UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 3, 2022

Harpoon Therapeutics, Inc.
(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-38800**	**47-3458693**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

131 Oyster Point Blvd, Suite 300 **South San Francisco, California** **(Address of Principal Executive Offices)**	**94080** **(Zip Code)**

(650) 443-7400
(Registrant's Telephone Number, Including Area Code)

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value $0.0001 per share	**HARP**	**Nasdaq Global Select Market**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

On June 3, 2022, Harpoon Therapeutics, Inc. ("Harpoon") is releasing additional information, which will be presented in a poster presentation at the American Society of Clinical Oncology on Monday, June 6, 2022, from its dose escalation and expansion clinical trial for HPN328 as follows:

The ongoing HPN328 dose escalation and expansion clinical trial enrolls patients with relapsed/refractory small cell lung cancer (SCLC) and other neuroendocrine malignancies. As of April 21, 2022, 18 patients have been enrolled and treated in the dose escalation portion of the study. These include 11 patients with SCLC, 2 with neuroendocrine prostate cancer, and 5 with other neuroendocrine cancers.

The encouraging interim results showed that HPN328 demonstrated anti-tumor activity and a favorable safety profile. To date, there have been no dose-limiting toxicities observed and no discontinuations due to adverse events. Treatment-related adverse events occurred in 15 (83%) patients, with only 1 (6%) Grade-3 event and no Grade >3 events. Grade 1-2 cytokine release syndrome (CRS) occurred in 4 (22%) patients, with no Grade-3 or higher CRS reported.

Treatment duration of >20 weeks was observed in 6 of 18 (33%) patients. At the data cut off, duration of treatment ranged from 4.1 to 41.4 weeks, with treatment ongoing in 5 patients. Treatment-emergent AEs observed in ≥15% of patients included cytokine release syndrome, chills, constipation, dysgeusia, fatigue, hypotension, and vomiting.

The highest target dose evaluated to date is 12mg / week. Step dosing was initiated for target doses higher than 3.6 mg / week. Patients were premedicated with acetaminophen, dexamethasone and histamine-receptor blockers for initial doses. HPN328 has demonstrated half-life extension, with a median half-life of 71 hours, and linear pharmacokinetics with dose-proportional increases in exposure at doses between 0.135 mg and 12 mg. T-cell margination and activation was observed, consistent with target engagement.

Across all dose cohorts, 7 of 18 (39%) patients demonstrated decreases in sum of target lesion diameters on radiographic assessments. 3 of 11 (27%) SCLC patients had >30% decrease in sum of target lesion diameters, including 1 confirmed partial response ongoing treatment at 32 weeks. 4 of 6 (67%) SCLC patients treated at ≥1.215mg/week had a decrease in sum of target lesion diameters. Additionally, 6 of 18 (33%) patients had a best overall response of stable disease.

Dose escalation is ongoing, MTD is not yet reached.

HPN328 is a delta like canonical Notch ligand 3 (DLL3)-targeting T-cell engager derived from the TriTAC® platform. HPN328 contains 3 binding domains, engineered to redirect T cells to kill DLL3-expressing cancer cells: anti-DLL3 for target engagement, anti-albumin for half-life extension, and anti-CD3 for T-cell engagement.

The information in this Item 7.01 of this Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, or incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

HARPOON THERAPEUTICS, INC.

By: /s/ Julie Eastland
Julie Eastland
President and Chief Executive Officer

Dated: June 3, 2022