UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 10, 2022

ATARA BIOTHERAPEUTICS, INC.
(Exact name of Registrant as Specified in Its Charter)

DELAWARE	**001-36548**	**46-0920988**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

611 Gateway Boulevard, Suite 900 **South San Francisco, CA** **(Address of Principal Executive Offices)**	**94080** **(Zip Code)**

Registrant's Telephone Number, Including Area Code: (650) 278-8930

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value $0.0001 per share	**ATRA**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter). Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

ITEM 7.01 Regulation FD Disclosure.

Atara Biotherapeutics, Inc. (the "Company") intends to conduct meetings with securities analysts, investors and others in connection with the 40th Annual J.P. Morgan Healthcare Conference beginning on January 10, 2022. As part of these meetings, the Company intends to utilize the corporate slide presentation furnished with this report as Exhibit 99.1.

ITEM 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit	Description
99.1	Corporate Slide Presentation, dated January 10, 2022
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

The information in this Item 7.01 is being furnished, not filed, pursuant to Regulation FD. Accordingly, the information in Item 7.01 of this report will not be incorporated by reference into any registration statement filed by the Company under the Securities Act of 1933, as amended, unless specifically identified therein as being incorporated therein by reference. The furnishing of the information in this report is not intended to, and does not, constitute a determination or admission by the Company that the information in this report is material or complete, or that investors should consider this information before making an investment decision with respect to any security of the Company.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Atara Biotherapeutics, Inc.

By: /s/ Amar Murugan
Amar Murugan
Senior Vice President, General Counsel

Dated: January 10, 2022

Exhibit 99.1

ATARA BIO

Investor Presentation

JP Morgan Healthcare Conference

January 10, 2022

Nasdaq: ATRA

Forward-Looking Statements

This presentation and the accompanying oral presentation contain forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this presentation, including statements regarding our future results of operations and financial position, business strategy, product candidates, correspondence with regulatory authorities, regulatory submissions, regulatory approvals, the initiation, timing, progress and results of preclinical studies and clinical trials and our research and development programs, ability to sell, manufacture or otherwise commercialize our product candidates, research and development costs, timing and likelihood of success, plans and objectives of management for future operations, any royalty payments, and our ability to obtain and maintain intellectual property protection for our product candidates, are forward-looking statements of Atara Biotherapeutics, Inc. ("Atara" or the "Company"). These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In some cases you can identify these statements by forward-looking words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "predict," "plan," "expect" or the negative or plural of these words or similar expressions. These forward-looking statements are subject to risks and uncertainties, including those discussed in Atara's filings with the Securities and Exchange Commission (SEC), including in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of the Company's most recently filed periodic reports on Form 10-K and Form 10-Q and subsequent filings and in the documents incorporated by reference therein. These risks and uncertainties include, without limitation, risks and uncertainties associated with the costly and time-consuming pharmaceutical product development process and the uncertainty of clinical success; the COVID-19 pandemic, which may significantly impact (i) our business, research, clinical development plans and operations, including our operations in South San Francisco and Southern California and at our clinical trial sites, as well as the business or operations of our third-party manufacturer, contract research organizations or other third parties with whom we conduct business, (ii) our ability to access capital, and (iii) the value of our common stock; the sufficiency of our cash resources and need for additional capital, and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Certain information contained in this presentation and statements made orally during this presentation relate to or are based on studies, publications, surveys and other data obtained from third-party sources and Atara's own internal estimates and research. While Atara believes these third-party studies, publications, surveys and other data to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of Atara's internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

We Are a Leading Allogeneic T-Cell Immunotherapy Company

Differentiated Allogeneic Cell Therapy Platform

Scalable EBV T-cell platform and technologies to develop multiple allogeneic cell therapies

Tab-cel®: First-In-Kind, Late-Stage, Oncology Program

MAA submitted in November 2021 with accelerated assessment and BLA submission expected in Q2 2022

ATA188: Potentially Transformative MS Treatment in Randomized Controlled Trial

Fast-track designation granted; Placebo-controlled interim data expected in Q2 2022 to enable pivotal studies and partnering opportunities, with potential to unlock multi-billion-dollar opportunity

Next-Gen Allogeneic CAR T Portfolio, Validated by Bayer Collaboration on Mesothelin-Targeted CAR T

Potential best-in-class programs designed to address current limitations of autologous and allogeneic CAR T

Proven Technical Capabilities

Advanced process science and manufacturing capabilities within state-of-the-art facilities

EBV = Epstein-Barr Virus; BLA = Biologics License Application; BTD = Break Through Designation

