Transplantation Proceedings* 7(1):439.
  106. Warren RP, Lofgreen JS, Steinmuller D (1973) Differential survival of heart and skin allografts in inbred rats. *Transplantation Proceedings* 5:717.
  107. Steinmuller D, Lofgreen JS. (1973) Differential survival of skin and heart allografts in radiation chimeras provides further evidence for SK histocompatibility antigen. *Nature* 244:441.
  108. Warren RP, Lofgreen JS, Steinmuller D. (1973) Factors responsible for the differential survival of heart and skin allografts. *Transplantation* 16:458.
  109. Steinmuller D, Warden G, Coleman M, Lofgreen JS, Reemtsma K, Stuart F, Garrick T, Holter A, Lynch A. (1971) Prolonged survival of rat heart and kidney allografts irradiated in vitro. *Transplantation* 12:153.

### Book Chapters

1. Prestwich GD, Shu XZ, Liu Y, Kirker KR, Li H, Shelby J, Morris SE and Gray SD. (2006) In Situ Crosslinkable Synthetic Extracellular Matrices for Tissue Repair and Prevention of Surgical Adhesions. In EA Balazs and VC Hascall (eds) Hyaluronan Structure, Metabolism, Biological Activities, Therapeutic Applications. From the Matrix Biology Institute.
2. Kirker KR, Luo Y, Morris SE, Shelby J and Prestwich GD. (2006) Glycosaminoglycan Hydrogels for Wound Healing. In EA Balazs and VC Hascall (eds) Hyaluronan Structure, Metabolism, Biological Activities, Therapeutic Applications. From the Matrix Biology Institute.
3. Shelby J., McCance K. (2003) Stress and Disease. In McCance K., Huether S (eds) Pathophysiology; The Biologic Basis for Disease in Adults and Children, 3rd edition, Mosby.
4. G.D. Prestwich, Y. Luo, K.R. Kirker, M.R. Ziebell, and J. Shelby, (2000) "Hyaluronan Biomaterials for Targeted Drug Delivery and Wound Healing," HA 2000, Woodhead Publishing Ltd., Abington, UK.
5. Shelby J., McCance K. (2000) Stress and Disease. In (eds) McCance K and Huether S. Understanding Pathophysiology, Mosby.
6. Shelby J., McCance K. (1997) Stress and Disease. In (eds) McCance K., Huether S., Pathophysiology; The Biologic Basis for Disease in Adults and Children, 3rd edition. Mosby.

7. Shelby J and Nelson EW. *Immunologic and clinical consequences of allogeneic blood transfusion*. In Faist E (ed), *Host Defense Alterations of Trauma, Shock and Sepsis - Multi Organ Failure and Immunotherapy of Sepsis*. Pabst, Berlin, 1996.
8. McCance K, Shelby J. (1995) *Stress and Disease*. In (eds) McCance K and Huether S. *Understanding Pathophysiology*, Mosby.
9. Bastian, NR., Xu, S., Shao, XL, Shelby, J., Hibbs, JB. (1993) Nitric oxide production in response to allogeneic heart transplant in mice. In (eds) Salvadore, M., Marletta, MA, Hibbs, JB., Higgs, A. *Biology of Nitric Oxide*, Portland Press, LTD.
10. McCance K, Shelby, J. (1993) *Stress and Disease*. In (eds) McCance K., Huether S. *Pathophysiology; The Biologic Basis for Disease in Adults and Children, 2nd edition.*, Mosby.
11. Eichwald EJ, Silmsler CR, Jorgensen D, Shelby J. (1987) Searches for human H-Y by conventional means, and how it all began. In *Genetic Markers of Sex Differentiation* (eds) Haseltine FP, McClure ME, Goldberg EH. Plenum Publishing Corp.

## PROFESSIONAL PRESENTATIONS

### Invited Speaker Invitations:

1. The Immune Consequences of Traumatic and Thermal Injury. Snowbird, Utah. Transfusion-induced immunosuppression, January, 1987.
2. Visiting Professor Series: University of California / Irvine, Department of Surgery. Inhibition of cell mediated immune response: Role of Prostaglandin E, September 2, 1987.
3. Symposium on Transfusion-induced Immunosuppression, Snowbird, Utah. The role of eicosanoids in the transfusion effect. January, 1988.
4. Visiting Professor. University of Nebraska, Omaha, Department of Cardiology. Transfusion - induced-immunosuppression. February, 1988.
5. Visiting Professor- Weber State University, Department of Microbiology, Ogden, Utah. Effects of stress and trauma on the immune response. May 18, 1989.
6. The Immunocompromised Surgical Patient: Mechanisms in Trauma and Burns, Snowbird, Utah. Viral infections in trauma. January, 1990.
7. Tolerance Induction. Beaver Run Resort and Conference Center, Breckenridge, Colorado, Lipids and eicosanoids. January, 1991.
8. Seminar on Wellness and Healing, Charter Summit Hospital, Salt Lake City, Utah. Understanding the immune system: How does it work and what social-psychosocial factors affect it? June, 1991.
9. IHC Mind-Body Task Force, Salt Lake City, Utah. Distress and Immunity. May, 1991.
10. Stress Medicine Seminar, University of Utah Medical Center. Stress-Induced Immunosuppression: Winter Darkness and Melatonin. December, 1992.
11. Special Educational Symposium, American Burn Association 25th Annual Meeting, Cincinnati, Ohio. Humoral Immunity in Burn Injury. March 24, 1993.
12. The Third Conference on the Immunocompromised Surgical Patient, Snowbird, Utah. Neuroendocrine mediation of immune response in trauma. January 16, 1994.
13. The Third International Congress of The Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. Neurohormone and neuropeptide regulation of the post-traumatic immune response. March 4, 1994.
14. The Third International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. Immunologic and Clinical consequences of allogeneic blood transfusion. March 5, 1994.
15. The Third International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. Immunologic Aspects of Wound Coverage. March 5, 1994.
16. Ninth Annual Biologic Basis of Pediatric Practice Symposium - "Transplantation Biology", Deer Valley,

