Progress in understanding the pathogenesis of BPD using the baboon and sheep models.

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ABSTRACT:

Bronchopulmonary dysplasia (BPD) is among the most common chronic lung diseases in infants in the US. Improved survival of preterm infants who developed BPD is becoming increasingly important because of the high risk for persistent pulmonary morbidities such as poor respiratory gas exchange, pulmonary hypertension, and excess airway expiratory resistance later in life. This review focuses on unique insights provided by the two large-animal, physiological models of neonatal chronic lung disease: preterm baboons and preterm lambs. The models' are valuable because they contribute to better understanding of the underlying molecular pathogenic mechanisms. An epigenetic hypothesis is proposed as a pathogenic mechanism for BPD and its persistent pulmonary morbidities.

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