CURRICULUM VITAE

CHRISTINE N. METZ, PhD

Address:

Business**:** The Feinstein Institute for Medical Research
Northwell Health
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Personal:

Date of birth: 12/16/1963
Place of birth: Rochester, NY

Education:

1986-88	Cornell University, NY, BS, MS, Human Nutrition
1990	New York University, NY, MS, Immunology
1993	New York University, NY, PhD, Immunology

Appointments:

1993-1994	Postdoctoral Fellow, New York University
1994-1998	Staff Investigator, The Picower Institute for Medical Research
1998-2001	Assistant Professor, The Picower Institute for Medical Research
1998-2001	Faculty, Picower Graduate School of Molecular Medicine
2002-2010	Associate Investigator, Institute for Medical Research at North Shore-LIJ (renamed in 2005: The Feinstein Institute for Medical Research)
2010-present	Professor, the Feinstein Institute for Medical Research
2002-2010	Associate Professor, North Shore-LIJ Graduate School of Molecular Medicine (renamed in 2008: The Elmezzi Graduate School of Molecular Medicine)
2004-present	Research Director, Clinical OB/Gyn Research (Fellowship Program)
2006-2007	Adjunct Faculty, Long Island University CW Post (for MS student)
2010-present	Professor, The Elmezzi Graduate School of Molecular Medicine
2010-present	Professor, Hofstra-North Shore-LIJ School of Medicine*,†, Department of Molecular Medicine *Renamed: Hofstra Northwell School of Medicine in 2016; Renamed: †Donald and Barbara Zucker School of Medicine at Hofstra/Northwell in 2017
2016-present	Associate Dean, The Elmezzi Graduate School of Molecular Medicine

Memberships:

1994	Member, American Association for the Advancement of Science
1995	Member, International Cytokine Society
1998	Member, New York Academy of Sciences
2000	Member, American Association of Immunologists
2003	Member, Shock Society
2004	Member, Society for Leukocyte Biology

2008 Member, Society for Gynecologic Investigation/Society for Reproductive Med
2009 Member, Henry Kunkel Society
2016 Alpha Omega Alpha Honor Medical Society, faculty inductee
2017 Academy of Medical Educations, Zucker School of Medicine at Hofstra/Northwell

Awards/Nominations:

2011 President's Award Nomination - North Shore-LIJ Health System/Northwell Health, The Generations Project, Teamwork (The Feinstein Institute)
2012 The Lorinda de Roulet Award for Excellence in Research
2012 The Eileen Ludwig Greenland Innovation Award
2012 President's Award Nomination - North Shore-LIJ Health System, Advancing Women in Science and Medicine (AWSM), Innovation (The Feinstein Institute)
2013 Sybil Sternlieb Mentorship Award
2014 2014 Partner's Council and Katz Institute for Women's Health Award (Collaboration Award: C Metz and B Rochelson)
2015 Collaborative Innovations Award, Katz Institute for Women's Health Award
2016 Alpha Omega Alpha Honor Medical Society, faculty induction (Zucker SOM)
2016 Chander Iyer AWSM Scientific Achievement Award
2016 Girl Scouts of Nassau County Adult Recognition – Girl Scout USA Honor - STEM Partner
2017 Inductee, Academy of Medical Educators, Donald and Barbara Zucker School of Medicine
2018 Northwell Health Innovation Award/President's Award (with Peter K Gregersen, MD)

Peer-Reviewed Research Publications (Total 143):

1. **Gleichauf CN** and Roe DA (1989) The menstrual cycles effect on the reliability of bioimpedance measurements for assessing body composition. *Am.J.Clin.Nutr.* 50 (5):903-907.

2. Frenkel K and **Gleichauf C** (1991) Hydrogen peroxide formation by cells treated with a tumor promoter. *Free Radic.Res.Commun.* 12-13 Pt 2:783-94:783-794.

3. **Metz CN**, Zhang YY, Guo Y, Tsang TC, Kochan JP, Altszuler N, and Davitz MA (1991) Production of the glycosylphosphatidylinositol-specific phospholipase D by the islets of Langerhans. *J.Biol.Chem.* 266 (27):17733-17736.

4. **Metz CN**, Schenkman S, and Davitz MA (1991) Characterization of the plasma glycosylphosphatidylinositol-specific phospholipase D (GPI-PLD). *Cell Biol.Int.Rep.* 15 (9):875 - 82.

5. **Metz CN**, Thomas P, and Davitz MA (1992) Immunolocalization of a glycosyl-phosphatidylinositol-specific phospholipase D in mast cells found in normal tissue and neurofibromatosis lesions. *Am.J.Pathol.* 140 (6):1275-1281.

6. Abe M, Harpel JG, **Metz CN**, Nunes I, Loskutoff DJ, and Rifkin DB (1994) An assay for transforming growth factor-b using cells transfected with a plasminogen activator inhibitor-1 promoter-luciferase construct. *Anal.Biochem.* 216 (2):276-284.

7. Brunner G, **Metz CN**, Nguyen H, Gabrilove J, Patel SR, Davitz MA, Rifkin DB, and Wilson EL (1994) An endogenous glycosylphosphatidylinositol-specific phospholipase D releases basic fibroblast growth factor-heparan sulfate proteoglycan complexes from human bone marrow cultures. *Blood* 83 (8):2115-2125.

8. Carvalho EM, **Metz CN**, Davitz MA, and Ramalho-Pinto FJ (1994) Binding of GPI-PLD-treated DAF to the surface of Schistosoma mansoni schistosomula. *Braz.J.Med.Biol.Res.* 27 (2):457-462.

9. **Metz CN**, Brunner G, Choi-Muira NH, Nguyen H, Gabrilove J, Caras IW, Altszuler N, Rifkin DB, Wilson EL, and Davitz MA (1994) Release of GPI-anchored membrane proteins by a cell-associated GPI-specific phospholipase D. *EMBO J.* 13 (7):1741-1751.

10. Calandra T, Bernhagen J, **Metz CN**, Spiegel LA, Bacher M, Donnelly T, Cerami A, and Bucala B (1995) MIF as a glucocorticoid-induced modulator of cytokine production. *Nature.* 377:68-71.

11. Einheber S, Hannocks MJ, **Metz CN**, Rifkin DB, and Salzer JL (1995) Transforming growth factor-β1 regulates axon/Schwann cell interactions. *J.Cell Biol.* 129 (2):443-458.

12. Bacher M, **Metz CN**, Calandra T, Mayer K, Chesney J, Lohoff M, Gemsa D, Donnelly T, and Bucala R (1996) An essential regulatory role for macrophage migration inhibitory factor in T-cell activation. *Proc. Natl. Acad. Sci. U.S.A.* 93 (15):7849-7854.

13. Bernhagen J, Bacher M, Calandra T, **Metz CN**, Doty SB, Donnelly T, and Bucala R (1996) An essential role for macrophage migration inhibitory factor in the tuberculin delayed-type hypersensitivity reaction. *J.Exp.Med.* 183 (1):277-282.

14. Meinhardt A, Bacher M, McFarlane JR, **Metz CN**, Seitz J, Hedger MP, de Kretser DM, and Bucala R (1996) Macrophage migration inhibitory factor production by Leydig cells: evidence for a role in the regulation of testicular function. *Endocrinology.* 137 (11):5090-5095.

15. Rosengren E, Bucala R, Aman P, Jacobsson L, Odh G, **Metz CN**, and Rorsman H (1996) The immunoregulatory mediator macrophage migration inhibitory factor (MIF) catalyzes a tautomerization reaction. *Mol.Med.* 2 (1):143-149.

16. Waeber G, Calandra T, Roduit R, Haefliger JA, Bonny C, Thompson N, Thorens B, Temler E, Meinhardt A, Bacher M, **Metz CN**, Nicod P, and Bucala R (1997) Insulin secretion is regulated by the glucose-dependent production of islet b cell macrophage migration inhibitory factor. *Proc. Natl. Acad. Sci. U.S.A.* 94 (9):4782-4787.

17. Bacher M, Meinhardt A, Lan HY, Mu W, **Metz CN**, Chesney JA, Calandra T, Gemsa D, Donnelly T, Atkins RC, and Bucala R (1997) Migration inhibitory factor expression in experimentally induced endotoxemia. *Am.J.Pathol.* 150 (1):235-246.

18. Bendrat K, Al-Abed Y, Callaway DJ, Peng T, Calandra T, **Metz CN**, and Bucala R (1997) Biochemical and mutational investigations of the enzymatic activity of macrophage migration inhibitory factor. *Biochemistry.* 36 (49):15356-15362.

19. Donnelly SC, Haslett C, Reid PT, Grant IS, Wallace WA, **Metz CN**, Bruce LJ, and Bucala R (1997) Regulatory role for macrophage migration inhibitory factor in acute respiratory distress syndrome [see comments]. *Nat. Med.* 3 (3):320-323.

20. **Metz CN** and Bucala R (1997) Role of macrophage migration inhibitory factor in the regulation of the immune response. *Adv. Immunol.* 66:197-223:197-223.

21. Mikulowska A, **Metz CN**, Bucala R, and Holmdahl R (1997) Macrophage migration inhibitory factor is involved in the pathogenesis of collagen type II-induced arthritis in mice. *J. Immunol.* 158 (11):5514-5517.

22. Nunes I, Gleizes PE, **Metz CN**, and Rifkin DB (1997) Latent transforming growth factor-b binding protein domains involved in activation and transglutaminase-dependent cross-linking of latent transforming growth factor-b. *J. Cell Biol.* 136 (5):1151-1163.

23. Tampanaru-Sarmesiu A, Stefaneanu L, Thapar K, Kovacs K, Donnelly T, **Metz CN**, and Bucala R (1997) Immunocytochemical localization of macrophage migration inhibitory factor in human hypophysis and pituitary adenomas. *Arch. Pathol. Lab. Med.* 121 (4):404-410.

