

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME Gary Peltz		POSITION TITLE Professor, Anesthesia	
eRA COMMONS USER NAME (credential, e.g., agency login) GARY_PELTZ			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Illinois-Urbana	B.S.	1978	Biochemistry
Stanford University-Stanford CA	M.D.	1982	Medicine
Stanford University-Stanford CA	Ph.D.	1983	Biochemistry

A. Positions

Stanford University School of Medicine Dept of Anesthesia
 2008- present Professor, Anesthesia

Roche Palo Alto
 1999-2007 Head of Genetics & Genomics
 1/96-98 Assistant Director, Respiratory Diseases

Attending Physician-Dept. of Rheumatology University of California San Francisco
 1989 – 2007

Diplomat of the American Board of Internal Medicine: Internal Medicine and Rheumatology

Syntex Inc. (1989 to 1995)
 2/94-1996 Senior Scientist and Senior Department Head
 1989-1992 Staff Scientist and department head

DNAX Research Institute Postdoctoral Fellowship
 1987-1989 Dr. Kevin W. Moore - advisor

University of California - San Francisco
 July 1985-June 1988 Fellowship in Rheumatology

June 1983-June 1985 Residency in Internal Medicine
 Stanford University

Sept 1978-June 1983 Cell Biology Ph.D. Dr. James A. Spudich - advisor

Advisory Panels

Scientific Advisory Boards
 Ataxia Telangiectasia Children's Project (2001 - present)
 Stanford Pharmacogenetics Knowledge Base (2005 – Present)

Program Director/Principal Investigator (Last, First, Middle): Peltz, Gary

UCSF Pharmacogenetics Research Network (2007-present)

Ad hoc member of multiple NIH grant review panels (recent: NIDA 06/09; NIDDK 04/10)

FDA/NIH Adverse Drug Reaction Panel (12/06)

Awards/Memberships

U. of Illinois Valedictorian, Phi Beta Kappa

Selected by Nature Publications as a top 10 worldwide Pharmaceutical Research Executive 2006

Recipient of Transformative Research Award: 1R01DK090992-01 PI: Peltz, G. 10/1/10-9/30/15 6.0 calendar month NIH/NIDDK Human Pharmacogenetics and Human Liver Regeneration

Member of Association of University Anesthesiologists, American Society of Anesthesiology, California Society of Anesthesiology

B. Peer-reviewed publications or manuscripts (n=104)

1. Liu, H.-Y., Peltz, G.A., Leytus, S.P., Livingston, C., Brocklehurst, J., Mangel, W.F.. Sensitive assay for plasminogen activator of transformed cells. **Proc. Natl. Acad. Sci** 77:3796-800, 1980.

2. Mangel, W.F., Livingston, D.C., Brocklehurst, J.R., Liu, H.-Y., Peltz, G.A., Cannon, J.F., Leytus, S.P., Wehrly, J.A., Salter, B.L., Mosher, J.L. New assay for the plasminogen activator activity of transformed cells. **Cold Spring Harbor Symposia on Quantitative Biology** 44(1):669-80, 1980.

3. Mangel, W.F., Livingston, D.C., Brocklehurst, J.R., Cannon, J.F., Leytus, S.P., Peltz, S.W., Peltz, G.A., Liu, H.-Y. A new active-site titrant of serine proteases. **Methods in Enzymology** 80 Pt C:414-24, 1981.

4. Leytus, S.P., Peltz, G.A., Liu, H.-Y., Cannon, J.F., Peltz, S.W., Livingston, D.C., Brocklehurst, J.R., Mangel, W.F. A quantitative assay for the activation of plasminogen by transformed cells in situ and by urokinase. **Biochemistry** 20:4307-14, 1981.

5. Livingston, D.C., Brocklehurst, J.R., Cannon, J.F., Leytus, S.P., Wehrly, J.A., Peltz, S.W., Peltz, G.A., Mangel, W.F. Synthesis and characterization of a new fluorogenic active-site titrant of serine proteases. **Biochemistry** 20:4298-306 1981.

6. Peltz, G., Kuczarski, E. and J. Spudich. Dictyostelium myosin: characterization of chymotryptic subfragments and localization of a heavy chain phosphorylation site. **J. Cell Biol.** 89:104-108, 1981.

7. Flicker, P., Peltz, G., Sheetz, M., Parham, P. and J. Spudich. Site-specific inhibition of myosin-mediated motility *in vitro* by monoclonal antibodies. **J. Cell Biol.** 100:1024-1030, 1985.

8. Peltz, G., Spudich, J.A., Parham, P. Monoclonal antibodies against seven sites on the head and tail of *Dictyostelium* myosin. **The Journal of Cell Biology** 100:1016-23, 1985.

