Development of Living Kidney Membrane Offers Hope to Kidney Patients

Researchers at the MIRA Research Institute and the Radboud University Nijmegen Medical Center (RUNMC) in the Netherlands recently created a living kidney membrane. To do this, they combined kidney epithelial cells (cells made of protective tissue) with an artificial membrane. Dr. D. Stamatialis led researchers at MIRA and Dr. R. Masereeuw led researchers at RUNMC to publish their shared findings in the scientific journal *Acta Biomaterialia.* Their research is part of the Bioart project under the auspices of the European Union (EU) Marie Curie Initial Training Networks (ITN). The aim of the Bioart project is to develop innovative bio-artificial devices for the treatment of kidney and liver diseases.

Researchers at MIRA and RUNMC say their particular goals are to improve dialysis techniques and create an artificial, implantable kidney. If live kidney membranes like the one they created were replicated on a wider scale, it would greatly reduce the need for dialysis and kidney donors.

However, the MIRA and RUNMC researchers did face some challenges, like how to maintain the growth of living kidney cells once removed from the body. While this may make it more difficult to replicate their breakthrough on a wider scale, doing so will be the next focus of their research. If they can successfully overcome these obstacles, their breakthrough offers much hope for kidney patients.