Barinthus Biotherapeutics Other Programs

Guiding the Immune System to Cure Disease

July, 2024

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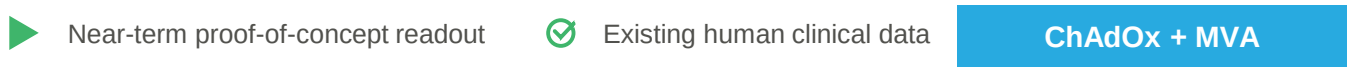
Harnessing the Power of Antigen-Specific Immunotherapies to Treat Chronic Infectious Diseases, Autoimmunity and Cancer

Other Programs	Product Candidate*	Therapeutic For	Preclinical	Phase 1	Phase 2	Phase 3	Status/Anticipated Upcoming Milestones
Cancer	**VTP-800/850**	**Prostate cancer**					**Phase 1 data (2025)**
Infectious Disease	**VTP-200**	**Persistent Human Papillomavirus (HPV) infection**					**Phase 1b/2 complete**



*Barinthus Bio has worldwide rights for all product candidates.
These are estimated timelines only and our pipeline may be subject to change.

VTP-200

Human Papillomavirus (HPV) Therapeutic

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VTP-200

Persistent HPV Infection Remains a Significant Public Health Problem[1]

We are targeting persistent HPV infection – which can lead to precancerous lesions and cervical cancer[1]

HPV is the most common sexually transmitted viral infection in the world[1]

Cervical cancer was the **4th most common** cancer in women globally in 2020.[2] **>95% of cervical cancer** is caused by HPV.[2]

~291 million women worldwide are infected with HPV[4] **>3.6M diagnosed annually** with persistent high-risk cervical HPV in US and across 5EU.[6]

Cervical cancer in the US[3]:

~4,000 deaths per year even with screening & treatment

~12,000 cases per year

Cervical cancer worldwide[2]:

~342,000 deaths per year

~604,000 cases per year

VTP-200 aims to address high unmet need for patients with persistent HPV infection

- While HPV prophylactic vaccines are effective at preventing infection, there are **low vaccination rates** exist in many regions of the world and these vaccines **do not eliminate existing infections**.[1]
- Standard of care is **monitoring and excision** once high-grade lesions develop.[1]
- Currently **no treatment** before high-grade lesions develop.[1]
- People with HPV infections report **cancer-related fear**, **worry over lack of treatment** and HPV being a **'ticking time bomb'**.[5]

[1] WHO, HPV vaccines: WHO position paper, 2022
[2] WHO, Cervical Cancer
[3] Center for Disease Control
[4] Lancet Infect Dis. 2007 Jul;7(7):453-9. 10.1016/S1473-3099(07)70158-5
[5] Psychooncology. 2021 Jan; 30(1): 84–92. doi: 10.1002/pon.5540
[6] Barinthus Bio, Data on File

APOLLO (HPV001) – Phase 1b/2 Study Design

Lead-in Phase: (N=9)

Objective: Evaluating VTP-200 immunogenicity and safety

Regions	EU	UK
Group A (n=3)	ChAdOx 2 x 10^8 vp MVA 1 x 10^7 pfu	
Group B (n=3)	ChAdOx 2 x 10^9 vp MVA 1 x 10^7 pfu	
Group C (n=3)	ChAdOx 2 x 10^{10} vp MVA 1 x 10^8 pfu	

Main Phase*: VTP-200 (N=99) – Complete

Objective: Evaluating safety data, efficacy data, immunogenicity, dose-response

Group	Day 1	Day 29
1 (n=16)	ChAdOx 2 x 10^9 vp	MVA 1 x 10^7 pfu
2 (n=16)	ChAdOx 2 x 10^{10} vp	MVA 1 x 10^7 pfu
3 (n=8)	ChAdOx 2 x 10^8 vp	MVA 1 x 10^8 pfu
4 (n=8)	ChAdOx 2 x 10^9 vp	MVA 1 x 10^8 pfu
5 (n=16)	ChAdOx 2 x 10^{10} vp	MVA 1 x 10^8 pfu
6 (n=32)	Placebo	Placebo

60 of the main phase participants will be part of an immunogenicity sub-study

Inclusion Criteria

- High risk HPV positive for >6 months and low-grade cervical lesions.