9. Peltz, G.A., Gallis, B., Peterlin, B.M. Monoclonal antibody immunoprecipitation of cell membrane glycoproteins. **Analytical Biochemistry** 167:239-44, 1987.

10. Peltz, G., Trounstein, M. and K. Moore. Cloned and expressed human Fc RII mediates anti-CD3 induced lymphoproliferation. **J. Immunol.** 141:1891-1896, 1988.

11. Grundy, H.O., Peltz, G., Moore, K.W., Golbus, M.S., Jackson, L.G., Lebo, R.V. The polymorphic Fc gamma receptor II gene maps to human chromosome 1q. **Immunogenetics** 29:331-9, 1989.

12. Peltz, G., Grundy, H., Lebo, R., Yssel, H., Barsh, G. and K. Moore. Human Fc RIII: cloning, expression and identification of the chromosomal locus of two Fc receptors for IgG. **Proc. Natl. Acad. Sci.** 86:1013-1017, 1989.
13. Peltz, G., Frederick, K., Anderson, C.L., Peterlin-B.M. Characterization of the human monocyte high affinity Fc receptor (hu FcRI). **Molecular immunology** 25:243-50,1988.
14. Trounstein, M.L., Peltz, G.A., Yssel, H., Huizinga, T.W., von dem Borne, A.E., Spits, H., Moore, K.W. Reactivity of cloned, expressed human Fc gamma RIII isoforms with monoclonal antibodies which distinguish cell-type-specific and allelic forms of Fc gamma RIII. **International Immunology** 2:303-10, 1990.
15. Mensi, N., Webb, D.R., Turck, C.W., Peltz, G.A. Characterization of *Borrelia burgdorferi* proteins reactive with antibodies in synovial fluid of a patient with Lyme arthritis. **Infection and Immunity** 58:2404-7, 1990.
16. Yssel, H., Nakamoto, T., Schneider, P., Freitas, V., Collins, C., Webb, D., Mensi, N., Soderberg, C., Peltz, G. Analysis of T lymphocytes cloned from the synovial fluid and blood of a patient with Lyme arthritis. **International Immunology** 2:1081-9,1990.
17. Yssel, H., Shanafelt, M.-C., Soderberg, C., Schneider, P., Anzola, J., and G. Peltz. *B. burgdorferi* activates a T_H1-like T cell subset in Lyme arthritis. **J. Exp. Med.** 174:593-601, 1991.
18. Shanafelt, M.C., Hindersson, P., Soderberg, C., Mensi, N., Turck, C.W., Webb, D., Yssel, H., Peltz, G. T cell and antibody reactivity with the *Borrelia burgdorferi* 60-kDa heat shock protein in Lyme arthritis. **Journal of Immunology** 146: 3985-92, 1991.
19. Peltz, G. A role for CD4⁺ T cell subsets producing a selective pattern of lymphokines in the pathogenesis of human chronic inflammatory and allergic diseases. **Immunol. Rev.** 123:23-35, 1991.
20. Collins, C., Peltz, G. Immunoreactive epitopes on an expressed recombinant flagellar protein of *Borrelia burgdorferi*. **Infection and Immunity** 59:514-20, 1991.
21. Shanafelt, M.C., Anzola, J., Soderberg, C., Yssel, H., Turck, C., and G. Peltz. Epitopes on the outer surface protein A of *Borrelia burgdorferi* recognized by antibodies and T cells of Lyme arthritis patients. **J. Immunol.** 146:3985-3992, 1992.
22. Anzola, J., Luft, B.J., Gorgone, G., Peltz, G. Characterization of a *Borrelia burgdorferi* dnaJ homolog. **Infection and Immunity** 60:4965-8, 1992.
23. Anzola, J., Luft, B.J., Gorgone, Dattwyler, R.J., Soderberg C., Lahesmaa, R., Peltz, G. *Borrelia burgdorferi* HSP70 homolog: characterization of an immunoreactive stress protein. **Infection and Immunity** 60:3704-13 1992.
24. Lahesmaa, R., Yssel, H., Batsford, S., Luukkainen, R., Möttönen, T., Steinman, L., Peltz, G. *Yersinia enterocolitica* activates a T helper type 1-like T cell subset in reactive arthritis. **Journal of Immunology** 148:3079-85, 1992.
25. Lahesmaa, R., Shanafelt, M.C., Steinman, L., Peltz, G. Immunopathogenesis of human inflammatory arthritis: lessons from Lyme and reactive arthritis. **J. Inf. Dis.** 170:978-85, 1994.
26. Begovich, A.B., Klitz, W., Moonsamy, P.V., Van de Water J., Peltz, G., Gershwin, M.E. Genes within the HLA class II region confer both predisposition and resistance to primary biliary cirrhosis. **Tissue Antigens** 43: 71-7, 1994.

