

Joanne L. Lomas-Neira

Aldrich 244

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EDUCATION

B.S.	University of Rhode Island (Microbiology)	1997
M.S.	University of Rhode Island (Clinical Laboratory Science-Cytopathology)	1999
Ph.D.	University of Rhode Island (Cell & Molecular Biology)	2006

POSTGRADUATE TRAINING

2006-2009	Research Associate/Post-doctoral Fellow, Div. Surg. Res., Dept. of Surgery, Rhode Island Hospital/Brown University, Providence, RI (Dr. A. Ayala)
2009-2013	Instructor of Surgery (Research), Dept. of Surgery, Rhode Island Hospital/Warren Alpert School of Medicine at Brown University, Providence, RI
2013-present	Assistant Professor of Surgery (Research), Dept. of Surgery, Rhode Island Hospital/Warren Alpert School of Medicine at Brown University, Providence, RI

POSTGRADUATE HONORS AND AWARDS

Society for Leukocyte Biology Presidential Students Awards Competition Finalist, 2001
Shock Society New Investigator Competition finalist, 2002
American Society for Investigative Pathology, Travel Award, 2003
A.D. Sobel- *American Society for Investigative Pathology* Education Fund Scholar, 2007
American Society for Investigative Pathology Experimental Pathologist-in-Training Award (EPIT), 2009
Society for Leukocyte Biology Travel Award, 2001, 03, 04, 07, 08
Shock Society Travel Award, 2002, 03, 07, 08
Gordon Research Conference Scholarship Award, 2009
Rhode Island Foundation Medical Research Award Grant 2010
Surgical Infection Society Junior Faculty Fellowship 2011

MILITARY SERVICE

None

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

None

ACADEMIC APPOINTMENTS

Post-doctoral Fellow, Div. Surg. Res., Dept. of Surgery, Brown University, Providence, RI. 2006-2009.

Instructor of Surgery (Research), Dept. of Surgery, Rhode Island Hospital/Warren Alpert School of Medicine at Brown University, Providence, RI. 2009-2013

Assistant Professor of Surgery (Research), Dept. of Surgery, Rhode Island Hospital/Warren Alpert School of Medicine at Brown University, Providence, RI. 2013-present

HOSPITAL APPOINTMENTS

Research Associate, Div. Surg. Res., Dept. of Surgery, Rhode Island Hospital, Providence, RI. 2006- **Present**.

OTHER APPOINTMENTS

Internet Committee-*Shock Society*, member 2006-2007

Education Committee-*American Society for Investigative Pathology*, member 2010-2012

Animal Issues Committee-*Shock Society*, member 2010-2012

Website Committee-*Society for Leukocyte Biology*. Member 2013-present

Ad Hoc Reviewer

Critical Care Medicine (2009, 2010, 2013)

American J. Respiratory & Critical Care Medicine (2010)

PLoS one (2009, 2011, 2012, 2013)

Shock Society (2007, 2009, 2011, 2013)

Rhode Island Hospital, Annual Research Celebration, New Investigator Competition (2012)

Study Section Appointments

Grant Application reviewed for the Israel Science Foundation, June 9th, 2006

Grant Application reviewed for the Austrian Research Fund, May 23, 2013

Grant Application reviewed for US Army Medical Research and Materiel Command,
August 19th, 2013

HOSPITAL COMMITTEES

None

UNIVERSITY COMMITTEES

None

MEMBERSHIP IN SOCIETIES

American Association of Immunologists
American Association for the Advancement of Science
American Society of Investigative Pathology
International Cytokine Society
Shock Society
Society for Leukocyte Biology
Surgical Infection Society

PUBLICATIONS

1. Joshi, A.R.T., Chung, C.S., Song, G.Y., **Lomas, J.**, Priester, R.A., Ayala, A. 2002. NF- κ B activation has tissue specific effects on immune cell apoptosis during polymicrobial sepsis. *Shock* 18:380-386.
2. Ayala, A., Chung, C.S., **Lomas, J.L.**, Song, G.Y., Doughty, L.A., Gregory, S.H., Cioffi, W.G., LeBlanc, B.W., Reichner, J., Simms, H.H., Grutkoski, P.S. 2002. Shock induced neutrophil mediated priming for acute lung injury in mice: divergent effects of TLR-4 and TLR-4/FasL deficiency. *Amer. J. Pathology* 161:2283-2294.
3. Chung, C.S., Song, G.Y., **Lomas, J.**, Simms, H.H., Chaudry, I.H., Ayala, A. 2003. Inhibition of Fas/Fas ligand (FasL) signaling during sepsis has tissue specific effects on macrophage apoptotic and functional capacity. *J. Leukocyte Biol.* 74:344-351.
4. **Lomas, J.L.**, Chung, C.S., Grutkoski, P.S., LeBlanc, B.W., Lavigne, L., Reichner, J., Gregory, S.H., Doughty, L.A., Cioffi, W.G., Ayala, A. 2003. Differential effects of MIP-2 and KC on hemorrhage induced neutrophil priming for lung inflammation: assessment by adoptive cell transfer in mice. *Shock* 19:358-365.
5. Rhee, R.J., Carlton, S., **Lomas, J.L.**, Lane, C., Brossay, L., Ayala, A. 2003. Inhibition of CD1d activation suppresses septic mortality: a role for NK-T cells in septic immune dysfunction. *J. Surg. Res.* 115:74-81.

