Validation of Patient-Reported Outcomes in the On-Demand Treatment of Hereditary Angioedema Attacks Published in Clinical Reviews in Allergy & Immunology

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- Data include a concurrent assessment of results collected from PGI and AMRA instruments, insights into clinically meaningful changes in HAE attack symptoms, and support for hierarchical ranking of RAPIDe-3 endpoints

ZUG, Switzerland, March 11, 2026 (GLOBE NEWSWIRE) -- Pharvaris (Nasdaq: PHVS), a late-stage biopharmaceutical company developing novel, oral bradykinin B2 receptor antagonists to help address unmet needs of those living with bradykinin-mediated diseases such as hereditary angioedema (HAE) and acquired angioedema due to C1 inhibitor deficiency (AAE-C1INH), today announced that results from a Pharvaris-sponsored non-interventional, mixed methods, real-world study assessing the patient experience during acute HAE attacks across alternative endpoints used in clinical studies have been published in *Clinical Reviews in Allergy & Immunology*. The study evaluated the patient experience with HAE attack manifestations, and what constitutes meaningful changes in those manifestations, to support the inclusion of meaningful endpoints in clinical studies for on-demand treatment (ODT) of HAE attacks, such as RAPIDe-3 (NCT06343779).

"This study and its findings explore important insights into the care of those living with HAE; by validating patient-reported outcome measures with rigorous evidence, we have supported the definition of clinical study endpoints and reinforced trust in the results of those studies, resulting in HAE treatment decisions ultimately being guided by patient experience," said Danny M. Cohn, M.D., Ph.D., Department of Vascular Medicine, Amsterdam UMC (an accredited center of ACARE) and an investigator for the study. "The ability to truly understand the impact of meaningful symptom changes will not only support the development of novel treatments but provide additional evidence to clinicians and people living with HAE to inform decisions on the most appropriate treatment options for them."

Although approved medicines exist for the on-demand treatment of HAE attacks, there have been no head-to-head studies of on-demand therapies, and cross-trial comparisons have been challenging due to lack of uniformity in study design. Additionally, (1) generation of evidence related to the key symptoms experienced by people during HAE attacks, (2) insights into the subsequent perception from patients as to what are clinically-meaningful changes in symptoms, (3) validation of the content of various patient-reported outcome (PRO) instruments to support the evaluation of those symptoms, and (4) confirmation of patient understanding and interpretation of that content, all could help in the evaluation of on-demand therapies by regulators, payers, and the HAE community.

This non-interventional study included participants with HAE in the U.S. who treated their HAE attacks with standard of care in accordance with their experience in real-world clinical practice. The study used a mixed methods approach and had a quantitative phase (real-time electronic PRO assessments during HAE attacks) and a qualitative phase (post-attack interview). The study aimed to evaluate PRO instruments—specifically the Patient Global Impression of Change (PGI-C), Patient Global Impression of Severity (PGI-S), and Angioedema syMptom Rating scAle (AMRA-3 and AMRA-5)—in capturing the patient experience during HAE attacks and to define meaningful change thresholds to inform the design of clinical trials for ODT of acute attacks.

Study Results
This mixed methods study provides strong evidence that the PGI and AMRA instruments are reliable, valid, and sensitive tools for assessing PROs in HAE attacks. Within the PRO assessments, most concepts (i.e., skin swelling, abdominal pain, difficulty swallowing, and voice change) were considered important by participants. Qualitative interviews confirmed that even relatively small improvements could be meaningful, such as the moment an attack was no longer worsening, as captured by the endpoint of End of Progression™.

Consistency across all PRO assessments of attack manifestation and response assessment were seen; End of Progression™ was the first-in-time achieved endpoint, followed by symptom relief, then symptom resolution. Importantly, the median time to onset of initial symptom relief as measured as PGI-C rating of at least "a little better" aligned more closely with the timing of AMRA-3 ≥20% than with the timing of AMRA-3 ≥30%. These results informed the hierarchy of endpoints in the Phase 3 RAPIDe-3 trial of deucrictibant and may also inform future trials of ODTs for HAE attacks.

"By validating patient-reported outcome measures in a real-world setting, we are ensuring that the experience and voices of people living with HAE directly inform how we assess new therapies in development" said Peng Lu, M.D., Ph.D., Chief Medical Officer of Pharvaris. "The findings support the use of PGI and AMRA instruments to evaluate endpoints in clinical trials for on-demand HAE treatments, including within our RAPIDe-3 study—the first-ever on-demand HAE study to be designed with prespecified endpoints being fully compliant with the Core Outcome Set recommended in the AURORA Consensus[1]. This study gives us greater confidence that clinical outcomes truly reflect meaningful benefits for patients. These results not only strengthen our clinical programs but also reinforce our commitment to advancing patient-centered care and providing oral alternatives that improve upon standard of care to people with by HAE."

The full publication can be found here: https://link.springer.com/article/10.1007/s12016-025-09132-4.

