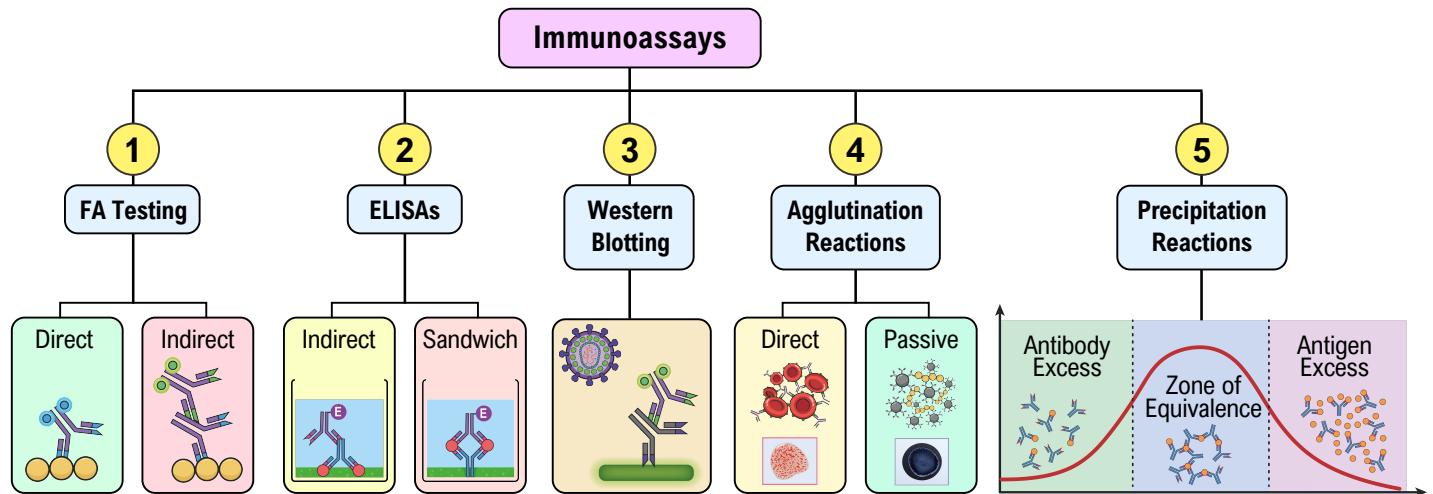


TOPIC: IMMUNOASSAY: FLUORESCENT ANTIBODY TESTS

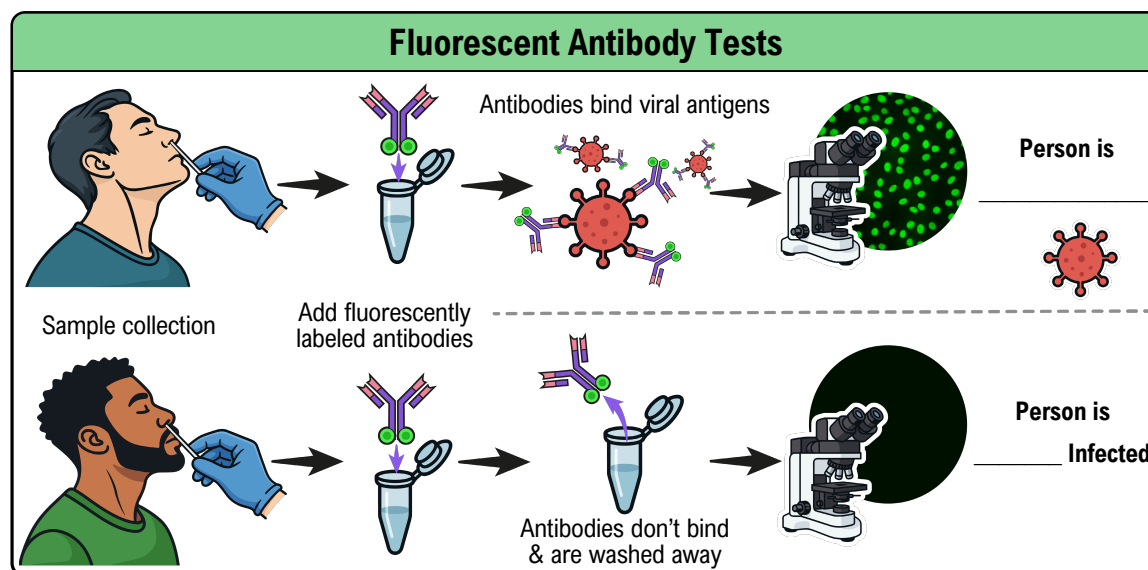
Introduction to Immunoassays

- ◆ **Immunoassays:** lab procedures using _____-antigen binding to detect & measure substances in a sample.
 - Commonly used for diagnostic testing (e.g. detecting HIV antigens or antibodies made against HIV).
- ◆ We are going to cover _____ of the primary types of immunoassays:



