Pharmaceutical companies relying on genetic data to develop new drugs

To find out what exactly can go wrong when genes get out of whack, the U.S. government got the ball rolling a decade ago with the Human Genome Project. More recently, President Obama requested $215 million to launch a research initiative focused on using genetic insights to create customized medicines.

A handful of gene-based medicines have already earned FDA approval, including Herceptin for breast cancer and Zelboraf for skin cancer. But despite all the excitement, relatively few new genetic treatments have made it to the market.

The reason for the lag is that even though most major pharmaceutical companies have begun using genetic information to identify and evaluate potential new drugs, the process is still messy and companies have been hesitant to pair genetic insights with the tried-and-true habits of evaluation on which they have leaned for decades.

Pharmaceutical companies eager to leverage genetics can do so in one of two ways. The first is to hire teams of researchers to mine case studies and the publicly available genomic data for clues that hint at a potential new treatment.

Some geneticists suggest another approach — examining drugs that are already in a pharmaceutical company's pipeline for genomic links. Today, when researchers examine a drug's potential, they rely on mouse models or gene expression studies, an imperfect way to gauge how a drug might work in people. These flaws explain why, currently, only one out of every 1,000 potential drug candidates makes it to clinical trials and only one in five of those drugs will be approved.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: How Drugs Are Made: Genetic Data Begins To Pay Off For Pharmaceutical Companies Researching New Treatments