27. Lahesmaa, R., Soderberg, C., Bliska, J., Leirisalo-Repo, M., Luukkainen, R., Steinman, L., and G. Peltz. Pathogen antigen and superantigen-responsive T cells in reactive arthritis. **J. Inf. Dis.** 172:1290-97, 1995.
28. Shanafelt, M-C., Soderberg, C., Allsup, A., Adelman, D., Peltz, G., and Lahesmaa, R. Costimulatory signals can selectively modulate cytokine production by CD4⁺ T cells. **J. Immunol.** 154:1684-90, 1995.
29. Jackman, J., Motto, D., Sun, Q., Tanemoto, M., Turck, C.W., Peltz, G.A., Koretzky, G.A., Findell, P.R. Molecular cloning of SLP76, a 76 kDa tyrosine phosphoprotein associated with Grb2 in T cells. **J. Biol. Chem.** 240:2029-32, 1995.
30. Lahesmaa, R., Shanafelt, M.C., Allsup, A., Soderberg, C., Anzola, J., Freitas, V., Turck, C., Steinman, L., Peltz, G. Preferential usage of T cell antigen receptor V region gene segment V beta 5.1 by *Borrelia burgdorferi* antigen-reactive T cell clones isolated from a patient with Lyme disease. **Journal of Immunology** 150: 4125-35, 1993.
31. Shanafelt, M-C., Yssel, H., Soderberg, C., Steinman, L., Adelman, D., Peltz, G., and R. Lahesmaa. CD45 isoforms on human T cell subsets. **J. Allergy Clin. Immunol.** 98:433-40, 1996.
32. Lahesmaa, R., Allsup, A., Soderberg, C., Jackman, J., Findell, P., and G. Peltz. Modulation of the grb2-associated protein complex in human CD4⁺ T cells by receptor activation. **J. Immunol.** 155:3815-22, 1995.
33. Turcovski-Corrales, S.M., Fenton, R.G., Peltz, G., Taub, D.D. CD28:B7 interactions promote T cell adhesion. **European Journal of Immunology** 25:3087-93, 1995.
34. Peltz, G. Transcription factors in immune-mediated disease. **Current Opin. Biotech.** 8:467-73, 1997.
35. Ranganath S. Ouyang WJ. Bhattarcharya D. Sha WC. Grupe A. Peltz G. Murphy KM (1998) Gata-3-dependent enhancer activity in IL-4 gene regulation. **Journal of Immunology** 161, 3822-3826.
36. Guler ML. Gorham JD. Dietrich WF. Murphy TL. Steen RG. Parvin CA. Fenoglio D. Grupe A. Peltz G. Murphy KM. (1999) Tpm1, a locus controlling IL-12 responsiveness, acts by a cell-autonomous mechanism. **Journal of Immunology** 162, 1339-1347.
37. Ranganath, S.; Ouyang, W.; Bhattarcharya, D.; Sha, W.C.; Grupe, A.; Peltz, G.; Murphy, K.M. GATA-3-dependent enhancer activity in IL-4 gene regulation. **J. Immunol.** 161:3822-26, 1998.
38. Guler ML, Gorham JD, Dietrich WF, Steen RG, Parvin C, Fenoglio D, Grupe A, Peltz G, Murphy KM. Loci influencing development of Th responses. Identification from *in vitro* analysis. **Microbes Infect.** 1:79-88, 1999.
39. Ewert, S.; Kuperman, D.; Schadt, E.; Tankersley, C.; Grupe, A.; Shubitowski, D.M.; Peltz, G.; Wills-Karp, M. Quantitative Trait Loci Controlling Allergen-Induced Airway Hyperresponsiveness in Inbred Mice. **Am J Respir Cell Mol Biol.** 23: 537-45, 2000.
40. Karp, C.L.; Grupe, A.; Schadt, E.; Ewert, S.; Keane-Moore, M.; Cuomo, P.J.; Kohl, J.; Wahl, L.; Kuperman, D.; Germer, S.; Aud, D.; Peltz, G.; Wills-Karp, M. Identification of Complement Factor 5 (C5) as a Susceptibility Factor for Experimental Allergic Asthma. **Nature Immunology.** 1:221, 2000.
41. Grupe, A.; Germer, S.; Usuka, J.; Aud, D.; Belknap, J.K.; Klein, R.F.; Ahluwalia, M.K.; Higuchi, R.; Peltz, G. *In Silico* Mapping of Complex Disease-Related Traits in Mice. **Science.** 292:1915, 2001.
42. Rozzo, S.; Allard, J.D.; Choubey, D.; Vyse, T.; Izui, S.; Peltz, G.; Kotzin, B.L. Evidence for an interferon-inducible gene, ifi202, in the susceptibility to Systemic Lupus. **Immunity.** 15:1, 2001.
43. Noble, J.A., White, Amy, M., Lazzeroni, L.C., Valdes, A.M., Mirel, D.B., Reynolds, R., Grupe, A., Aud, D.,

