



Manufactured By: HYPHEN BioMed

**MEASUREMENT OF  
PROCOAGULANT OR CELL DERIVED  
MICROPARTICLES:  
Consequence and cause of disease**

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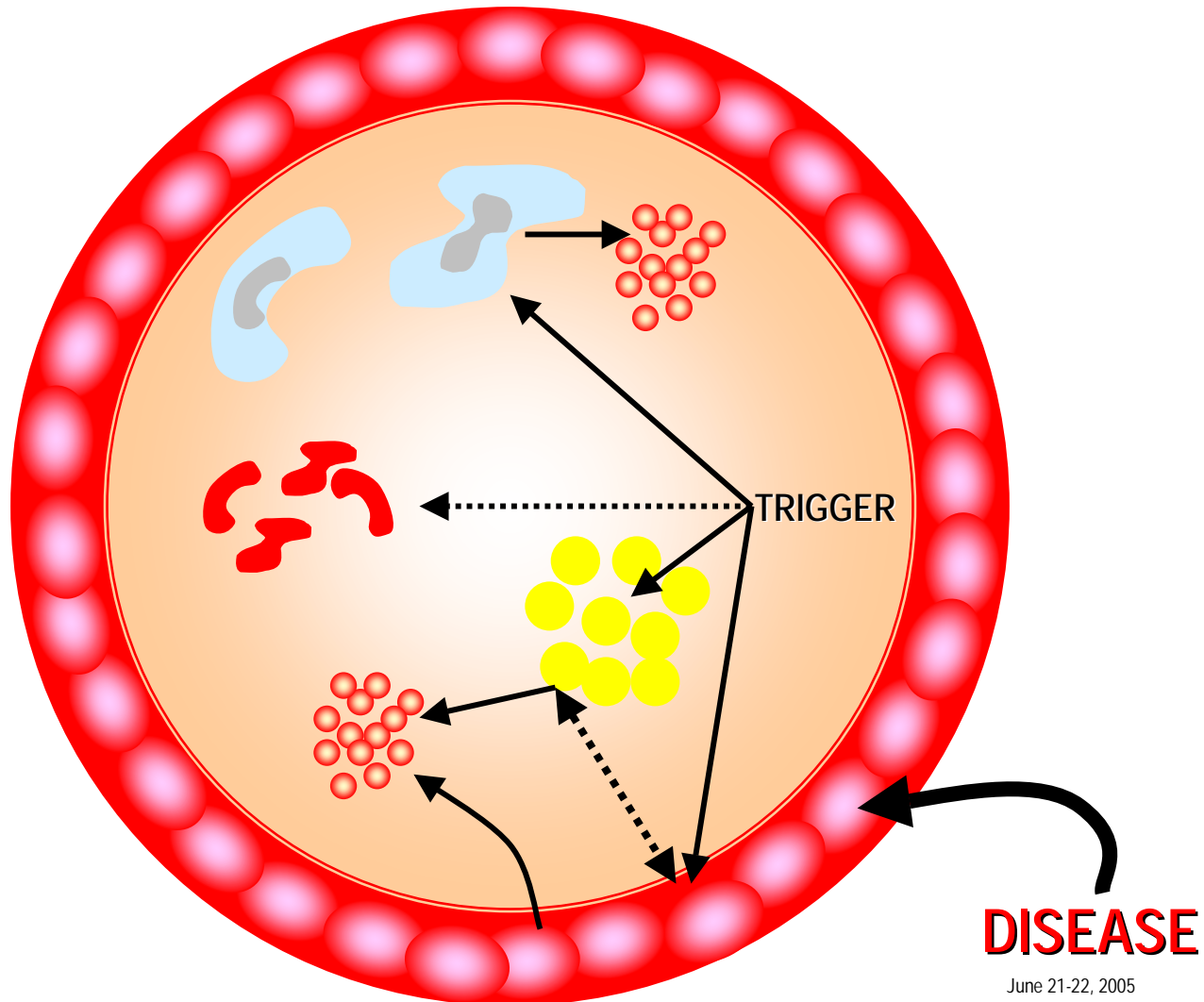
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# Generation of microparticles



**DISEASE**

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# Cellular origin of microparticles

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- Platelet (activation of coagulation)
- Endothelial cells (auto-immune diseases, TTP, activation of coagulation)
- Monocytes (inflammation, infection, ...)
- Leucocytes (inflammation, ...)
- Lymphocytes (diabetes mellitus, ...)

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# Biological effects of microparticles

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- **Procoagulant** (phospholipids)
- **Prothrombotic** (TF bearing  $\mu\text{P}$ , TF upregulation, platelet-leucocytes aggregates)
- **Enhancement of monocyte-endothelium adhesiveness**
- **Pro-inflammatory** (TNF - $\alpha$  ...)

