

Request Information

**INNOVATION VENTURES** 

**AVAILABLE TECHNOLOGIES** 

**CONTACT US** 

Permalink

## Targeting Tumor-Associated Macrophages to Overcome Immunotherapy Resistance

Tech ID: 34378 / UC Case 2023-213-0

#### **TECHNOLOGY DESCRIPTION**

#### APPLICATION

This therapeutic approach focuses on a novel immune population of tumor-associated macrophages (TAMs) within the tumor microenvironment. Leveraging a pharmaceutical composition comprising a binding agent, such as an antibody or aptamer, this technology specifically targets this population of TAMs that are enriched in immunotherapy-resistant tumors. The binding agent can be directly or indirectly conjugated to a cytotoxic moiety, enabling selective elimination of TAMs via an antibody-drug conjugate (ADC). By disrupting TAM-mediated immune suppression, this approach represents a paradigm shift in cancer immunotherapy, particularly for tumors resistant to immune checkpoint blockade (ICB).

## **Competitive Advantages:**

- Novel Mechanism of Action: Unlike traditional immunotherapy approaches that focus on lymphocytes, this technology targets a specific population of TAMs, a previously underexplored immune population critical to immune evasion.
- ▶ **Broad Applicability:** Demonstrated efficacy across multiple tumor types, including colorectal cancer, breast cancer, and melanoma, particularly in cases resistant to current immunotherapies.
- ▶ Enhanced Tumor Microenvironment Modulation: Selective targeting of tolerogenic macrophages disrupts the immune-suppressive niche, improving tumor clearance without reliance on lymphocyte activation.
- ▶ Strong Preclinical Evidence: In vitro and in vivo studies validate the therapeutic potential of TAM ablation to significantly reduce tumor growth, independent of immune checkpoint blockade.

## **CONTACT**

Gemma E. Rooney

Gemma.Rooney@ucsf.edu tel: 415-625-9093.



# OTHER INFORMATION

**KEYWORDS** 

**Tumor Associated** 

Macrophages, Macrophages,

Colorectal Cancer, Breast

Cancer, Melanoma

### **CATEGORIZED AS**

- **►** Medical
  - Disease: Cancer
  - Therapeutics

**RELATED CASES** 

2023-213-0

## STAGE OF DEVELOPMENT

Preclinical.

### **RELATED MATERIALS**

PATENT STATUS

ADDRESS

**UCSF** 

**Innovation Ventures** 

600 16th St, Genentech Hall, S-272,

San Francisco,CA 94158

CONTACT

Tel:

innovation@ucsf.edu

https://innovation.ucsf.edu

Fax:

CONNECT

Follow in Connect

 $\ensuremath{\text{@}}$  2025, The Regents of the University of

California

Terms of use Privacy Notice