Highlight Therapeutics announces follow-up results from Phase 2b study of BO-112 + anti-PD1 in confirmed anti-PD1 progressor melanoma patients at AACR

BO-112 demonstrates potential as new and highly effective second line therapy for melanoma

- BO-112 demonstrates potential as best-in-class therapy to overcome anti-PD1 resistance in melanoma patients whose disease has progressed on prior anti-PD-1 treatment
- Primary endpoint met with a 30% Response Rate, 15% Complete Responses (CR) and 65% Disease Control Rate (DCR) substantially exceeding current standard of care
  - Further improvements anticipated over one year follow up
- Hard-to-treat mucosal melanoma patients achieved 66% Overall Response Rate (ORR) and 100% DCR
- Durable responses and manageable safety profile, with no patients discontinuing due to adverse events
- Potential for use in multiple solid cancers resistant to anti-PD1 inhibitors, and with different anti-PD1 combinations

Madrid, Spain, 13 April, 2022 – Highlight Therapeutics ("Highlight"), a clinical-stage biopharmaceutical company developing RNA-based therapies against cancer, today announced positive results of a Phase 2 study of intratumoral administration of BO-112 with pembrolizumab in patients with advanced melanoma whose disease had progressed on first-line anti-PD1-based therapy. BO-112 is a dsRNA agonist targeting anti-PD1 resistance, which has demonstrated anti-cancer activity in previous Phase 1b studies.

Results of the study were presented at the plenary session at the American Association for Cancer Research (AACR) Annual Meeting 2022 in in New Orleans, Louisiana by Iván Marquez-Rodas (CT014. Efficacy of intratumoral BO-112 with systemic pembrolizumab in patients with advanced melanoma refractory to anti-PD-1-based therapy: Final results of SPOTLIGHT203 phase 2 study. 10:15 –12:15 PM CT)

Sales of anti-PD1 therapies are valued at approximately $24 billion[1] a year and they are used to treat most solid tumors. However, currently fewer than 20% of all cancer patients benefit from first-line anti-PD1 treatment. BO-112 in combination with anti-PD1 therapy is designed to resensitize tumors to anti-PD1 treatment through improved antigen presentation, enhanced T-cell infiltration and increased MHC-1 and PDL1 expression by the tumor itself.

"*This remarkable data confirms that BO-112 is effective at resensitizing tumors and helping to overcome anti-PD1 resistance, opening up the potential to treat many more patients with anti-PD1 therapies. Analysis of the data showed that most patients achieved a response rate of 40%, although patients with very high LDH levels and acral melanoma did not obtain clinical benefit.*" ***Dr. Marisol Quintero, CEO of Highlight Therapeutics, commented****. "Importantly, BO-112 was able to achieve improvements even in patients who had initially responded to anti-PD1 therapy before regressing and in hard-to-treat mucosal melanoma, overall response rates of 66% and disease control rates of 100% were seen, greatly exceeding current standard of care."*

Highlight Therapeutics and Merck, known as MSD outside the United States and Canada, conducted an open-label, single arm study to evaluate the efficacy & safety of intra-tumoral administration of BO-112 + pembrolizumab in mucosal, acral and cutaneous melanoma patients whose disease had progressed, confirmed by two consecutive CT scans. The study recruited 42 patients in France and Spain, with recruitment completed by August 24, 2021. Patients included those with high LDH levels, which are often associated with poor response rates and have been excluded from comparable clinical trials.

The analysis shows:

- Primary endpoint (ORR by independent reviewer) has been met
- With a median follow up of seven months, there is a clear clinical benefit in patients with confirmed anti-PD1-resistant melanoma, with a 30% ORR and a 65% DCR≠ superior to 2nd line Standard of Care in stage III/IV melanoma of ~8% (continuing with anti-PD1 Ab) or 13% (second line ipilimumab).
- Three hard-to-treat mucosal melanoma patients have achieved an ORR of 66% and DCR of 100%
- High baseline LDH levels (>3xULN) predict progressive disease
- Responses and stable diseases are durable
- Study treatment has a manageable safety profile, with no patients discontinuing due to adverse events

Next steps in the development of BO-112 include:

- Initiation of a randomized Phase 2 study in 2nd-line melanoma is planned in 2023
- Highlight Therapeutics has initiated strategic partnerships discussions with anti-PD1 companies interested in enhancing their anti-PD1 market potential

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1. *IQVIA Global Oncology Report 2020*

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Notes to editors

About Highlight Therapeutics

Highlight Therapeutics, formerly known as Bioncotech Therapeutics, is a private, clinical-stage company dedicated to unlocking the full potential of immuno-oncology. Our lead drug candidate BO-112 is a best-in-class RNA-based therapy which has been demonstrated to initiate a powerful immune response, leveraging a unique multi-target approach to turn 'cold' tumors 'hot' and therefore visible to the immune system. It has the potential to rescue patients who are resistant to current checkpoint inhibitor therapy, a very large market opportunity. BO-112 is currently being investigated in a range of clinical trials as a monotherapy and in combination with checkpoint inhibitors. In addition to in-house research, Highlight Therapeutics has a number of external collaborators, including Merck & Co and UCLA.

For more information, please visit www.highlighttherapeutics.com