- Utah. Circadian Rhythm, Critical Care and Transplantation. June 4, 1995.
17. National Pathophysiology Workshop - Difficult Concepts in Pathophysiology: Undergraduate to Advanced Practice. Salt Lake City, Utah. Psychoneuroimmunology: an Integrative Response to Disease. August 11, 1995.
  18. Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah. Circadian Disruption in Trauma. January 20-24, 1996.
  19. Postgraduate Course, "The Research Process", American Burn Association 28th Annual Meeting, Nashville, Tenn. Trial Design. March 16, 1996.
  20. The Fourth International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. Circadian rhythm disruption in burn ICU patients: association with inflammatory cytokine production. March, 1997.
  21. The Fourth International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. Kinetics and significance of cytokine changes in allogeneic transfused subjects. March, 1997.
  22. First Spring Conference on Immune Modulation, Vail, Colorado. Circadian disruption in Burn Patients. April 5, 1997.
  23. Conference on Resuscitation Fluid Design and Protocols for Combat Casualties. National Academy of Science, Institute of Medicine, Washington, D.C. Melatonin therapy in acute trauma. September, 1998.
  24. Office of Naval Research Workshop on Basic and Applied Combat Casualty Care Research, Philadelphia. Circadian rhythm changes and effects of melatonin in trauma. June, 1999.
  25. 24<sup>th</sup> Shock Society Meeting, Marcos Island, Florida. Neuro-endocrine agents in the treatment of shock. June, 2001.
  26. Spring Meeting of the American Association of Tissue Banks, Clearwater, Florida. Skin Banking: Scientific Progress In Processing Human Skin Allografts. March 26, 2002.
  27. Annual Meeting of the American Association of Tissue Banks, Boston, MA. Research in Tissue Banking. August, 2002.
  28. Tissue Banking Workshop, American Association of Tissue Banks and Shriners's Burns Institute, Cincinnati, Ohio. Research in Tissue Banking November, 2002.
  29. Utah State Orthopedic Society Annual Meeting, Deer Valley, Utah. "Utah's Local Tissue Center". Sept 2004.
  30. LifeNet Seminar, Virginia Beach, VA. "Adult derived adipose stem cells". November, 2005.

#### Scientific Oral Presentations:

1. American Society of Transplant Surgeons, Chicago, Illinois. Non-specific effect of blood transfusion in prolonging allograft and xenograft survival. June 3, 1982.
2. Ninth International Congress of the Transplantation Society, Brighton, England. Prolonged allograft and xenograft survival by nonspecific blood. Blood Transfusion Workshop. August 26, 1982.
3. Forty-fifth Annual Meeting of the Society of University Surgeons, Chicago, Illinois. Suppressor cell induction in donor specific transfused heart recipients. February 10, 1984.
4. Tenth International Congress of the Transplantation Society, Minneapolis, Minnesota. Splenectomy abrogates the improved graft survival achieved by transfusion. August 31, 1984.
5. Seventeenth Meeting of the American Burn Association, Orlando, Florida. Transfusion induced sensitization to skin allografts in burned mice. March 29, 1985.
6. Western Association of Transplant Surgeons, Tucson, Arizona. Prolonged heart allograft survival induced by massive preoperative transfusion. May 3, 1985.
7. Eighteenth Meeting of the Amer Burn Assoc, Chicago. In vivo monitoring of post burn immune response. April, 1986.
8. Eighteenth Meeting of the Amer Burn Assoc, Chicago Illinois. Transfer of cytomegalovirus via skin allograft. April, 1986.
9. Western Association of Transplant Surgeons, Ontario, California. Effect of prostaglandin inhibitors on

- transfusion induced immune suppression. April 25, 1986.
10. Twelfth Annual Scientific Meeting of the American Society of Transplant Surgeons, Chicago, Illinois. Effect of prostaglandin inhibitors on transfusion-induced immune suppression. May, 1986.
  11. Second Workshop on Mouse Heart Transplantation, Oxford, England. Hyperacute rejection of mouse hearts. July, 1986.
  12. Poster Session Workshop on Blood Transfusions in Transplantation XI International Congress of the Transplantation Society, Helsinki, Finland. Role of prostaglandins in transfusion-induced immune suppression. August 7, 1986.
  13. Nineteenth Meeting of the American Burn Association, Washington, DC. Transfer of cytomegalovirus by cryopreserved skin grafts. May 1, 1987.
  14. Western Association of Transplant Surgeons, Albuquerque, New Mexico. Delayed type hypersensitivity (DTH) response and skin graft survival in (DHPG) treated mice. March, 1988.
  15. Twentieth Meeting of the Amer Burn Assoc, Seattle. Cytomegalovirus infection in thermally injured mice. March, 1988.
  16. Twentieth Meeting of the American Burn Association, Seattle, Washington. Effect of anti-PGE antibody on MCMV-associated mortality in thermally injured mice. March 24, 1988.
  17. Eighth Annual Meeting of the Surgical Infection Society, San Francisco, California. Effect of ibuprofen and interleukin-2 on transfusion-induced suppression of cell mediated immunity. May 6, 1988.
  18. Annual Meeting of the Association of Academic Surgeons, Local Program, Snowbird, Utah. Cytomegalovirus infection and thermal injury. November 17, 1988.
  19. Thirteenth Annual Meeting of the Western Society of Transplant Surgeons, Salt Lake City, Utah. Enhancement of the blood transfusion effect in mice treated with a cAMP active agent. March 10, 1989.
  20. Twenty-first Annual Meeting of the American Burn Association, New Orleans, Louisiana. Treatment of cytomegalovirus infection in thermally injured mice with DHPG. April 1, 1989.
  21. Twenty-second Annual Meeting of the American Burn Association, Las Vegas, Nevada. Severe burn injury: effects of psychological and immunological function in non-injured close relatives. Mar 1990.
  22. Sixty-first Annual Meeting of the Pacific Sociological Association, Spokane, Washington. Distress and immune function in non-injured close relatives of severely burned individuals. April 7, 1990.
  23. Fifteenth Annual Meeting of the Western Society of Transplant Surgeons, Newport Beach, California. Immune effects of antiviral drugs. March 9, 1991.
  24. Twenty-third Meeting of the American Burn Association, Baltimore. Influence of coping strategy preference on distress and immune response in noninjured close relatives of severely burned patients. April, 1991.
  25. Twenty-fifth Annual Meeting of the American Burn Association, Cincinnati, Ohio. Stress resiliency in close relatives of thermally injured patients. March 25, 1993.
  26. Twenty-fifth Annual Meeting of the American Burn Association, Cincinnati, Ohio. Relationship between severity of illness and posthospitalization depression, morale and quality of life in adult burn survivors. March 25, 1993.
  27. Twenty-fifth Annual Meeting of the American Burn Association, Cincinnati, Ohio. Immunomodulatory role for melatonin in thermal injury. March 26, 1993.
  28. Research Perspectives in Psychoneuroimmunology IV, Boulder, Colorado. Modulation of cell mediated immune reactivity and cytokine production by exogenous melatonin. April 22, 1993.
  29. Thirteenth Annual Meeting of the Surgical Infection Society, Baltimore, Maryland. Modulation of cytokine secretion with exogenous melatonin in a thermal injury model. April 30, 1993.
  30. Twenty-sixth Annual Meeting of the American Burn Association, Orlando, Florida. Preinjury psychosocial risk factors and long term recovery and adjustment in burn patients. April, 1994.
  31. Twenty-sixth Annual Meeting of the American Burn Association, Orlando, Florida. Peripheral blood cell cytokine production in burn patients. April, 1994.
  32. Twenty-seventh Annual Meeting of the American Burn Association, Albuquerque, New Mexico.

