

Heather Dale Jones, M.D.

CURRICULUM VITAE

8/15/15

PROFESSIONAL CONTACT INFORMATION

Business Address Cedars-Sinai Medical Center
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EDUCATION

Bachelor of Arts in Molecular and Cell Biology, Honors **May, 1992**
University of California, Berkeley
Berkeley, California

Doctor of Medicine, Magna Cum Laude, AOA **May, 1998**
Medical College of Pennsylvania/Hahnemann University
Philadelphia, Pennsylvania

Internship/Residency in Internal Medicine **July, 1998-**
Boston Medical Center **June, 2001**
Boston, Massachusetts

Fellowship, Pulmonary and Critical Care Medicine **July, 2001-**
(Clinical) **December, 2002**
Johns Hopkins Hospital
Baltimore, Maryland

Fellowship, Pulmonary and Critical Care Medicine **January, 2003-**
(Research) **June 2006**
Pulmonary-Critical Care Medicine Branch,
National Heart, Lung, and Blood Institute,
National Institutes of Health
Bethesda, Maryland

LICENSURE

Maryland Board of Physicians (#D60373) **2002-2008**

Medical Board of California (#A99138) **2007-current**

BOARD CERTIFICATION

Diplomate in Internal Medicine **2002**

Diplomate in Pulmonary Medicine 2005

Diplomate in Critical Care Medicine 2006

PROFESSIONAL EXPERIENCE

Researcher/Lab Manager June 1992- July 1994
Laboratory of Dr. David Morgan, Department of Physiology
University of California, San Francisco
San Francisco, California

Assistant Clinical Investigator July 2006- May 2007
Pulmonary-Critical Care Medicine Branch
National Heart, Lung, and Blood Institute
National Institutes of Health, Bethesda, Maryland

Medical Director, Critical Care Intensivist Service July 2007- Present
Saperstein Critical Care Tower
Division of Pulmonary/Critical Care Medicine
Cedars-Sinai Medical Center, Los Angeles, California

Health Sciences Assistant Clinical Professor, Step II July 2009-Present
David Geffen School of Medicine
University of California, Los Angeles
Los Angeles, California

Assistant Professor of Medicine July 2014-Present
Cedars-Sinai Medical Center
Los Angeles, California

PROFESSIONAL ACTIVITIES

Professional Societies:

American College of Chest Physicians, Fellow
American Thoracic Society, Member

- *Members in Transition and Training Committee, Member*
- *Respiratory Cell and Molecular Biology Early Career Professionals Working Group, Member*

American College of Physicians, Member
World Molecular Imaging Congress, Member

Reviewer (2007-present):

Journal of Intensive Care Medicine
ICU Director

International Immunopharmacology
Medical Science Monitor

American Journal of Respiratory Cell and Molecular Biology

CSMC PROFESSIONAL ACTIVITIES

Leadership roles:

- Cedars-Sinai Medicine Sepsis Task Force: Co-chair (2010-2013)
- CS Link ICU Order Set Development Group: Co-chair (2009-2012)
- Medical Staff Leadership Development Program: Co-chair (2012-2013)
- Pharmacy and Therapeutics Committee: Vice-chair (2012-2014)
- Critical Care Committee: Co-chair (2009-2010; 2012-2013)
- CRRT Usage Oversight Committee, Co-chair (2013-2014)
- MICU Clinical Efficiency Working Group, Co-chair (2013-2014)
- MICU Sedation Protocol Working Group, Chair (2014-Present)

Active member:

- 7 Saperstein MD/RN Collaboration

HONORS/AWARDS

Undergraduate School:

I.L. Chaikoff Award for Outstanding Undergraduate Research in Molecular and Cell Biology
President's Undergraduate Research Fellowship
Honors in Molecular and Cell Biology
Distinction in General Scholarship

Medical School (academic):

Alpha Omega Alpha Honor Medical Society
Maurice C. Clifford, M.D. Leadership Award
Dr. Judith Mausner Award for excellence in Community Medicine
Shuman Award for excellence in Pathology and Laboratory Medicine
Winnifred B. Stewart Memorial Prize for excellence in Psychiatry
The Women's Health Education Award for excellence in Women's Health
Janet M. Glasgow Memorial Achievement Citation of the AMWA

