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(54) Title: ANTI-VISTA ANTIBODY RNA OR NUCLEIC ACID CONJUGATES (ARCS OR ANCS), COMPOSITIONS CONTAINING, AND THERAPEUTIC USE THEREOF

FIG. 1

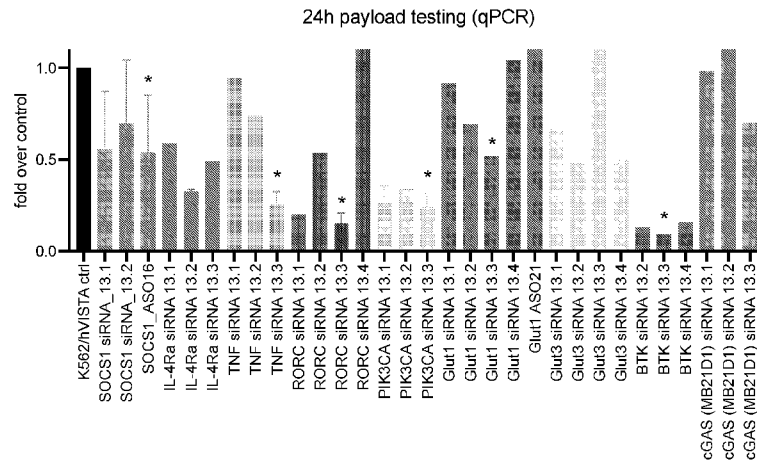


Figure 1. Immunologically relevant siRNAs and ASO payloads have been identified and tested. K562-VISTA cells were transfected with 200 nM siRNA (or ASO) alone, and target knockdown was analyzed by qRT-PCR using the ddct method and reported as fold over control. Scrambled siRNA or ASO controls were also ordered from IDT. Payloads marked with (*) were selected for conjugation to a delivery vehicle (anti-VISTA Mab INX201).

(57) **Abstract:** The present invention relates to anti-VISTA antibody RNA or nucleic acid conjugates (ARCs or ANCs) which specifically deliver at least one nucleic acid, e.g., RNAs into immune cells and the use of such ARCs or ANCs as therapeutics, e.g., for treating autoimmune, allergic and inflammatory conditions, or for treating cancer and/or for treating inflammatory symptoms associated therewith elicited by specific immune cell types which express VISTA.



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(81) **Designated States** (*unless otherwise indicated, for every
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AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
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RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. C12N 15/113; A61K 39/00; A61K 39/395; A61K 47/55; A61K 47/64; A61K 47/65; A61K 47/68 (2024.01)
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ADD. C07K 16/28; C07K 16/2809

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
See Search History document

Electronic database consulted during the international search (name of database and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	KUMAR. "T cell-specific siRNA delivery suppresses HIV-1 infection in humanized mice" 577-586. Cell. Retrieved From The Web On 08/10/2024. 22 August 2008; <Pages 578, 579, 584>; <DOI: 10.1016/j.cell.2008.06.034>	1 --- 2, 3
Y --- A	WIENER. "Preparation of single- and double-oligonucleotide antibody conjugates and their application for protein analytics" 1-11. Scientific Reports. Retrieved From The Web On 8/10/2024. 29 January 2020; <Pages 3, 4, 10>; <DOI: 10.1038/s41598-020-58238-6>	2, 3 --- 1
A	WO 2022/115719 A1 (BLAZE BIOSCIENCE INC (US) FRED HUTCHINSON CANCER RESEARCH CENTER INC (US)) 02 June 2022	1-3
A	US 2019/0330349 A1 (IMMUNEXT INC (US) JANSSEN PHARMACEUTICA NV (US)) 31 October 2019	1-3
A	SONG. "Antibody mediated in vivo delivery of small interfering RNAs via cell-surface receptors" 709-717. Nature Biotechnology. Retrieved From The Web On 08/10/2024. 22 May 2005; <Entire Document>; <DOI: 10.1038/nbt1101>	1-3

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas Telephone No. PCT Helpdesk: 571-272-4300

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2024/032660

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:
 - a. forming part of the international application as filed.
 - b. furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.1(a)),
 accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this report has been established to the extent that a meaningful search could be carried out without a WIPO Standard ST.26 compliant sequence listing.
3. Additional comments: