Icosavax Announces Positive Topline Interim Phase 1 Results for Bivalent VLP Vaccine Candidate IVX-A12 Against RSV and hMPV in Older Adults

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– IVX-A12 induced robust immune responses at Day 28 to both RSV and hMPV in older adults –

– IVX-A12 was generally well tolerated with no vaccine-related SAEs –

– First demonstration of hMPV vaccine immunogenicity in an older adult population –

– No evidence of immune interference; initial indication of combinability achievable with company's VLP technology –

– Next steps: Icosavax plans to initiate a Phase 2 immunogenicity trial for IVX-A12 in mid-2023, to be followed by an hMPV human challenge study as proof-of-concept efficacy study –

– Concurrent $67.8 million registered direct offering; extends cash runway into 2H 2025 –

– Company to host conference call/webcast today at 6:00 p.m. ET / 3:00 p.m. PT –

SEATTLE, May 22, 2023 (GLOBE NEWSWIRE) -- Icosavax, Inc. (Nasdaq: ICVX), a biopharmaceutical company leveraging its innovative virus-like particle (VLP) platform technology to develop vaccines against infectious diseases, with an initial focus on life-threatening respiratory diseases and a vision of creating pan-respiratory vaccines for older adults, today announced positive topline interim results from its Phase 1 clinical trial of IVX-A12 against respiratory syncytial virus (RSV) and human metapneumovirus (hMPV) in older adults. IVX-A12 is comprised of IVX-121, Icosavax's RSV prefusion F protein VLP vaccine candidate, and IVX-241, Icosavax's hMPV prefusion F protein VLP vaccine candidate.

"IVX-A12 is a potential first-in-class combination vaccine candidate designed to address an unmet medical need in older adults, and we believe these interim data for hMPV in an older adult population also break new ground in the field. As has been seen previously with prefusion F antigen approaches for RSV, we expect that a combination vaccine displaying prefusion F antigens for both hMPV and RSV, on our VLP technology, may translate into significant protection against two leading causes of pneumonia. We plan to expeditiously proceed towards a Phase 2 trial for IVX-A12 in mid-2023 in older adults as we pursue our goal of developing a broader viral respiratory vaccine," said Adam Simpson, Chief Executive Officer of Icosavax.

IVX-A12 Phase 1 Trial Design

The ongoing Phase 1 clinical trial of IVX-A12 is a randomized, observer-blinded, placebo-controlled, multi-center study designed to evaluate the safety and immunogenicity of varying dosage levels and ratios of RSV and hMPV VLPs in IVX-A12, with and without CSL Seqirus' proprietary adjuvant MF59®.

The trial enrolled 140 healthy older adults aged 60 to 75 years, of which 123 subjects were evaluable for immunogenicity. Subjects were administered a single dose of IVX-A12, at one of three combination dosage levels below, or placebo:

- 150 µg total VLP content (75 µg of IVX-121 (RSV) and 75 µg of IVX-241 (hMPV)), with or without MF59®
- 225 µg total VLP content (75 µg of IVX-121 and 150 µg of IVX-241), with or without MF59®
- 300 µg total VLP content (75 µg of IVX-121 and 225 µg of IVX-241), without MF59®

The objective of the Phase 1 study of IVX-A12 is to evaluate safety and immunogenicity against both RSV and hMPV, as well as to assess the potential for immunologic interference, with subjects followed through 12 months after vaccination.

Topline Interim Results

Safety:

In this Phase 1 trial, IVX-A12 was generally well-tolerated across all dosage groups as of Day 28.

- Solicited local and systemic adverse events (AEs) were generally mild or moderate, without dose-limiting reactogenicity.
  - Across the five dosage groups for IVX-A12 with or without adjuvant, the proportion of subjects experiencing any systemic AE within seven days was 25-41%, and similar to 35% for placebo.
- The most common local and systemic AEs were injection site tenderness, headache and myalgia.
- There were no vaccine related serious adverse events (SAEs), clinical events of special interest, or AEs leading to discontinuation.

Immunogenicity:

In this Phase 1 trial, IVX-A12 induced robust immune responses against both RSV and hMPV at Day 28 in older adults across dosage levels and with and without adjuvant.

- There was no evidence of immune interference between RSV and hMPV VLPs when administered in combination.
- Across dosage groups, IVX-A12 induced geometric mean titers (GMTs) in RSV-A neutralizing antibody titers (nAbs) of up to approximately 16,100 IU/mL compared to approximately 2,600 IU/mL for placebo at Day 28. IVX-A12 induced GMTs in RSV-B nAbs of up to approximately 8,300 IU/mL compared to approximately 2,500 IU/mL for placebo at Day 28.
- There were higher Day 28 post-vaccination levels of RSV A and RSV B nAbs (IU/ml) observed in this IVX-A12 study than seen in the previous Phase 1 clinical study of IVX-121 (RSV) alone.
- Across dosage groups, IVX-A12 induced GMTs in hMPV-A nAbs of up to approximately 3,300 assay units/mL compared to approximately 900 assay units/mL for placebo at Day 28. IVX-A12 induced GMTs in hMPV-B nAbs of up to approximately 23,900 assay units/mL compared to approximately 11,500 assay units/mL for placebo at Day 28. No standardized international units exist in the field for hMPV.
- High baseline nAbs to RSV-A and RSV-B were observed, likely reflecting an off-cycle RSV season following the COVID-19 pandemic.
    - Geometric mean fold rise (GMFR) at Day 28 was up to 4-fold in RSV-A and 3-fold in RSV-B across all treatment groups. In a pre-specified sub-analysis of data from subjects with the lowest tertile baseline nAbs titers, the corresponding GMFRs for RSV-A and RSV-B were up to 11-fold and 7-fold, respectively.
- GMFR at Day 28 was up to 5-fold in hMPV-A and 4-fold in hMPV-B. In a pre-specified sub-analysis of data from subjects with the lowest tertile baseline nABs titers, the corresponding GMFRs for hMPV-A and hMPV-B were up to 9-fold and 8-fold, respectively.

