

livin bubble

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Those “living bubbles” are alive and the dwellers within are also alive. The bubbles featured under the light microscope are actually living cells undergoing herpesvirus-induced cell damage. The phenomenon of cells changing shape after virus infection is coined as cytopathic effects (CPE). Normally, adherent cells grow flat and stuck down firmly on the culture plate. After infection with viruses such as herpesvirus, the fibroblast cells change shape from spindle to round and become more refractile. This CPE type has been commonly termed as cell rounding or ballooning. In fact, rounding of infected cells is one of the most common CPE induced by virus. Can you imagine living in a bubble? Viruses within may feel safeguarded from dangers. Virus exists for a single-minded mission, to reproduce and produce new viruses. The moment it invades the cell, it takes over the reproductive machinery of host cells. In other words, once it conquers, it changes the shape of cellular machinery. It overrides the cell’s normal functioning with its own new instructions that can shut down production of cellular proteins. Subsequently, it directs the cells to produce new viral genes and proteins which then come together and assemble into whole new viruses. Millions of viruses are either released from the host cell without destroying the cell or can eventually build up to a large enough number that can burst the host cell like an overfilled water balloon.

