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Estrella Immunopharma, Inc. (ESLA-NASDAQ)

ESLA: Initiating Coverage of Estrella Immunopharma: A Potential Successor to Arcellx in Next-Generation CAR-T

Based on our probability adjusted DCF model that takes into account potential future revenues for EB103, ESLA is valued at $12.00/share. This model is dependent upon continued clinical success of EB103 and will be adjusted accordingly based upon future clinical results.

Current Price (03/18/26)	$1.11
Valuation	**$12.00**

OUTLOOK

We are initiating coverage of Estrellas Immunopharma, Inc. (ESLA) with a valuation of $12.00. The recent $7.8B acquisition of Arcellx by Gilead Sciences has intensified investor focus on identifying the next generation of differentiated CAR-T platforms. We believe Estrella Immunopharma represents a compelling candidate within this emerging group. The company is developing engineered T-cell therapies based on its proprietary ARTEMIS® AbTCR platform, which is designed to enable more physiologic T-cell signaling and potentially improve the safety and durability of CAR-T therapies. Its lead program, EB103, targets the clinically validated CD19 antigen in relapsed or refractory B-cell lymphoma and has demonstrated encouraging early clinical activity. In our view, Estrella today resembles Arcellx approximately 18–24 months prior to its acquisition.

SUMMARY DATA

52-Week High	**$3.05**
52-Week Low	**$0.76**
One-Year Return (%)	**21.98**
Beta	**0.53**
Average Daily Volume (sh)	**40,071**
Shares Outstanding (mil)	**42**
Market Capitalization ($mil)	**$47**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**3**
Insider Ownership (%)	**62**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2026 Estimate	**N/A**
P/E using 2027 Estimate	**N/A**

Risk Level	**High**
Type of Stock	**Small-Blend**
Industry	**N/A**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2024	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
2025	0.0 A	0.0 A	0.0 A	0.0 E	0.0 E
2026					0.0 E
2027					0.0 E

Earnings Per Share

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2024	-$0.01 A	-$0.13 A	-$0.09 A	-$0.01 A	-$0.27 A
2025	-$0.06 A	-$0.15 A	-$0.13 A	-$0.14 E	-$0.48 E
2026					-$0.39 E
2027					-$0.32 E

WHAT'S NEW

Initiating Coverage

Source: Estrella Immunopharma, Inc.

We are initiating coverage of Estrella Immunopharma (NASDAQ: ESLA) with a valuation of $12.00 per share and a thesis centered on the potential for the company to emerge as one of the next generation of differentiated CAR-T innovators following the value creation recently demonstrated by Arcellx, Inc. and its acquisition by Gilead Sciences for approximately $7.8 billion. Estrella is developing next-generation engineered T-cell therapies designed to address several of the key limitations associated with conventional CAR-T constructs, including excessive immune activation, treatment-related toxicity, and loss of durable T-cell activity. The company's technology platform, ARTEMIS®, combines antibody-based antigen recognition with physiologic T-cell receptor signaling, enabling a more controlled form of T-cell activation that may improve the therapeutic window of engineered T-cell therapies.

Estrella's lead program, EB103, is a CD19-directed ARTEMIS engineered T-cell therapy being developed for relapsed or refractory B-cell malignancies. CD19 remains one of the most clinically validated targets in hematologic oncology, but meaningful opportunities remain to improve the safety, durability, and scalability of CD19-directed CAR-T treatments. Early clinical data presented from the Phase 1/2 STARLIGHT-1 trial demonstrated encouraging efficacy and safety signals, including a 100% complete response rate at dose level 2 with no ≥ Grade 3 cytokine release syndrome, suggesting EB103 may offer a differentiated safety and efficacy profile within this well-established therapeutic class.

Next-generation engineered T-cell platform targeting known CAR-T limitations
Estrella's ARTEMIS platform separates antigen recognition from intracellular costimulatory signaling, allowing engineered T cells to activate through physiologic T-cell receptor pathways rather than conventional CAR signaling domains. This architecture is designed to produce a more controlled immune response that may potentially improve both safety and durability of response compared to first-generation CAR-T therapies.

Encouraging early clinical data supporting platform differentiation
Early clinical observations from EB103 have demonstrated durable complete responses in patients with relapsed or refractory B-cell lymphoma along with a low incidence of high-grade cytokine release syndrome and immune effector cell–associated neurotoxicity. Results from the Phase 1/2 STARLIGHT-1 study showed a 100% complete response rate at dose level 2, despite approximately 80% of treated patients meeting high-risk disease criteria, providing early clinical support for the ARTEMIS platform.

Strong commercial precedent for CD19-directed engineered T-cell therapies
Multiple approved CD19 CAR-T products have already demonstrated the clinical and commercial value of this target across B-cell malignancies. As next-generation technologies seek to improve safety and durability, companies capable of delivering differentiated CAR-T performance may attract substantial strategic interest, as illustrated by the recent multi-billion-dollar acquisition of Arcellx by Gilead Sciences. Estrella's platform-driven approach to improving engineered T-cell signaling may position the company to participate in the next wave of value creation within the CAR-T sector.

INVESTMENT THESIS

Estrella Immunopharma: A Potential Successor to Arcellx in Next-Generation CAR-T

The acquisition of Arcellx, Inc. by Gilead Sciences for approximately $7.8 billion has intensified industry focus on identifying the next generation of differentiated CAR-T cell therapy platforms. While the first wave of CAR-T therapies demonstrated transformative efficacy in certain hematologic malignancies, limitations related to toxicity, durability, and manufacturing complexity have created significant opportunity for next-generation engineering approaches.

We believe Estrella Immunopharma (ESLA) represents a compelling candidate to emerge in this search. In our view, Estrella today closely resembles Arcellx approximately 18–24 months prior to its acquisition, with a differentiated CAR-T engineering platform, early clinical signals of efficacy, and a focus on validated therapeutic targets in B-cell malignancies.

At the center of Estrella's strategy is its ARTEMIS® T-cell engineering platform, designed to provide more controlled signaling within CAR-T cells. By separating antigen recognition from intracellular signaling, the ARTEMIS system may allow more precise tuning of T-cell activation compared with conventional CAR designs. If successful, this architecture could potentially mitigate several of the limitations observed with earlier CAR-T constructs, including excessive immune activation and treatment-related toxicities.

The company's lead clinical candidate, EB103, targets the well-validated CD19 antigen, a surface protein expressed on most B-cell malignancies. CD19 has already been clinically validated by multiple approved CAR-T therapies, including products developed by companies such as Kite Pharma and Novartis. However, despite strong efficacy, first-generation CD19 CAR-T therapies are associated with meaningful toxicity risks and logistical complexity.

Estrella's approach aims to improve upon these earlier therapies by applying its novel engineering platform to a target with well-established clinical relevance. Given the substantial strategic interest in differentiated cell-therapy technologies, we believe Estrella represents a potentially attractive platform within the evolving CAR-T ecosystem.

The Arcellx Playbook: A Blueprint for Value Creation in CAR-T

The recent success of Arcellx provides an instructive case study in how innovative CAR-T platforms can rapidly create strategic value. Arcellx developed anitocabtagene autoleucel (anito-cel), a BCMA-targeted CAR-T therapy designed using its proprietary D-domain binding technology. Early clinical data demonstrated strong response rates with potentially improved safety characteristics relative to earlier BCMA-targeted CAR-T therapies.

These results generated significant interest across the biotechnology sector and ultimately culminated in a multi-billion-dollar strategic transaction with Gilead Sciences. Several key factors drove Arcellx's rapid valuation expansion, with these elements combining to create a powerful value-creation narrative and one that we believe Estrella appears to be following as well:

1. **Differentiated engineering technology**: The company introduced a novel binding domain architecture intended to improve CAR-T performance.
2. **Early clinical signals of efficacy and safety**: Initial clinical data suggested meaningful responses in heavily pre-treated patients.
3. **Focus on validated oncology targets**: BCMA had already been clinically validated in multiple myeloma, reducing target-related development risk.
4. **Strategic demand for next-generation cell therapy platforms**: Large pharmaceutical companies continue to seek differentiated technologies capable of improving existing CAR-T therapies.

Estrella and Arcellx Development Comparison

While Estrella remains at an earlier stage of clinical development, the company exhibits several characteristics that resemble the trajectory followed by Arcellx prior to its acquisition.

