# VAX-24 Phase 1/2 Adult Proof-of-Concept Data Published in The Lancet Infectious Diseases Highlight Best-in-Class Potential of Vaxcyte's 24-Valent Pneumococcal Conjugate Vaccine (PCV) Candidate

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***-- In the Study, VAX-24 Demonstrated a Safety and Tolerability Profile Similar to Prevnar 20® (PCV20) at all Doses Studied --***

***-- All 24 Serotypes of VAX-24 at Conventional 2.2 mcg PCV Dose Met or Exceeded Regulatory Immunogenicity Standards --***

***-- Results Confirm Potential of Carrier-Sparing, Cell-Free Platform Technology Underlying VAX-24 --***

***-- Topline Data from the VAX-24 Phase 3 Pivotal Non-Inferiority Study in Adults Expected in 2025 --***

SAN CARLOS, Calif., Dec. 04, 2023 (GLOBE NEWSWIRE) -- Vaxcyte, Inc. (Nasdaq: PCVX), a vaccine innovation company engineering high-fidelity vaccines to protect humankind from the consequences of bacterial diseases, today announced the publication of the results from the VAX-24 Phase 1/2 clinical proof-of-concept study in the journal *The Lancet Infectious Diseases*. This study evaluated the safety, tolerability and immunogenicity of Vaxcyte's investigational 24-valent, carrier-sparing pneumococcal conjugate vaccine (PCV) compared to the current standard-of-care, Prevnar 20 ® (PCV20), for the prevention of invasive pneumococcal disease (IPD) in healthy adults 18-64 years of age. The study results showed VAX-24 demonstrated a safety and tolerability profile that was comparable to PCV20 at all doses studied, and an immunogenicity profile that met or exceeded established regulatory immunogenicity standards for all 24 serotypes at the conventional 2.2 mcg dose. The Company plans to advance the VAX-24 2.2 mcg dose into a Phase 3 program.

"The publication of our data in *The Lancet Infectious Diseases,* which is also highlighted in an independent commentary, is a testament to the potential of our cell-free technology to create carrier-sparing conjugate vaccines that provide broader coverage with enhanced immunogenicity compared to the standard-of-care in adults today," said Jim Wassil, Executive Vice President and Chief Operating Officer of Vaxcyte. "Despite the availability of pneumococcal vaccines, the bacteria associated with IPD continues to be a major driver of deaths as a result of antimicrobial resistance. This is among the many reasons why the public health community continues to affirm the need for new vaccines that provide broader coverage against this disease. We believe these proof-of-concept study results underscore the potential of VAX-24 to address this important public health need."

"The results from the proof-of-concept study provided the first look at the safety and immunogenicity profile of VAX-24 in adults, giving us confidence in the 2.2 mcg dose we plan to advance into Phase 3," said Dr. Jakub Simon, Chief Medical Officer of Vaxcyte. "We look forward to initiating our Phase 3 pivotal, non-inferiority study, which is designed to further establish the clinical potential of VAX-24, and announcing topline data, which we expect in 2025."

**About the VAX-24 Phase 1/2 Study Results**

The VAX-24 Phase 1/2 clinical proof-of-concept study was a randomized, observer-blind, dose-finding, controlled study designed to evaluate the safety, tolerability and immunogenicity of VAX-24 in healthy adults 18-64 years of age.

***Safety and Tolerability Findings:***

- Through six months, VAX-24 demonstrated safety and tolerability results similar to PCV20 across all ages and doses studied. Frequently reported local and systemic reactions were generally mild-to-moderate, resolving within several days of vaccination, with no meaningful difference observed across the cohorts. There were no serious adverse events or new onset chronic illnesses reported that were considered to be related to study vaccines.

***Immunogenicity Findings:***

- VAX-24 demonstrated robust opsonophagocytic activity (OPA) and immunoglobulin G (IgG) immune responses for all 24 serotypes at all doses studied (1.1 mcg, 2.2 mcg, 2.2 mcg/4.4 mcg).
- The VAX-24 2.2 mcg dose met or exceeded the established regulatory immunogenicity standards for all 24 serotypes and is the dose the Company plans to advance into a Phase 3 clinical program beginning with the pivotal, non-inferiority study for which the Company expects topline safety, tolerability and immunogenicity data in 2025.
- At the 2.2 mcg dose, VAX-24 met the standard OPA response non-inferiority criteria[(1)] for all 20 serotypes common with PCV20, of which 16 serotypes (3, 4, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15B, 18C, 19A, 19F, 23F and 33F) achieved higher immune responses and four serotypes (9V, 18C, 19F and 33F) reached statistical significance.
- At all three doses, VAX-24 met the standard superiority criteria[(2)] for all four serotypes (2, 9N, 17F and 20B) unique to VAX-24.

**About the Phase 1/2 Clinical Proof-of-Concept Study**
The VAX-24 Phase 1/2 clinical proof-of-concept study was conducted in two stages. The Phase 1 portion of the study evaluated the safety and tolerability of a single injection of VAX-24 at three dose levels, 1.1 mcg, 2.2 mcg and 2.2 mcg/4.4 mcg, and compared to PCV20 in 64 healthy adults 18 to 49 years of age. The Phase 2 portion evaluated the safety, tolerability and immunogenicity of a single injection of VAX-24 at the same three dose levels and compared to a single injection of PCV20 in 771 healthy adults 50 to 64 years of age.