- Peltz, G., Erlich, H.A. (2003). A polymorphism in the *TCF7* gene, C883A, is associated with type 1 diabetes. **Diabetes**. 52: 1579-82.
44. Klein, R.F.; Alard, J.; Avnur, Z.; Nikolcheva, T.; Rotstein, D.; Carlos, A.S.; Shea, M.; Waters, R.V.; Belknap, J.K.; Peltz, G.; Orwoll, E.S. Regulation of Bone Mass in Mice by the Lipoxygenase Gene *Alox15*. **Science**. 303:229-232, 2004.
45. Savov, J.D., Whitehead, G.S., Foster, W.M., Wang, J., Liao, G., Usuka, J., Peltz, G., Schwartz, D.A. O₃-Induced Acute Pulmonary Injury in Inbred Mouse Strains. **Am. J. Resp. Cell Mol. Biol.**, 31: 69-77, 2004.
46. Peltz, G. Computational Biology Are We There Yet? Chapter 1 in **Computational Genetics: New Tools for Disease Biology**. G. Peltz, Editor. Trenton: Humana Press, 2005.
47. Wang, J., Peltz, G. Haplotype-Based Computational Genetic Analysis in Mice. Chapter 3 in **Computational Genetics: New Tools for Disease Biology**. G. Peltz, Editor. Trenton: Humana Press, 2005.
48. Wang, J.; Liao, G.; Chang, J.; Nguyen, A.; Guo, J.; Chou, S.; Hu, S.; Bach, C.; Allard, J.; Shafer, S.; Puech, A.; McPherson, J.D.; Foerzler, D.; Peltz, G.; Usuka, J. Haplotypic Structure of the Mouse Genome. Chapter 4 in **Computational Genetics: New Tools for Disease Biology**. G. Peltz, editor. Trenton: Humana Press, 2005.
49. Wang, J.; Liao, G.; Chang, J.; Nguyen, A.; Guo, J.; Chou, S.; Hu, S.; Allard, J.; Shafer, S.; Puech, A.; McPherson, J.D.; Foerzler, D.; Peltz, G.; Usuka, J. In Silico Genetics: Identification of A Novel Functional Element Regulating H2-Ea Gene Expression. **Science** 306:690-96, 2004.
50. Wang, J.; Liao, G.; Usuka, J.; Peltz, G. Computational Genetics: From Mouse to Man? **Trends in Genetics**. 21: 526-532, 2005.
51. Usuka, J.; Peltz, G. From Mouse Genetics to Human Therapeutics. **Current Opinion in Drug Discovery and Development**. 8: 253, 2005.
52. Moffett, S.P.; Zmuda, J.M.; Oakley, J.M.; Beck, T.J.; Cauley, J.A., Stone, K.L., Lui, L.Y.; Ensrud, K.E., Hillier, T.A., Hochberg, M.A.; Morin, P.; Peltz, G.; Greene, D.; Cummings, S.R. Tumor Necrosis Factor Alpha Polymorphism, Bone Strength Phenotypes, and the Risk of Fracture in Older Women. **J. Clin. End. Metab.** 90: 3492-3497, 2005.
53. Guo, Y.; Shafer, S.; Usuka, J.; Peltz, G. The Pharmacogenomic Road Ahead. **Pharmacogenetics**. 6:857-864, 2005.
54. Liang, D., Liao, G., Wang, J., Usuka, J., Gou, J., Peltz, G. and Clark, D.J. Genetic Analysis of Opioid-Induced Hyperalgesia in Mice. **Anesthesiology**, 104: 1054-1062, 2006.
55. A.C. Patel J.D. Morton, E.Y. Kim, Y. Alevy, S. Swanson, J. Tucker, G. Huang, E. Agapov, T.E. Phillips, J.D. Allard, K. Dabbagh, G. Peltz, and M.J. Holtzman. Genetic segregation of airway disease traits despite redundancy of chloride channel calcium-activated (CLCA) family members. **Physiological Genomics**. 25: 502-513, 2006.
56. D.Y. Liang, T. Guo, G. Liao, W. Kingery, G. Peltz and J.D. Clark. Chronic Pain and Genetic Background Interact and Influence Opioid Analgesia, Tolerance and Physical Dependence. **Pain**. 121: 232-240, 2006.
57. Y. Guo, P. Weller, J. Allard, J. Usuka, M. Masjedizadeh, S-Y. Wu, B. Fitch, D. Clark, J.D. Clark, S. Shafer, J. Wang, G. Liao and G. Peltz. Understanding Our Drugs and Our Diseases. **Proceedings of the American Thoracic Society**. 3: 409-412, 2006.