Melatonin and Hormonal Alterations in the Light/Dark Cycle: Effect of Cytokine Response in Thermally Injured Mice. April, 1995.

33. Western Association of Transplant Surgeons 20th Annual Meeting, Seattle, Washington. Melatonin decreases transfusion-induced prolonged cardiac allograft survival in mice. February 16, 1996.
34. Twenty-eighth Annual Meeting of the American Burn Association, Nashville, Tenn. Circadian Variations in Serum Steroids and Melatonin in Burn Patients. March 17, 1996.
35. Shock Society Annual Meeting, Philadelphia. Increased serum melatonin levels following injury. June 13, 1999.
36. Dept Surgery Research Day, University of Utah. Gastrointestinal Production of Melatonin in Burn Injured Mice. 03/2002

#### PUBLISHED ABSTRACTS (selected from 185+)

1. Shelby J, Erickson J, Allen S. Rural Native American Community Service Learning for Medical Students. AAMC Group on Regional Medical Campuses, March 23-25<sup>th</sup>, 2011, New Orleans, LA.
2. Seol DL, Kim HI, Ji-Yeon Seo, Shelby J, Yang YI. Multipotent Stem Cells from Cryopreserved Adipose Tissue using 3-Dimensional Organotypic Culture Method. Regenerate World Congress, April 2006, Pittsburg, PA.
3. Yang YI, Kirker K, Massey M, Shelby J. Adult-derived Adipose Stem Cells for Bone Regeneration. Biomaterials Annual Meeting. April, 2006, Pittsburgh, PA.
4. Fitzpatrick K, Yang YI, Kirker K, Massey M, Shelby J. Extracellular Matrix Molecules Enhance Allograft Skin Viability". Biomaterials Annual Meeting. April, 2006, Pittsburgh, PA.
5. Yang YI, Kirker K, Massey M, Shelby J. The Use of Adult Derived Adipose Stem Cells for Bone Regeneration. . Biointerface meeting. Minneapolis, MN. October 2005.
6. Erickson I, Yang YI, Fitzpatrick K, Kirker K, Massey M, Shelby J. Improved Viability of Adipose-Derived Adult Stem Cells After Cryopreservation Using Hyaluronan as a Media Supplement. BioInterface meeting. Minneapolis, MN. October 2005.
7. Fitzpatrick K, Yang YI, Kirker K, Massey M, Shelby J. Enhanced Viability of Stored Human Skin Tissue. Biointerface meeting. Minneapolis, MN. October 2005.
8. Shelby J, Yang Young IL, Fitzpatrick K, Massey M. Use of human derived adipose stem cells and demineralized bone matrix to regenerate bone tissue in vivo. Amer Assoc Tissue Banks, Ft. Lauderdale, FL, Sept 19-20, 2005.
9. Firpo M, Peattie R, Whiting D, Shelby J, Fisher R, Prestwich G. HA/VEGF-induced angiogenesis gene expression in vivo. 7<sup>th</sup> International Congress of the Cell Transplantation Society, Boston, November 2004.
10. Peattie RA, Firpo MA, Shelby J, Prestwich GD. Gene Expression Mechanisms for HA/VEGF-induced Angiogenesis In Vivo. BMES, Philadelphia, October 2004
11. Fitzpatrick K, Shelby J. Development of a Method for Enhancement of Stored and Preserved Human Cells and Tissues. . Amer Assoc Tissue Banks Annual Meeting, Chicago, August 2004.
12. Shelby J, White A, Burns D, Christensen T. Supercritical Carbon Dioxide Terminal Sterilization. Amer Assoc Tissue Banks Annual Meeting, Chicago, August 2004
13. Shelby J, White A, Burns D, Christensen T. Terminal Tissue Sterilization Using SuperCritical Carbon Dioxide. Amer Assoc Tissue Banks Annual Meeting, San Diego, California, August 2003
14. Peattie, RA, Nayate, AP, Firpo, MA, Shao, Y, Shelby, J, Fisher, RJ, Prestwich, GD. Stimulation of In Vivo Angiogenesis by Cytokine-loaded Hyaluronic Acid Hydrogel Implants and Potential Gene Expression Mechanisms for New Vessel Growth. Fall Annual Meeting, Biomedical Engineering Society, Houston, TX, October 2002
15. Peattie, RA, Nayate, AP, Luo, Y, Firpo, MA, Shelby, J, Fisher, RJ, Prestwich, GD. In Vivo Stimulation of New Microvessel Growth by Cytokine-loaded Hyaluronic Acid Hydrogel Implants. Experimental Biology 2002, New Orleans, LA, April 2002
16. Edelman L, Shelby J, Saffle J. IL-6 levels in burn patients following blood transfusion. American