24. Calandra T, Spiegel LA, **Metz CN**, and Bucala R (1998) Macrophage migration inhibitory factor is a critical mediator of the activation of immune cells by exotoxins of Gram-positive bacteria. *Proc. Natl. Acad. Sci. U.S.A.* 95 (19):11383-11388.

25. Bacher M, Meinhardt A, Lan HY, Dhabhar FS, Mu W, **Metz CN**, Chesney JA, Gemsa D, Donnelly T, Atkins RC, and Bucala R (1998) MIF expression in the rat brain: implications for neuronal function. *Mol. Med.* 4 (4):217-230.

26. Juttner S, Bernhagen J, **Metz CN**, Rollinghoff M, Bucala R, and Gessner A (1998) Migration inhibitory factor induces killing of Leishmania major by macrophages: dependence on reactive nitrogen intermediates and endogenous TNF-α. *J. Immunol.* 161 (5):2383-2390.

27. Meinhardt A, Bacher M, **Metz C**, Bucala R, Wreford N, Lan HY, Atkins, Hedger M (1998) Local regulation of macrophage subsets in the adult testis: examination of the roles of the seminiforous tubules, testosterone and macrophage migration inhibitory factor. *Bio. Reprod* 59 (2): 371-378.

28. Lan HY, Yang N, Brown FG, Isabel NM, Nikolic-Paterson DJ, Mu W, **Metz CN**, Bacher M, Atkins RC, and Bucala R (1998) Macrophage migration inhibitory factor expression in human renal allograft rejection. *Transplantation.* 66 (11):1465-1471.

29. Rossi AG, Haslett C, Hirani N, Greening AP, Rahman I, **Metz CN**, Bucala R, and Donnelly SC (1998) Human circulating eosinophils secrete macrophage migration inhibitory factor (MIF). Potential role in asthma. *J. Clin. Invest.* 101 (12):2869-2874.

30. Yang N, Nikolic-Paterson DJ, Ng YY, Mu W, **Metz C**, Bacher M, Meinhardt A, Bucala R, Atkins RC, Lan HY (1998) Reveral of established rat crescentic glomerulonephritis by blockade of macrophage migration inhibitory factor (MIF): Potential role of MIF in regulating glucocorticoid production. *Mol Med* 4 (6): 413-424.

31. Leech M, **Metz C**, Santos L, Peng T, Holdsworth SR, Bucala R, Morand EF (1998) Involvement of macrophage migration inhibitory factor in the evolution of rat adjuvant arthritis. *Arthritis Rheum* 41 (5):910-917.

32. Tesch GH, Nikolic-Paterson DJ, **Metz CN**, Mu W, Bacher M, Bucala R, Atkins RC, and Lan HY (1998) Rat mesangial cells express macrophage migration inhibitory factor *in vitro* and *in vivo*. *J. Am. Soc. Nephrol.* 9 (3):417-424.

33. Chesney J, **Metz C**, Stavitsky A, Bacher M, Bucala R (1998) Regulated production of type I collagen and inflammatory cytokines by peripheral blood fibrocytes. *J Immunol* 160(1):419-425.

34. Donnelly SC, Bucala R, **Metz CN**, Grant IS, Robertson CR, and Haslett C (1999) Macrophage migration inhibitory factor and acute lung injury. *Chest.*116 (1 Suppl):111S.

35. Meinhardt A, Bacher M, O'Bryan MK, McFarlane JR, Mallidis C, Lehmann C, **Metz CN**, de Kretser DM, Bucala R, and Hedger MP (1999) A switch in the cellular localization of macrophage migration inhibitory factor in the rat testis after ethane dimethane sulfonate treatment. *J. Cell Sci.* 112 (Pt 9):1337-1344.

36. Leech M, **Metz C**, Hall P, Hutchinson P, Gianis K, Smith M, Weedon H, Holdsworth SR, Bucala R, Morand EF (1999) Macrophage migration inhibitory factor in rheumatoid arthritis: evidence of proinflammatory function and regulation by glucocorticoids. *Arthritis Rheum.* 42(8):1601-8.

37. Chesney J, **Metz, CN**, Bacher M, Peng T, Meinhardt A, and Bucala R. (1999) An essential role of macrophage migration inhibitory factor (MIF) in angiogenesis and the growth of a murine lymphoma. *Molecular Medicine* 5:181-191.

38. Mitchell RA, **Metz CN**, Peng T, and Bucala R (1999) Sustained mitogen-activated protein kinase (MAPK) and cytoplasmic phospholipase A2 activation by macrophage migration inhibitory factor (MIF). Regulatory role in cell proliferation and glucocorticoid action. *J. Biol. Chem.* 274:18100-18106.

39. Leech M, **Metz C**, Bucala R, Morand EF (2000) Regulation of macrophage migration inhibitory factor by endogenous glucocorticoids in rat adjuvant-induced arthritis. *Arthritis Rheum*. 43(4):827-33

40. Chesney J, Mitchell R, Benigni F, Bacher M, Spiegel L, Al-Abed Y, Han JH, **Metz C**, Bucala R (1999). An inducible gene product for 6-phosphofructo-2-kinase with an AU-rich instability element: role in tumor cell glycolysis and the Warburg effect. *Proc Natl Acad Sci USA.* 96(6):3047-52.

41. Calandra T, Echtenacher B, Roy DL, Pugin J, **Metz CN**, Hultner L, Heumann D, Mannel D, Bucala R, and Glauser MP (2000) Protection from septic shock by neutralization of macrophage migration inhibitory factor. *Nat. Med.* 6 (2):164-170.

42. Lan HY, Yang N, Nikolic-Paterson DJ, Yu XQ, Mu W, Isbel NM, **Metz CN**, Bucala R, and Atkins RC (2000) Expression of macrophage migration inhibitory factor in human glomerulonephritis. *Kidney Int.* 57 (2):499-509.

43. Martiney JA, Sherry B, **Metz CN**, Espinoza M, Ferrer AS, Calandra T, Broxmeyer HE, and Bucala R (2000) Macrophage migration inhibitory factor release by macrophages after ingestion of Plasmodium chabaudi-infected erythrocytes: possible role in the pathogenesis of malarial anemia. *Infect. Immun.* 68 (4):2259-2267.

44. Batliwalla FM, Damle RN, **Metz C**, Chiorazzi N, and Gregersen PK (2001) Simultaneous flow cytometric analysis of cell surface markers and telomere length: Analysis of human tonsillar B cells. *J. Immunol. Methods*. 247 (1-2): 103-109

45. Abe R, Peng T, Sailors J, Bucala R, and **Metz CN** (2001) Regulation of the CTL response by macrophage migration inhibitory factor. *J. Immunol.* 166 (2):747-753.

46. Santos L, Hall P, **Metz C**, Bucala R, Morand EF (2001) Role of macrophage migration inhibitory factor (MIF) in murine antigen-induced arthritis: interaction with glucocorticoids. *Clin Exp Immunol.* 123(2):309-314.

47. Abe R, Donnelly DC, Peng T, Bucala R, **Metz CN**. (2001) Peripheral blood fibrocytes: Differentiation pathway and migration to wound sites. *J. Immunol.* 166 (12): 7556-7562.

48. Brown FG, Nikolic-Paterson DJ, Chadban SJ, Dowling J, Jose M, **Metz CN**, Bucala R, Atkins RC. (2001) Urine macrophage migration inhibitory factor concentrations as a diagnostic tool in human renal allograft rejection. *Transplantation*. 71(12):1777-1783.

49. Sampey AV, Hall PH, Mitchell RA, **Metz CN**, Morand EF (2001) Regulation of synoviocyte phospholipase A2 and cyclooxygenase 2 by macrophage migration inhibitory factor. *Arthritis Rheum*. 44(6):1273-1280.

50. Hartlapp I, Abe R, Saeed R, Peng T, Voelter W, Bucala R, **Metz CN**. (2001) Fibrocytes induce an angiogenic phenotype in cultured endothelial cells and promote angiogenesis in vivo. *FASEB J.* 15:2215-2224.

51. deJong YP, Abadia-Molina AC, Satoskar AR, Clarke K, Rietdijk ST, Faubion WA, Mizoguchi E, **Metz CN**, Sahli MA, ten Hove T, Keates AC, Lubetsky JB, Farrell RJ, Michetti P, van Deventer SJ, Lolis E, David JR, Bhan AK, Terhorst C. (2001) Development of chronic colitis is dependent on the cytokine MIF. *Nat Immunol.* 2:1061-6.

52. Hou G, Valujskikh A, Stavitsky A, **Metz C**, Heeger PS. (2001) In vivo blockade of macrophage migration inhibitory factor prevents skin graft destruction after indirect allorecognition. *Transplantation* 72:1890-1897.

53. Senter PD, Al-Abed Y, **Metz CN**, Benigni F, Mitchell RA, Chesney J, Han J, Gartner CG, Nelson SD, Todaro GJ, Bucala R.(2002) Inhibition of macrophage migration inhibitory factor (MIF) tautomerase and biological activities by acetaminophen metabolites. *Proc Natl Acad Sci U S A*. 99:144-149.

54. Brown FG, Nikolic-Paterson DJ, Hill PA, Isbel NM, Dowling J, **Metz CN**, Atkins RC. (2002) Urine macrophage migration inhibitory factor reflects the severity of renal injury in human glomerulonephritis. *J Am Soc Nephrol*. 13 Suppl 1:S7-13.

55. Kats R., **Metz CN**, Akoum A. (2002) Macrophage migration inhibitory factor is markedly expressed in active and early-stage endometriotic lesions. *J. Clin. Endocrinol. Metab.* 87: 883-889.

56. Isidori AM, Kaltsas GA, Korbonits M, Pyle M, Gueorguiev M, Meinhardt A, **Metz C**, Petrovsky N, Popovic V, Bucala R, Grossman AB. (2002) Response of serum macrophage migration

inhibitory factor levels to stimulation or suppression of the hypothalamo-pituitary-adrenal axis in normal subjects and patients with Cushing's disease. *J Clin Endocrinol Metab.* 87: 1834-1840.

