



Elpiscience Announces Studies Presented at Society for Immunotherapy of Cancer (SITC) 2023 Annual Meeting

SHANGHAI, China and SUZHOU, China and GERMANTOWN, MD., Nov. 5, 2023 – Elpiscience Biopharmaceuticals, Inc. (“Elpiscience”), a clinical-stage biopharmaceutical company focused on developing next-generation immunotherapies to benefit cancer patients worldwide, presented studies for its innovative immunotherapeutic molecules at the SITC 2023 Annual Meeting, including KG2A/NKG2C dual-targeting antibody ES015-2, a high affinity LILRB1 specific blocking antibody ES008-a, and the first-in-class anti-CD39/TGF- β RII bifunctional fusion protein ES014.

Study Highlights:

Title: Selective delivery of TGF β “trap” to CD39-expressing immune and stroma cells reshapes tumor microenvironment and rejuvenates antitumor immunity

Abstract Number: 453

CD39-Adenosine and TGF β are two key immune suppressive pathways within the tumor microenvironment (TME). TGF β , in contrast to its biphasic effects on tumor cells, acts on stromal cells and immune cells in the TME, which commonly express high levels of CD39, to promote tumor progression. CD39-targeted TGF β “trap” is thus more likely to effectively inhibit tumor progression. Our study showed that ES014, a bifunctional antibody–ligand trap which comprises an antibody targeting CD39 fused to a TGF β receptor II ectodomain, can inhibit TGF β activity and lead to cancer killing in ex vivo models.

A phase I clinical study is ongoing to primarily investigate the safety, tolerability, and preliminary clinical activity of ES014 in patients with advanced solid tumors.

Highlights:

- ES014 binds and neutralizes both CD39 and TGF β .
- ES014 promoted killing of tumors from NSCLC patients in ex vivo MPE model.
- ES014 inhibits Treg differentiation and TGF β -induced CD39 expression on T cells.
- ES014 promotes T cell survival.

Title: ES015-2, a first-in-class NKG2A and NKG2C dual-targeting antibody, demonstrated potent anti-tumor immune response

Abstract Number: 498



Elpiscience

The inhibitory receptor NKG2A and the activating receptor NKG2C modulate the function of NK and CD8 T cells by recognizing the same ligand HLA-E. NKG2A is selectively expressed on lymphocytes with cytolytic function, and the NKG2C “engager” has the potential to generate a strong antitumor response against various tumors. Inhibiting NKG2A and HLA-E alone was not as effective as had been expected in both mouse tumor models and in clinical trials. Our NKG2A/NKG2C dual targeting antibody ES015-2 can inhibit NKG2A function yet promoting NKG2C action, leading to superior anti-tumor response.

Highlights:

- ES015-2 is a NKG2A/NKG2C dual targeting antibody.
- ES015-2 can completely block the interaction of NKG2A/CD94 with HLA-E, thereby inhibits HLA-E-induced NKG2A inhibitory signaling.
- Ligation of ES015-2 effectively potentiates the activation of NKG2C⁺ NK cells and T cells.

Title: ES008-a, a high affinity LILRB1 specific blocking antibody activates multiple immune cells to fight cancers

Abstract Number: 510

LILRB1 is the most broadly expressed member of LILRB family on various immune cells. Blocking LILRB1 augments macrophage phagocytosis of tumor cells, restores cytotoxic function of NK cells, and enhances tumor cell killing by effector CD8⁺ T cells. The high affinity LILRB1 specific blocking antibody ES008-a can activate multiple immune cells to fight cancers.

Highlights:

- ES008-a is a high affinity LILRB1-specific blocker that can completely block HLA-G/LILRB1 and HLA-A2/LILRB1 interactions.
- ES008-a promotes NK cell-mediated destruction of tumor cells.
- ES008-a synergizes with CD47/SIRP α inhibitors in enhancing macrophage phagocytosis of tumor cells.

About Elpiscience

Elpiscience is a clinical-stage biopharmaceutical company dedicated to developing life-changing immuno-oncology therapies for cancer patients worldwide. The company’s innovative approach is focused on removing immunosuppressive factors in the tumor microenvironment, by targeting the adenosine pathway and myeloid checkpoints. A pipeline of novel molecules has been developed using its proprietary



Elpiscience

platforms including a powerful Bispecific Macrophage Engager (BiME®) technology that connects and activates macrophages for solid tumor killing without causing cytokine storms.

For more information, please visit: www.elpiscience.com

BD inquiries: BD@elpiscience.com

Media inquiries: PR@elpiscience.com