Burn Association, Boston, April, 2001

17. Shelby J, Mitchell M, Finn L, Singer D, Prack N. Utah Navajo Partners: Building Healthy Communities. Organization of Teratology Services Meeting, Montreal, June, 2001.
18. K.R. Kirker, Y. Luo, J. Harte Nielson, J. Shelby, and G.D. Prestwich. "Glycosaminoglycan Hydrogels for Wound Healing," ASME Bioengineering Conference, Snowbird, UT (2001).
19. K.R. Kirker, Y. Luo, J. Harte Nielson, J. Shelby, and G.D. Prestwich. "Glycosaminoglycan Hydrogel films: New Biomaterials for Wound Healing," Gordon Research Conference on Biomaterials: Biocompatibility and Tissue Engineering, Holderness, NH (2001).
20. Hansen T, Watt R, Nielson H, Shelby J. Cytokine profiles in allogeneic transfused recipients treated with a specific COX-2 inhibitor. American Burn Association, Las Vegas, March, 2000.
21. Hartsell S, Saffle J, Shelby J. Appropriateness of emergent referral and transport of pediatric burn patients to a regional burn center. American Burn Association, Las Vegas, March, 2000.
22. Knoblock L, Watt R, Xu S, Shelby J. Serum IL-18 levels in burn patients. . Amer Burn Assoc, Las Vegas, March, 2000.
23. Affleck DG, Bull DA, Watt R, Shao Y, Karwande SV, Shelby J. Interleukin 18 production after heart transplantation: induction of interferon-g. Western Thoracic Assoc., January, 2000.
24. Oleynikov D, Barton R, Watt R, Shelby J. Acute alcohol ingestion causes immune modulation in a mouse hemorrhage model. Shock Society, June, 1999.
25. Shelby J, Edelman L, Xu S, Watt R. Serum melatonin levels in burn injury. Shock Society, Philadelphia, June, 1999.
26. Watt R, Shixuan Xu, Shelby J. Strain and gender variability in splenic cytokine responses following burn injury. Shock Society, Philadelphia, June, 1999.
27. Wallace J, Watt R, Shelby J. Endogenous melatonin levels in critically ill adults. Amer Physiologic Society, Ft. Lauderdale, October, 1999.
28. Edelman L, Xu S, Shelby J. The rise in endogenous melatonin following burn injury in a guinea pig model. Inflammation and the Surgical Patient: Mechanisms and Therapy in Trauma, Snowbird, Utah, February, 1998.
29. Shelby J, Stephen Morris, Saffle J. Circadian rhythm disruption in burn ICU patients: association with inflammatory cytokine production . The Fourth International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany. March, 1997.
30. Shelby J, Winslow G, Shao W, Nelson EW. Kinetics and significance of cytokine changes in allogeneic transfused subjects. The Fourth International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Mechanisms and Therapeutic Approaches, Munich, Germany, March, 1997.
31. Winslow G, Shelby J, Nelson E, Morris S, Saffle J. Influence of allogeneic blood transfusion on natural killer Cell Activity and Cytokine Profiles. Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah, January, 1996.
32. Sullivan D, Shelby J, Hinson DM, Barton RG. Treatment with a 21-Aminosteroid reduces serum gamma-interferon (g-IFN) levels and post-shock fluid requirements after hemorrhage. Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah, January, 1996.
33. Sellers B, Barton R, Edelman L, Araneo B, Shelby J. Physiologic and immunologic effects of dehydroepiandrosterone (DHEA) in hemorrhagic shock. Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah, January, 1996.
34. Weiru Shao, Edelman L, Nelson EW, Shelby J. Cytokine characterization in transfused mice. Western Amer Fed for Clinical Research Annual Meeting, Carmel, CA, 1996.
35. Shelby J, Shao Y, Xu S, Nelson EW. Melatonin decreases transfusion-induced prolonged cardiac allograft survival in mice. Western Association of Transplant Surgeons Annual Meeting, Seattle, Washington. February 16, 1996.
36. Shelby J, Saffle JR, Morris S. Circadian variations of hormone and melatonin rhythms in burn