RESEARCH GRANTS

Ongoing Research Support:

NIH/NHLBI 1K08HL125806-01 (\$138,051/yr) **2014-2015**
IL-1beta in the Development of Hypoxemia in Acute Lung Injury
Goal: Determine the mechanisms of IL-1b-dependent hypoxemia in a two-hit murine model of acute lung injury.
Role: PI (75% effort)

Plum Foundation (\$25,000) **2015-2016**
Understanding the Role of the Pulmonary Vasculature in the Development of Severe Hypoxemia During Acute Lung Injury
Goal: Determine the mechanisms of vascular dysregulation during acute lung injury.
Role: PI

Completed Research Support:

- Breathe LA Foundation** (\$3000) **2009-201**
Yoga as an adjunctive therapy in COPD
Goal: To determine whether instruction in gentle yoga improves symptoms in patients with COPD who are participating in a pulmonary rehabilitation program.
Role: PI
- NIH/NCRR RR00425 General Clinical Research Center** (\$30,000) **2007-200**
The use of traditional acupuncture for sedation and analgesia in mechanically ventilated *patients*.
Goal: Evaluated the efficacy of daily acupuncture as an adjunctive therapy to sedatives and analgesics in patients requiring mechanical ventilation.
Role: PI
- CSMC Research Institute/Eigler-Mann-Whiting Grant Award** (\$30,000) **2011-201**
Acute Lung Injury and Ventilation induced Lung Injury and Modulation of Lung Inflammation.
Goal: Assessed the effects of immunomodulators in VILI. Supported the data used for my NIH KL2 award.
Role: PI
- Plum Foundation** (\$25,000) **2012-201**
Dissecting the Role of the Inflammasome in Acute Respiratory Distress Syndrome
Goal: Determine if inhibitors of the NLRP3 inflammasome or IL-1 β attenuate VILI.
Role: PI
- Plum Foundation** (\$35,000) **2013-201**
Dissecting the Mechanism of Severe Hypoxemia in Acute Respiratory Distress Syndrome
Goal: Determine which factors are responsible for hypoxemia in VILI with sepsis
Role: PI
- NIH/NCRR/NCATS UCLA CTSI UL2TR000122 (\$15,000)** **2012-201**
Acute Lung Injury and Effects of NAMPT and NAM in Modulating Lung Inflammation
Goal: Explore the role of nicotinamide and NAMPT in a mouse model of VILI.
Role: PI
- NIH/NCATS UCLA CTSI UL1TR000124 (KL2) (\$123,250/yr)** **2013-201**
Role of IL-1 β and the NLRP3 Inflammasome in the Development of Hypoxemia in Acute Lung Injury
Goal: Explore the role of IL-1 β and the NLRP3 inflammasome in hypoxemia in ventilator-induced lung injury (VILI) with sepsis.
Role: PI (75% effort)
- NIH/NCATS UCLA CTSI UL1TR000124 (core voucher) (\$10,000)** **2014-201**
Using in vivo imaging to determine the mechanism of IL-1 β -dependent hypoxemia in ARDS
Goal: Develop in vivo imaging method to map IL-1 β -dependent pulmonary perfusion and ventilation mismatching in a murine two-hit model of acute lung injury.
Role: PI

RESEARCH INTERESTS

Acute Lung Injury/ARDS: I developed mouse model of ventilator-induced acute lung injury that I am using to study the role of apoptosis and innate immune system in the

pathogenesis of acute lung injury. I received an NIH K08 career development award in December 2014 to support this research.

Lung Imaging: I am collaborating with Dr. Andreas Fouras at Monash University in Melbourne, Australia to utilize novel lung imaging technologies to determine the mechanisms of hypoxemia in acute lung injury.

