

# CHAPTER 3

## the shape shifter

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When a face or outer body or inner body or living cell looks so different from the origin, never rule out viral factors. No doubt virus comes in different shapes but it also can be a shapeshifter and the cause for gruesome disfiguring disease. Changing shape is a common myth, folklore or fantasy fiction, in which one can physically transform into another being or form. However, the virus way of transforming shape does not involve any mythological creature, magic spells or talismans. Viral factors evidenced the induced changes due to either biochemical or biophysical causes with a set of underlying molecular mechanisms.

The most common form of shape-shifting myths is the transformation of a human being into an animal or conversely into a tree! Have you not heard the “Tree man” story? An Indonesian fisherman who grew roots on his hands and feet. The viral factors can hijack the cellular machinery of skin cells. The cell breaks free from the normal restraints on cell division and begins to display inappropriate proliferation leading to formation such as tree-like growths. Viruses such as poxvirus, papilloma virus, coxsackievirus, rubella virus, herpesvirus, can change live beings from fair to ugly. Few members of herpesvirus can inflame facial nerves that control muscles in the face, leading to weakened or paralysis of facial muscles. Parts of the face may droop, such as one side of the mouth and must not be confused

with a stroke. In fact, what seems to be a simple shift induced by a virus at cellular level may be a threat to an individual’s life and subsequently dictates her fate. For a person to be successfully infected, a sizable dose of virus needs to break the skin of target and circulate mainly by way of the blood stream, but can also be spread via the nervous system. If the infection is picked up, the victim is struck by a nasty debilitating fever that continues to outcome. At times these diseases don’t merely kill but seek to mutilate live being on the way out. Physical changes include drooping face, horrifying warts all over the body, nasty scarring, and disfiguring carpet of scabs on body followed with painful rash or leaking lesions. Oncogenic viral infections cause changes in host cells, turning them into tumor cells. Virus-induced genomic instability can be linked to accumulations of mutations and related to the process of immortalization. These viruses alter or transform cell properties leading to abnormal cell growth, eventually disrupt the normal functions of tissues and organs needed for survival.

Viruses do changes in their genes to alter their surface proteins, eventually new virus strains are formed and may not be visible to host antibodies. Strangely, although they tend to straddle the fence between living and non-living, viruses do play key roles in shaping the history of life on our planet by shuffling and redistributing genes in and among organisms, causing diseases. Thus, public awareness about the availability of preventive measures and treatments are ever crucial against enduring trying circumstance.



