

Wednesday, September 16, 2015

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

12-1pm



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“New insights into the pathogenesis of Transfusion Related Acute Lung Injury (TRALI): A mouse’s tale.”

Transfusion-related acute lung injury (TRALI) denotes lung injury soon after a patient receives a blood transfusion. With a death rate of 5-14%, TRALI has recently been ranked as the leading cause of transfusion-related death; recent clinical studies have also suggested that approximately 3-5% of all deaths in cardiac surgery patients are due to TRALI-like lung complications. The mechanisms of how TRALI occurs are not completely clear, but substances within the blood product are thought to be the main factors involved. It appears that the majority (approximately 85%) of cases of TRALI are associated with the transfusion of antibodies that react with cells within the patient's lungs. This interaction causes the cells to become activated and release substances that damage the lung tissue. Perhaps more intriguing is that many units that cause TRALI in one recipient, do not cause lung injury in others indicating that recipient factors also play a role. Murine models of TRALI have been instrumental in dissecting out some of the pathogenic mechanisms of antibody- and non-antibody-mediated TRALI, however, they have also generated controversy because of contrasting results. This lecture will review the current state of the literature on the pathologic mechanisms that lead to human TRALI and particularly focus on murine models of TRALI.

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