



**A.N.I.F.**



Interdisciplinary International Group for Hemapheresis Therapy and Metabolic Disturbances Control

# **The MIGHTY MEDIC Global Scientific Society**

## **12<sup>th</sup> Lipid Club and Therapeutic Apheresis 2017**

**May 3-4, 2017 Rome**  
Istituto Salesiano Sacro Cuore

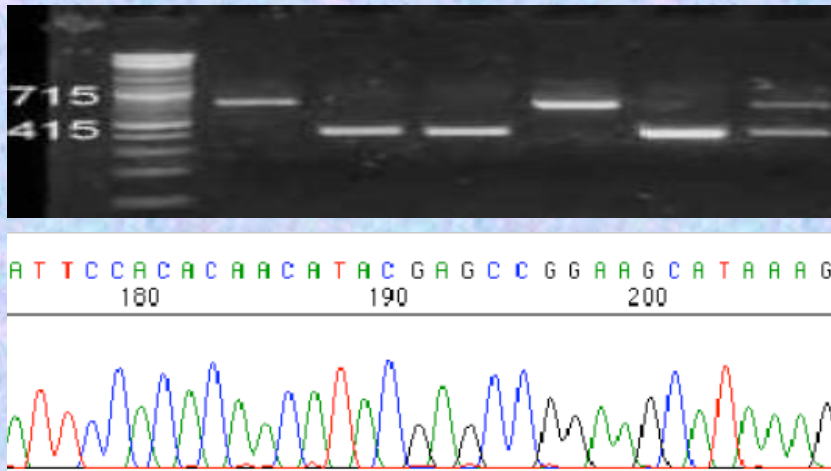
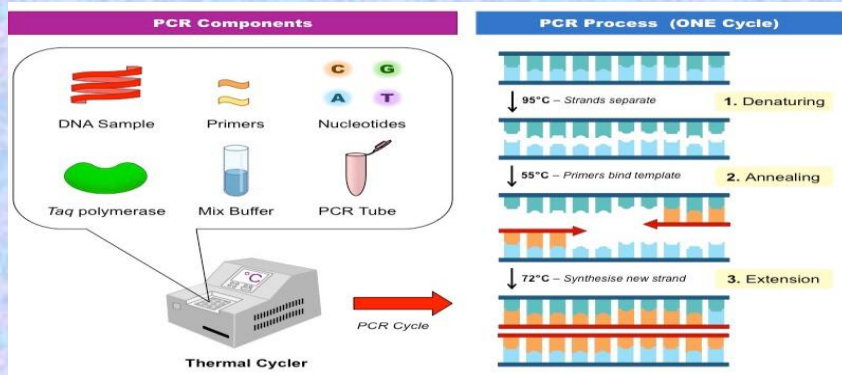
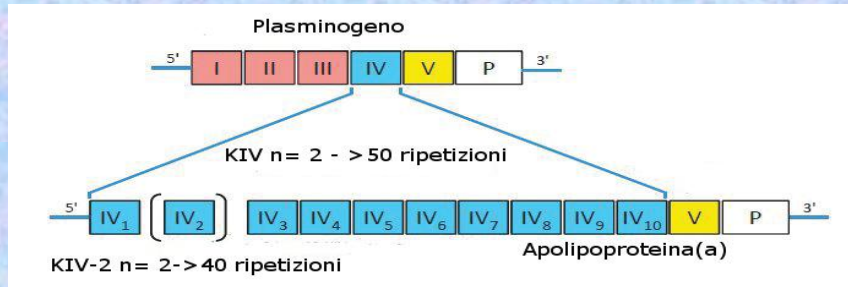
### ***Diagnostic Techniques for Determining Lipoprotein(a)***