Feature	Arcellx (Pre-Acquisition Stage)	Estrella Today
Core technology	D-domain CAR architecture	ARTEMIS T-cell platform
Lead asset	Anitocabtagene autoleucel	EB103
Target antigen	BCMA	CD19
Clinical stage	Early clinical trials	Early clinical trials
Differentiation strategy	Novel binding domain	Controlled signaling architecture

Source: Zacks Small Cap Research

Importantly, both companies centered their development strategy around validated oncology targets while introducing engineering innovations designed to improve CAR-T functionality. This approach can be particularly powerful within cell therapy development. By targeting antigens that have already demonstrated strong clinical relevance, companies can focus their innovation on improving therapeutic performance rather than proving biological validity from scratch. Estrella's focus on CD19 exemplifies this strategy, as CD19 remains one of the most extensively validated targets in hematologic oncology, with multiple approved therapies demonstrating significant response rates in B-cell malignancies. However, despite these successes, substantial opportunities remain to improve the safety, durability, and accessibility of CAR-T treatments. If Estrella's ARTEMIS platform can successfully address these challenges, the company may be well positioned within the next generation of CAR-T innovation.

CD19 as a Therapeutic Target

CD19 is a transmembrane glycoprotein of the immunoglobulin superfamily that is expressed consistently throughout most stages of B-cell development, from early progenitor B cells through mature B cells, and on the vast majority of B-cell malignancies, including acute lymphoblastic leukemia (ALL), chronic lymphocytic leukemia (CLL), and various forms of non-Hodgkin lymphoma (NHL). Importantly, CD19 is not expressed on hematopoietic stem cells or most non-B cell lineages, providing a lineage-restricted target that minimizes off-tumor toxicity when targeted by immunotherapies (Maher, 2014).

At the molecular level, CD19 functions as a modulator of B-cell receptor (BCR) signaling, amplifying receptor-mediated signals and lowering the threshold for BCR activation (Schurmans *et al.*, 2025). Through interactions with signaling partners including CD21 and CD81, CD19 recruits and activates Src family kinases and downstream effectors such as PI3K and Akt, which drive B-cell proliferation and survival. This central role in B-cell signaling enhances both normal immune responses and the pathogenic proliferation of malignant B cells.

The consistent presence of CD19 across the spectrum of B-cell malignancies has made it a therapeutically validated target for decades. Early immunotherapy efforts focused on monoclonal antibodies and bispecific antibody constructs directed at CD19, but the most dramatic clinical progress has come from chimeric antigen receptor T cells (CAR-T) (Davila *et al.*, 2016). CAR-T cells are autologous T lymphocytes genetically modified to express a synthetic receptor that uses an antibody-

derived binding domain to recognize CD19, coupled to intracellular domains that activate T-cell effector functions independently of major histocompatibility complex (MHC) restriction.

Clinical validation of CD19 has been unequivocal. CD19 CAR-T therapies have transformed outcomes for patients with relapsed or refractory B-cell malignancies who previously had limited options. High complete response rates, durable remissions, and meaningful overall survival benefits have been observed in multiple Phase I/II studies and led to regulatory approvals for products such as tisagenlecleucel (Kymriah®) in acute lymphocytic leukemia (ALL) and axicabtagene ciloleucel (Yescarta®), brexucabtagene autoleucel (Tecartus®), and lisocabtagene maraleucel (Breyanzi®) in Non-Hodgkin lymphoma (NHL). These therapies have established CD19-targeted CAR-T as a new standard of care in select relapsed/refractory patient populations.

A meta-analysis encompassing more than 3,400 patients across 56 studies reinforces the broad clinical impact of CD19 CAR-T therapies, reporting an overall complete response rate of ~56% and demonstrating that durable responses are achievable across varied patient populations and CAR constructs, even though long-term disease-free survival remains an ongoing challenge (Montagna *et al.*, 2024).

Despite this clear clinical success, several biological limitations of CD19 as a target have surfaced in practice (Sterner *et al.*, 2021). CD19 expression is not absolutely required for malignant B-cell survival, meaning that tumor cells can downregulate or lose CD19 under therapeutic pressure. This phenomenon is observed in both B-ALL and NHL relapse settings. This antigen escape represents a critical mechanism of resistance to monospecific CD19-directed therapies.

Moreover, intrinsic tumor cell features such as the presence of other coreceptor molecules (e.g., CD21) can influence the efficiency of recognition and killing by CD19-targeted CAR T cells, suggesting that tumor biology itself contributes to heterogeneous therapeutic responses beyond T-cell product attributes (Li *et al.*, 2022). The lineage-restricted expression of CD19 also means that on-target, off-tumor effects, most notably B-cell aplasia, occur as an expected consequence of effective therapy. While manageable clinically with immunoglobulin replacement, this effect reflects the fundamental cost of targeting a pan-B-cell antigen.

Taken together, the biological characteristics of CD19 (consistent expression on malignant B cells, absence from most essential normal tissues, and functional involvement in B-cell signaling) provide both the scientific rationale and clinical validation for its use as a therapeutic target. At the same time, limitations such as antigen escape and variable response durability have motivated the development of next-generation targeting strategies, including dual antigen targeting and engineered T-cell platforms with improved signaling characteristics. These developments are central to Estrella's strategic positioning and the rationale for advancing its ARTEMIS platform and associated assets.

Disease Landscape and Current Treatment Paradigm

The clinical development strategy for CD19-directed engineered T-cell therapies is anchored in diseases with high unmet need, established biological validation, and increasingly competitive treatment landscapes. Estrella's programs are primarily focused on relapsed or refractory B-cell malignancies, including diffuse large B-cell lymphoma (DLBCL), follicular lymphoma (FL), mantle cell lymphoma (MCL), and B-cell acute lymphoblastic leukemia (B-ALL). Across these indications, therapeutic advances over the past decade have improved outcomes for many patients, but a substantial subset continue to relapse or progress despite exposure to multiple lines of therapy, underscoring the need for more durable and tolerable treatment options.

Diffuse Large B-Cell Lymphoma (DLBCL)

DLBCL is the most common subtype of NHL, accounting for approximately 30–40% of cases worldwide. It is an aggressive malignancy characterized by rapid progression but also potential curability with

frontline therapy. Standard first-line treatment typically consists of rituximab-based chemoimmunotherapy, most commonly R-CHOP, which achieves long-term remission in approximately 60% of patients (Friedberg, 2011). However, patients who relapse early or are refractory to frontline therapy face poor outcomes, with historical median overall survival of less than one year in chemotherapy-refractory disease (Crump *et al.*, 2017).

Second-line treatment historically relied on salvage chemotherapy followed by autologous stem cell transplantation (ASCT) in eligible patients. However, only a minority of patients with relapsed or refractory disease are able to proceed to transplant due to chemorefractoriness, age, or comorbidities. This treatment gap catalyzed the adoption of CD19 CAR-T therapies, which have now become standard of care in second- or third-line settings depending on disease risk and regulatory jurisdiction (Barca *et al.*, 2023).

Three CD19 CAR-T products are approved for DLBCL: axicabtagene ciloleucel (Yescarta®), tisagenlecleucel (Kymriah®), and lisocabtagene maraleucel (Breyanzi®). Pivotal trials demonstrated overall response rates ranging from ~50–75%, with complete response rates of ~40–55% (Neelapu *et al.*, 2017; Schuster *et al.*, 2019; Abramson *et al.*, 2023) Importantly, a subset of patients achieve durable remissions extending beyond five years, establishing CAR-T therapy as potentially curative in a population with otherwise limited options.

Despite these advances, CAR-T therapy in DLBCL remains constrained by treatment-related toxicity**,** manufacturing delays**,** and relapse rates approaching 40–60% in some real-world cohorts. Additionally, access remains uneven due to the need for specialized treatment centers and prolonged inpatient monitoring, creating a strong incentive for next-generation approaches that maintain efficacy while improving safety and logistical feasibility.

Other treatments in development include CD3×CD20 bispecific antibodies such as glofitamab and epcoritamab, which offer off-the-shelf availability and outpatient administration (Dickinson *et al.*, 2022; Thieblemont *et al.*, 2023). While bispecifics demonstrate meaningful activity, complete response rates and durability generally appear inferior to CAR-T therapy, particularly in high-risk disease, positioning them as complementary rather than fully substitutive options.

