



MISSION: Bespoke is dedicated to engineering human B-cells into individualized, immuno-oncology “living drugs” that can traffic to tumors, co-stimulate and activate T-cells, and locally secrete anti-cancer and immunomodulatory cytokines and antibodies, to eradicate high-risk locally advanced and metastatic solid tumors. 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 group of scientific advisors, University of Minnesota B-cell genome engineering inventions, and an unprecedented B-cell engineering 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

Serial Biotech Builder
Drug Dev Expert

Cleveland Clinic
Nuvelo • Talon
Medeor • Radimmune



Branden Moriarity, PhD
Co-founder & CSO

U of Minnesota B-cell
Genome Editing Expert

B-MoGen
Luminary Tx
Catamaran Bio



Kirk Trisler, PhD
Co-founder & CTO

Cell/Gene Therapy
CMC Expert

GSK
Gritstone
Stanford • Harvard



Tullia Bruno, PhD
SAB Member

U of Pittsburgh
Tumor immunologist
with expertise in B-cell
spatial imaging and
transcriptomics



Brad H. Nelson, PhD
SAB Member

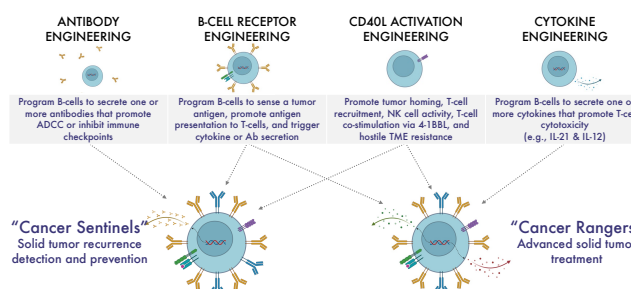
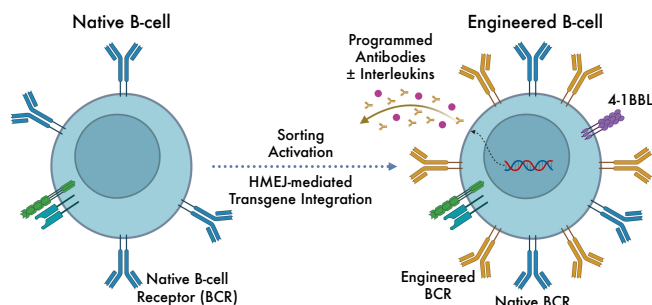
U of British Columbia
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B-cell bioinformatics,
genomics, and cancer
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Justin Taylor, PhD
SAB Member

Fred Hutch
B-cell immunologist,
B-cell engineering and
neutralizing antibody
expert

PLATFORM: Starting with a peripheral blood collection, Bespoke combines the distinct protein production, antigen presentation, and immunologic memory power of B-cells with cutting-edge B-cell isolation, activation, non-viral genome editing (CRISPR/Cas9), and culture expansion technologies to reprogram native B-cells into transformative engineered B-cell therapeutics (left figure below). To accommodate large-sized transgene cargo, we employ plasmid vectors and homology mediated end joining (HMEJ) to achieve site specific transgene integration. B-cell receptors can be engineered to detect a specific tumor-associated antigen (TAA), 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”) 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) expand R&D activities, 2) establish process development operations, 3) build out its management team and SAB, and 4) generate data to support pre-IND meetings with FDA and EMA.