

CURRICULUM VITAE

Martin J. Hessner PhD

Professor
Department of Pediatrics
Division of Endocrinology

OFFICE ADDRESS:

Translational and Biomedical Research Center
8701 Watertown Plank Rd
Milwaukee, WI 53226

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Hessner MJ, Wejksnora PJ, Collins ML. Construction, characterization, and complementation of Rhodospirillum rubrum puf region mutants. *J Bacteriol.* 1991 Sep;173(18):5712-22. PMID: PMC208302
2. Hessner MJ, Baxter-Lowe LA. Characterization of novel HLA-DPB1 alleles by oligotyping and nucleotide sequencing. *Tissue Antigens.* 1992 Nov;40(5):261-3.
3. Skogen B, Bellissimo DB, Hessner MJ, Santoso S, Aster RH, Newman PJ, McFarland JG. Rapid determination of platelet alloantigen genotypes by polymerase chain reaction using allele-specific primers. *Transfusion.* 1994;34(11):955-60.
4. Hessner MJ, Roth MS, Drobyski WR, Baxter-Lowe LA. Development of a sensitive, highly controlled assay for molecular detection of the Philadelphia chromosome in patients with chronic myelogenous leukemia. *Genet Anal Tech Appl.* 1994;11(4):90-4.
5. Hessner MJ, Endean DJ, Casper JT, Horowitz MM, Keever-Taylor CA, Roth M, Flomenberg N, Drobyski WR. Use of unrelated marrow grafts compensates for reduced graft-versus-leukemia reactivity after T-cell-depleted allogeneic marrow transplantation for chronic myelogenous leukemia. *Blood.* 1995 Nov 15;86(10):3987-96.
6. Hessner MJ, Curtis BR, Endean DJ, Aster RH. Determination of neutrophil antigen gene frequencies in five ethnic groups by polymerase chain reaction with sequence-specific primers. *Transfusion.* 1996 Oct;36(10):895-9.
7. Hessner MJ, McFarland JG, Endean DJ. Genotyping of KEL1 and KEL2 of the human Kell blood group system by the polymerase chain reaction with sequence-specific primers. *Transfusion.* 1996 Jun;36(6):495-9.
8. Hessner MJ, Agostini TA, Bellissimo DB, Endean DJ, Pircon RA, Kirschbaum NE. The sensitivity of allele-specific polymerase chain reaction can obviate concern of maternal contamination when fetal samples are genotyped for immune cytopenic disorders. *Am J Obstet Gynecol.* 1997 Feb;176(2):327-33.
9. Drobyski WR, Endean DJ, Klein JP, Hessner MJ. Detection of BCR/ABL RNA transcripts using the polymerase chain reaction is highly predictive for relapse in patients transplanted with unrelated marrow grafts for chronic myelogenous leukaemia. *Br J Haematol.* 1997 Aug;98(2):458-66.
10. Pearson SL, Hessner MJ. A(1,2)BO(1,2) genotyping by multiplexed allele-specific PCR. *Br J Haematol.* 1998 Jan;100(1):229-34.
11. Drobyski WR, Pelz C, Kabler-Babbitt C, Hessner M, Baxter-Lowe LA, Keever-Taylor CA. Successful unrelated marrow transplantation for patients over the age of 40 with chronic myelogenous leukemia. *Biol Blood Marrow Transplant.* 1998;4(1):3-12.
12. Hessner MJ, Pircon RA, Johnson ST, Luhm RA. Prenatal genotyping of Jk(a) and Jk(b) of the human Kidd blood group system by allele-specific polymerase chain reaction. *Prenat Diagn.* 1998 Dec;18(12):1225-31.
13. Juckett M, Rowlings P, Hessner M, Keever-Taylor C, Burns W, Camitta B, Casper J, Drobyski WR, Hanson

- G, Horowitz M, Lawton C, Margolis J, Peitryga D, Vesole D. T cell-depleted allogeneic bone marrow transplantation for high-risk non-Hodgkin's lymphoma: clinical and molecular follow-up. *Bone Marrow Transplant*. 1998 May;21(9):893-9.
14. Drobyski WR, Hessner MJ. The use of the polymerase chain reaction to predict for subsequent relapse in unrelated marrow transplantation for chronic myelogenous leukemia. *Leuk Lymphoma*. 1998 Oct;31(3-4):317-23.
 15. Hessner MJ, Pircon RA, Johnson ST, Luhm RA. Prenatal genotyping of the Duffy blood group system by allele-specific polymerase chain reaction. *Prenat Diagn*. 1999 Jan;19(1):41-5.
 16. Hessner MJ, Shivaram SM, Dinauer DM, Curtis BR, Endean DJ, Aster RH. Neutrophil antigen (FcgammaRIIIB) SH gene frequencies in six racial groups. *Blood*. 1999 Feb 01;93(3):1115-6.
 17. Hessner MJ, Luhm RA, Pearson SL, Endean DJ, Friedman KD, Montgomery RR. Prevalence of prothrombin G20210A, factor V G1691A (Leiden), and methylenetetrahydrofolate reductase (MTHFR) C677T in seven different populations determined by multiplex allele-specific PCR. *Thromb Haemost*. 1999 May;81(5):733-8.
 18. Hessner MJ, Dinauer DM, Luhm RA, Endres JL, Montgomery RR, Friedman KD. Contribution of the glycoprotein Ia 807TT, methylene tetrahydrofolate reductase 677TT and prothrombin 20210GA genotypes to prothrombotic risk among factor V 1691GA (Leiden) carriers. *Br J Haematol*. 1999 Jul;106(1):237-9.
 19. Drobyski WR, Hessner MJ, Klein JP, Kabler-Babbitt C, Vesole DH, Margolis DA, Keever-Taylor CA. T-cell depletion plus salvage immunotherapy with donor leukocyte infusions as a strategy to treat chronic-phase chronic myelogenous leukemia patients undergoing HLA-identical sibling marrow transplantation. *Blood*. 1999 Jul 15;94(2):434-41.
