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## **Primary Research Field**

Cell Biology & Immunology

## **Education**

1982 B.S. in Chemical Engineering, Shenyang Inst. Of Chem.  
Engineering, Shenyang, P.R. China  
1992-1994 ESL Program, Univ. MA, Lowell, MA

## **Professional Experience**

2004-*present* Sr. Research Assistant, Rhode Island Hospital, Providence, RI  
2001-2004 Research Assistant, Rhode Island Hospital, Providence, RI  
1999-2001 Research Assistant, Providence College, Providence, RI

## **Abstracts (published)**

1. Grutkoski, P.S., Chen, Y., Chung, C.S., Ayala, A. 2002. Suppressor of cytokine signaling (SOCS)-3 expression is upregulated in polymicrobial sepsis. *Shock* 17:8S.
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3. Grutkoski, P.S., Chen, Y., Chung, C.S., Ayala, A. 2003. Factors responsible for suppressors of cytokine signaling (SOCS)-3 upregulation in polymicrobial sepsis is site-specific. *Shock* 19:2A
4. Grutkoski, P.S., Chen, Y., Chung, C.S., Cioffi, W.G., Ayala, A. 2003. Putative mechanism of hemorrhage-induced leukocyte hyporesponsiveness: induction of suppressor of cytokine signaling (SOCS)-3. *J. Trauma* 55:206.

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8. 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).
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14. Huang, X., Chung, C.S., Chen, Y., Ayala, A. 2005. Sepsis induces differential expression of ITIM receptors on CD4+ T cells. *Shock.* 23:61 Suppl. 3.
15. Lomas-Neira, J., Chung, C.S., Perl, M., Chen, Y., Ayala, A. 2005. MIP-2 and KC differentially contribute to the neutrophil activation/phosphoprotein status resultant from hemorrhage. *Shock.* 23:40 Suppl. 3.
16. Chen, Y., Chung, C.S., Wilson, D., Jones, L., Ayala, A. 2005. The role of BID protein in sepsis induced apoptosis. *Shock.* 23:47 Suppl. 3.
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48. Lomas-Neira, J.L., Huang, X., Chen, Y., Ayala, A. 2013. The survival benefit seen in mice lacking programmed cell death receptor (PD)-ligand (L) 1 following shock/sepsis induced indirect acute lung injury is independent of changes in lung tissue ICAM-1 and MPO levels. *J. Leuko. Biol.* 94: S41 (Suppl.).
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63. Biron, B.M., Chen, Y., Chung, C-S., Reichner, R., Ayala, A. 2017. PAD4 deficiency limits kidney dysregulation in a murine model of shock/sepsis. *FASEB J.* (abst. epub suppl.).

64. Yang, Q., Chung, C-S., Chen, Y., Xu, S., Bai, J., Ayala, A. 2017. Does program cell death 1 ligand (PD-L1) expression on endothelial cells directly affect their function after injury? *Shock* 47:101 (Suppl. 1).
65. Gray, C., Biron, B., Chen, Y., Chung, C-S., Ayala, A. 2018. CD4<sup>+</sup> T cells upregulate immune checkpoint VISTA surface expression in response to septic challenge. *J. Leuko. Biol.* (On-line Abst. Suppl.: #22: pg 16-17).
66. Jiang, J., Hu, B., Chung, C-S., Chen, Y., Pan, W., Zhang, Y., Ayala, A. 2019. The effect of hemorrhage and subsequent septic challenge on activation/release of kidney SHP1/SHP2, NF-κB and HMGB1 during AKI. *Shock* 51:115 (Suppl. 1).
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68. Wakeley, M.E., De Paepe, M.E., Chung, C-S., Ayala, A. 2019. Herpes virus entry mediator (HVEM) signaling in neonatal sepsis. *Shock* 51:13 (Suppl. 1).
69. Bartholomew, M., Chung, C-S., Chen, Y., Ayala, A. 2019. The contribution of SHP-1 signaling to sepsis-induced changes in macrophage function. *Shock* 51:127 (Suppl. 1).
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### Publications

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4. 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.

5. Chung, C.S., Chen, Y.P., Grutkoski, P.S., Doughty, L.A., Ayala, A. 2007. The loss of SOCS-1 expression contributes to increased lymphoid apoptosis and decreased ability to survive sepsis. *Apoptosis* 12:1143-1153.
6. Huang X., Venet, F., Lepape, A., Yuan, Z., Wang, Y.L., Chen, Y., Swan, R., Kherouf, H., Monneret, G., Chung, C.S., Ayala, A. 2008. PD-1 on macrophages/monocytes: a critical role in suppressed innate immunity during sepsis. *P.N.A.S. USA* 106:6303-6308.
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10. 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* 36:138-143.
11. Monaghan, S.F., Thakkar, R.K., Heffernan, D.S., Tran, M.L., Huang, X., Chung, C.S., 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.* 255:158-64.
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14. Tang, L.\*, Bai, J.\*, Chung, C.S., Lomas-Neira, J., Chen, Y., Huang, X., Ayala, A. 2014. Active players in resolution of shock/sepsis induced indirect lung injury: CD4+CD25+Foxp3+ regulatory T cells (Tregs) and PD-1's immunomodulatory effects. *J. Leukocyte Biol.* 96:809-820 (\*L.T. and J.B. contributed equally as first authors to this work).
15. Bai, J.\*, Tang, L.\*, Lomas-Neira, J., Chen, Y., McLeish, K.R., Uriarte, S.M., Chung, C.S., Ayala, A. 2015. TAT-SNAP-23 treatment inhibits the priming of



neutrophil functions contributing to shock and/or sepsis-induced extra-pulmonary-acute lung injury. *Innate Immunity* 19: 42-54 (\*J.B. and L.T. contributed equally as first authors to this work).

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23. Biron, B.M., Chung, C-S., O'Brien, X.M. Chen, Y., Pulido, S., Reichner, J., Ayala A. 2017. Cl-amidine Prevents Histone 3 Citrullination, NET Formation, and Improves Survival in a Murine Sepsis Model. *J. Innate Immunity* 9:22-32.
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