

Please select **Print from the file menu to print your Abstract.**
Then fax it to: **ATS Abstracts c/o Marathon Multimedia, FAX: US 507.334.0126.**

ATS 2005 · San Diego International Conference

Filename: 952867

Contact/Presenting Author: A. Fernandez

Department/Institution: Anesthesiology and Critical Care Medicine, Johns Hopkins Medical Inst.

Address: Tower 711, 600 N. Wolfe St

City/State/Zip/Country: Baltimore, MD, 21287-8711, United States

Phone: 410 955-3640 **Fax:** 410 955-0994 **E-mail:** aferna10@jhmi.edu

ATS member: No **Student or in training:** Yes

Abstract Category: 4.1 - Acute Lung Injury and ARDS

Presentation format: Poster Only

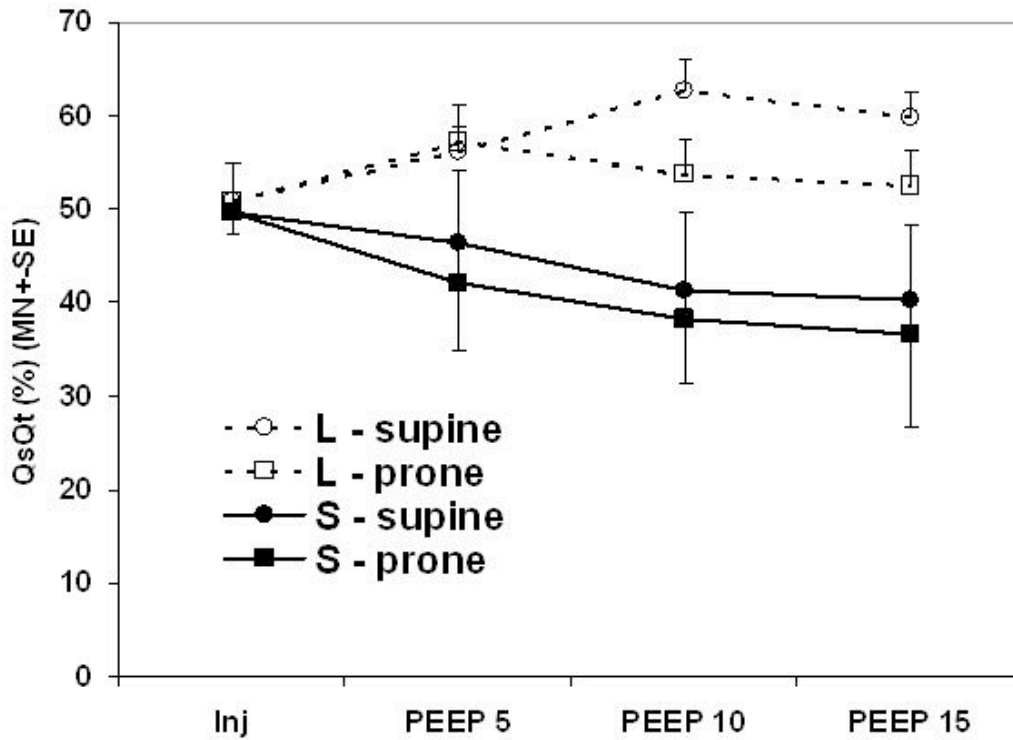
Travel Award: Yes

Publication of email address: Yes, aferna10@jhmi.edu

Title: rSP-C SURFACTANT IMPROVES OXYGENATION AND SHUNT IN SEVERE OVINE LPS-INDUCED ACUTE LUNG INJURY (ALI)

A. Fernandez, MD, PhD¹, R.B. Easley, MD¹, M.K. Fuld, BS¹, E.A. Hoffman, PhD², J.F. Lewis, MD³ and B.A. Simon, MD, PhD¹. ¹ Johns Hopkins Medical Inst., Baltimore, MD, United States; ² Univ. of Iowa, Iowa City, IA, United States and ³ Univ. of Western Ontario, London, ON, Canada.

Clinical response to surfactant therapy in adult ALI has been variable. The goal of this study was to characterize the physiological effects of exogenous surfactant in a sheep model of sepsis-related ALI as a baseline for further study using CT imaging. **Methods:** 18 anesthetized, mechanically ventilated (Vt 10 ml/kg, f 20/min, 5 PEEP, FiO₂ 1.0) adult sheep had E.coli LPS infused at 10mcg/kg/h until Qs/Qt \geq 40% and PaO₂ \leq 200 for 20 minutes. Sheep received LPS alone (L) or +surfactant (S) (100mg lipid/kg rSP-C, Venticute[®]) instilled in divided doses. Each animal underwent two cycles of recruitment maneuvers and increasing PEEP: 5, 10 and 15cmH₂O, both supine and prone. **Results:** Severe ALI (Qs/Qt 50.4 \pm 9.7%) developed after a wide range of LPS dose (6.7-51.1 mc/kg). No differences in oxygenation (PaO₂, Qs/Qt) were observed at injury baseline. PaO₂ was higher and Qs/Qt lower in group S at every PEEP level, both supine and, more markedly, prone, reaching statistical significance at PEEP 10 and 15 levels. **Conclusions:** Instilled surfactant rSP-C significantly improves oxygenation in this severe ALI model, especially in prone position and with higher PEEP levels. The increase in shunt with PEEP in untreated animals suggests surfactant both improved recruitment and prevented blood flow redistribution.



Funded By: DOD DAMD17-02-1-0732, NIH HL64368, Spanish Ministry of Education EX2004-0283

Off-Label Use Disclosure: No

Financial Disclosure: No

Signature of Presenting Author:

A. Fernandez

In order to complete your submission please print out a copy of your final abstract submission, sign it and fax to:

ATS Abstracts 2005
c/o Marathon Multimedia
FAX: US 507.334.0126.

[Close Window](#)