

Dren Bio

Category:

Best Startup

Company Name:

Dren Bio

Turnover and/or Funding:

Funding and Financial Position

Private Placements

Since its founding 6 years ago, Dren Bio has raised over \$140 million in equity financings to support the advancement of its novel and highly differentiated antibody therapeutic technologies, including its proprietary Targeted Myeloid Engager and Phagocytosis Platform (DR-02 Platform). The company's initial Seed round in 2019 was led by 8VC with participation of several prominent biotech experts, followed by a Series A in 2020 co-led by SR One Capital Management and Taiho Ventures. In 2022, the company closed its Series B financing, co-led by Aisling Capital and HBM Healthcare Investments, which further expanded its investor base and positioned the company to accelerate both platform development and pipeline expansion.

Strategic Partnerships

Dren Bio has established a strong track record of strategic pharma partnerships by leveraging its heavily differentiated DR-02 Platform, raising over \$785 million in upfront and near-term considerations. In December 2021, the company entered a research collaboration and license agreement with Pfizer in oncology, and is eligible to receive tiered royalties and over \$1 billion in milestone payments. In July 2024, this was followed by a research collaboration with Novartis in oncology, featuring a \$150 million upfront payment and up to \$3 billion in potential milestone payments, along with tiered royalties. Additionally, in May 2025, Dren transacted on its DR-0201 program with Sanofi for \$600 million upfront and up to \$1.3 billion in contingent payments, reflecting the industry's recognition of Dren's novel DR-02 Platform and its strong clinical potential.

Financial Runway

Dren Bio is well-capitalized, with sufficient resources to advance its internal programs

across multiple indications through early 2027. Beyond its strong cash position, the company is well-positioned to secure additional nondilutive funding through current and future partnerships. The broad applicability of its DR-02 Platform across oncology, autoimmune, and other disease areas presents significant opportunities for new collaborations that can further extend its runway and drive long-term growth.

Sub-Category:

Biotechnology

Corporate history (creation, key milestones, main funding,...)Information on Condition / Disease and need for solution / product (prevalence, existing treatments / solutions):

Dren Bio (« Dren ») is a privately held, clinical-stage biopharmaceutical company pioneering the discovery and development of novel, first-in-class biologics, including bi- and multi-specific antibodies for the treatment of cancer, autoimmune, and other serious diseases. Dren was founded in May 2019, a few months before the COVID-19 outbreak, and in just six years, despite pandemic-associated disruptions and biotech market turmoil, has discovered and successfully advanced multiple molecules into clinical studies for various indications with high unmet need. Both DR-01 (autoreactive T-cell depleter program) and DR-02 (Targeted Myeloid Engager and Phagocytosis Platform) are wholly-owned technologies developed internally with a focus on novel and highly-differentiated mechanisms of action, designed to be therapeutically safe with the potential to yield transformative outcomes for patients.

High R&D productivity driven by in-house scientific expertise, creativity, speed of execution, and a relentless focus on excellence has resulted in three programs entering the clinic in the short time since Dren's founding, with positive clinical proof-of-concept data generated in more than five indications. Dren has raised over \$140 million in equity financing and received over \$785 million in non-dilutive upfront payments and milestones through strategic partnerships with Pfizer, Novartis and Sanofi. Additionally, Dren is eligible to receive up to \$5.3 billion in additional milestone payments and royalties across these partnerships.

Dren's lead asset, DR-01 (INN, Dibotatug), is a first-in-class monoclonal antibody in development for various T-cell mediated diseases that lack targeted disease modifying therapies, such as cytotoxic lymphomas, Large Granular Lymphocytic Leukemia, Vitiligo and Alopecia Areata. DR-01 was developed based on the clever idea of leveraging the cytotoxic feature of pathogenic T-cells in these diseases to kill each other (fratricide), and in doing so treat cancers and spare the healthy tissue in autoimmune diseases. DR-01 has received Fast Track designation from the FDA and has demonstrated

transformative clinical efficacy with a favorable safety profile across multiple indications. Dren plans to further expand the program into additional indications in the near future.

