



Preclinical Models of Acute Lung Injury (ALI)

Acute Lung Injury (ALI)

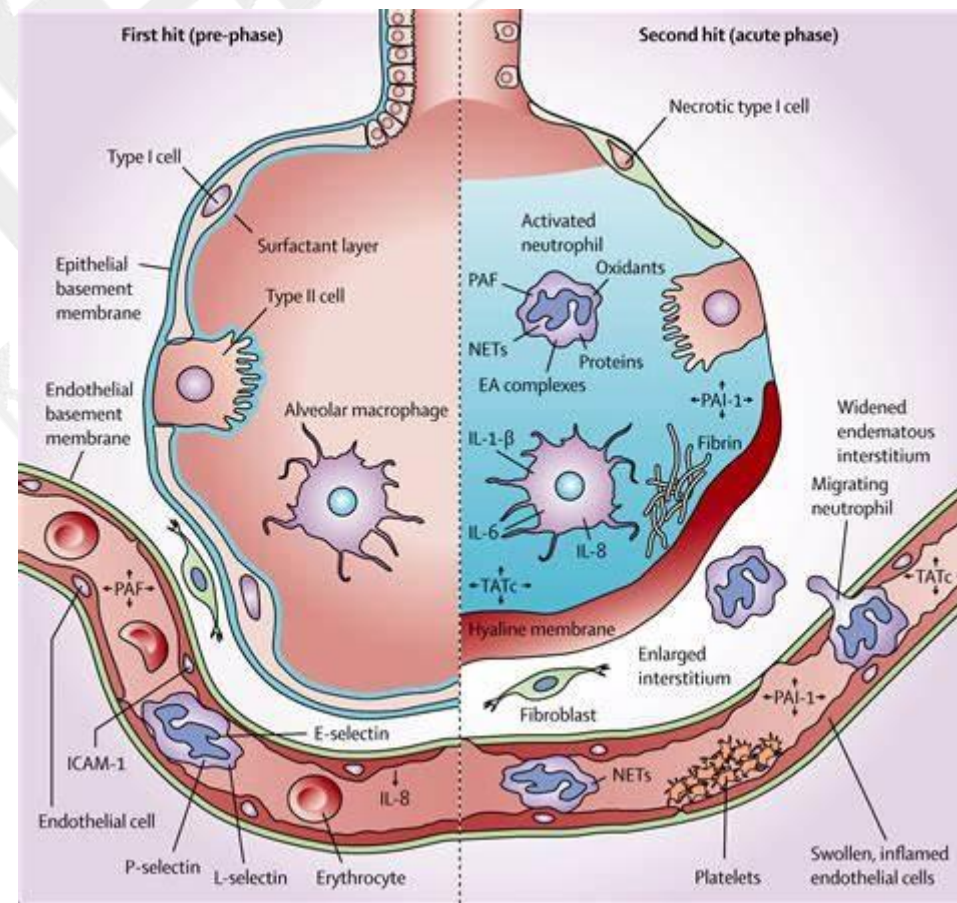
Symptoms and Causes

Acute lung injury (ALI) remains a significant source of morbidity and mortality in the critically ill patient population. Defined by a constellation of clinical criteria (acute onset of bilateral pulmonary infiltrates with hypoxemia without evidence of hydrostatic pulmonary edema).

The most commonly encountered potential etiologic disorders include infection, collagen vascular disease, drug toxicity, and an idiopathic form.

Models in place:

■ LPS Induced ALI Mouse Model



LPS Induced ALI Model in BALB/c Mice

■ Mechanism

Lipopolysaccharide (LPS) is a key constituent of Gram-negative bacterial cell walls. When delivered into animals and humans, LPS exposure displays major features of microvascular lung injury, including leukocyte accumulation in lung tissue, pulmonary edema, profound lung inflammation and mortality .

An LPS-induced animal model should reproduce the acute injury to the epithelial and endothelial barriers in the lungs and the acute inflammatory response in the air spaces by either inhalation or systemic (intravenous and intraperitoneal) administration within a short period (usually no more than 48 h). LPS-induced injury is a very useful experimental in vivo model closely resembling ALI/ARDS in humans.

■ LPS Induced Model in BALB/c Mice



Animal	BALB/c
	Cell: Lymphocytes, neutrophils, macrophages
Evaluation	Cytokine: MCP-1, IL-6, IL-10
	Pathology: HE&IHC staining

