



Cases #646

Portable ECMO with Avian Lung Structure

Current available extracorporeal membrane oxidation (ECMO) units are expensive, not portable and leave patients confined to hospitals and requiring the care of highly trained personnel. With a growing number of end stage lung disease patients and those waiting for lung transplants, there is a critical unmet need for effective, economical and convenient lung assist devices that can be used more widely throughout the health care system.

Using their expertise in lung decellularization and recellularization, UVM researchers are taking advantage of the cross current flow architecture of avian lungs to support human lung cells for a more effective and portable gas exchange system. This ideal combination can be used for hospital based systems and can also be a part of portable or even implantable systems for long term and flexible care.

Applications:

- End stage or transplant lung support.
- Neo-natal lung assist.

Advantages:

- Increased and effective gas exchange.
- Minimization of inflammation and clotting of blood in circulation.
- Portable and implantable options for long term use.

Intellectual Property and Development Status:

US Non-Provisional Application US20160067378A1

Ready for research and development collaboration and licensing.

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