



محاضرة رقم: 4

¹ Lecture No 4:

Advanced laboratory technique

ENZYME LINKED IMMUNOSORBENT ASSAY

Sawa University

College of health and medical techniques

Department of Medical Laboratories

. Stage third

جامعة ساوة الاهلية

كلية التقنيات الصحية والطبية

قسم تقنيات المختبرات الطبية

المرحلة / الثالثة

Practical

تدريسي المادة : م.م ايمان علي اعطيه
م.د طيبه شاكر

ELISA

(Enzyme Linked immunosorbent Assay)

A laboratory technique that makes use of the binding **between** an **antigen** and its **homologous antibody** in order to **identify and quantify** the specific antigen or antibody in a sample.

ELISA Technique

—
Hormones •

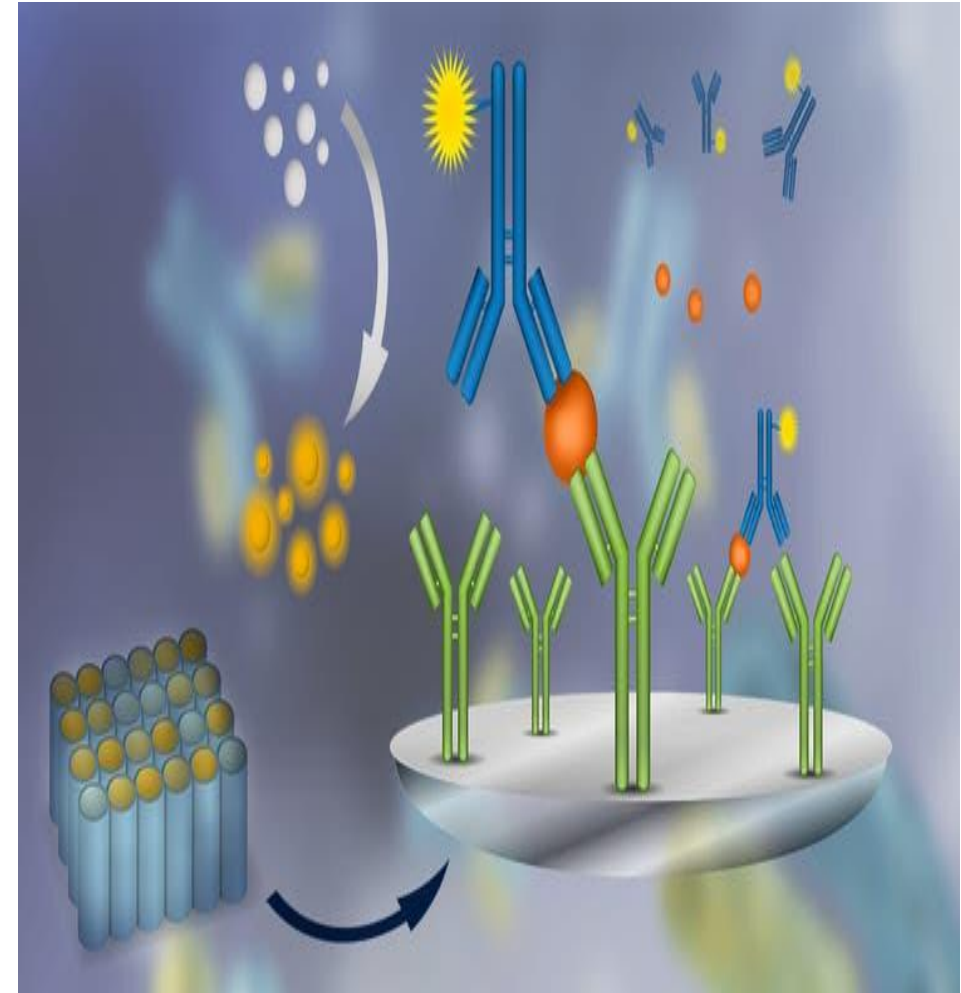
- Virus
- Antibodies
- Antigen
- Bacteria
- Fungi



