IPR2022-00852 (Patent 9,518,123 B2) IPR2022-00855 (Patent 9,540,445 B2)

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MILTENYI BIOMEDICINE GmbH and MILTENYI BIOTEC INC. Petitioner

v.

THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA Patent Owner

> IPR2022-00852 (Patent 9,518,123 B2) IPR2022-00855 (Patent 9,540,445 B2)

PATENT OWNER'S OPPOSITION TO PETITIONERS' MOTION FOR ADDITIONAL DISCOVERY

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PATENT OWNER'S EXHIBIT LIST

Ex.	Reference
2001	Jason Fagone, Has Carl June Found a Key to Fighting Cancer?,
	PHILA. MAG. (Aug. 1, 2013).
2002	Denise Grady, An Immune System Trained to Kill Cancer, N.Y. TIMES
	(Sept. 12, 2011),
	https://www.nytimes.com/2011/09/13/health/13gene.html.
2003	Jasone Fagone, Walt Keller, Leukemia Survivor, Has Passed, PHILA.
	MAG. (Feb. 20, 2014),
	https://www.phillymag.com/news/2014/02/20/walt-keller-leukemia-
	survivor-obituary-1953-2014/.
2004	Gina Kolata, A Cancer Treatment Makes Leukemia Vanish, but Creates
	More Mysteries, N.Y. TIMES (Feb. 2, 2022),
	https://www.nytimes.com/2022/02/02/health/leukemia-car-t-
	immunotherapy.html.
2005	Denise Grady, In Girl's Last Hope, Altered Immune Cells Beat
	<i>Leukemia</i> , N.Y. TIMES (Dec. 9, 2012),
	https://www.nytimes.com/2012/12/10/health/a-breakthrough-against-
	leukemia-using-altered-t-cells.html.
	Denise Grady, F.D.A. Approves First Gene-Altering Leukemia
2006	Treatment, Costing \$475,000, N.Y. TIMES (Aug. 30, 2017),
	https://www.nytimes.com/2017/08/30/health/gene-therapy-cancer.html.
	FOOD AND DRUG ADMIN., FDA APPROVAL BRINGS FIRST GENE THERAPY
2007	TO THE UNITED STATES (Aug. 30, 2017), https://www.fda.gov/news-
2007	events/press-announcements/fda-approval-brings-first-gene-therapy-
	united-states.
	FOOD AND DRUG ADMIN., BREAKTHROUGH THERAPY (Jan. 4, 2018),
2008	https://www.fda.gov/patients/fast-track-breakthrough-therapy-
	accelerated-approval-priority-review/breakthrough-therapy.
	FOOD AND DRUG ADMIN., PRIORITY REVIEW (Jan. 4, 2018),
2009	https://www.fda.gov/patients/fast-track-breakthrough-therapy-
	accelerated-approval-priority-review/priority-review.
2010	Barbara Savoldo et al., CD28 costimulation improves expansion and
	persistence of chimeric antigen receptor-modified T cells in lymphoma
	patients, 121 J. CLINICAL INVESTIGATION 1822 (2011).
2011	Brian G. Till et al., Adoptive immunotherapy for indolent non-Hodgkin
	lymphoma and mantle cell lymphoma using genetically modified
	autologous CD20-specific T cells, 112 BLOOD 2261 (2008).

