

# [Persuasive for biology honors class. subject is related to the book andromeda str...](https://assignbuster.com/persuasive-for-biology-honors-class-subject-is-related-to-the-book-andromeda-strain-and-you-need-to-come-up-with-something-related-to-the-book-and-biology-and-write-a-persuasive-on-it/)

The paper " Andromeda Strain and Virus Evolution" is an outstanding example of a biology essay.
The world is a complex place. Not even the most advanced science can explain everything. What makes things even more complicated are the rapid changes that are occurring around us at all times. Just when it appears that we have discovered the answer to a certain question, we find out that the goalposts have moved. To some extent, this is a theme in Michael Crichton's novel The Andromeda Strain, where a team of scientists must try to prevent the outbreak of a rapidly evolving extraterrestrial virus. The virus remains one step ahead of them for most of the book. While this is only a novel, it has real-world counterparts in the difficult steps taken to reduce the evolution of other real viruses. Antibiotics have caused some viruses to evolve and become less treatable. We need to take a page from this clever book and work hard to limit the evolution of real-world viruses. If we do not, we may face a resurgence of diseases we once thought were eminently treatable.
The Andromeda Strain is a work of science fiction, but it shows us a great deal about our own world. While it is unlikely that a virus would come from outer space, it is entirely possible that such a virus might occur from any of the viruses currently present on Earth. Due to the incredible rate of transportation and interconnectedness of the contemporary world, it will be very challenging to prevent it from rapidly spreading around the world. We must be very mindful of this as such a situation is a potentially existential threat. It is not enough to simply say that the Andromeda Strain is a work of fiction with no bearing on our world. The lesson it teaches us is to be vigilant. We have to be on guard at all times to avoid the disaster that an evolving deadly virus represents.
There are two main forms of virus evolution that we need to be mindful of. One is called inter-host evolution. This can be measured as we can identify the changes the virus is undergoing as it travels from one host to another. We need to focus on this form of evolution as it provides us with the best source of information about potential threats facing us (Domingo). The second form is more sinister. Intra-host evolution occurs within the host and can be invisible to the eye or other methods of investigation. We need to be especially watchful of this form of virus evolution and develop rapid response measures to deal with it when it becomes apparent.
A number of contemporary scientists weighed in on this issue, during the recent outbreak of swine flu. They too identify virus evolution as a great threat.
" Viruses have evolved to exploit human contact as a way of spreading," points out Peter Daszak of the Wildlife Trust, whose team 14 months ago predicted just this sort of evolution in an animal flu, coming from Latin America to the United States after evolving to infect people. David Schaffer, a professor of chemical engineering and bioengineering at the University of California at Berkeley, explains the mechanics of how a flu virus morphs: " For flu, there are multiple ways that diversity can arise (the virus has multiple strands of RNA in its genome, and it can mix and swap strands with different flu variants to give rise to fully novel variants … in addition, each strand can individually mutate)," Schaffer explained this week. " Furthermore, in this case, the enhanced property from the virus point of view is the ability to infect humans. So, this is viral evolution" (Britt).
The fact that this issue is taken so seriously by credible scientists indicates that we are no longer in the realm of science fiction. While some might dismiss the Andromeda Strain as a fantasy book it is becoming increasingly clear that the core issues in the book are ones we face today.
Nature takes many twists and turns and can be difficult to predict. In the past, diseases have wiped out whole segments of human populations. As we have seen in the novel The Andromeda Strain, it can be impossible to know where the next threat is coming from. While it seems unlikely that a virus will emerge from an extraterrestrial source, it is very possible that one may emerge from something familiar and close at hand. Evolution is what got us to where we are, but in a complex world, it may also be what destroys us as viruses mutate far beyond our control.