 20. Dinauer DM, Friedman KD, Hessner MJ. Allelic distribution of the glycoprotein Ia (alpha2-integrin) C807T/G873A dimorphisms among caucasian venous thrombosis patients and six racial groups. *Br J Haematol*. 1999 Dec;107(3):563-5.
 21. Ekman GC, Hessner MJ. Screening of six racial groups for the intron 5 G-&A 3' splice acceptor mutation responsible for the polynesian kidd (a-b-) phenotype: the null mutation is not always associated with the JKB allele. *Transfusion*. 2000 Jul;40(7):888-9.
 22. Dinauer DM, Luhm RA, Uzgiris AJ, Eckels DD, Hessner MJ. Sequence-based typing of HLA class II DQB1. *Tissue Antigens*. 2000 Apr;55(4):364-8.
 23. Hessner MJ, Budish MA, Friedman KD. Genotyping of factor V G1691A (Leiden) without the use of PCR by invasive cleavage of oligonucleotide probes. *Clin Chem*. 2000 Aug;46(8 Pt 1):1051-6.
 24. Curtis BR, Edwards JT, Hessner MJ, Klein JP, Aster RH. Blood group A and B antigens are strongly expressed on platelets of some individuals. *Blood*. 2000 Aug 15;96(4):1574-81.
 25. Hessner MJ, Luhm RA. The C536T transition in the tissue factor pathway inhibitor (TFPI) gene does not contribute to risk of venous thrombosis among carriers of factor V Leiden. *Thromb Haemost*. 2000 Oct;84(4):724-5.
 26. Luhm RA, Bellissimo DB, Uzgiris AJ, Drobyski WR, Hessner MJ. Quantitative evaluation of post-bone marrow transplant engraftment status using fluorescent-labeled variable number of tandem repeats. *Mol Diagn*. 2000 Jun;5(2):129-38.
 27. Ledford M, Friedman KD, Hessner MJ, Moehlenkamp C, Williams TM, Larson RS. A multi-site study for detection of the factor V (Leiden) mutation from genomic DNA using a homogeneous invader microtiter plate fluorescence resonance energy transfer (FRET) assay. *J Mol Diagn*. 2000 May;2(2):97-104. PMID: PMC1906901
 28. Lazzaro B, Anderson AE, Kajdacsy-Balla A, Hessner MJ. Antigenic characterization of medullary carcinoma of the breast: HLA-DR expression in lymph node positive cases. *Appl Immunohistochem Mol Morphol*. 2001 Sep;9(3):234-41.
 29. Hessner MJ, Dinauer DM, Kwiatkowski R, Neri B, Raife TJ. Age-dependent prevalence of vascular disease-associated polymorphisms among 2689 volunteer blood donors. *Clin Chem*. 2001 Oct;47(10):1879-84.
 30. Hessner MJ, Friedman KD, Voelkerding KV, Huber S, Ryan D, Nuccie B, Ledford M. Multisite study for genotyping of the factor II (prothrombin) G20210A mutation by the invader assay. *Clin Chem*. 2001 Nov;47(11):2048-50.
 31. Hessner MJ, Dinauer DM, Kwiatkowski R, Neri B, Raife TJ. Age-dependent prevalence of vascular disease-associated polymorphisms among 2689 volunteer blood donors. *Clin Chem*. 2001 Oct;47(10):1879-84.
 32. Raife TJ, Lentz SR, Atkinson BS, Vesely SK, Hessner MJ. Factor V Leiden: a genetic risk factor for

- thrombotic microangiopathy in patients with normal von Willebrand factor-cleaving protease activity. *Blood*. 2002 Jan 15;99(2):437-42.
33. Hessner MJ, Friedman KD, Voelkerding KV, Huber S, Ryan D, Nuccie B, Ledford M. Multisite study for genotyping of the factor II (prothrombin) G20210A mutation by the invader assay. *Clin Chem*. 2001 Nov;47(11):2048-50.
 34. Hessner MJ, Bellissimo DB. Prenatal Genotyping of the RhD Locus to Identify Fetuses at Risk for Hemolytic Disease of the Newborn. *Methods Mol Med*. 2001;49:427-37.
 35. Ekman GC, Billingsly R, Hessner MJ. Rh genotyping: avoiding false-negative and false-positive results among individuals of African ancestry. *Am J Hematol*. 2002 Jan;69(1):34-40.
 36. Hessner MJ, Wang X, Hulse K, Meyer L, Wu Y, Nye S, Guo SW, Ghosh S. Three color cDNA microarrays: quantitative assessment through the use of fluorescein-labeled probes. *Nucleic Acids Res*. 2003 Feb 15;31(4):e14. PMID: PMC150246
 37. Hessner MJ, Wang X, Khan S, Meyer L, Schlicht M, Tackes J, Datta MW, Jacob HJ, Ghosh S. Use of a three-color cDNA microarray platform to measure and control support-bound probe for improved data quality and reproducibility. *Nucleic Acids Res*. 2003 Jun 01;31(11):e60. PMID: PMC156737
 38. Wang X, Hessner MJ, Wu Y, Pati N, Ghosh S. Quantitative quality control in microarray experiments and the application in data filtering, normalization and false positive rate prediction. *Bioinformatics*. 2003 Jul 22;19(11):1341-7.
 39. Pati N, Ghosh S, Hessner MJ, Khoo HJ, Wang X. Difference in gene expression profiles between human CD4+CD25+ and CD4+CD25- T cells. *Ann N Y Acad Sci*. 2003 Nov;1005:279-83.