Dren's proprietary Targeted Myeloid Engager and Phagocytosis Platform (DR-02 Platform) includes a multispecific antibody technology that harnesses a novel phagocytic receptor on myeloid cells with optimal properties to selectively engulf disease-causing agents. By leveraging tissue-resident and trafficking myeloid cells, Dren's multispecific antibodies can induce potent depletion of pathogenic cells in various niches with the potential for deep and durable responses in cancer and autoimmune indications. Designed to activate phagocytosis only in the presence of disease targets, the DR-02 Platform offers the potential for superior efficacy and safety compared to conventional immunotherapies.

Dren's initial Platform candidate, DR-0201, recently acquired by Sanofi, is a potent and selective B-cell depleter and has shown robust and safe activity in patients. DR-0201 is currently in Phase 1 studies for oncology and autoimmune indications. Dren's second Platform program, DR-0202, entered first-in-human clinical trials in solid tumor patients in Q2 2025. Dren's preclinical pipeline includes additional multispecific antibodies targeting indications across oncology, immunology, and neurology.

Dren's DR-02 Platform has received significant industry interest, with Dren having established strategic partnerships with Pfizer, Novartis, and Sanofi.

History of the development of the solution/product (Intellectual Property, preclinical and clinical datas, development collaborations):

Since starting operations in Q3 2019, Dren has discovered and advanced three first-in-class molecules into the clinic, with one recently acquired by Sanofi.

Dren's lead asset, DR-01, is being evaluated in a global heme-onc study (NCT05475925) in Large Granular Lymphocytic Leukemia (LGLL) and Cytotoxic Lymphomas (CTL).

CTLs are a group of rare and aggressive lymphomas that are driven by cytotoxic CD8+ T and NK cells. The International T-Cell Lymphoma Project highlighted the poor prognosis for CTL, with the reported median overall survival in relapsed/refractory (R/R) cohorts being ~3 months. No standard of care exists, and poor outcomes in R/R patients emphasize an urgent need for novel therapies. The DR-01 study for CTL has demonstrated promising safety and efficacy (ICML abstract: https://onlinelibrary.wiley.com/doi/10.1002/hon.70093_149). At the selected dose for the registrational study, the ORR was 52%, more than half of which were complete responses.

LGLL is a chronic, slowly progressing disease with patients often needing treatment at diagnosis due to severe cytopenias, recurrent infections, or autoimmune symptoms. Currently, there are no approved therapies. First-line treatment involves non-selective immunosuppressants (methotrexate, cyclosporin, cyclophosphamide) that generally confer slow responses and are often limited by toxicity. DR-01 has demonstrated a favorable safety profile in LGLL with no dose-limiting toxicities (DLTs) or serious treatment-related adverse events. Clinical studies evaluating its efficacy are ongoing.

DR-01 is also in a Phase 1 clinical trial (NCT06602232) for Alopecia Areata (AA) and Vitiligo (VT). In AA, CD8+ T cells attack hair follicles and cause patchy hair loss, and in VT, CD8+ T cells attack melanocytes and cause skin depigmentation. Both diseases are chronic, visible autoimmune disorders that can significantly affect a person's psychological well-being. The majority of these patients suffer from low self-esteem, social stigma and isolation, anxiety, depression, and, in several cases, suicidal thoughts.

Until recently, no FDA-approved treatments existed. JAK inhibitors have shown promise but have limited efficacy and carry serious safety risks. DR-01 has garnered an unprecedented level of interest for patient enrollment in DR-01-AIM-001. Substantial patient population and high unmet need in these indications, coupled with marked interest from patients and providers for safe and effective therapies, has generated significant excitement around DR-01.

Dren's initial program from its proprietary DR-02 Platform, DR-0201 (now Sanofi's SAR448501), a potent B-cell depleter with the potential for immune reset, is in Phase 1 clinical trials for oncology and autoimmunity. Dren's second DR-02 Platform program, DR-0202, is being evaluated in a Phase 1 solid tumor basket trial (NCT06999187). DR-0202 leverages myeloid cells that are abundant in tumors -including tumor-associated macrophages (TAMs), monocytes, and DCs- to selectively induce phagocytosis of tumor cells, reprogram the tumor microenvironment to support immune activation, and promote antigen presentation to generate lasting immune memory. Through this coordinated mechanism of action, DR-0202 has the potential to deliver best-in-class efficacy across multiple cancers.