About Deucrictibant
Deucrictibant is a novel, potent, orally bioavailable small-molecule bradykinin B2 receptor antagonist currently in clinical development. Deucrictibant is being investigated for its potential to prevent the occurrence of bradykinin-mediated angioedema attacks and to treat the manifestations of attacks if/when they occur by inhibiting bradykinin signaling through the bradykinin B2 receptor. Pharvaris is developing two formulations of deucrictibant for oral administration: an extended-release tablet to enable sustained absorption and efficacy as prophylactic treatment, and an immediate-release capsule to enable rapid onset of activity for on-demand treatment. Deucrictibant has been granted orphan drug designation for the treatment of bradykinin-mediated angioedema by the U.S. Food and Drug Administration, the European Commission, and Swissmedic.

About Pharvaris
Pharvaris is a late-stage biopharmaceutical company developing novel, oral bradykinin B2 receptor antagonists to help address unmet needs in bradykinin-mediated conditions, including all types of bradykinin-mediated angioedema. Pharvaris' aspiration is to offer therapies with injectable-like

efficacy™, a well-tolerated profile, and the convenience of oral administration to prevent and treat bradykinin-mediated angioedema attacks. By delivering on this aspiration, Pharvaris aims to provide a new standard of care in bradykinin-mediated angioedema. Pharvaris is preparing marketing authorization applications for deucrictibant immediate-release capsule as an on-demand treatment of HAE attacks, and a global pivotal Phase 3 study of deucrictibant extended-release tablet for the prevention of HAE attacks (CHAPTER-3) is ongoing with topline data anticipated in the third quarter of 2026. In addition, CREAATE is an ongoing Phase 3 study of deucrictibant for the prophylactic and on-demand treatment of AAE-C1INH attacks. For more information, visit https://pharvaris.com/.

Forward Looking Statements

This press release contains certain forward-looking statements that involve substantial risks and uncertainties. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements relating to our future plans, studies and trials, and any statements containing the words "believe," "anticipate," "expect," "estimate," "may," "could," "should," "would," "will," "intend" and similar expressions. These forward-looking statements are based on management's current expectations, are neither promises nor guarantees, and involve known and unknown risks, uncertainties and other important factors that may cause Pharvaris' actual results, performance or achievements to be materially different from its expectations expressed or implied by the forward-looking statements. Such risks include but are not limited to the following: uncertainty in the outcome of our interactions with regulatory authorities, including the FDA; the expected timing, progress, or success of our clinical development programs, especially for deucrictibant immediate-release capsules and deucrictibant extended-release tablets, which are in late-stage global clinical trials; our ability to replicate the efficacy and safety demonstrated in the RAPIDe-1, RAPIDe-2, RAPIDe-3, and CHAPTER-1 Phase 2 and Phase 3 studies in ongoing and future nonclinical studies and clinical trials, such as CHAPTER-3, and CREAATE; the timing and outcome of regulatory approvals, including the timing and outcome of our planned submission of an NDA with the FDA in the first half of 2026 for the on-demand treatment of acute attacks of HAE; risks arising from epidemic diseases, which may adversely impact our business, nonclinical studies, and clinical trials; our ability to potentially use deucrictibant for alternative purposes, for example to treat C1-INH deficiency (AAE-C1INH); the value of our ordinary shares; the timing, costs and other limitations involved in obtaining regulatory approval for our product candidates, or any other product candidate that we may develop in the future; our ability to establish commercial capabilities or enter into agreements with third parties to market, sell, and distribute our product candidates; our ability to compete in the pharmaceutical industry, including with respect to existing therapies, emerging potentially competitive therapies and with competitive generic products; our ability to market, commercialize and achieve market acceptance for our product candidates; our ability to produce sufficient amounts of drug product candidates for commercialization; our ability to raise capital when needed and on acceptable terms; regulatory developments in the United States, the European Union and other jurisdictions; our ability to protect our intellectual property and know-how and operate our business without infringing the intellectual property rights or regulatory exclusivity of others; our ability to manage negative consequences from changes in applicable laws and regulations, including tax laws (including the Biosecure Act), our ability to maintain an effective system of internal control over financial reporting; changes and uncertainty in general market conditions; disruptions at the FDA and other agencies; changes and uncertainty in general market, political and economic conditions, including as a result of inflation and geopolitical conflicts; changes in regulations and customs, tariffs and trade barriers; and the other factors described under the headings "Cautionary Statement Regarding Forward-Looking Statements" and "Item 3. Key Information—D. Risk Factors" in our Annual Report on Form 20-F and other periodic filings with the U.S. Securities and Exchange Commission. These and other important factors could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. While Pharvaris may elect to update such forward-looking statements at some point in the future, Pharvaris disclaims any obligation to do so, even if subsequent events cause its views to change. These forward-looking statements should not be relied upon as representing Pharvaris' views as of any date subsequent to the date of this press release.

Contact

Maggie Beller
Executive Director, Head of Corporate and Investor Communications
maggie.beller@pharvaris.com

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[1] Petersen RS, et al. *J Allergy Clin Immunol Pract.* 2024 Jun;12(6):1614-1621. doi:10.1016/j.jaip.2024.04.007.