***Dr. Marco Vitale***

**(Biologist)**

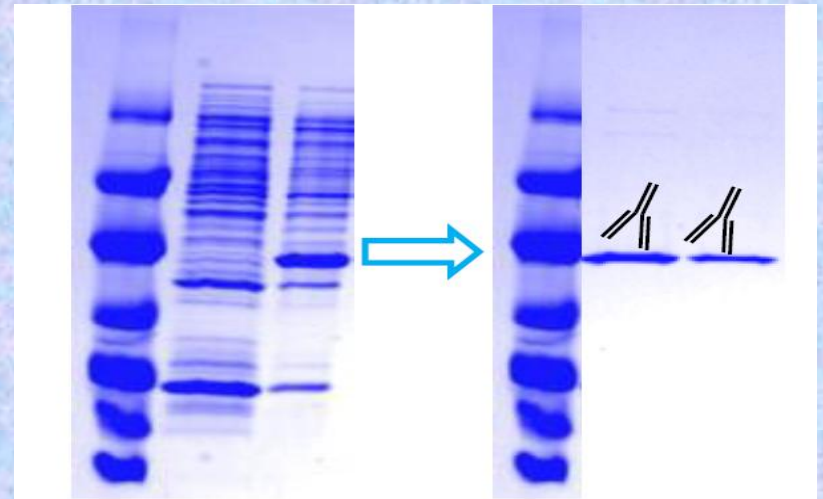
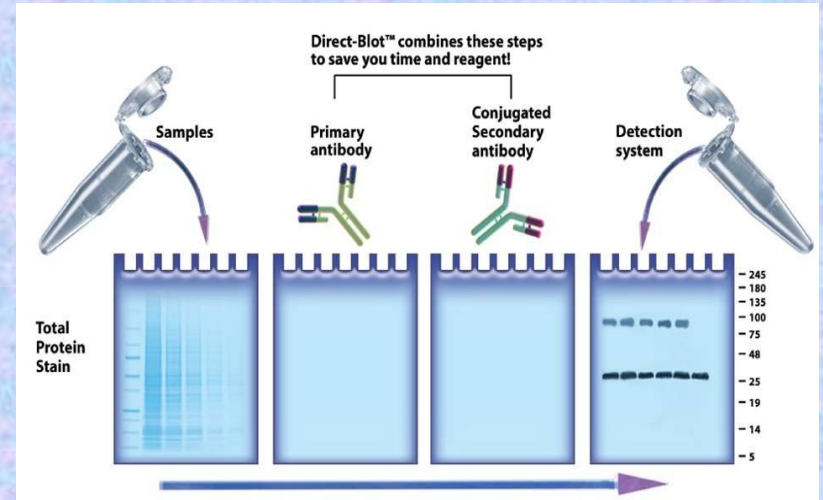
**Extracorporeal Therapeutic Techniques Unit - Lipid Clinic and Atherosclerosis  
Prevention Centre Immunohematology and Transfusion Medicine - 'Umberto I'  
Hospital - Department of Molecular Medicine - 'Sapienza' University of Rome.**

## Amplification and sequencing Gene of *Apo(a)*



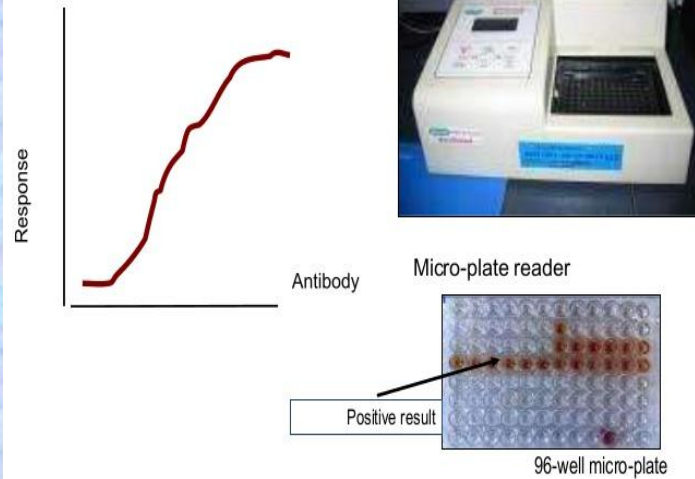
## WESTERN BLOTTING

Western blot or immunofixation or immunoblot is a biochemical technique that identifies Lp (a) in a protein mixture (serum) by means of by specific antibodies.



# Measurement of Lp(a)

## ELISA

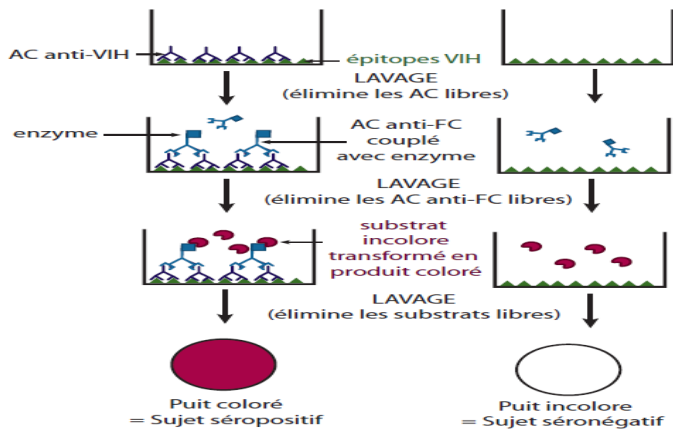


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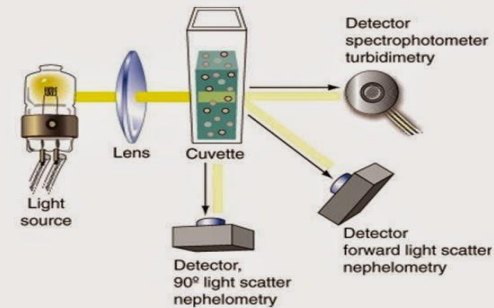
Dr.T.V.Rao MD

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## Type «Sandwich»

