

# Agenus Commences Phase 1 Trial with Neoantigen Cancer Vaccine AutoSynVax™

**Two posters presented at AACR show evidence of ASV™ synergizing with checkpoint blockade**

LEXINGTON, Mass., April 5, 2017 /PRNewswire/ -- Agenus Inc. (NASDAQ: AGEN), an immunology company with a clinical stage pipeline of immune checkpoint antibodies and cancer vaccines, today announced that the first patient has been dosed in a Phase 1 clinical trial of AutoSynVax™ (ASV™), Agenus' neoantigen vaccine. Preclinical data presented at the American Association for Cancer Research (AACR) 2017 Annual Meeting show ASV to be active and synergistic with checkpoint blockade.

The open-label trial will test the ASV vaccine in combination with QS-21 Stimulon® adjuvant in patients with advanced cancer. The trial is intended to pave the way for further evaluation of combinations of ASV with Agenus' checkpoint antibodies targeting CTLA-4 and PD-1.



"AutoSynVax is one of three vaccine platforms proprietary to Agenus that have the potential to expand cancer patient populations that benefit from immunotherapy," said Dr. John Castle, Ph.D., Senior Director Computational Biology and Genomics at Agenus. "Our innovative algorithms, clinically validated HSP-based antigenic peptide delivery system, QS-21 Stimulon, and a portfolio of checkpoint antibodies place us in a uniquely advantageous position to potentially treat patients with advanced malignancies." Dr. Castle is the lead author of pioneering research<sup>1</sup> that demonstrated feasibility of identifying neoantigen immunogens that evoke anti-tumor immunity.

This week at AACR Agenus scientists presented evidence that ASV mediates tumor control and lasting immune memory in murine models of cancer. Additional data indicated that ASV cooperates with a surrogate CTLA-4 targeted antibody to bolster anti-tumor immunity in a mouse model of melanoma.

ASV is a personalized cancer vaccine platform that involves identification of tumor neoantigens unique to each patient using genomic sequencing. Each tumor mutational signature is interrogated using advanced bioinformatics algorithms derived from mass spectrometry profiling and structural biology modeling to catalogue and rank the tumor antigens that arise from these mutations. Neoantigens computationally predicted to be most immunogenic are incorporated into the so-called vaccine 'blueprint', synthesized, complexed with heat shock proteins (HSPs) and administered in conjunction with QS-21 Stimulon, Agenus' proprietary adjuvant. The HSP-peptide complexes accompanied by QS-21 Stimulon are designed to be efficient activators of T cells specific to the tumor neoepitopes and can elicit tumor control. Their activity is expected to be further enhanced by combinations with checkpoint modulators, such as our clinical-stage CTLA-4 (AGEN1884) and PD-1 (AGEN2034) antagonists, as confirmed by the preclinical data presented at AACR. The ASV platform could be applicable to a broad range of tumors.

Additional information about the trial can be found [here](#).

1. Castle JC, Kreiter S, Diekmann J, Löwer M, van de Roemer N, de Graaf J, Selmi A, Diken M,

Boegel S, Paret C, Koslowski M, Kuhn AN, Britten CM, Huber C, Türeci O, Sahin U. Exploiting the mutanome for tumor vaccination. *Cancer Res.* 2012; 72(5): 1081-91.

## About Agenus

Agenus is a clinical-stage immuno-oncology company focused on the discovery and development of therapies that engage the body's immune system to fight cancer. The Company's vision is to expand the patient populations benefiting from cancer immunotherapy by pursuing a number of combination approaches that leverage a broad repertoire of antibody therapeutics and proprietary cancer vaccine platforms. The Company is equipped with a suite of antibody discovery platforms and a state-of-the-art GMP manufacturing facility with the capacity to support early phase clinical programs. Agenus is based in Lexington, MA. For more information, please visit [www.agenusbio.com](http://www.agenusbio.com); information that may be important to investors will be routinely posted on our website.

## Forward Looking Statements


This press release contains forward-looking statements that are made pursuant to the safe harbor provisions of the federal securities laws, including statements regarding the Company's cancer vaccine product candidates and clinical trial plans. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially. These risks and uncertainties include, among others, the factors described under the Risk Factors section of our most recent Quarterly Report on Form 10-Q or Annual Report on Form 10-K filed with the Securities and Exchange Commission. Agenus cautions investors not to place considerable reliance on the forward-looking statements contained in this release. These statements speak only as of the date of this press release, and Agenus undertakes no obligation to update or revise the statements, other than to the extent required by law. All forward-looking statements are expressly qualified in their entirety by this cautionary statement.

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