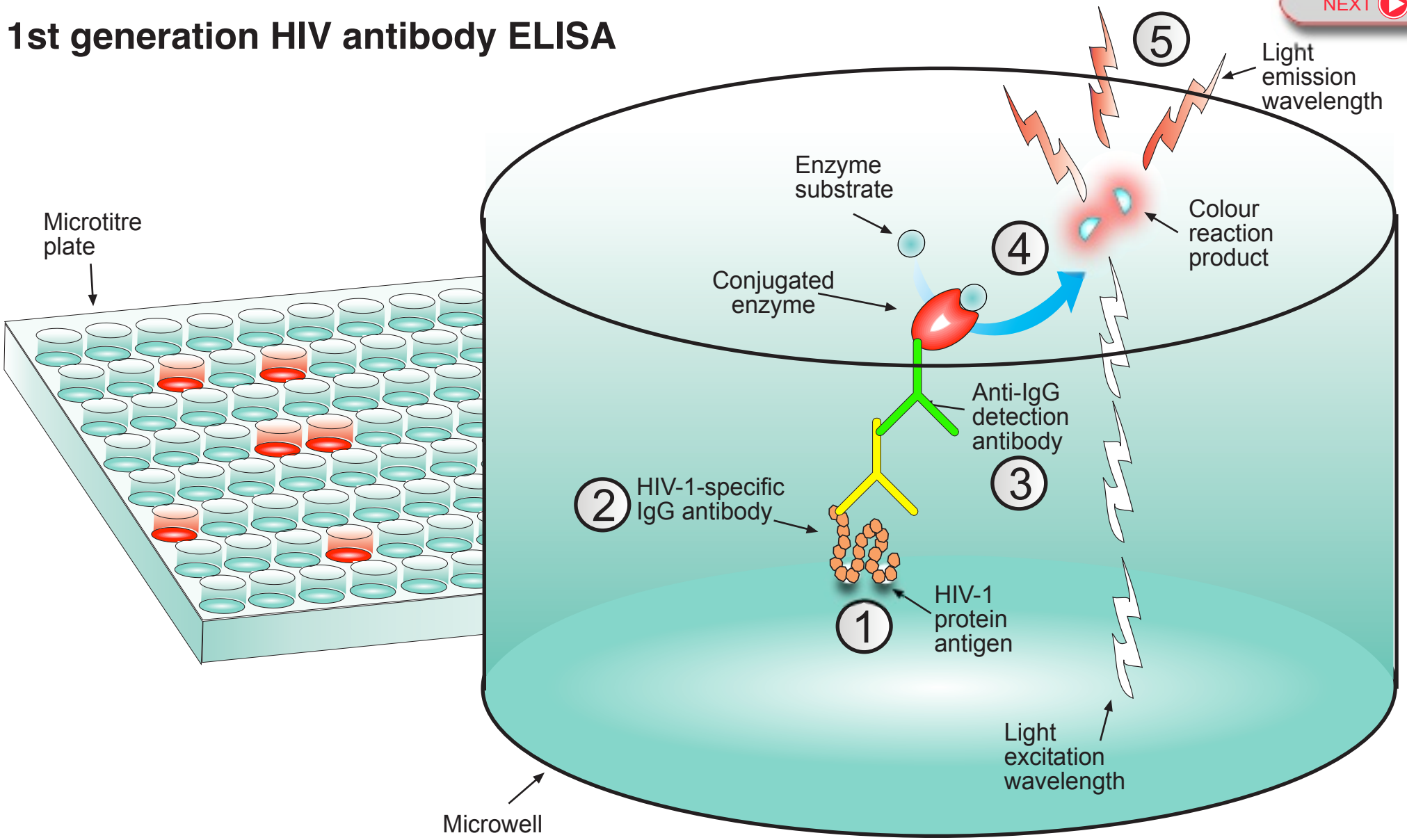