LECTURES AND PRESENTATIONS (Cedars-Sinai)

- 3/27/2008 "Hemoptysis" House Staff Grand Rounds
- 6/18/2008 "Sedation in Mechanically Ventilated Patients in the Intensive Care Unit"
Pulmonary Grand Rounds
- 1/27/2009 "Acute Asthma in the ICU" Resident Noon Lecture
- 3/16/2009 "COPD" Medical Student Lecture
- 3/30/2009 "Reading Chest X-rays" Nursing Education Lecture
- 3/24/2009 "Weaning from Mechanical Ventilation" Thoracic Surgery Lecture
- 5/12/2009 "Acute Asthma in the ICU" Resident Noon Lecture
- 7/10/2009 "Ventilator Emergencies" House Staff Grand Rounds
- 7/23/2009 "Reading Chest X-rays" Nursing Education Lecture
- 8/11/2009 Resident Morning Report, Guest Expert
- 8/26/2009 "Reading Chest X-rays" Nursing Education Lecture
- 9/16/2009 "Pneumonia" Medical Student Lecture
- 1/27/2010 "Ventilator Management" Resident Noon Lecture
- 3/15/2010 "Obstructive Lung Disease" Medical Student Lecture
- 8/6/2010 "Ventilator Emergencies" House staff Grand Rounds
- 9/15/2010 "Pneumonia" Medical Student Lecture
- 12/16/2010 "Weaning from Mechanical Ventilation" Resp Therapy Lecture
- 8/1/2011 "Ventilator Emergencies" House Staff Grand Rounds
- 9/21/2011 "Pneumonia" Medical Student Lecture
- 12/16/2011 "Weaning from Mechanical Ventilation" Resp Therapy Lecture
- 1/4/2012 "Weaning from Mechanical Ventilation" Resp Therapy Lecture
- 1/12/2012 "Acute Respiratory Distress Syndrome and the role of Nicotinamide
and NAMPT in Modulating Lung Inflammation" poster, Cedars-Sinai
Research Day, Cedars-Sinai Medical Center
- 3/16/2012 "Code Sepsis Reduces Mortality" Cedars-Sinai Medicine Council
- 4/3/2012 "Modulation of Acute Lung Injury due to Mechanical Ventilation by
Nicotinamide (Vitamin B3)" Immunology 'Research in Progress' Lecture
- 5/10/2012 "Ventilator-induced Lung Injury is Mediated by NLRP3 Inflammasome"
Arditi Lab Journal Club
- 6/26/2012 "Ventilator Emergencies" House Staff Grand Rounds
- 9/19/2012 "Pneumonia" Medical Student Lecture
- 9/27/2012 "Effects of Nicotinamide Treatment in Acute Lung Injury" Clinical Scholars
Research Presentation
- 11/30/2012 "Beyond Rivers: Sepsis Treatment in 2012" Medicine Grand Rounds
- 3/18/2013 "Obstructive Lung Disease" Medical Student Lecture
- 5/14/2013 "Role of IL-1 β in Hypoxemia in Acute Lung Injury"
Immunology 'Research In Progress' lecture
- 5/16/2013 "Management of Sepsis" ICU RN lecture
- 5/29/2013 "Pneumonia" Medical Student Lecture
- 7/9/2013 "Role of IL-1 β in the Development of Hypoxemia in Acute Lung Injury"
Clinical Scholars Program Research in Progress Presentation
- 7/19/2013 "Ventilator Management" House Staff Grand Rounds

- 1/17/2014 "Role of the NLRP3 Inflammasome in Hypoxemia in Acute Lung Injury" (poster) Cedars-Sinai Research Day 2014, Cedars-Sinai Medical Center
- 1/21/2014 "Applying for Grants: Experiences and Lessons Learned" panel speaker, Clinical Scholars Program lecture and discussion
- 2/11/2014 "Role of IL-1 β in the Development of Hypoxemia in Acute Lung Injury" Women's Guild Lung Institute Research in Progress lecture
- 3/17/2014 "COPD" Medical Student Lecture
- 7/1/2014 "Ventilator Emergencies" House Staff Emergencies Series Lecture
- 8/19/2014 "Determining the mechanisms of hypoxemia in acute lung injury" Cedars-Sinai Women's Guild Lung Institute, Research In Progress
- 10/24/2014 "The NLRP3 Inflammasome is Required for the Development of Hypoxemia in an LPS/Mechanical Ventilation Model of Acute Lung Injury" Endocrinology Research-In-Progress lecture
- 12/17/2015 Housestaff Morning Report: "Sedation in the ICU"
- 12/18/2015 "Sedation in the ICU" MD/RN Collaboration ICU Lecture Series (am shift)
- 2/16/2015 "Sedation in the ICU" MD/RN Collaboration ICU Lecture Series (pm shift)

