

Gwendolyn Fonseca Elphick, PhD, MS, MA

Research Associate/Post-Doctoral Fellow

(Mentored by A Ayala)

Division of Surgical Research

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Primary Research Field

Immunology, Inflammation, neuro-immunology

Education

Undergraduate : Tufts University, Anthropology, B.A., 1993

Graduate : SUNY Oneonta, History, M.A., 1997
University of Colorado, Boulder, M.S., 2000
University of Colorado, Boulder, Ph.D., 2003

Postgraduate Training

Post doctoral position	Brown University, virology, 2003-2005 (W Attwood)
Post doctoral fellowship	Brown University Medical School-Div. Surg. Res., NRSA-T32 training fellow in inflammation, 2006-2008 (M Kim, JS Reichner, A Ayala, JE Albina)
Research Associate	Brown University Medical School-Div. Surg. Res., Shock, Trauma & Sepsis, 2008-present (A Ayala)

Academic Appointments

State University of New York, adjunct professor, 2003-present

Society Memberships

- Psychoneuroimmunology Research Society, 1999-present
- Society of Leukocyte Biology, 2007-present

Awards, Fellowships, Grants

Awards:

- National Research Service Awardee (NRSA) in 2006-2008.

- Student/Postdoctoral Fellow travel award to the 41st Society of Leukocyte Biology (SLB) meeting, held in Denver, CO, November, 2008.

Publications List

- Elphick, G.F.**, Hyun, Y-M., Hollenbaugh, J.A., Biffl, W.L., Chung, H-L., Rezaie, A.R., McGrath, J.L., Ayala, A., Topham, D.J., Reichner, J.S., Kim, M. Recombinant Human Activated Protein C Regulates Integrin-Mediated Neutrophil Migration. *Blood* 113:4078-4085, 2009.
- Smith, D., Busineau, P., Miller, A., Newell, S., **Elphick, G.F.** Effect of heat stress on platelet function and coagulatory factors. In preparation. 2008.
- Nickerson M., **Elphick G. F.**, Campisi J., Greenwood B. N., Fleshner M. Physical Activity Alters the Brain Hsp72 and IL-1beta Responses to Peripheral E.coli Challenge. *Amer. J. Physiol.: Reg. Integrat. Comp. Physiol.* 289: R1665-74, 2006.
- Elphick, G.F.**, Querbes, W., Jordan, J.A., Gee, G.V., Eash, S., Manley, K., Dugan, A., Stanifer, M., Bhatnagar, A., Kroeze, W.K., Roth, B.L., Atwood, W.J. The human polyomavirus, JCV, uses serotonin receptors to infect cells. *Science*. 306:1380-3, 2004.
- Elphick, G. F.**, Greenwood, B. N., Campisi, J., Fleshner, M. Increased serum IgM in voluntarily exercising rats: a potential role for B-1 cells. *J. Applied Physiol.* 94: 660-667, 2003.
- Elphick, G. F.**, Weisler-Frank, J., Greenwood, B. N., Campisi, J., Fleshner, M. B-1 cell (CD5/CD11b) numbers and nIgM levels are elevated in physically active versus sedentary rats. *J. Applied Physiol.* 95:199-206, 2003.

Abstracts

- Elphick, G.F.**, Carriera, A, Huang, X., Ayala, A. *Sepsis induced potentiation of peritoneal macrophage migration is mitigated by PD-1 gene deficiency.* Society of Leukocyte Biology-Abstracts, 2008.
- Elphick, G.F.**, Chen, L., Morin, N.A., LeBlanc, B.W., Lavigne, L.M., Rezaie, A.R., Biffl, W.L., Reichner, J.S., Minsoo, K. *Recombinant activated protein C regulates integrin-mediated neutrophil migration.* Experimental Biology-Abstracts, 2008.
- Smith, D., Busineau, P., Miller, A., Newell, S., **Elphick, G.F.** *Platelet Function and Coagulation During and Following Heat Stress.* Experimental Biology-Abstracts, 2007.
- Owolabi, S.A., Morin, N.A., **Elphick, G. F.**, Shaw, S.K., Kim, M., Saab, C.Y. Neutrophils are excitatory and neurotoxic to primary afferents; potential contribution to neuropathic pain. Society for Neuroscience Abstracts, 2006.
- Elphick, G.F.**, Stopa, E. *The distribution of sialic acid receptors in human tissues.* Brain, Behavior and Immunity Abstracts, 2005.

