



First Prospective Clinical Validation of Allarity's DRP[®] Companion Diagnostic to be Presented at 2023 ASCO Annual Meeting

Phase 2 study evaluating the utility of a DRP[®] companion diagnostic for cisplatin supports its ability to predict drug response in certain breast cancer patients

Boston, MA (May 30, 2023) — Allarity Therapeutics, Inc. (“Allarity” or the “Company”), a clinical-stage pharmaceutical company developing novel oncology therapeutics together with drug-specific DRP[®] companion diagnostics for personalized cancer care, today announced the results of a prospective Phase 2 clinical study of the Company’s proprietary DRP[®] technology that will be presented in a poster at the 2023 American Society of Clinical Oncology (ASCO) Annual Meeting on June 3, 2023.

In the Phase 1/2 study, researchers analyzed the transcriptomic profiles of 37 evaluable metastatic breast cancer (mBC) patients and, based on analysis of biomarkers comprised within a DRP[®] signature, assigned response likelihood scores (DRP[®] 0-100) of patient tumors to a targeted, liposomal form of cisplatin (LiPlacis[™]). Data from the poster presentation will show that the cisplatin-DRP[®] identified all four mBC patients who demonstrated a partial response (PR) in the trial as likely responders to the LiPlacis[™] treatment regimen using a DRP80+ score as a cut-off for likely responders. In addition, the cisplatin-DRP[®] also identified mBC patients demonstrating other efficacy signals, including improved progression-free survival. Based on these data, researchers concluded that the cisplatin-DRP[®] companion diagnostic can differentiate, in a statistically significant way, clinical responders and non-responders to cisplatin administered as LiPlacis[™].

“While our proprietary DRP[®] companion diagnostics have been extensively validated in numerous retrospective analyses across multiple forms of cancer and many drug types, these data represent the first prospective clinical study showing that our technology can predict actual patient responses ahead of potential treatment,” said James G. Cullem, Chief Executive Officer of Allarity Therapeutics. “The ability to differentiate likely responders to a specific drug regimen prior to treatment has the potential to provide improved patient benefits and potential clinical

trial efficiencies, and we are excited that these data will be shared with our colleagues at this year's ASCO meeting."

Using a proprietary systems biology algorithm, Allarity's DRP[®] technology analyzes transcriptomic differences between cell lines that are sensitive and resistant to provide a biomarker signature of drug response and resistance. The DRP[®] platform further refines the predictive signature through a clinical relevance filter (created from more than 3,000 actual tumor biopsy samples from a broad range of cancer drug clinical trials) to eliminate unnecessary biomarkers. By remaining agnostic to what influences tumor response or resistance to a drug, DRP[®] enables the identification of unknown biomarkers crucial to drug response or resistance.

Allarity conducted the study in collaboration with investigators at hospitals in Denmark and its CRO Smerud Medical Research International AS. The LiPlaCis[™] program is currently licensed to CHOSA Oncology AB for further clinical development.

The poster presentation details are as follows:

Poster Title: "Predictive biomarker for cisplatin in prospective phase 2 of liposomal cisplatin in metastatic breast cancer."

Authors: Nielsen, D., Jakobsen, E.H., Langkjer, S.T., Danoe, H., Balslev, E., Knoop, A., ... Lassen, U.N.

Abstract Number: 3130

Session Title: Developmental Therapeutics—Molecularly Targeted Agents and Tumor Biology