 40. Waukau J, Jailwala P, Wang Y, Khoo HJ, Ghosh S, Wang X, Hessner MJ. The design of a gene chip for functional immunological studies on a high-quality control platform. *Ann N Y Acad Sci*. 2003 Nov;1005:284-7.
 41. Wang X, Jiang N, Feng X, Xie Y, Tonellato PJ, Ghosh S, Hessner MJ. A novel approach for high-quality microarray processing using third-dye array visualization technology. *IEEE Trans Nanobioscience*. 2003 Dec;2(4):193-201.
 42. Hessner MJ, Singh VK, Wang X, Khan S, Tschannen MR, Zahrt TC. Utilization of a labeled tracking oligonucleotide for visualization and quality control of spotted 70-mer arrays. *BMC Genomics*. 2004 Feb 09;5(1):12. PMID: PMC362869
 43. Morrison J, Knoll K, Hessner MJ, Liang M. Effect of high glucose on gene expression in mesangial cells: upregulation of the thiol pathway is an adaptational response. *Physiol Genomics*. 2004 May 19;17(3):271-82.
 44. Patnaik M, Dlott JS, Fontaine RN, Subbiah MT, Hessner MJ, Joyner KA, Ledford MR, Lau EC, Moehlenkamp C, Amos J, Zhang B, Williams TM. Detection of genomic polymorphisms associated with venous thrombosis using the invader bplex assay. *J Mol Diagn*. 2004 May;6(2):137-44. PMID: PMC1867477
 45. Zhou G, Wen X, Liu H, Schlicht MJ, Hessner MJ, Tonellato PJ, Datta MW. B.E.A.R. GeneInfo: a tool for identifying gene-related biomedical publications through user modifiable queries. *BMC Bioinformatics*. 2004 Apr 29;5:46. PMID: PMC419696
 46. Hessner MJ, Meyer L, Tackes J, Muheisen S, Wang X. Immobilized probe and glass surface chemistry as variables in microarray fabrication. *BMC Genomics*. 2004 Aug 04;5(1):53. PMID: PMC512283
 47. Schlicht M, Matysiak B, Brodzeller T, Wen X, Liu H, Zhou G, Dhir R, Hessner MJ, Tonellato P, Suckow M, Pollard M, Datta MW. Cross-species global and subset gene expression profiling identifies genes involved in prostate cancer response to selenium. *BMC Genomics*. 2004 Aug 20;5(1):58. PMID: PMC516028
 48. Yang J, Wong RK, Wang X, Moibi J, Hessner MJ, Greene S, Wu J, Sukumvanich S, Wolf BA, Gao Z. Leucine culture reveals that ATP synthase functions as a fuel sensor in pancreatic beta-cells. *J Biol Chem*. 2004 Dec 24;279(52):53915-23.
 49. Hessner MJ, Wang X, Meyer L, Geoffrey R, Jia S, Fuller J, Lernmark A, Ghosh S. Involvement of eotaxin, eosinophils, and pancreatic predisposition in development of type 1 diabetes mellitus in the BioBreeding rat. *J Immunol*. 2004 Dec 01;173(11):6993-7002.
 50. Liang M, Cowley AW Jr, Hessner MJ, Lazar J, Basile DP, Pietrusz JL. Transcriptome analysis and kidney research: toward systems biology. *Kidney Int*. 2005 Jun;67(6):2114-22.
 51. Hessner MJ, Xiang B, Jia S, Geoffrey R, Holmes S, Meyer L, Muheisen S, Wang X. Three-color cDNA microarrays with prehybridization quality control yield gene expression data comparable to that of commercial platforms. *Physiol Genomics*. 2006 Mar 13;25(1):166-78.
 52. Hessner MJ, Liang M, Kwitek AE. The application of microarray analysis to pediatric diseases. *Pediatr Clin*

- North Am. 2006 Aug;53(4):579-90.
53. Wang X, Jia S, Meyer L, Xiang B, Chen LY, Jiang N, Moreno C, Jacob HJ, Ghosh S, Hessner MJ. Comprehensive quality control utilizing the prehybridization third-dye image leads to accurate gene expression measurements by cDNA microarrays. *BMC Bioinformatics*. 2006 Aug 14;7:378. PMID: PMC1563483
 54. Geoffrey R, Jia S, Kwitek AE, Woodliff J, Ghosh S, Lernmark A, Wang X, Hessner MJ. Evidence of a functional role for mast cells in the development of type 1 diabetes mellitus in the BioBreeding rat. *J Immunol*. 2006 Nov 15;177(10):7275-86.
 55. Hessner MJ, Liang M, Kwitek AE. The application of microarray analysis to pediatric diseases. *Pediatr Clin North Am*. 2006 Aug;53(4):579-90.
 56. Wang X, Jia S, Meyer L, Yassai MB, Naumov YN, Gorski J, Hessner MJ. Quantitative measurement of pathogen-specific human memory T cell repertoire diversity using a CDR3 beta-specific microarray. *BMC Genomics*. 2007 Sep 19;8:329. PMID: PMC2039751
 57. Heiden TC, Struble CA, Rise ML, Hessner MJ, Hutz RJ, Carvan MJ 3rd. Molecular targets of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) within the zebrafish ovary: insights into TCDD-induced endocrine disruption and reproductive toxicity. *Reprod Toxicol*. 2008 Jan;25(1):47-57. PMID: PMC2693207
 58. Wang X, Jia S, Geoffrey R, Alemzadeh R, Ghosh S, Hessner MJ. Identification of a molecular signature in human type 1 diabetes mellitus using serum and functional genomics. *J Immunol*. 2008 Feb 01;180(3):1929-37.