Follicular Lymphoma (FL)

Follicular lymphoma (FL) is an indolent B-cell malignancy characterized by repeated cycles of remission and relapse. While median overall survival exceeds 15 years, FL is considered incurable with conventional therapies, and patients who progress within 24 months of frontline therapy (POD24) experience markedly worse outcomes (Ng *et al.*, 2025). Standard treatment options include anti-CD20 monoclonal antibodies, chemoimmunotherapy, PI3K inhibitors, and immunomodulatory agents. CD19 CAR-T therapy has emerged as an important option for heavily pretreated patients, with high response rates observed even in late-line settings. The five-year follow-up for the ZUMA-5 trial of axicabtagene ciloleucel reported an overall response rate of 90% and a complete response rate of 75% in relapsed or refractory FL (Neelapu *et al.*, 2025). However, the indolent nature of FL raises unique considerations regarding long-term toxicity and quality of life. As a result, therapies with improved safety profiles and durable disease control without excessive immune-related adverse events are particularly attractive, creating a potential niche for next-generation engineered T-cell platforms.

Mantle Cell Lymphoma (MCL)

Mantle cell lymphoma (MCL) is a rare but aggressive B-cell malignancy with a historically poor prognosis. While initial responses to chemoimmunotherapy and targeted agents such as Bruton's tyrosine kinase (BTK) inhibitors can be robust, most patients eventually relapse. The approval of brexucabtagene autoleucel (Tecartus®) represented a major advance, with high response rates observed in heavily pretreated patients (Wang *et al.*, 2020) Nevertheless, MCL patients treated with CAR-T therapy remain at risk for significant toxicity, and relapse remains common. Competitive development in this space includes

next-generation CAR-T constructs, bispecific antibodies, and novel targeted agents, reinforcing the need for therapies that balance potency with tolerability (Boccellato *et al*., 2025).

B-Cell Acute Lymphoblastic Leukemia (B-ALL)

B-cell acute lymphoblastic leukemia (B-ALL) represents one of the earliest and most dramatic clinical successes of CD19 CAR-T therapy. In pediatric and young adult patients with relapsed or refractory disease, CD19 CAR-T therapy has produced complete remission rates exceeding 80%, leading to early regulatory approvals and widespread clinical adoption (Maude *et al*., 2018). Despite high initial response rates, relapse remains frequent, often driven by CD19 antigen loss or lineage switching. These observations have catalyzed the development of dual-target CAR-T approaches, including CD19/CD22 constructs, designed to mitigate antigen escape and improve durability of response (Ma *et al*., 2025).

CAR-T Market Overview

The global CAR-T cell therapy market has transitioned from scientific novelty to a commercially meaningful category within oncology. By 2026, the CAR-T market is estimated to exceed $7.4 billion in annual revenue (EvaluatePharma), with continued robust growth expected through the end of the decade. This figure could reach to almost $20 billion by 2031 (EvaluatePharma), reflecting broader adoption, label expansions, and entry into earlier lines of therapy as well as geographic penetration.

Currently marketed CAR-T therapies, including CD19-directed products such as Yescarta (axicabtagene ciloleucel), Kymriah (tisagenlecleucel), Breyanzi (lisocabtagene maraleucel), and Tecartus (brexucabtagene autoleucel), alongside BCMA-directed therapies in multiple myeloma, comprise the commercial backbone of the category. In 2025, Yescarta generated approximately $1.5 billion in sales, Breyanzi generated almost $1.4 billion, while Kymriah and Tecartus each generated over $300 million in revenue (EvaluatePharma).

Product dynamics vary by indication: CD19 CAR-T therapies lead in DLBCL, FL, and MCL, while BCMA-targeted therapies such as Carvykti® (ciltacabtagene autoleucel) are rapidly expanding in multiple myeloma. Growth in the BCMA segment has been particularly strong, with some products showing explosive year-over-year increases in sales and market share gains.

The acquisition of Arcellx by Gilead Sciences further underscores the commercial and valuation potential of differentiated CAR-T assets. In February 2026, Gilead announced a definitive agreement to acquire Arcellx for approximately $7.8 billion in cash and contingent value rights, representing a significant premium to market value.

The centerpiece of the Arcellx acquisition is anitocabtagene autoleucel (anito-cel), a novel BCMA-directed CAR-T therapy in development for relapsed or refractory multiple myeloma that has shown deep, durable responses in clinical studies and whose biologics license application (BLA) has been accepted by the U.S. Food and Drug Administration, with an anticipated action date in late 2026. Beyond anito-cel, Arcellx brings a proprietary D-Domain CAR technology platform with enhanced target-binding domains that Gilead plans to leverage for future next-generation CAR and bispecific programs.

From an investment perspective, the Arcellx acquisition validates several important themes:

- **Large biopharma willingness to pay premium valuations** for differentiated cell therapy assets with late-stage clinical programs and near-term regulatory catalysts (e.g., an FDA PDUFA date).
- **Robust growth expectations for CAR-T as a commercial class**, justifying strategic portfolio prioritization.
- **The proliferation of CAR-T beyond CD19 into targets such as BCMA and potentially others**, highlighting the broadening therapeutic scope of engineered T-cell approaches.

Compared with that comp, Estrella's pipeline, particularly if EB104 and the CF33-CD19t mark-and-kill strategy prove successful, could be viewed as a multi-engine opportunity across both hematologic and solid tumor landscapes. Arcellx's valuation also underscores the premium attached to assets with imminent market entry and strong clinical validation, which serves as a benchmark when considering Estrella's risk/return profile.

Emerging Competitive Therapies

The treatment landscape for relapsed or refractory B-cell malignancies has evolved rapidly over the past decade, driven by the introduction of cellular immunotherapies and a growing array of immune-based and targeted agents. While CD19-directed CAR-T therapies have established a new efficacy benchmark in aggressive and late-line disease, multiple alternative modalities are now competing across adjacent lines of therapy, each offering distinct trade-offs in potency, safety, and accessibility.

Agent	Company	Modality / Class	Molecular Target(s)	Mechanism of Action	Key Approved / Studied Indications	Strategic Strengths	Key Limitations
Axicabtagene ciloleucel (Yescarta®)	Gilead / Kite	Autologous CAR-T	CD19	Genetically engineered autologous T cells expressing a CD19-directed CAR with CD28 costimulatory domain	DLBCL, FL, MCL	High CR rates; durable remissions in subset	CRS/ICANS; manufacturing time; relapse
Tisagenlecleucel (Kymriah®)	Novartis	Autologous CAR-T	CD19	CD19 CAR-T with 4-1BB costimulation	DLBCL, B-ALL	Long-term follow-up data; pediatric ALL success	Slower expansion; persistence variability
Lisocabtagene maraleucel (Breyanzi®)	BMS	Autologous CAR-T	CD19	Defined CD4/CD8 CAR-T composition	DLBCL, FL	Improved safety profile vs peers	Still resource-intensive
Brexucabtagene autoleucel (Tecartus®)	Gilead / Kite	Autologous CAR-T	CD19	CD19 CAR-T optimized for aggressive disease	MCL, B-ALL	High activity in MCL	Significant toxicity risk
Epcoritamab	Genmab / AbbVie	Bispecific antibody	CD3 × CD20	Redirects endogenous T cells to CD20+ B cells	DLBCL, FL (approved in some regions)	Off-the-shelf; outpatient dosing	Lower CR durability vs CAR-T
Glofitamab	Roche	Bispecific antibody	CD3 × CD20	T-cell engagement and B-cell cytotoxicity	R/R DLBCL	Fixed-duration dosing	CRS still observed; less durable
Mosunetuzumab	Roche	Bispecific antibody	CD3 × CD20	Immune synapse formation	FL, NHL	Favorable tolerability	Activity declines in aggressive disease
Loncastuximab tesirine	ADC Therapeutics	ADC	CD19	CD19-targeted cytotoxic payload delivery	DLBCL	Single-agent activity	Hematologic toxicity
Polatuzumab vedotin	Roche	ADC	CD79b	Microtubule-disrupting payload	DLBCL (combo regimens)	Synergistic with chemo	Not curative alone
Zanubrutinib / Acalabrutinib	BeiGene / AstraZeneca	Small molecule (BTKi)	BTK	B-cell receptor signaling inhibition	MCL, CLL, others	Oral; well tolerated	Resistance develops
CD19/CD22 Dual CAR-T (various)	Multiple (academic & biotech)	Dual-target CAR-T	CD19 + CD22	Reduces antigen escape	B-ALL, NHL (early trials)	Improved relapse prevention	Early-stage data
CD33/CD19 "Mark-and-Kill" Platforms	Early-stage biotechs	Multi-antigen immune targeting	CD33 + CD19	Tumor marking + immune activation	Hematologic malignancies	Addresses heterogeneity	Preclinical / early clinical

Sources: Company documents / Zacks SCR

Approved and late-stage therapies now span autologous CAR-T products**,** bispecific T-cell–engaging antibodies**,** antibody–drug conjugates (ADCs)**,** and targeted small molecules, with several next-generation approaches in early clinical development. These agents are increasingly being deployed in overlapping patient populations, particularly in relapsed or refractory DLBCL, FL, MCL, and B-ALL. A summary of key approved and emerging competitive therapies, including their mechanisms of action and regulatory status, is provided in the table above.