6. **Lomas-Neira, J.L.**, Chung, C.S., Grutkoski, P.S., Miller, E.J., Ayala, A. 2004. CXCR2 inhibition suppresses hemorrhage induced priming for acute lung injury in mice. *J. Leukoc. Biol.* 76:58-64.
7. Newton, S., Ding, Y., Chung, C.S., Chen, Y., **Lomas-Neira, J.L.**, Ayala, A. 2004. Sepsis induced changes in macrophage co-stimulatory molecule expression: CD86 as a regulator of anti-inflammatory IL-10 response. *Surg. Infect.* 5:375-383.
8. **Lomas-Neira, J.**, Chung, C.S., Grutkoski, P.S., Carlton, S., Dunican, A., Simms, H.H., Cioffi, W.G., Ayala, A. 2005. Divergent roles of the murine neutrophil chemokines in hemorrhage induced priming for acute lung injury. *Cytokine* 31:169-179.
9. **Lomas-Neira, J.L.**, Chung, C.S., Wesche, D.E., Perl, M., Ayala, A. 2005. In vivo gene silencing (with siRNA) of pulmonary expression of MIP-2 vs. KC results in divergent effects on hemorrhage induced neutrophil mediated septic acute lung injury. *J. Leukocyte Biol.* 77:846-853.
10. Wesche, D.E., Chung, C.S., **Lomas-Neira, J.**, Doughty, L.A., Gregory S. H., Ayala, A. 2005. In vivo delivery of caspase 8 or FAS siRNA improves the survival of septic mice. *Blood.* 106:2295-2301.
11. Perl, M., Chung, C.S., **Lomas-Neira, J.**, Rachel, T.M., Biffl, W.L., Cioffi, W.G., Ayala, A. 2005. Silencing of Fas- but not caspase-8 in lung epithelial cells ameliorates experimental acute lung injury. *Amer. J. Pathol.* 167:1545-559.
12. **Lomas-Neira, J.**, Chung, C.S., Perl, M., Gregory, S., Biffl, W., Ayala, A. 2006. Role of alveolar macrophage & migrating neutrophils in hemorrhage induced priming for ALI subsequent to septic challenge. *Amer. J. Physiol.* 290:51-58.
13. Chung, C.S., Watkins, L., Song, G.Y., **Lomas-Neira, J.**, Cahoone, E.V., Cioffi, W.G., Ayala, A. 2006. Deficiency in $\gamma\delta$ T-lymphocytes compromises the ability of mice to survive polymicrobial sepsis. *Amer. J. Physiol.* 291:R1338-1343.
14. Perl, M., Chung, C.S., Perl, U., **Lomas-Neira, J.L.**, De Paepe, M., Cioffi, W.G., Ayala, A. 2007. Fas induced pulmonary apoptosis and inflammation during extrapulmonary acute lung injury. *Amer. J. Resp. & Crit. Care Med.* 176(6):591-601.
15. Venet, F., Chung, C.S., Huang, X., **Lomas-Neira, J.**, Chen, Y., Ayala, A. 2009. Lymphocytes in the development of lung inflammation: a role for regulatory CD4+T cells in indirect pulmonary lung injury. *J. Immunol.* 183:3472-3480.
16. Perl, M., Chung, C.S., Perl, U., **Lomas-Neira, J.**, Ayala, A. 2009. Therapeutic accessibility of caspase-3 activation as a key pathomechanism in septic acute lung injury. *Crit. Care Med.* 38(4):1179-86.