57. Akoum A, Kong J, **Metz C**, Beaumont MC. (2002) Spontaneous and stimulated secretion of monocyte chemotactic protein-1 and macrophage migration inhibitory factor by peritoneal macrophages of women with and without endometriosis. *Fertility and Sterility* 77:989-994.

58. Morand EF, Leech M, Weedon H, **Metz C**, Bucala R, Smith MD. (2002) Macrophage migration inhibitory factor in rheumatoid arthritis: clinical correlations. *Rheumatology* (Oxford). 41:558-562.

59. Dios A, Mitchell RA, Aljabari B, Lubetsky J, O'Connor K, Liao H, Senter PD, Manogue KR, Lolis E, **Metz C**, Bucala R, Callaway DJ, Al-Abed Y. (2002) Inhibition of MIF bioactivity by rational design of pharmacological inhibitors of MIF tautomerase activity. *J Med Chem*. 45:2410-2416.

60. Tan KC, Chow WS, Ai VH, **Metz C**, Bucala R, Lam KS. (2002) Advanced glycation end products and endothelial dysfunction in type 2 diabetes. *Diabetes Care*. 25:1055-1059.

61. Kats R, Collette T, **Metz CN**, Akoum A. (2002) Marked elevation of macrophage migration inhibitory factor in the peritoneal fluid of women with endometriosis. *Fertility and Sterility* 78: 69-76.

62. Lo JW, Leunge AY, Huang XR, Lie AK, **Metz C**, Bucala R, Liang R, Lan HY (2002) Macrophage migratory inhibitory factor (MIF) expression in acute graft-versus-host disease (GVHD) in allogeneic hemopoietic stem cell transplant recipients. *Bone Marrow Transplant*. 6: 375-380.

63. Atsumi T, Chesney J, **Metz C**, Leng L, Donnelly S, Makita Z, Mitchell R, Bucala R (2002) High Expression of inducible 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase (iPFK-2; PFKFB3) in human cancers. *Cancer Res*. 62(20): 5881-5887.

64. Vozarova B, Stefan N, Hanson R, Lindsay RS, Bogardus C, Tartaranni PA, **Metz CN**, Bucala R (2003) Plasma concentrations of macrophage migration inhibitory factor are elevated in Pima Indians compared to Caucasians and are associated with insulin resistance*. Diabetologia* 45(12) 1739-1741.

65. Pan JH, Lindholt JS, Sukhova GK, Baugh JA, Henneberg EW, Bucala R, Donelly SC, Libby P, **Metz C**, Shi GP (2003) Macrophage migration inhibitory factor is associated with aneurismal expansion. *J Vasc. Surg* 37(3): 628-635.

66. Petrovsky N, Socha L, Silva D, Grossman AB, **Metz C**, Bucala R (2003) Macrophage migration inhibitory factor exhibits a pronounced circadian rhythm relevant to its role as a glucocorticoid counter-regulator. *Immunol Cell Biol.* 81(2): 137-143.

60. Pyle ME, Korbonits M, Gueorguiev M, Jordan S, Kola B, Morris DG, Meinhardt A, Powell MP, Claret FX, Zhang Q, **Metz C**, Bucala R, Grossman AB (2003) Macrophage migration inhibitory factor expression is increased in pituitary adenoma cell nuclei. *J Endocrinol*. 176(1): 103-110.

61. Petrenko O, Fingerle-Rowson G, Mitchell R, **Metz CN**. (2003) MIF deficiency is associated with altered cell growth and reduced susceptibility to Ras-mediated transformation. *J Biol Chem.* 278(13): 11078-11082.

62. Fingerle-Rowson G, Koch P, Bikoff R, Lin X, **Metz CN**, Dhabhar FS, Meinhardt A, Bucala R. (2003) Regulation of macrophage migration inhibitory factor expression by glucocorticoids in vivo. *Am J Pathol* 162(1):47-56

63. Demir Y, Chen Y, **Metz C**, Renz H, Heeger PS (2003) Cardiac allograft rejection in the absence of macrophage migration inhibitory factor. *Transplantation*. 2003 Jul 15;76(1):244-7.

64. Denkinger C, Denkinger M, Kort J, **Metz C**, Forsthuber T. (2003) Effects of blockade of macrophage migration inhibitory factor (MIF) on EAE: Amelioration of acute disease by inhibition of homing of encephalitogenic T cells to the central nervous system *J. Immunol.*170(3): 1274-82.

65. Lai KN, Leung JC, **Metz CN**, Lai FM, Bucala R, Lan HY (2003) Role for macrophage migration inhibitory factor in acute respiratory distress syndrome. *J. Path*. 199(4): 496-508.

66. Leng L, **Metz C**, Fang Y, Xu J, Donnelly S, Baugh J, Delohery T, Chen Y, Mitchell RA, Bucala R (2003) MIF signal transduction initiated by binding to CD74. *J Exp. Med*. 197(11) 11467-11476.

67. Saeed RW, Peng T, **Metz CN** (2003) Ascorbic acid blocks the growth inhibitory effect of tumor necrosis factor-alpha on endothelial cells. *Exp. Bio. Med*. 228(7): 855-865.

68. Wu J, **Metz C**, Xu X, Abe R, Gibson AW, Edberg JC, Cooke J, Xie F, Cooper GS, Kimberly RP (2003) A novel polymorphic CAAT/enhancer-binding protein beta element in the FasL gene promoter alters Fas ligand expression: a candidate background gene in African American systemic lupus erythematosus patients. *J Immunol.* 170(1):132-8.

69. Fingerle-Rowson G, Petrenko O, **Metz CN**, Forsthuber TG, Mitchell R, Huss R, Moll, Muller W, Bucala R (2003) The p53-dependent effects of macrophage migration inhibitory factor revealed by gene targeting. *Proc. Natl. Acad. Sci*. 100(16): 9354-9359.

70. Rice EK, Nikolic-Paterson DJ, Hill PA, **Metz CN**, Bucala R, Atkins RC, Tesch GH (2003) Interferon-gamma induces macrophage migration inhibitory factor synthesis and secretion by tubular epithelial cells. *Nephrology* 8(3):156-161.

71. Stavitsky AB**, Metz C**, Liu S, Xianli J, Bucala R. (2003) Blockade of macrophage migration inhibitory factor (MIF) in Schistosoma japonicum-infected mice results in an increased adult worm burden and reduced fecundity. *Parasite Immunol*. 2003 25(7):369-374

72. Pan JH, Sukhova GK, Yang JT, Wang B, Xie T, Fu H, Zhang Y, Satoskar AR, David JR, **Metz CN**, Bucala R, Fang K, Simon DI, Chapman HA, Libby P, Shi GP (2004) Macrophage migration inhibitory factor deficiency impairs atherosclerosis in low-density lipoprotein receptor-deficient mice. *Circulation.* 109(25):3149-3153.

73. Saeed RW, Varma S, Peng T, Tracey KJ, Sherry B, **Metz CN**. 2004. Ethanol blocks leukocyte recruitment and endothelial cell activation *in vivo* and *in vitro J Immunol*. 173(10):6376-6383.

74. Wang H, Liao H, Ochani M, Justiniani M, Lin X, Yang L, Al-Abed Y, Wang H, **Metz C**, Miller EJ, Tracey KJ, Ulloa L. 2004. Cholinergic agonists inhibit HMGB1 release and improve survival in experimental sepsis. *Nat Med*. 10(11):1216-1221.

75. Saeed RW, Varma S, Peng T, Sherry B, Balakhneh, D, Huston, J, Tracey KJ, Al-Abed Y, **Metz CN** (2005). Cholinergic stimulation blocks endothelial cell activation and leukocyte recruitment during inflammation. *J Exp Med:* 201(7): 1113-1123.

76. Akoum A, **Metz CN**, Morin MJ (2005) Marked Increase in Macrophage Migration Inhibitory Factor Synthesis and Secretion in Human Endometrial Cells in Response to Human Chorionic Gonadotropin Hormone. *Clin Endocrinol Metab*. 90(5):2904-10.

77. Morin M, Bellehumeur C, Therriault MJ, **Metz C**, Maheux R, Akoum A (2005) Elevated levels of macrophage migration inhibitory factor in the peripheral blood of women with endometriosis. *Fertil. Steril.* 83(4):865-872.

78. Kar S, **Metz C** and McMahon-Pratt D. (2005) $CD4^+$ T cells play a dominant role in protection against New World leishmaniasis induced by the amastigote single strand-specific nuclease, P-4. *Infection and Immunity*. 73(6):3823-3827.

79. Cao WG, Morin M, **Metz C**, Maheux R, and Akoum A. (2005) Stimulation of macrophage migration inhibitory factor expression in endometrial stromal cells by interleukin 1, beta involving the nuclear transcription factor NFkB. *Biol Reprod*. 73(3):565-570.

80. Chagnon F, **Metz C**, Bucala R, Lesur O (2005) Endotoxin-induced myocardial dysfunction: Effects of macrophage migration inhibitory factor (MIF) neutralization. *Circulation Res*. 96(10):1095-102.

81. Kats R, Al-Akoum M, Guay S, **Metz C**, Akoum A. (2005) Cycle-dependent expression of macrophage migration inhibitory factor in the human endometrium. *Hum Reprod*. 20(12):3518-3525.

82. Nicolette F, Creange A, Orlikowski D, Bolgert F, Mangano K, **Metz C**, DiMarco R, and Al-Abed Y. (2005) Macrophage migration inhibitory factor (MIF) seems crucially involved in Guillain-Barre syndrome and experimental allergic neuritis. *J Neuroimmunol.* 168(1-2):168-174.

83. Al-Abed Y, Dabideen D, Alijabari B, Valster A, Messmer D, Ochani M, Tanovic M, Ochani K, Bacher M, Nicoletti F, **Metz C**, Pavlov V, Miller EJ, Tracey KJ (2005) ISO-1 binding to the tautomerase active site of MIF inhibits its pro-inflammatory activity and increases survival in severe sepsis. J Biol Chem 280(44): 3541-44.

