Vaxart Publishes Positive, Complete Data from a Phase 2b Challenge Study of its First-Generation Oral Pill Norovirus Vaccine Candidate in Science Translational Medicine

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Challenge Study measured safety, efficacy against infection and symptomatic disease as well as viral shedding

Machine learning analyses identified statistically significant correlates of protection and will be incorporated into the development of Vaxart's second-generation norovirus vaccine candidate, which is being evaluated in a Phase 1 clinical trial

SOUTH SAN FRANCISCO, Calif., May 14, 2025 (GLOBE NEWSWIRE) -- Vaxart, Inc. (Nasdaq: VXRT) today announced the publication of complete data from a Phase 2b challenge study of its first-generation oral pill norovirus vaccine candidate (NCT05212168) in *Science Translational Medicine*. Consistent with preliminary data reported in September 2023, the complete results show that the trial met five of its six primary endpoints and demonstrate the safety, efficacy, and immunogenicity of the vaccine candidate. Additional data included in the current publication include results from machine learning analyses that identify functional blocking antibody and fecal IgA as robust correlates of protection (CoP). These additional results will help inform the development of the Company's second-generation oral pill norovirus vaccine candidate. Vaxart initiated a Phase 1 trial comparing its first- and second-generation norovirus vaccine candidates in March 2025.

"Challenge studies provide unique opportunities to identify correlates of protection that can be used to predict vaccine efficacy and support vaccine development," said James F. Cummings, MD, Chief Medical Officer at Vaxart. "The application of machine learning approaches to the complete data from the Phase 2b challenge study of our first-generation oral pill norovirus vaccine candidate identified two such correlates, functional serum blocking antibody and fecal IgA. Evaluation of these endpoints will help inform our understanding and provide an early read on the potential efficacy profile of our second-generation norovirus vaccine candidate as it advances through clinical development.

The single-center, double-blinded Phase 2b challenge study enrolled 165 healthy adults, who were randomized 1:1 to receive Vaxart's monovalent oral pill vaccine candidate targeting the norovirus GI.1 genotype or placebo. Four weeks after vaccination, subjects were challenged with GI.1 norovirus. The primary objective of the study was to determine vaccine efficacy against norovirus infection and norovirus gastroenteritis (NVG) after GI.1 NV challenge. Secondary objectives were to assess the safety and tolerability of the vaccine candidate. The ability of the vaccine candidate to modify disease severity, the quantity and duration of norovirus shedding, and a set of immunogenicity parameters also were quantified. The primary efficacy endpoints were the proportion of participants showing evidence of NVG, a composite endpoint defined as meeting one or more definitions for acute gastroenteritis (AGE) and a positive norovirus infection (detected by qPCR), and norovirus infection (detected by qPCR).

Key findings from the study include:

- The vaccine was immunogenic and protected against norovirus infection, with a 30% relative reduction for the vaccine group compared with placebo (p=0.003).
- The vaccine group had a lower incidence of norovirus gastroenteritis (21% relative reduction), but was not statistically different (p=0.178).
- The vaccine significantly increased serum IgA, IgG, norovirus-blocking antibodies, and antibody-secreting cells (p<0.001 for all endpoints). The vaccine stimulated mucosal-homing B cells and significantly increased norovirus-specific antibodies in saliva, nasal lining fluid and intestine.
- Most common solicited symptoms reported in the week following vaccine administration; headache (14%) and malaise/fatigue (14%) were reported at similar rates in the placebo group.
- A Totality of Evidence approach of the primary endpoint data was used to consider the probability of multiple simultaneous positive outcomes, and the outcome of p<0.0001 indicated an overall beneficial effect of the vaccine candidate.
- Participants in the vaccine cohort had reduced frequency of emesis (exploratory endpoint) and reduced viral load in emesis and stool samples (secondary endpoints).
- The vaccine was safe and well-tolerated after norovirus challenge, with no vaccine-related serious events or dose-limiting toxicities reported. Most adverse events (AEs) were mild, with few moderate and no severe AEs reported.
- Machine learning analyses identified norovirus VP1-specific fecal IgA and serum norovirus blocking antibodies as robust and statistically significant CoP against norovirus infection.

Vaxart previously published positive, complete data from a Phase 1b trial of its first-generation norovirus vaccine candidate in elderly adults, a patient population that often has age-related reductions in immune responses to injected vaccines.[1,2] A Phase 1 study in lactating mothers showed that the Company's vaccine candidate resulted in a 4-6-fold increase in norovirus antibodies in breast milk, which may help to protect infants through passive antibody transfer. The Company initiated a Phase 1 trial comparing its first- and second-generation norovirus vaccine candidates in March 2025.

