Rethinking ‘The Omega Man’: How viruses alter human DNA

[W]e’re celebrating 50 years since the release of The Omega Man, the 1971 film based on Richard Matheson’s novel I Am Legend. In the film, and the novel on which it’s based, a virus sweeps the globe wiping out most of humanity. The story follows Robert Neville, a scientist immune to the disease who believes himself to be the last living human on earth. Except, of course, for the mutants (or vampires, as the case may be) who are still alive but perhaps not quite human, as the virus changed them.

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It’s unlikely that a virus could so crucially alter humanity’s collective DNA essentially overnight (it hasn’t happened yet, but never say never) but viruses do alter our DNA. They’ve been doing so for millions of years, and we wouldn’t be who we are today without them.

Sometimes… a virus will infect a germ cell, delivering its genetic material to a sperm or egg. When that happens, it’s possible for the virus’s genetic material to pass onto the offspring. Over generations, that material can become part of the host species’ genome.

Today, roughly 8 percent of the human genome is comprised of human endogenous retroviruses (HERVs), inherited from stowaway viruses.

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