84. Lashuel HA, Aljabari B, Sigurdsson EM, **Metz CN**, Leng L, Callaway DJ, Bucala R. (2005) Amyloid fibril formation by macrophage migration inhibitory factor**.** *Biochem Biophys Res Commun*. 338(2):973-980.

85. Lin X, Sakuragi T, **Metz CN**, Ojamaa K, Skopicki HA, Wang P, Al-Abed Y, Miller EJ (2005) Macrophage migration inhibitory factor within the alveolar spaces induces changes in the heart during late experimental sepsis. *Shock* 24(6):556-63.

86. Chalimoniuk M, King-Pospisil K, **Metz CN**, Toborek M. (2006) Macrophage migration inhibitory factor induces cell death and decreases neuronal nitric oxide expression in spinal cord neurons. *Neuroscience*. 139(3):1117-28.

87. Akoum A, **Metz C**, Al-Akoum M, Kats R (2006) Macrophage migration inhibitory factor expression in the intrauterine endometrium of women with endometriosis varies with disease stage, infertility status, and pelvic pain. *Fertil Steril.* 85(5):1379-85.

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89. Rochelson B, Dowling O, Schwartz N, **Metz CN** (2007). Magnesium sulfate suppresses inflammatory responses by human umbilical vein endothelial cells (HuVECs) through the NFκB pathway. *J Repro Immunol.* 23(2):101-107.

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141. Warren LA, Shih A, Marquez Renteira S, Seckin T, Blau B, Simpfendorfer K, Lee A, ***Metz CN**, *Gregersen PK (*indicates equal contribution, co-corresponding author). (2018) Analysis of Menstrual Effluent: Diagnostic Potential for Endometriosis. *Mol Med*. 24(1):1-12. doi: 10.1186/s10020-018-0009-6.

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143. Greeley ET, Rochelson B, Krantz DA, Xue X, Carmichael JB, Ashour S, Woo S, Augustine S, **Metz CN** (*in press*) Evaluation of Syndecan-1 as a Novel Biomarker for Adverse Pregnancy Outcomes. *Reproductive Sciences*.

144. Ruiz S, Zhao H, Chandakkar P, Papoin J, Choi H, Nomura-Kitabayashi A, Patel R, Gillen M, Diao L, Chatterjee PK, He M, Al-Abed Y, Wang P, Metz CN, Oh SP, Blanc L, Campagne F, Marambaud P. (2019) Correcting Smad1/5/8, mTOR, and VEGFR2 treats pathology in hereditary hemorrhagic telangiectasia models. *J Clin Invest.* Nov 5. pii: 127425. doi: 10.1172/JCI127425.

Review Articles

1. Harpel JG, **Metz CN**, Kojima S, and Rifkin DB (1992) Control of transforming growth factor-beta activity: latency vs. activation. *Prog. Growth Factor Res.* 4 (4):321-335.

2. **Metz CN**, and Bucala R (2000) Review: MIF (Chapter 7) Oppenheim JJ and Feldmann M. (Eds.) *Cytokine Reference Vol. I. Ligands.* Academic Press. Electronic Citation, www.apnet.com/cytokine.

3. Bucala R, and **Metz CN** (2002) Immunosuppressive Factors in Cancer (Chapter 4) Stuhler G and Walden P (Eds.) In: *Cancer Immune Therapy.* Wiley-VCH Verlag Press.

4. **Metz CN** (2003) Fibrocytes: A unique cell population involved in wound healing. *Cellular and Molecular Life* Sciences 60: 1342-50.

5. **Metz CN**, Gregersen PK, and Malhotra A. (2004). Metabolism and biochemical effects of nicotine for primary care providers. In: *Medical Clinics of North America* 88(6):1399-413.

6. Denkinger CM, **Metz C**, Fingerle-Rowson G, Denkinger MD, Forsthuber T. (2004). Macrophage migration inhibitory factor and its role in autoimmune disease. *Arch Immunol. Ther Exp*. 52: 389-400.

7. Moss JE, **Metz CN**, Bucala R (2004) Immune Evasion Strategies Utilized by Cancers: Molecular Mechanisms and Implications for Therapy. In: Encyclopedia of Molecular Cell Biology and Molecular Medicine (2nd Edition). Wiley Press. Editor RA Meyers.

8. **Metz CN** and Tracey KJ (2005) It takes nerve to dampen inflammation. *Nat. Immunol*. 8:756-57.

9. Cullen Riechert V, Folan P, Villano L, Kohn N, and **Metz CN**. (2005) Tobacco and law enforcement officers. *Clin Occup Environ Med*. 5(1):43-54.

10. Tracey, KJ and **Metz, CN** (2007) Chapter: Brain endothelial cells bridge neural and immune networks. In: vascular bed/organ in health and disease. In: *The Comprehensive Treatise on the Endothelium*. Editor: W. Aird.

11. Hsaio WL, **Metz C**, Singh DP, and J Roth (2008) The microbes of the intestine: An introduction to their metabolic and signaling capacities. In: *Endocrinol Metab Clin N Am* 37: 857-871.

12. Pavlov, V, Ulloa, L, and **Metz, CN** (2010) Vol. 9 Chapter 5.6 Infection and Sepsis. In: *Neuroimmune Biology Volume 8 The Brain and Host Defence* (Ed. Arnason). Elsevier Science.

13. **Metz CN**, Hudson L, Pavlov VA (2016) Chapter: Rodent Models of Diabetes in: *Principles of Diabetes Mellitis, Third Edition*. L. Poretsky (Ed.). Springer. doi:10.1007/978-3-319-20797-1_11-1

14. Olofsson PS, **Metz CN**, Pavlov V (2018) PART VI: Resolution of Inflammation and Tissue Repair, Chapter: The neuroimmune communicatome in inflammation. In: Inflammation from Molecular and Cellular Mechanisms to the Clinic Vol 3. Eds. Cavaillon J-M and Singer M. Wiley-VCH Verlag GmbH & Co. Germany. ISBN: 978-3-527-33899-3

15. **Metz CN**, Pavlov VA. (2018) Vagus nerve cholinergic circuitry to the liver and the gastrointestinal tract in the neuroimmune communicatome. *Am J Physiol Gastrointest Liver Physiol*. 315(5):G651-G658. doi: 10.1152/ajpgi.00195.2018.

Invited Talks and Oral Presentations at National/International Meetings

1. Keystone Symposia: Cytokines and Disease April 12, 2000
   The role of MIF in tumor angiogenesis: *In vitro* and *in vivo*.
2. The GCRC and Clinical Research Conference Chicago, IL April 16, 2004
   The collection of de-identified human specimens for research

Invited Talks and Oral Presentations at National/International Meetings - cont'd

3. Shock Society Annual Meeting, Nova Scotia June 8, 2004
   Cholinergic activation of endothelial cells *in vitro* and *in vivo*
4. Shock Society Annual Meeting, Marco Island, FL June 4, 2005
   A novel cholinergic agonist improves sepsis: The role of the endothelium
5. Alcohol Immunology Research Interest Group, Loyola U Medical Center November 18, 2005
   The effects of acute ethanol exposure on leukocyte recruitment and endothelial cell activation
6. Society for Critical Care Medicine, San Francisco, CA January 8, 2006
   Neural Stimulation in sepsis
7. Endothelial Cell Phenotypes In Health and Disease (Gordon Conference) August 8, 2006
   Cholinergic Stimulation of Endothelial Cells During Inflammation, Biddeford, ME
8. Shock Society Annual Meeting, Baltimore, MD June 12, 2007
   Cholinergic Regulation of Leukocyte Recruitment Requires the Spleen
9. The American Heart Association, Board of Directors Meeting, NY September 19, 2007
   Butt Out: Getting to the Heart of the Matter
10. Society for Maternal Fetal Medicine (Presenter: H Tam Tam, PI: C. Metz) February 6, 2010
    $MgSO_4$ attenuates maternal and fetal inflammatory responses to LPS
11. The Henry Kunkel Society Meeting June 22, 2011
    Acute kidney injury (AKI) is suppressed by cholinergic agonists:
    Effects on proteasome inhibition
12. Society for Maternal Fetal Medicine (Presenter: N Desai; PI: C Metz) February 5, 2012
    The effect of Metformin on Diet-Induced Maternal and Fetal Inflammation
13. Society for Gynecological Investigation (Presenter: N Desai, PI: C Metz). March 2012
    Metformin does not prevent diet-induced lipid abnormalities in the maternal liver
14. Society for Gynecological Investigation (Presenter: M Gupta, PI: C Metz) March 2012
    Magnesium (Mg) deficiency *in utero* restricts fetal growth and impairs brain proteasome function
15. Society for Maternal Fetal Medicine (Presenter: A Roman; PI: C Metz) February 14, 2013
    Maternal magnesium supplementation reduces incidence of intrauterine growth restriction in a rat model and modulates cytokine expression
    NOTE: Dr. Roman won the Research Excellence Award; manuscript was fast-tracked -*AJOG*
16. Shock Society Meeting Program Co-Chair for Symposia entitled: Inflammation and Signaling for the 36th Annual Shock Society Meeting June 2013
17. American Academy of Allergy, Asthma and Immunology (AAAAI) Feb 28, 2014
    Diaz J, Solanki M, Xue X, Chatterjee PK, Gupta M, Bonagura V, Metz CN
    Glucocorticoid receptor-β up-regulation in B57Bl/6 diet-induced obese mice with house dust mite asthma (San Diego, Oral presentation; J Diaz, MD; PI: C Metz)
18. The 40th Annual Meeting of the Society of Gynecologic Surgeons: March 2014
    Sacral nerve stimulation reduces elevated urinary nerve growth factor (uNGF) levels in women with detrusor overactivity (Oral Presentation: DF Shalom; PI: C Metz)
19. Endometriosis Medical Conference sponsored by the Endometriosis Foundation of America (EFA) March 7, 2014 C Metz Chair and Panelist (Controversies in Research)
20. American College of Allergy, Asthma, and Immunology (ACAAI): November 9, 2014
    M1 macrophages: A potential role in the development of steroid resistance asthma in obese mice. Diaz J, Solanki M, Xue X, Chatterjee PK, Gupta M, Bonagura V, Metz CN. Dr. J Diaz was awarded the ACAAI Alliance Memorial Award–First place Clemens von Pirquet Award (with a $2500 check). Oral presentation.
21. Research Symposium: Diabetes & Metabolic Disorders. April 7, 2016
    A pre-clinical model to study the effects of obesity on asthma and its treatment (Oral: C Metz)
    J. Diaz, L. Warren, L. Helfner, X. Xue, P.K. Chatterjee, M Gupta, M.H. Solanki, M. Esposito, V. Bonagura, C.N. Metz