Robust T-Cell Immunotherapy Pipeline

Program	Indication	Target	Preclinical	Phase 1	Phase 2	Phase 3	Registration	Next Milestone
Tab-cel® (tabelecleucel)	RR EBV+ PTLD following HCT and SOT	EBV	ALLELE Study					**Q2 2022:** BLA submission **Q4 2022:** EU approval
	Multi-Cohort: EBV+ cancers(1)	EBV						**2023**: Ph2 Study data expected
	Nasopharyngeal carcinoma(2) MERCK	EBV						**TBD:** Pending development path
ATA188	Progressive MS	EBV(3)	EMBOLD Study					**Q2 2022**: Interim Analysis
ATA2271	Autologous CAR T Solid tumors(4,5,6) BAYER	Mesothelin						**2022**: Updated safety / efficacy data
ATA3271	Off-the-shelf, allogeneic CAR T Solid tumors(4,6) BAYER	Mesothelin						**Q4 2022:** IND filing
ATA3219	Off-the-shelf, allogeneic CAR T B-cell malignancies	CD19						**Q4 2022**: IND filing
Other Programs	B-cell malignancies, solid tumors, and infectious diseases	Various						Undisclosed

These investigational agents are not approved by any regulatory agencies. Efficacy and safety have not been established.
EBV+ PTLD: EBV-Associated Post-Transplant Lymphoproliferative Disease; RR: rituximab relapsed/refractory; HCT: allogeneic hematopoietic cell transplant; SOT: solid organ transplant
Atara has entered into an agreement with Pierre Fabre to commercialize Tab-cel® for EBV+ cancers in Europe, Middle East, Africa, and other select emerging markets
Other programs: ATA2431 (B-cell malignancies), and ATA358 (HPV)
(1) Phase 2 multi-cohort initiated in Q3 2020, with possible indications including EBV+ PTLD with CNS involvement, EBV+ PID/AID LPD, EBV+ LMS and other potential EBV-associated diseases
(2) Phase 1b/2 study in combination with anti-PD-1 therapy, KEYTRUDA® (pembrolizumab), in patients with platinum-resistant or recurrent EBV-associated NPC
(3) Targeted antigen recognition technology; Phase 2 Randomized Controlled Trial
(4) Mesothelin is expressed at high levels on the surface of cells in aggressive solid tumors including mesothelioma, triple-negative breast cancer, esophageal cancer, pancreatic cancer and non-small cell lung cancer
(5) Atara's CAR T collaboration with MSK will focus on development of a next-generation, mesothelin-targeted CAR T using novel 1XX CAR signaling and PD-1 dominant negative receptor (DNR) checkpoint inhibition technologies.
(6) Worldwide license agreement and research, development and manufacturing collaboration with Bayer to develop Atara's allogeneic off-the-shelf mesothelin CAR T program (ATA3271) and autologous program (ATA2271)

ATARA BIO®

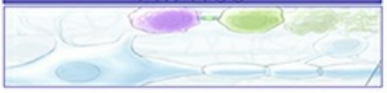
Three Strategic Priorities Driving Long-Term Value

Tab-cel®

First-in-Kind Allogeneic T-Cell Therapy with Historic Regulatory Filing

- BTD program for high unmet need in ultra rare population, with meaningful label expansion potential
- Compelling efficacy profile in Phase 2 and Phase 3 IA data with favorable safety profile
- **Next Step:** Submitted MAA with accel. assess. in Nov. 2021; BLA submission expected in Q2 2022

ATA188



Transformative MS Treatment in Randomized Controlled Trial (RCT)

- Fast track designation granted: High unmet medical need for the up to ~1.2 million progressive MS patients worldwide
- Clinical and translational data support potential to halt or reverse disease progression in progressive MS
- **Next Step:** Interim Analysis from Phase 2 EMBOLD study (Q2 2022)

Next-Gen CAR T

Next-Generation Allogeneic CAR T Programs Leveraging EBV T Cells

- Urgent need for new treatment options across solid and liquid tumor indications
- Portfolio of next-generation CAR T with robust pre-clinical evidence and no gene editing of TCR
- **Next Step:** First allogeneic CAR T programs IND (Q4 2022)

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IA = Interim Analysis
MS = Multiple Sclerosis
CAR = Chimeric Antigen Receptor
OLE = Open-label Extension
BTD = Break Through Designation
EBV = Epstein-Barr Virus
BLA = Biologics License Application
IND = Investigational New Drug

Upcoming Key Catalysts

Tab-cel® (tabelecleucel)	Planned FDA Biologics License Application (BLA) submission for patients with EBV+ PTLD	Q2 2022
	Anticipated EU approval of MAA for patients with EBV+ PTLD, with accelerated assessment	Q4 2022
	Anticipated U.S. approval of BLA for patients with EBV+ PTLD	H1 2023
	Anticipated Phase 2 data for multi-cohort study in EBV+ cancers	2023
ATA188	Conduct interim analysis (IA) to assess efficacy and safety from Phase 2 randomized, double-blind, placebo-controlled study in patients with progressive forms of MS	Q2 2022
ATA2271	Present updated top-line Phase 1 data for mesothelin-targeted autologous CAR T for patients with advanced mesothelioma	2022
ATA3271	Anticipated submission of next-generation off-the-shelf, mesothelin-targeted allogeneic CAR T IND for patients with advanced mesothelioma	Q4 2022
ATA3219	Anticipated submission of best-in-class off-the-shelf, allogeneic CD-19 targeted CAR T IND for patients with B-cell malignancies	Q4 2022

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Atara Strategic Priorities to Create Value: Tab-cel®

Tab-cel® (tabelecleucel)