Fluorescent Antibody Tests

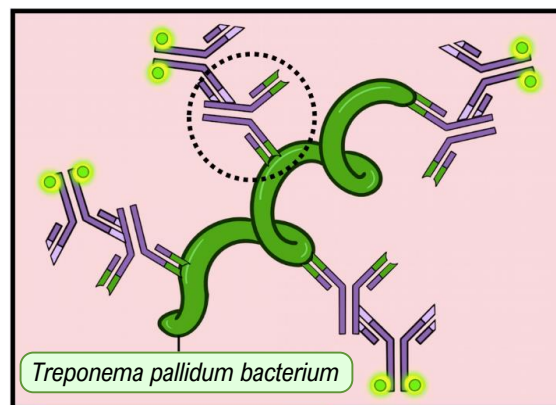
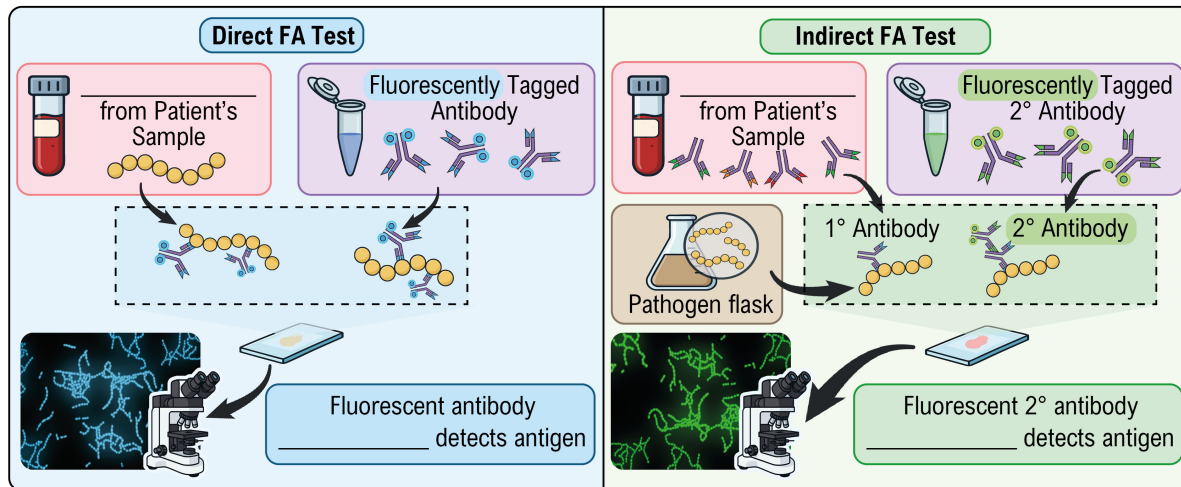
- ◆ Visualization of antigens OR antibodies in a sample can be achieved via Fluorescent Antibody (_____) Tests.
 - **FA Tests:** use fluorescent microscopy to visualize *fluorescently* _____ antibodies in a sample.



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Direct vs. Indirect Fluorescent Antibody Tests

- ◆ **Direct FA Test:** detects presence of an _____ in a patient's sample using fluorescent 1° antibodies.
 - **Primary (1°) Antibody:** the first/only antibody that binds the antigen _____.
 - Direct FA test answers the question "is the patient currently infected with the antigen?"
- ◆ **Indirect FA Tests:** detects presence of a primary _____ in a patient's serum using fluorescent 2° antibodies.
 - **Secondary (2°) Antibody:** the second antibody binds the primary antibody (_____ detects antigen).
 - Indirect FA test answers the question "has the patient built up immunity (have they had antigen exposure)?"

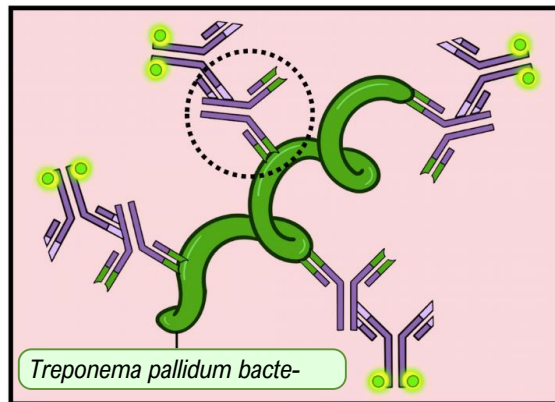


EXAMPLE

In the image, which of the following molecules is labeled & produces the visible result of the test?

- a) Primary antibody
- b) Secondary antibody.
- c) Antigen.
- d) The bacterial cell.

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PRACTICE

The disease syphilis is caused by the *Treponema pallidum* bacteria. The image above is showing which method of determining if a patient has been infected with *Treponema pallidum* bacteria?

- a) Indirect FA test.
- b) Direct FA test.
- c) Subjective FA test.
- d) Secondary antibody test.

PRACTICE

Direct fluorescent antibody tests use a fluorescently tagged antibody to identify:

- a) An antibody of interest.
- b) An antigen of interest.
- c) An immune cell of interest.
- d) A pathogen of interest.

TOPIC: IMMUNOASSAY: FLUORESCENT ANTIBODY TESTS

PRACTICE

Which of the following methods could be used to detect the presence of COVID-19 antibodies in a patient's serum?

- a) Administering a COVID-19 vaccination to the patient.
- b) Testing the patient's serum with a direct antibody test.
- c) Testing the patient's serum with an indirect antibody test.
- d) Providing the patient with COVID-19 immune globulin therapy.
- e) None of the above.