

# 幼稚单核细胞在体外循环 相关急性肺损伤中发挥作 用的机制研究

资助项目：

国家自然科学基金（No. 81070203， No. 81270327）

完成单位：

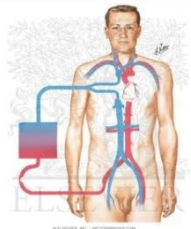
北京安贞医院心脏危重症中心

北京地坛医院传染病研究所



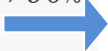
邢智辰  
北京安贞医院

# Cardiopulmonary bypass (CPB)



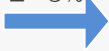
体外循环-人工心肺机

>90%



急性肺损伤 (Acute lung injury, ALI)

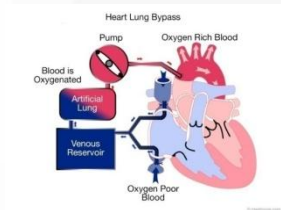
2-3%



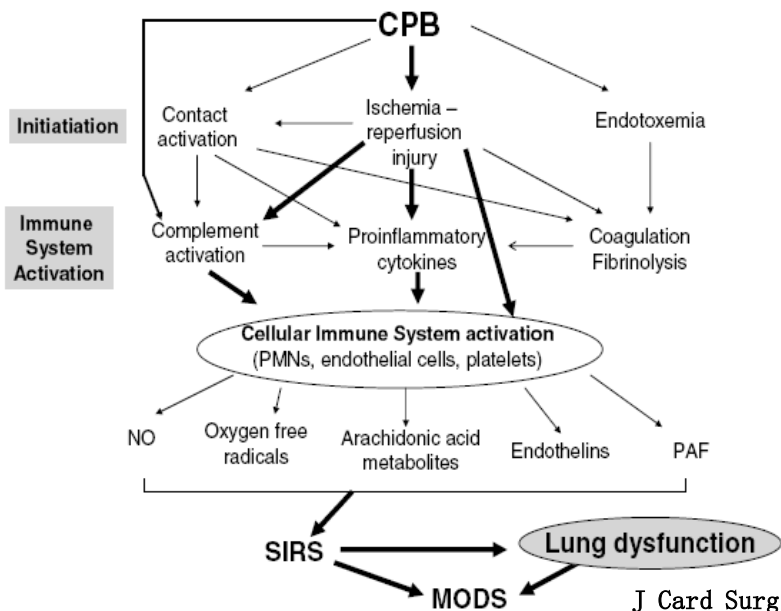
急性呼吸窘迫综合症  
(Acute respiratory distress syndrome,  
ARDS)