17. Perl, M., Chung, C.S., Perl, U., Thakkar, R., **Lomas-Neira, J.**, Ayala, A. 2010. Therapeutic accessibility of caspase mediated cell death as a key patho-mechanism in indirect acute lung injury. *Crit. Care. Med.* 39:1179-86. (PMID: 0154604).
18. Thakkar, R.K., Chung, C.S., Chen, Y., Monaghan, S.F., **Lomas-Neira J.**, Cioffi, W.G., Ayala, A. 2011. Local tissue expression of the cell death ligand, FasL, plays a central role in the development of extra-pulmonary acute lung injury. *Shock* (epub-in press). (PMID: 21451443).
19. Perl, M., **Lomas-Neira, J.L.**, Venet, F., Chung, C.S., Ayala, A. 2011. Pathogenesis of indirect (secondary) acute lung injury (ALI). *Expert Rev. Resp. Med.* 5:115-126. (REVIEW; PMID: 21348592).
20. Monaghan, S.F., Thakkar, R.K., Heffernan, D.S., Tran, M.L., Huang, X., Chung, C.S., Chen, Y., Chen, Y., **Lomas-Neira, J.**, Cioffi, W.G., Ayala, A. 2012. Mechanisms of indirect acute lung injury: a novel role for the co-inhibitory receptor, programmed death-1 (PD-1). *Ann. Surg.* Jan;255(1):158-64. PMID: 21997806 [PubMed - indexed for MEDLINE]
21. **Lomas-Neira JL**, Ayala A. 2012. What's new in Shock, March 2012? *Shock.* Mar;37(3):239-41. No abstract available. PMID: 22337009
21. **Lomas-Neira J**, Perl M, Venet F, Chung CS, Ayala A. 2012. The Role and Source of TNF- α in Hemorrhage Induced Priming for Septic Lung Injury. *Shock.* Jun;37(6):611-20. [Epub ahead of print] PMID: 22552013.
22. Nacionales DC, Cuenca AG, Ungaro R, Gentile LF, Joiner D, Satoh M, **Lomas-Neira J**, Ayala A, Bihorac A, Delano MJ, Ang DN, Efron PA. The acute immunological response to blood transfusion is influenced by polymicrobial sepsis. *Shock.* Dec;38(6):598-606. PMID: 23143057 [PubMed - indexed for MEDLINE]
23. Chichger H, Grinnell KL, Casserly B, Chung CS, Braza J, **Lomas-Neira J**, Ayala A, Rounds S, Klinger JR, Harrington EO. 2012. Genetic disruption of protein kinase C δ reduces endotoxin-induced lung injury. *Am J Physiol Lung Cell Mol Physiol.* Nov 15;303(10):L880-8. Epub 2012 Sep 14. PMID: 22983354 [PubMed - indexed for MEDLINE]
24. **Lomas-Neira, J.**, Venet, F., Chung, C-S., Thakkar, R., Heffernan, D., Ayala, A. 2013. Neutrophil-endothelial interactions mediate Angiopoietin-2 associated pulmonary endothelial cell dysfunction in indirect ALI in mice. *Am J Respir Cell Mol Biol.* 2013 Aug 27. [Epub ahead of print] PMID: 23980650 [PubMed - as supplied by publisher]

OTHER PEER-REVIEWED PUBLICATIONS

Reviews:

1. Ayala, A., **Lomas, J.L.**, Grutkoski, P.S., Chung, C.S. 2002. Pathological aspects of apoptosis in severe sepsis and septic shock. *Int. J. Biochem. & Cell Biol.* 35:7-15.
2. Ayala, A., **Lomas, J.L.**, Grutkoski, P.S., Chung, C.S. 2003. Fas-Ligand Mediated Apoptosis in Severe Sepsis and Shock. *Scand. J. Infect. Dis.* 35:593-600.
3. Wesche, D.E., **Lomas-Neira, J.L.**, Perl, M., Jones, L., Chung, C.S., **Ayala, A.** 2005. The role and regulation of apoptosis in sepsis. *J. Etx. Res.* 11:375-382.
4. Wesche, D.E., **Lomas-Neira, J.L.**, Perl, M., Chung, C.S., Ayala, A. 2005. Leukocyte apoptosis and its significance in sepsis and shock. *J. Leukocyte Biol.* 78:325-337.
5. **Lomas-Neira, J.**, Ayala, A. 2005. Pepducins: an effective means to inhibit G-protein Coupled Receptor Signaling by neutrophils? *Trends in Immunology.* 26:619-621.
6. **Lomas-Neira, J.L.**, Perl, M., Chung, C.S., Ayala, A. 2005. Shock and hemorrhage: An overview of animal models. *Shock* 24 (Suplt. 1):33-39.
7. Huang, X., Venet, F., **Lomas-Neira, J.L.**, Chung, C.S., Ayala, A. 2007. Changes in Dendritic Cell Function in the Immune Response to Sepsis. *Expert Opin. Biol. Ther.* 7:929-938.
8. Perl, M., **Lomas-Neira, J.**, Chung, C.S., Ayala, A. 2008. Epithelial cell apoptosis and neutrophil recruitment in acute lung injury-A unifying hypothesis? What we have learned from small interfering RNAs. *J. Mol. Med.* 14(7) Online.
9. **Lomas-Neira, J.**, Chung, C.S., Ayala, A. 2008. RNA interference as a potential therapeutic treatment for acute lung injury. *Int. J. Clin. Exp. Med.* 2, 154-160.
10. Ayala A., Perl M., Venet F., **Lomas-Neira J.**, Swan R., Chung C.S. 2008. Apoptosis in sepsis: mechanisms, clinical impact and potential therapeutic targets. *Curr Pharm Des.* 14(19):1853-9.

