Virologist

Turning tiny invaders into tools.
Virologists study the structure of viruses. They work to learn how viruses’ genetic material can be packaged in very small particles and how they can infect all living things. Virologists ask how viruses interact with cells. They develop strategies to interfere with the stages of virus replication. Virologists can discover new viruses or identify viruses causing epidemics in plants or animals. Virologists can work as researchers or technicians with plants, animals, or other living creatures at universities, companies, and government agencies. They can modify viruses so that they can be used as tools, such as delivery vehicles for vaccines to prevent disease, or they can develop new crop plants that are resistant to viral infection. They can be teachers, scientific advisors, or epidemiologists who monitor virus outbreaks throughout the world.

To be a virologist, you need a bachelor’s degree in a life science discipline such as microbiology, biochemistry, plant pathology, or genetics. You should take courses in biochemistry, molecular biology, computer science, and mathematics. It is important for you to get research experience during an internship or while taking courses. In high school, take college preparatory courses in biology, chemistry, physics, and mathematics. Participate in science fairs and science clubs and, if possible, work in a laboratory during the summer.