- Elphick, G.F., Hippely, M.R., Greenwood, B. N., Campisi, J., Fleshner, M.** *Voluntarily physically active rats have increased serum and peritoneal nlgM, increased CD5+/CD11b+ (B-1) cells and decreased sickness from intraperitoneal E. coli.* Brain, Behavior and Immunity Abstracts, 2003.
- Elphick, G.F., Weisler-Frank, J., Greenwood, B. N., Campisi, J., Fleshner, M.** *Increased B-1 (CD5+/CD11b+) cell population from voluntary physical activity contributes to enhanced E. coli clearance in rats.* Brain, Behavior and Immunity Abstracts, 2003.
- Elphick, G.F., Weisler-Frank, J., Greenwood, B. N., Campisi, J., Fleshner, M.** *Increased serum nlgM and CD5+/CD11b+(B-1) cells and reduced sickness from E. coli in voluntarily physically active rats.* FASEB, 2003.
- Elphick, G.F., Hippely, M.R., Greenwood, B. N., Campisi, J., Fleshner, M.** *B-1 cell depletion attenuates enhanced E. coli clearance produced in voluntarily physically active rats.* FASEB, 2003.
- Elphick, G. F., Campisi, J, Greenwood, B. N., Fleshner, M.** *Natural IgM is increased in rats that voluntarily free wheel exercise.* FASEB, 2002.
- Elphick, G. F., Campisi, J, Greenwood, B. N., Fleshner, M.** *Evidence that B-1 production of nlgM is elevated in the peritoneal cavity after voluntary exercise.* Brain, Behavior and Immunity Abstracts, 2002.
- Elphick, G. F., Moraska, A, Fleshner, M.** *Elevation of Immunoglobulin observed in voluntary freewheel run rats may be dependent on activity intensity.* Brain, Behavior and Immunity Abstracts, 2001.
- Campisi, J., Elphick, G. F., Vigers, A. J., Fleshner, M.** *Role of extracellular HSP and NO in stress-induced facilitation of innate immunity.* Society for Neuroscience Abstracts, 2001.
- Elphick, G. F., Campisi, J, Greenwood, B. N., Moraska, A, Fleshner, M.** *Natural IgM (B1), but not antigen driven IgM (B2), is stimulated by voluntary freewheel running.* Society for Neuroscience Abstracts, 2001.
- Elphick, G. F., Campisi, J, Greenwood, B. N., Moraska, A, Fleshner, M.** *Natural IgM (B1), but not antigen driven IgM (B2), is stimulated by voluntary freewheel running.* FASEB, 2001.
- Albeck, D., Elphick, G. F., Greenwood, B. N., Leem, T., Juthberg, S., Ickes, B., Granholm, A. E., Fleshner, M.** *Levels of free BDNF in the brain may be altered by physical activity.* Brain, Behavior and Immunity Abstracts, 2000.
- Elphick, G. F., Moraska, A., Fleshner, M.** *Exercise increases total circulating IgM in Sprague-Dawley rats.* Brain, Behavior and Immunity Abstracts, 2000.
- Fleshner, M., Smith, T. P., Olson, M. C., Elphick, G. F., Greenwood, B. N., Leem, T.** *Stress-induced neutrophil mobilization is increased in physically active rats.* Brain, Behavior and Immunity Abstracts, 2000.
- Kennedy, S. L., Smith, T. P., Olson M. C., Smith, S. E., Elphick, G. F., Greenwood, B. N., Leem, T., Fleshner, M.** *Resting cellular and physiological effects of freewheel running.* Brain, Behavior and Immunity Abstracts, 2000.

Elphick, G. F., Moraska, A., Fleshner, M. *Exercise increases total circulating Ig in male Sprague-Dawley rats.* Society for Neuroscience Abstracts, 2000.

Albeck, D., **Elphick, G. F.,** Greenwood, B. N., Leem, T., Juthberg, S., Ickes, B., Granhom, A. E., Fleshner, M. *Levels of free BDNF in the brain may be altered by physical activity.* Society for Neuroscience Abstracts, 1999.

Invited Presentations

Psychoneuroimmunology Annual Meeting, Cape Fear, North Carolina, May 2000; international.

International Society for Exercise Immunology, Copenhagen, Denmark, May 2003; international.

Psychoneuroimmunology Annual Meeting, Amelia Island, Florida, June 2003; international.

4th Annual Symposia on Inflammation, Providence, Rhode Island, September, 2006; regional.

Other Appointments

Ad hoc Reviewer

- Shock

University Teaching Roles

Co-Mentor Student Trainees:

- **Arnaldo Carreira:** Summer undergraduate student in the *NIH Short Term Training for Minority Students Program/ Leadership Alliance*: Project: "PD-1 gene deficiency suppresses sepsis induced increase in macrophage migratory capacity", June-August, 2008.
- **Nicholas Shubin:** Fall graduate Laboratory Rotation-graduate independent Study, Project: "PD-1 gene deficiency effects sepsis induced changes in T cell migratory capacity", September-December, 2008
- **Sadella Santos:** Summer undergraduate student in the *NIH Short Term Training for Minority Students Program/ Leadership Alliance*: Project: "PD-1 gene deficiency suppresses sepsis induced increase in lymphocyte migratory capacity", June-August, 2009.

Last updated: 6/16/2009