 59. Schulte RD, Chu H, Dai X, Chen Y, Edwards B, Haribhai D, Williams CB, Malarkannan S, Hessner MJ, Glisic-Milosavljevic S, Jana S, Kerschen EJ, Ghosh S, Wang D, Kwitek AE, Lernmark A, Gorski J, Weiler H. Impaired survival of peripheral T cells, disrupted NK/NKT cell development, and liver failure in mice lacking Gimap5. *Blood*. 2008 Dec 15;112(13):4905-14. PMID: PMC2597598
 60. Das R, Chen X, Komorowski R, Hessner MJ, Drobyski WR. Interleukin-23 secretion by donor antigen-presenting cells is critical for organ-specific pathology in graft-versus-host disease. *Blood*. 2009 Mar 05;113(10):2352-62. PMID: PMC2652376
 61. Chen X, Das R, Komorowski R, Beres A, Hessner MJ, Mihara M, Drobyski WR. Blockade of interleukin-6 signaling augments regulatory T-cell reconstitution and attenuates the severity of graft-versus-host disease. *Blood*. 2009 Jul 23;114(4):891-900. PMID: PMC2716024
 62. Reddy S, Jia S, Geoffrey R, Lorier R, Suchi M, Broeckel U, Hessner MJ, Verbsky J. An autoinflammatory disease due to homozygous deletion of the IL1RN locus. *N Engl J Med*. 2009 Jun 04;360(23):2438-44. PMID: PMC2803085
 63. Jailwala P, Waukau J, Glisic S, Jana S, Ehlenbach S, Hessner M, Alemzadeh R, Matsuyama S, Laud P, Wang X, Ghosh S. Apoptosis of CD4+ CD25(high) T cells in type 1 diabetes may be partially mediated by IL-2 deprivation. *PLoS One*. 2009 Aug 05;4(8):e6527. PMID: PMC2716541
 64. Chen F, Zhang G, Cao Y, Hessner MJ, See WA. MB49 murine urothelial carcinoma: molecular and phenotypic comparison to human cell lines as a model of the direct tumor response to bacillus Calmette-Guerin. *J Urol*. 2009 Dec;182(6):2932-7.
 65. Moralejo DH, Hansen CT, Treuting P, Hessner MJ, Fuller JM, Van Yserloo B, Jensen R, Osborne W, Kwitek AE, Lernmark A. Differential effects of leptin receptor mutation on male and female BBDR Gimap5-/Gimap5- spontaneously diabetic rats. *Physiol Genomics*. 2010 Mar 03;41(1):9-20. PMID: PMC2841494
 66. Gao S, Jia S, Hessner M, Wang X. Quality Weighted Mean and T-test in Microarray Analysis Lead to Improved Accuracy in Gene Expression Measurements and Reduced Type I and II Errors in Differential Expression Detection. *J Comput Sci Syst Biol*. 2008 Dec 26;1:41. PMID: PMC2819534
 67. Das R, Komorowski R, Hessner MJ, Subramanian H, Huettner CS, Cua D, Drobyski WR. Blockade of interleukin-23 signaling results in targeted protection of the colon and allows for separation of graft-versus-host and graft-versus-leukemia responses. *Blood*. 2010 Jun 24;115(25):5249-58. PMID: PMC2892952
 68. Liss MA, Schlicht M, Degueme A, Hessner M, Datta MW. Use of cross species genomic profiling identifies pathways and genes differentially regulated in prostate cancer cells treated with soy protein isolates or purified genistein. *Cancer Genomics Proteomics*. 2010;7(3):111-28.
 69. Kerschen E, Hernandez I, Zogg M, Jia S, Hessner MJ, Fernandez JA, Griffin JH, Huettner CS, Castellino FJ, Weiler H. Activated protein C targets CD8+ dendritic cells to reduce the mortality of endotoxemia in mice. *J Clin Invest*. 2010 Sep;120(9):3167-78. PMID: PMC2929901
 70. Kaldunski M, Jia S, Geoffrey R, Basken J, Prosser S, Kansra S, Mordes JP, Lernmark A, Wang X, Hessner

- MJ. Identification of a serum-induced transcriptional signature associated with type 1 diabetes in the BioBreeding rat. *Diabetes*. 2010 Oct;59(10):2375-85. PMID: PMC3279523
71. Das R, Komorowski R, Hessner MJ, Subramanian H, Huettner CS, Cua D, Drobyski WR. Blockade of interleukin-23 signaling results in targeted protection of the colon and allows for separation of graft-versus-host and graft-versus-leukemia responses. *Blood*. 2010 Jun 24;115(25):5249-58. PMID: PMC2892952
72. Yagil Y, Hessner M, Schulz H, Gosele C, Lebedev L, Barkalifa R, Sapojnikov M, Hubner N, Yagil C. Genotranscriptomic dissection of proteinuria in the uninephrectomized rat uncovers a molecular complexity with sexual dimorphism. *Physiol Genomics*. 2010 Nov 29;42A(4):301-16.
73. Kerschen E, Hernandez I, Zogg M, Jia S, Hessner MJ, Fernandez JA, Griffin JH, Huettner CS, Castellino FJ, Weiler H. Activated protein C targets CD8+ dendritic cells to reduce the mortality of endotoxemia in mice. *J Clin Invest*. 2010 Sep;120(9):3167-78. PMID: PMC2929901
74. Gao S, Hartman JL 4th, Carter JL, Hessner MJ, Wang X. Global analysis of phase locking in gene expression during cell cycle: the potential in network modeling. *BMC Syst Biol*. 2010 Dec 03;4:167. PMID: PMC3017040
75. Worthey EA, Mayer AN, Syverson GD, Helbling D, Bonacci BB, Decker B, Serpe JM, Dasu T, Tschannen MR, Veith RL, Basehore MJ, Broeckel U, Tomita-Mitchell A, Arca MJ, Casper JT, Margolis DA, Bick DP, Hessner MJ, Routes JM, Verbsky JW, Jacob HJ, Dimmock DP. Making a definitive diagnosis: successful clinical application of whole exome sequencing in a child with intractable inflammatory bowel disease. *Genet Med*. 2011 Mar;13(3):255-62.