BOOKS AND BOOK CHAPTERS:

1. Ayala, A., Wesche-Soldato, D.E., Perl, M., **Lomas-Neira, J.L.**, Swan, R., Chung, C.S. 2006. Novartis Foundation Symposium No. 280 on Sepsis-New Insights, New Therapies. Chapter: Blockade of apoptosis as a rational therapeutic strategy for the treatment of sepsis. Wiley Press Chichester, U.K., pg. 37-52.
2. Wesche-Soldato, D.E., **Lomas-Neira, J.**, Perl, M., Chung, C.S., Ayala, A. 2008. Hydrodynamic Delivery of siRNA in a Mouse Model of Sepsis. In: *Methods in*

Molecular Biology Series: siRNA, shRNA and miRNA. Editors: S. Barik. Human Press Inc., Totowa, NJ.

3. Thakkar, R.H., Huang, X., **Lomas-Neira, J.**, Heffernan, D. Ayala, A. 2011. Sepsis and the Immune Response. In: Essential Immunology for Surgeons. Editor: E. Eremin. Oxford Press, UK. (in press).

OTHER NON-PEER REVIEWED PUBLICATIONS

Published Letters/Editorials/Commentary/Press Release:

1. **Lomas-Neira, J.L.**, Ayala, A. 2007. CXCL2 Polymorphism in Sepsis and ARDS: Pathological Significance Lost in Translation. *Crit. Care Med.* 35:2439-2440.

PUBLICATIONS SUBMITTED OR IN PREPARATION

1. Venet, F., Chung, C.S., Huang, X., **Lomas-Neira, J.**, Chen, Y., Ayala, A. 2012. Indirect lung injury: a role for regulatory T lymphocytes in the development of pulmonary inflammation. *J. Immunol.* (in revision).
2. **Lomas-Neira, J.**, Monaghan, S., Chung, C-S., Heffernan, D., Ayala, A. 2013. Endothelial Growth Factor, Angiopoietin-2, Plays a Central Role in Mediating the Mortality in Indirect ALI in Mice. *AJPLCM* (under review).
3. **Lomas-Neira, J.**, Monaghan, SJ., Huang, X., Chung, SC., Chen, Y., Ayala, A. 2013. Programmed cell death receptor ligand-1 (PD-L1): a role in Angiopoietin-mediated endothelial cell activation in the development of acute lung injury. *AJCCM* (in process)

ABSTRACTS

1. Ayala, A., Chung, C.S., Song, G.Y., **Lomas, J.**, Chaudry, I.H. 2000. Apoptosis in polymicrobial sepsis: dysregulation of activation induced apoptotic response. *Shock* 13:(suplt 1) 111.
2. Chung, C.S., Song, G.Y., **Lomas, J.**, Simms, H.H., Chaudry, I.H., Ayala, A. 2000. Delayed blockade of FasL restores lymphoid immune function, suppresses apoptosis and improves survival in sepsis. *Shock* 13:(suplt 2) 29.
3. Cahoone, E.V., Chung, C.S., **Lomas, J.**, Ayala, A. 2000. Deficiency in CD8 T-lymphocytes compromises the ability of mice to survive sepsis. *Shock* 13:(suplt. 2) 11.

