What CRISPR gene editing means for San Fran biotech

A new way to make powerful changes at will to the DNA of humans, other animals and plants, much like how a writer changes words in a story, could usher in a transformation in genetic medicine.

Scientists are not just excited about this recently discovered technique because it can snip and edit DNA with precision. It can also do the job more easily and cheaply than other gene-editing methods, making possible research that has historically been difficult, experts say.

Now some of the biologists who unlocked this tool, derived from the immune system of bacteria, are forming companies around it. Although this molecular system, known as Crispr, is not fully understood, researchers believe it can be harnessed to create therapies for intractable genetic diseases.

One of those scientists, UC Berkeley Professor Jennifer Doudna, was part of the team that in 2012 first demonstrated the technique. It is now employed by two companies she has co-founded: Caribou Biosciences in Berkeley, and Editas Medicine in Cambridge, Mass. The latter started last year with $43 million in venture capital. Another company, the aptly named Crispr Therapeutics in Switzerland, has $25 million in the bank, and other biotechnology companies are experimenting with the procedure.

“In principle, this is a technology that could enable correction of genetic mutations that would otherwise lead to disease,” said Doudna, a professor of chemistry and biochemistry and molecular biology, in a telephone interview. She was among several experts who spoke at a UC Berkeley conference on the subject last month.

Read the full, original story: Editing DNA could be genetic medicine breakthrough