76. Jia S, Kaldunski M, Jailwala P, Geoffrey R, Kramer J, Wang X, Hessner MJ. Use of transcriptional signatures induced in lymphoid and myeloid cell lines as an inflammatory biomarker in Type 1 diabetes. *Physiol Genomics*. 2011 Jun 15;43(11):697-709. PMID: PMC3121160
77. Haribhai D, Williams JB, Jia S, Nickerson D, Schmitt EG, Edwards B, Ziegelbauer J, Yassai M, Li SH, Relland LM, Wise PM, Chen A, Zheng YQ, Simpson PM, Gorski J, Salzman NH, Hessner MJ, Chatila TA, Williams CB. A requisite role for induced regulatory T cells in tolerance based on expanding antigen receptor diversity. *Immunity*. 2011 Jul 22;35(1):109-22. PMID: PMC3295638
78. Gao S, Jia S, Hessner MJ, Wang X. Predicting disease-related subnetworks for type 1 diabetes using a new network activity score. *OMICS*. 2012 Oct;16(10):566-78. PMID: PMC3459426
79. Bonacci B, Edwards B, Jia S, Williams CB, Hessner MJ, Gauld SB, Verbsky JW. Requirements for growth and IL-10 expression of highly purified human T regulatory cells. *J Clin Immunol*. 2012 Oct;32(5):1118-28. PMID: PMC4271826
80. Levy H, Wang X, Kaldunski M, Jia S, Kramer J, Pavletich SJ, Reske M, Gessel T, Yassai M, Quasney MW, Dahmer MK, Gorski J, Hessner MJ. Transcriptional signatures as a disease-specific and predictive inflammatory biomarker for type 1 diabetes. *Genes Immun*. 2012 Dec;13(8):593-604. PMID: PMC4265236
81. Schmitt EG, Haribhai D, Williams JB, Aggarwal P, Jia S, Charbonnier LM, Yan K, Lorier R, Turner A, Ziegelbauer J, Georgiev P, Simpson P, Salzman NH, Hessner MJ, Broeckel U, Chatila TA, Williams CB. IL-10 produced by induced regulatory T cells (iTregs) controls colitis and pathogenic ex-iTregs during immunotherapy. *J Immunol*. 2012 Dec 15;189(12):5638-48. PMID: PMC3537488
82. Bogdani M, Henschel AM, Kansra S, Fuller JM, Geoffrey R, Jia S, Kaldunski ML, Pavletich S, Prosser S, Chen YG, Lernmark A, Hessner MJ. Biobreeding rat islets exhibit reduced antioxidative defense and N-acetyl cysteine treatment delays type 1 diabetes. *J Endocrinol*. 2013 Feb;216(2):111-23. PMID: PMC4077722
83. Christy AL, Walker ME, Hessner MJ, Brown MA. Mast cell activation and neutrophil recruitment promotes early and robust inflammation in the meninges in EAE. *J Autoimmun*. 2013 May;42:50-61.
84. Chen YG, Mordes JP, Blankenhorn EP, Kashmiri H, Kaldunski ML, Jia S, Geoffrey R, Wang X, Hessner MJ. Temporal induction of immunoregulatory processes coincides with age-dependent resistance to viral-induced type 1 diabetes. *Genes Immun*. 2013 Sep;14(6):387-400. PMID: PMC4027975
85. Chen YG, Forsberg MH, Khaja S, Cieccko AE, Hessner MJ, Geurts AM. Gene targeting in NOD mouse embryos using zinc-finger nucleases. *Diabetes*. 2014 Jan;63(1):68-74. PMID: PMC3868049
86. Levy H, Reske M, Bersie R, Barbieri J, Jia S, Kaldunski M, Simpson P, Laxova A, Farrell PM, Hessner MJ. Host Microarray Molecular Signature and Serologic Evaluation of Stages of *Pseudomonas aeruginosa* Infection in Cystic Fibrosis. *Ann Am Thorac Soc*. 2014 Jan;11(Supplement_1):S80-S81
87. Cort L, Habib M, Eberwine RA, Hessner MJ, Mordes JP, Blankenhorn EP. Diubiquitin (Ubd) is a susceptibility gene for virus-triggered autoimmune diabetes in rats. *Genes Immun*. 2014;15(3):168-75. PMID: PMC4260472

88. Chen YG, Cabrera SM, Jia S, Kaldunski ML, Kramer J, Cheong S, Geoffrey R, Roethle MF, Woodliff JE, Greenbaum CJ, Wang X, Hessner MJ. Molecular signatures differentiate immune states in type 1 diabetic families. *Diabetes*. 2014 Nov;63(11):3960-73. PMID: PMC4207392
89. Cohen EP, Lenarczyk M, Fish BL, Jia S, Hessner MJ, Moulder JE. Evaluation of Genomic Evidence for Oxidative Stress in Experimental Radiation Nephropathy. *J Genet Disord Genet Rep*. 2013 Jan 01;2(1). PMID: PMC4013680
90. Tsaih SW, Holl K, Jia S, Kaldunski M, Tschannen M, He H, Andrae JW, Li SH, Stoddard A, Wiederhold A, Parrington J, Ruas da Silva M, Galione A, Meigs J, Meta-Analyses of Glucose and Insulin-Related Traits Consortium (MAGIC) Investigators, Hoffmann RG, Simpson P, Jacob H, Hessner M, Solberg Woods LC. Identification of a novel gene for diabetic traits in rats, mice, and humans. *Genetics*. 2014 Sep;198(1):17-29. PMID: PMC4174929
