Controlled Gas Exchange in Whole Lung Bioreactors

OCR Number: OCR 7058

Description:

- A bioreactor system for whole rat lungs that controls dissolved gas levels (Fig. 1A-B). The system is able to quantify and predict the gas exchange within the bioreactor using a lumped parameter model (Fig. 1C, 2A-B).
- This system enables the maintenance of alveolar levels (100 mmHg) of dissolved oxygen for the duration of lung culture.
- The mathematical model enables non-invasive and real-time estimation of cell number and the proliferative state of lung tissue simply through dissolved oxygen measurements.


PI: Laura Niklason

Licensing Contact: Hong Peng
hong.peng@yale.edu