

Lycellvax – A novel allogeneic vaccine against cancer

University of Chile has generated a novel immunotherapy based on direct *in vivo* stimulation of the immune system in cancer patients

THE CHALLENGE

Immunotherapy based on immune-checkpoint blockers has proven survival benefits in patients with melanoma and other malignancies. Nevertheless, a significant proportion of treated patients remain refractory, suggesting that combinations with active immunizations, such as cancer vaccines, could be helpful to improve response rates. Cancer vaccines, particularly tumor-based vaccines and the use of dendritic cells (DCs), resurge as an alternative for complementary immunological treatments in cancer patients.

THE TECHNOLOGY

Lycellvax is a **novel vaccine for the treatment of malignant melanoma and other solid tumors by direct *in vivo* stimulation of the immune system** of cancer patients. This immunogenic formulation is based on in-house developed **cell lysates from heat-shock conditioned allogenic tumor cells** and other solid tumors, combined with an adjuvant derived from hemocyanins.

Lycellvax is capable of improving the DC capacity to cross-present tumor-associated antigens, as well as CD3+ and CD8+ T-cell infiltration of tumors inhibiting tumor growth. Preclinical results have shown the ability of this vaccine to reduce **significantly tumor size and an increased humoral and cellular immune response**.

STAGE OF DEVELOPMENT

- **Preclinical assays for safety and efficacy** – Murine models of melanoma and colon adenocarcinoma
- **Validated antigens and adjuvants** – No adverse effects in humans
- **Development of other immunogenic formulations for other types of cancer/tumors** – Prostate, kidney, gallbladder, colon

COMPETITIVE ADVANTAGES

- **Universal** – Generic vaccine
- **Simple production** compared to personalized, *ex vivo* immunotherapies
- **Improves anti-tumor effect of anti-PD1** immune checkpoint inhibitor

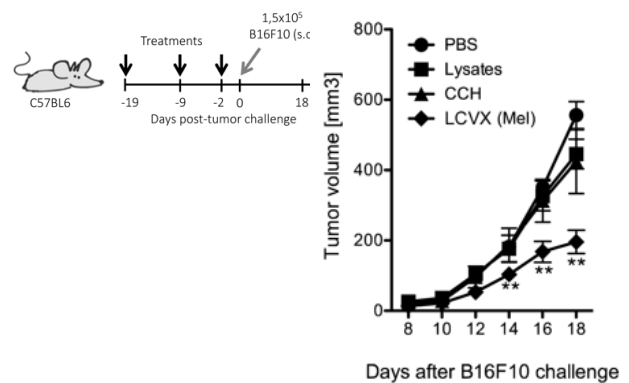


Figure 1. B16F10 tumor growth is inhibited by treatment with Lycellvax

APPLICATIONS

- Treatment of **advanced melanoma, inoperable tumors or cancers with high risk of recurrence**
- **Complementary therapy** to other cancer therapies

OPPORTUNITY

University of Chile is searching for industry partners for **out-licensing**.

INTELLECTUAL PROPERTY/REFERENCES

- Provisional US patent application No. 62/814,756