Immunotoxins are a potentially powerful drug class... Immunotoxins can be designed to block the synthesis of proteins inside cancer cells—a mechanism that is differentiated and potentially synergistic with other treatments, such as chemotherapy and checkpoint inhibitors. The toxin is fused to an antibody fragment that is designed to target tumor cells while minimizing off-target side effects.

**IMMUNOTOXINS CAUSE TUMOR CELL DEATH**

**toxin**

**antibody fragment**

**protein production**

Immunotoxin penetrates the target tumor cell

The toxin blocks protein production within the cell

The cell dies

...but immunotoxins are highly immunogenic, which has negated their efficacy.

Because the toxin moiety is derived from foreign organisms, immunotoxins provoke a strong immune response in humans resulting in loss of efficacy. Consequently, the use of immunotoxins in fighting cancer has been severely restricted.

**SEL-403: A New Therapeutic Modality**

Selecta's SEL-403 is designed to avoid immunogenicity, which could enable prolonged immunotoxin dosing and enhanced anti-tumor activity.

**SEL-403 Targets Mesothelin**

**LMB-100**

**SVP-Rapamycin**

**Fused & Target Toxin**

**Immunogenicity Prevention**

**SEL-403**

Clinical Program

LMB-100 and SVP-Rapamycin (the components of SEL-403) have been studied separately in clinical trials. Selecta intends to evaluate SEL-403 combination therapy in patients with mesothelioma and pancreatic cancer.

Most patients fail treatment due to immunogenicity

In previous clinical trials of a precursor recombinant immunotoxin in mesothelioma, the vast majority of patients failed treatment due to immunogenicity despite the use of potent immunosuppressants.

However, for the limited number of patients who were able to receive more than two treatment cycles, marked tumor regression was observed. The goal of SEL-403 is to increase the number of treatments that patients can receive by preventing immunogenicity.

**SEL-403 may be synergistic with other cancer treatments, such as:**

- **Chemotherapy**
- **Checkpoint Inhibitors**

**BROAD POTENTIAL APPLICABILITY**

**Mesothelin is overexpressed in many types of solid tumors:**

- **Mesothelioma ~90%**
- **Pancreatic cancer ~90%**
- **Lung cancer ~70%**
- **Ovarian cancer ~50%**
- **Breast cancer ~34%**

**SEL-403 may be synergistic with other cancer treatments, such as:**

- **Chemotherapy**
- **Checkpoint Inhibitors**

**Potential areas of expansion:**

SEL-403 utilizes pseudomonas exotoxin A (peA) as its cancer-killing payload. This same payload could be attached to a variety of other proteins.