Invited Talks and Oral Presentations at National/International Meetings - cont'd

22. Pediatric Academic Societies Meeting (Baltimore, MD) April 30, 2016
    The effect of maternal magnesium deficiency on fetal pancreatic development by A Bauman
23. Society for Reproductive Investigation (Orlando, FL) March 2017
    In utero oxytocin (OXT) exposure alters gene expression associated with metabolism and neurotransmitter secretion in the mouse perinatal brain
    F Hsieh, G Kumar, P Chatterjee, X Xue, I Kordunsky, B Rochelson and C Metz
    (note: Dr. Frances Hsieh won First Prize: Best New Investigator Award)
24. New York Perinatal Society (40th Annual Meeting, NY, NY) April 25, 2017
    Fetal oxytocin exposure and the perinatal mouse brain
    F Hsieh, G Kumar, P Chatterjee, X Xue, I Kordunsky, B Rochelson and C Metz
25. OB/GYN Grand Rounds – LIJMC and NSUH, Northwell Health Nov 1, 2017
    The Genetics of Endometriosis: Chasing Diagnostic Endophenotypes (C Metz & P Gregersen)
26. Society for Maternal Fetal Medicine (38th Annual Meeting, Dallas, TX) Feb 3, 2018
    Effects of Maternal Oxytocin on Gene Expression in the Brains of Perinatal and Neonatal Mice
    F Hsieh, G Kumar, P Chatterjee, X Xue, I Kordunsky, B Rochelson and C Metz
27. Society for Reproductive Investigation (San Diego, CA) March 2018
    Maternal Oxytocin Administration at Term Affects Uterine Gap Junction-Associated Gene Expression in Mice S Soni, P Chatterjee, F Hsieh, X Xue, B Rochelson, C Metz
28. Menstruation: Science and Society Meeting NIH NICHD Rockville, MD Sept 20-21, 2018
    Diagnosing Endometriosis from Menstrual Effluent
29. Grand Rounds at Staten Island University Hospital, Regina McGinn Bldg, Feb 6, 2019
    Staten Island NY. *Menstrual Effluent: A Tool for Diagnosing and Understanding Endometriosis*
30. New England Fertility Society Newton, MA March 6, 2019
    Analysis of Menstrual Effluent: Insights into Endometriosis & Infertility C Metz & P Gregersen
31. Endometriosis Foundation of America (EFA) NY, NY March 8, 2019
    Analysis of Menstrual Effluent: Emerging Insights into the Pathogenesis of Endometriosis
    C Metz & P Gregersen
32. XV Int'l Symposium: Magnesium in Health and Disease, Bethesda, MD (NIH) March 22, 2019
    Magnesium (Mg) deficiency enhances oxidative stress and migratory potential of colon cancer cells G Kumar, S Madankumar, X Xue, P Chatterjee and CN Metz
32. Loyola University Chicago Stricht School of Medicine April 10, 2019
    Targeting Kidney Inflammation and Injury Using Cholinergic Agonists, C Metz
33. Lenox Hill Hospital, Dept of OB/GYN faculty, fellows, residents June 5, 2019
    Using Menstrual Effluent to Diagnose and Understand Endometriosis, C Metz & PK Gregersen
34. Grand Rounds Southside Hospital, Northwell Health November 6, 2019
    Analysis of Menstrual Effluent: Insights into Endometriosis, C Metz & PK Gregersen

Advisor for Master's Degree Students

1999-2000 Ingo Hartlapp. Master's thesis performed in my laboratory as part of M.D./M.S. degree (Tubingen, Germany). Thesis: Biochemical characterization of the angiogenic activity secreted by peripheral blood fibrocytes.
Hartlapp et al (2001). *FASEB J.* 15:2215-2224.
Current position: Physician Scientist, Physician-Scientist Institute of Pathology, University of Cologne, Cologne, Germany

2005-2007 Radhika Damle. Master's thesis work performed in my laboratory as part of a M.S. degree (Long Island University C.W. Post).

PhD Thesis Advisor for:

2006-2009 Michael McGraw Yeboah, MD
Graduate student of The Elmezzi School of Molecule Medicine
Thesis Advisor: Christine N. Metz, PhD

Thesis: The role of the cholinergic anti-inflammatory pathway in renal ischemia-reperfusion injury
July 2009-2014: Renal Fellow at Massachusetts General Hospital and Brigham and Women's Hospital (affiliate of Harvard Medical School);
July 2014-present: Assistant Professor, Medical College of Wisconsin

2010-2014 Madhu Gupta, MBBS
Graduate student of The Elmezzi School of Molecule Medicine
Thesis Advisor: Christine N. Metz, PhD

Thesis: *In Utero* Exposure to Magnesium Deficiency and Magnesium Supplementation: Maternal and Fetal Consequences
Postdoc, Medical College of Wisconsin

2011-2014: Malvika Solanki, MBBS
Graduate student of The Elmezzi School of Molecule Medicine
Thesis Advisor: Christine N Metz, PhD

Thesis: The Regulation of Acute Kidney Injury by Magnesium
July 2014-2018: Resident, Pathology, Northwell Health/Medical College of WI;
2018-2019: Fellowships in Path; Aug 2019: Mayo Clinic Pathologist

2015-2019: Gopal Kumar, MBBS
Graduate student of The Elmezzi School of Molecular Medicine
Thesis Advisor: Christine N Metz, PhD

Thesis: Magnesium deficiency: Implications for cisplatin-induced kidney injury and colon cancer

2015-2018: Laura Warren
MD-PhD student of the Zucker School of Medicine
Thesis Advisor: Christine N Metz, PhD (Co-Advisor with PK Gregersen)

Thesis: The role of endometrial stem cells in endometriosis
Currently 4th year medical student at the Zucker School of Medicine

2019- Matthew Moss
PhD student of the Zucker School of Medicine
Thesis Advisor: Christine N Metz, PhD (Co-Advisor with PK Gregersen)

PhD Thesis Committee Member for:

1999-2001 Maowen Hu, MD (The Picower Institute for Medical Research, Graduate School of Molecular Medicine)
Thesis Advisor, Michael McDevitt, MD, PhD

Thesis: Analysis of chromosomal loss and characterization of candidate tumor suppressor genes on human chromosome 7 in leukemia and breast cancer.

2004-2007 Max Brenner, MD PhD,
Graduate Student of The Elmezzi School of Molecule Medicine
Mentor: Percio Gulko, MD

Thesis: Identification of gene regulating experimental autoimmune arthritis within the *Rattus norvegicus* chromosome 10.

2004-2008 Mauricio Rosas-Ballinas, MD,
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Kevin J. Tracey, MD
Thesis: Physiological and molecular basis of the cholinergic anti-inflammatory pathway
2011: Switzerland, research scientist

2006-2009 Yael (Tobi) Harris, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Kevin J. Tracey, MD
Thesis: Insulin resistance and the cholinergic anti-inflammatory pathway
2009: Endocrinologist attending, Northwell Health

2007-2010 Koga Kiyokazu, MD,
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Edmond Miller, PhD and Kaie Ojamaa, PhD
Thesis: The role of MIF in acute myocardial infarction and reperfusion injury
2010: Japan, Thoracic Surgeon/Researcher.

2009-2013 Sergio Valdez-Ferrer, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Kevin J Tracey, MD
Thesis: HMGB1 is a key modulator of sustained Inflammation in sepsis survivors.

2010-2012 Preetesh Jain, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Nicolas Chiorazzi, MD and Barbara Sherry, PhD
Thesis: The potential role of IL-17 in chronic lymphocytic leukemia (CLL)
2012: HemOnc Fellowship and MD Anderson, TX

2010-2014 Sehba Dsilva, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Thomas Rothstein, MD, PhD
Thesis: Alternative B cell signaling pathways
2014: Post-doc, Feinstein Institute; 2015: Resident, Psychiatry

2010-2016- Ji Young Lee, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Ed Miller, PhD
Thesis: Angiopoietin-2 and hemodynamics in sepsis-associated acute lung injury
2013: University of South Alabama – Critical Care Fellow (thesis was defended in 2016)

2013-present: Amit Porat, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Betty Diamond, MD
Thesis: HMGB1 and interferon immune activation in systemic lupus erythematosus patients – mechanism and possible therapeutic implications

2013-2016: Roman Sankowski, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Yousef Al-Abed, PhD

Thesis: Interrogation and therapeutic manipulation of HMGB1 in the Intracerebroventricularly injected streptozotocin Animal Model of neuroinflammation

2015-2018: Ibrahim Mughrabi, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Yousef Al-Abed, PhD
Thesis: Suppression of Inflammation by Chronic Pharmacological Vagus Nerve Stimulation: *In Vitro* and *In Vivo* Evaluation of Galantamine in a Model of Auto-inflammation

2015-2017: Alexandra Bolognese, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Ping Wang, MD
Thesis: The Role of iNKT cells in neonatal sepsis

