

What can you do with the Genetics Kit?

The Genetics Kit allows you to display and manipulate the genetic codes that describe Norns, Ettins and Grendels, and generate new eggs and Digital DNA (D-DNA). In summary, you can:

- [Create Digital Clones of existing D-DNA.](#)
- [Breed existing D-DNA strands to produce new eggs.](#)
- [Edit a wide range of individual genes.](#)
- [Add or remove certain genes.](#)
- Identify and correct genetic faults.

What can't you do (and why) with the Genetics Kit?

The Genetics Kit imposes some limitations on how some genes can be edited. These limitations are designed to prevent the construction of organisms that could not live in Albia.

Don't expect miracles

Evolution took 3.7 billion years to come up with human beings, and a whole lot of generations. Even with the benefit of copying nature, it took us nearly two years to come up with the D-DNA behind the Norns in Creatures. Having said that—anything is possible. If you are able to make improved Norns, CyberLife wants to know! Email creatures_support@cyberlife.co.uk with your findings.

Structure, not behaviour

Bear in mind that you are tinkering with the structure of life, and that genetics dictates a creature's structure, from which behaviour naturally emerges. **If you reduce the structure, you'll reduce the behaviour.** This means that if you are planning on using the Genetics Kit to create immortal Norns that do not need to eat, or that can give birth in seconds, then you're barking up the wrong tree. By removing genes such as those in the immune, reproductive or digestive systems, you **will** make stupider Norns. If you really want to make super-norns, you would be better off improving the genetic structure, and enhancing the component parts of the Norn physiology, such as the digestive system. By doing this you can open new possibilities and new structures, out of which improved behaviour could emerge.

You may slow Creatures down

The D-DNA of your initial Norns, i.e. those for the eggs in the Hatchery consist of 787 genes. It is likely that by increasing the gene count substantially, or increasing the neurone count, you will slow your program down. You will need a fast computer to run Norns with a couple of thousand neurones (a "generation one" Norn contains about 970 neurones).

You could crash Creatures

It is possible to specify systems genetically that the Creatures application cannot build because they are either impossible, or were never intended. Should this happen, check carefully that you have all critical genes that you need before reporting the issue as a bug. Also, see [Notes on creating genomes from scratch.](#)

Remember! The keys to using the Genetics Kit are *patience* and *care and attention*.