4. Ayala, A., Chung, C.S., **Lomas, J.**, Grutkoski, P.S., Doughty, L.A., Cahoone, E.V., Simms, H.H. 2001. Hemorrhagic (HEM) shock serves as a "priming stimulus" for acute lung injury but is not sufficient to "trigger" it alone. *FASEB J* 15:A244.
5. Chung, C.S., Song, G.Y., **Lomas, J.**, Simms, H.H., Chaudry, I.H., Ayala, A. 2001. Inhibition of Fas/Fas ligand (FasL) signaling during sepsis has tissue specific effects on apoptotic and functional capacity. *Surgical Infections* 2:74.
6. Chung, C.S., Song, G.Y., **Lomas, J.**, Wang, W., Ayala, A. 2001. Blockade of Fas/FasL signaling prevents increased intestinal permeability during sepsis. *Shock* 15:(suplt 1)70.
7. Ayala, A., C.S. Chung, **Lomas, J.**, Grutkoski, P.S., Doughty, L.A., Simms, H.H. 2001. A mouse model of priming for acute lung injury following shock. *Shock* 15:(suplt 1)82.
8. Doughty, L., Chung, C.S., **Lomas, J.**, Nguyen, K., Biron, C., Ayala, A. 2001. Mechanism of viral potentiation of inflammation: IFN-alpha modulation of the cytokine response to sepsis. *Shock* 15 (suplt 1)35.
9. **Lomas, J.L.**, Chung, C.S., Song, G.Y., Grutkoski, P.S., Dunican, A.L., Simms, H.H., Ayala, A. 2001. Role of MIP-2 in suppression of neutrophil apoptosis. *Shock* 15 (suplt 1)74.
10. Watkins, L., Chung, C.S., Song, G.Y., **Lomas, J.**, Cahoone, E.V., Ayala, A. 2001. Deficiency in $\gamma\delta$ T-lymphocytes compromises the ability of mice to survive sepsis. *J. Surg. Res.* 100:282.
11. **Lomas, J.L.**, Chung, C.S., Song, G.Y., Grutkoski, P.S., Dunican, A.L., Simms, H.H. and Ayala, A. 2001. Mechanisms of hemorrhage (HEM) induced neutrophil priming for acute lung injury (ALI): A role for Mip-2. *J. Leukocyte Biol.* 70:82 (suplt).
12. Ayala, A., C.S. Chung, **Lomas, J.L.**, Doughty, L.A., Grutkoski, P.S. 2002. Differential effect of endotoxin insensitivity and/or FasL deficiency on local pulmonary inflammatory response to sequential shock and septic insult. *FASEB J.* 16:A20.
13. Rhee, R.J., Carlton, S., Chung, C.S., **Lomas, J.L.**, Lane, C., Ayala, A. 2001. NK-T cells as potential contributors to the immune dysfunction seen in sepsis. *FASEB J.* 16:A1228.
14. **Lomas, J.L.**, Chung, C.S., Grutkoski, P.S., Carlton, S., Dunican, A.L., Simms, H.H., Cioffi, W.G., Ayala, A. 2002. Divergent roles of the murine homologues of IL-8 in the pathogenesis of acute lung injury. *Surg. Infect.* 3:78.
15. Rhee, R.J., Carlton, S., Chung, C.S., **Lomas, J.L.**, Ayala, A. 2002. Immune dysfunction in sepsis: the contribution of CD1d mediated NK-T cell activation. *Shock* 17: 44S.

