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(71) Applicants: **SONOMA BIOTHERAPEUTICS, INC.**

[US/US]; 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **CURARA AB** [SE/SE]; Vanadisvägen 22B, S-113 46 Stockholm (SE).

(72) Inventors: **MATTHAEI, James**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **VAN DER VUURST DE VRIES, Anne-Renee**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **BEILKE, Joshua**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **MALMSTRÖM, Vivianne**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **HOOPER, Kathryn**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **JOHNSON, Rebecca**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US). **KLARESKOG, Lars**; c/o Sonoma Biotherapeutics, Inc., 201 Haskins Way, Suite 203, South San Francisco, California 94080 (US).

(74) Agent: **LEKUTIS, Christine** et al.; Morrison & Foerster LLP, 425 Market Street, San Francisco, California 94105 (US).

(54) Title: SYNOVIAL EXTRACELLULAR MATRIX-SPECIFIC CHIMERIC ANTIGEN RECEPTOR FOR TARGETING REGULATORY T CELLS TO TREAT AUTOIMMUNE DISEASES

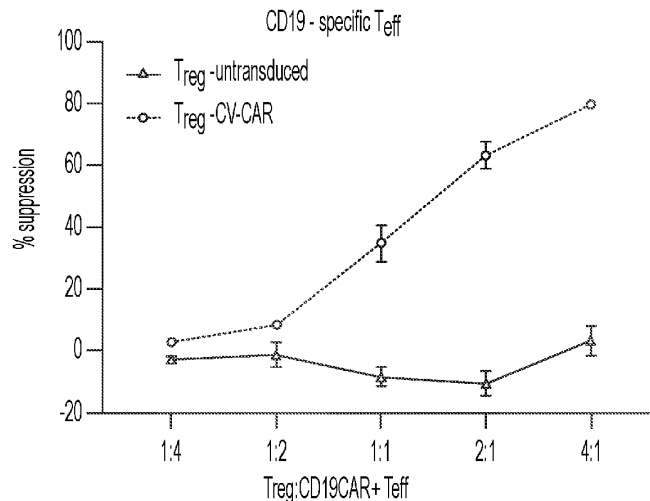


FIG. 16B

(57) Abstract: Disclosed herein are chimeric antigen receptors ("CARs") comprising an antigen binding site that recognizes citrullinated polypeptides. Citrullinated polypeptides, such as citrullinated vimentin, fibrinogen, and filaggrin, are expressed in the synovium of subjects with rheumatoid arthritis. Further disclosed are T cells, and in particular, Treg cells, that express these CARs. Administration of these CAR-T cells is useful in the treatment of rheumatoid arthritis as well as other diseases associated with citrullinated peptides.

[Continued on next page]

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