Investigational T-cell immunotherapy for EBV-associated ultra-rare diseases

FDA breakthrough designation and EMA PRIME for EBV+ PTLD

MAA submitted in EU with accelerated assessment

ATA188

CAR T

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Recent Positive Regulatory Progress for Tab-cel®

- Based on the requests from the FDA following our recent interactions, Atara has provided to the Agency additional analyses of CMC data we have already provided
  - FDA has not requested additional clinical studies or manufacturing lots
- Atara has made recent progress with FDA through constructive engagement with CBER in Q4 2021
- Atara subsequently plans to have further interactions with the FDA through a Type B CMC meeting in Q1 2022 and complete the BLA submission for tab-cel in Q2 2022
- Atara continues to adapt investment in U.S. commercial readiness toward anticipated U.S. launch in H1 2023

- Following successful interactions with European Medicines Agency (EMA), Atara submitted a MAA for tab-cel® in patients with EBV+ PTLD in November 2021
- With the granting of accelerated assessment, anticipate a decision regarding EU tab-cel approval in Q4 2022

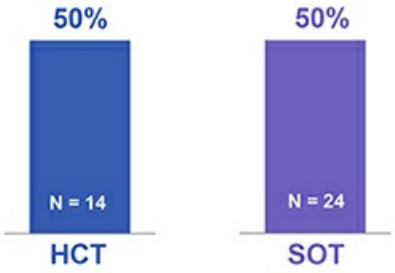
Tab-cel® Phase 3 ALLELE Data Presented at ASH 2021 Demonstrate 50% ORR and Impressive Overall Survival at 1 Year

Interim Analysis by IORA for Phase 3 Pivotal Study

- Based on data cut from Q2 2021
- Includes 6-month durability of response analysis on additional patients, as requested by FDA in Q4 2020 Clinical Type B Meeting
- 50% ORR by IORA across HCT and SOT cohorts
- 100% and 82.5% OS at 1 year in responders for HCT and SOT, respectively
- Safety: Continued favorable safety profile with no new safety signals

IORA: Phase 3 Interim Analysis ORR

for EBV+ PTLD patients who failed rituximab ± CT



Overall survival at 1 year in responders:

- HCT: 100%
- SOT: 82.5%

The poor median survival (0.7 months for HCT, 4.1 months for SOT) reported in patients with EBV+ PTLD for whom rituximab ± CT failed demonstrates an urgent unmet need in this patient population[1,2]

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HCT: allogeneic hematopoietic cell transplant; SOT: solid organ transplant; Objective response rate (ORR) = complete response (CR) + partial response (PR)
IORA = Independent Oncologic and Radiographic Assessment; OS = overall survival

1. Sanz J *et al.* ASH 2021. Abstract #1454. 2. Dharnidharka V *et al.* ASH 2021. Abstract #2528.

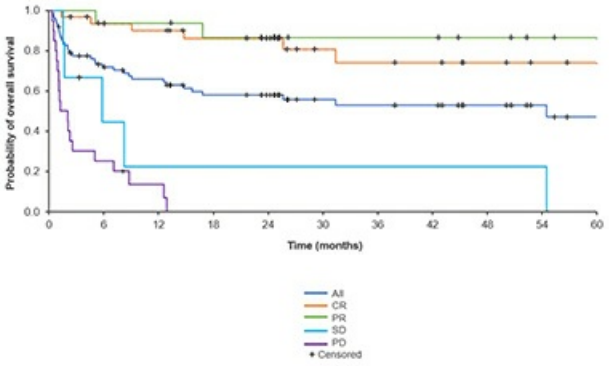
New ASH 2021 Data Confirm Tab-cel® Long-term Survival Benefit

Key Takeaways

- 2 year overall survival rates similar between CR and PR patients at 86% and 87%, respectively
- Median overall survival (OS) of ~55 months
- Continued favorable safety profile:
  - No new safety signals with >180 patients treated to date
  - No observed related GvHD
- Has the potential to address an urgent unmet need in this high-risk population
- Limited competition expected in previously treated PTLD

Tab-cel Estimated OS Data

S. Prockop et al. *ASH* 2021 (n=76)



CR = complete response; PR = partial response; PD = progressive disease; SD = stable disease; OS = overall survival; ; GvHD = graft vs host disease

Atara Strategic Priorities to Create Value: ATA188

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We Have Received Fast Track Designation from FDA and are Rapidly Advancing our Phase 2 EMBOLD Study for ATA188

FDA Registrational Feedback Received

- **Fast track designation received:** FDA granted fast track designation in both **non-active SPMS and non-active PPMS** patient populations
- **Patient Population:** FDA considers **non-active SPMS and non-active PPMS** as two distinct populations with high unmet medical need
- **Next Steps:** Further dialogue with FDA following interim analysis

Planned Development Strategy for RCT and Phase 3 Pivotal Study

- **Ongoing Robust Phase 2 progressing well:** Key stepping stone before Phase 3 pivotal studies, with enrollment of patient 80 expected soon after the IA
- **Phase 3 pivotal studies:** to be conducted in both **non-active SPMS and PPMS** populations
  - One Phase 3 study will focus on non-active SPMS, for which no approved therapies currently exist in U.S. or E.U.
  - A separate study will focus on non-active PPMS, which has very few treatment options in most countries and approved therapeutic options are of limited efficacy
- **Stirred-tank bioreactor:** We continue to invest in this manufacturing technology to **enable clinical supply** and **biologic-like COGM** at commercial scale