16. **Lomas, J.L.**, Chung, C.S., Grutkoski, P.S., Doughty, L., Ayala, A. 2002. Differential effects of MIP-2 and KC on hemorrhage induced neutrophil priming for lung inflammation. *Shock* 17:21S.
17. Chung, C.S., Song, G.Y., **Lomas, J.**, Grutkoski, P.S., Doughty, L., Ayala, A. 2002. Neutrophil sequestration in lung is a transient event during polymicrobial sepsis. *Shock* 17:30S.
18. Doughty, L., Chung, C., Carlton, S., Grutkoski, P., **Lomas, J.**, Ayala, A. 2002. dsRNA-activated protein kinase (PKR) mediates viral priming of lethality in polymicrobial sepsis. *Shock* 17:30S.
19. Rhee, R.J., Carlton, S., Chung, C., **Lomas, J.L.**, Cioffi, W.G., Ayala, A. 2002. Inhibition of CD1d activation suppresses septic mortality: a role for NK-T cells in septic immune dysfunction. *J. Surg. Res.* 107:268.
20. Chung, C.S., Watkins, L., Song, G.Y., **Lomas, J.L.**, Grutkoski, P.S., Cioffi, W.G., Ayala, A. 2003. Role of gamma-delta T-cells in immunoregulatory effects in sepsis. *Surg. Infect.* 4:97.
21. **Lomas, J.L.**, Chung, C.S., Grutkoski, P.S., Gregory, S.H., Doughty, L.A. Biffl, W.L., Ayala, A. 2003. Hemorrhage induced priming for acute lung injury resultant from subsequent septic challenge: what is the neutrophil's contribution? *Faseb J.* 17:A245.
22. Ayala, A., **Lomas, J.L.**, Chung, C.S., Gregory, S.H., Doughty, L.A., Grutkoski, P.S. 2003. FasL or Fas gene deficiency potentiates PMN priming for lung inflammation resultant from sequential shock and sepsis *Faseb J.* 17:A655.
23. Chung, C.S., Watkins, L., Song, G.Y., **Lomas, J.**, Grutkoski, P.S., W.G.Cioffi, Ayala, A. 2003. Immunoregulatory effects of gamma-delta T-cells in response to sepsis. *Faseb J.* 17:C319.
24. **Lomas, J.L.**, Chung, C.S., Grutkoski, P.S., Gregory, S.H., Biffl, W.L., Ayala, A. 2003. PMN depletion attenuates lung injury resultant from combined insults of hemorrhage followed by sepsis independent of ICAM-1 expression. *Shock* 19:67A.
25. **Lomas-Neira, J.L.**, Chung, C.S., Grutkoski, P.S., Miller, E.J., Ayala, A. 2003. CXCR2 inhibition suppresses hemorrhage induced priming for ALI. *J. Leuko. Biol.* 74:133 suppl.
26. Ayala, A., Chung, C.S., Wesche, D., **Lomas-Niera, J.L.** 2004. Extrinsic events in the apoptotic response to sepsis/shock. *Shock* 21:53A.
27. **Lomas-Neira, J.**, Chung, C.S., Wesche, D., Albina, J., Ayala, A. 2004. Hemorrhage induced priming for acute lung injury is abrogated by TNF- α gene deficiency. *FASEB J.* 18:A1117.

28. Newton, S., Ding, Y., Chung, C.S., Chen, Y., **Lomas-Neira, J.L.**, Cioffi, W.G., Ayala, A. 2004. Sepsis induced changes in macrophage co-stimulatory molecule expression: CD86 as a regulator of anti-inflammatory IL-10 response. *Surg. Infect.* 5:104 (Abst).
29. Wesche, D.E., Chung, C.S., **Lomas-Neira, J.**, Gregory, S.H., Ayala, A. 2004. In vivo delivery of caspase 8 siRNA improves survival of septic mice. *Shock* 21:23 suppl. 2.
30. **Lomas-Neira, J.**, Chung, C.S., Wesche, D.E., Ayala, A. 2004. Local chemokine suppression reduces shock induced lung injury: in vivo siRNA silencing of pulmonary MIP-2. *Shock* 21:78 suppl. 2.
31. Ayala, A., Wesche, D.E., **Lomas-Neira, J.L.**, Perl, M., Chung, C.S. 2004. Leukocyte apoptosis and its significance during sepsis. *J. Leukocyte Biol.* 76:20 suppl.
32. **Lomas-Neira, J.L.**, Chung C.S., Wesche D.E., Perl M., Ayala A. 2004. In vivo gene silencing (with siRNA) of pulmonary expression of MIP-2 vs. KC results in divergent effects on hemorrhage induced neutrophil mediated septic acute lung injury. *J. Leukocyte Biol.* 76:61 suppl.
33. Ayala, A., Wesche, D.E., **Lomas-Neira, J.J.**, Perl, M., Jones, L., Chung, C.S. 2004. The role and regulation of apoptosis in sepsis. *J. Endotoxin Res.* 10:304.
34. **Lomas-Neira, J.**, Chung, C.S., Perl, M., Chen, Y., Ayala, A. 2005. MIP-2 and KC differentially contribute to the neutrophil activational/phosphoprotein status resultant from hemorrhage. *Shock.* 23:40 suppl. 3.
35. Perl, M., Chung, C.S., **Lomas-Neira, J.**, Rachel, T.M., Biffl, W.L., Cioffi, W.G., Ayala, A. 2005. Pulmonary instillation of Fas- but not caspase-8 small interfering RNA (siRNA) into lung epithelial cells ameliorates acute lung injury. *Shock.* 23:3 suppl. 3.
36. **Lomas-Neira, J.**, Chung, C.S., Perl, M., Ayala, A. 2005. Divergent effects of murine chemokines KC and MIP-2 on phosphorylation status of proteins involved in PMN activation following hemorrhage. *J. Leukocyte Biol.* 78:34 suppl.
37. Perl, M., Perl, U., Lomas-Neira, J., van Rooijen, N., Chung, C.S., Ayala, A. 2006; The myeloid immune response in sepsis: A case for 'What Doesn't Kill Us Makes Us Stronger'? *Surg. Infect.* 7:190-191.
38. Perl, M., **Lomas-Neira, J.**, Perl, U., Biffl, W.L., Cioffi, W.G., Chung, C.S., Ayala, A. 2006. Contribution of non-apoptotic Fas signaling to the pathology of extra-pulmonary acute lung injury. *Shock.* 25: 1 suppl.