“The topline interim data from our Phase 1 trial show that IVX-A12 was generally well tolerated and elicited a robust response against both RSV and hMPV in older adults, with no evidence of immune interference. This is an important result as IVX-A12 is the only vaccine candidate in clinical development targeting both RSV and hMPV in older adults, a vulnerable population with a heightened risk of severe disease,” said Niranjan Kanesa-thasan, M.D., Chief Medical Officer of Icosavax.

Next Steps

Based on these results, Icosavax now plans to initiate a Phase 2 trial for IVX-A12 in RSV and hMPV in mid-2023. The company plans to evaluate two formulations of IVX-A12 in this next clinical trial.

Pending results from the planned Phase 2 trial, Icosavax intends to conduct an IVX-A12 hMPV human challenge clinical trial, which Icosavax considers the most relevant proof-of-concept model for evaluating disease prevention for its bivalent vaccine candidate incorporating stabilized prefusion F proteins for each of RSV and hMPV. This hMPV human challenge model is currently in development and builds on an established precedent in the RSV field.

The IVX-121 (RSV) component of IVX-A12 (RSV/hMPV) previously demonstrated positive immunogenicity and tolerability results in a Phase 1/1b study, and a subset of these Phase 1b older adult subjects continue to be followed. In December 2022, Icosavax reported positive durability data at the six-month timepoint, with twelve-month immunogenicity data expected in mid-2023.

Registered Direct Offering

As separately announced, Icosavax has priced a $67.8 million registered direct offering with select healthcare investors. The company now expects its cash balance to be sufficient to fund operations into 2H 2025.

Conference Call and Webcast

Icosavax will host a corresponding conference call and live webcast at 6:00 p.m. ET / 3:00 p.m. PT on May 22, 2023 to discuss the topline interim Phase 1 results for IVX-A12. Individuals interested in listening to the live conference call may do so by using the webcast link in the “Investors” section of the company’s website at www.icosavax.com. A webcast replay will be available in the investor relations section on the company’s website for 30 days following the completion of the call.

About Icosavax

Icosavax is a biopharmaceutical company leveraging its innovative VLP platform technology to develop vaccines against infectious diseases, with an initial focus on life-threatening respiratory diseases and a vision for combination and pan-respiratory vaccines. Icosavax’s VLP platform technology is designed to enable multivalent, particle-based display of complex viral antigens, which it believes will induce broad, robust, and durable protection against the specific viruses targeted. Icosavax’s lead program is a combination vaccine candidate targeting respiratory syncytial virus (RSV) and human metapneumovirus (hMPV), and its pipeline includes additional programs in influenza and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Icosavax was formed in 2017 to advance the breakthrough VLP technology from the Institute for Protein Design at the University of Washington with the goal to discover, develop, and commercialize vaccines against infectious diseases. Icosavax is located in Seattle.

For more information, visit www.icosavax.com.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are forward-looking statements. The forward-looking statements are based on the company's current beliefs and expectations and include, but are not limited to: the company's expectation regarding the opportunities for, and the prophylactic and commercial potential of, its vaccine candidates and technology platform; the company's planned development activities, including clinical trials and data readouts, and the timing thereof; and the sufficiency of the company's current cash, cash equivalents, and investments to fund operations into 2H 2025. Actual results may differ from those set forth in this press release due to the risks and uncertainties inherent in the company's business, including, without limitation: the early stage of the company's development efforts; the risk that results of a clinical trial at a particular time point may not predict final results and that an outcome may materially change as follow-up of subjects continues and following more comprehensive reviews of the data; the company's approach to the development of vaccine candidates, including its development of a combination bivalent RSV/hMPV VLP vaccine candidate, which is a novel and unproven approach; potential delays in the development process including without limitation in the commencement, enrollment, conduct of, and receipt of data from, clinical trials; difficulties in developing an hMPV challenge model and the risk that the planned challenge study may produce negative or inconclusive results based on such model or otherwise; unexpected adverse side effects or inadequate immunogenicity or efficacy of the company's vaccine candidates that may limit their development, regulatory approval, and/or commercialization; the company's dependence on third parties in connection with manufacturing, research, and clinical testing; the risk that recent and expected regulatory approval of third party RSV vaccines may make conducting clinical trials more difficult and costly and otherwise adversely affect the company's ability to successfully develop, obtain regulatory approval of and commercialize its vaccine candidates; the potential for challenges encountered in the manufacturing and scale up process, including without limitation challenges that reduce drug product stability or potency; competing approaches limiting the commercial value of the company's vaccine candidates; regulatory developments in the United States and other countries; the risk that the company may use its capital resources sooner than it expects; and other risks described in the company's prior filings with the Securities and Exchange Commission (SEC), including under the heading "Risk Factors" in the company's quarterly report on Form 10-Q for the quarter ended March 31, 2023 and any subsequent filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and the company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement, which is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

Icosavax's Contacts

Media Contact:
Jessica Yingling, Ph.D.,
Little Dog Communications Inc.
jessica@litldog.com
858.344.8091

Investor Contact:
Laurence Watts
Gilmartin Group, LLC
laurence@gilmartinir.com
619.916.7620