RCT = Randomized Controlled Trial
COGM = Cost of Goods Manufactured

SPMS = Secondary Progressive Multiple Sclerosis
PPMS = Primary Progressive Multiple Sclerosis

We are Advancing Towards the Planned Interim Analysis for the ATA188 EMBOLD Study in Q2 2022

Planned Interim Analysis on Track for Q2 2022

- We plan to conduct a formal **interim analysis in Q2 2022**, including efficacy and safety, to optimize the likelihood of success in Phase 2, and confirm current development strategy
- We plan to communicate our **decision on next steps** for the program, including rationale, while still maintaining the integrity of the study

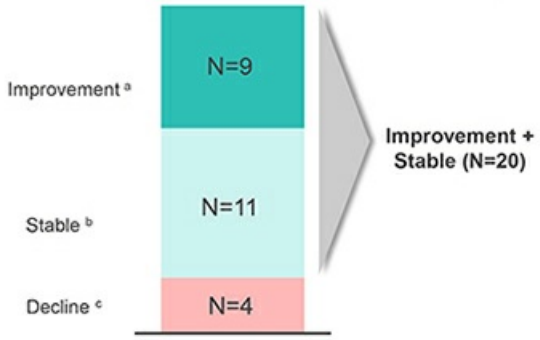
Key Aspects of Planned Interim Analysis

- Key data point at time of interim analysis is **EDSS improvement at 6 months**, for applicable patients
- As patients continue to enroll, there will be a **range of treatment durations** at the time of the IA
- Based on Phase 1 data: EDSS improvement at 6 months is **>85% predictive** of achieving EDSS improvement at 12 months
  - Note: 33% EDSS improvement at 6 months in high dose cohorts in Phase 1
- Results will determine sample size necessary to achieve **target conditional power** at end of the study and will inform **Phase 3 design and planning**
- Continued strong interest from large pharma companies on potential **partnering opportunities**

Phase 1/OLE Summary of Data (ECTRIMS 2021)

- Updated results from the ongoing Open Label Extension (OLE) demonstrate continued safety and tolerability of ATA188 with the longest observed patients receiving up to 3 annual treatments and up to 39 months of follow up
- SDI with ATA188 was driven by sustained EDSS improvement in most patients, disability improvement was maintained at all subsequent timepoints in all but one patient
- Patients treated with ATA188 may achieve SDI, and specifically sustained EDSS improvement, at a higher rate and longer duration than would be expected based on the natural history of progressive MS
- Patients who achieved sustained EDSS improvement with ATA188 at any time in the study (versus those who did not) showed greater increases in MTR from baseline at 12 months, which may be suggestive of remyelination. In general, an increase in MTR was associated with improvement in EDSS scores
- MTR data provide evidence that suggest remyelination may be biological basis for clinical disability improvements observed with ATA188

A total of 24 patients* enrolled in the Ph 1a study (initial 12 mo), 18 of whom continued into the OLE



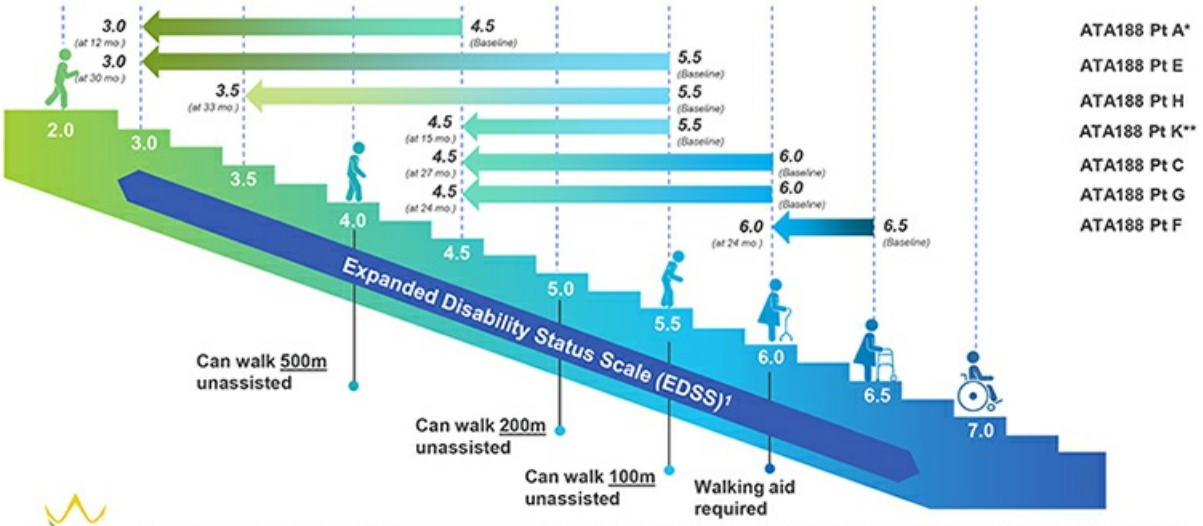
[a] 9 patients met SDI criteria either in the initial 12-month period (n=7) or in the OLE (n=2) and of these, seven patients had sustained EDSS improvement