39. **Lomas-Neira, J.**, Chung, C.S., Perl, M., Chen, Y., Ayala, A. 2006. Neutralization of KC and MIP-2: divergent effects on activation pathways in mouse pro-myelocytic cell-line (MPRO)-consistent with mouse blood PMN. *Shock*. 25:29 suppl.
40. Perl, M., Chung, C.S., Perl, U., van Rooijen, N., **Lomas-Neira, J.**, Gregory, S., Ayala, A. 2006. Decreasing neutrophil but not monocyte apoptosis *in vivo* improves septic survival by modulating innate immune functions. *Shock*. 26:4 suppl 1.
41. Perl, M., Chung, C.S., **Lomas-Neira, J.**, Perl, U., Biffl, W.L., Cioffi, W.G., Ayala, A. 2007. Role of lung epithelial cells in Fas mediated inflammation during extra-pulmonary acute lung injury. *Inflam. Res*. 56:S70 suppl. 2.
42. Ayala, A., Wesche-Soldato, D.E., Perl, M., **Lomas-Neira, J.L.**, Chung, C.S. 2007. Manipulating apoptosis for therapeutic gain: novel therapeutic approach III, siRNA. *Inflam. Res*. 56:S259 suppl. 2.
43. **Lomas-Neira, J.L.**, Wesche-Soldato, D.E., Chung, C.S., Venet, F., Perl, M., Ayala, A. 2007. The murine pulmonary endothelial cell's response to pro-inflammatory stimuli associated with traumatic shock. *Inflam. Res*. 56:S259 suppl. 2.
44. Venet, F., Chung, C.S., **Lomas-Neira, J.L.**, Ayala, A. 2007. Lymphocytes as an anti-apoptotic / anti-inflammatory regulator of extra-pulmonary acute lung injury? *Shock* 27:6 suppl. 1.
45. Perl, M., Chung, C.S., Perl, U., **Lomas-Neira, J.L.**, Ayala, A. 2007. In vivo silencing of caspase-3 in lung epithelial cells ameliorates extra-pulmonary acute lung injury (ALI) induced by hemorrhagic shock & sepsis. *Shock* 27:6 suppl. 1.
46. Venet, F., **Lomas-Neira, J.**, Chung, C.S., Ayala, A. 2007. Mechanisms of extrapulmonary acute lung injury: lymphocytes as anti-apoptotic / anti-inflammatory regulators. *J. Leukocyte Biol*. 82 suppl.
47. **Lomas-Neira, J.**, Perl, M., Soldato, D., Venet, F., Chung, C.S., Ayala, A. 2007. TNF- α priming for the development of shock induced acute lung injury (ALI) is mediated by local tissue not circulating cells *J. Leukocyte Biol*. 82 suppl.
48. **Lomas-Neira, J.**, Chung, C.S., Venet, V., Ayala, A. 2008. Neutrophils mediate pulmonary endothelial activation (Ang-2) release during shock/sepsis induced ALI. *J. leukocyte Biol*. 36 suppl.
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55. **Lomas-Neira, J.**, Chen, Y., Heffernan, D.S., Ayala, A. 2012. Shock/sepsis induced neutrophil infiltration and mortality is mediated by Angiopoietin-2. *Surg. Infect.* 13:S20 (Suppl. 1).
56. Bai, J., **Lomas-Neira, J.**, Chung, C.S., Chen, Y., Uriarte, S., Ayala, A. 2012. The role of SNAP-23 in sepsis induced neutrophil respiratory burst. *J Leuko. Biol.* 92:S59 (Suppl. 1).
57. **Lomas-Neira, J.**, Monaghan, S.F., Huang, X., Chen, Y., Ayala, A. 2013. Mechanisms of acute lung injury: Programmed cell death receptor (PD-1) ligation as a regulator of Angiopoietin-2 expression. *FASEB J.* 26: (in press).
58. **Lomas-Neira, J.**, Monaghan, S.F., Huang, X., Chen, Y., Ayala, A. 2013. Programmed cell death receptor ligand-1 (PD-L1): A role in Angiopoietin-mediated endothelial cell activation in the development of acute lung injury. 2013. *Shock* (suppl. 1).

