

## APHERESIS AND TRANSPLANTATION

### Round Table: Organ Perfusion

#### What the lung experience is telling us

#### **M. Boffini**

Perfusion techniques have had a significant impact on lung transplantation, a treatment that suffers from a lack of available organs. Among the various techniques, *ex vivo* perfusion techniques have been used to treat marginal organs or those deemed unsuitable for transplantation. With these methods it is possible to carry out a more thorough evaluation of the organ and to postpone the decision-making phase regarding the suitability for transplantation. It was also possible to increase lung transplants. During the perfusion phase it is possible to perform a careful evaluation of the lung in terms of ventilation, hemodynamic and oxygen exchange. These are discriminatory parameters for the determination of suitability for transplantation. *Ex vivo* perfusion techniques can be used as methods of safe organ manipulation, in terms of reconditioning and resuscitation of the graft. With *ex vivo* perfusion the causes that lead to a negative transplant outcome can be counteracted. Perfusion treatments were performed for the lungs with high levels of antibiotics, or by modulating the levels of inflammation mediators using sorbent systems inserted in the perfusion circuit. Performing an evaluation of the perfusate is crucial to obtain the trend of different parameters that may result in the loss of post-transplant organ dysfunction.

