Docket #: S15-336

Method to prevent Graft Versus Host Disease

Researchers at Stanford have developed a method of preventing Graft versus Host Disease (GVHD) by inhibiting a specific immune receptor. GVHD is a major debilitating complication of transplantation. It accounts for a large portion of the morbidity and mortality of the procedure. Following transplantation, clinical immunosuppression with a variety of therapeutics is used to prevent GVHD. However, these therapeutics are highly toxic and non-specific. As such, more efficient therapeutics with fewer side effects are needed. To help meet this need the inventors have identified a specific immune target involved in GVHD and developed methods of inhibiting it to prevent GVHD. They developed a novel monoclonal antibody that is highly specific for the target and thus provides the means to prevent or treat GVHD with fewer side effects and better efficacy. This patented method to prevent GVHD can profoundly affect the field of transplantation by reducing costs and improving survival.

Stage of Development – Proof of Concept
The inhibitors have been tested in a mouse model of hematopoietic cell transplantation and show great promise in preventing GVHD. Additional studies are ongoing.

Applications

- Hematopoietic cell transplantation
- Solid organ transplantation

Advantages

- High specificity

- Less toxicity and fewer side effects than current methods
- Better efficacy

Publications

- Meyer, E. H., DeKruyff, R. H., Iliopoulou, P., Hsu, Y., & Cruz, M. P. (2020). U.S. Patent No. 10,669,335. Washington, DC: U.S. Patent and Trademark Office.
- Meyer, E. H., DeKruyff, R. H., Iliopoulou, P., Hsu, Y., & Cruz, M. P. (2018). U.S. Patent No. 10,093,734. Washington, DC: U.S. Patent and Trademark Office.

Patents

- Published Application: WO2017079486
- Published Application: 20170121404
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