58. Guo, Y., Weller, P., Farrell, E., Cheung, P., Fitch, B., Clark, D., Wu, S.-Y., Wang, J., Liao, G., Zhang, Z., Allard, J., Cheng, J., Nguyen, A., Jiang, S., Shafer, S., Usuka, J., Masjedizadeh, M. and G. Peltz. *In Silico* Pharmacogenetics: Warfarin Metabolism. **Nature Biotechnology**, 24: 531-536, 2006.
59. D-Y. Liang, G. Liao, G. Lighthall, G. Peltz and J. D. Clark (2006). Genetic Variants of the P-Glycoprotein Gene *Abcb1b* Modulate Opioid-Induced Hyperalgesia, Tolerance and Dependence. **Pharmacogenetics and Genomics**, 16: 825-835, 2006.
60. J.G. Koch, X. Gu, Y. Han, A. El-Naggar, D. Medina, D. J. Jerry, A. C. Blackburn, G. Peltz, C. Amos, and G. Lozano. Mammary tumor modifiers in BALB/cJ mice heterozygous for p53. **Mammalian Genome**, 18:300-309, 2007.
61. A.C. Blackburn, Hill, L.Z., Roberts A., Wang, J., Aud, D., Jung, J., Nikolcheva, T., Allard, J., Otis, C.N., Cao, J., Ricketts S.J.R., Naber, S.P., Dickinson E., Peltz, G., and D.J. Jerry. Low DMBT1 Expression Correlates with Breast Cancer Susceptibility in Mice and Humans. **Am. J. Pathology**, 170:2030-2041, 2007.
62. Cascio, M., Xing, Y., Gong, D., Popovich, J., Eger, E., Saunak Sen, Peltz, G., Sonner, J.M. Mouse chromosome 7 harbors a quantitative trait locus for isoflurane minimum alveolar concentration. **Anesthesia and Analgesia**, 105: 381-385, 2007.
63. Moffett, S.P., Zmuda, J.M., Cauley J.A., Ensrud K.E., Hillier T.A., Hochberg M.C., Li J., Cayabyab S., Lee J. M, Peltz G., Cummings S.R. Association of the VDR translation start site polymorphism and fracture risk in older women. **Journal of Bone and Mineral Research**, 22: 730-6, 2007.
64. Adachi, K., Mirzadeh, Z., Sakaguchi, M., Yamashita. T., Nikolcheva, T., Peltz, G., Gong, L., Gotoh, Y., Alvarez-Buylla, A., Kawase, T., Okano, H., and Sawamoto, K. b-catenin Signaling Promotes Proliferation of Progenitor Cells in the Adult Mouse Subventricular Zone. **Stem Cells**, 25: 2827-36, 2007.
65. Zheng, M., Lu, P., Liu, Y., Pease, J., Usuka, J., Peltz, G., and Guochun Liao. An Automated Method for Analysis of 2-Dimensional ¹H-¹³C NMR Spectra (2007). **Bioinformatics**, 21:2926-2933.
66. Sabsovitch, I., Clark, J.D., Liao, G., Peltz, G., Lindsey, D.P., Jacobs, J.R., Yao, W., Guo, T-Z., W.S. Kingery. Bone Microstructure and its Associated Genetic Variability in 12 Inbred Mouse Strains: μ CT Study and In Silico Genome Scan. **Bone**, 42:439-51, 2008.
67. Yingying Guo, Erin Farrell, Peng Lu, Paul Weller, Jianmei Wang, Guochun Liao, Zhaomei Zhang, Steven Hu, John Allard, Steve Shafer, Jonathan Usuka, and Gary Peltz. In silico and In vitro Computational Pharmacogenetics in mice. **Proceedings of the National Academy of Science**, 104:17735-40, 2007.
68. G. Liao, J.D. Clark, G. Peltz. A Genomic 'Roadmap' to 'Better' Drugs. **Drug Metabolism Reviews**, 40:225-39, 2008.
69. S.B. Smith, C.L. Marker, C. Perry, S.G. Sotocinal, J.-S. Austin, K. Melmed, G. Liao, G. Peltz, D.J. Clark, K. Wickman, and J.S. Mogil. Quantitative Trait Locus and Computational Mapping Identifies *Kcnj9* (GIRK3) as a Candidate Gene Affecting Analgesia from Multiple Drug Classes, **Pharmacogenetics and Genomics**, 18:231-41, 2008.
70. E.Y. Kim, J.T. Battaile, A.C. Patel, E. Agapov, M.H. Grayson, Y. You, Y. Alevy, J. Tucker, S. Swanson, J.W. Tyner, J.D. Morton, M.Castro, G.A. Patterson, J.C. Woods, G. Reto, A. Schwendener, J.D. Allard, G. Peltz, and M.J. Holtzman. Persistent activation of an innate NKT cell-macrophage immune axis translates respiratory viral infection into chronic inflammatory lung disease. **Nature Medicine**, 14:633-40, 2008.

