

Zika virus is a mosquito-borne virus transmitted by *Aedes* mosquitoes. The symptoms of the virus are similar to other arbovirus infections and include fever, skin rashes, conjunctivitis, muscle and joint pain, and headache. The World Health Organization has concluded that Zika virus infection<sup>1</sup> during pregnancy is a cause of congenital brain abnormalities, including microcephaly. Additionally, Zika virus is a trigger of Guillain-Barré syndrome. Guillain-Barré syndrome (GBS) is a disorder in which the body's immune system attacks part of the peripheral nervous system. Symptoms of the disease increase in intensity until certain muscles cannot be used at all and often leads to paralysis. Oftentimes the disorder can be life threatening, potentially interfering with breathing, blood pressure, and heart rate.

National governments have become increasingly more involved as the growth of Zika virus threatens South and Central America's neighbors. The international community has several paths it can take towards managing the Zika epidemic. These paths include, but are not limited to: eliminating the mosquito population, preventing the spread of Zika through informing people at risk, and developing a Zika vaccine<sup>2</sup>.

Many concerns arise on the topic of creating a Zika vaccine<sup>3</sup>. One major concern facing the scientific world is the risk of exposure to GBS for patients receiving the Zika vaccination<sup>4</sup>. Because the Zika infection in adults may be linked to GBS, it is unclear if an injection of Zika DNA, as part of the vaccination process, is directly linked to the onset of this life-threatening medical emergency. GBS presents a major concern that a vaccine designed to protect patients against Zika could inadvertently provoke more cases of the autoimmune condition. Like a flu or polio vaccine, a shot designed to protect against Zika would need to contain some form of the virus in order to stimulate antibody protection against it. Scientists today are trying to decide: is it ethical to ask people to be injected with Zika virus in order to help search for a vaccine?

Questions to consider when researching your topic:

- Which plan of attack should this committee take? Is killing off mosquitoes practical and safe? Will keeping people informed do enough to stop the virus?
- Do the benefits of the vaccine outweigh the potential costs? Is the risk of causing Guillain-Barré syndrome as a result of the vaccine worth the efforts on behalf of society?
- If yes,
  - What types of vaccines are local governments likely to support or have capacity to roll out?
  - Who will participate in clinical trials for the vaccine? Will pregnant women participate? Should they?
  - How will the vaccine be dosed for pregnant women vs. non-pregnant women? Furthermore, many women are unaware of their pregnancies until well into their first trimester. How will this be taken into consideration when dosing a patient?
  - Would a standard of prevention be provided during trials?

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<sup>1</sup> <http://www.who.int/mediacentre/factsheets/zika/en/>

<sup>2</sup> [http://www.who.int/immunization/research/meetings\\_workshops/1\\_TFinn\\_zika\\_june16.pdf?ua=](http://www.who.int/immunization/research/meetings_workshops/1_TFinn_zika_june16.pdf?ua=)

<sup>3</sup>

<http://www.who.int/immunization/research/development/zika/en/index1.html>

<sup>4</sup> <http://www.who.int/csr/resources/publications/zika/guillain-barre-syndrome/en/>

Your research and position papers should not be limited to just these questions; I encourage you to use these questions as guidance, not as a strict outline. The goal of the WHO<sup>5</sup> is to broaden the discussion of some of the major ethical, legal, and social issues specific to diseases affecting the human race-in this case, the Zika virus. I reiterate that when you write your position papers, you are writing about the position of the nation you are representing and not a personal view on the matter. If you have any questions feel free to reach out to me at [sweller@mail.yu.edu](mailto:sweller@mail.yu.edu). Best of luck and I am looking forward to reading your papers and meeting all of you!

Shelby Weller  
Chair of WHO

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<sup>5</sup> <http://www.who.int/en/>