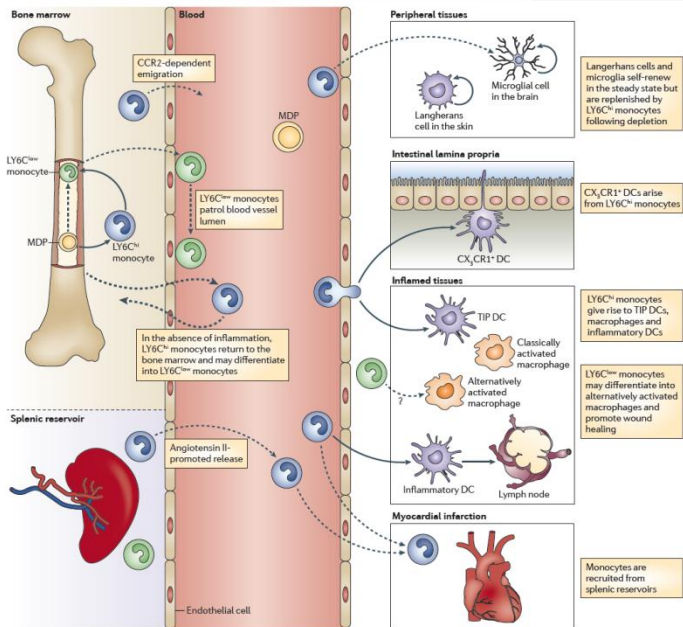
死亡率15-72% 永久性肺纤维化



# CPB-related ALI and SIRS



# Monocytes in acute injury or infection



1. CPB是如何对单核细胞的分布产生影响的

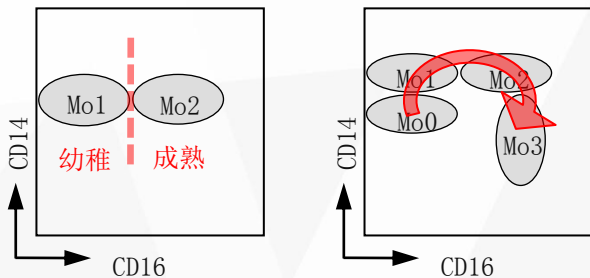
2. 不同种类单核细胞对急性肺损伤的作用是什么



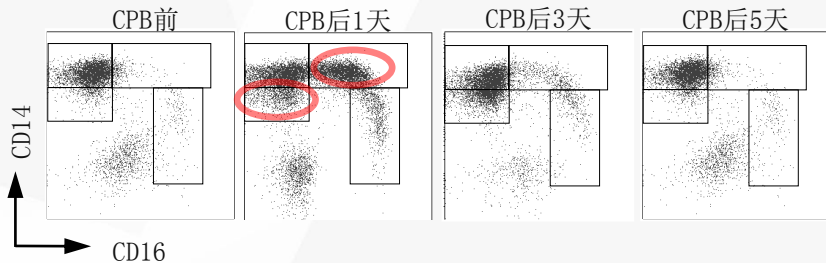
**CCIC**

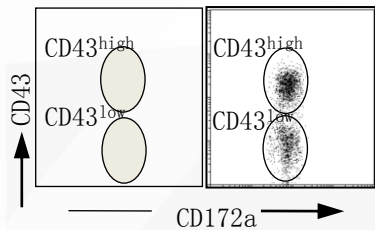
Anzhen Hospital, CCMU

示意图



动态观察

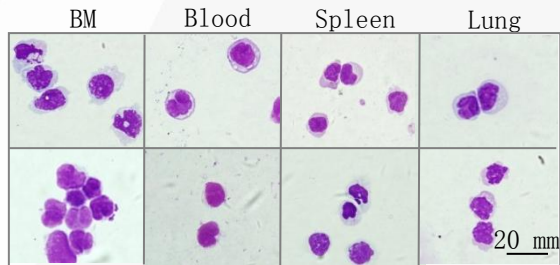


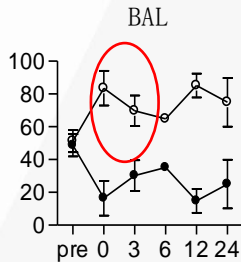
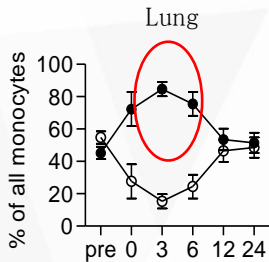
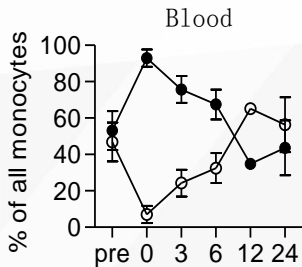


## 大鼠单核细胞的鉴定

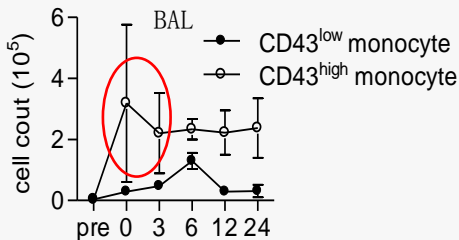
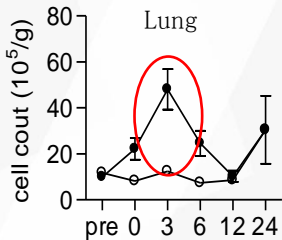
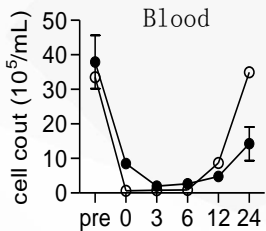
CD43<sup>low</sup>  
monocyte