"We believe that a safe and effective norovirus vaccine is essential to protect health, and have confidence that our oral pill vaccine platform can deliver a much needed global health resource," said Steven Lo, Chief Executive Officer of Vaxart. "The initiation of the Phase 1 clinical trial comparing our first- and second-generation norovirus vaccine candidates is a key step toward this important goal. The Phase 2 challenge study published today for our first-generation norovirus candidate supports of our oral pill norovirus vaccine approach, and the preclinical data we have generated to date supports our view that our second-generation candidate has the potential to provide improved immunogenicity and protection."

References

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2. A. Pera, C. Campos, N. López, F. Hassouneh, C. Alonso, R. Tarazona, R. Solana, Immunosenescence: Implications for response to infection and vaccination in older people. *Maturitas* **82**, 50-55 (2015).

About Vaxart
Vaxart is a clinical-stage biotechnology company developing a range of oral recombinant vaccines based on its proprietary delivery platform. Vaxart vaccines are designed to be administered using pills that can be stored and shipped without refrigeration and eliminate the risk of needle-stick injury. Vaxart believes that its proprietary pill vaccine delivery platform is suitable to deliver recombinant vaccines, positioning the company to develop oral versions of currently marketed vaccines and to design recombinant vaccines for new indications. Vaxart's development programs currently include pill vaccines designed to protect against coronavirus, norovirus and influenza, as well as a therapeutic vaccine for human papillomavirus (HPV), Vaxart's first immune-oncology indication. Vaxart has filed broad domestic and international patent applications covering its proprietary technology and creations for oral vaccination using adenovirus and TLR3 agonists.

Note Regarding Forward-Looking Statements

This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this press release regarding Vaxart's strategy, prospects, plans and objectives, results from preclinical and clinical trials and the timing of such results, commercialization agreements and licenses, and beliefs and expectations of management are forward-looking statements. These forward-looking statements may be accompanied by such words as "should," "believe," "could," "potential," "will," "expected," “anticipate," "plan," and other words and terms of similar meaning. Examples of such statements include, but are not limited to, statements relating to Vaxart's ability to develop and commercialize its product candidates, Vaxart's expectations regarding clinical results and trial data, and the timing of receiving and reporting such clinical results and trial data; and Vaxart's expectations with respect to the effectiveness of its product candidates. Vaxart may not actually achieve the plans, carry out the intentions, or meet the expectations or projections disclosed in the forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions, expectations, and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially from the forward-looking statements that Vaxart makes, including uncertainties inherent in research and development, including the ability to meet anticipated clinical endpoints, commencement, and/or completion dates for clinical trials, regulatory submission dates, regulatory approval dates, and/or launch dates, as well as the possibility of unfavorable new clinical data and further analyses of existing clinical data; the risk that clinical trial data are subject to differing interpretations and assessments by regulatory authorities; whether regulatory authorities will be satisfied with the design of and results from the clinical studies; decisions by regulatory authorities impacting labeling, manufacturing processes, and safety that could affect the availability or commercial potential of any product candidate, including the possibility that Vaxart's product candidates may not be approved by the FDA or non-U.S. regulatory authorities; that, even if approved by the FDA or non-U.S. regulatory authorities, Vaxart's product candidates may not achieve broad market acceptance; that a Vaxart collaborator may not attain development and commercial milestones; that Vaxart or its partners may experience manufacturing issues and delays due to events within, or outside of, Vaxart's or its partners' control; difficulties in production, particularly in scaling up initial production, including difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel or key raw materials, and compliance with strictly enforced federal, state, and foreign regulations; that Vaxart may not be able to obtain, maintain, and enforce necessary patent and other intellectual property protection; that Vaxart's capital resources may be inadequate; Vaxart's ability to resolve pending legal matters; Vaxart's ability to obtain sufficient capital to fund its operations on terms acceptable to Vaxart, if at all; the impact of government healthcare proposals and policies; competitive factors; and other risks described in the "Risk Factors" sections of Vaxart's Quarterly and Annual Reports filed with the SEC. Vaxart does not assume any obligation to update any forward-looking statements, except as required by law.

Contact
Vaxart Media and Investor Relations:
Matt Steinberg
FINN Partners
IR@vaxart.com
(646) 871-8481

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