



Achilles Therapeutics Announces Publication of Nature Cancer ‘Comment’ on Strategy for Improved Neoantigen Immunogenicity Prediction

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Newly developed computational tools and large datasets with low bias will lead to robust neoantigen prediction and improved personalized cancer therapies

LONDON, Dec. 18, 2023 (GLOBE NEWSWIRE) -- Achilles Therapeutics plc (NASDAQ: ACHL), a clinical-stage biopharmaceutical company developing AI-powered precision T cell therapies targeting clonal neoantigens to treat solid tumors, today announced publication of a ‘Comment’ in *Nature Cancer* that outlines the vast potential of neoantigen immunogenicity prediction, discusses current limitations in the field that limit performance, and proposes a path forward.

The article, entitled [Breaking the performance ceiling for neoantigen immunogenicity prediction](#), makes the case that the efficient and accurate selection of immunogenic neoantigens is a critical determinant in neoantigen-based personalized tumor therapies. Selecting which neoantigens to use in drug development based on their immunogenicity is crucial for efficacy of personalized treatments as only a few neoantigens will be clinically relevant.

The authors of the ‘Comment’ are all researchers affiliated with [the DECOD-Ag consortium](#) of which Achilles Therapeutics is a member. They note recent improvements in computational immunogenicity-prediction models and suggest that the performance of currently available artificial intelligence (AI) methods for immunogenicity ranking will be surpassed by robust prediction algorithms built from larger datasets with lower bias.

Achilles has built a world-leading, AI-powered PELEUS™ bioinformatics platform to identify clonal neoantigens from each patient’s unique tumor profile. The proprietary PELEUS™ platform was developed and validated with sequence data from the landmark TRACERx study led by Achilles co-founder Professor Charles Swanton of the Crick Institute. Achilles has exclusive commercial rights to the TRACERx study, which has generated one of the largest data sets ever collected to analyze tumor evolution.

Earlier this year, the Company announced analysis results showing that the new AI application of its PELEUS bioinformatics platform, trained with proprietary real-world data, outperformed current AI and non-AI state-of-the-art methods for neoantigen immunogenicity prediction, enabling the identification of the most potent clonal neoantigens for personalized cancer therapies.

Co-author Dr Sergio Quezada, Chief Scientific Officer of Achilles, commented: *“Accurate prediction of neoantigen immunogenicity can be pivotal in determining the efficacy of immunological treatments. It is therefore essential that we collaborate to refine our prediction models and improve the precision of our T cell therapies.”*

About Achilles Therapeutics

Achilles is a clinical-stage biopharmaceutical company developing AI-Powered precision T cell therapies targeting clonal neoantigens: protein markers unique to the individual that are expressed on the surface of every cancer cell. The Company has two ongoing Phase I/IIa trials, the CHIRON trial in patients with advanced non-small cell lung cancer (NSCLC) and the THETIS trial in patients with recurrent or metastatic melanoma. Achilles uses DNA sequencing data from each patient, together with its proprietary PELEUS™ bioinformatics platform, to identify clonal neoantigens specific to that patient, and then develop precision T cell-based product candidates specifically targeting those clonal neoantigens.

Forward-Looking Statements

This press release contains express or implied forward-looking statements that are based on our management’s belief and assumptions and on information currently available to our management. Forward-looking statements in this press release include, but are not limited to, statements regarding the timing of the Company’s clinical and translational data updates and the Company’s beliefs about recent data updates, and expectations related to the Company’s operating expenses and capital expense requirements. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. The forward-looking statements in this press release represent our views as of the date of this press release. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this press release.

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