CD43<sup>high</sup>  
monocyte



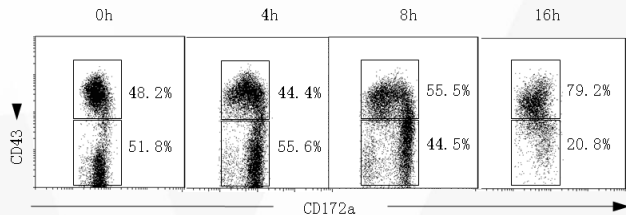


Time (hours post-CPB) →

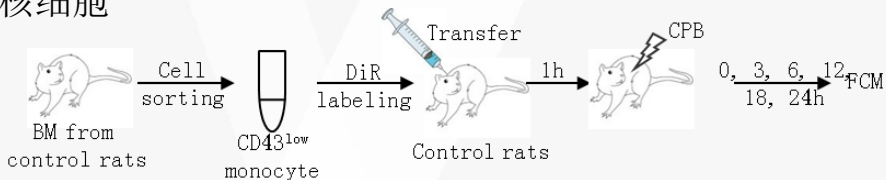




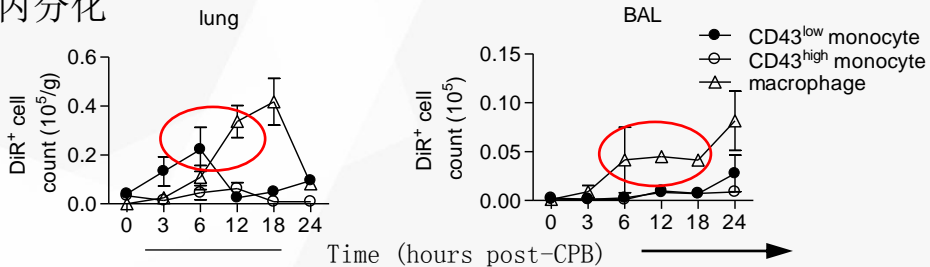
## 单核细胞体外分化



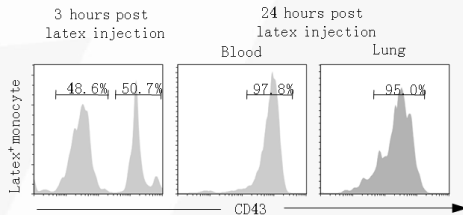
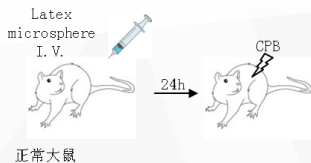
## 标记幼稚单核细胞



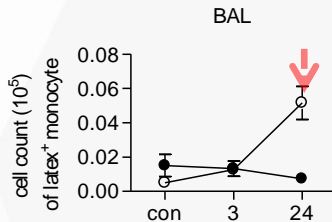
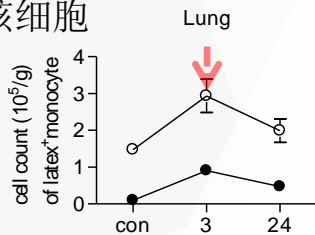
## 单核细胞体内分化



## 标记成熟单核细胞



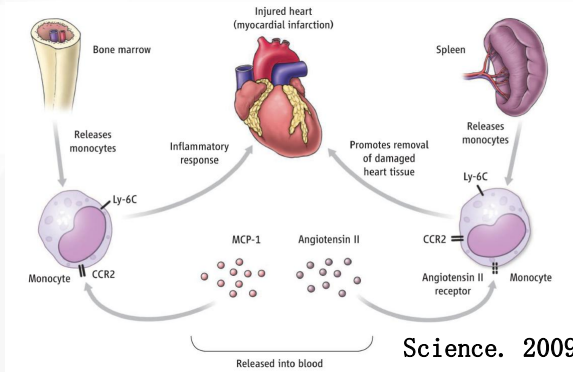
## 标记成熟单核细胞



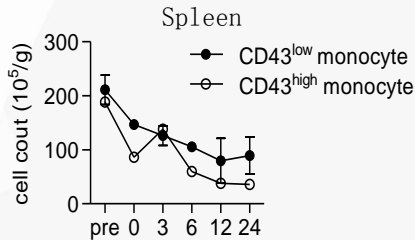
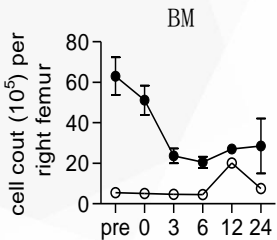
○ CD43<sup>high</sup> monocyte