- patients. American Burn Association, Nashville, Tennessee, March, 1996.
37. Sullivan D, Edelman LS, Shelby J, Shao Y, Hinson DM, Barton RG. The influence of allogeneic blood transfusion on splenocyte cytokine production after hemorrhagic shock. Surgical Infection Society, Milwaukee, Wisconsin, April, 1996.
  38. Shelby J, Sullivan JJ, Groussman M, Saffle JR. Severe burn injury: effects on psychological and immunological function in Winslow G, Shelby J, Nelson EW, Morris S, Barton R, Saffle JR. Influence of allogeneic blood transfusion on natural killer cell activity in burn injured mice. American Burn Association, Albuquerque, New Mexico, April, 1995.
  39. Sullivan DJ, Shelby J, Shao Y, Affleck DG, Hinson DM, Barton RG. *Melatonin and a 21-aminosteroid attenuate shock after hemorrhage, but differentially affect serum cytokines.* Association of Academic Surgery 1995, Ann Arbor.
  40. Shelby J, WW Ku, Nielson HC. Melatonin and Alterations in the Light/dark cycle: effect on cytokine response in thermally injured mice. American Burn Assoc., Albuquerque, New Mexico, April, 1995.
  41. Ku WW, Shelby J. Protective effect of melatonin in a murine model of endotoxin challenge following thermal injury. American Burn Association, Albuquerque, New Mexico, April, 1995.
  42. Shelby J., Ku WW, Nielson HC. Neurohormone and neuropeptide regulation of the post-traumatic immune response. The Immune Consequences of Trauma, Shock and Sepsis-Mechanisms and Therapeutic Approaches, Munich, Germany; Intensive Care Med. 20S:304, 1994.
  43. Shelby J and Nelson EW. Immunologic and clinical consequences of allogeneic blood transfusion. The Immune Consequences of Trauma, Shock and Sepsis - Mechanisms and Therapeutic Approaches, Munich, Germany; Intensive Care Med. 20S:512, 1994.
  44. Shelby J. Immunologic aspects of wound coverage. The Immune Consequences of Trauma, Shock and Sepsis Mechanisms and Therapeutic Approaches, Munich, Germany; Intensive Care Med. 20S:653, 1994.
  45. Shelby J., Ku WW, Saffle J. Peripheral blood cell cytokine production in burn patients. American Burn Association, Orlando, Florida, April, 1994.
  46. Mone, M., Shelby J, Chafey K, Saffle J. Burn injured patients from distant rural and frontier locations: Characteristics and outcomes following treatment at a major regional burn center. Amer Burn Assoc, Orlando, Florida, April, 1994.
  47. Shelby J, Groussman M, Saffle J. Preinjury psychosocial risk factors and long term recovery and adjustment in burn patients. American Burn Association, Orlando, Florida, April, 1994.
  48. Ku WW, Shelby J, Nielson HC. Effect of light-dark cycle on cytokine response in thermally injured mice. American Burn Association, Orlando, Florida, April, 1994.
  49. Shelby J, Ku WW, Nielson, HC. Effect of light dark cycle alteration on cytokine response in normal and thermally injured mice. Psychoneuroimmunology Research Society meeting, Key Biscayne, Florida, November, 1994.
  50. Shelby J, Groussman M., Addison C., Burgess Y., Sullivan J., Saffle J. Stress resiliency in close relatives of thermally injured patients. American Burn Association 1993, Cincinnati, Ohio.
  51. Brockway C., Hayes-Lundy C., Reddy R., Mills P., Sullivan J., Tuohig G., Shelby J., Morris S., Saffle J. Patient perception versus nurses evaluation of donor site pain. American Burn Association 1993, Cincinnati, Ohio.
  52. Shelby J., Sullivan J., Tuohig G., Groussman M., Addison C., Saffle J. Relationship between severity of illness and posthospitalization depression, morale and quality of life in adult burn survivors. Amer Burn Assoc 1993, Cincinnati, Ohio.
  53. Shelby J, Ku WW. Immunomodulatory role for melatonin in thermal injury. Amer Burn Assoc, 1993, Cincinnati, Ohio.
  54. Shelby J., Ku WW., Nielson HC. Modulation of cytokine secretion with exogenous melatonin in a thermal injury model. Surgical Infection Society, April, 1993.
  55. Shelby J., Groussman M., Addison C., Sullivan J., Gray R., Collette J., Saffle J. Relationship between psychosocial factors and immune response in noninjured close relatives of burn patients. "Research Perspectives in Psychoneuroimmunology IV, Boulder, Colorado, April, 1993.

56. Shelby J., Ku WW, Nielson HC. Modulation of cell mediated immune reactivity and cytokine production by exogenous melatonin. "Research Perspectives in Psychoneuroimmunology IV", Boulder, Colorado, April, 1993.
57. Groussman M, Saffle J, Sullivan J, Tuohig G, Shelby J. The "indirect" costs of thermal injury in hospitalized adults. American Burn Association, Salt Lake City, Utah, April, 1992.
58. Young M, Shelby J., Tuohig G, Sullivan J, Collette J, Groussman M, Saffle J. Perceived social support and adjustment following burn injury. American Burn Association, SLC, Utah, April, 1992.
59. Shelby J., Sullivan JJ, Gray R, Collette J, Groussman M, Saffle JR. Influence of coping strategy preference on distress and immune response in noninjured close relatives of severely burned patients. The 23rd Annual Meeting of the American Burn Association, Baltimore, Maryland, April 3-6, 1991.
60. Shelby J., Sullivan JJ, Groussman M, Saffle JR. *Severe burn injury: effects on psychological and immunological function in non-injured close relatives.* American Burn Association, Las Vegas, Nevada, March 1990.

## **DISSERTATION AND THESIS SERVICE**

### Graduate Supervisory Committees / Montana State University:

#### Master's of Science in Health Science

Chair	Emily Morrison, 2010
Committee Member	Bryce Griswold, 2010
Committee Member	Julia Marsik, 2010
Committee Member	Erin Gosekamp, 2010
Committee Member	Dorothy Sizemore, 2010

### Graduate Supervisory Committees / University of Utah:

#### Dissertation Committee Member

Committee Member	Department of Medicinal Chemistry University of Utah, 1998-2002. Doctoral, Ms. Kelly Kirker. Glycosaminoglycan hydrogel films for wound dressing.
Committee Member	Department of Sociology University of Utah, 1996-1998. Doctoral candidate, Ms. Jie Zheng. Sociological Perspectives: An Analysis of Hospital Costs in Utah.

#### Thesis Committee member

Committee Member	Department of Family and Preventative Medicine, University of Utah, 1997-1999. Masters of Public Health Candidate, Mr. Raymond Jesson.
Committee Member	Department of Pathology, College of Medicine, University of Utah, 1993-1994. Master's Degree in Laboratory Science, Ms. Wenhua Li. Thesis title: Development and Regulation of Alloantibody Responses Following Cardiac Allograft Transplantation.
Committee Member	College of Nursing, University of Utah, 1992-1994. Master's Degree, Ms. Darlene Bangarter. Thesis title: Pathophysiology Curriculum Content in BSN and MSN Programs: Cellular Mechanisms of Action Survey.
Committee Member	College of Nursing, University of Utah, 1991. Master's Degree for Ms. Elizabeth Carter. Thesis title: Psychoneuroimmunology and Nursing.
Committee Member Science	College of Medicine, Pathology, 1989-1991. Master's Degree in Laboratory Science for Mr. Wen Wei Ku. Thesis title: Endogenous Biotin and Background Staining in Murine Cardiac Tissue Using the Avidin-Biotin Immunoperoxidase Technique.

