# New data show HOOKIPA's arenaviral immunotherapies induce potent T cell responses in novel combinations and against tumor self-antigens

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- Preclinical data on combination with co-stimulatory 4-1BB agonists or adoptive T cell transfer showed potent T cell responses and significant tumor control
- Preclinical data also expand evidence on arenaviral immunotherapy targeting tumor self-antigens, reinforcing scientific approach for HB-300 program in prostate cancer
- Poster presentations at AACR underscore the versatility of HOOKIPA's novel arenaviral platform technology to address unmet needs across cancer types

NEW YORK and VIENNA, Austria, April 13, 2022 (GLOBE NEWSWIRE) -- HOOKIPA Pharma Inc. (NASDAQ: HOOK, 'HOOKIPA'), a company developing a new class of immunotherapeutics based on its proprietary arenavirus platform, today announced positive preclinical data demonstrating potent T cell responses, potential novel combination use beyond PD-1 inhibitors, and the ability to break immune tolerance to various self-antigens for targeting cancers. The results highlight the potential of HOOKIPA's novel arenaviral platform in difficult-to-treat cancers and as a backbone of potential combination therapies requiring robust T cell responses for cancer patients. The data were shared as poster presentations at the 2022 American Association for Cancer Research Annual Meeting (AACR).

"Our HB-200 clinical program biomarker data have confirmed our preclinical findings in head and neck cancers, so we're encouraged by the preclinical findings presented at AACR as further evidence of the potential of our novel arenaviral platform in various cancers, either alone or together with other modalities, including as a potential backbone for combination therapy," said Joern Aldag, Chief Executive Officer at HOOKIPA. "Specifically, the ability of our technology to target tumor self-antigens and induce a potent T cell response that leads to tumor regression is important as we prepare to file an IND for our HB-300 program in prostate cancer in the third quarter. In addition, the combination data with 4-1BB or adoptive T cell transfer highlight several new strategies for our platform to amplify T cell responses and address unmet needs in cancer."

All of the AACR abstract poster presentations are accessible in the Investor section of the HOOKIPA website under "Events."

*Potential of arenaviral immunotherapy in combination with other modalities*
Preclinical data presented at AACR (abstract #4198) show that the combination of co-stimulatory 4-1BB agonists with arenaviral immunotherapy increased tumor control and resulted in a higher cure rate than arenaviral immunotherapy alone. Co-stimulatory agents, like 4-1BB agonists, are known as accelerators of cancer immunotherapy, because they help induce potent, tumor-specific T-cells that can infiltrate and kill tumors. The combination of an arenaviral immunotherapy with a 4-1BB agonistic antibody resulted in complete tumor rejection in 30 percent of mice following treatment. Importantly, improved tumor control and cure rates of up to 50 percent were also observed with a 4-1BB ligand which was integrated into the arenaviral vector.

A separate preclinical analysis presented at AACR (abstract #3298) offered additional evidence of potential combination with other modalities. In this analysis, replicating arenaviral immunotherapy was sequentially combined with adoptively transferred TCR transgenic T cells, which resulted in tumor cures in all mice receiving combination therapy, with 100 percent survival at the end of the experiment (60 days after administration).

These data highlight the potential of arenaviral immunotherapies in combination with other treatment modalities beyond PD-1 inhibitors, as well as showcase the versatility of the platform as a potential backbone for various combination immunotherapies.

*Arenaviral immunotherapy activates against self-antigens*
Additional preclinical data (abstract #3298 and abstract #4198) showed antitumor activity with a single administration of replicating arenaviral immunotherapy targeting tumor self-antigens. Specifically, the arenaviral immunotherapy was able to overcome immune tolerance, induce potent T cell responses against two different tumor self-antigens and reduce tumor growth in these cancers. Notably, targeting tumor self-antigens can be a challenge because the immune system does not recognize these molecules as foreign.

These preclinical data provide further support for the clinical entry of HOOKIPA's HB-300 candidate for treatment of prostate cancer. The AACR data demonstrate the ability of HOOKIPA's arenaviral immunotherapeutic technology to induce potent T-cell responses against tissue-specific self-antigens, which is the same type of tumor self-antigens targeted by HB-300. The company intends to submit an Investigational New Drug (IND) application in the third quarter of 2022.

HOOKIPA's Phase 1/2 study (NCT04180215) of HB-200 for patients with Human Papillomavirus 16-positive (HPV16+) squamous cell head and neck cancers (HNSCC) is ongoing. Biomarker data from this study (abstract #3284) showed an unprecedented induction of tumor antigen specific CD8+ T cell responses of up to 40 percent of total CD8+ T cells. As dosing of HB-200 continued, more T cells became polyfunctional (able to produce multiple cytokines), which indicates the T cells are high quality and not exhausted. A clinical update on Phase 1 HB-200 monotherapy data is anticipated mid-year; preliminary data on HB-200 in combination with pembrolizumab as 1st-line and 2nd-line treatment for HNSCC is anticipated in the second half of 2022.

**About HOOKIPA**
HOOKIPA Pharma Inc. (NASDAQ: HOOK) is a clinical-stage biopharmaceutical company focused on developing novel immunotherapies, based on its

proprietary arenavirus platform, that are designed to mobilize and amplify targeted T cells and thereby fight or prevent serious disease. HOOKIPA's replicating and non-replicating technologies are engineered to induce robust and durable antigen-specific CD8+ T cell responses and pathogen-neutralizing antibodies. HOOKIPA's pipeline includes wholly-owned investigational arenaviral immunotherapeutics targeting HPV16+ cancers, prostate cancer, KRAS-mutated cancers (including colorectal, pancreatic and lung), and other undisclosed programs. In addition, HOOKIPA aims to develop functional cures of HBV and HIV in collaboration with Gilead.

Find out more about HOOKIPA online at www.hookipapharma.com.

**Forward Looking Statements**
This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding the completion of the proposed offering and the use of proceeds from the proposed offering. The use of words such as "may," "might," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "project," "intend," "future," "potential," or "continue," and other similar expressions are intended to identify such forward-looking statements. All such forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, without limitation, uncertainties related to market conditions and the completion of the Offering on favorable terms or at all and those risks more fully discussed in the section entitled "Risk Factors" in HOOKIPA's annual report on Form 10-K for the fiscal year ended December 31, 2021, as well as discussions of potential risks, uncertainties, and other important factors in HOOKIPA's subsequent filings with the Securities and Exchange Commission, including in connection with the Offering. Any forward-looking statements represent HOOKIPA's views only as of today and should not be relied upon as representing its views as of any subsequent date. All information in this press release is as of the date of the release, and HOOKIPA undertakes no duty to update this information unless required by law.

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