Date and Time: 6/3/2023, 8:00 AM-11:00 AM local time

About Allarity Therapeutics

Allarity Therapeutics, Inc. (Nasdaq: ALLR) develops drugs for personalized treatment of cancer guided by its proprietary and highly validated companion diagnostic technology, the DRP[®] platform. The Company has a mature portfolio of three drug candidates: stenoparib, a PARP inhibitor in Phase 2 development for ovarian cancer, and in Phase 1 development for advanced solid tumors in a combination treatment with dovitinib, a pan-tyrosine kinase inhibitor (pan-TKI) that has previously been developed through Phase 3 in renal cancer; and IXEMPRA[®] (Ixabepilone), a microtubule inhibitor approved in the U.S. and marketed by R-PHARM U.S. for the treatment of second-line metastatic breast cancer, currently in Phase 2 development in Europe for the same indication. Additionally, the Company has rights in two secondary assets: 2X-111, a liposomal formulation of doxorubicin for metastatic breast cancer and/or glioblastoma multiforme (GBM), which is the subject of discussions for a restructured

out-license to Smerud Medical Research International AS; and LiPlaCis[®], a liposomal formulation of cisplatin and its accompanying DRP[®], being developed via a partnership with CHOSA Oncology AB for late-stage metastatic breast cancer. The Company is headquartered in the United States and maintains an R&D facility in Hoersholm, Denmark. For more information, please visit the Company's website at www.Allarity.com.

About the Drug Response Predictor – DRP[®] Companion Diagnostic

Allarity uses its drug-specific DRP[®] to select those patients who, by the genetic signature of their cancer, are found to have a high likelihood of responding to the specific drug. By screening patients before treatment, and only treating those patients with a sufficiently high DRP[®] score, the therapeutic response rate can be significantly increased. The DRP[®] method builds on the comparison of sensitive vs. resistant human cancer cell lines, including transcriptomic information from cell lines combined with clinical tumor biology filters and prior clinical trial outcomes. DRP[®] is based on messenger RNA from patient biopsies. The DRP[®] platform has proven its ability to provide a statistically significant prediction of the clinical outcome from drug treatment in cancer patients in 37 out of 47 clinical studies that were examined (both retrospective and prospective), including ongoing, prospective Phase 2 trials of Stenoparib and IXEMPRA[®]. The DRP[®] platform, which can be used in all cancer types and is patented for more than 70 anti-cancer drugs, has been extensively published in peer-reviewed literature.

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Forward-Looking Statements

This press release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements provide Allarity’s current expectations or forecasts of future events. The words “anticipates,” “believe,” “continue,” “could,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predicts,” “project,” “should,” “would” and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements include, but are not limited to, statements related to the expected availability of capital to fund its anticipated clinical trials, statements related to advancing dovitinib in combination with stenoparib or another therapeutic candidate or other approved drug, any statements related to ongoing clinical trials for stenoparib as a monotherapy or in

combination with another therapeutic candidate for the treatment of advanced ovarian cancer, or ongoing clinical trials (in Europe) for IXEMPRA® for the treatment of metastatic breast cancer, statements relating to the effectiveness of the Company's DRP® companion diagnostics platform in predicting whether a particular patient is likely to respond to a specific drug, and statements related to the Company's ability to regain compliance with the Nasdaq Listing Rule. Any forward-looking statements in this press release are based on management's current expectations of future events and are subject to multiple risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the risk that the Company is not able to raise sufficient capital to support its current and anticipated clinical trials, the risk that results of a clinical study do not necessarily predict final results and that one or more of the clinical outcomes may materially change following more comprehensive reviews of the data, and as more patient data become available, the risk that results of a clinical study are subject to interpretation and additional analyses may be needed and/or may contradict such results, the receipt of regulatory approval for dovitinib or any of our other therapeutic candidates or, if approved, the successful commercialization of such products, the risk of cessation or delay of any of the ongoing or planned clinical trials and/or our development of our product candidates, the risk that the results of previously conducted studies will not be repeated or observed in ongoing or future studies involving our therapeutic candidates, and the risk that the current COVID-19 pandemic will impact the Company's current and future clinical trials and the timing of the Company's preclinical studies and other operations. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in our Form 10-K annual report on file with the Securities and Exchange Commission, available at the Securities and Exchange Commission's website at www.sec.gov, and as well as discussions of potential risks, uncertainties and other important factors in the Company's subsequent filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and the Company undertakes no duty to update this information unless required by law.

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