The following is a list of companies working on potential new and curative therapies for PKU. All of these efforts are in the early stages. While 90% of drug development efforts fail during the early phases of clinical trial development, the National PKU Alliance (NPKUA) is hopeful our community will have new options to treat and even cure their PKU in the near future.

**BioMarin** has two FDA approved medications on the US market. Kuvan, a co-factor therapy, was approved in 2008. In 2018, the enzyme substitution therapy Palynziq was approved for use in adults (18 and up) with PKU. Just recently, the European Medicines Agency also approved Palynziq in patients 16 years of age and up. BioMarin has also announced during investor calls that they are pursuing a gene therapy development program for PKU. The NPKUA anticipates assisting the company with clinical trial design and recruitment.

**Homology Medicines** recently announced that they have received FDA clearance and accelerated approval to begin a Phase 1/2 trial for single dose administration of a PKU gene therapy. The trial will include adults between the ages of 18 and 55 with PKU. Homology expects initial data by the end of 2019. The NPKUA anticipates assisting the company with clinical trial enrollment.

**Nestle Health Science/Codexis** are conducting Phase 1b trials in Australia of a therapeutic enzyme, given orally, to replace the PAH enzyme in the GI tract to treat PKU. Nestle Health Science recently exercised its option for exclusive rights to develop and commercialize this potential new therapy. The NPKUA anticipates future trials may also happen in the United States.

**Rubius Therapeutics** announced recently that they received FDA clearance on a red blood cell therapy to treat adults with PKU. The Phase 1b trial will be the first-ever clinical investigation of genetically engineered red blood cells to treat PKU. The NPKUA anticipates assisting the company with education and clinical trial enrollment.

**Synlogic** is currently conducting a Phase 1/2a clinical trial with a synthetic biotic medicine for treating PKU. This therapy uses bacteria that are engineered to consume phenylalanine in the intestine. In this first phase, Synlogic is looking at a series of increasing doses of this new medicine to determine which dose is best tolerated in both PKU and non-PKU volunteers. The NPKUA anticipates assisting the company with Phase 2 trials.

If you are interested in learning more about drug development efforts for PKU, please visit npkua.org and sign up for our newsletter.

Interested in participating in research or clinical trials? Patients can enroll in the PKU Patient Registry to be notified in advance about opportunities for participation in clinical trials. The registry helps researchers develop and provide better treatments and improve the quality of life for those living with PKU. Enroll today at http://pku.iamrare.org.