71. Aimee Zaas, Guochun Liao, Jason Chien, Jonathan Usuka, Clarice Weinberg, David Shore, Steven Giles, Kieren Marr, Lauranell Burch, Lalith Perara, John Perfect, Gary Peltz, David Schwartz. Plasminogen Alleles Influence Susceptibility to Invasive Aspergillosis (2008). **PLOS Genetics**. 4: e1000101, 2008.
72. Moffett, S. P., Oakley, J. I., Cauley, J. A., Lui, L. Y., Ensrud, K. E., Taylor, B. C., Hillier, T. A., Hochberg, M. C., Li, J., Cayabyab, S., Lee, J. M., Peltz, G., Cummings, S. R., Zmuda, J. M. Osteoprotegerin Lys3Asn Polymorphism and the Risk of Fracture in Older Women. **J. Clinical Endocrinology and Metabolism**. 93:2002-8, 2008.
73. G.J. Tranah, B.C. Taylor, Li-Y. Liu, J.M. Zmuda, J.A. Cauley, Kristine E. Ensrud, T.A. Hillier, M.C. Hochberg, J. Li, Brian Rhee, H. Erlich, M.D. Sternlicht, G. Peltz, and S. R. Cummings, for the SOF Research Group (2008). A candidate gene study of fracture risk and bone mineral density: results from the Study of Osteoporotic Fractures. **Calcified Tissue International**. 83:155-66.
74. H. Suemizu, M. Hasegawa, K. Kawai, K. Taniguchi, M. Monnai, M. Wakui, M. Suematsu, M. Ito, G. Peltz and M. Nakamura (2008). Establishment of a humanized model of liver using NOD/Shi-*scid* IL2Rg^{null} mice. **Biochemical Biophysical Research Communications**. 377: 248-52.
75. L. Chu, D-Y. Liang, X. Li, P. Sahbaie, N. D'Arcy, G. Liao, G. Peltz, and J. D. Clark. From Mouse to Man: The 5HT3 Receptor Modulates Physical Dependence on Narcotic Drugs (2009). **Pharmacogenetics and Genomics**. 19: 193-205.
76. M.L. LaCroix-Fralish, S.B. Smith, G. Mo, S.G. Sotocinal, J. Ritchie, J.-S. Austin, K. Melmed, T.H. Lee, D. Romanovsky, G. Liao, M.A. Behlke, D. J. Clark, G. Peltz, P. Séguéla, M. Dobretsov and J.S. Mogil. Genetic Variation within the β_3 Subunit (*Atp1b3*) of the Na⁺,K⁺-ATPase Alters Inflammatory Pain Sensitivity (2009). **Pain**, 144:294-302.
77. Zheng, M., Shafer, S.S., Liao, G., Liu, H.-H., and Peltz, G. Computational Genetic Mapping in Mice: 'The Ship has Sailed' (2009). **Science Translational Medicine**, 1:3ps4.
78. H.-H. Liu, P. Lu, Y. Guo, E. Farrell, X. Zhang, M. Zheng, B. Bosano, Z. Zhang, J. Allard, G. Liao, S. Fu, J. Chen, K. Dolim, A. Kuroda, J. Usuka, J. Cheng, W. Tao, K. Welch., Y. Liu, J. Pease, S.A. de Keczer, M. Masjedizadeh, J.-S. Hu, P. Weller, T. Garrow, and G. Peltz. *Bhmt2* is a Genetic Susceptibility Factor For Acetaminophen-Induced Liver Toxicity (2010). **Genome Research**, 20:28-35.
79. L. Gong, D. Hirschfeld, Y-C. Tan, J. H. Hogg, G. Peltz, Z. Avnur, P. Dunten. Discovery of potent and bioavailable GSK-3b inhibitors (2010). **Bioorganic & Medicinal Chemistry Letters**, 20:1693–1696.
80. X. Li, P. Sahbaie, M. Zheng, J. Ritchie, G. Peltz, J.S. Mogil and J. D. Clark. Expression Genetics Identifies Spinal Mechanisms Supporting Formalin Late Phase Behaviors (2010). **Molecular Pain**, 6:11, 2010.
81. X. Zhang, H-H. Liu, P. Weller, M. Zheng, J. Wang, G. Liao, M. Monshouwer and G. Peltz. *In Silico* and *In Vitro* Pharmacogenetics: Aldehyde Oxidase Rapidly Metabolizes a P38 Kinase Inhibitor. **The Pharmacogenetics Journal** 11:15-24, 2011.
82. Y. Hu, D. Liang, X. Li, H-H. Liu, Xun Zhang, M. Zheng, D. Dill, X. Shi, Y. Qiao, D. Yeomans, B. Carvalho, M.S. Angst, J.D. Clark, G. Peltz. The Role of IL-1 in Wound Biology Part I: Murine *in Silico* and *In vitro* Experimental Analysis. **Anesthesia & Analgesia** 111: 1525-33, 2010.
83. Y. Hu, D. Liang, X. Li, H-H. Liu, Xun Zhang, M. Zheng, D. Dill, X. Shi, Y. Qiao, D. Yeomans, B. Carvalho, M.S. Angst, J.D. Clark, G. Peltz. The Role of IL-1 in Wound Biology Part II: *In vivo* and Human Translational Studies. **Anesthesia & Analgesia** 111(6):1534-42, 2010.