### Other Student Research Supervision

Faculty Director	Medical Student Summer Research Fellowship, College of Medicine, University of Utah, 1999. Tom Hansen, MSII. Role of COX2 in transfusion-induced cytokine modulation.
Faculty Director	Medical Student Summer Research Fellowship, College of Medicine, University of Utah, 1996. Weiru Shao, MSIII. Long-term bone density loss due to glucocorticoid production and proinflammatory cytokines following thermal injury in mice.
Faculty Director	Medical Student Summer Research Fellowship, College of Medicine, University of Utah, 1995. Weiru Shao, MSII. Cytokines in Transfused Mice.
Faculty Director	Netherlands Medical Student Research Project, 1988, for Ms. Paula Elkuizen. Enhancement of Transfusion Effect in Mice Treated with a cAMP Active Agent

## SERVICE

### Montana State University

<i>Member</i>	Montana WWAMI Advisory Board, 2009-present
<i>Member</i>	Montana Healthcare Workforce Advisory Committee to the Commissioner of Higher Education
<i>Member</i>	Advisory Committee for the MSU American Indian Research Opportunity Program (AIRO)
<i>Ex Officio Member</i>	MSU Deans' Council
	Montana Area Health Education Center (AHEC) Board

### University of Washington School of Medicine

<i>Member</i>	Subcommittee on Second Year Curriculum Review
---------------	---

### University of Utah

<i>Chair</i>	Conflicts of Interest Advisory Committee, 1999-2002.
<i>Member</i>	Institutional Review Board, 1999-2002.
<i>Member</i>	Research Compliance Committee, 2000-2005.
<i>Member</i>	Institutional Animal Care and Use Committee, 1995-1999
<i>Member</i>	Student Recruiting Council, University of Utah Alumni Association - 1992-1994

### University of Utah School of Medicine

<i>Member</i>	Medical Student <u>Final Selection</u> Committee, 1998-2005; Interview Committee, 1997-1998
<i>Member</i>	Nominating Committee for the Candidates for the PRT Committee, College of Medicine – 1996

### Professional

#### Editorial Experience

Board Member Shock: Pathobiological Aspects and Therapeutic Approaches, 1997-2005  
 Board Member Journal of Burn Care and Rehabilitation, 1999-2005  
 Referee Transplantation: 1984-2005; Shock: 1996-2005; JBCR: 1990-2005;  
 International Immunology: 1997-2005; Am Journal of Physiology: 1998-2005; Cytokine: 1999.

### National Committees

Liaison NABR liaison for the Surgical Infection Society, 2000-2003.  
Member Awards Committee, American Burn Association, 1999 to 2002.  
Ex officio Program Committee, American Burn Association, 1997-2000.  
Chair Advisory Committee to At-Large-Membership, American Burn Association, 1999-2000.  
Member Membership Committee, American Burn Association, 1997-2000.  
Member Research Committee, American Burn Association, 1991-1993, 1993-1996.  
Member Membership Committee, Surgical Infection Society, 1993-1996.  
Chair Research Special Interest Group, American Burn Association, 1993-1996.  
Member Ethical Issues Committee, American Burn Association, 1996-1999.  
Member Intermountain Tissue Center Medical Advisory Committee, 1995 to 2000

### Organization of Scientific Meetings

*Chair* Local Organizing Committee; Surgical Infection Society Annual Meeting. Snowbird, Utah, April 25-28, 2001.  
*Chair\** Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah, January 31-February 4, 1998.  
*Chair\** Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Snowbird, Utah, January 20-24, 1996.  
*Co-Director* Postgraduate Course for the American Burn Association, "The Research Process", March 15-17, 1996.  
*Chair\** The Third Conference on the Immunocompromised Surgical Patient: Mechanisms and Therapy in Trauma and Burns, Snowbird, Utah, 1994.  
*Member* Scientific Organizing Committee, Third Basic Sciences Symposium, International Transplantation Society, Big Sky, Montana, September, 1993.  
*Chair\** The Second Conference on the Immunocompromised Surgical Patient: Mechanisms and Therapy in Trauma and Burns. Snowbird, Utah, January 26-29, 1992.  
*Member* Scientific Organizing Committee, Tolerance Induction. Beaver Run Resort and Conference Center, Breckenridge, Colorado, January 13-16, 1991.  
*Chair\** The Immunocompromised Surgical Patient: Mechanisms and Therapy in Trauma and Burns. Snowbird, Utah, January 24-28, 1990.

\*Founder and Chair: operating budgets in excess of \$50,000.00 for each meeting – directed content, faculty selection and all aspects of meeting management including fund raising.

### Moderator - Invited Discussant Service (National - International Meetings)

#### American Burn Association Annual Meetings:

Moderator	Scientific Sessions	1993, 1994, 1998, 2000, 2001
Moderator	Sunrise Symposiums	1994, 1995, 1996, 1997, 1998

#### Surgical Infection Society Annual Meetings:

Discussant	Scientific Session	1997, 2001
------------	--------------------	------------

#### The Snowbird Immunocompromised Surgical Patient Meetings:

Moderator	Scientific Sessions	1990, 1992, 1994, 1996
-----------	---------------------	------------------------

#### Fourth International Congress of the Immune Consequences of Trauma, Shock and Sepsis: Munich, Germany

Moderator	Poster Session	1997
-----------	----------------	------

## **RESEARCH PROJECTS / GRANTS**

### Extramural Funding - Research:

**Upjohn Research Award**, 1987. \$1,200

**Animal Models for Antiviral Evaluation N01-A1-62518**

*Co-investigator*, 1987-1990. \$888,399

**Deseret Foundation**, Heart Transplantation Immunology

*Co-investigator*, 1990 – 1991 \$19,501

**American Heart Association Grant-in-Aid Award**,

*Collaborating Investigator*, 1986 – 1988; 1990 – 1991, \$14,080

**CDC GRANT: Grants for Injury Prevention Control Research Projects;**

Determinants of outcome in Elderly Burn Patients.