Despite increasing competition, CAR-T therapy remains the most potent modality for inducing deep and durable remissions in advanced B-cell malignancies. However, its use is constrained by treatment-related toxicity, manufacturing complexity, and limited durability in a substantial subset of patients. These limitations have created space for alternative immune-based strategies that prioritize convenience, scalability, and broader patient eligibility, even if at the expense of maximal efficacy.

Among these alternatives, CD3×CD20 bispecific antibodies have emerged as the most clinically advanced and commercially relevant competing class. Multiple agents within this class have now

received regulatory approval or advanced into late-stage development, supported by consistent activity across both aggressive and indolent B-cell lymphomas. Their off-the-shelf availability and outpatient administration have enabled rapid clinical adoption, particularly in patients who are ineligible for or relapse following CAR-T therapy.

While CD3×CD20 bispecifics have demonstrated meaningful clinical benefit, differences in response depth, durability, and toxicity profiles relative to CAR-T therapy have important implications for treatment sequencing and long-term disease control. A more detailed discussion of the clinical performance, safety profile, and competitive positioning of CD3×CD20 bispecific antibodies follows below.

Overview of CD3×CD20 Bispecific Antibodies

CD3×CD20 bispecific antibodies have emerged as a major competitive class in relapsed or refractory B-cell malignancies, particularly NHLs. These agents function by simultaneously binding CD20 on malignant B cells and CD3 on endogenous T cells, thereby inducing immune synapse formation and T-cell–mediated cytotoxicity without the need for *ex vivo* cell manipulation. Unlike CAR-T therapies, CD3×CD20 bispecifics are off-the-shelf biologics, enabling rapid treatment initiation and outpatient administration.

Clinically, bispecific antibodies have demonstrated meaningful activity across aggressive and indolent lymphomas in heavily pretreated populations. In pivotal studies, agents such as glofitamab, epcoritamab, and mosunetuzumab have reported overall response rates ranging from approximately 50–70%, with complete response rates generally lower than those observed with CD19 CAR-T therapies (Dickinson *et al*., 2022; Linton *et al*., 2024; Budde *et al*., 2022) . Importantly, while durable remissions are observed in a subset of patients, long-term follow-up suggests that depth and durability of response remain inferior to CAR-T therapy, particularly in aggressive disease subtypes.

Cytokine release syndrome (CRS) is a class-wide toxicity associated with CD3×CD20 bispecifics but is typically lower grade and more manageable than CAR-T–associated CRS. Step-up dosing strategies and premedication have been effective in mitigating severe events, allowing administration in outpatient or short-stay inpatient settings. Neurotoxicity occurs less frequently than with CAR-T therapy, further supporting broader applicability in older or less fit patients.

From a competitive perspective, CD3×CD20 bispecific antibodies are increasingly positioned either before CAR-T therapy in earlier relapsed disease or after CAR-T failure in patients who are ineligible for repeat cellular therapy. Their convenience, scalability, and favorable safety profile make them attractive for certain patient subsets; however, their comparatively lower complete response rates and limited long-term durability constrain their ability to fully displace CAR-T therapy as the preferred modality for achieving deep and potentially curative remissions in advanced B-cell malignancies.

Limitations of First Generation CD19 CAR-T Therapies

The clinical success of first-generation CD19-directed CAR-T therapies represents a landmark advance in the treatment of relapsed or refractory B-cell malignancies. However, long-term follow-up from pivotal trials, combined with real-world registry data and mechanistic studies, has increasingly highlighted structural limitations that constrain durability, safety, and scalability. These limitations are not specific to any single product but instead reflect broader design features of early CAR-T constructs and the biological complexity of advanced B-cell cancers.

Incomplete Durability and Relapse: Across pivotal clinical trials, CD19 CAR-T therapies have demonstrated high initial response rates; however, a substantial proportion of patients ultimately relapse.

- In the ZUMA-1 trial evaluating axicabtagene ciloleucel in aggressive B-cell lymphoma, long-term follow-up demonstrated that while durable remissions were achieved in a subset of patients,

approximately 60% of treated patients experienced disease progression or death over time (Locke *et al*., 2019).

- Similarly, in the JULIET trial of tisagenlecleucel in relapsed or refractory DLBCL, durable responses were observed, but median progression-free survival remained limited, and relapse continued to occur beyond the first year of treatment (Schuster *et al*, 2019).

- The TRANSCEND NHL 001 study of lisocabtagene maraleucel demonstrated improved safety and a defined CD4/CD8 composition, yet long-term follow-up again revealed that a significant fraction of patients relapse despite achieving initial complete responses (Abramson *et al*., 2020).

Antigen Escape and Tumor Heterogeneity: One of the most well-characterized mechanisms of relapse following CD19 CAR-T therapy is loss or downregulation of CD19 expression, rendering malignant cells invisible to CAR-T–mediated cytotoxicity. Antigen escape has been documented across multiple disease settings, particularly in B-ALL but also in lymphoma (Majzner *et al*., 2019). Tumor heterogeneity further compounds this issue, as selective pressure exerted by single-antigen targeting can promote clonal outgrowth of antigen-negative or lineage-switched malignant cells. These observations have driven interest in dual-target CAR-T constructs and alternative targeting strategies designed to reduce escape-mediated relapse.

Limited CAR-T Persistence and Functional Exhaustion: Sustained CAR-T persistence is a key determinant of long-term disease control. However, first-generation CAR-T products frequently exhibit limited *in vivo* persistence, particularly in heavily pretreated patients with compromised T-cell fitness. Functional exhaustion, characterized by diminished proliferative capacity and impaired cytokine production, has been linked to both intrinsic CAR design and chronic antigen exposure (Wherry *et al*., 2015). Differences in costimulatory domains (e.g., CD28 vs 4-1BB) influence expansion kinetics and persistence, but no first-generation construct has fully resolved the trade-off between rapid tumor clearance and sustained immune surveillance.

Treatment-Related Toxicity (CRS and ICANS): CRS and immune effector cell–associated neurotoxicity syndrome (ICANS) remain defining toxicities of CAR-T therapy. In ZUMA-1, grade ≥3 CRS or neurologic events occurred in a substantial proportion of patients, necessitating intensive supportive care and specialized treatment centers. Although improved management strategies have reduced mortality, severe toxicities continue to limit eligibility, particularly among older patients and those with comorbidities. Importantly, toxicity risk is not fully predictable and remains an obstacle to broader adoption (Lee *et al*., 2014). Mechanistically, CRS and ICANS are driven by supraphysiologic immune activation, macrophage engagement, and endothelial dysfunction, all processes that are not antigen-specific and therefore difficult to eliminate without compromising efficacy (Gust *et al*., 2017).

Manufacturing Complexity and Time-to-Treatment: All currently approved CD19 CAR-T therapies are autologous products that require leukapheresis, centralized genetic modification, *ex vivo* expansion, and cryopreservation prior to reinfusion. This multistep manufacturing process introduces logistical complexity, variable vein-to-vein times, and the risk of manufacturing failure or clinical deterioration during the interval between cell collection and treatment. Clinical trial reports and post-approval analyses have demonstrated that a subset of patients enrolled for CAR-T therapy do not ultimately receive infusion due to disease progression, complications during bridging therapy, or manufacturing-related issues. These challenges are particularly relevant in aggressive B-cell malignancies, where rapid disease kinetics can limit the feasibility of prolonged manufacturing timelines (Hartmann *et al*., 2017).

Manufacturing complexity also contributes to variability in product quality, including differences in T-cell phenotype, fitness, and expansion capacity, which may influence clinical outcomes. These factors have motivated ongoing efforts to improve CAR-T manufacturing efficiency, consistency, and scalability, as well as interest in alternative or next-generation engineered T-cell platforms (Depil *et al*., 2020).