91. Liang HP, Kerschen EJ, Hernandez I, Basu S, Zogg M, Botros F, Jia S, Hessner MJ, Griffin JH, Ruf W, Weiler H. EPCR-dependent PAR2 activation by the blood coagulation initiation complex regulates LPS-triggered interferon responses in mice. *Blood*. 2015 Apr 30;125(18):2845-54. PMID: PMC4424632
92. Cabrera SM, Henschel AM, Hessner MJ. Innate inflammation in type 1 diabetes. *Transl Res*. 2016 Jan;167(1):214-27. PMID: PMC4626442
93. Liang HP, Kerschen EJ, Basu S, Hernandez I, Zogg M, Jia S, Hessner MJ, Toso R, Rezaie AR, Fernández JA, Camire RM, Ruf W, Griffin JH, Weiler H. Coagulation factor V mediates inhibition of tissue factor signaling by activated protein C in mice. *Blood*. 2015 Nov 19;126(21):2415-23. PMID: PMC4653768
94. Gurram B, Salzman NH, Kaldunski ML, Jia S, Li BU, Stephens M, Sood MR, Hessner MJ. Plasma-induced signatures reveal an extracellular milieu possessing an immunoregulatory bias in treatment-naive paediatric inflammatory bowel disease. *Clin Exp Immunol*. 2016 Apr;184(1):36-49. PMID: PMC4778097
95. Gehrand AL, Kaldunski ML, Bruder ED, Jia S, Hessner MJ, Raff H. Intermittent neonatal hypoxia elicits the upregulation of inflammatory-related genes in adult male rats through long-lasting programming effects. *Physiol Rep*. 2015 Dec;3(12). PMID: PMC4760434
96. Cabrera SM, Chen YG, Hagopian WA, Hessner MJ. Blood-based signatures in type 1 diabetes. *Diabetologia*. 2016 Mar;59(3):414-25. PMID: PMC4744128
97. Cabrera SM, Wang X, Chen YG, Jia S, Kaldunski ML, Greenbaum CJ, Type 1 Diabetes TrialNet Canakinumab Study Group, Mandrup-Poulsen T, AIDA Study Group, Hessner MJ. Interleukin-1 antagonism moderates the inflammatory state associated with Type 1 diabetes during clinical trials conducted at disease onset. *Eur J Immunol*. 2016 Apr;46(4):1030-46. PMID: PMC4828314
98. Haribhai D, Ziegelbauer J, Jia S, Upchurch K, Yan K, Schmitt EG, Salzman NH, Simpson P, Hessner MJ, Chatila TA, Williams CB. Alternatively Activated Macrophages Boost Induced Regulatory T and Th17 Cell Responses during Immunotherapy for Colitis. *J Immunol*. 2016 Apr 15;196(8):3305-17. PMID: PMC4851766
99. Olsen JA, Kenna LA, Spelios MG, Hessner MJ, Akirav EM. Circulating Differentially Methylated Amylin DNA as a Biomarker of β -Cell Loss in Type 1 Diabetes. *PLoS One*. 2016;11(4):e0152662. PMID: PMC4844136
100. Stelloh C, Reimer MH, Pulakanti K, Blinka S, Peterson J, Pinello L, Jia S, Roumiantsev S, Hessner MJ, Milanovich S, Yuan GC, Rao S. The cohesin-associated protein Wapal is required for proper Polycomb-mediated gene silencing. *Epigenetics Chromatin*. 2016;9:14. PMID: PMC4832553
101. Regnell SE, Hessner MJ, Jia S, Åkesson L, Stenlund H, Moritz T, La Torre D, Lernmark Å. Longitudinal analysis of hepatic transcriptome and serum metabolome demonstrates altered lipid metabolism following the onset of hyperglycemia in spontaneously diabetic biobreeding rats. *PLoS One*. 2017;12(2):e0171372. PMID: PMC5305198
102. Haribhai D, Luo X, Chen J, Jia S, Shi L, Schroeder JA, Weiler H, Aster RH, Hessner MJ, Hu J, Williams CB, Shi Q. TGF- β 1 along with other platelet contents augments Treg cells to suppress anti-FVIII immune responses in hemophilia A mice. *Blood Adv*. 2016 Dec 13;1(2):139-151. PMID: PMC5288643
103. Gao S, Wolanyk N, Chen Y, Jia S, Hessner MJ, Wang X. Investigation of coordination and order in transcription regulation of innate and adaptive immunity genes in type 1 diabetes. *BMC Med Genomics*. 2017 Jan 31;10(1):7. PMID: PMC5282641
104. . 40th EASD Annual Meeting of the European Association for the Study of Diabetes : Munich, Germany, 5-9 September 2004. *Diabetologia*. 2004 Aug;47(Suppl 1):A1-A464. PMID: PMC7096100

105. Ideozu JE, Zhang X, Pan A, Ashrafi Z, Woods KJ, Hessner MJ, Simpson P, Levy H. Increased Expression of Plasma-Induced ABCC1 mRNA in Cystic Fibrosis. *Int J Mol Sci.* 2017 Aug 11;18(8). PMID: PMC5578142
106. Palatnik A, Ye S, Kendzierski C, Iden M, Zigman JS, Hessner MJ, Rader JS. Identification of a serum-induced transcriptional signature associated with metastatic cervical cancer. *PLoS One.* 2017;12(8):e0181242. PMID: PMC5576712
107. Fawley J, Koehler S, Cabrera S, Lam V, Fredrich K, Hessner M, Salzman N, Gourlay D. Intestinal alkaline phosphatase deficiency leads to dysbiosis and bacterial translocation in the newborn intestine. *J Surg Res.* 2017 Oct;218:35-42.