2012	Renier J. Brentjens et al., <i>Safety and persistence of adoptively</i> <i>transferred autologous CD19-targeted T cells in patients with relapsed</i> <i>or chemotherapy refractory B-cell leukemias</i> , 118 BLOOD 4817 (2011).
2013	Renier Brentjens et al., <i>Treatment of chronic lymphocytic leukemia</i> with genetically targeted autologous T cells: case report of an unforeseen adverse event in a phase I clinical trial, 18 MOLECULAR THERAPY 666 (2010).
2014	Renier J. Brentjens et al., <i>A Phase I Trial for the Treatment of Chemo</i> <i>refractory Chronic Lymphocytic Leukemia with CD19-Targeted</i> <i>Autologous T Cells</i> , 16 MOLECULAR THERAPY S15 (2008).
2015	Jennifer Couzin-Frankel, <i>The dizzying journey to a new cancer arsenal</i> , 340 Sci. 1514 (2013).
2016	Jennifer Couzin-Frankel, <i>Breakthrough of the Year 2013: Cancer</i> <i>Immunotherapy</i> , 342 Sci. 1432 (2013).
2017	David L. Porter et al., Chimeric Antigen Receptor Modified T Cells Directed Against CD 19 (CTL0l 9 cells) Have Long-Term Persistence And Induce Durable Responses In Relapsed, Refractory CLL, 122 BLOOD 4162 (2013).
2018	David L. Porter et al., <i>Randomized, Phase II Dose Optimization Study</i> <i>Of Chimeric Antigen Receptor Modified T Cells Directed Against CD</i> <i>19 (CTL019) In Patients With Relapsed Refractory CLL</i> , 122 BLOOD 873 (2013).
2019	Stephan A. Grupp et al., <i>T Cells Engineered With A Chimeric Antigen</i> <i>Receptor (CAR) Targeting CD 19 (CTL0l 9) Produce Significant In</i> <i>Vivo Proliferation, Complete Responses And Long-Term Persistence</i> <i>Without GVHD In Children And Adults With Relapsed, Refractory</i> <i>ALL</i> , 122 BLOOD 67 (2013).
2020	James N. Kochenderfer et al., <i>B-cell depletion and remissions of</i> <i>malignancy along with cytokine-associated toxicity in a clinical trial of</i> <i>anti-CD 19 chimeric-antigen-receptor transduced T cells</i> , 119 BLOOD 2709 (2012).
2021	Carl June Named One of Time's 100 Most Influential People in the World, PENN MEDICINE (Apr. 26, 2018), https://pathology.med.upenn.edu/news/carl-june-named-one-times- 100-most-influential-people-world.
2022	Holly Auer, Penn Medicine Immunotherapy Pioneer Carl June, MD, Awarded 2015 Paul Ehrlich and Ludwig Darmstaedter Prize, PENN TODAY (Mar. 11, 2015), https://penntoday.upenn.edu/news/penn-

	medicine-immunotherapy-pioneer-carl-june-md-awarded-2015-paul- ehrlich-and-ludwig-darmstaed.
2023	Andrew Pollock, <i>Setting the Body's 'Serial Killers' Loose on Cancer</i> , N.Y. TIMES (Aug. 1, 2016), https://www.nytimes.com/2016/08/02/health/cancer-cell-therapy-
	immune-system.html.
2024	2015 Watanabe Award Winner Carl H. June, IND. CLINICAL AND TRANSLATIONAL SCIS. INST., https://indianactsi.org/awards/watanabe- award-winners/2015-watanabe-award-winner-carl-h-june/ (last visited July 12, 2022).
2025	Agilent Presents Thought Leader Award to Drs. Carl H. June and Michael Milone, AGILENT TECHS. INC. (Nov. 17, 2020), https://www.agilent.com/about/newsroom/presrel/2020/17nov- ca20030.html.
2026	Information Disclosure Statement Initialed by Examiner (Apr. 18, 2016), U.S. Patent Application No. 14,997,136.
2027	Information Disclosure Statement Initialed by Examiner (Apr. 18, 2016), U.S. Patent Application No. 14,997,136.
2028	World Intell. Prop. Org. Patent Application No. WO 02/077029 A2.
2029	Pilot Study for Patients with Chemotherapy Resistant or RefractoryCD19 Leukemia and Lymphoma (CART-19), CLINICALTRIALS.GOV(April 29, 2009),[http://web.archive.org/web/20090903002304/http://clinicaltrials.gov/ct2/show/NCT00891215].
2030	Amendments to the Claims (Nov. 13, 2018), U.S. Patent Application No. 15,353,899.
2031	Steven A. Rosenberg et al., <i>Use of Tumor-Infiltrating Lymphocytes and Interleukin-2 in the Immunotherapy of Patients with Metastatic Melanoma</i> , 319 NEW ENG. J. MED. 1676 (1988).
2032	Michael C. Jensen et al., <i>Antitransgene Rejection Responses Contribute</i> <i>to Attenuated Persistence of Adoptively Transferred CD20/CD19-</i> <i>Specific Chimeric Antigen Receptor Redirected T Cells in Humans</i> , 16 BIOLOGY BLOOD AND MARROW TRANSPLANTATION 1245 (2010).
2033	Richard A. Morgan et al., <i>Case Report of a Serious Adverse Event</i> <i>Following the Administration of T Cells Transduced With a Chimeric</i> <i>Antigen Receptor Recognizing ERBB2</i> , 18 MOLECULAR THERAPY 843 (2010).