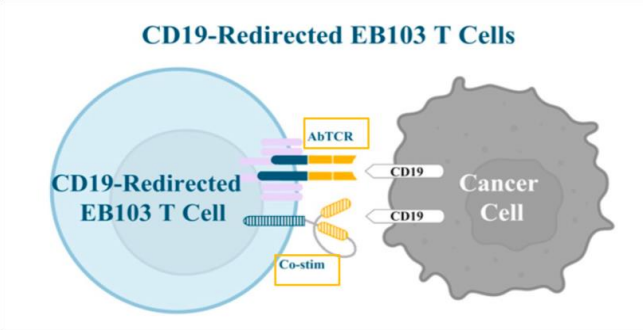
Estrella's ARTEMIS Platform

Estrella's strategic objective is to advance a next-generation engineered T-cell therapy platform capable of addressing the key biological and clinical limitations inherent to first-generation CD19 CAR-T therapies. Central to this strategy is the ARTEMIS (Antibody-T-Cell Receptor Engagement System) platform, a proprietary antibody-T-cell receptor (AbTCR) architecture licensed from Eureka Therapeutics that is designed to combine specific antibody targeting with physiologic T-cell receptor–like signaling in order to improve safety, persistence, and overall anti-tumor activity.

The ARTEMIS approach represents a departure from conventional CAR-T constructs, which typically fuse a single-chain variable fragment (scFv) to an intracellular signaling domain composed of CD3ζ in combination with costimulatory domains (e.g., 4-1BB or CD28). While CAR-T modalities have demonstrated potent antitumor responses in select hematologic malignancies, their synthetic signaling architecture has been implicated in supraphysiologic T-cell activation, excessive cytokine release, and premature T-cell exhaustion, all factors that collectively limit durability and widen the therapeutic window. ARTEMIS seeks to address these limitations by integrating antigen recognition through antibody fragments with native T-cell receptor signaling machinery, thereby aligning target engagement with more regulated and nuanced T-cell activation pathways.

Antibody-TCR (AbTCR) Engineering

The core innovation of the ARTEMIS platform lies in the construction of an "AbTCR" that links an antibody-derived binding domain to endogenous T-cell receptor components, enabling engineered T-cells to engage cancer antigens through a signaling cascade that more closely resembles natural T-cell receptor biology. Specifically, EB103 T-cells consist of two domains: 1) the AbTCR consists of a target binding domain from an antibody fragment antigen binding (Fab) region and an effector domain derived from portions of a human gamma/delta T-cell receptor (TCR); 2) the co-stimulatory molecule consists of a target binding domain derived from a single-chain variable fragment (scFv) and a co-stimulatory domain derived from portions of a human co-stimulatory receptor. Both the AbTCR and the co-stimulatory molecule bind CD19.

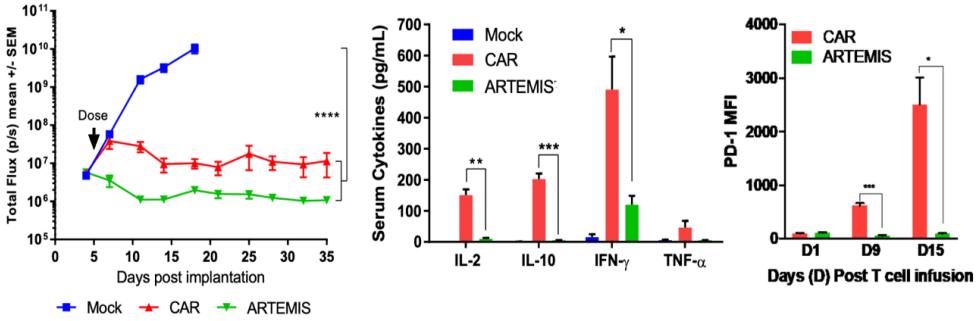


Source: Estrella Immunopharma, Inc.

Preclinical and translational literature provides context for the potential advantages of this approach. For example, AbTCR constructs have been shown to confer antigen-specific cytotoxicity with reduced inflammatory cytokine release and a less exhausted T-cell phenotype compared with conventional CAR constructs in xenograft models, while maintaining comparable tumor-killing activity (Xu *et al.*, 2018). These effects are attributed to engagement of the endogenous multimeric CD3 complex and preservation of native TCR signaling pathways, which may reduce the intensity of immune overactivation associated with CAR signaling domains.

In the study by Xu *et al.*, the *in vivo* antitumor activity of AbTCR constructs (ET190L1-AbTCR-T cells) were tested in an established $CD19^{+}$ Raji B-cell lymphoma xenograft model against a CAR-T construct (ET190L1-CAR). The following figure shows that treatment with the AbTCR cells resulted in tumor regression and long-lasting tumor rejection. In fact, when the control mice had to be euthanized, tumor

burden was on average approximately 1000-fold less in mice treated with the CAR cells than placebo and approximately 5300-fold lower in mice treated with AbTCR cells than in the placebo-treated mice. While treatment with the CAR cells caused a large increase in inflammatory cytokines such as Interleukin (IL)-2, IL-10, Interferon-gamma (IFN-γ), and tumor necrosis factor alpha (TNF-α), much lower levels of those cytokines were released by the AbTCR cells. Lastly, T cells collected from peripheral blood nine- and 15-days post-T cell dosing also showed that AbTCR cells exhibited significantly lower levels of PD-1 (an exhaustion marker) than CAR cells. Taken together, the data show that AbTCR cells have potent *in vivo* anti-tumor activity while simultaneously releasing lower levels of inflammatory cytokines and lower levels of exhaustion markers than CAR-T cells.



Source: Estrella Immunopharma, Inc.

STARLIGHT-1 Trial of EB103

Estrella's lead clinical program, EB103, utilizes the ARTEMIS AbTCR platform to target CD19 in patients with relapsed or refractory B-cell NHL. The Phase I/II STARLIGHT-1 study (NCT06343311) is designed to evaluate the safety, tolerability, and preliminary efficacy of EB103 in adult patients with relapsed/refractory disease, with the goal of identifying a recommended Phase II dose (RP2D) and establishing proof of concept for the ARTEMIS platform. An overview of the trial is provided below:

STARLIGHT-1: Phase I/II U.S. Clinical Trial

CD19-targeting ARTEMIS T-cell (EB103)	
Target population:	• DLBCL, FL, MCL, BL, PCNSL, HIV-associated • Address populations with high unmet needs and maximize the diversity of those enrolled
Enrollment:	• Dose Escalation Phase and an Expansion Phase
Dose level:	• 2.5 x 10^6 receptor-positive T cells/kg • 5.0 x 10^6 receptor-positive T cells/kg
Primary Endpoints:	• Type, frequency, and severity of adverse events (AEs) and laboratory abnormalities • RP2D based on maximum tolerated dose (MTD) and manufacturing capability
Secondary Endpoints:	• CR rate, ORR, DOR, DOCR, PFS, EFS, OS • PK including Cmax, Tmax, pAUC

Source: Esteghamat *et al.*, 2026

Previous updates from the company included:

- In February 2025, Estrella announced the Data and Safety Monitoring Board (DSMB) approved the initiation of the second dose cohort following a review of the first dose cohort that showed a favorable safety profile, no dose-limiting toxicities, or treatment-related serious adverse events.

- In November 2025, Estrella announced the successful completion of the second dose cohort, with key findings showing a 100% complete response (CR) rate at Month 1 in all evaluable patients. This

is noteworthy as all patients treated were considered “high-risk” who were not suitable for commercial CD19 products, including a patient with Central Nervous System (CNS) lymphoma.

- In December 2025, Estrella announced that the independent DSMB recommended advancing the STARLIGHT-1 trial to the Phase II portion of the study (“expansion phase”) at the Recommended Phase II Dose (RP2D).

In February 2026, Estrella presented the Phase 1 results from the STARLIGHT-1 trial at the 2026 ASTCT & CIBMTR Tandem Meetings (American Society for Transplantation and Cellular Therapy and Center for International Blood & Marrow Transplant Research). The following table gives the adverse events not due to CRS or ICANS for the nine evaluable patients. Two subjects experienced serious adverse events, however neither of them were due to EB103: one patient had grade 3 blunt trauma and one patient in DL2 died from pneumonia and respiratory failure.