108. Henschel AM, Cabrera SM, Kaldunski ML, Jia S, Geoffrey R, Roethle MF, Lam V, Chen YG, Wang X, Salzman NH, Hessner MJ. Modulation of the diet and gastrointestinal microbiota normalizes systemic inflammation and γ -cell chemokine expression associated with autoimmune diabetes susceptibility. *PLoS One.* 2018;13(1):e0190351. PMID: PMC5749787
109. Cabrera SM, Engle S, Kaldunski M, Jia S, Geoffrey R, Simpson P, Szabo A, Speake C, Greenbaum CJ, Type 1 Diabetes TrialNet CTLA4-Ig (Abatacept) Study Group, Chen YG, Hessner MJ. Innate immune activity as a predictor of persistent insulin secretion and association with responsiveness to CTLA4-Ig treatment in recent-onset type 1 diabetes. *Diabetologia.* 2018 Nov;61(11):2356-2370. PMID: PMC6182660
110. Redondo MJ, Geyer S, Steck AK, Sharp S, Wentworth JM, Weedon MN, Antinozzi P, Sosenko J, Atkinson M, Pugliese A, Oram RA, Type 1 Diabetes TrialNet Study Group. A Type 1 Diabetes Genetic Risk Score Predicts Progression of Islet Autoimmunity and Development of Type 1 Diabetes in Individuals at Risk. *Diabetes Care.* 2018 Sep;41(9):1887-1894. PMID: PMC6105323
111. Palatnik A, Ye S, Kendzierski C, Iden M, Zigman JS, Hessner MJ, Rader JS. Correction: Identification of a serum-induced transcriptional signature associated with metastatic cervical cancer. *PLoS One.* 2018;13(2):e0193687. PMID: PMC5825151
112. Tsai S, McOlash L, Jia S, Zhang J, Simpson P, Kaldunski ML, Aldakkak M, Grewal J, Palen K, Dwinell MB, Johnson BD, Mackinnon A, Hessner MJ, Gershan JA. A Serum-Induced Transcriptome and Serum Cytokine Signature Obtained at Diagnosis Correlates with the Development of Early Pancreatic Ductal Adenocarcinoma Metastasis. *Cancer Epidemiol Biomarkers Prev.* 2019 Apr;28(4):680-689. PMID: PMC6545232
113. Levy H, Jia S, Pan A, Zhang X, Kaldunski M, Nugent ML, Reske M, Feliciano RA, Quintero D, Renda MM, Woods KJ, Murkowski K, Johnson K, Verbsky J, Dasu T, Ideozu JE, McColley S, Quasney MW, Dahmer MK, Avner E, Farrell PM, Cannon CL, Jacob H, Simpson PM, Hessner MJ. Identification of molecular signatures of cystic fibrosis disease status with plasma-based functional genomics. *Physiol Genomics.* 2019 Jan 01;51(1):27-41. PMID: PMC6383551
114. Zhang X, Pan A, Jia S, Ideozu JE, Woods K, Murkowski K, Hessner MJ, Simpson PM, Levy H. Cystic Fibrosis Plasma Blunts the Immune Response to Bacterial Infection. *Am J Respir Cell Mol Biol.* 2019 Sep;61(3):301-311. PMID: PMC6839930
115. Liss MA, Schlicht M, Kahler A, Fitzgerald R, Thomassi T, Degueme A, Hessner M, Datta MW. Characterization of soy-based changes in Wnt-frizzled signaling in prostate cancer *Cancer Genomics and Proteomics.* September-October 2010;7(5):245-252.
116. Jia S, Gao S, Hessner MJ, Wang X. Acquisition of accurate gene expression information from microarray measurements *Current Topics in Human Genetics: Studies in Complex Diseases.* 1 January 2007:351-364.
117. Wang X, Hessner MJ. Quantitative quality control of microarray experiments: Toward accurate gene expression measurements *Gene Expression Profiling by Microarrays: Clinical Implications.* 1 January 2006:27-46.
118. Hessner MJ, Curtis BR. Prenatal genotyping for identification of fetuses at risk for immune cytopenic disorders *Molecular Diagnostics: For the Clinical Laboratorian.* 2005:329-339.
119. Broeckel U, Hessner MJ. Single-nucleotide polymorphisms: Testing DNA variation for disease association *Molecular Diagnostics: For the Clinical Laboratorian.* 2005:111-120.
120. Wang X, Jia S, Zhou G, Hessner MJ. Parallel algorithm in microarray data processing *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications, PDPTA'04.* 2004;1:43-48.
121. Elis A, Blickstein D, Klein O, Eliav-Ronen R, Manor Y, Lishner M. Detection of relapse in non-Hodgkin's lymphoma: role of routine follow-up studies. *Am J Hematol.* 2002 Jan;69(1):41-4.
122. Drobyski WR, Hessner MJ, Klein JP, Kabler-Babbitt C, Vesole DH, Margolis DA, Keever-Taylor CA.

- Erratum: T-cell depletion plus salvage immunotherapy with donor leukocyte infusions as a strategy to treat chronic-phase chronic myelogenous leukemia patients undergoing HLA-identical sibling marrow transplantation (*Blood* (July 15, 1999) 94 (434-441)) *Blood*. 15 February 2000;95(4):1137.
123. Hessner MJ, Atkinson BS, Johnson ST, Endean DJ, Pircon RA. Development of an allele-specific polymerase chain reaction assay for prenatal genotyping of the rhc/c and rhe/e antigen systems *Acta Diabetologica Latina*. 1997;176(1 PART II).
