Serological assay for the prediction of graft loss in kidney transplant candidates

Technology #cu14358

This technology is a serological assay that determines immunoglobulin (IgG) reactivity to apoptotic cells to assess the risk of graft loss in kidney transplant candidates.

Unmet Need: Assay that predicts kidney graft failure

Current assays that predict kidney graft failure generally focus on measuring graft dysfunction and the presence of IgG binding to human leukocyte antigen (HLA) molecules. However, repetitive sampling of the graft is invasive and dangerous. Additionally, some patients with non-rejecting grafts still exhibit a measurable IgG response to HLA molecules. As such, there is a need for additional assays for the early prediction of graft loss in kidney transplant candidates.

The Technology: Non-invasive assay that determines risk of graft failure before and after transplantation

This technology describes a serological assay that determines IgG reactivity to apoptotic cells. This technology is based on the finding that elevated levels of anti-apoptotic antibodies correlate with late transplant rejection. By providing a simple assay to determine IgG reactivity to apoptotic cells, this technology provides a non-invasive method for predicting and diagnosing transplant rejection. As such, this technology enables improved decision-making for kidney transplant candidates and provides a tool for monitoring kidney graft function in post-transplant patients.

This technology has been validated by testing the pre-transplant serum of 300 kidney transplant recipients and examining the contribution of anti-apoptotic IgG reactivity to graft outcomes.

Applications:

- Assay to predict the likelihood of transplant loss in kidney transplant candidates
- Predicting the probability of rejection in other organ transplant patients
- Target for development of therapeutics to prevent transplant rejection
Advantages:

- Non-invasive
- Complementary to existing diagnostic tests
- Predicts risk of rejection before transplantation

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Patent Information:

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Related Publications:


Tech Ventures Reference:

- IR CU14358
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