2015-2018: Caroline Maloney, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: B Steinberg, PhD, M Symons, PhD and S Soffer, MD
Thesis: The Role of RIPK2 in Macrophage-promoted Invasion and Metastasis in Osteosarcoma

2016-2019: Gavin Imperato, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Kevin Tracey, MD and Sangeeta Chavan, PhD

2016-2019: Mohamed (Babar) Khan, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Marc Symons, PhD and Maria Ruggieri, PhD

2016-2019: Adam Kressel, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Kevin Tracey, MD and Sangeeta Chavan, PhD

2016-present: Erik Anderson, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: Meggan Mackay, MD and Bruce Volpe, MD

2017-present: Michelle Kallis, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisors: B Steinberg, PhD, M Symons, PhD and S Soffer, MD

2018-present: Yemil Atisha-Fregosa, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: B Diamond, MD

2018-present: Naomi-Liza (Mimi) Denning, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Ping Wang, MD

2018-present: Siavash Bolourani, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Ping Wang, MD

2019-present William Royster, MD
Graduate student of the Elmezzi Graduate School of Molecular Medicine
PhD thesis advisor: Ping Wang, MD

The Zucker School of Medicine PhD Thesis Committee Member for:

2012-2017: Joseph Carrion
Graduate student of Zucker School of Medicine (PhD candidate)-served as Chair
PhD thesis advisor: Stephen Dewey, PhD
Thesis: Pain, addiction and dopamine signaling

2013-2016: Spyros Mavropoulos
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: Kaie Ojamaa, PhD
Thesis: An investigation into the molecular basis of the cardioprotective effects of remote ischemic preconditioning

2013-2016: Joshua Bloom
PhD thesis advisor: Dr. Yousef Al-Abed, PhD
MD-PhD Student, Zucker School of Medicine
Thesis: Development of robust MIF bioassays for structural characterization and drug development

2015-2017 Jolanta Norelli
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: Daniel Grande, PhD
Thesis: Effects of Docycycline and tenogenically differentiated adipose-derived stem cells on the repair of Achilles tendon defects

2016 Renata Lerner (served as a committee member for the final defense only June 2016)
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: David Eidelberg, MD
Thesis: Effects of Levodopa on regional cerebral metabolism, blood flow, and blood-brain barrier permeability in the unilateral 6-hydroxydopamine rat model

2018- Ashley Barlev
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: B Diamond, MD
Thesis: Investigating the origin of autoreactive plasma cells in lupus mice and SLE patients

2018- Ryan Ashley
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: Lionel Blanc, PhD
Thesis: Regulation and Modulation of the Cell Cycle in Human Erythroid Progenitors

2019 Adriana Gata-Garcia (served as additional reviewer on final thesis defense)
MD-PhD Student, Zucker School of Medicine
PhD thesis advisor: Betty Diamond, MD
Thesis: Sex Chromosomes and Gonadal Hormones: Genesis and Rescue of ASD-like Phenotypes in Mouse Models

Mentor for OB/GYN-Maternal Fetal Medicine Fellows (as Director of OB-GYN Research):

2006: Nadav Schwartz, MD: MFM Fellow (NYU School of Medicine); 7/1/08-present U Penn
2007: Hima TamTam, MD: MFM Fellow (Northwell Health)
2008: Hima TamTam, MD: MFM Fellow (Northwell Health)

2009: Hima TamTam, MD and Neeraj Desai, MD: MFM Fellows (Northwell Health)
2010: Neeraj Desai, MD: MFM Fellow (Northwell Health); Amanda Roman, MD: MFM Fellow (Northwell Health)
2011: Neeraj Desai, MD: MFM Fellow; Amanda Roman, MD: MFM Fellow, and Stewart Boulis, MD MFM Fellow (Northwell Health and Zucker School of Medicine)
2012: Neeraj Desai, MD: MFM Fellow; Amanda Roman, MD: MFM Fellow; Stewart Boulis, MD MFM Fellow; and Kemoy Harris, MD MFM Fellow (Northwell Health and Zucker School of Medicine)
2013: Amanda Roman, MD, MFM Fellow, Stewart Boulis, MD MFM Fellow; and Kemoy Harris, MD MFM Fellow (Northwell Health and Zucker School of Medicine); and Yaakov Rosner, MD, MFM Fellow, NYU Medical Center
2014: Stewart Boulis, MD, MFM Fellow; Kemoy Harris, MD, MFM Fellow; Elizabeth Greeley, MD, MFM Fellow; Yaakov Rosner, MD, MFM Fellow, NYU Medical Center
2015: Kemoy Harris, MD, MFM Fellow; Allison Bauman, DO, Peds Fellow; Vinisha Singhi, MD, Neonatal Fellow; Elizabeth Greeley, MD, MFM Fellow; Yaakov Rosner, MD, MFM Fellow (Northwell Health and Zucker School of Medicine)
2016: Elizabeth Greeley, MD, MFM Fellow; Frances Hsieh, MD, MFM Fellow; Shelly Soni, MD, MFM Fellow; Allison Bauman, DO, Peds (Northwell Health and Zucker School of Medicine)
2017: Frances Hsieh, MD, MFM Fellow; Shelly Soni, MD, MFM Fellow (Northwell Health and Zucker School of Medicine)
2018: Shelly Soni, MD, MFM Fellow; Sarah Pachtman, MD, MFM Fellow
2019: Matthew Blitz, MD, MFM Fellow; Ruchira Sharma, MD, MFM Fellow

Mentor for OB-GYN-Uro/Gyn Fellows
2011-13: Dara Shalom, MD (Northwell Health and Zucker School of Medicine)
2014-15: Nirmala Pillalamarri (Northwell Health and Zucker School of Medicine)
2015-16: Marjorie Pilkinton, MD (Northwell Health and Zucker School of Medicine)

Mentor for Asthma, Allergy, Inflammation Fellows
2011-2014 Jennifer Diaz, MD **(**T32 Fellow)
2014-2015 Laura Helfner, MD (Asthma, Allergy, Immunology Fellow)

Mentor for Young Scientists: Leadership/mentoring
1998-2000 Riichiro Abe, MD, now Clinician-Scientist, Hokkaido University School of Medicine
2000-2002 Alexei Petrenko, PhD, now Associate Professor, SUNY Stony Brook, NY
2002-2005 Rubina Saeed, PhD, Returned to Pakistan to care for ailing mother
2003-2004 Santosh Varma, PhD, Deceased
2006-2011 Oonagh Dowling, PhD, now Sr. Analyst, NSLIJHS
2007-present Prodyot Chatterjee, PhD, Sr. Research Scientist

Mentor for Summer Interns
The Picower Institute for Medical Research (high school students)
Mentor for summer students 1996-2001
1996: David D'Agate
1997: Karen Kambas
1998: Jennifer Robeson
1999: Cynthia Gordon and Jennifer Obiapi
2000: Jennifer Obiapi
2001: Jennifer Obiapi
North Shore-LIJ Research Institute/The Feinstein Institute for Medical Research 2002-present
High school students, unless indicated
2002: Lonnie Kussin
2003: Katherine Gregersen
2004: Allison Auriemo
2005: Jessica Fleischer
2006: Kathleen Way

2007: Kathleen Way, Alex Kamath, Stefanie Hong (Adelphi Finalist)
2008: Alex Kamath (semifinalist for Intel Award; semi-finalist/finalist, LISEF program)
2009: Jennifer Kozhin (DO student), Beth Anne Bartscherer (high school student)
2010: Daniel Markowitz (NYU student); Sarah Han (U or R student, NIDDK StepUp Intern), Bethanne Bartscherer (high school student-semifinalist for Intel Award)
2011: Daniel Markowitz (NYU student), Jordan Federer (Swarthmore student), Olivia Novick (high school student)
2012: Olivia Novick (high school student-2nd place ISEF Award), Rachel Mintz, Nisha Nanda, Jay Canarick (Duke U) Joshua Bloom (Med school student-SOM)
2013: Christina Gambino (Sacred Heart University); Rachel Mintz (high school student, 2014 Ezra Levy High School Science Award from the American Association for Clinical Chemistry), Nisha Nanda (high school student), Margot Metz (high school student), Sydney Blanche (high school student, MWCABC – Baker Scholarship recipient), Laura Warren (MD-PhD student, Zucker School of Medicine);
2014: Adriana Gata-Garcia (MD-PhD student, Zucker School of Medicine); Alexander O'Connell (MD student, Zucker School of Medicine); Rachel Mintz (high school student; 2015 Intel Award semifinalist; 2015 LISEF 2nd place); Sydney Blanche (high school student, LISEF semifinalist); Justin Esposito (high school student); Marlena McGill (graduate of McGill University)
2015: Annabel Lee (AWSM-Girl Scout Intern, high school student), Sabreen Bhuiya (high school student; 2016 Intel Award semifinalist), Seunghyun Woo (Garden City High School), Kelly Pabon (SUNY Stony Brook), Sarah Ashour (SUNY College of Old Westbury)
2016: Swati Mandakumar (Herricks High School); Seunghyun Woo (Garden City High School)
2017: Swati Mandakumar (Herricks High School; Regeneron Scholar-Semifinalist); Emma Gazzara (2nd year medical student, Zucker SOM); Logan Samuel (high school); Julia Su (MD-PhD student)
In-house faculty mentor for Northwell Health and Zucker School of Medicine students doing research: Elise Rooney; Danielle Cohen; Kellie Patterson; and Lei Alexander Qin
2018: Amanda Miao (high school), Logan Samuel (high school), and Melissa Robinson (Zucker SOM, MS1/2)
2019: Radhika Viswanathan (MS1 SUNY downstate); Michael Angela (Angela) Omongos (MS1 SUNY Downstate); Shrey Koya (University of Albany); Gina Faiella (Adelphi U); Matthew Saleem (4x4 Hofstra U)

Ad Hoc Reviewer
American J of Obstetrics and Gynecology
Arthritis & Rheumatism
The American Journal of Pathology
Blood
Biochimica et Biophysica Acta
Molecular Medicine
Nutrition
Proceedings of the National Academy of Sciences (PNAS)

