

BIOGRAPHICAL SKETCH

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NAME Paul M. Guyre		POSITION TITLE	
eRA COMMONS USER NAME PMGUYRE		Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Montclair State College	B.A.	1972	Biology
University of New Hampshire, Durham, NH	M.S.	1976	Microbial Genetics
University of New Hampshire, Durham, NH	Ph.D.	1979	Immunogenetics
Dartmouth Medical School, Hanover, NH	Post-doc.	1979-1981	Physiology

A. Positions and Honors

1981-1987 Assistant Professor of Physiology, Dartmouth Medical School, Hanover, NH
1981-1992 Director, Flow Cytometry Laboratory, Dartmouth Medical School, Hanover, NH
1987-1992 Associate Professor of Physiology, Dartmouth Medical School, Hanover, NH
1992-present Professor of Physiology, Dartmouth Medical School, Hanover, NH
1992-present Co-Director, Herbert C. Englert Cell Analysis Laboratory, Norris Cotton Cancer Center, Hanover, NH

B. Selected peer-reviewed publications (112 total)

Fanger NA, Liu C, Guyre PM, Wardwell K, O'Neil J, Guo TL, Christian TP, Mudzinski SP, Gosselin EJ (1997). Activation of human T cells by major histocompatibility complex Class II expressing neutrophils: Proliferation in the presence of superantigen, but not tetanus toxoid. *Blood* 89 (11): 4128-4135.

Fanger NA, Voigtlaender D, Liu C, Swink S, Wardwell K, Fisher J, Graziano RF, Pfefferkorn LC, Guyre PM (1997). Characterization of expression, cytokine regulation, and effector function of the high affinity IgG receptor Fc gamma RI (CD64) expressed on human blood dendritic cells. *J Immunol* 158 (7): 3090-3098.

Givan AL, White HD, Stern JE, Colby E, Gosselin EJ, Guyre PM, Wira CR (1997). Flow cytometric analysis of leukocytes in the human female reproductive tract: Comparison of fallopian tube, uterus, cervix, and vagina. *Am J Reprod Immunol* 38 (5): 350-359.

Keler T, Graziano RF, Mandal A, Wallace PK, Fisher J, Guyre PM, Fanger MW, Deo YM (1997). Bispecific antibody-dependent cellular cytotoxicity of HER2/neu - overexpressing tumor cells by Fc gamma receptor type I-expressing effector cells. *Cancer Res* 57 (18): 4008-4014.

Wallace PK, Keler T, Coleman K, Fisher J, Vitale L, Graziano RF, Guyre PM, Fanger MW (1997). Humanized mAb H22 binds the human high affinity Fc receptor for IgG (Fc gamma RI), blocks phagocytosis, and modulates receptor expression. *J Leukoc Biol* 62 (4): 469-479.

Yeaman GR, Guyre PM, Fanger MW, Collins JE, White HD, Rathbun W, Orndorff KA, Gonzalez J, Stern JE, Wira CR (1997). Unique CD8+ T cell-rich lymphoid aggregates in human uterine endometrium. *J Leukoc Biol* 61 (4): 427-435.

Yeaman GR, Collins JE, Currie JK, Guyre PM, Wira CR, Fanger MW (1998). IFN-gamma is produced by polymorphonuclear neutrophils in human uterine endometrium and by cultured peripheral blood polymorphonuclear neutrophils. *J Immunol* 160 (10): 5145-5153.

Fahey JV, Prabhala RH, Guyre PM, Wira CR (1999). Antigen-presenting cells in the human female reproductive tract: Analysis of antigen presentation in pre- and post-menopausal women. *Am J Reprod Immunol* 42 (1): 49-57.

Keler T, Guyre PM, Vitale LA, Sundarapandiyam K, van De Winkel JG, Deo YM, Graziano RF (2000). Targeting weak antigens to CD64 elicits potent humoral responses in human CD64 transgenic mice. *J Immunol* 165 (12): 6738-6742.

