

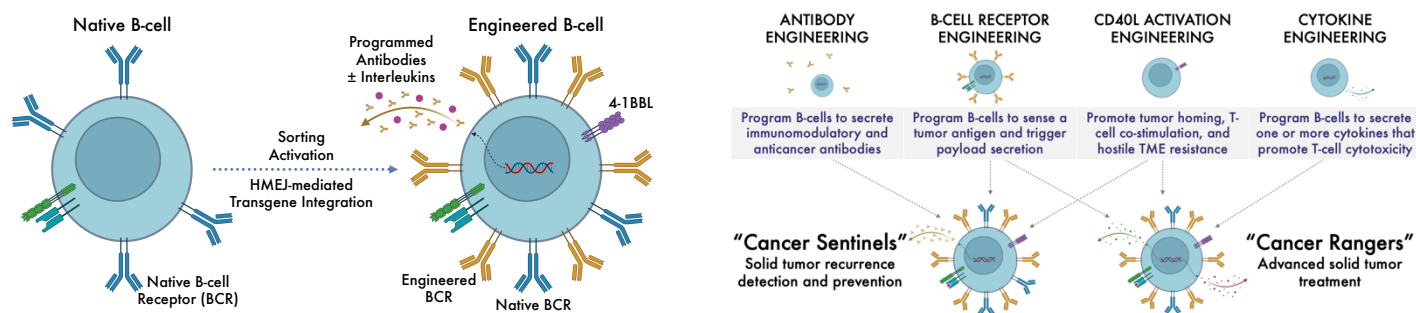
MISSION: Bespoke is dedicated to genome engineering human B-cells into immuno-oncology “living drugs” that can traffic to tumors, co-stimulate and activate T-cells, and locally secrete anticancer and immunomodulatory antibodies and cytokines, to eradicate high-risk locally advanced and metastatic solid tumor cancers. Our breakthrough product candidates are intended to overcome obstacles to effective natural immune responses and barriers to current pharmacologic immunotherapy (e.g., CAR-T) against cancer.

BUSINESS: Bespoke, founded in 2021, is a privately held biotechnology company focused on unlocking the vast potential of engineered B-cell therapeutics to address the physical and emotional needs of persons with cancer. Bespoke is built upon the expertise and experience of its founders and core scientific advisors, B-cell genome engineering and synthetic biology inventions, and a robust B-cell engineering granted patent portfolio (14 granted to date). Bespoke is poised to expand internal and sponsored R&D and process development efforts to efficiently advance its lead product candidates to IND and first-in-human trials.

TEAM:

				
Steven R. Deitcher, MD Founder, CEO, & Chairman	Branden Moriarity, PhD Co-founder & CSO	Kirk Trisler, PhD Co-founder & CTO	Tullia Bruno, PhD SAB Member	Brad Nelson, PhD SAB Member
Serial Biotech Builder Drug Dev Expert	U of Minnesota B-cell Genome Editing Expert	Cell/Gene Therapy CMC Expert	U of Pittsburgh	U of Brit Columbia
Cleveland Clinic Nuvelo • Talon Medeior • Radimmune	B-MoGen Luminary Tx Catamaran Bio	GSK Gritstone Stanford • Harvard	Justin Taylor, PhD SAB Member	Yuliya Pylayeva-Gupta, PhD SAB Member
			Fred Hutch	UNC Chapel Hill

PLATFORM: Starting with peripheral blood collection, Bespoke combines the distinct protein production, antigen presentation, and immunologic memory functions of B-cells with cutting-edge non-viral B-cell genome engineering (CRISPR/Cas9) to impart actuatable (inducible) therapeutic antibody and cytokine expression and secretion. Native B-cells are programmed into engineered B-cell therapeutics (left figure below). We employ plasmid vectors and homology mediated end joining to achieve site specific large transgene cargo integration. B-cell receptors are engineered to detect specific tumor-associated antigens, present that antigen to T-cells, actuate the local production of a cytokine and/or antibody of choice, and turn immunologically unresponsive (i.e., “cold” and “lukewarm”) tumors into “hot” tumors. Multiple engineered functions can be combined to make B-cells programmed to detect and eliminate specific residual or relapsed Stage III (i.e., *Cancer Sentinels*) or Stage IV (i.e., *Cancer Rangers*) cancers (right figure below).



PIPELINE: Bespoke’s paradigm-changing engineered B-cell therapeutic product candidates include:

- **BB-101:** Autologous *Cancer Sentinel* product to prevent overt relapse of high-risk Stage II and Stage III solid tumors
- **BB-201:** Autologous *Cancer Ranger* product to promote a multiprong immune attack against Stage IV solid tumors
- **BB-2112:** Allogeneic product that locally secretes immunomodulatory, anti-cancer cytokines upon engineered BCR TAA binding

THE MARKET: Bespoke engineered B-cell therapeutics will build and improve upon existing classes of anti-cancer therapy, including cytokines, dendritic cell vaccines, and antibody therapeutics accounting for more than US\$60B in annual sales. Our products are intended to be standalone drugs and synergize with immune checkpoint inhibitors as well as engineered T-cell products (i.e., CAR-T). Bespoke anticipates premium pricing and strong payer and physician support.

COMPETITION: Other emerging companies are primarily focused on viral-based, homologous recombination-mediated B-cell or B-cell-derived plasma cell engineering to treat congenital enzyme deficiencies. In contrast, Bespoke is 100% focused on innovative non-viral, HMEJ-mediated B-cell genome engineering building upon our vast patent portfolio and exclusively targeting cancer indications.

OPERATIONS: Bespoke’s discovery R&D activities are centered within the University of Minnesota’s Masonic Cancer Research Center. Manufacturing process and analytical assay development activities are located within JLABS@MBC BioLabs in San Carlos, California.

FUNDRAISING: Funded by an NSF SBIR, Bespoke seeks seed capital to 1) accelerate R&D activities, 2) build out its scientific team and SAB, and 3) generate proof-of-concept data to support pre-IND FDA and EMA engagement and future fundraising efforts.