Ad Hoc Reviewer
The Journal of Clinical Investigation
The Journal of Experimental Medicine
The British Journal of Nutrition
FASEB Journal Br J Nutr
Frontiers in Immunology
Cell Discovery
The Journal of Immunology
Scientific Reports

Patents

1. Hemozoin vaccine adjuvant (Inventors: **Metz** and Bucala)
2. CD74 MIF receptor (Inventors: Bucala, **Metz**, Lang)
3. CTLs in cancer – MIF target (Inventors: Abe, Bucala, and **Metz**)
   Note: Royalty payments have been received for MIF patents
4. Fibrocyte differentiation pathways and migration to wound sites (Inventors: Abe, Bucala, Donnelly and **Metz**)
5. Leukocyte trafficking regulated by vagus nerve stimulation (Inventors: Tracey, Shaw, **Metz**)
6. Method of inhibiting binding or activity of MIF administrating a MIF antagonist (Co-inventor) Patent # 9,221,903 12/29/15
7. Provisional patent: Methods for detecting and treating endometriosis (filed March 2018); PCT application filed March 6, 2019, Serial No. US2019/020868

Leadership Training

2016-2017:	MAP-IT (mentoring and professionalism in training) 10 month course designed to increase knowledge and skills to mentor early-career professionals
2017-	Academy of Medical Educators; program to develop outstanding medical educators
2018-2019	MAP-IT, Co-Leader, providing mentoring training to high potentials through a 10 month course designed to increase knowledge and skills to mentor early-career professionals
2019	Respectful Workplace Training (Northwell Health)

Other activities within the Feinstein Institute for Medical Research at Northwell Health

2000-2007	Institutional Animal Care and Use Committee (IACUC) Member
2001-2007	IACUC, Educational Program Director
2002-2010	Associate Professor, North Shore-LIJ Graduate School of Molecular Medicine (renamed in 2008: Elmezzi Graduate School of Molecular Medicine)
2010-present	Professor, Elmezzi Graduate School of Molecular Medicine
2002-present	Elmezzi Graduate School Admissions Committee Member
2002-present	The Feinstein/Northwell Health Tissue Donation Program (TDP), Scientific Director http://www.feinsteininstitute.org/Feinstein/Tissue+Donation+Program
2002-present	Committee for Participant Protection (TDP)-COPP, Chair
2004-present	Research Director, Clinical OB/Gyn Research for MFM Fellowship Program
2006-present	Institutional Review Board (IRB) Committee Member, North Shore-LIJ Health System (renamed Northwell Health in 2016)
2010-2016	President, AWSM (Advancing Women in Science and Medicine)
2013-present	Katz Institute for Women's Health Steering Committee, Committee Member
2014-2016	Member, Feinstein Faculty Communications Committee
2014-2016	Feinstein Diversity Council, Faculty Liaison and Member
2015-present	Director, Faculty Affairs, Faculty Liaison
2015-present	Member, Institutional Biological Safety Committee (IBC) Northwell Health-Feinstein
2015-present	Member, Clinical Institutional Biological Safety Committee, Northwell Health
2016-present	Associate Dean, Elmezzi Graduate School of Molecular Medicine
2015-2017:	Policies and Procedures Committee (Feinstein Institute of Northwell Health)
2016-2018:	Judge, Medical Marvels, March 2016, 2017, 2018
2016:	Diversity and Inclusion Program: Presenter: *Introduction and historical perspective of the importance of Diversity at the lab bench, in the workplace, & in clinical trials* and panelist
2017-present:	Northwell Health Tissue Donation Program Executive Steering Committee

2017: Northwell Health Tissue Donation Program System-wide educational presentations at North Shore University Hospital OR staff, Ambulatory Surgery, LIJMC, etc
2017-present: AWSM, Advancing Women in Science and Medicine, organizing luncheon & fund-raising
2017-present: Chair, Research in Excellence Committee, Northwell Health
2017: Feinstein/Northwell Health, Emergency Operations Team (Feinstein), Member
2019 2019 Innovation Challenge information session with R Mulry and B Morrissey (presenting my experience with the Innovation Challenge in 2019)

Course Development at the Feinstein Institute and the Zucker School of Medicine

2001-2007 Institutional Animal Care and Use Committee (IACUC) Training/Education Courses Developed and taught 6 mandatory sessions for training students, staff, and faculty for humane animal experimentation
2009-2011 Northwell Health and Zucker School of Medicine Curriculum development committee leader (Pharmacology, Vertical)
2009-2011 Northwell Health and Zucker School of Medicine Curriculum development committee member (Biological Imperatives A, Horizontal)
2010-2011 Northwell Health and Zucker School of Medicine Curriculum development committee member (Interacting with the environment)

Teaching: The Zucker School of Medicine (SOM)

2011-present: Instructor: Cell Adhesion, Cell Junctions, Cell Migration (SOM) – Biological Imperatives -Once a year lecture
2011-present: Instructor: Cytoskeleton, Microtubules, Intermediate and Thin Filaments (SOM) – Biological Imperatives Once a year lecture
2012: Instructor: Inflammation (SOM)
2012: Instructor: Anti-inflammatory agents (NSAIDs and COX inhibitors) (SOM)
2012-present Instructor: Model Organisms Course: *C elegans* section (Zucker School of Medicine MD-PhD and PhD students) 4-2hr sessions during the summer months each year
2014-present Course Director/Facilitator, Weekly Graduate Journal Club Course (Elmezzi/Zucker School of Medicine)
2017: Facilitator for the 'Big Picture of Cancer' (SOM); 2 sessions (AM and PM) Oct 31
2018: Cell Junctions, Cell Adhesion, and the Extracellular Matrix for Molecular and BI, first year medical students; Facilitator for the 'Big Picture of Cancer' (SOM); 2 sessions (AM and PM) – Oct 2018
2019: Cell Junctions, Cell Adhesion, and the Extracellular Matrix for Molecular and BI, first year medical students; Facilitator for the 'Big Picture of Cancer' (SOM); 1 session (AM) – Oct 28, 2019

Teaching: Elmezzi Graduate School of Molecular Medicine

2005-2006 Graduate Advanced Immunology Course: Co-Director/Instructor (Innate Immunity)
2007-2008 Course Instructor for 12 wk Advanced Methods Course for Elmezzi Graduate
2008: Instructor: Cell Junctions, Cell Adhesion, and the Extracellular Matrix for Molecular and Cell Biology Course for Elmezzi Graduate Students
2009-present Course Director/Facilitator, Elmezzi/Zucker School of Medicine Graduate Journal Club Course (2 semesters each year)

2010: Co-Director and Instructor (Innate Immunity) Graduate Advanced Immunology Course: Faculty
2011: Instructor, Molecular and Cell Biology Course
2012: Co-Director and Instructor for Advanced Immunology Course
2014: Instructor: Cell Junctions, Cell Adhesion, and the Extracellular Matrix for Molecular and Cell Biology Course for Elmezzi Graduate Students
2015-16: Co-Director and Instructor for Advanced Immunology Course
2017: Instructor/facilitator for Elmezzi Ethics Course: Mentor-Mentee relationships
2017: Instructor: Cell Junctions, Cell Adhesion, and the Extracellular Matrix for Molecular and Cell Biology Course for Elmezzi Graduate Students
2018-19: Co-Director and Instructor for Advanced Immunology Course

Other Teaching:

2015: Instructor and Facilitator, *Ethics in Collaborations and Clinical Property/Data* session for the one day Ethics and Responsible Conduct of Research training session for postdocs (Dec 14, 2015)
2016: Instructor and Facilitator, *Ethics in Collaborations and Clinical Property/Data* session for the one day Ethics and Responsible Conduct of Research training session for postdocs (Dec 1, 2016).
2017: Instructor and Facililtator, Ethics in Collaborative Research and Ownership of Data and Clinical Property training session for postdocs, trainees, etc (Dec 6, 2017)
2018: Instructor and Facilitator, Ethics in Collaborative Research and Ownership of Data and Clinical Property training session for postdocs, trainees, etc (Dec 6, 2018)

Activities Outside The Feinstein Institute for Medical Research & Community Outreach

2001-present Judge, Long Island Science and Engineering Fair (annual high school competition)
2008 Ad hoc Grant Reviewer for NIH-NIAAA (R21s)
2009 Grant Reviewer, Dutch Kidney Foundation/Nierstichting Nederland Kolff Career Stimulation Program
2010 Grant Reviewer, European Research Council
2010-present MD-PhD Candidate Interviewer (Zucker School of Medicine)
2011 Grant Reviewer, US-Israel Binational Award
2012-present Site Liaison for the NSLIJHS Women's Community Health Collaborative (Directors: S Rosen and L Kang) Go Red Campaign – Feinstein site leader 2013, 2014
2012-2014 Staten Island Economic Development (SIEDEC) - *Careers in Biomedical Research What is Biomedical Research?* 2012, 2013, 2014
2013: Co-Program Director, AWSM-Katz Institute for Women's Health (KIWH) Centricity Series: Bone Health in Women
2013 Co-Organizer, Program for the 10th and 11th grade Girl Scouts of Nassau County
AWSM Feinstein host the Girl Scouts to learn about careers in Biomedical Research
Presenter, *What is Biomedical Research?*
2013-present Committee Member, Steering Committee for the Katz Institute for Women's Health (Director: S Rosen, MD)
2013-present Advisory Board Member, Girl Scouts of Nassau County: Science, Technology, Engineering and Math (STEM)
2013: Presentation given to the Human Subjects Advisory Board – Community Outreach
8-28-2013 *A Research Study to Learn About Endometriosis…*
Requires the Participation of Many Willing Research Subjects
2013: Presentation given to BOSES Nurses Organization (Garden City) – Child Health

12-4-13 *What's Normal and What's Not? The Biological Basis for Symptoms Associated With Normal/Abnormal Menstruation-AND- Endometriosis Research*