[b] 11 patients remained stable throughout their participation in the study (4 through the initial 12 month period and 7 through the OLE)

[c] 4 patients had confirmed disability progression either in the initial 12 month period (n=1) or in the OLE (n=3)

* One patient who had treatment-related MS relapse 7 days after dosing in the setting of ongoing URTI symptoms and possible dental infection discontinued the study and was not evaluated for efficacy (only safety)

In the Phase 1 and OLE, Treatment with ATA188 Led to Sustained EDSS Improvement in Some Patients Suggesting a Possible Reversal of Disease Progression



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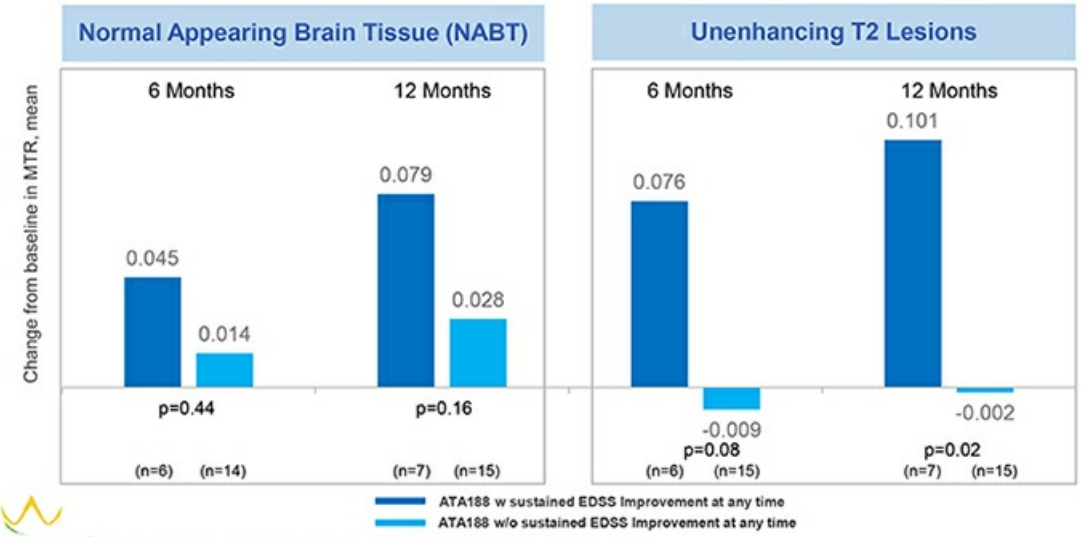
*Note: Chart is not to scale and does not accurately depict time to progression from one to stage to another. EDSS 0 (not shown) represents normal neurological exam; EDSS 1-2 represent minimal disability. EDSS scores 8-10 (not shown) represent progression to bed rest and death. Time to progression on EDSS varies significantly from patient to patient. Graphic based on: 1) Kurtzke JF. Neurology. 1983;33:1444-1452; 2) Kurtzke Expanded Disability Status Scale description *Patient A did not enroll in OLE; **Patient K had a relapse at 18 months, reverted to 5.5 EDSS, and decided to discontinue the study.*

ATA188 Shows, For the First Time in PMS, a Statistically Significant Increase in MTR (Potential Remyelination) in Unenhancing T2 Lesions



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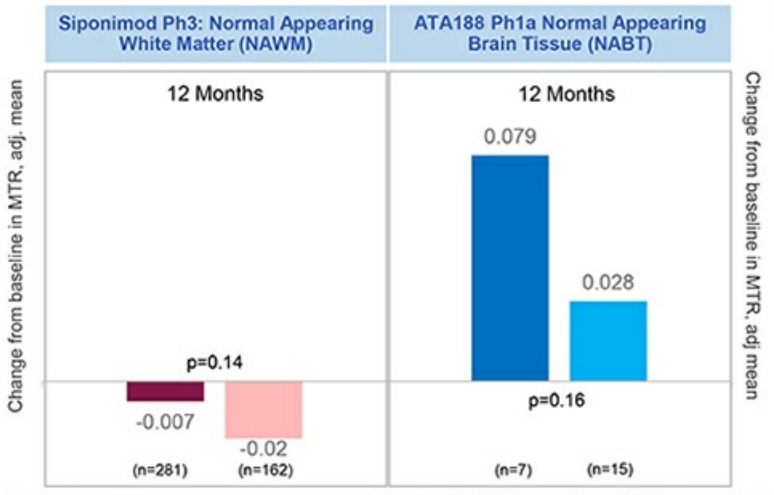
Source: Data table Adapted from Bar-Or A et al. Presented at ECTRIMS Congress; October 13-15, 2021; Poster P638.
Note: Some imaging scans for ATA188 could not be obtained or were unreadable; ATA188 patients are both PPMS and SPMS

