Special Issue

Molecular Mechanisms of Primary Graft Dysfunction and Acute Rejection in Solid Organ Transplantation

Message from the Guest Editor

Solid organ transplantation is a lifesaving therapeutic strategy for numerous end-stage organ failures. Organ rejection is the most critical problem affecting the long-term survival of allografts, and it is determined by the activation of a host's innate and adaptive immune systems. The initial immune response leading to primary graft dysfunction (PGD) after a transplant is a consequence of the ischemia and reperfusion injury (IRI) to which grafts are exposed during procurement and implantation. Besides IRI, allo-antigen (major histocompatibility complex, MHC) recognition by immune cells also plays a role in acute rejection. This Special Issue is focused on the mechanisms involved in the development of PGD and acute rejection after IRI and allo-antigen recognition, including, but not limited to, IRI-induced changes in the cellular microenvironment, intracellular metabolic reprograming, cellular stress and death pathways, damage-associated molecular pattern (DAMP) recognition, recognition of allo-antigens by immune cells, and clinical studies with biomolecular experiments.

Guest Editor

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