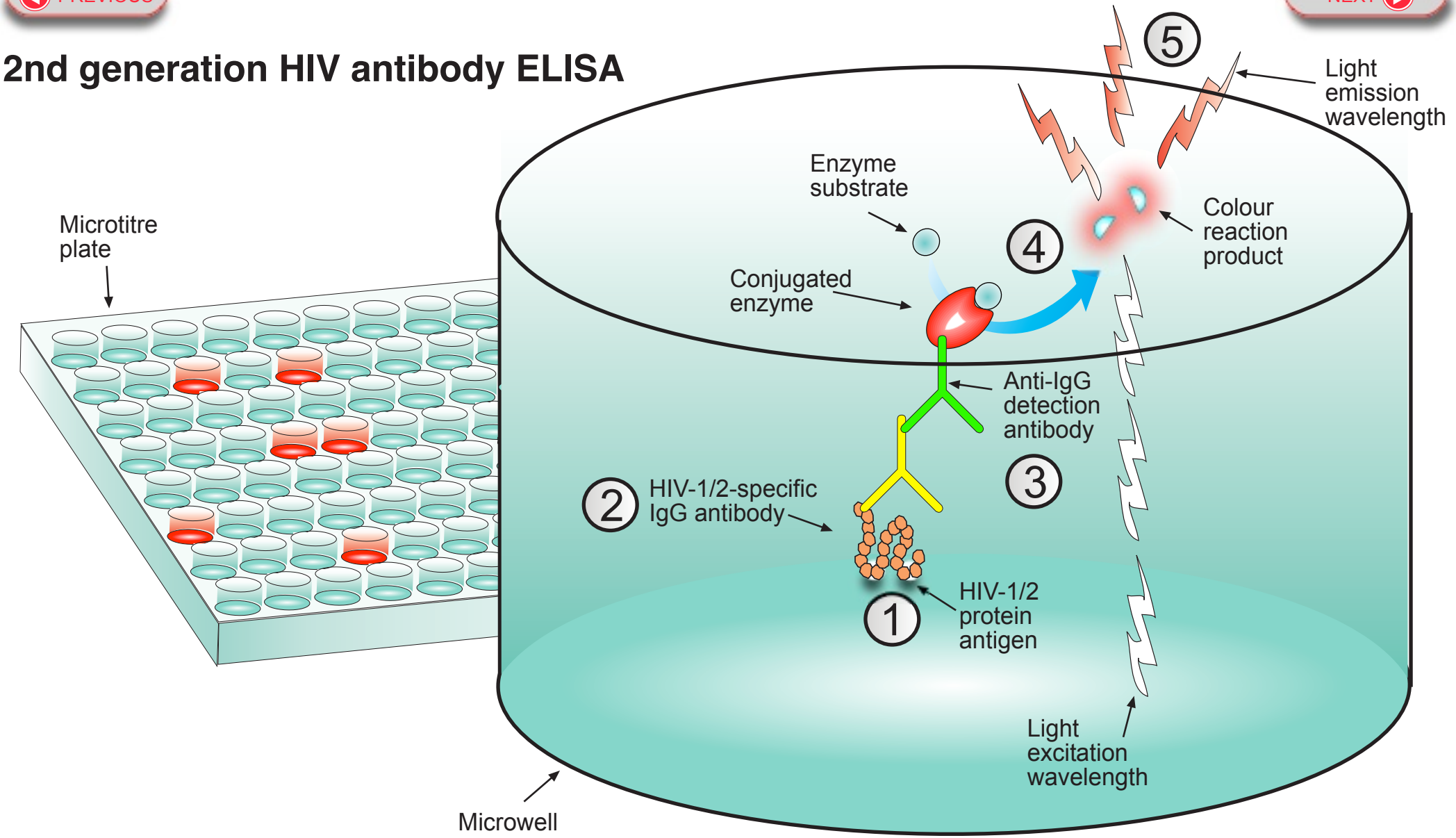
1st generation HIV antibody ELISA