● CD43<sup>low</sup> monocyte

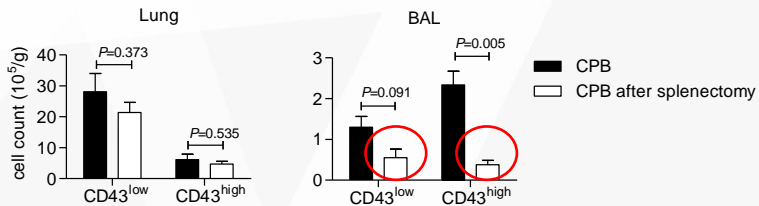
Time (hours post-CPB) →



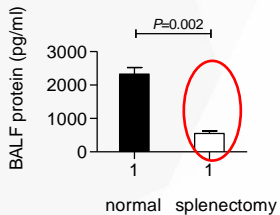
Science. 2009 July 31; 325(5940): 549 - 550.



Time (hours post-CPB) →

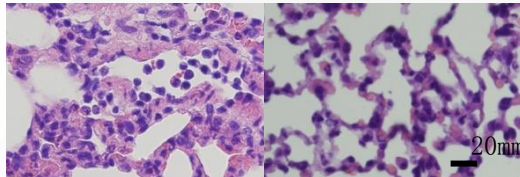


6h post-CPB

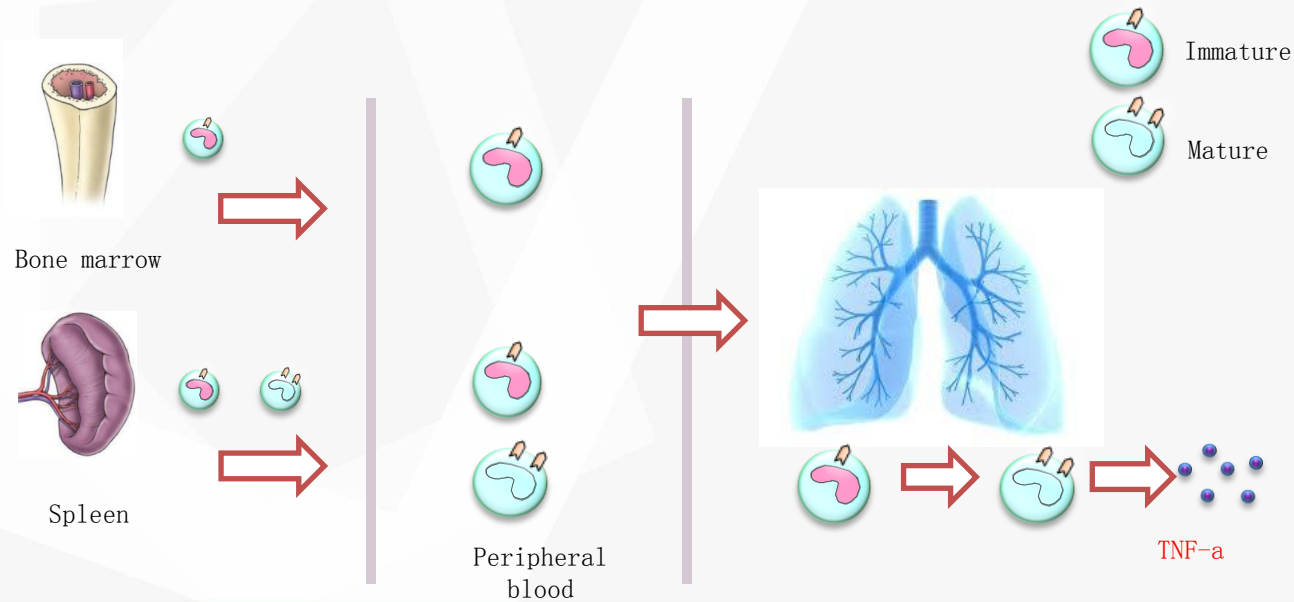


CPB 6h

CPB 6h + splenectomy



# Summary





CCIC  
Anzhen Hospital, CCMU



Thanks