Primary Endpoint

- Safety: incidence of AEs and SAEs.

Secondary Endpoints

- Efficacy.
- Dose determination for further studies.

Study Outputs

- **Efficacy Data:** % clearance of high-risk HPV and cervical lesions evaluated at 12 months.

AE: adverse events, SAE: serious adverse events.
*All groups open simultaneously
Study Reference: NCT04607850

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APOLLO Trial Primary Endpoint Met - Analysis Ongoing

APOLLO (HPV001):
Phase 1b/2 Topline Final Data

- **Primary endpoint met:** VTP-200 was generally well-tolerated and administered with no treatment-related grade 3 or higher unsolicited AEs and no treatment-related SAEs.
- **Highest high-risk (hr)HPV clearance rate (60%) observed in Group 2**, which included the highest dose of ChAdOx.
- **Highest cervical lesion clearance rate (67%) observed in Group 2 and Group 5**, both received the highest dose of ChAdOx.
- Pooled data from the five active dose groups showed no significant improvement in hrHPV clearance or cervical lesion clearance rates in comparison to the placebo group.

		Month 12 hrHPV clearance	Month 12 Cervical lesion clearance*
Group	**1**	12%	40%
	2	**60%**	**67%**
	3	11%	20%
	4	33%	33%
	5	36%	**67%**
	Placebo	33%	39%

Next anticipated readout:

Analysis - Ongoing

AE: adverse events, SAE: serious adverse events.
* in participants with both reported lesions at screening and visualization of the cervical transformation zone at 12 months (n=57).

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VTP-850

Prostate Cancer Therapeutic

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Prostate Cancer Remains a Health Priority with High Diagnosis and Recurrence Rates

VTP-850 is a next generation ChAdOx-MVA multi-antigen product candidate designed to induce disease-relevant cytotoxic T cells and prevent advancement to metastatic disease.

Prostate cancer is the **4th most common cancer** diagnosis in the world.[1]	Prostate cancer worldwide[3]:
1 in 8 men will be diagnosed with prostate cancer in their lifetime.[2]	**~1.4M** new cases diagnosed.
20-40% of patients with non-metastatic prostate cancer experience biochemical recurrence after local therapy (e.g., prostatectomy).	**~375K** deaths per year.

VTP-850 is a novel immunotherapy candidate aiming to prevent advanced disease.

- Biochemical recurrence is indicated by rising PSA levels with no evidence of disease on conventional imaging, meaning the disease was not cured by local therapy.[4]
- Treatment options for patients with biochemical recurrence include systemic therapies such as hormonal or chemotherapy, resulting in toxicity and side effects.

[1] WHO, 2022.
[2] American Cancer Society, 2023
[3] World Cancer Research Fund International. 2020.
[4] Simon Ni, et al. Am Soc Clin Oncol Educ Book. 2022.

PSA: Prostate Specific Antigen.
Study Reference: NCT05617040

VTP-800 First-Generation Single-Antigen Immunotherapy Showed Meaningful Reduction in PSA

Phase 2a ADVANCE: VTP-800 + Anti-PD-1 in mCRPC

Study in metastatic castration-resistant prostate cancer (mCRPC) patients using ChAdOx-MVA plus nivolumab