84. M. Zheng, P. Ravindran, J. Wang, R.H. Epstein, D.P. Chen, A.J. Butte, and G. Peltz. An Optimistic Prognosis For the Clinical Utility of Laboratory Test Data. **Anesthesia & Analgesia** 111:1026-1035, 2010.
85. J.S. Tregoning, Y. Yamaguchi, B. Wang, D. Mihm, J.A. Harker, E.S.C. Bushell, M. Zheng, G. Liao, G. Peltz and P.J.M. Openshaw. Genetic Susceptibility to the Delayed Sequelae of RSV Infection is MHC-Dependent, but Modified by Other Genetic Loci. **J. Immunol.** 185:5384-91,2010.
86. M. Zheng, G. Peltz. Genetic discovery: The prescription for chronic pain. **Genomic Medicine** 2:82-84, 2011.
87. Hasegawa M, Kawai K, Mitsui T, Taniguchi K, Monnai M, Wakui M, Ito M, Suematsu M, Peltz G, Nakamura M *et al*: The reconstituted 'humanized Liver' in TK-NOG mice is mature and functional. **Biochem Biophys Res Commun** 2011, **405**(3):405-410.
88. G. Peltz. Immunomodulation in perioperative medicine. **Pain Management** In press, 2011.
89. A.C.M. Boon, D. Finkelstein, G. Liao, M. Zheng, J. Allard, K. Klump, R. Webster, G. Peltz, R.J. Webby. Outcome of H5N1 influenza infection in genetically diverse mice is mediated at the level of viral load (2011) **mBio** 2(5). pii: e00171-11. PMID: 21896679
90. Peltz G, Zaas AK, Zheng M, Solis NV, Zhang MX, Liu H-H, Hu Y, Boxx GM, Phan QT, Dill D, and S. Filler. Next-Generation Computational Genetic Analysis: Multiple Complement Alleles Control Survival After Candida Albicans **Infection and Immunity** (2011): 79: 4472-79. PMID: 21875959
91. M. Zheng, M. Dill D., Peltz, G. A Better Prognosis for Genetic Association Studies in Mice **Trends in Genetics** (2012) 28 (2):62-69.
92. Sorge, R. E., T. Trang, R. Dorfman, S. B. Smith, S. Beggs, J. Ritchie, J.-S. Austin, D. V. Zaykin, H. V. Meulen, M. Costigan, T. A. Herbert, M. Yarkoni-Abitbul, D. Tichauer, J. Livneh, E. Gershon, M. Zheng, K. Tan, S. L. John, G. D. Slade, J. Jordan, C. J. Woolf, G. Peltz, W. Maixner, L. Diatchenko, Z. Seltzer, M. W. Salter, and J. S. Mogil. Genetically determined P2X7 receptor pore formation regulates variability in chronic pain sensitivity (2012) **Nature Medicine** 18:595-600.
93. H-H. Liu, Y. Hu, M. Zheng, M.M. Suhoski, E.G. Engleman, D. Dill, M. Hudnall, J. Wang, R. Spolski, W.J. Leonard and G. Peltz. *Cd14* SNPs Regulate the Innate Immune Response. **Molecular Immunology** (2012) 51:112-127.
94. Ming Zheng, David Dill, J. David Clark, and Gary Peltz. Computational Genetic Discoveries that could Improve Perioperative Medicine. **Current Opinion in Anesthesiology** (2012) 25(4):428-33.
95. M. Wu, M. Zheng, W. Zhang, S. Suresh, U. Schlecht, W.L. Fitch, S. Aronova, S. Baumann, R. Davis, R. St.Onge, D.L. Dill, G. Peltz. Identification of Drug Targets by Chemogenomic and Metabolomic Profiling in Yeast. **Pharmacogenetics and Genomics** (2012) 22:877-86. PMID: 23076370
96. M. Wu, P. Sahbaie, M. Zheng, R. Lobato, D. Boison, J. D. Clark, and G. Peltz. Opiate-induced Changes in Brain Adenosine Levels and Narcotic Drug Responses (2012) **Neuroscience** 228: 235-42. PMID:23098802
97. T. Nishimura, Y. Hu, M. Wu, E. Pham, H. Suemizu, M. Elazar, M. Liu, R. Idilman, C. Yurdaydin, P. Angus, C. Stedman, B. Murphy, J. Glenn, M. Nakamura, T. Nomura, Y. Chen, M. Zheng, W.L. Fitch, and G Peltz. Using Chimeric Mice with Humanized Livers to Predict Human Drug Metabolism and a Drug-Drug Interaction. **J. Pharmacology and Exp. Therapeutics** (2013) 344: 388-98. PMID: 23143674
98. Y. Hu, M. Wu, T. Nishimura, M. Zheng, G. Peltz. Human pharmacogenetic analysis in chimeric mice with "humanized livers". **Pharmacogenetics and Genomics** (2013) 23(2): 78-83. PMID: 23241944

