

# ATS Highlights 2024: Critical Care Assembly Early Career Professionals



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## ***Tell us about yourself.***

I am from Mumbai, India, where I trained in Paediatrics and Critical Care; thereafter made my way to Sickkids, Toronto for further training in Critical Care and completed a PhD from University of Toronto studying Ventilator-Induced Lung Injury. I am now a faculty in Paediatric Critical Care Medicine, Washington University in St Louis.

## ***Tell us about your research.***

My research focuses on understanding lung injury in critical illness as well as development of personalized strategies of lung protection in mechanically ventilated patients. To that end, I use large animals to develop translationally relevant models of ARDS and deploy advanced cardio-respiratory tools to understand pathophysiology.

## ***Where do you see yourself in 5 years?***

In next 5 years, I plan to develop a multi-disciplinary research program, encompassing basic-through-clinical; deploying tools like Electrical Impedance Tomography/esophageal balloon manometry as well as understanding the physiologic and biologic heterogeneity of ARDS.

## ***How has the Critical Care Assembly contributed to your career?***

Assembly is a great place for networking and developing collaborations



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## *Selected published work:*

Sousa MLA, **Katira BH**, Bouch S, Hsing V, Engelberts D, Amato MBP, post M, Brochard L. Limiting overdistension or collapse with mechanical ventilation of injured lungs; a porcine study. *American Journal of Respiratory and Critical Care Medicine* doi: 10.1164/rccm.202310-1895OC, 2024

Shah N, **Katira BH**. Role of cardiopulmonary interactions in development of ventilator-induced lung injury-Experimental evidence and clinical Implications *Front Physiol*. 2023 Jul 18;14:1228476.

Kneyber MCJ, Khemani RG, Bhalla A, Blokpoel RGT, Cruces P, Dahmer MK, Emeriaud G, Grunwell J, Ilia S, **Katira BH**, Lopez-Fernandez YM, Rajapreyar P, Sanchez-Pinto LN, Rimensberger PC. Understanding clinical and biological heterogeneity to advance precision medicine in paediatric acute respiratory distress syndrome. *Lancet Respir Med*. 2023 Feb;11(2):197-212.

**Katira BH**, Engelberts D, Bouch S, Fliss J, Bastia L, Osada K, Connelly KA, Amato MBP, Ferguson ND, Kuebler WM, Kavanagh BP, Brochard LJ, Post M. Repeated Endo-Tracheal Tube Disconnection generates Pulmonary Edema in a Model of Volume Overload, an Experimental Study. *Critical Care* 26(1):47, 2022

**Katira BH\***, Kohei Osada\*, Engelberts D, Bastia L, Damiani FL, Li X, Chen H, Yoshida T, Amato MBP, Ferguson ND, Post M, Kavanagh BP, Brochard LJ. Positive End-Expiratory Pressure, Pleural Pressure, and Regional Compliance during Pronation: An Experimental Study. *American Journal of Respiratory and Critical Care Medicine* 203 (10): 1266-1274, 2021

Telias I, **Katira BH**, Brochard L. Is Prone Position Helpful During Spontaneous Breathing in Patients with COVID-19. *JAMA* Editorial 323(22):2265-2267, 2020

**Katira BH**, Engelberts D, Otulakowski G, Giesinger RE, Yoshida T, Post M, Kuebler WM, Connelly KA, Kavanagh BP. Abrupt deflation after sustained inflation causes lung injury. *American Journal of Respiratory and Critical Care Medicine* 198 (9): 1165-1176, 2018

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