	N = 9 Patients						
	Highest Grade per Subject					Total Subjects	≥ Grade 3
	1	2	3	4	5	Number (%)	Number (%)
Cardiovascular							
Atrial Fibrillation	0	1	0	0	0	1 (11)	0
Orthostatic Hypotension	0	1	0	0	0	1 (11)	0
Sinus Bradycardia	0	1	0	0	0	1 (11)	0
Supraventricular Tachycardia	0	1	0	0	0	1 (11)	0
Hypotension	1	0	0	0	0	1 (11)	0
Infections							
Sepsis	0	0	0	0	1	1 (11)	1 (11)
Pneumonia	0	0	0	1	0	1 (11)	1 (11)
Bacteremia	0	1	0	0	0	1 (11)	0
Abdominal Infection	0	1	0	0	0	1 (11)	0
Cholangitis	0	1	0	0	0	1 (11)	0
Hematologic Toxicities							
Leukopenia	0	0	2	1	0	3 (33)	3 (33)
Thrombocytopenia	0	1	1	1	0	3 (33)	2 (22)
Anemia	0	0	1	0	0	1 (11)	1 (11)
Hypofibrinogenemia	0	1	2	0	0	3 (33)	2 (22)

Source: Esteghamat *et al.*, 2026

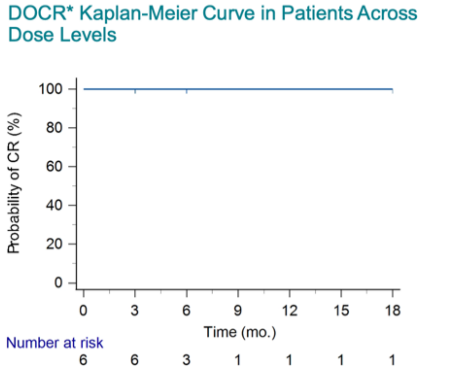
When looking specifically at CRS and ICANS, all subjects experienced CRS, however none had ≥ Grade 3 and 7/9 patients had ICANS, with six patients experiencing Grade 1-2 and only one patient having Grade 3. The duration of the ICANS event for the Grade 3 patient was two days.

The following figure shows the efficacy results for the eight evaluable patients (3 in DL1 and 5 in DL2). All subjects who achieved a CR remained in CR at the time of cutoff. The median duration of complete response (DOCR) has not been reached with the CR’s ranging from 3-18 months.

	DL1 3 Enrolled 3 Evaluable	DL2 6 Enrolled 5 Evaluable	All Evaluable Subjects Across Both Dose Levels
ORR	67%	**100%**	88%
CR	33%	**100%**	75%

- A total of 9 subjects were enrolled in the STARLIGHT-1 trial; 8 evaluable for efficacy (3 in DL1, 5 in DL2)
- STAR1-201-005 at DL2 expired on D18 due to grade 5 Sepsis event unrelated to EB103 and was not evaluable for response.
- All subjects who achieved CR remain in CR
- Median DOCR in subjects who achieved CR at Day +28 has not been reached, range 3-18 months

Source: Esteghamat *et al.*, 2026



*DOCR is defined as DOR of all patients who achieved a best response of CR. CR, complete response; DOCR, duration of complete response, DOR, duration of response.

Importantly, the enrolled population was enriched for high-risk disease features: approximately 80% of patients met high-risk criteria (e.g., double-hit or triple-hit lymphoma, activated B-cell subtype, or primary refractory disease), substantially exceeding the proportion of high-risk patients enrolled in pivotal trials of approved CD19 CAR-T products, where comparable high-risk representation has typically ranged from approximately 13–50% depending on trial and criteria applied.

Efficacy Comparisons

When benchmarked against approved CD19 CAR-T therapies, EB103's early efficacy compares favorably, particularly when adjusted for patient risk profile. In pivotal trials of first-generation CAR-T therapies in aggressive B-cell lymphoma:

- **ZUMA-1 (axi-cel):** reported an ORR of ~82% and CR rate of ~58% in a population with fewer high-risk features and a median age of ~58 years (Neelapu *et al*., 2017).
- **JULIET (tisa-cel):** reported an ORR of ~52% and CR rate of ~40%, with slower expansion kinetics and broader eligibility (Schuster *et al*., 2019).
- **TRANSCEND (liso-cel):** reported ORR ~73% and CR ~53%, with a more controlled toxicity profile (Abramson *et al*., 2020).

The following table shows how EB103's DL2 response rate compares with the approved CAR-T therapies, particularly when adjusted for older age, heavier pretreatment, and unusually high enrichment for high-risk disease biology. While difficult to make cross-trial comparisons and knowing that all results must be interpreted cautiously, especially in small Phase I cohorts, the magnitude of response at DL2 is notable given the high-risk patient population.

Therapy	Platform	Trial / Data Source	Patient Population	ORR	CR Rate	High-Risk Features*	CRS (Grade ≥3)	ICANS (Grade ≥3)	Durability Snapshot
EB103	AbTCR (ARTEMIS®)	STARLIGHT-1 Ph I (ASTCT/CIBMTR 2026 abstract)	R/R B-cell NHL; median age 67; ≥3 prior lines or primary refractory	DL1: 67% DL2: 100%	DL1: 33%. DL2: 100%	~80% high-risk (DHL/THL, ABC, refractory)	0%	~11% (1 pt, Grade 3)	All CRs ongoing at cutoff (1–12 mo)
Axicabtagene ciloleucel (Yescarta®)	CAR-T (CD28)	ZUMA-1	R/R LBCL; median age ~58	~82%	~58%	~25–30% high-risk	~13%	~28%	~40% PFS at ~2 yrs
Tisagenlecleucel (Kymriah®)	CAR-T (4-1BB)	JULIET	R/R DLBCL; median age ~56	~52%	~40%	Lower enrichment	~22%	~12%	Median PFS ~2.9 mo
Lisocabtagene maraleucel (Breyanzi®)	CAR-T (4-1BB; defined CD4/CD8)	TRANSCEND	R/R LBCL; median age ~63	~73%	~53%	~30–40% high-risk	~2%	~10%	~44% PFS at 1 yr

Sources: Estrella Immunopharma, Inc.; Neelapu *et al*., 2017; Schuster *et al*., 2018; Abramson *et al*., 2020; Zacks SCR
*High-risk definitions vary by trial and include factors such as double-/triple-hit lymphoma, ABC subtype, primary refractory disease, or high tumor burden

Durability Considerations

Durability remains the central question for any next-generation CAR-T or CAR-like therapy. In approved products, approximately 40–50% of patients achieving CR remain progression-free at 2–3 years. EB103's durability data are still immature; however, the fact that all complete responders remained in remission through the data cutoff, despite short follow-up, supports continued investigation and expansion.

Importantly, durability in a high-risk population may prove more informative than durability in less refractory cohorts, as early relapse has historically been enriched in patients with aggressive molecular features.

Safety and Therapeutic Index

Perhaps the most differentiating aspect of EB103 relative to first-generation CAR-T therapies lies in its safety profile. In ZUMA-1, grade ≥ 3 CRS and/or neurologic events occurred in a substantial proportion of patients, often requiring intensive care management. By contrast, EB103's immune-mediated toxicities

were predominantly low grade, of short duration, and fully reversible, with no treatment-related serious adverse events reported to date.

While CRS and ICANS were observed in most patients, which is consistent with on-target immune activation, the rapid resolution and absence of long-term sequelae suggest a more controlled activation profile, consistent with the platform's AbTCR-based signaling hypothesis.

In summary, the STARLIGHT-1 data suggest that EB103 may achieve efficacy comparable to, or potentially exceeding, first-generation CD19 CAR-T therapies, while offering a more favorable and predictable safety profile, even in a heavily pretreated, high-risk population. Although longer follow-up and larger patient numbers are required to validate durability and reproducibility, the combination of deep responses, manageable toxicity, and inclusion of patients often excluded from commercial CAR-T trials strengthens the case that ARTEMIS represents a meaningful next-generation evolution rather than an incremental modification.

Intellectual Property

Estrella's intellectual property position is structured around two core pillars: proprietary rights to the ARTEMIS T-cell engineering platform (originating from Eureka Therapeutics) and a collaborative, cross-licensed framework governing the CF33-CD19t oncolytic virus program with Imugene Ltd. The durability and defensibility of the company's clinical strategy depend on both internally controlled platform patents and the contractual allocation of rights under this collaboration.