LPS Induced ALI Model in BALB/c Mice

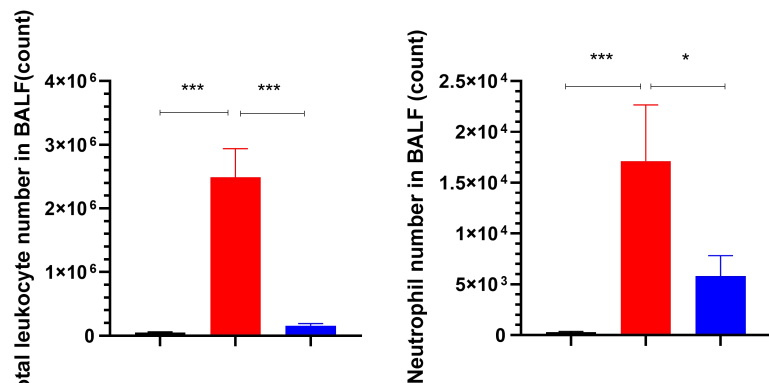


Fig1. Cells in BALF

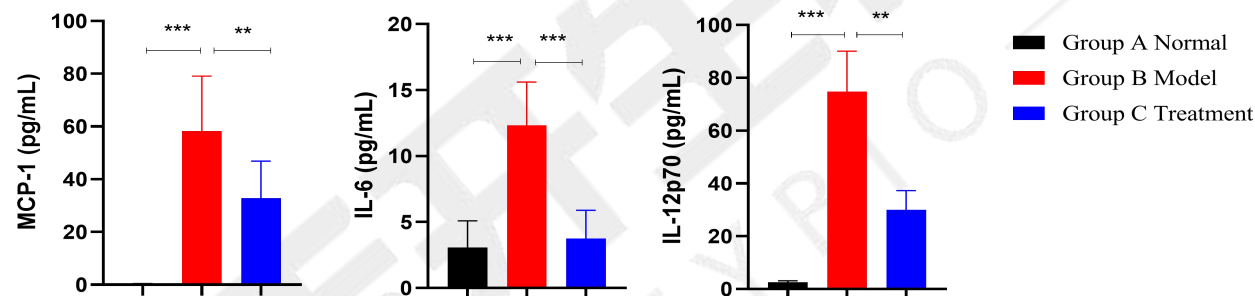


Fig2. Cytokines in Serum

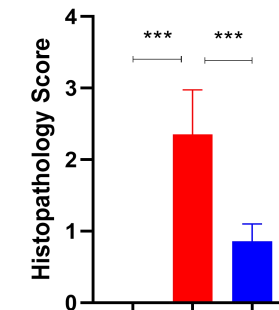


Fig4. HE

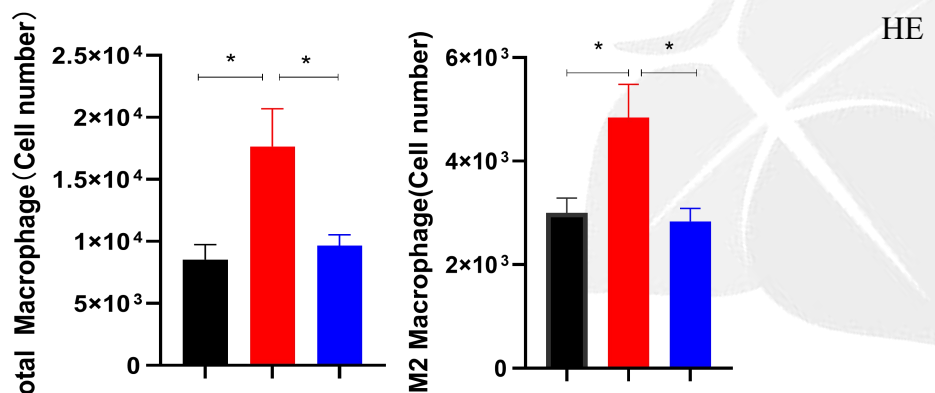


Fig3. IHC

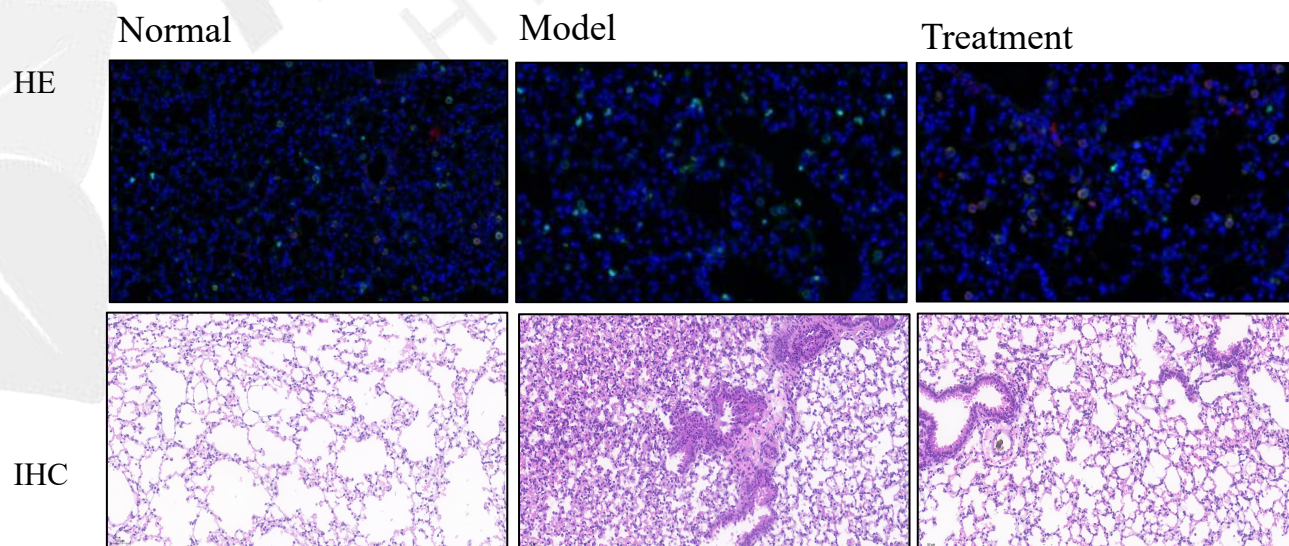


Fig5. Typical pathological images



禾开生物

— HKEYBIO —

Our Sites

Non-human Private Center: Guangxi
Analysis Center: Suzhou
Rodent Center: Suzhou



WeChat

Hkeybio Tech.

Website: www.hkeybio.com

Email: info@hkeybio.com