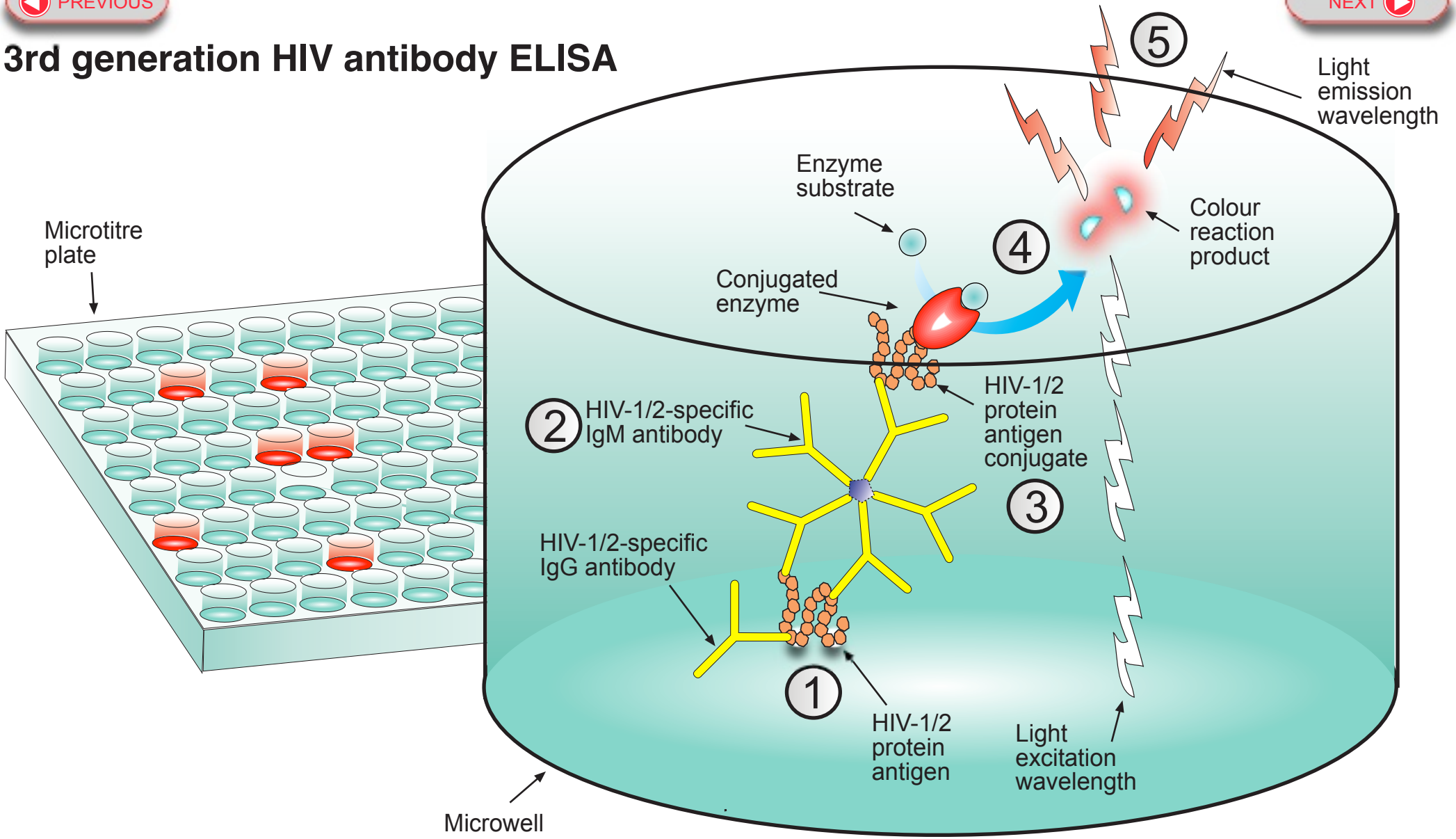
The 1st generation HIV antibody ELISA tests were designed to detect anti-HIV-1 antibodies of the IgG isotype in plasma samples. This was achieved by (1) immobilising HIV-1 antigens on the surface of wells in a microtitre plate, (2) capture of HIV-1-specific antibodies from plasma, (3) detection of bound IgG antibodies by an anti-IgG antibody-enzyme conjugate, (4) addition of enzyme substrate and (5) a spectrophotometric measurement of the completed colour reaction as an indicator of the amount of bound IgG.