[1
2034	David L. Porter et al., <i>A phase 1 trial of donor lymphocyte infusions</i> <i>expanded and activated ex vivo via CD3/CD28 costimulation</i> , 107 BLOOD 1325 (2006).
2035	Grazyna Lipowska-Bhalla, Targeted immunotherapy of cancer with
	CAR T cells: achievements and challenges, 61 CANCER IMMUNOLOGY,
	IMMUNOTHERAPY 953 (2012).
2036	Latest paper from the father of CAR-T: CAR-T really completely cured
	cancer, MEDICALTREND.ORG,
	https://medicaltrend.org/2022/02/03/latest-paper-from-the-father-of-
	car-t-car-t-really-completely-cured-cancer/ (last visited July 13, 2022).
2037	Bipulendu Jena et al., Redirecting T-cell specificity by introducing a
	tumor-specific chimeric antigen receptor, 116 BLOOD 1035 (2010).
2038	Michael H. Kershaw et al., A Phase I Study on Adoptive
	Immunotherapy Using Gene-Modified T Cells for Ovarian Cancer, 12
	CLINICAL CANCER RSCH. 6106 (2006).
	Cor H.J. Lamers et al., Treatment of Metastatic Renal Cell Carcinoma
2039	With Autologous T-Lymphocytes Genetically Retargeted Against
	Carbonic Anhydrase IX: First Clinical Experience, 24 J. CLINICAL
	ONCOLOGY e20 (2006).
2040	ASH honors Bruce R. Blazar, M.D., and Carl H. June, M.D., with 2012
	Ernest Beutler Lecture and Prize, SCIENCEX (Aug. 27, 2012),
	https://sciencex.com/wire-news/107531358/ash-honors-bruce-r-blazar-
	md-and-carl-h-june-md-with-2012-ernest.html.
2041	Renier J. Brentjens et al., Genetically Targeted T Cells Eradicate
	Systemic Acute Lymphoblastic Leukemia Xenografts, 13 CLINICAL
	Cancer Rsch. 5426 (2007).
2042	U.S. Patent No. 7,402,431.
2043	Cancer treatment myths: Any truth to these common beliefs?, MAYO
	CLINIC (March 22, 2022), https://www.mayoclinic.org/diseases-
0044	conditions/cancer/in-depth/cancer/art-20046762.
2044	Adam Bagg Aff., July 19, 2022.
2045	SITC Smalley Award 2013 Recipient, SOC'Y FOR IMMUNOTHERAPY OF
	CANCER, https://www.sitcancer.org/funding/named-funds-and-
	awards2/smalley/2013 (last visited July 19, 2022).
2046	AAI-Steinman Award for Human Immunology Research Past
	Recipients, AM. ASS'N OF IMMUNOLOGISTS,
	https://www.aai.org/Awards/Career-Awards/AAI-Steinman-Award-
	for-Human-Immunology-Research/Past-Recipients.aspx (last visited
	July 19, 2022).

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