

Combined Kidney and Hematopoietic Cells for Transplantation Tolerance

Stanford researchers Robert Lowsky and Samuel Strober have developed a strategy for maintaining normal graft function without immune suppression medication. Kidney transplant recipients require lifelong use of immunosuppressants to minimize rejection risk. The side effects associated with chronic use of these medications include diabetes, heart disease, cancer, infection and renal toxicity. Moreover, recipients often experience gradual graft loss despite these drugs. Dr. Lowsky and Dr. Strober's method involves processing blood cells from the kidney transplant donor, and returning the cells for injection into the recipient after the kidney transplant so the recipient's immune system tolerates donor antigens, thereby inducing immune tolerance.

Stage of Development

Clinical Trial

Applications

- Therapeutic: end stage renal disease

Advantages

- Eliminates the side effects of maintenance anti-rejection drugs
- Prevents long-term graft loss from chronic rejection or renal toxicity

Patents

- Published Application: [20140243577](#)

- Published Application: [WO2014133729](#)
- Published Application: [20150272993](#)
- Published Application: [20170106086](#)
- Published Application: [20170119819](#)
- Published Application: [20180193380](#)
- Published Application: [20180221409](#)
- Published Application: [20180193379](#)
- Published Application: [20180221410](#)
- Published Application: [20180243337](#)
- Published Application: [20190000877](#)
- Published Application: [20180344766](#)
- Published Application: [20190083530](#)
- Published Application: [20190192561](#)
- Published Application: [20190091262](#)
- Published Application: [20190192562](#)
- Published Application: [20190298762](#)
- Published Application: [20190358257](#)
- Published Application: [20190336528](#)
- Published Application: [20200254015](#)
- Published Application: [20210196754](#)
- Published Application: [20220362291](#)
- Issued: [9,504,717 \(USA\)](#)
- Issued: [9,561,253 \(USA\)](#)
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- Issued: [10,603,340 \(USA\)](#)
- Issued: [11,040,067 \(USA\)](#)
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- Issued: [12,303,532 \(USA\)](#)

Innovators

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- Robert Lowsky

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