MTR Increases in Ph1 ATA188 Study (SPMS, PPMS) Suggest Remyelination vs MTR Decreases in Ph3 Siponimod Study (SPMS)



Summary

- The expected course for MTR in Progressive MS is decline, or demyelination, as seen in the SPMS placebo group from the Siponimod Ph3 Study
- Siponimod shows slowing of demyelination based on a smaller decrease in MTR vs. Placebo
- ATA188 uniquely demonstrates potential remyelination based on a relatively large magnitude increase in MTR

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Source: Adapted from Arnold D et al. As presented during the EAN Virtual Congress 2020, EPR1147
Note: Siponimod patients are SPMS only

Source: Data table Adapted from Bar-Or A et al. Presented at ECTRIMS Congress, October 13-15, 2021; Poster P638.
Note: Some imaging scans for ATA188 could not be obtained or were unreadable; ATA188 patients are both PPMS and SPMS

Growing Evidence that EBV Has a Major Role in the Pathogenesis of Multiple Sclerosis

- Prior EBV infection is necessary for a patient to develop MS [1,4]
- MS may be mediated by B cells that are infected with EBV [2]
- Defective elimination of EBV-infected autoreactive B cells by CD8+ T-cells results in accumulation in lymphoid structures and target organs implicated in MS, including the CNS, leading to inflammation.[3] This aberrant inflammation eventually leads to demyelination and axon destruction.
- As MS progresses, patient's ability to mount cell-mediated immune response against EBV decreases and is the worst in patients with progressive MS [3]
- EBV can activate and expand autoreactive memory CD4+ T-cells via molecular mimicry to antigens found in the brain (namely RASGP2) [5]
- EBV may promote the maintenance and expansion of autoreactive memory CD4+ T-cells via molecular mimicry [5]

1. Ascherio A et al, *Nat Rev Neurol*. 2012;8:602-612. Endriz, J. et al., Neurol. Neuroimmunol. Neuroinflamm. (2017) 4, e308
2. Harley et al, Nature Genetics 2018
3. Pender et al, Clin Transl Immunology. 2017;6(1):e126. Cencioni et al, Immunology. 2017;152:660–676
4. Pender et al, Trends in Molecular Medicine 2020
5. Wang et al., 2020, Cell *183*, 1-18; Zamvil S. and Hauser M., 2021, NEJM *384*;4

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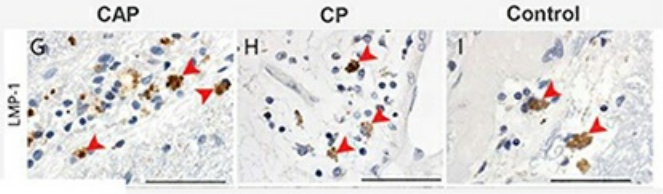
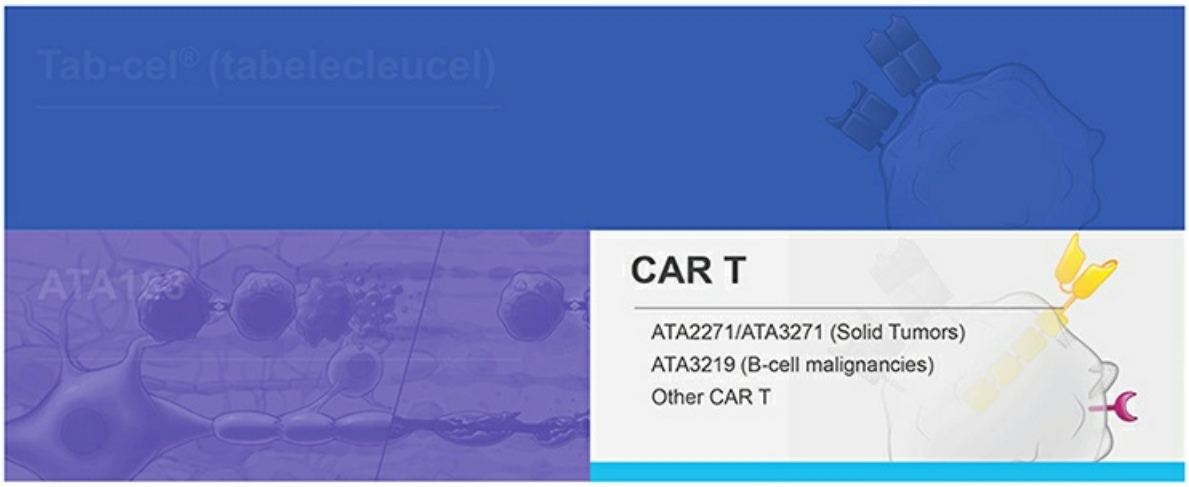
Expression of LMP1 in MS and control subjects



Moreno MA. et al. *Neurol Neuroimmunol Neuroinflamm*. 2018;5:e466.