Types of ELISA

Direct ELISA •

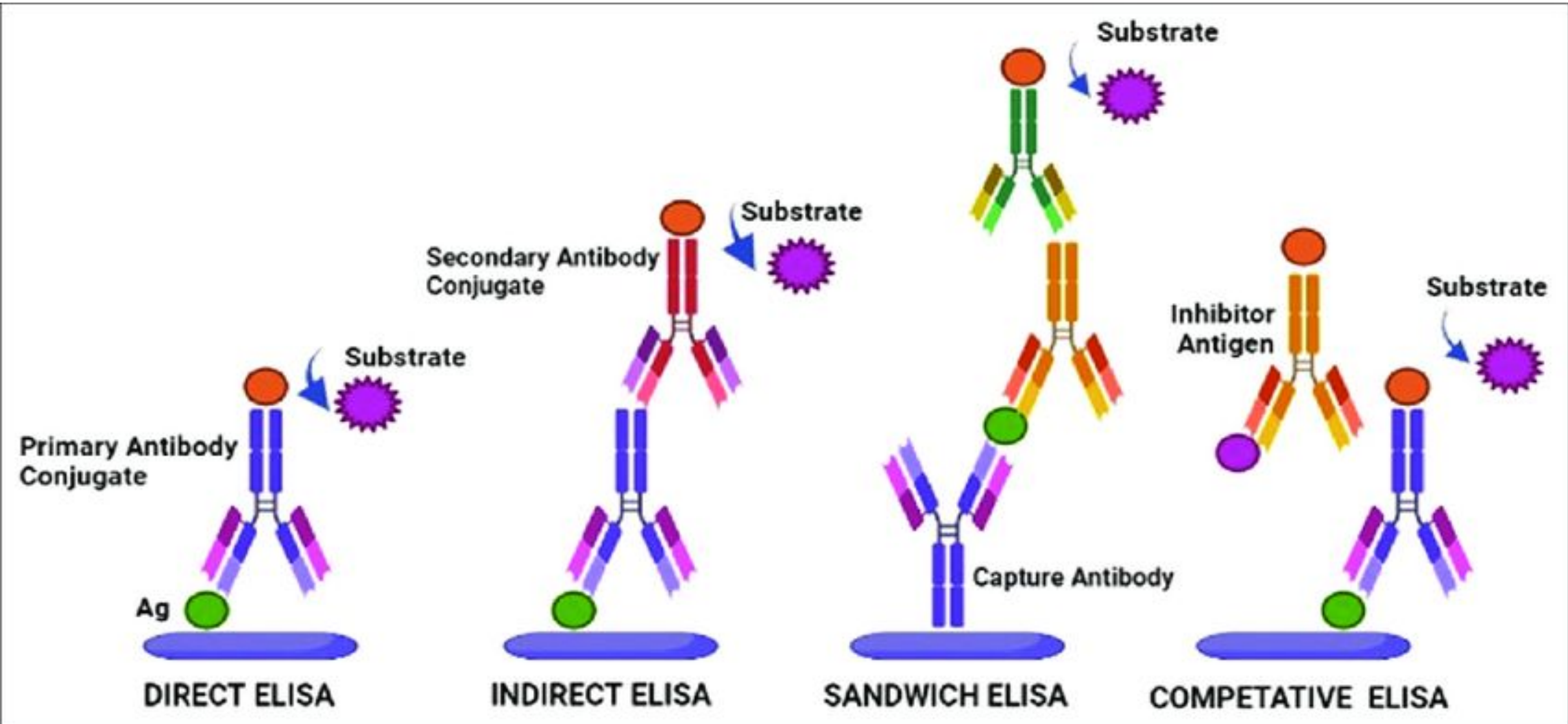
- In Direct ELISA
- Competitive ELISA
- Sandwich ELISA



Direct ELISA

Its used to detect **antigens** in a test sample •

- The result can be positive or negative depending on the presence and absent of the antigen in the test sample



Indirect ELISA

- 
- **Antigen coated to a plate is detected in two stages or layers**
- First an **unlabeled primary antibody**, which is specific for the antigen, is applied
- Next, an **enzyme-labeled secondary antibody** is bound to the first antibody.

Sandwich ELISA



The sandwich ELISA **q**uantify **antigens** between •
two layers of antibodies act in the **sandwich**

Competitive ELISA

In case of quantity of **enzyme conjugate** is more than •
quantity of **protein** of interest the intensity of the **color**
will be high

Any questions?

*Thank
You*