## What is a Clinical Trial?

A clinical trial, also called a clinical research study, tests an investigational medicine or treatment in a population of volunteers. All new drug products go through the clinical study process, so participants play a very important role in advancing medicine for present and future generations.

## **About the pheNIX Clinical Trial**

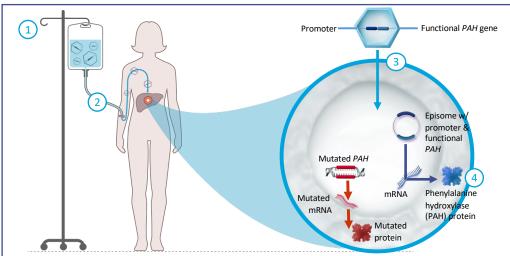
Homology Medicines is conducting a clinical trial, which is currently recruiting patients, to evaluate the safety and effectiveness of its one-time gene therapy HMI-102 in adults with phenylketonuria (PKU) due to phenylalanine hydroxylase (PAH) deficiency.

What is PKU? PKU is a rare, inherited inborn error of metabolism caused by mutations in the *PAH* gene responsible for breaking down phenylalanine (Phe) as it enters the body through diet. The current standard of care is a highly restrictive diet, but it is not always effective, and there are currently no treatments available that address the genetic defect in PKU. If left untreated, PKU can result in progressive and severe neurological impairment. PKU affects approximately 16,500 people in the U.S., and an estimated 300 newborns are diagnosed each year.

What is HMI-102? HMI-102 is designed to deliver functional copies of the phenylalanine hydroxylase (*PAH*) gene to the liver cells, where there is a missing or mutated PAH gene. This *in vivo* (in the body) gene therapy approach is intended to enable the production of the PAH enzyme responsible for metabolizing phenylalanine (Phe). People with PKU are not able to metabolize Phe properly resulting in significantly elevated levels of Phe, and if left untreated, can lead to severe neurological impairment.

Step 1: A patient could receive a one-time intravenous (I.V.) administration of HMI-102.

Step 2: HMI-102 is designed to target the cells in the liver, where *PAH* activity is required to metabolize Phe normally.



This approach is under investigation as a potential treatment for adult patients with PKU.

Step 3: HMI-102 is designed to enter the liver cell, where it would deliver the functional gene and promoter.

Step 4: The functional PAH gene contains the instructions necessary to create functional PAH protein that metabolizes dietary Phe, potentially restoring the normal biochemical pathway.

## What is the pheNIX Clinical Trial?

The Phase 1/2 pheNIX trial includes two parts: a completed Phase 1 dose-escalation portion that focused on selecting the optimal dose for the second phase, which is called a dose expansion phase. The pheNIX trial is designed to evaluate the safety and efficacy of HMI-102 in adults with Classic PKU, and multiple centers across the U.S. are participating in the trial.

## What Does Participation in the pheNIX Trial Involve?

Participating in the pheNIX Clinical Trial Would Involve: **Screening Period:** The trial will include a screening to ensure participants meet the eligibility criteria to enroll in the study.

**Study Period:** Following a single I.V. administration of HMI-102, participants will be observed periodically for 52 weeks.

**Follow-Up Period:** Participants will be seen less frequently for another four years.



