## 7.12 A Systematic Review of the Contribution of Large Animal Ex Vivo Lung Perfusion Models to Lung Transplantation Research, Development, and Clinical Practice.

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**Background:** A significant challenge to lung transplantation (LTx) practice is the limited number of viable donor lungs. The introduction of ex vivo lung perfusion (EVLP) has proved effective in countering this challenge. This systematic review sought to illicit the contribution of large animal models to EVLP development and application in LTx. **Methods:** Using a predefined pro forma, a strategic literature search was performed. All relevant data was extracted from included studies. Qualitative synthesis using thematic analysis was used to present key effect measures. Methodology quality and bias risk was assessed using the Modified Downs and Black Checklist. Certainty assessment was conducted using the GRADE-CERQual approach. **Results:** In total, 30 studies met predefined inclusion criteria. Identified animal models included porcine, ovine, rabbit, and canine. Key themes included EVLP as a reconditioning platform, EVLP protocol optimisation, and novel EVLP applications. **Conclusions:** The porcine model was found to be the most established EVLP research platform contributing to EVLP protocol optimisation, and overall LTx clinical outcomes. Furthermore, the porcine model holds potential to further expand the role of EVLP. **Keywords:** Lung transplantation; Ex vivo lung perfusion; Large animal model. **Funding:** This study was non-funded. **Conflict of Interest:** The authors declare no conflict of interest.