HOOKIPA to present new preclinical, translational, and clinical biomarker data at AACR further supporting the potential of arenaviral platform in oncology

- Four poster presentations expand evidence on potent T cell responses, ability to break tolerance and potential combination use beyond PD-1 inhibitors

- Preclinical data suggest synergy of arenaviral immunotherapy with 4-1BB agonists or cell therapy, resulting in better tumor control and more responders

- Data highlight the broad potential of HOOKIPA's novel arenaviral platform technology in different cancer types and treatment combinations

New York, US and Vienna, Austria, March 8, 2022 - HOOKIPA Pharma Inc. (NASDAQ: HOOK, 'HOOKIPA'), a company developing a new class of immunotherapeutics based on its proprietary arenavirus platform, today announced that preclinical, translational, and clinical biomarker data from its oncology pipeline have been selected for four poster presentations at the 2022 American Association for Cancer Research Annual Meeting (AACR), taking place April 8-13.

"We're thrilled to have four poster presentations accepted at AACR as they provide further evidence of the broad potential of our arenaviral platform to address unmet needs in various types of cancer, either alone or in combination with other modalities," said Joern Aldag, Chief Executive Officer at HOOKIPA. "New translational data from our ongoing Phase 1/2 trial in head and neck cancers continue to show strong T cell responses, and new preclinical data further support our early-stage prostate cancer program, as well as highlight new potential combination approaches."

The AACR posters provide a broad preclinical, translational, and clinical biomarker dataset highlighting the versatility and therapeutic utility of replicating arenavirus vectors to activate and augment tumor-specific CD8+ T cell responses for tumor killing. Specifically, the data support the potential of arenaviral vectors to target self and non-self tumor antigens and be used as monotherapy or in combination with other modalities. The abstracts are available on the AACR website.

- *Abstract # 2048: In vitro and in vivo characterization of non-oncolytic engineered arenavirus for cancer immunotherapy*
  This detailed preclinical and translational characterization of arenavirus vectors based on Lymphocytic choriomeningitis virus and Pichinde virus shows anti-tumor effects in preclinical models, as well as infection and activation of human professional antigen-presenting cells key for eliciting a robust tumor specific CD8+ T cell response.
  - In person poster presentation
  - Monday, April 11, 1:30pm – 5:00pm CT
  - Presenter: Henning Lauterbach, HOOKIPA

- *Abstract # 3284: HB-201 and HB-202, an arenavirus-based immunotherapy, induces tumor T cell infiltration in patients with HNSCC and other HPV16+ tumors*
  These data demonstrate that HB-201 and HB-202/HB-201 rapidly induce

unprecedented levels of systemic, tumor-specific CD8+ T cells in patients with Human Papilloma Virus 16-positive (HPV16+) head and neck squamous cell carcinoma (HNSCC) after one dose. In addition, the data show a sustained polyfunctional profile of these cells during treatment, infiltration of CD8+ T cells into tumors and decrease of HPV16+ DNA in tumor tissue, in line with the proposed mode of action of the therapy.
    - In person poster presentation
    - Tuesday, April 12, 1:30pm – 5:00pm CT
    - Presenter: Donna Edwards, HOOKIPA

- Abstract # 3298: *Propagation competence of a self-antigen-targeting arenavirus vector-based cancer therapy determines antitumor efficacy in mouse melanoma*
  These data highlight the crucial role of replication competence of arenavirus-based vectors for: overcoming immune tolerance; robust induction of CD8+ T cell responses against tumor self-antigens; and activation and amplification of adoptively transferred TCR transgenic CD8+ T cells in a combination therapy which proved able to induce complete tumor remission in mice.
    - In person poster presentation
    - Tuesday, April 12, 1:30pm – 5:00pm CT
    - Presenter: Klaus Orlinger, HOOKIPA

- *Abstract # 4198: Evaluation of a cancer immunotherapy with engineered arenavirus vectors and 4-1BB agonists in a preclinical tumor model*
  The data demonstrate one strategy to unlock the potential of arenavirus vector-induced CD8+ T cell responses for tumor killing in a combination therapy with 4-1BB agonists.
    - In person poster presentation
    - Wednesday, April 13, 9:00am – 12:30pm CT
    - Presenter: Judith Strauss, HOOKIPA

About HB-202/HB-201
HB-201 and HB-202 are HOOKIPA's lead oncology candidates engineered with the company's proprietary replicating arenaviral vector platform. Each single-vector compound uses a different arenavirus backbone (Lymphocytic Choriomeningitis Virus for HB-201 and Pichinde Virus for HB-202), while expressing the same antigen, an E7E6 fusion protein derived from HPV16. In pre-clinical studies, alternating administration of HB-201 and HB-202 resulted in a ten-fold increase in immune response and better disease control than either compound alone.

About the HB-200 trial (NCT04180215)
This Phase 1/2 clinical trial is an open-label trial exploring different dose levels and dosing schedules in individuals with treatment-refractory HPV16+ head and neck cancers who progressed on standard of care, including check point inhibitors. The trial is evaluating HB-201 as a monotherapy, as an alternating 2-vector therapy with HB-202, and in combination with a PD-1 inhibitor. The primary endpoint of Phase 1 is a recommended Phase 2 dose. Secondary endpoints include safety and tolerability, as well as preliminary efficacy defined by RECIST 1.1. The study also includes exploratory objectives on immunogenicity and pharmacodynamic biomarkers.

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, 2020, 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.

For further information, please contact:

Media
Instinctif Partners
hookipa@instinctif.com
+44 (0)20 7457 2020

Investors
Matt Beck
Executive Director – Investor Relations
matthew.beck@hookipapharma.com