Atara Strategic Priorities to Create Value: CAR T



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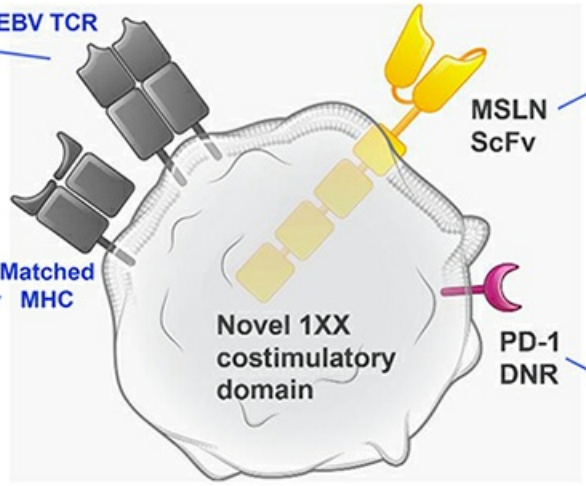
Atara Next-Gen CAR T Platform: Key Features for Efficacy and Persistence

- TCR is a key survival signal for T-cells[1,2,7]
- Loss of TCR complex results in reduced persistence in vivo[3,4]



- Optimized affinity for therapeutic index[5]
- Humanized to minimize HAMA

- Partial HLA Matching allows TCR/MHC matching and minimizes GVHD risk[8]
- Obviates need for genomic editing or stealth approaches

- Maintains endogenous PD1 expression
- Co-expression of DNR molecule
- Avoid ablation of PD1 which results in premature T-cell exhaustion[6]

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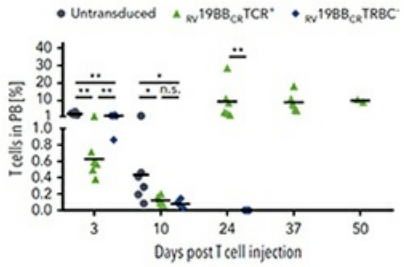
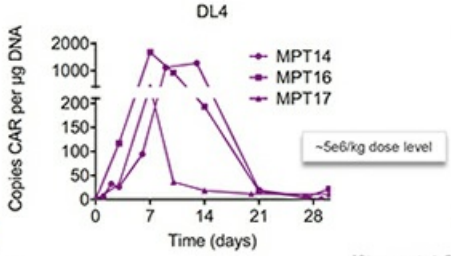
[1]Tanchot et al, Science 1997. [2]Myers et al, Trends Immunology 2017. [3]Stenger et al, Blood 2020. [4]Wang et al, Nature CMI 2021. [5]Adusumilli et al Can Disc 2021. [6]Kalinin et al, Frontiers Molec Bio 2021. [7]Polic et al, PNAS 2001. [8]Prokop et al, JCI 2020.

An Intact T-Cell Receptor is Essential for T-cell Persistence



- Loss of TCR expression results in reduced CAR T cell persistence and survival in multiple pre-clinical models
  - TCR KO CAR T cells rapidly disappear



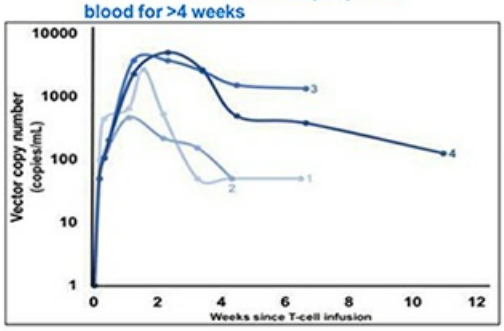
- TCR KO CAR T cells do not persist efficiently in patients in Ph1 study using MSLN TCR KO/PD1 KO CAR T cells
  - Persistence beyond 3-4 weeks has been challenging for CAR T in solid tumors or Allo CAR T in heme malignancies

ATARA I...

[1]Stenger et al, Blood 2020; [2]Wang et al, Nature CMI 2021

Encouraging Preliminary Data for ATA2271 and ATA3271 (Mesothelin CART Programs in Solid Tumors)

Clinical PK shows presence of ATA2271 CAR T cells in peripheral blood for >4 weeks



- **ATA2271** was associated with less T-cell exhaustion with enhanced serial cell killing and *in vivo* efficacy when compared with first-generation mesothelin CAR T therapy (AACR 2020)
- **ATA2271** preliminary clinical data confirms safety and persistence of such armored CAR-T (ESMO-IO 2021)
- **ATA3271**: off-the-shelf, allogeneic EBV mesothelin CAR T, IND-enabling studies ongoing
  - First preclinical data presented showing potent anti-tumor activity without allo-reactivity *in vivo* (SITC 2020)

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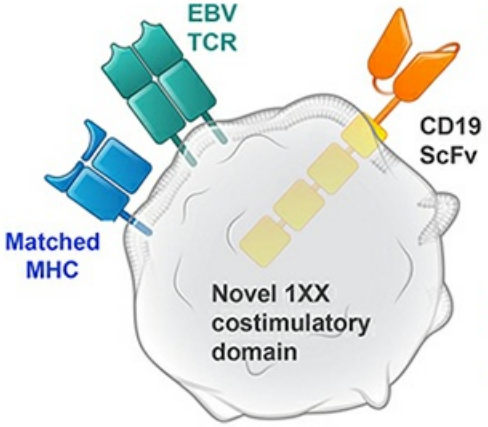
ATA2271 Phase 1 second cohort infused for patients with advanced mesothelioma; ATA3271 IND Submission Expected in Q4 2022