VTP-800 antigen: 5T4

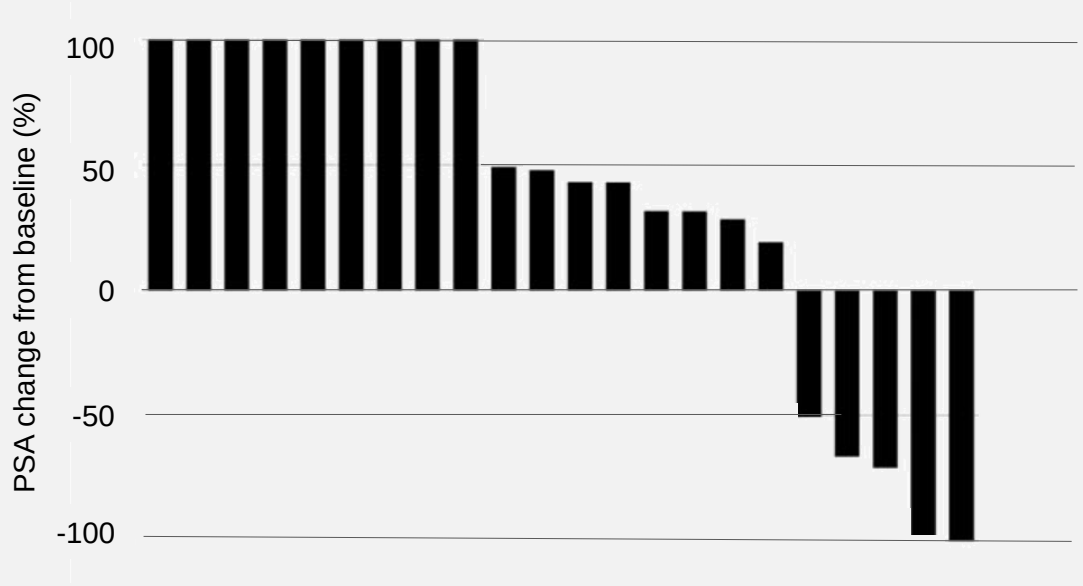
Target patient population: 23 mCRPC patients enrolled.

Efficacy data readouts:

- >50% reduction in PSA compared to baseline was seen in 22% of patients (5/23).
- Historical comparator with a PSA response to anti-PD-1 alone is ~9%.[1]
- 3 patients with PSA response also had measurable tumors and achieved clinical responses.

Phase 2 ADVANCE:

Serum PSA Results[2]



mCRPC: metastatic castration-resistant prostate cancer; **PSA:** prostate-specific antigen.

[1] Antonarakis, E. et al. Journal of Clinical Oncology 2020

[2] Data courtesy of Prostate Cancer Vaccine Group, Jenner Institute, UO. mCRPC: Metastatic Castrate Resistant Prostate Cancer

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PCA001 – Phase 1 Study of VTP-850 Design

Ongoing Phase 1 study for Multi-Antigen VTP-850, a Next-Generation Candidate.

Phase 1: Lead-in Phase

VTP-850 (N=15-18)

Objective: Dose finding for Phase 2, evaluation of safety and immunogenicity.

VTP-850 antigens:

- **5T4**
- **PSA**
- **PAP**
- **STEAP**

Cohort 1	**Low dose**	**(n=3-6)** IM/IM
Cohort 2	**Full dose**	**(n=6)** IM/IM
Cohort 3	**Full dose**	**(n=6)** IM/IV

Inclusion Criteria

- Hormone sensitive prostate cancer.
- Biochemical recurrence after definitive local therapy.
- No metastases by standard radiography.

Primary Endpoints

- Safety: incidence of AEs and SAEs.

Secondary Endpoints

- PSA response, durability of PSA response, duration of PSA response, metastasis-free survival, time to metastasis, time to start of androgen deprivation therapy.

* Including 6 participants from Phase 1. ** If 4 or more of the 25 participants at the RP2R (including the Phase 1 participants who received the same dose regimen) have a PSA response, Stage 2 will be opened to enrolment of up to 100 additional participants.
⁺ Dosing dependent on outcome of Phase 1.
Study Reference: NCT05617040

Next anticipated milestone:

Phase 1 data: 2025

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Thank You

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