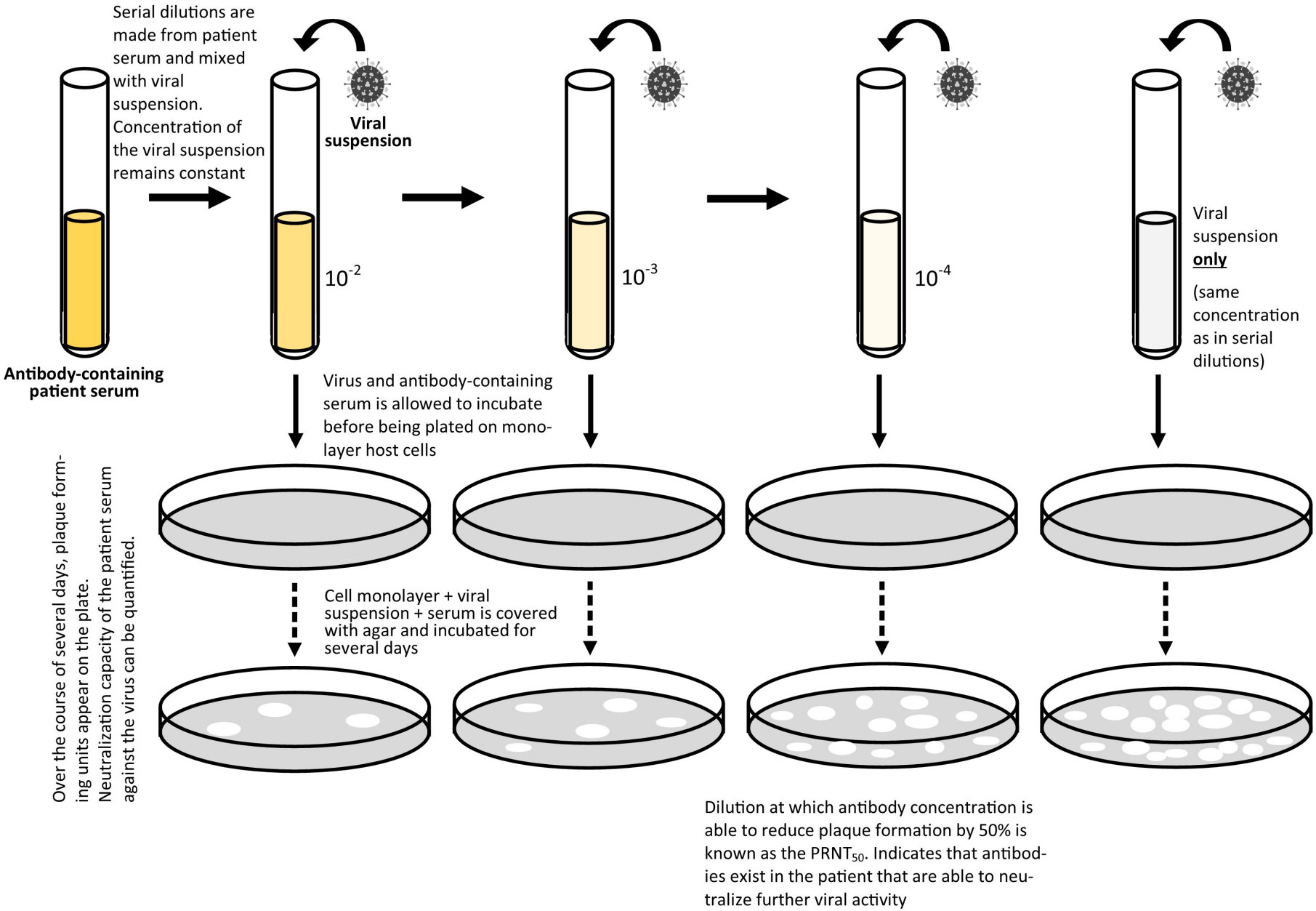
Serial dilutions are made from patient serum and mixed with viral suspension. Concentration of the viral suspension remains constant
Viral suspension
Antibody-containing patient serum
$10^{-2}$
$10^{-3}$
$10^{-4}$
Viral suspension **only** (same concentration as in serial dilutions)
Virus and antibody-containing serum is allowed to incubate before being plated on mono-layer host cells
Cell monolayer + viral suspension + serum is covered with agar and incubated for several days
Over the course of several days, plaque forming units appear on the plate. Neutralization capacity of the patient serum against the virus can be quantified.
Dilution at which antibody concentration is able to reduce plaque formation by 50% is known as the $PRNT_{50}$. Indicates that antibodies exist in the patient that are able to neutralize further viral activity