LECTURES AND PRESENTATIONS (Outside Institutions)

- 11/18/2010 "COPD and Yoga" Webinar presentation for BreatheLA COPD Awareness Day webinar
- 5/24/2012 "Nicotinamide Inhibits Neutrophil Infiltration of the Lungs in Ventilator-induced Lung Injury but Does Not Improve Survival" (poster) ImmunologyLA , Skirball Cultural Center, Los Angeles
- 8/9/2012 "Hemoptysis" Pulmonary Fellows' lecture, VA Hospital, Los Angeles
- 10/22/2012 "Nicotinamide Inhibits Neutrophil Infiltration of the Lungs in Ventilator-induced Lung Injury but Does Not Improve Survival" (oral presentation) American College of Chest Physicians CHEST conference, Atlanta, GA
- 10/30/2012 "Nicotinamide Inhibits Neutrophil Infiltration of the Lungs in Ventilator-induced Lung Injury but Does Not Improve Survival" (poster) Oppenheimer Research Day, UCLA, Los Angeles
- 5/23/2013 "Role of the NLRP3 Inflammasome in Hypoxemia in Acute Lung Injury" (poster) ImmunologyLA , Skirball Cultural Center, Los Angeles
- 6/22/2013 "Role of IL-1 β in Acute Lung Injury" Plum Foundation Board Meeting Research in Progress presentation, Los Angeles
- 12/17/2013 "Role of the NLRP3 Inflammasome in Hypoxemia in Acute Lung Injury" UCLA CTSI CREST Committee Presentation, UCLA, Los Angeles
- 4/10/2014 "The NLRP3 Inflammasome is Required for the Development of Hypoxemia in an LPS/Mechanical Ventilation Model of Acute Lung Injury" (poster) Translational Science 2014, Washington, DC.
- 4/22/2014 "The Role of IL-1b in the Development of Hypoxemia in a Murine Model of Acute Lung Injury" (invited speaker) LA Lung Day, CSMC, Los Angeles
- 7/22/2014 "Imaging perfusion patterns in acute lung injury" Research in Progress at the Saban Research Institute, Children's Hospital, Los Angeles.
- 6/19/2015 "The Role of the NLRP3 Inflammasome in the Development of Hypoxemia During Acute Lung Injury" Pulmonary Grand Rounds, University of California, Los Angeles.

6/13/2015 "Understanding the Role of the Pulmonary Vasculature in the Development of Severe Hypoxemia During Acute Lung Injury" Plum Foundation Board, Beverly Hills, CA

TEACHING/MENTORING ACTIVITIES

- 2007-2009 Allison Kole, MD (Pulmonary fellow): mentored in development and implementation of IRB pilot study of yoga as an adjunctive therapy in COPD; obtained small private grant from BreatheLA to fund project
- 2010-2013 Eugene Yeh, MD (Internal Medicine resident): mentored in data analysis, preparation, submission/revision of original research manuscript "A preliminary investigation on the acceptance and feasibility of acupuncture in the intensive care unit" (published in ICU Director 2013)
- 2012 Francine Kim (undergraduate summer student): supervised in laboratory research and brought on ICU rounds for 2 weeks
- 2013 Laura Schweiger (high school summer student): supervised in laboratory research project, wrote letter of support for college applications
- 2014-2015 Anna Skor, MD (Pulmonary fellow): Co-mentored in translational research with Dr. Barry Stripp, teaching mouse techniques and providing career guidance
- 2014-Present Chidinma Chima-Oreke, MD (Pulmonary fellow): Co-mentoring in translational research project with Dr. William Parks, supervising research project using my two-hit model of acute lung injury to study long-term effects on macrophages; member of Research Supervisory Committee
- 2014-Present Jeena Yoo, MD (Internal Medicine resident): Mentoring during elective blocks in translational research and providing career guidance; Jeena's work during her research block has led to her becoming an author on my most recent paper (PLOSOne, in press)
- 2015-Present Jeneike Allen (PhD candidate): Clinical mentor and thesis advisory committee member; I am working with Jeneike to apply my model of ventilator-induced lung injury in her area of interest, TIMP1 regulation of inflammation in the lung