- Sulahian TH, Hogger P, Wahner AE, Wardwell K, Goulding NJ, Sorg C, Droste A, Stehling M, Wallace PK, Morganelli PM, Guyre PM (2000). Human monocytes express CD163, which is upregulated by IL-10 and identical to p155. *Cytokine* 12 (9): 1312-1321.
- Lewis LD, Cole BF, Wallace PK, Fisher JL, Waugh M, Guyre PM, Fanger MW, Curnow RT, Kaufman PA, Ernstoff MS (2001). Pharmacokinetic-pharmacodynamic relationships of the bispecific antibody MDX-H210 when administered in combination with interferon gamma: A multiple-dose phase-I study in patients with advanced cancer which overexpresses HER-2/neu. *J Immunol Methods* 248 (1-2): 149-165.
- Sulahian TH, Hintz KA, Wardwell K, Guyre PM (2001). Development of an ELISA to measure soluble CD163 in biological fluids. *J Immunol Methods* 252 (1-2): 25-31.
- Wallace PK, Tsang KY, Goldstein J, Correale P, Jarry TM, Schlom J, Guyre PM, Ernstoff MS, Fanger MW (2001). Exogenous antigen targeted to Fc γ R1 on myeloid cells is presented in association with MHC class I. *J Immunol Methods* 248 (1-2): 183-194.
- Hintz KA, Rassias AJ, Wardwell K, Moss ML, Morganelli PM, Pioli PA, Givan AL, Wallace PK, Yeager MP, Guyre PM (2002). Endotoxin induces rapid metalloproteinase-mediated shedding followed by up-regulation of the monocyte hemoglobin scavenger receptor CD163. *J Leukoc Biol* 72 (4): 711-717.
- Fillinger MP, Rassias AJ, Guyre PM, Sanders JH, Beach M, Pahl J, Watson RB, Whalen PK, Yeo KT, Yeager MP (2002). Glucocorticoid effects on the inflammatory and clinical responses to cardiac surgery. *J Cardiothorac Vasc Anesth* 16 (2): 163-169.
- Vailes LD, sun AW, Ichikawa K, Wu Z, Sulahian TH, Chapman MD, Guyre PM (2002). High-level expression of immunoreactive recombinant cat allergen (Fed d 1): Targeting to antigen-presenting cells. *J Allergy Clin Immunol* 110 (5): 757-762.
- Goldstein JI, Goldstein KA, Wardwell K, Fahrner SL, Goonan KE, Cheney MD, Yeager MP, Guyre PM (2003). Increase in plasma and surface CD163 levels in patients undergoing coronary artery bypass graft surgery. *Atherosclerosis* 170 (2):325-32.
- Sulahian TH, Pioli PA, Wardwell K, Guyre PM. (2004). Cross-linking of Fc γ R triggers shedding of the hemoglobin-haptoglobin scavenger receptor CD163. *J Leukoc Biol*. 76:271-277.
- Pioli PA, Goonan KE, Wardwell K, Guyre PM. (2004). TGF- β regulation of human macrophage scavenger receptor CD163 is Smad3-dependent. *J Leukoc Biol* 76:500-508.
- Pioli PA, Amiel E, Schaefer TM, Connolly JE, Wira CR, Guyre PM.(2004) Differential expression of Toll-like receptors 2 and 4 in tissues of the human female reproductive tract. *Infect Immun*. 72:5799-806.
- Rassias AJ, Guyre PM, Holzberger P, Givan AL, Fahrner SL, Yeager MP. Decreased Physiologic Variability as a Generalized Response to Human Endotoxemia. *Crit Care Med*, 33(3):512-19,2005.
- Yeager MP, Rassias AJ, Fillinger MP, Discipio AW, Gloor KE, Gregory JA, Guyre PM. (2005). Cortisol antiinflammatory effects are maximal at postoperative plasma concentrations. *Crit Care Med*. 33:1507-12.
- Fahey JV, Wallace PK, Johnson K, Guyre PM, Wira CR. (2006). Antigen presentation by human uterine epithelial cells to autologous T cells. *Am J Reprod Immunol*. 55:1-11.
- Pioli PA, Weaver LK, Schaefer TM, Wright JA, Wira CR, Guyre PM. (2006). Lipopolysaccharide-induced IL-1 beta production by human uterine macrophages up-regulates uterine epithelial cell expression of human beta-defensin 2. *J Immunol*. 176:6647-6655.
- Weaver LK, Hintz-Goldstein KA, Pioli PA, Wardwell K, Qureshi N, Vogel SN, Guyre PM. (2006). Pivotal Advance: Activation of cell surface Toll-like receptors causes shedding of the hemoglobin scavenger receptor CD163. *J Leukocyte Biol*. 80:26-35.
- Weaver LK, Pioli PA, Wardwell K, Vogel SN, Guyre PM. (2007). Up-regulation of human monocyte CD163 upon activation of cell-surface Toll-like receptors. *J Leukoc Biol*. 81:663-671.
- Pioli PA, Jensen AL, Weaver LK, Amiel E, Shen Z, Shen L, Wira CR, Guyre PM. (2007). Estradiol attenuates lipopolysaccharide-induced CXC chemokine ligand 8 production by human peripheral blood monocytes. *J Immunol*. 179:6284-90.
- Huarte E, Cubillos-Ruiz JR, Nesbeth YC, Scarlett UK, Martinez DG, Engle XA, Rigby WF, Pioli PA, Guyre PM, and Conejo-Garcia JR. (2008). PILAR is a novel modulator of human T cell expansion. *Blood*. 112:1259-68.
- Yeager MP, Pioli PA, Wardwell K, Beach ML, Martel P, Rassias AJ, Guyre PM. (2008). In vivo exposure to high or low cortisol has bi-phasic effects on inflammatory response pathways of human monocytes. *Anesth Analg*. 107:1726-34.

C. Research Support

Ongoing Research Support

1 RO1AI051547 Guyre (PI) 04/01/03-03/31/09
NIH/NIAID (currently in 1-year no-cost extension)

Critical Glucocorticoid/Cytokine Mechanisms in Endotoxemia

Objective: 1) To test the hypothesis that GCs exert a biphasic influence on cytokine production and Mo/MØ phenotype during an acute inflammatory response. 2) To elucidate the molecular mechanisms of permissive and suppressive effects of GCs on the macrophage activation program.

Role: PI

1 P01 AI 51877 Wira (PI) 09/30/02 – 07/31/09
NIH/NIAID (no-cost extension)

Sex hormone regulation of innate immunity in women and men.

The overall objective of this program project is to define the role of sex hormones (androgens, estrogens, and progestins) in regulating the innate immune system, as it functions systemically and at mucosal surfaces.

Role: Co-Investigator

P20 RR 16437 Green (PI) 07/01/06 – 06/30/11
NIH/NCRR

Immune mechanisms controlling inflammation and cancer

This is a COBRE (Centers of Biomedical Research Excellence) award, totaling \$11.6M over 5 years, to establish at Dartmouth an Immunology /Inflammation Center. It consists of 5 individual research projects, 3 cores, and developmental monies to help establish new independent PI's at Dartmouth and the Univ. of New Hampshire.

Role: Co-Investigator

CA 23108 Israel (PI) 12/01/08 - 11/30/13
NIH/NCI

Cancer Center Support Grant

Objective: The Norris Cotton Cancer Center is a multidisciplinary focus for cancer related research, education, and patient care.

Role: Co-Investigator