

# Transforming Treatment and Prevention of Cancer and Chronic Inflammatory Diseases

## CORPORATE SNAPSHOT

### Funding to date:

Equity: USD \$39M

Non-dilutive: USD \$14M

Shares Outstanding: 25M

Current Runway: Q1 2025

## INTELLECTUAL PROPERTY

68 patents in 6 patent families in all major markets

## CONTACT INFORMATION

Hal Gunn, MD, CEO

Cell: 778-968-7572

## Addressing the Underlying Causes of Disease Rather Than the End Result

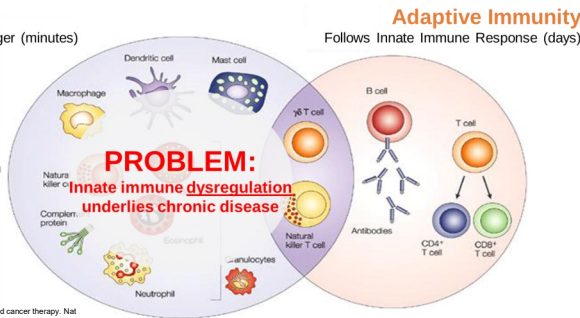
The innate immune system plays a fundamental role in controlling inflammation, modulating adaptive immunity, maintaining barrier function, regulating metabolism, regulating the microbiome, autophagy, and clearing cancer and infection. Chronic inflammation dysregulates innate immunity and its critical functions, creating a vicious cycle that underlies the development and progression of chronic inflammatory diseases and cancer. Small molecule drugs or monoclonal antibody immunotherapies force a single receptor or pathway to treat the end result of these diseases.

### Innate Immunity

Body's Initial Response to Danger (minutes)

- Regulates adaptive immunity
- Controls inflammation
- Regulates metabolism
- Essential for the clearance of all microbial infections
- Controls tissue regeneration
- Prevents & eradicates malignancy
- Regulates the health of the microbiome
- Maintains barrier function
- Mediates autophagy (cellular 'clean up')

Dranoff, G. Cytokines in cancer pathogenesis and cancer therapy. Nat Rev Cancer 4, 11–22 (2004). <https://doi.org/10.1038/nrc1252>



### Adaptive Immunity

Follows Innate Immune Response (days)

Qu Biologics' transformative platform, Site Specific Immunomodulators (SSIs), is designed to restore normal function of all cells, pathways, and roles of innate immunity in a targeted diseased organ to clear cancer, chronic inflammatory disease, and chronic infection. This is a fundamentally different way to treat and prevent disease, aligned with the body's healing processes.

## Training Innate Immunity

By analogy to muscles, the innate immune system must be 'exercised' to function optimally. Without this training, our innate system becomes less resilient and, as a consequence, susceptible to dysregulation/suppression and the development of cancer, chronic inflammatory diseases, and chronic infection. Once these diseases are established, they become difficult to reverse due to dysregulation/suppression of innate immunity and all its important roles. The simplest way to think of Qu's unique platform, SSIs, is as 'innate immune vaccines' that 'train' or restore normal innate immune function in a targeted diseased organ. SSIs induce myelopoiesis and organ-specific chemokine release (see SOLUTION figure), recruiting activated innate immune cells (NK cells, M1 macrophages, etc.) to the targeted diseased organ, reversing multiple important underlying causes of disease (see PROBLEM figure).

## Strong Safety Profile to Date

Rather than forcing a single receptor or pathway in one direction like small molecule drugs or monoclonal antibodies resulting in potential significant side effects, SSIs are designed to restore normal function of all the cells, pathways, and roles of innate immunity in a manner aligned with the body's healing capacity. SSIs are anticipated to have a strong safety profile, similar to traditional vaccination, as seen in more than 360 patients treated to date. The SSI response is targeted to the area of pathology rather than normal tissue, and if there is no pathology in the targeted organ, the SSI response is muted, further contributing to safety.

## Clinical Proof of Principle

Qu has completed four Phase 2 clinical studies in lung cancer, Crohn's disease, and ulcerative colitis, demonstrating immunological restoration consistent with the novel mechanism of SSIs and clinical proof of principle, including downregulation of PD-1 and PD-L1 and upregulation of M1 macrophages in lung cancer<sup>1</sup>, innate immune training and endoscopic and histological response in Crohn's disease<sup>2</sup>, and endoscopic and histological response in ulcerative colitis<sup>3</sup>. Supporting the broad application of SSIs across multiple important diseases, Qu has published SSI efficacy data in animal models in multiple cancers and infections, inflammatory bowel disease, COPD, and asthma, including SSIs' novel mechanism<sup>4</sup>.

## Company Overview and IP

Qu Biologics is a private, Phase 2 clinical stage company based in Vancouver, Canada with a strong team passionately committed to fulfilling the transformative potential of Qu's novel SSI platform. Qu has robust patent protection for the SSI platform with 68 granted patents and 22 applications pending across 6 patent families (including cancer, chronic inflammatory disease, infection, and post-surgical immune suppression).

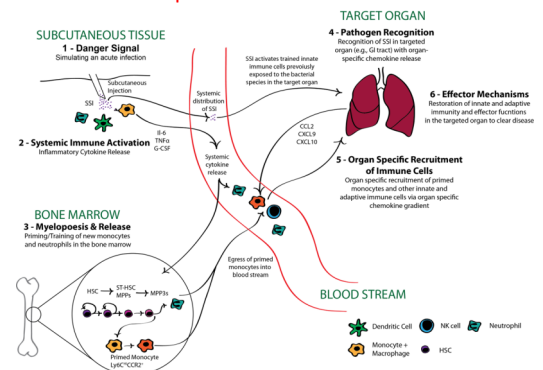
## Near Term Value Driving Milestones

Qu Biologics is actively enrolling participants in two randomized double-blind placebo-controlled clinical studies in immunosenescence (immune dysfunction with aging) (n=72) and in patients with late stage colon cancer undergoing section of liver metastases (n=115), with transformational milestones anticipated in late 2024.

## Investment Opportunity

Qu Biologics is raising a Series B USD\$25M equity round to expand our team and clinical development program to include a randomized double-blind placebo-controlled study in pancreatic cancer in addition to our current two enrolling studies. Please join us in transforming Medicine.

## SOLUTION: Site Specific Immunomodulators



<sup>1</sup> Bazett et al. Harnessing innate lung anti-cancer effector functions with a novel bacterial-derived immunotherapy. *Oncimmunology*. 2017; Article E1398875

<sup>2</sup> Sutcliffe et al. Novel microbial-based immunotherapy approach for Crohn's disease. *Frontiers in Medicine*. July 2019; Volume 6, Article 170; and QBECO-CD-02 results to be published

<sup>3</sup> Sham et al. Immune stimulation using a gut microbe-based immunotherapy reduces disease pathology in Ulcerative Colitis. *Frontiers in Immunology* 2018; Volume 9 Article 2211

<sup>4</sup> Kalyan et al. The right microbial stimulus can direct innate immune effector cells to specific organ sites to clear pathology. *bioRxiv*. 612598; doi: <https://doi.org/10.1101/612598>