2nd generation HIV antibody ELISA



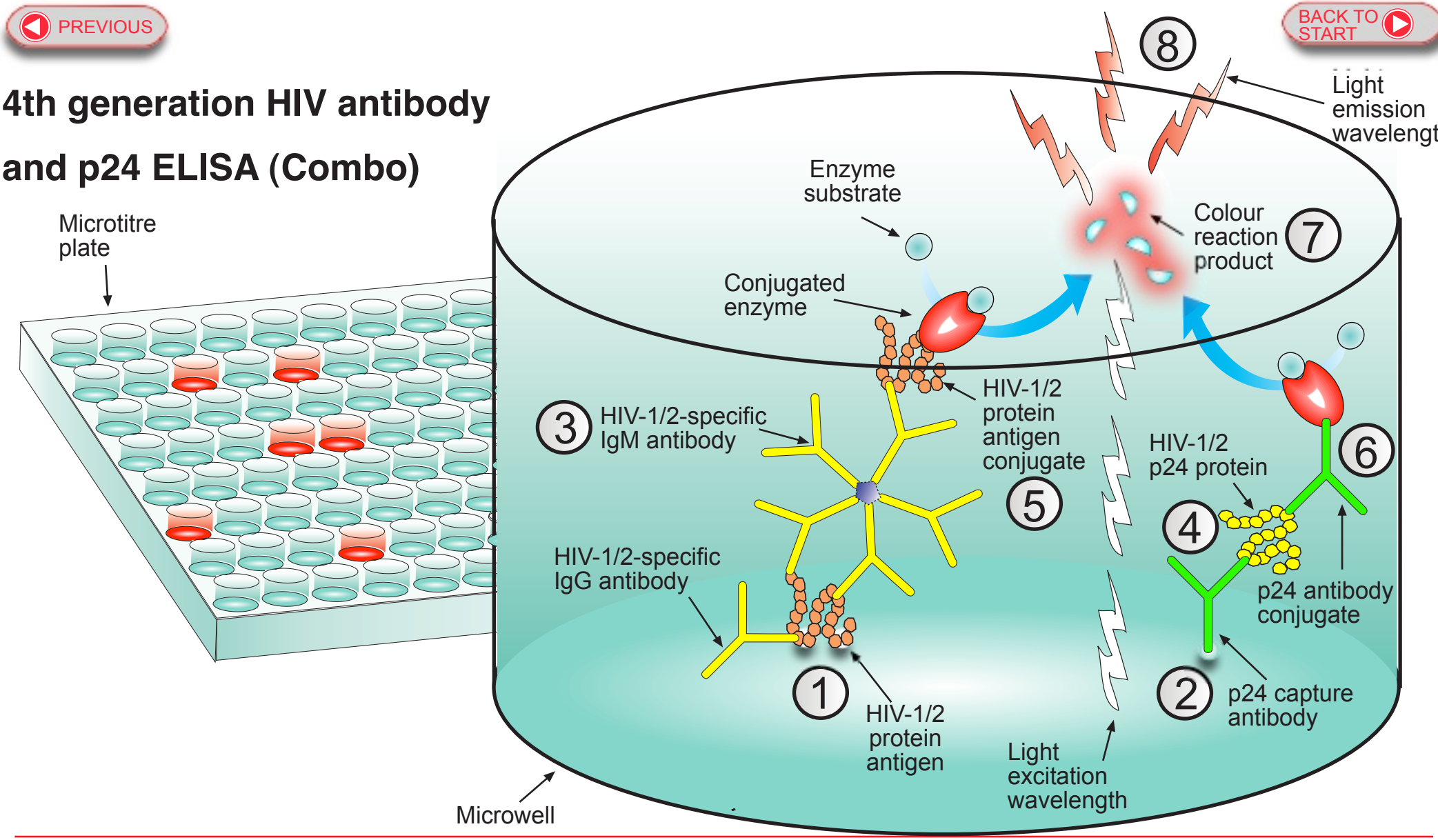
The 2nd generation HIV antibody ELISA tests included the ability to detect anti-HIV-1 and HIV-2 antibodies of the IgG isotype in plasma samples. This was achieved by (1) immobilising both HIV-1 and HIV-2 antigens on the surface of wells in a microtitre plate, (2) capture of HIV-1 or HIV-2-specific antibodies from plasma, (3) detection of bound IgG antibodies by an anti-IgG antibody-enzyme conjugate, (4) addition of enzyme substrate and (5) a spectrophotometric measurement of the completed colour reaction as an indicator of the amount of bound IgG.

3rd generation HIV antibody ELISA



The 3rd generation HIV antibody ELISA tests enhanced the sensitivity of the assay by including the detection of anti-HIV IgM antibodies as well as IgG in plasma samples. This was achieved by (1) immobilising both HIV-1 and HIV-2 antigens on the surface of wells in a microtitre plate, (2) capture of HIV-1 or HIV-2-specific antibodies from plasma, (3) detection of bound IgM and IgG antibodies by formation of immune complexes using HIV-1 and HIV-2 antigen-enzyme conjugates, (4) addition of enzyme substrate and (5) a spectrophotometric measurement of the completed colour reaction as an indicator of the amount of bound IgM and IgG.

4th generation HIV antibody and p24 ELISA (Combo)



The 4th generation HIV antibody and p24 ELISA (Combo) tests enhanced the sensitivity of the assay to detect early or acute HIV infection by including detection of p24 antigen in plasma samples. This was achieved by (1) immobilising HIV-1 and HIV-2 proteins on the surface of wells in a microtitre plate as well as (2) an anti-p24 capture antibody, (3) capture of HIV-1 or HIV-2-specific antibodies from plasma and (4) capture of p24 antigen, (5) detection of bound IgM and IgG antibodies by formation of immune complexes using HIV-1 and HIV-2 antigen-enzyme conjugates and (6) detection of bound p24 using an anti-p24 antibody-enzyme conjugate, (7) addition of enzyme substrate and (8) a spectrophotometric measurement of the completed colour reaction as an indicator of the amount of bound IgM, IgG and p24.