ATA3219: Potential Best in Class Off-the-Shelf Allogeneic CD19 Program for B-Cell Malignancies, with IND Expected in Q4 2022



- Investigator Sponsored Trial (MSKCC): advanced B-cell malignancy patients received partially HLA matched EBV CD19 CAR T cells manufactured from third-party donors
  - 83% (5/6) of R/R B-ALL, NHL and CLL patients had durable Complete Response (CR) with median follow up of 26.9 months
  - 100% CR in CLL (1/1) and NHL (4/4)
  - Average HLA match 3-4: similar to Atara EBV T-cell clinical experience
  - No dose-limiting toxicities observed with multiple doses administered
  - No CRS or neurotoxicity above Grade 2, no confirmed GvHD
- ATA3219: Next-generation off-the-shelf, allogeneic CD19-1XX CAR+ EBV T-cell product containing a modified CD3ζ signaling domain, 1XX.
- ATA3219 demonstrate persistence, polyfunctional phenotype, efficient targeting of CD19 expressing tumor cells both *in vitro* and *in vivo* (ASH 2020)

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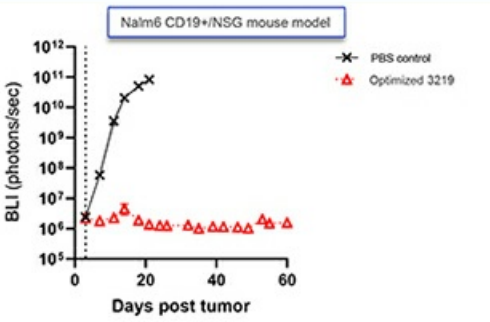
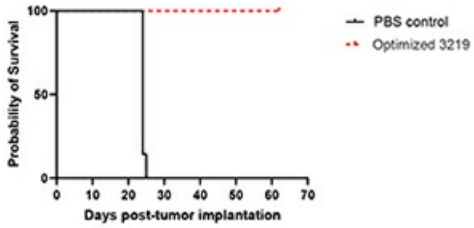
Curran KJ, Sauter CS, Kernan NA, et al. Durable remission following "Off-the-Shelf" Chimeric Antigen Receptor (CAR) T-cells in patients with relapse/refractory (R/R) B-cell malignancies. Biol Blood Marrow Transplant. 2020;26(3):S89.

IND = Investigational New Drug

Optimized for T Cell memory, ATA3219 CAR T Cells Show Superior Tumor Control *in vivo*

- CAR T field highlights importance of memory T cell phenotype for CAR T efficacy
- ATA3219 is being optimized for best-in-class opportunity
- Modifying the ATA3219 bio-production process for stem-like T cells shows more robust *in vivo* activity in Nalm6 preclinical model





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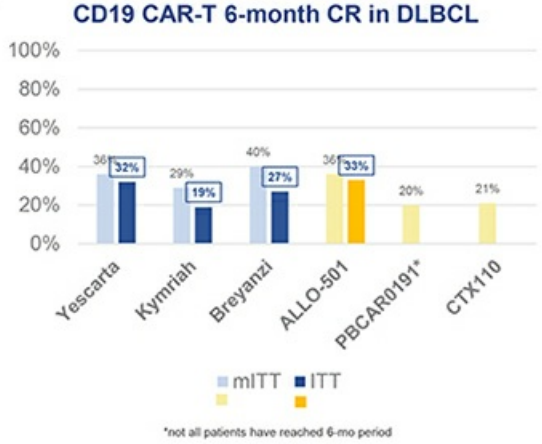
Atara – Data on File

ATA3219 Differentiation to Address High Unmet Medical Need

Key Points of Differentiation in B-Cell malignancies

- Confirm safety of allogeneic EBV CAR T cells
- Demonstrate best-in-class efficacy
- Establish sufficient persistence for durable response
- Scaled up manufacturing and off-the-shelf accessibility



ATARA BIO

We Are a Leading Allogeneic T-Cell Immunotherapy Company

Differentiated Allogeneic Cell Therapy Platform

Scalable EBV T-cell platform and technologies to develop multiple allogeneic cell therapies

Tab-cel®: First-In-Kind, Late-Stage, Oncology Program

MAA submitted in November 2021 with accelerated assessment and BLA submission expected in Q2 2022

ATA188: Potentially Transformative MS Treatment in Randomized Controlled Trial

Fast-track designation granted; Placebo-controlled interim data expected in Q2 2022 to enable pivotal studies and partnering opportunities, with potential to unlock multi-billion-dollar opportunity

Next-Gen Allogeneic CAR T Portfolio, Validated by Bayer Collaboration on Mesothelin-Targeted CAR T

Potential best-in-class programs designed to address current limitations of autologous and allogeneic CAR T

Proven Technical Capabilities

Advanced process science and manufacturing capabilities within state-of-the-art facilities

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EBV = Epstein-Barr Virus; BLA = Biologics License Application; BTD = Break Through Designation