Allarity Provides Update on Key Recent Advances Solidifying Drug Response Predictor® to Drive Stenoparib's Clinical Development

- Recently awarded patents have solidified Allarity's strategy to leverage DRP to ensure the commercial exclusivity of stenoparib

TARPON SPRINGS, Fla., September 30, 2026 – Allarity Therapeutics, Inc. ("Allarity" or the "Company") (NASDAQ: ALLR), a Phase 2 clinical-stage pharmaceutical company dedicated to developing stenoparib (2X-121)—a differentiated, dual PARP and WNT pathway inhibitor—today provided an update on recent advances in its proprietary Drug Response Predictor (DRP®) technology, patent portfolio and in-house laboratory capabilities that strengthen its ability to drive stenoparib's clinical development while expanding external partnership opportunities.

Allarity Therapeutics was established on its proprietary patient selection technology—the Drug Response Predictor (DRP®). DRP® allows Allarity to assess a patient's tumor tissue for the gene expression changes that indicate the patient's tumor is either more or less likely to respond to a given cancer therapy. DRP® tests have been successfully developed for dozens of cancer therapies. Most notably, DRP® has been developed for Allarity's lead asset, stenoparib, and has been deployed in the clinic to pre-select patients for stenoparib-based therapy.

The stenoparib-DRP® is comprised of a unique 414-gene expression signature, notably including genes associated with WNT pathway activity. At AACR 2026, Allarity presented an exploratory analysis of its prior Phase 2 cohort of patients with advanced ovarian cancer treated with twice-daily stenoparib. Higher pretreatment DRP scores were associated with longer overall survival, supporting the test's potential to identify patients who may derive the most durable benefit.

Recent patent awards coupled with the CLIA certification of Allarity's in-house lab allow the company to extend the utility of the test as a companion diagnostic test and to retain sole control of that clinical test. These developments extend the commercial viability of both stenoparib and the stenoparib-DRP test.

Collectively, these advances support Allarity's ongoing strategy to use DRP to inform patient selection for a pivotal trial, making the technology an integral part of stenoparib's development toward FDA approval.

"Over the past few months, we have significantly strengthened the clinical foundation for our DRP-guided stenoparib program," said Thomas Jensen, Chief Executive Officer of Allarity Therapeutics. "For stenoparib, the association between higher DRP scores and longer overall survival helps inform our clinical development strategy as we work toward FDA approval. While stenoparib remains our principal development focus, our extensive experience developing predictors for other drugs also provides a foundation for external partnerships."

About Allarity Therapeutics

Allarity Therapeutics, Inc. (NASDAQ: ALLR) is a clinical-stage pharmaceutical company focused on developing personalized cancer treatments. The Company is developing stenoparib, a novel PARP/tankyrase inhibitor for patients with advanced ovarian cancer, and is using its proprietary DRP® technology to develop a companion diagnostic designed to identify patients expected to derive the greatest clinical benefit from stenoparib. Allarity's principal operations are located in Denmark, and its U.S. business address is in Florida. For more information, visit www.allarity.com.

About Stenoparib/2X-121

Stenoparib is an orally available, small-molecule dual-targeted inhibitor of PARP1/2 and tankyrase 1/2. Tankyrases have emerged as potential therapeutic targets in cancer due in part to their role in regulating the WNT signaling pathway. Aberrant WNT/β-catenin signaling has been implicated in the development and progression of numerous cancers, including drug-resistant cancers. Through its inhibition of PARP and the WNT signaling pathway, stenoparib has the potential to provide therapeutic benefit across multiple cancer types, including ovarian cancer, small cell lung cancer and colorectal cancer.

Allarity has secured exclusive global rights to develop and commercialize stenoparib, which was originally developed by Eisai Co., Ltd. and was formerly known as E7449 and 2X-121.

Allarity has completed its first Phase 2 trial evaluating stenoparib in patients with advanced ovarian cancer. The trial demonstrated promising and durable clinical benefit in patients with ovarian cancer who received two or more prior lines of therapy and were treated with

stenoparib twice daily. Updated data from the trial were presented at the AACR Special Conference on Advances in Ovarian Cancer in September 2025. These analyses remain subject to change as the study data mature.

Based on the emerging clinical experience with stenoparib, Allarity developed a new protocol focused on patients with platinum-resistant ovarian cancer, which began enrolling patients in the summer of 2025. The amended protocol enrolls only platinum-resistant or platinum-ineligible patients and is designed to advance the clinical development of stenoparib toward potential FDA approval.

In parallel, a separate Phase 2 trial evaluating stenoparib in combination with temozolomide for patients with relapsed small cell lung cancer, or SCLC, began enrolling in early 2026 and is currently enrolling patients at multiple U.S. Department of Veterans Affairs sites.

About the Drug Response Predictor – DRP® Companion Diagnostic

Allarity uses its drug-specific DRP® technology to identify patients who, based on the gene expression signature of their cancer, may be more likely to benefit from a particular drug. By screening patients before treatment, and selecting those with a sufficiently high, drug-specific DRP score, the DRP technology is designed to increase the likelihood of therapeutic benefit.

The DRP methodology is based on the comparisons of sensitive and resistant human cancer cell lines, and incorporates transcriptomic data, clinical tumor biology filters and prior clinical trial outcomes. The DRP uses messenger RNA expression profiles derived from patient biopsies to generate drug-specific predictive scores.

The DRP® platform has demonstrated the ability to provide statistically significant predictions of clinical outcome following drug treatment across dozens of retrospective and prospective clinical studies. The platform is designed for potential application across multiple cancer types, is patented for dozens of anti-cancer drugs and has been extensively described in peer-reviewed scientific literature.

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Forward-Looking Statements

This press release contains forward-looking statements within the meaning of applicable federal securities laws. Forward-looking statements reflect current expectations or forecasts

regarding future events. The words “anticipates,” “believes,” “continues,” “could,” “estimates,” “expects,” “intends,” “may,” “might,” “plans,” “possible,” “potential,” “predicts,” “projects,” “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 regarding the potential of the DRP® platform to identify patients most likely to benefit from stenoparib and other therapies; Allarity's plans to use DRP to inform patient selection for a potential pivotal trial of stenoparib; the potential for stenoparib to achieve FDA approval; the expected benefits of Allarity's in-house CLIA laboratory capability, including support for patient-selection testing, the development of companion diagnostics and the delivery of laboratory services to external partners; opportunities for diagnostic licensing and other external partnerships; the scope and duration of Allarity's patent protection; and the Company's ability to create long-term enterprise value. 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 from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, risks related to the exploratory nature of the DRP analyses described in this press release and the possibility that such results may not be replicated in future clinical trials; the risk that the DRP may not successfully identify patients who benefit from stenoparib or other therapies; risks related to the design, timing, enrollment, conduct and results of clinical trials, including any potential pivotal trial of stenoparib; the risk that stenoparib or any DRP-based companion diagnostic may not receive regulatory approval; risks related to the operation of Allarity's CLIA laboratory, including regulatory compliance; the Company's ability to enter into and maintain licensing and laboratory services agreements with external partners; the Company's ability to obtain, maintain, defend and enforce its patents and other intellectual property rights; the Company's need for additional financing; and general market, economic and competitive conditions. For a discussion of risks and uncertainties and other important factors that could cause actual results to differ materially from those contained in the forward-looking statements, see the risk factors and other disclosures in Allarity’s filings with the SEC, including its most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. These filings are available through the SEC’s website. All information in this press release is as of the date of the release, and the Company undertakes no obligation to update or revise this information, except as required by applicable law.

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