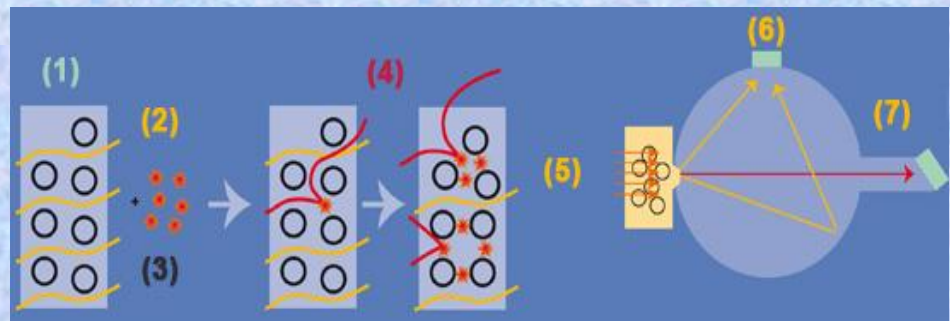


## Nefelometría



Nefelometry is an optical analysis method that allows to obtain the amount of Lp(a) by measuring **diffuse radiation** by Tyndall effect.

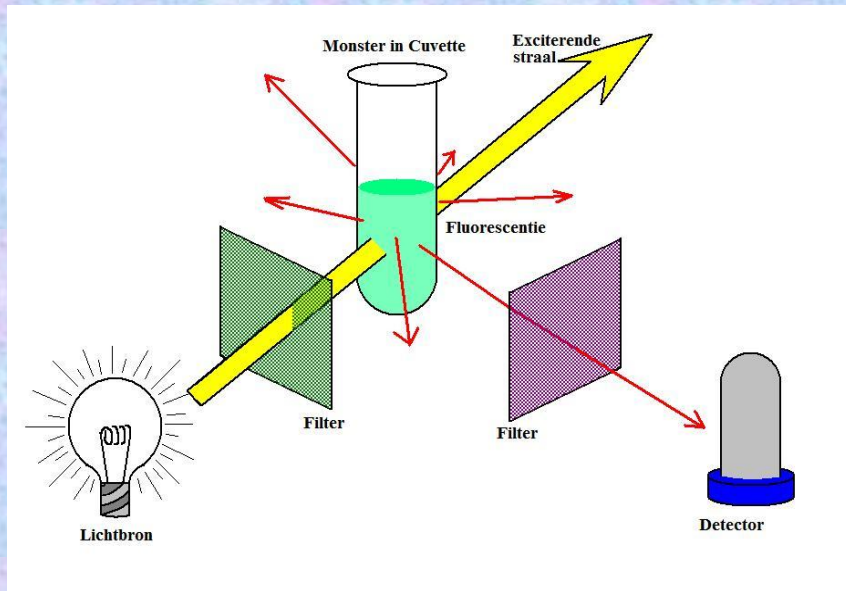
## Turbidimetry



Latex particles sensitized with **anti-Lp(a)** antibodies, when mixed with samples containing Lp(a) **agglutinate**. Agglutination causes a variation of D.O. which depends on [Lp(a)].

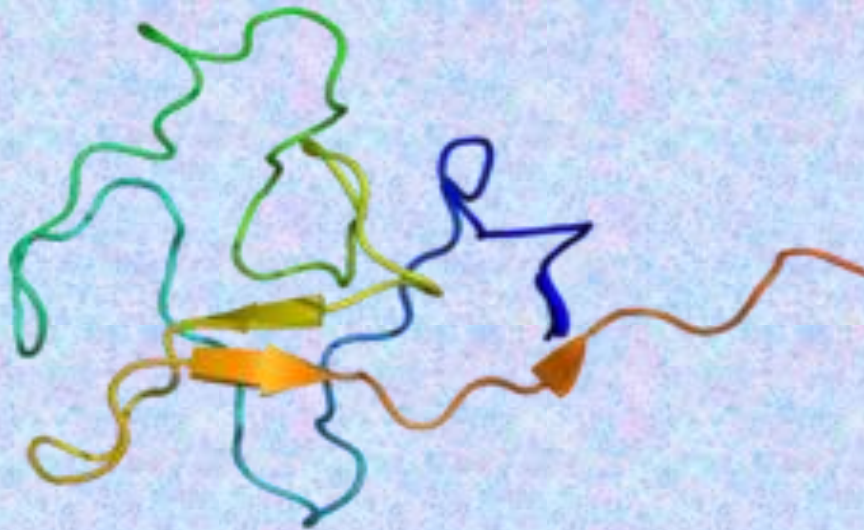


# Cholesterol Loading Capacity (CLC)



- **THP-1 cells** (monocytes) + 50 ng / mL Phorbol 12-Myristate 13-Acetate (PMA) = Macrophages differentiated (72 hours).
- These cells are exposed for 24 h with the serum collected from patients.
- The cholesterol content in the cells will be measured with a fluorometer in cell lysates.
- CLC has been defined as the content of cholesterol in macrophages after Exposure of the cells to serum and expressed as  **$\mu\text{g}$  of cholesterol / mg protein**.

***THANKS FOR YOUR ATTENTION....***



*( Molecular structure in the space of  $L_p(\alpha)$  ).*