

CRISPR lets scientists rewrite organisms' body plan

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The simplicity of [CRISPR-Cas9](#) gene editing will soon make studying the genes of any organism, from the simplest slime mold to the octopus, as easy as it now is to study the genes controlling development in standard lab animals such as [nematodes](#), fruit flies, frogs and mice.

A new study from the University of California, Berkeley, illustrates the ease with which CRISPR-Cas9 can knock out genes in exotic animals – in this case, an amphipod or sandhopper – to learn how those genes control growth and development. Researchers wanted to know which genes control the development of appendages on each segment of the amphipod, whose body is like a Swiss army knife with each segment bearing a different blade or tool as an appendage.

In less time than it would have taken two years ago to knock out one gene in the animal, UC Berkeley researchers knocked out six, shedding light on the basic genetic mechanisms that determine leg anatomy in the evolution of animals.

By knocking out, one by one, the so-called [Hox genes](#) that specify body parts in all animals, they switched the identities of the crustacean's limbs, transforming a claw into a leg, for example, or a jaw into an antenna.

Read full, original post: [CRISPR-Cas9 Helps Uncover Genetics Of Exotic Organisms](#)