INVITED PRESENTATIONS

Symposia/Workshop Presentations

Local/Regional:

1. Presentation entitled: "In Vivo Silencing (with siRNA) of Pulmonary Expression of MIP-2 vs. KC Results in Divergent Effects on Hemorrhage Induced Neutrophil Mediated Septic Acute Lung Injury" as a portion of the 12th Annual Hospitals Research Celebration's Young Investigator Award Competition on paper, held at the George Auditorium in the Rhode Island Hospital, Providence, RI, October 27th, 2004.
2. Seminar speaker on topic entitled: "Biomedical Research & the Curious Mind", As a part of 58th Annual Clinical Laboratory Science Convention sponsored by the American Society for Clinical Laboratory Science (ASCLS), held at the Providence Convention Center, May 8th, 2006.
3. Seminar speaker on topic entitled: "TNF- α Priming for the Development of Shock Induced Acute Lung Injury (ALI): Mediation by Local Tissue Not Circulating Cells", as a part of Division of Surgical Research Seminar Series/Department of Surgery, held at the Rhode Island Hospital, Providence, RI, November 6th, 2007.
4. Presentation entitled: "The Pulmonary Endothelial Cell's Response to Pro-Inflammatory Stimuli Associated with Traumatic Shock" as a semi-finalist in Basic Research/Young Investigator Competition at the Lifespan 15th Annual Research Celebration held at the George Auditorium in the Rhode Island Hospital, Providence, RI, November 13th, 2007.

National/International:

1. Speaker in Symposia I entitled: 'Acute Lung Injury: Sepsis'. Presentation entitled: "siRNA and the treatment of acute lung injury/sepsis". As a part of joint British Association for Lung Research, British Inflammation Research Association & British Pharmacology Society spring 2006 meeting at Griton College in Cambridge, England, United Kingdom, April 6, 2006.
2. Oral & Poster presentation in Session #43 (free communications) on 'Cellular Mechanism in Airway Inflammation', presentation entitled: "The Murine Pulmonary Endothelial Cell's Response to Pro-inflammatory Stimuli Associated with Traumatic Shock" at 7th International Congress on the Immune Consequences of Trauma, Shock and Sepsis, Munich, Germany, March 13-17, 2007.
3. Invited seminar/presentation entitled: "TNF- α Priming for the Development of Shock Induced Acute Lung Injury (ALI): Mediation by Local Tissue Not Circulating Cells" at Pfizer Pharmaceuticals, Inc. in Groton, CT, August 17, 2007.

GRANTS

Endothelial Injury and Repair: CardioPulmonary Vascular Biology COBRE (active)
(PI: Sharon Rounds)

Agency: NIH/NCRR

Type: P20-RR032652-0; Period: 2013-2019

Project 2: Effects of Angiopoietins on Shock –Induced Acute Lung Injury

Aim: To provide novel insights into the relationship between the role of Angiopoietins in regulating vascular angiogenesis and neutrophil/endothelial cell interactions in the pathogenesis of ALI.

Regulatory Mechanisms of Acute Lung Injury: Phagocyte Apoptosis. (active)

Research Associate/Fellow: Joanne L. Lomas-Neira

Agency: NIH/NIHLBI

Type: R01-GM63898-06; Period: 8/31/07-9/01/12

Aims: The global objective of this was to determine the contribution of the neutrophil apoptotic response to the development of acute lung injury induced by a salient two-hit model of hemorrhage (priming) followed by subsequent infectious polymicrobial septic challenge (triggering) in the mouse. P.I.: Alfred Ayala

Past

Mediators of endothelial cell dysfunction in the development of shock induced acute lung injury

P.I.: Joanne Lomas-Neira

Agency: Surgical Infection Society Junior Faculty Fellowship;

Type: Fellowship, 7/01/11-6/30/12.

Mediators of Endothelial Cell Dysfunction in the Development of Shock Induced Acute Lung Injury

P.I.: Joanne Lomas-Neira

Agency: The Rhode Island Foundation

Type: Grant; Period: 3/25/10-3/24/11

UNIVERSITY TEACHING ROLES

at Community College of Rhode Island:

Non-majors Introductory Biology, 2007, 2013

Human Anatomy, September-December 2008

Human Physiology Lecture/Lab- 2010-2013

Educational Activities:

at Rhode Island Hospital/ Brown University School of Medicine

Students and Residents Advised/Trained:

HOSPITAL TEACHING ROLES