99. Peltz G Can 'Humanized' Mice Improve Drug Development in the 21st Century? (2013) **Trends in Pharmacological Sciences** 34:255-60. PMID: 23602782

100. Manhong Wu, William L. Fitch, Ming Zheng, Robert E. Merritt, Joseph B. Shrager, Weiruo Zhang, David L. Dill, Gary Peltz and Chuong D. Hoang. Liquid chromatography/mass spectrometry methods for measuring dipeptide abundance in non-small-cell lung cancer (2013) **Rapid Communications in Mass Spectrometry** 27:2091-98. PMID: 23943330

101. Park W, Wu M, Bowen R, Zheng M, Fitch WL, et al. Metabolomic Markers Differentiate Mucinous and Non-Mucinous Pancreatic Cysts. (2013) **Gastrointestinal Endoscopy** 78:295-302. PMID: 23566642

102. J.J. Gallagher, M. Tajerian, T. Guo, X.Y. Shi, W. Li, M. Zheng, G. Peltz, W.S. Kingery and D.J. Clark. Acute and Chronic Phases of Complex Regional Pain Syndrome in Mice are Accompanied by Distinct Transcriptional Changes in the Spinal Cord. (2013) **Molecular Pain** In Press.

103. Dan Xu, Toshihiko Nishimura, Ming Zheng, Manhong Wu, Hua Su, Noboru Sato, Gordon Lee, Sara Michie, Jeffrey Glenn, and Gary Peltz. Enabling Autologous Human Liver Regeneration With Differentiated Adipocyte Stem Cells (2013) **Cell Transplantation** In press (appears online: 10/21/13).

104. Dan Xu, Toshihiko Nishimura, Sachiko Nishimura, Haili Zhang, Ming Zheng, Ying-Ying Guo, Marilyn Masek, Sara A. Michie, Jeffrey Glenn, and Gary Peltz. Fialuridine Induces Acute Liver Failure in Chimeric TK-NOG Mice: A Model for Detecting Hepatic Drug Toxicity Prior to Human Testing. **PLOS Medicine** (2014). In press.

BOOKS

Peltz, G., Editor. *Leukocyte Recruitment in Inflammatory Disease*. Austin: R.G. Landes Co., 1996.

Peltz, G., Editor. *Computational Genetics: New Tools for Understanding Disease* Trenton: Humana Press, 2005.

C. Other Support

Transformative RO1 1R01DK090992-01 PI: Peltz, G. 10/1/10-9/30/15 6.0 calendar month
NIH/NIDDK Human Pharmacogenetics and Human Liver Regeneration

This transformative project, which was selected by the NIH director, uses a novel method for producing mice with 'human livers' to determine: 1) if human pharmacogenetic factors can be efficiently identified in these chimeric mice, which are reconstituted with donor human liver cells with defined alleles at drug metabolizing enzymes. 2) if skin-derived human induced pluripotent stem (hiPS) cells or human adipose-derived adult mesenchymal stem cells can reconstitute the human liver in these mice.

1R01HD070795-01A1 PI: Peltz, G. 7/1/2012 to 6/30/2017 2.4 cal month NIH/NICHHD
Ondansetron; Maternal and Neonatal pharmacokinetics and Prevention of Neonatal Abstinence Syndrome

A multi-center (Stanford, UCSF, Santa Clara Valley) clinical study to examine the effectiveness of ondansetron treatment for prevention of a narcotic drug withdrawal syndrome, which occurs in 42-90% of babies born to narcotic using mothers. This project translates a recently published mouse genetic discovery into a clinical therapy. This application received an impact score of 10 (percentile 1%).

Eli Lily Research Scholars 2012-2013. PI: Peltz, G.

Program Director/Principal Investigator (Last, First, Middle): Peltz, Gary

Research program to determine whether humanized mice can better predict human drug toxicity, and to perform a detailed pharmacokinetic and drug disposition of the humanized biliary tract in these mice.