*Co-Investigator*, 1989 – 1991, \$485,670

**NIH Grant:** Mechanisms of Myocyte Injury During Cardiac Rejection,

*Co-investigator*, 1991 – 1996, \$190,847

**NIH Grant:** Immunologic Reconstitution of Thermally Injured Animals.

*Co-Investigator*, 1992- 1995, \$334,897

**National Institute of Child Health and Human Development Grant:**

Determinants of Outcome in Elderly Burn Patients/2: R01 HD 30455-01

*Co-Investigator*, 1993-1996, \$382,143

**Office of Naval Research Grant N00014-92-J-1612.:** Prevention of Post Surgical Decline in

Immune Function *Co-Principal Investigator*, 1994-1996, \$199,000

**Office of Naval Research Grant N00014-96-0780:**

The role of circadian rhythm and melatonin on hormonal and inflammatory response in traumatic injury.

*Principal Investigator*, 1996-1999, \$285,000

**Paradigm Inc. Research Contract:** Effect of DHEA on Primarily Vascularized Cardiac Allograft Survival.

*Principal Investigator*, 1996, \$1,513

**Paradigm Inc. Research Contract:** Evaluation of DHEAS in Wound Healing and

Reepithelization in a Porcine Model of Partial Thickness Keratotomy and Burn Wound.

*Co-Principal Investigator*, 1996, \$5,000

**Office of Naval Research Grant N00014-96-0780:**

Optimizing melatonin treatment in injury and assessing outcome in an injury resuscitation model.

*Principal Investigator*, 1998-2002, \$285,000

**NIH Grant 1-R43-GM067420-01A1:**

In Situ Crosslinkable Hydrogels for Tissue Repair

*Principal Investigator*, 2004-2005, \$107,000 Wyoming Research Innovations, Inc.

**State of Utah Centers of Excellence Program: Center for Therapeutic Biomaterials**

*Co-Director- Basic Science*, 2004-2006, \$260,000

**Federal Appropriations: Department of Defense Project**

Antimicrobial Coatings for Medical Devices,

*Principal Investigator*, 2005-2006, \$1,300,000 Bacterin International, Inc.

**Federal Appropriations: Department of Defense Project**

Adult Stem Cells for Wound Healing and Immune Reconstitution

*Principal Investigator*, 2006-2007, \$2,800,000, Bacterin International, Inc.

**State of Montana Research & Commercialization Grant**

Demineralized Bone Matrix Putty for Transplantation

*Co-Investigator*, 2006-2007, \$165,974, Bacterin International, Inc.

**NIH Grant 5R25GM056806-11**

Increasing Montana Student Diversity

*Co-Principal Investigator*, 2006-2011, \$1,409,000

**NIH Grant 2-R25-GM063983-02:**

Bridging Tribal Colleges to MSU

*Principal Investigator*, 2006-2009, \$808,465

**Howard Hughes Medical Institute MONSTA016**

AIRO program support

Principal Investigator, 2009-2010, \$346,080  
**Howard Hughes Medical Institute COMBI0002**  
AIRO program support  
Principal Investigator, 2009-2010, \$55,000  
**NSF Grant DBIO840098**  
AIRO Environmental Science  
Co-Principal Investigator, 2008-2012, \$322,120

Extramural Funding – Meeting/Educational Grants:

Bayer Pharmaceutical Corporation: \$2,000 Sponsorship of educational symposium for first year medical students: Social Medicine Course, September, 1998. Guest speaker: Dr. William Close

Inflammation and Multiple Organ Failure: Mechanisms and Therapy in Burns and Trauma. Biannual meetings, Snowbird, Utah. J Shelby, Founder and Chair

January 31-Feb. 4, 1998; Unrestricted Educational Grants (\$25,000) Bayer Pharmaceutical Corporation: Amgen Corporation:Genetics Institute:Merck Pharmaceutical Corporation: Wyeth Ayerst Pharmaceutical Corporation: Integra Corporation:Immunex Corporation:

January 20-24, 1996; Unrestricted Educational Grants (\$29,000) Amgen Corporation: Merck Pharmaceutical Corporation:Wyeth Ayerst Pharmaceutical Corporation:Immunex Corporation: Lifecell Corporation;Sandoz Pharmaceuticals Corporation;The Upjohn Company ;Pfizer, Inc. Roerig Division

January 15-19, 1994; Unrestricted Educational Grants (\$28,500) Amgen Corporation: Merck Pharmaceutical Corporation; Wyeth Ayerst Pharmaceutical Corporation:Bristol-Meyers Squibb; Immunex Corporation:Glaxco Corporation;The Upjohn Company;Pfizer, Inc. Roerig Division

January 26-29, 1992; Unrestricted Educational Grants (\$27,500) Amgen Corporation: Merck Pharmaceutical Corporation:Wyeth Ayerst Pharmaceutical Corporation:Bristol-Meyers Squibb; Immunex Corporation:Glaxco Corporation;The Upjohn Company;Pfizer, Inc. Roerig Division

January 24-28, 1990; Unrestricted Educational Grants (\$27,000) Amgen Corporation: Merck Pharmaceutical Corporation:Wyeth Ayerst Pharmaceutical Corporation:Bristol-Meyers Squibb; Immunex Corporation:Glaxco Corporation;The Upjohn Company;Pfizer, Inc. Roerig Division

University of Utah Funds:

UV tumor induction in immunosuppressed mice, Co-investigator, 1985-1986, \$5,000  
Microvascular Laboratory Facility, Principal Investigator 1985, \$31,106  
Microvascular Laboratory: Immunosuppression studies, Principal Investigator, 1985, \$10,318  
Didemnin B, a new immunosuppressive agent. Co-investigator , 1989-1990, \$5,000  
Relationship between cytomegalovirus infection and cardiac transplantation rejection. Co-investigator (primary author) 1989-1990, \$5,000  
Cytokine profiles in trauma patients, Co-investigator (primary author), 1991, \$14,500  
Microvascular studies in Dept. Surgery, Co-investigator (primary author), 1997, \$14,300  
Transplantation studies in mice, Principal Investigator, 2000, \$6,500