 124. Speake C, Skinner SO, Berel D, Whalen E, Dufort MJ, Young WC, Odegard JM, Pesenacker AM, Gorus FK, James EA, Levings MK, Linsley PS, Akirav EM, Pugliese A, Hessner MJ, Nepom GT, Gottardo R, Long SA. A composite immune signature parallels disease progression across T1D subjects. *JCI Insight*. 2019 Dec 05;4(23). PMID: PMC6962023
 125. Battaglia M, Ahmed S, Anderson MS, Atkinson MA, Becker D, Bingley PJ, Bosi E, Brusko TM, DiMeglio LA, Evans-Molina C, Gitelman SE, Greenbaum CJ, Gottlieb PA, Herold KC, Hessner MJ, Knip M, Jacobsen L, Krischer JP, Long SA, Lundgren M, McKinney EF, Morgan NG, Oram RA, Pastinen T, Peters MC, Petrelli A, Qian X, Redondo MJ, Roep BO, Schatz D, Skibinski D, Peakman M. Introducing the Endotype Concept to Address the Challenge of Disease Heterogeneity in Type 1 Diabetes. *Diabetes Care*. 2020 Jan;43(1):5-12. PMID: PMC6925574
 126. Nelson AJ, Stephenson DJ, Bone RN, Cardona CL, Park MA, Tusing YG, Lei X, Kokotos G, Graves CL, Mathews CE, Kramer J, Hessner MJ, Chalfant CE, Ramanadham S. Lipid mediators and biomarkers associated with type 1 diabetes development. *JCI Insight*. 2020 Aug 20;5(16). PMID: PMC7455134
 127. Hessner MJ, Cabrera SM. Broadening Our Understanding Type 1 Diabetes Heterogeneity by Exploring Effects of Race/Ethnicity on Disease Trajectory. *J Clin Endocrinol Metab*. 2020 Dec 01;105(12):e4961-3. PMID: PMC7531905
 128. Raskin A, Borsheim K, Kim M, Brickler M, Jarzembowski J, Punnoose A, Chin C, Kindel S, Hessner M. Plasma Induced Transcriptional Analysis Assessment of Rejection in Pediatric Heart Transplantation. *J Heart Lung Transplant*. 2020 Apr;39(4S):S222.
 129. Narsale A, Lam B, Moya R, Lu T, Mandelli A, Gotuzzo I, Pessina B, Giamporcaro G, Geoffrey R, Buchanan K, Harris M, Bergot AS, Thomas R, Hessner MJ, Battaglia M, Serti E, Davies JD. CD4+CD25+CD127hi cell frequency predicts disease progression in type 1 diabetes. *JCI Insight*. 2021 Jan 25;6(2). PMID: PMC7934872
 130. Hofeld BC, Puppala VK, Tyagi S, Ahn KW, Anger A, Jia S, Salzman NH, Hessner MJ, Widlansky ME. *Lactobacillus plantarum* 299v probiotic supplementation in men with stable coronary artery disease suppresses systemic inflammation. *Sci Rep*. 2021 Feb 17;11(1):3972. PMID: PMC7889883
 131. Voss MG, Cuthbertson DD, Cleves MM, Xu P, Evans-Molina C, Palmer JP, Redondo MJ, Steck AK, Lundgren M, Larsson H, Moore WV, Atkinson MA, Sosenko JM, Ismail HM, DPT-1 and TrialNet Study Groups. Time to Peak Glucose and Peak C-Peptide During the Progression to Type 1 Diabetes in the Diabetes Prevention Trial and TrialNet Cohorts. *Diabetes Care*. 2021 Oct;44(10):2329-2336. PMID: PMC8740940
 132. Cabrera SM, Coren AT, Pant T, Ciecko AE, Jia S, Roethle MF, Simpson PM, Atkinson SN, Salzman NH, Chen YG, Hessner MJ. Probiotic normalization of systemic inflammation in siblings of type 1 diabetes patients: an open-label pilot study. *Sci Rep*. 2022 Feb 28;12(1):3306. PMID: PMC8885673
 133. Zhang X, Moore CM, Harmacek LD, Domenico J, Rangaraj VR, Ideozu JE, Knapp JR, Woods KJ, Jump S, Jia S, Prokop JW, Bowler R, Hessner MJ, Gelfand EW, Levy H. CFTR-mediated monocyte/macrophage dysfunction revealed by cystic fibrosis proband-parent comparisons. *JCI Insight*. 2022 Mar 22;7(6). PMID: PMC8986072
 134. Pritchard KA Jr, Jing X, Teng M, Wells C, Jia S, Afolayan AJ, Jarzembowski J, Day BW, Naylor S, Hessner MJ, Konduri GG, Teng RJ. Role of endoplasmic reticulum stress in impaired neonatal lung growth and bronchopulmonary dysplasia. *PLoS One*. 2022;17(8):e0269564. PMID: PMC9417039
 135. Sargin P, Roethle MF, Jia S, Pant T, Ciecko AE, Atkinson SN, Salzman NH, Teng RJ, Chen YG, Cabrera SM, Hessner MJ. *Lactiplantibacillus plantarum* 299v supplementation modulates γ -cell ER stress and antioxidative defense pathways and prevents type 1 diabetes in gluten-free BioBreeding rats. *Gut Microbes*. 2022;14(1):2136467. PMID: PMC9586621
 136. Nguyen H, Arribas-Layton D, Chow IT, Speake C, Kwok WW, Hessner MJ, Greenbaum CJ, James EA. Characterizing T cell responses to enzymatically modified beta cell neo-epitopes. *Front Immunol*. 2022;13:1015855. PMID: PMC9871889
 137. Jing X, Jia S, Teng M, Day BW, Afolayan AJ, Jarzembowski JA, Lin CW, Hessner MJ, Pritchard KA Jr, Naylor S, Konduri GG, Teng RJ. Cellular Senescence Contributes to the Progression of Hyperoxic Bronchopulmonary Dysplasia. *Am J Respir Cell Mol Biol*. 2024 Feb;70(2):94-109.

138. Pant T, Lin CW, Bedrat A, Jia S, Roethle MF, Truchan NA, Ciecko AE, Chen YG, Hessner MJ. Monocytes in type 1 diabetes families exhibit high cytolytic activity and subset abundances that correlate with clinical progression. *Sci Adv.* 2024 May 17;10(20):eadn2136. PMID: PMC11100571