The immunogenicity objectives of the Phase 2 portion of the study included an assessment of the induction of antibody responses, using OPA and IgG, at each of the three VAX-24 doses and compared to PCV20 and, for the additional four serotypes contained in VAX-24 (and Pneumovax® 23), but not in PCV20, the percentage of subjects that experienced a four-fold rise in antibody titers. Participants in the study were evaluated for safety through six months after vaccination.

**About Pneumococcal Disease**
Pneumococcal disease (PD) is an infection caused by *Streptococcus pneumoniae* (pneumococcus) bacteria. It can result in IPD, including meningitis and bacteremia, and non-invasive PD, including pneumonia, otitis media and sinusitis. In the United States, approximately 320,000 people get pneumococcal pneumonia each year, which is estimated to result in approximately 150,000 hospitalizations and 5,000 deaths. Pneumococci also cause over 50% of all cases of bacterial meningitis in the United States. Antibiotics are used to treat PD, but some strains of the bacteria have developed resistance to treatments. The morbidity and mortality due to PD are significant, particularly for young children and older adults, underscoring the need for a more broad-spectrum vaccine.

**About VAX-24**
VAX-24 is an investigational 24-valent PCV candidate designed to prevent IPD, which can be most serious for infants, young children, older adults and those with immune deficiencies or certain chronic health conditions. VAX-24, which is moving into late-stage clinical development, is intended to improve upon the standard-of-care PCVs for both children and adults by covering the serotypes that are responsible for most of the pneumococcal disease currently in circulation. Vaxcyte aims to efficiently create and deliver high-fidelity, broad-spectrum vaccines, such as VAX-24, by using modern synthetic techniques, including advanced chemistry and the XpressCF™ cell-free protein synthesis platform. Vaxcyte is deploying this approach with VAX-24 in order to add more pneumococcal strains without compromising the overall immune response.

In January 2023, Vaxcyte announced that the FDA granted Breakthrough Therapy designation to VAX-24 for the prevention of IPD in adults. The Breakthrough Therapy designation process is designed to expedite the development and review of drugs that are intended to treat a serious or life-threatening condition.

**About Vaxcyte**
Vaxcyte is a vaccine innovation company engineering high-fidelity vaccines to protect humankind from the consequences of bacterial diseases. The Company is developing broad-spectrum conjugate and novel protein vaccines to prevent or treat bacterial infectious diseases. Vaxcyte's lead candidate, VAX-24, is a 24-valent, broad-spectrum, carrier-sparing PCV being developed for the prevention of IPD and is poised to move into Phase 3. VAX-31, the Company's next-generation 31-valent PCV, is the broadest-spectrum PCV candidate in the clinic today.

Vaxcyte is re-engineering the way highly complex vaccines are made through modern synthetic techniques, including advanced chemistry and the XpressCF™ cell-free protein synthesis platform, exclusively licensed from Sutro Biopharma, Inc. Unlike conventional cell-based approaches, the Company's system for producing difficult-to-make proteins and antigens is intended to accelerate its ability to efficiently create and deliver high-fidelity vaccines with enhanced immunological benefits. Vaxcyte's pipeline also includes VAX-A1, a prophylactic vaccine candidate designed to prevent Group A Strep infections; VAX-PG, a therapeutic vaccine candidate designed to slow or stop the progression of periodontal disease; and VAX-GI, a vaccine program designed to prevent Shigella. Vaxcyte is driven to eradicate or treat invasive bacterial infections, which have serious and costly health consequences when left unchecked. For more information, visit www.vaxcyte.com.

**Forward-Looking Statements**
This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements related to the potential benefits of VAX-24, including breadth of coverage and clinical potential, the ability to deliver a potentially best-in-class profile and the improvement upon the standard-of-care; the design, timing and availability of data for the VAX-24 adult Phase 3 non-inferiority study; the potential of Vaxcyte's carrier-sparing, cell-free platform technology; and other statements that are not historical fact. The words "anticipate," "believe," "could," "expect," "intend," "may," "on track," "potential," "should," "would" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) convey uncertainty of future events or outcomes and are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements are based on Vaxcyte's current expectations and actual results and timing of events could differ materially from those anticipated in such forward-looking statements as a result of risks and uncertainties, including, without limitation, risks related to Vaxcyte's product development programs, including development timelines, success and timing of chemistry, manufacturing and controls and related manufacturing activities, potential delays or inability to obtain and maintain required regulatory approvals for its vaccine candidates, and the risks and uncertainties inherent with preclinical and clinical development processes; the success, cost and timing of all development activities and clinical trials; and sufficiency of cash and other funding to support Vaxcyte's development programs and other operating expenses. These and other risks are described more fully in Vaxcyte's filings with the Securities and Exchange Commission (SEC), including, without limitation, its Quarterly Report on Form 10-Q filed with the SEC on November 6, 2023 or in other documents Vaxcyte subsequently files with or furnishes to the SEC. All forward-looking statements contained in this press release speak only as of the date on which they were made and are based on management's assumptions and estimates as of such date, and readers should not rely upon the information in this press release as current or accurate after its publication date. Vaxcyte undertakes no duty or obligation to update any forward-looking statements contained in this release as a result of new information, future events or changes in its expectations. Readers should not rely upon the information in this press release as current or accurate after its publication date.

(1) Lower bound of the 2-sided 95% confidence interval of the OPA geometric mean titer ratio is greater than 0.5.

(2) Lower bound of the 2-sided 95% confidence interval of the difference in the proportions of participants with a ≥4-fold increase from Day 1 to Day 29 is greater than 10%, and lower bound of the 2-sided 95% confidence interval of the OPA geometric mean titer ratio is greater than 2.0.

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