Artemis Platform IP

The ARTEMIS platform was developed by Eureka Therapeutics and subsequently contributed to Estrella as part of the corporate separation. The platform centers on antibody-T-cell receptor (AbTCR) constructs designed to engage intracellular CD3 signaling machinery in a manner distinct from conventional second-generation CAR designs. Intellectual property surrounding ARTEMIS includes composition-of-matter claims covering the engineered receptor constructs, methods of use in specific disease settings, and manufacturing processes related to cell engineering and expansion. The company has one issued U.S. Patent (US Patent #10464988), one issued Australian patent (#2016342041), and multiple pending patent applications in jurisdictions worldwide. All issued and pending patents have an expiration date of October 21, 2036. Since ARTEMIS differs structurally and mechanistically from traditional CAR constructs, particularly in its signaling configuration and receptor architecture, its patent estate is positioned to be differentiated from the dominant CAR-T intellectual property portfolios held by larger commercial players. This structural distinction is strategically important, as the CAR-T field has historically been characterized by complex IP disputes over signaling domains and receptor architecture. By utilizing an alternative receptor framework, Estrella may reduce exposure to certain legacy CAR patent estates while establishing its own composition-of-matter protection.

In addition to platform-level protection, product-specific intellectual property includes claims directed to particular antigen targets (e.g., CD19 constructs within the ARTEMIS framework), vector configurations, and potentially manufacturing optimizations. As with most autologous cell therapy programs, commercial defensibility is expected to derive not only from issued patents but also from accumulated process know-how, cell engineering workflows, quality control systems, and regulatory data packages that are difficult to replicate.

Financials and Capital Structure

On November 12, 2025, Estrella filed form 10-Q with financial results for the third quarter of 2025. As expected, the company did not report any revenues for the third quarter of 2025. R&D expenses for the third quarter of 2025 were $4.2 million, compared to $2.8 million for the third quarter of 2024. The increase was primarily due to higher service fees during the clinical phase and the completion of three patient dosings compared to two patient dosings during the same period in 2024. G&A expenses for the

third quarter of 2025 were $649,000 compared to $551,000 for the third quarter of 2024. The increase was primarily due to increased stock-based compensation.

As of September 30, 2025, Estrella had approximately $1.6 million in cash and cash equivalents. On January 6, 2026, the company announced the closing of an $8.0 million registered direct offering with a single healthcare-focused institutional investor in which the company sold approximately 4.1 million shares and 1.0 million pre-funded warrants for a price of $1.58 (or $1.57999 per pre-funded warrant). In a concurrent private placement, Estrella issued and sold common warrants to the investor to purchase up to an aggregate of approximately 7.6 million shares of common stock. The warrants have an exercise price of $1.39 per share and are exercisable up to the fifth anniversary of the initial exercise date. We estimate the company currently has approximately 41.8 million shares outstanding and, when factoring in stock options and warrants, a fully diluted share count of 55.2 million.

Risks to Consider

In addition to the risk discussed below, investors are encouraged to read the company's latest 10-K filing that discusses additional risk factors.

Clinical Risk: While results seen thus far with EB103 are highly encouraging, early-phase response rates, particularly in small dose-escalation cohorts, may not reliably predict durability or performance in larger, more heterogeneous patient populations. In addition, EB103 has demonstrated encouraging response rates and manageable toxicity, however durability beyond short follow-up intervals remains unproven. In aggressive B-cell lymphomas, relapse following initial response remains a major cause of treatment failure even among approved CD19 CAR-T therapies. Comparative positioning against established CD19 CAR-T products will require not only comparable efficacy but a clearly differentiated safety profile, durability signal, or operational advantage.

Regulatory Risk: Although regulatory agencies have developed familiarity with CD19-directed CAR-T products, ARTEMIS represents a distinct receptor architecture. Regulators may require additional mechanistic or safety data to fully characterize signaling behavior, persistence kinetics, and immunogenicity risk.

Manufacturing and CMC Risk: Autologous cell therapy manufacturing is operationally fragile. Variability in leukapheresis product quality, especially in heavily pretreated lymphoma patients, can affect expansion kinetics and final product yield. Manufacturing failures, out-of-specification batches, or sterility concerns could delay treatment and negatively impact outcomes. Scaling production while maintaining strict chain-of-identity controls presents logistical challenges. Any systemic manufacturing issue could trigger regulatory holds.

Competitive Risk: The CD19 therapeutic space is crowded and commercially mature. Approved CAR-T products have established manufacturing infrastructure, clinical familiarity, and payer relationships. Emerging CD3xCD20 bispecific antibodies offer off-the-shelf alternatives with no manufacturing delay and lower upfront cost. To capture market share, EB103 must demonstrate meaningful differentiation in efficacy, safety, durability, or operational simplicity. Absent clear superiority, physician adoption may be limited.

Intellectual Property Risk: While the ARTEMIS platform is structurally distinct from conventional CAR constructs, the cell therapy IP landscape has historically been litigious. Patent challenges or freedom-to-operate disputes could arise as programs advance toward commercialization.

Financial Risk: As of September 30, 2025, Estrella had cash and cash equivalents of approximately $1.6 million. The company recently raised $8 million from a registered direct offering but will need to obtain additional capital to support its operations, including clinical expansion, vector production, and manufacturing slot reservation. There is no guarantee that the company will be able to obtain additional financing or, if funding is obtained, that it will be on acceptable terms. Raising additional capital could cause dilution of current shareholders.

MANAGEMENT PROFILES

Cheng Liu, PhD – President and Chief Executive Officer

Dr. Liu is the Founder, President and CEO of Estrella Biopharma. He also serves as the President and CEO of Eureka Therapeutics. Prior to this, Dr. Liu was a Principal Scientist in the antibody drug discovery group at Chiron Corporation (now Novartis). With over 20 years of experience in the field, Dr. Liu holds more than 500 patents and published patent applications, of which over 100 patents have issued worldwide. He has authored numerous peer-reviewed papers on cancer immunotherapy. Dr. Liu is the inventor of multiple first-in-class, clinical-stage cancer drugs against various tumor targets, including drugs targeting CSF1 for the treatment of bone metastasis, BCMA for multiple myeloma, and AFP and GPC3 for liver cancer. In 2007, he was awarded a Special U.S. Congressional Recognition for his contributions to improving human health. He is the editor of the book “Biosimilars of Monoclonal Antibodies: A Practical Guide to Manufacturing, Preclinical, and Clinical Development”. Dr. Liu received his B.S. in Cell Biology and Genetics from Peking University and a Ph.D. in Molecular Cell Biology from the University of California, Berkeley.

Jiandong (Peter) Xu – Chief Financial Officer

Mr. Xu is the Chief Financial Officer of Estrella Biopharma. Mr. Xu has 15 years investment and management experience in capital markets, energy markets, and food & beverage industry. Prior to joining Estrella Biopharma, he has been the founder and CEO of TLC Gourmet Food International LLC since 2021. He has also served as the co-founder and CEO of Lake Crystal Energy LLC since 2020. Previously, Mr. Xu founded LI North Shore Invest LLC where he invests and manages a portfolio of small businesses since 2017. Prior to that, he held various investment and management positions at Millennium Partners, Barclays Capital, and Lehman Brothers. Mr. Xu earned a MS degree in Computer Science from Northeastern University in Boston.

VALUATION

We are initiating coverage of Estrella Immunopharma, Inc. (ESLA) with a valuation of $12.00. Estrella is a clinical-stage biopharmaceutical company developing next-generation CAR-T therapies utilizing the ARTEMIS® T-Cell Receptor Platform. The recent acquisition of Arcellx, Inc. by Gilead Sciences for approximately $7.8 billion has intensified industry focus on identifying the next generation of differentiated CAR-T cell therapy platforms. While the first wave of CAR-T therapies demonstrated transformative efficacy in certain hematologic malignancies, limitations related to toxicity, durability, and manufacturing complexity have created significant opportunity for next-generation engineering approaches.

We believe Estrella represents a compelling candidate to emerge in this search. In our view, Estrella today closely resembles Arcellx approximately 18–24 months prior to its acquisition, with a differentiated CAR-T engineering platform, early clinical signals of efficacy, and a focus on validated therapeutic targets in B-cell malignancies.

At the center of Estrella's strategy is its ARTEMIS platform, designed to provide more controlled signaling within CAR-T cells. By separating antigen recognition from intracellular signaling, the ARTEMIS system may allow more precise tuning of T-cell activation compared with conventional CAR designs. If successful, this architecture could potentially mitigate several of the limitations observed with earlier CAR-T constructs, including excessive immune activation and treatment-related toxicities.