Dren's DR-02 Platform programs have the strong potential to achieve potent target cell depletion in patients without CRS or neurotoxicity - two adverse effects that are commonly associated with other modalities such as T-cell engagers and CAR-Ts.

Why this drug or device is innovative, the broad implications for future research, and/or how it will improve the human condition:

Dren is pioneering a new generation of biologics that harness the body's own immune

mechanisms to target and eliminate pathogenic cells with precision, durability, and favorable safety.

At the forefront of Dren's innovation is DR-01, a first-in-class antibody that employs a unique fratricide mechanism-turning pathogenic cytotoxic T cells or NK cells against each other. This self-targeting strategy via a novel receptor represents a transformative advance in immunotherapy, enabling potent and selective depletion of disease-driving T or NK cells without broadly suppressing the immune system. DR-01 is being evaluated in indications such as CTL, LGLL, AA, and VT, where it is poised to be best-in-disease. Importantly, the favorable safety profile of DR-01 supports its potential in both life-threatening malignancies and debilitating non-lethal autoimmune conditions, with expansion opportunities into additional diseases.

Myeloid cells play a central role in cancer, immunological, and neurological disorders. In tumors, myeloid populations are abundant and associated with poor prognosis across multiple cancers. Unlike other myeloid-targeting strategies that can carry significant safety risks - including myeloid checkpoint inhibitors - Dren's Targeted Myeloid Engager and Phagocytosis Platform (DR-02 Platform) engages myeloid cells via a first-in-class phagocytic receptor to eliminate disease-causing agents. Dren's myeloid engager bi- and multispecific antibodies activate a natural engulfment process, potentially leading to deeper efficacy with superior safety. Dren's targeted phagocytosis approach avoids a cytokine storm and enables outpatient administration for mild-to-moderate patient populations.

DR-0201 (now SAR448501), is a first-in-class B-cell depleting bispecific that engages specific tissue-resident and trafficking myeloid cells to induce deep B-cell depletion via targeted phagocytosis. DR-0201 is being evaluated in oncology and autoimmune indications and has the potential to achieve immune reset with a favorable safety profile.

Dren's lead solid tumor program, DR-0202, targets an antigen that is overexpressed in more than 10 tumor types, and exploits myeloid cells, the dominant immune cells within tumors, by converting them into direct killers of cancer cells. Through a multifaceted mechanism - inducing tumor cell phagocytosis, reprogramming the tumor microenvironment, enhancing antigen presentation, and establishing immune memory - DR-0202 offers a novel therapeutic strategy for treating solid tumors, positioning it to overcome resistance to existing therapies and delivering deep, durable responses across multiple tumor types. DR-0202 is in a Phase 1 clinical study for solid tumors.

In addition to the clinical stage assets, Dren has demonstrated robust activity with its DR-02 Platform across multiple therapeutic areas and has established an extensive preclinical pipeline that will lead to additional first-in-class and potentially best-in-disease clinical programs in the near future.

Together, DR-01 and the DR-02 Platform assets, including DR-0201 and DR-0202, represent mechanistically distinct, paradigm-shifting therapies-one leveraging cytotoxic T or NK cell fratricide and the other harnessing myeloid cell phagocytosis. These differentiated approaches underscore Dren's commitment to developing next-generation immunotherapies with the potential to transform outcomes in oncology, autoimmunity, and beyond. Dren has also amassed a robust intellectual property portfolio with more than 100 patents pending globally to protect its platform and novel programs.

Please provide appropriate references (PubMed, Abstract, Website):

Various references are attached, including conference abstracts and posters, press releases for strategic collaborations and financing rounds, manuscripts and references from PIs and Key Opinion Leaders (KOLs) for Dren's programs.

References File Document upload:

Dren Bio DR01 2022 ASH Abstract.pdf
Dren Bio DR01 TCLF 2025 Clinical Poster.pdf
Dren Bio DR01 2025 ICML Abstract Submission.pdf
Dren Bio DR01 2024 ASH Abstract Submission 206053.pdf
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