2014: Co-Organizer, Program for the 10th and 11th grade Girl Scouts of Nassau County – *AWSM Feinstein hosts the Girl Scouts to learn about careers in Biomedical Research* Presenter, *What is Biomedical Research?*

2014: KIWH Women's Health Awards Committee, Chair

2014: 10-23-14 *Community Partnership in Health Care and Research*

Presenter:*The Importance of Diversity in Research* Southside Hospital, Bay Shore, NY

2015: Co-Organizer, Program for the 10th and 11th grade Girl Scouts of Nassau County – *AWSM-Feinstein hosts the Girl Scouts and their moms/guardians to learn about careers in Biomedical Research* (Feb 2015)

Presenter, *What is Biomedical Research at the Feinstein?*

2015: Presenter and Panelist: *What is Biomedical Research and Why Is Diversity Important for Biomedical Research?* Mentoring in Medicine Program for High School and College Students (to promote diversity opportunities).Adelphi University 3-21-15

2015: Presenter: *The Importance of Diversity in Biomedical Research* The Girl Scouts Career Exploration Camp at the North Shore-LIJ Health System, Center for Workforce Readiness, July 17, 2015

2015: Grant Review Committee for the Katz Institute for Women's Health

2015: Northwell Health Dept of Medicine Resident's Research Presentation (9-29-2015)

2015: Co-Organizer, Program for the 10th and 11th grade Girl Scouts of Nassau County – *AWSM Feinstein hosts the Girl Scouts-careers in Biomedical Research*

Presenter, *What is Biomedical Research?* Moderator for parent panel (Nov 2015)

2015-2018: Northwell Health Department of Surgery Competition Day, Judge (Poster presentations, May 2015, 2016, 2017, 2018)

2015-present Member, Women's Health/Community Education Collaborative Group (Katz Institute for Women's Health)

2015: Co-Program Director, AWSM-KIWH Centricity Series: Behavioral Health in Women

2016: Organizer, AWSM lunch and learn for the Meadowbrook Women's Initiative May 2016

2016-present Member, Women's Leadership Advisory Board of Northwell Health (Directors: K Gallo, S Rosen, and J Mieres)

2016: Presented for the Cohen's Children's Medical Center-Women in Medicine. Research at the Feinstein Institute: Opportunities to collaborate. Nov 1, 2016

2016: Judge, Northwell Health Academic Day Competition Nov 3, 2016

2016: Keynote Speaker at the Lindenhurst Sr High School's 4th Annual Science Research Symposium (June 7, 2016)

2016: Hosted the American Heart Association (AHA) Regional Board Meeting at the Feinstein Institute (June 8, 2016)

2016: Panelist and speaker, Feinstein Institute Diversity Event

2016: Faculty Facilitator, Zucker School of Medicine Scholarship Day Nov 2, 2016

2016: Coordinated *Beyond the Diagnosis, Part 2:* Art Exhibit and Rare Diseases Program (a Feinstein Institute- Northwell Health and Zucker School of Medicine program directed by Lisa Martin, Osler Society featuring artwork from the Rare Diseases United Foundation) (Nov 17, 2016, a component of the Elmezzi Genetics course and Nov 29, 2017, a component of the Elmezzi Molecular and Cell Biology course)

2017-2018: Faculty Mentor: Advisory Committee for Student Research, Zucker School of Med

2017: Representing Katz Institute for Women's Health Northwell Health Walk Kickoff event

2017: Speaker, National Youth Leadership Forum: Medicine (What is Biomedical Research), June 22, 2017 St. John's University, Queens

2017: June 2017: Contributed: KIWH Newsletter and Blog: *Understanding Endometriosis*

2017 September 7 2017: Presented: *The Feinstein Institute of Northwell Health: Where Scientists and Clinicians Collaborate to Prevent Disease and Cure Patients* at the quarterly KIWH meeting.

2017: October 18, 2017: AWSM hosts the Girl Scouts of Nassau County and their parents for a career night. Organizer and Presenter: *What is biomedical research at the Feinstein/Northwell?*
Panelist member: parents' discussion on science opportunities and challenges

2017: November 1, 2017: OB-GYN Grand Rounds: *The Genetics of Endometriosis: Chasing Diagnostic Endophenotypes*(C Metz & P Gregersen)

2017: November 9, 2017: Panelist for *Bombshell: The Hedy Lamarr Story* – a science on screen event at the Gold Coast International Film Festival (putting women in science in the spotlight)

2018: March 15, 2018: Co-Program Director, AWSM-KIWH Centricity Series: Autoimmunity and Inflammation in Women

2018: April 20th, 2018: STEM Goes Red Mentoring program for high school girls interested in pursuing STEM careers. Sponsored by the American Heart Association.

2018: Research Investigator Science Expo (RISE) Judge – RISE is Northwell Health (a competition that incorporates objectives from Northwell Health's Office of Diversity, Inclusion and Health Literacy)

2018: September 25, 2018: Brentwood Library Presentation (community outreach): *Endometriosis: Myths vs. Facts*

2018: October 10, 2018: AWSM hosts the Girl Scouts of Nassau County and their parents for a career night. Presenter: *What is biomedical research at the Feinstein/Northwell?*
Panelist member: parents' discussion on science opportunities and challenges

2019: October 16, 2019: AWSM hosts the Girl Scouts of Nassau County and their parents for a career night. Presenter: *What is biomedical research at the Feinstein/Northwell?*
Panelist leader: parents' discussion on science opportunities and challenges

2019: Guest Speaker at Adelphi University, Garden City NY; Let's Talk "Women's Health Research" with Feinstein Institutes Scientists.

Northwell Health and Zucker School of Medicine Service (in addition to teaching)

2011-present Zucker School of Medicine MD-PhD Admissions Committee
2016-present Zucker School of Medicine Member, Student Research Advisory Committee
2016-present Zucker School of Medicine Screener for the MD Admissions Committee
2016-present Zucker School of Medicine Appointments and Promotions Committee
2018-present Humanities in Medicine Advisory Board (HMAB) at the Zucker SOM, member

Support

Research Evaluation and Commercialization Hub (REACH) 03/1/19-02/28/20
Center for Biotechnology's NIH award entitled "Establishing a Long Island Bioscience Hub."
National Heart, Lung, and Blood Institute of the National Institutes of Health-Award Number U01HL127522
REACH: Developing a Non-Invasive Diagnostic for Endometriosis (feasibility award)
Sponsor ID 18150044
Role: PI

NIGMS 1R01GM128008-01 (PI: Pavlov) 04/01/18 - 03/31/23
Brainstem Cholinergic Circuitries in the Inflammatory Reflex during Sepsis
The objective of this grant is to study the role of the nervous system and specifically the vagus nerve originating in the brainstem in regulating inflammatory derangements and sepsis pathology.
Role: Co-Investigator

RFA-OD-16-004 (UG3) Environmental Influences on Child Health Outcomes (ECHO) Prenatal Autoimmune and Inflammatory Risk Factors for Autism Spectrum Disorders
Co-PIs: Drs. P Gregersen and B Diamond
Role: Co-Investigator

1R21AA025574-01 NIAAA 09/01/2016-8/31/18
The Role of CIRP in Low Dose Alcohol-Induced Neurosuppression
Co-PIs: Drs. P Wang and A Varghese
Role: Co-Investigator

The Oxenhorn Family Foundation Rochelson (PI) 2010-present
Support for Research Training of Maternal Fetal Medicine Fellows.
Role: PI, Director of OB-GYN Research Overlap: NONE

Completed Research Support (including no-cost extension)

Young Faculty Support Award Farzan (PI) 11/01/14-10/31/15
American College of Allergy Asthma and Immunology (ACAAI)
The Role of Glucocorticoid Receptor β in Steroid Insensitivity among Obese Atopic Asthmatics.
Purpose: To investigate the steroid insensitivity among obese asthmatics vs. lean asthmatics.
Role: Co-Investigator

Competitive Institutional Award (Feinstein) Metz (PI) 01/01/12-12/31/14
The Effect of Mg Status on Maternal and Fetal Inflammatory Responses.
Role: Investigator

Endometriosis Foundation of America Gregersen (PI) 2013-2015
Tissue Banking Program for the Study of Endometriosis.
This funding was used to establish methods of collecting menstrual effluent and both ectopic and eutopic endometrial tissues from human subjects (controls vs. patients with endometriosis).
Role: Co-Investigator

Medtronics Shalom (PI) 01/01/12-12/31/14
Evaluation of Urinary Nerve Growth Factor as an Objective Tool to Assess Therapeutic Outcome in Patients with Detrusor Overactivity Undergoing Treatment with Sacral Neuromodulation.
Role: Co-Investigator

ONYX081512 Powell and Metz (Co-PIs) 12/1/13-11/30/14
Pilot Studies of the Efficacy of ONYX0914 to Mitigate Sepsis and Sepsis Acute Kidney Injury (AKI).
In this study we will examine the effect of the inhibitor of the inducible proteasome (iprot) on organ injury in mouse models of sepsis.

R43 AR062401 Christian & Coleman (PIs) 05/09/12-10/31/13
NIH/NIAMS (no-cost extension)
Developing Small MIF Inhibitors for Rheumatoid Arthritis

We plan to screen numerous small molecule inhibitors of macrophage migration inhibitory factor (MIF) for use in pre-clinical models of arthritis
Role: Co-Investigator

R01 GM070727-01 Metz (PI) 05/1/06-4/30/12
NIH/NIGMS (no-cost extension)
Cholinergic Stimulation of Endothelial Cells during Sepsis.
This project focuses on the effects of cholinergic stimulation on endothelial cell inflammatory responses *in vitro* and *in vivo*. The goals of the project are to identify the cellular and molecular mechanisms by which cholinergic agonists and vagus nerve stimulation modulate inflammatory responses of the endothelium and to determine the effect of cholinergic stimulation on endothelial cell activation and leukocyte recruitment during sepsis/infection.