BIBLIOGRAPHY/PUBLICATIONS:

Research Papers:

A. Peer Reviewed

1. Drubin D.G., **Jones H.D.**, Wertman K.F. Actin structure and function: roles of mitochondrial organization and morphogenesis in budding yeast and

- identification of the phalloidin-binding site. *Molecular Biology of the Cell* 4:1277-94 (1993)
2. **Jones H.D.**, Schliwa M., Drubin D.G. Videomicroscopy of organelle inheritance and motility in budding yeast. *Cell Motility and the Cytoskeleton* 25:129-142 (1993)
 3. DeBondt H.L., Rosenblatt J., Jancarik J., **Jones H.D.**, Morgan D.O., Kim S.H. Crystal structure of cyclin-dependent kinase 2. *Nature* 363:595-602 (1993)
 4. Shulze-Gahmen U., Brandsen J., **Jones H.D.**, Morgan D.O., Meijer L., Vesely J., Kim S.H. Multiple modes of ligand recognition: crystal structures of cyclin-dependent kinase 2 in complex with ATP and two inhibitors, olomoucine and isopentenyladenine. *Proteins* 22:378-91 (1995)
 5. Srinivasan A., Wolfenden L., Song X., Mackie K., Hartsell T., **Jones H.D.**, Diette G., Orens J., Yung R., Ross T., Merz W., Scheel P., Haponik E., and Perl T. An Outbreak of *Pseudomonas aeruginosa* Infections Associated with Flexible Bronchoscopes. *N Engl J Med.* 348:221-7 (2003)
 6. Citterio, C., **Jones, H.D.**, Pacheco-Rodriguez, G., Moss, J., and Vaughan, M. Effect of protein kinase A on accumulation of brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1) in HepG2 cell nuclei. *Proc. Natl. Acad. Sci.* 103:2683-8 (2006)
 7. Islam A, **Jones H.D.**, Hiroi T, Lam J, Zhang J, Moss J, Vaughan M, Levine SJ: cAMP-dependent PKA signaling induces TNFR1 exosome-like vesicle release via anchoring of PKA regulatory subunit RIIbeta to BIG2. *J. Biol. Chem.* 283:25364-71 (2008)
 8. Limusukon, A., **Jones, H.D.**, Gladstein, J. A 60-year-old Japanese man with fevers, myalgias, pharyngitis, and right knee pain. *Chest* 136:1428-31 (2008)
 9. SungHee Kole A, **Jones H.D.**, Christensen R, Gladstein, J. A case of Kombucha tea toxicity. *J Intensive Care Med.* 24:205-7 (2009)
 10. Yeh E, Mirocha J, Brantman A, Ma X, Qiao Y, Bairey Merz CN, **Jones HD.** A preliminary investigation on the acceptance and feasibility of acupuncture in the intensive care unit. *ICU Director* 4:82-7 (2013)
 11. Jupelli M, Shimada K, Chiba N, Slepentin A, Alsabeh R, **Jones HD**, Peterson E, Chen S, Arditi M, Crother TR. Chlamydia pneumoniae infection in mice induces chronic lung inflammation, iBALt formation, and fibrosis. *PLoS One* 8:e77447 (2013)
 12. Hsieh E, Oh SS, Chellappa P, Szeftel R, **Jones HD.** Management of autism in the adult intensive care unit. *J Intensive Care Med.* 29:47-52 (2014)
 13. **Jones HD**, Crother TR, Gonzalez-Villalobos RA, Jupelli M, Chen S, Dagvadorj J, Arditi M, Shimada K. The NLRP3 Inflammasome Is Required for

the Development of Hypoxemia in LPS/Mechanical Ventilation Acute Lung Injury. *Am J Respir Cell Mol Biol* 50: 270-280 (2014)