The company's lead clinical candidate, EB103, targets the well-validated CD19 antigen, a surface protein expressed on most B-cell malignancies. CD19 has already been clinically validated by multiple approved CAR-T therapies, including products developed by companies such as Kite Pharma and Novartis. However, despite strong efficacy, first-generation CD19 CAR-T therapies are associated with meaningful toxicity risks and logistical complexity.

Estrella's approach aims to improve upon these earlier therapies by applying its novel engineering platform to a target with well-established clinical relevance. Given the substantial strategic interest in differentiated cell-therapy technologies, we believe Estrella represents a potentially attractive platform within the evolving CAR-T ecosystem.

EB103 is currently being evaluated in the Phase I/II STARLIGHT-1 study (NCT06343311), which is designed to evaluate the safety, tolerability, and preliminary efficacy of EB103 in adult patients with relapsed/refractory disease, with the goal of identifying a recommended Phase II dose (RP2D) and establishing proof of concept for the ARTEMIS platform. In February 2026, Estrella presented the Phase 1 results from the trial at the 2026 ASTCT & CIBMTR Tandem Meetings (American Society for Transplantation and Cellular Therapy and Center for International Blood & Marrow Transplant Research). The data showed a 100% complete response (CR) rate, with the median duration of CR having not been reached with the CR's ranging from 3-18 months. In regards to safety, while all subjects experienced cytokine release syndrome (CRS) and 7/9 patients experienced immune effector cell–associated neurotoxicity syndrome (ICANS), none had ≥ Grade 3 CRS and six patients experienced Grade 1-2 ICANS and only one patient had Grade 3. The duration of the ICANS event for the Grade 3 patient was two days. These results are very encouraging, as EB103 is thus far exhibiting efficacy data that is on par with currently available therapies with a more benign adverse event profile.

Valuation

We value Estrella using a probability-adjusted discounted cash flow model that takes into account revenues from the sale of EB103 in B-cell malignancies. While not currently a part of the model, we view EB104 and the company's 'mark-and-kill' platform as offering potential upside to our valuation. We

estimate there are approximately 77,000 patients diagnosed with non-Hodgkin lymphoma (NHL) annually in the United States, while epidemiology data from GLOBOCAN database suggests roughly 120,000 additional cases occur each year in Europe. Despite advances in frontline chemotherapy, approximately 30-40% of patients experience relapsed or refractory disease following first-line treatment, and a meaningful subset ultimately progress to third-line or later therapy. Applying these progression rates suggests that approximately 30,000-40,000 patients across the U.S. and E.U. may become eligible for third-line or later therapies each year, representing the core addressable population for CD19-directed cell therapies. We model for EB103 to cost $350,000 per year and to have peak worldwide revenues of just over $2 billion in 2037. Using a 13% discount rate and a 33% probability of approval leads to a net present value for EB103 of $703 million.

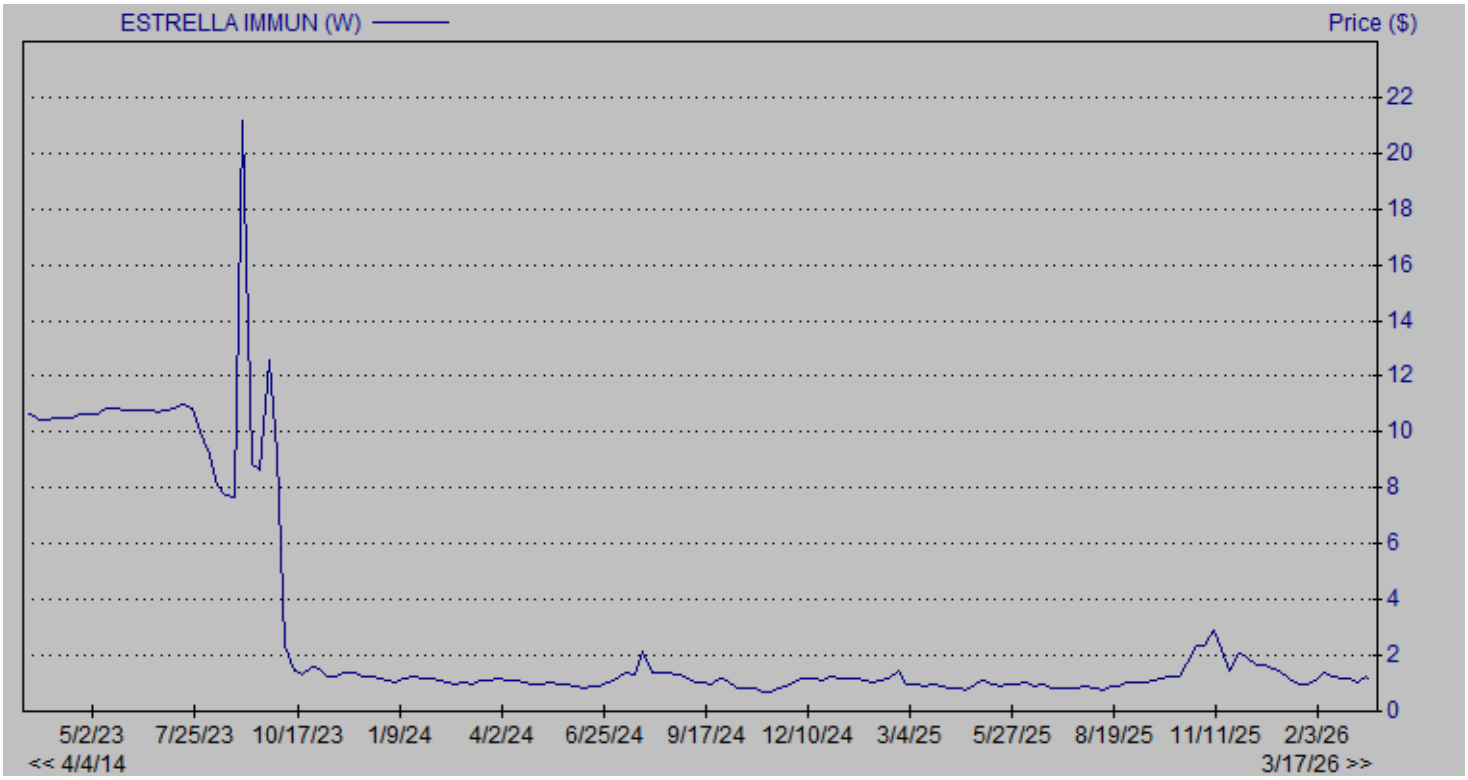
Combining the net present value for EB103 with the company's current cash position (~$5 million) and the potential cash from warrant exercises (~$36 million) leads to a net present value for the company of $744 million. The fully diluted share count currently stands at 52.9 million, and we add 10 million shares for potential dilution, which leads to a valuation of $12.00 per share.

PROJECTED FINANCIALS

Estrella Immunopharma, Inc.	2024 A	Q1 A	Q2 A	Q3 A	Q4 E	2025 E	2026 E	2027 E
EB103	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
EB104	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
License and other revenues	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Cost of revenues	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Research & development	$4.1	$1.4	$4.7	$4.2	$4.4	$14.6	$15.0	$15.0
General & administrative	$3.2	$0.7	$0.9	$0.6	$0.8	$3.0	$3.5	$4.0
Depreciation Expense	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Operating Income	($7.3)	($2.1)	($5.5)	($4.8)	($5.2)	($17.6)	($18.5)	($19.0)
Non-Operating Expenses (Net)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Pre-Tax Income	($7.3)	($2.1)	($5.5)	($4.8)	($5.2)	($17.6)	($18.5)	($19.0)
Income Taxes	($0.0)	($0.0)	($0.0)	$0.0	$0.0	($0.0)	$0.0	$0.0
Net Income	**($7.3)**	**($2.1)**	**($5.5)**	**($4.8)**	**($5.2)**	**($17.6)**	**($18.5)**	**($19.0)**
Net Margin	-	-	-	-	-	-	-	-
Reported EPS	**($0.27)**	**($0.06)**	**($0.15)**	**($0.13)**	**($0.14)**	**($0.48)**	**($0.39)**	**($0.32)**
YOY Growth	-	-	-	-	-	-	-	-
Basic Shares Outstanding	27.1	36.2	36.2	37.1	37.4	36.7	48.0	60.0

Source: Zacks Investment Research, Inc. *David Bautz, PhD*

HISTORICAL STOCK PRICE



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