Surgery Core Laboratories, Principal Investigator, 2001, \$9.500

#### University of Utah Foundation Grants

Funding Incentive Grant , Principal Investigator, 2003-2004, \$35.500

Enhancement of chronic wound healing with hydrogels

Technology Commercialization Project Principal Investigator, 2003-2005, \$70,000

Method for enhancement of viability and longevity of stored human cells and tissue

#### Clinical Protocols (University of Utah Health Sciences Center):

1. Principal Investigator: Distress and Immune Function in Non-Injured Close Relatives of Burn Patients. 1989-1992
2. Principal Investigator: Cytokine Profiles in Burn Patients, 1992-1994
3. Principal Investigator: Circadian Rhythm and Inflammatory Response in Burn Patients.1995-1999
4. Co-Investigator: Characterization of Bone Mass Loss in Burn Patients, 1997-2000
5. Co-Principal Investigator: Leukocyte Reduced Blood Transfusions in Burn Patients, 1998-2001
6. Co-Principal Investigator: Endogenous melatonin levels in critically ill adults, 1999-2000
7. Principal Investigator: Adult Derived Adipose Stem Cells, 2006-2007

#### **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

1984 International Transplantation Society  
1989 Surgical Infection Society  
1989 International Immunocompromised Host Society  
1989 American Burn Association  
1993 Psychoneuroimmunology Research Society  
1994 International Cytokine Society  
1996 Shock Society  
1996 American Society of Transplant Physicians  
1999 American Society of Tissue Banking  
2004 International Stem Cell Research Society  
2006 International Society for Cellular Therapy  
2010 National AHEC Organization  
2010 National Rural Health Association  
2010 National Rural Medical Educators  
2010 American Association Medical Colleges- Group Rural Medical Campuses

#### **PROFESSIONAL RECOGNITION**

- Robert B. Lindberg Award - American Burn Association, 22nd Annual Meeting, March, 1990. Title: Severe Burn Injury: Effects on Psychological and Immunological Function in Noninjured Close Relatives.
- Senior co-author: Robert B. Lindberg Award - American Burn Association, 29th Annual Meeting, March, 1997. Title: Effects of Thermal Injury on Bone Metabolism: A Murine Model.
- Research Teaching Award: Department of Surgery, University of Utah School of Medicine 1997
- Nominee; Gender Equity Award, University of Utah Chapter of American Medical Women's Association, 2000
- Award of Membership: Angel Flight West-Utah Wing. Founder, Angel Flight Santa Navajo Project
- Stoel Rives Utah Innovation Award: presented March 20, 2003 - 4<sup>th</sup> Annual Innovations to

- Commercialization Conference, University of Utah
- **2010 Faculty Award for Excellence, Montana State University, presented February 16, 2010**

#### BIOGRAPHICAL REFERENCE LISTINGS:

- *Who's Who in Collegiate Faculty*, 2010-2011
- *American Men and Women of Science*, RR Bowker Co. -2006, 20<sup>th</sup> Edition, 1998; 19<sup>th</sup> Edition, 1995
- *International Biographical Centre: Outstanding People of the 21<sup>st</sup> Century*- 1<sup>st</sup> Edition, 2001.
- *International Biographical Centre: Outstanding Scientists of the 21<sup>st</sup> Century* - 1<sup>st</sup> Edition, 2001.
- *Marquis Who's Who of Emerging Leaders in America* - 2nd Edition, 1989-90; 3rd Edition, 1991-1992.
- *International Biographical Centre: International Leaders in Achievement* - 2nd Edition, 1989-90.
- *Marquis Who's Who in the West* - 21st Edition (1987-88)

#### CIVIC AND COMMUNITY ACTIVITIES/SERVICE:

- *Founder* The Dr Bill and Tine Close Hozhoni Glasses and Reading Program, Utah Navajoland, 2008-present. Funded program providing prescription glasses and books to Navajo children.
- *Founder and Director* Annual food, clothing, book drive, house repair efforts among families of Burnt Corn Wash, Arizona, Navajo Nation. 1991-2000.  
Utah Navajo Partners: Health Fairs and Screening Clinics- with Utah Navajo Health Founder Systems and the Montezuma Creek Community Health Center- St. Christopher's Mission, 2000-present  
*Provided health screening for over 1500 individuals and new prescription glasses for >800 children on the Utah portion of the Navajo Reservation.*
- *Vice President* Episcopal Diocese of Utah, Board of Trustees, Episcopal Corporation of Utah, 2001-2003

#### PATENTS

##### Issued:

US Patent No. 5,519,047, May 21, 1996. Inventors: Jane Shelby, Ph.D.; H. Clark Nielson, Ph.D. "Immunomodulatory Activity of Endogenous Melatonin Following Traumatic Injury" Assignee: University of Utah

US Patent No. 7,794,761, September 14, 2010. "Methods for inducing anti-anxiety and calming effects in animals and humans" Inventors: Nancy J Shelby, PhD, Mitchell Godfrey, Mark Rosenfeld, PhD

##### Patent Applications Under Prosecution:

1. "Process and Formulation to Improve Viability of Stored Cells and Tissue" Inventor: Jane Shelby, PhD –Filed 2004 Assignee: University of Utah
2. "Methods for Augmenting Immune Defenses Contemplating the Administration of Phenolic and Indoleamine-Like Compounds for Use in Animals and Humans" –Filed 2004 Inventors: Jane Shelby, PhD, Mark Rosenfeld, PhD
3. "Three-Dimensional Organotypic Culture System for Isolation Culture and Expansion of Adipose-tissue Derived Stem Cells" -Filed 2005 Inventors: Young Il Yang MD, Jane Shelby PhD.
4. "Novel Process for Devitalized/Acellular Tissue Transplantation" –Filed 2008 Inventors: Jane Shelby PhD; Kristin Fitzpatrick, Kelly Kirker PhD; Darrel Holmes.

5. "Process for demineralization of cancellous bone matrix with preservation of natural growth factors" -Filed 2008 Inventors: J Shelby, S Scott, B Luchsinger, G Juda, D Holmes, J Hernandez, K Kirker.
6. "Feed Supplement for Animals for Methane Reduction" - Filed 2009  
Inventors: Jane Shelby PhD, M Godfrey