14. Chiba N, Shimada K, Chen S, **Jones HD**, Alsabeh R, Slepkin AV, Peterson E, Crother TR, Arditi M. Mast Cells Play an Important Role in Chlamydia pneumoniae Lung Infection by Facilitating Immune Cell Recruitment into the Airway. *J Immunol* (2015, Epub)
15. Tumurkhuu G, Dagvadorj J, **Jones HD**, Chen S, Shimada K, Crother TR, Arditi M. Alternatively Spliced Myeloid Differentiation Protein-2 Inhibits TLR4-Mediated Lung Inflammation. *J Immunol* 194:1686-94 (2015).
16. Dagvadorj J, Shimada K, Chen S, **Jones HD**, Tumurkhuu G, Zhang W, Wawrowsky KA, Crother TR and Arditi M. Lipopolysaccharide induces alveolar macrophage necrosis via CD14 and the P2x7 receptor leading to Interleukin 1- α release. *Immunity* 2015; 42(4):640-53.
17. **Jones HD**, Yoo J, Crother TR, Kyme P, Ben-Shlomo A, Khalafi R, Tseng C, Parks WC, Arditi M, Liu G, Shimada K. Nicotinamide exacerbates hypoxemia in ventilator-induced lung injury independent of neutrophil infiltration. *PLoS One*. 2015 PubMed PMID: 25875775

Chapters

1. **Jones H.D.** and Mosenifar Z. "Preoperative assessment of high-risk patients for lung cancer resection." In: Lewis M. and McKenna R., eds. *Medical Management of the Thoracic Surgery Patient*. Philadelphia, PA: Elsevier; 2009:288-292.

Letters To The Editor:

1. **Jones H.**, Aguila E., Farber H.W. Gabapentin toxicity requiring intubation in a patient receiving long-term hemodialysis. *Ann Intern Med*. 137:74 (2002)

Reviews:

1. **Jones H.D.**, Moss, J., and Vaughan, M. BIG1 and BIG2, Brefeldin A-Inhibited Guanine Nucleotide-Exchange Factors for ADP-Ribosylation Factor. *Methods in Enzymology*, 404:74-184 (2005)
2. Filie, A., and **Jones, H.** Metastatic Carcinoma in Effusion: Query Primary Site. *Pathology Case Reviews*. 11(2):74-77 (2006)

Abstracts:

1. **Jones H.D.**, Kutty Y., Kushner H., and Falkner B.F. Preventive medicine in women's health: low rates of screening for psychosocial risk factors. (research project from Oct 1996-May 1998; results selected for oral presentation at the National Medical Student Research Forum, Galveston, Texas, April 1997).

2. **Jones H.D.**, Xu K.F., Moss J., and Vaughan M. Regulation of Vesicular Trafficking by ADP-Ribosylation Factors (ARFs): Evidence for Molecular Interaction of Guanine-nucleotide Exchange Proteins, BIG1 and BIG2. Presented at the American Thoracic Society Conference, May 2006.
3. Kole A., **Jones H.D.**, Christensen R., and Gladstein J. A Case of Kombucha Tea Toxicity. Selected for oral presentation at American College of Chest Physicians Conference, Philadelphia, PA, October 2008.
4. Limuskon A., **Jones H.D.**, Feinstein J. A fulminant case of Adult-Onset Still's Disease with pulmonary capillaritis and pleuropericarditis. Selected for oral presentation at American College of Chest Physicians Conference, Philadelphia, PA, October 2008.
5. Bloom M., **Jones H.D.**, Borenstein J, Mirocha J., Snodgrass K., Cat T., Ohri A., Tareen A., Bukur M., Marguiles D., Salim A., Ley E. Implementation of Code Sepsis Reduces Delay in Antibiotic Administration in Critically Ill Floor Patients. American Association for the Surgery of Trauma Meeting, Kauai, Hawaii 2012 (accepted for poster presentation).
6. **Jones HD**, Kyme P., Liu G., Arditi M. Nicotinamide inhibits neutrophil infiltration of the lungs in ventilator-induced lung injury but does not improve survival. American College of Chest Physicians Conference, Atlanta, GA 2012 (accepted for oral presentation).