

Kevin M. Esvelt is an assistant professor at the MIT Media Lab, where he leads the Sculpting Evolution Group in exploring evolutionary and ecological engineering. The inventor of a synthetic viral ecosystem for the directed evolution of biomolecules, he helped pioneer the development of CRISPR, a powerful new method of genome engineering.

Esvelt was the first to discover that CRISPR-based “gene drive” systems could single-handedly edit the genomes of entire wild populations of organisms. Unusually for an inventor, he and his colleagues chose to reveal their findings and call for open discussion and safeguards before they demonstrated the technology in the laboratory.

An outspoken advocate of sharing research plans to accelerate discovery and improve safety, Esvelt’s laboratory seeks to safeguard biotechnology against mistrust and misuse by pioneering new ways of visibly working with communities, developing early-warning systems to reliably detect any catastrophic biological threat, and applying cryptographic methods to enable secure and universal DNA synthesis screening. His work has been published in *Nature* and *Science*, covered by the *New York Times* and *Washington Post*, and featured on *Last Week Tonight* and the Netflix special *Unnatural Selection*.