Billing Code: 4140-01-P

DEPARTMENT: DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing and/or co-development in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing and/or co-development.

ADDRESSES: Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD, 20850-9702.

FOR FURTHER INFORMATION CONTACT: Information on licensing and co-development research collaborations, and copies of the U.S. patent applications listed below, may be obtained by contacting: Attn. Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD, 20850-9702, Tel. 240-276-5515 or email ncitechtransfer@mail.nih.gov. A signed Confidential Disclosure Agreement may be required to receive copies of the patent applications.

SUPPLEMENTARY INFORMATION: Technology description follows.

Title of invention:

Chimeric Antigen Receptors to CD276 for treating Cancer

Description of Technology:

Chimeric antigen receptors (CARs) are hybrid proteins consisting of an antibody binding fragment fused to protein signaling domains that cause T-cells which express the CAR to become cytotoxic. Once activated, these cytotoxic T-cells can selectively eliminate the cells which they recognize via the antibody binding fragment of the CAR. By engineering a T-cell to express a CAR that is specific for a certain cell surface protein, it is possible to selectively target those cells for destruction. This is a promising new therapeutic approach known as adoptive cell therapy.

CD276 (a.k.a., B7-H3) is a tumor-associated antigen that is expressed on the cell surface of several cancers, including neuroblastomas, prostate cancer, ovarian cancer and some lung cancers. This technology concerns the development of CARs comprising an antigen-binding fragment derived from the MGA271 antibody. The resulting CARs can be used in adoptive cell therapy treatment for neuroblastoma and other tumors which express CD276.

Potential Commercial Applications:

- Treatment of cancers associated with expression of CD276
- Specific cancers include neuroblastoma, prostate cancer, ovarian cancer, lung cancer and other solid tumors

Value Proposition:

- MGA271 is a well characterized anti-CD276 antibody, making it a known quantity regarding safety issues
- High affinity of the MGA271 antibody for CD276 increases the likelihood of successful targeting

• Targeted therapy decreases non-specific killing of healthy, essential cells, resulting in fewer non-specific side-effects and healthier patients

Development Stage:

Discovery (Lead ID)

Inventor(s):

Crystal Mackall

Intellectual Property:

HHS No. E-243-2015/0-US-01 U.S. Provisional Application 62/216,447 (E-243-2015/0-US-01) filed 9/10/2015 titled "Anti-CD276 Chimeric Antigen Receptors"

Publications:

None applicable

Collaboration Opportunity: Researchers at the NCI seek licensing for chimeric antigen receptors to CD276 for treating cancer.

Contact Information:

Requests for copies of the patent application or inquiries about licensing, research collaborations, and co-development opportunities should be sent to John D. Hewes, Ph.D., email: john.hewes@nih.gov.

Dated: May 31, 2016.

John D. Hewes,

Technology Transfer Specialist,

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National Cancer Institute.

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