

**Docket #:** S15-050

# **Mobilizing anti-tumor immunity by targeting chemerin receptor CCRL2**

Researchers at Stanford have developed a new, patented strategy to enhance anti-tumor immune responses to treat cancer. Cancer is the second leading cause of death in the United States and inflicts a tremendous burden on public health. Harnessing the immune system to destroy tumor cells is a promising therapeutic strategy. However, most current cancer immunotherapies selectively activate only a limited repertoire of anti-tumor immune defenses and often have incomplete efficacy. To overcome these limitations, the inventors have developed a new strategy to facilitate recruitment of anti-tumor immune cells into tumor tissue by exploiting chemerin. Chemerin is a chemoattractant that directs recruitment of anti-tumor immune cells, including NK cells. The inventors have identified a chemerin-sequestering receptor, CCRL2, which restricts chemerin-dependent recruitment of tumor fighting immune cells. This technology provides methods of inhibiting CCRL2 to enhance the anti-tumor immune response to treat cancer.

## **Stage of research**

Initial studies have shown great promise. Additional development and validation is ongoing.

## **Applications**

- Cancer immunotherapy

## **Advantages**

- New therapeutic strategy
- Facilitates anti-tumor immune defenses independent of existing immunotherapeutics

- Works through a non-checkpoint inhibitor pathway to slow tumor growth
- Synergies with emerging checkpoint inhibitor and conventional chemotherapeutic approaches
- Mobilizes the endogenous immune defenses to attract a broader and more cohesive repertoire of immune cells

## **Publications**

- Woo Jae Shin, Brian A. Zabel, Russell K. Pachynski, "[Mechanisms and Functions of Chemerin in Cancer: Potential Roles in Therapeutic Intervention](#)," *Frontiers in Immunology*, Nov 30, 2018, Vol. 9, Article 2772, doi:10.3389/fimmu.2018.02772.

## **Patents**

- Published Application: [20170002087](#)
- Issued: [9,868,792 \(USA\)](#)

## **Innovators**

- Justin Monnier
- Alexander Scholz
- Eugene Butcher
- Brian Zabel
- Russell Pachynski

## **Licensing Contact**

### **Cheryl Cathey**

Senior Licensing and Strategic Alliance Manager

[Email](#)