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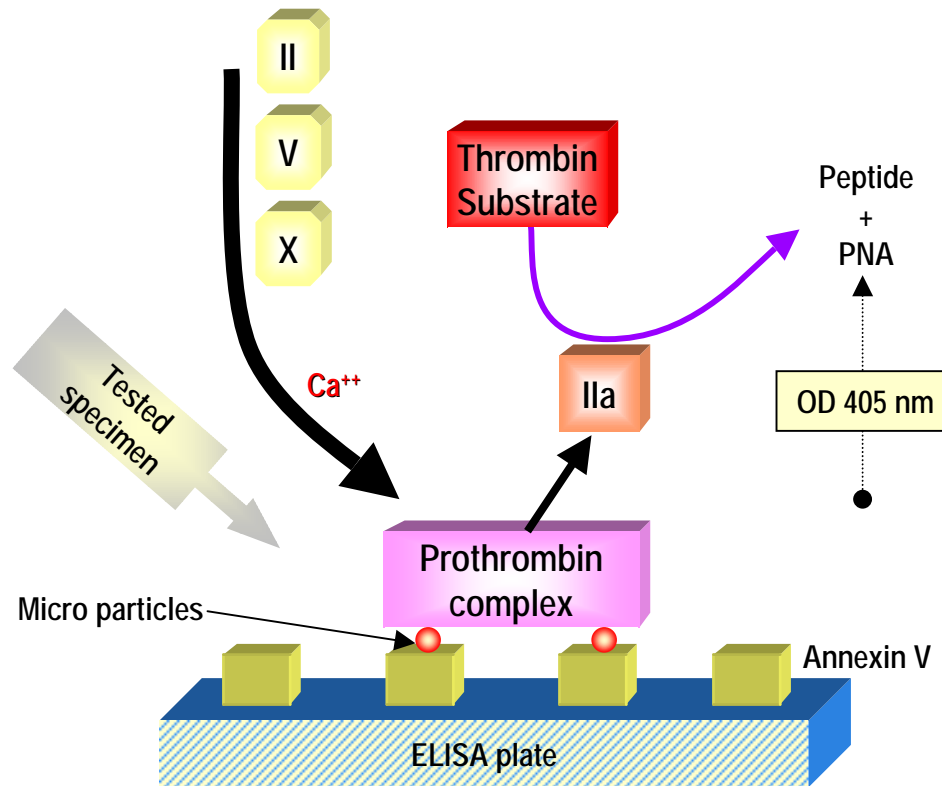
# Microparticles

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- Long shelf life ( $\approx$  6 days)
- Bind to Annexin V
- Released from many blood cells
- Bear CDs, TF, TM, GP IIb- IIIa,...

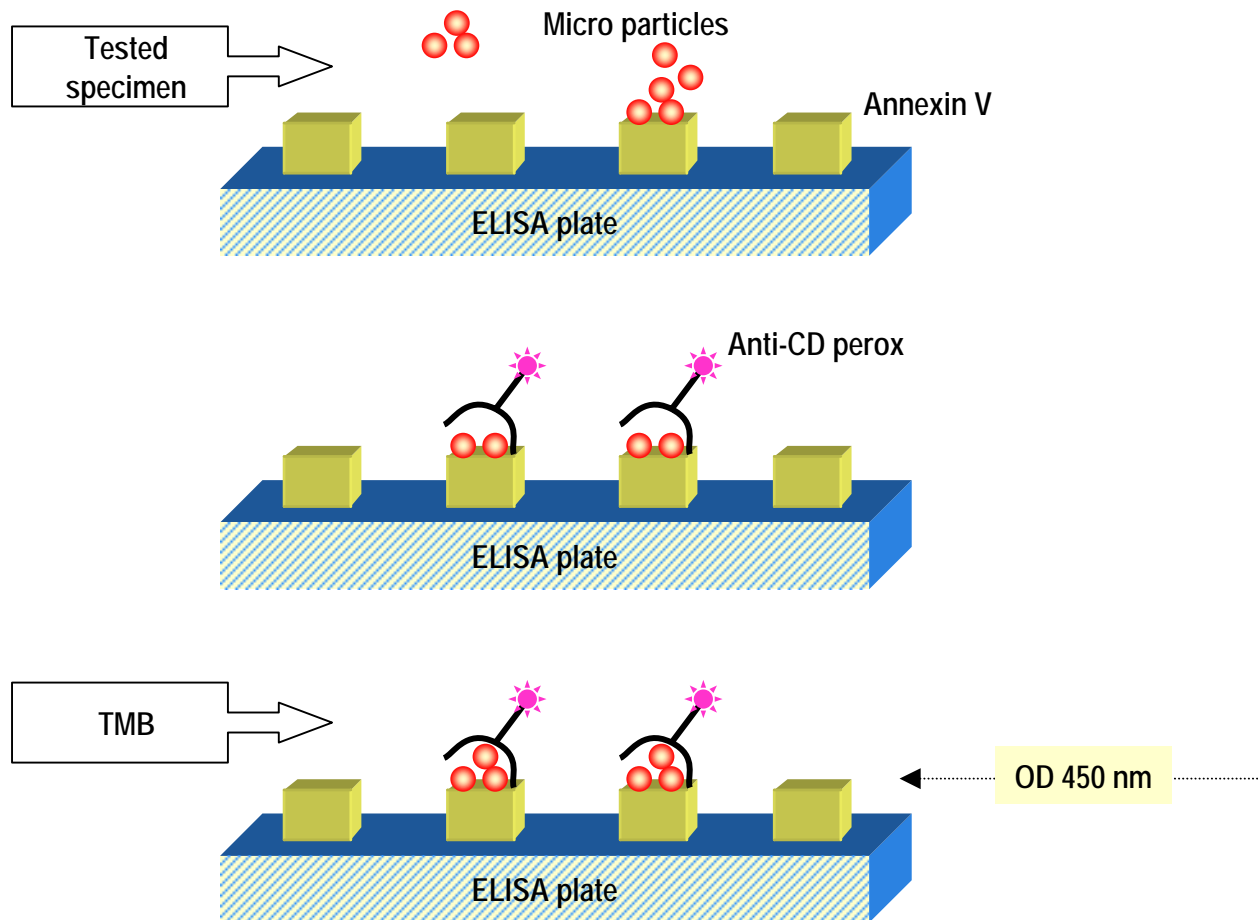
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# Assay of procoagulant microparticles



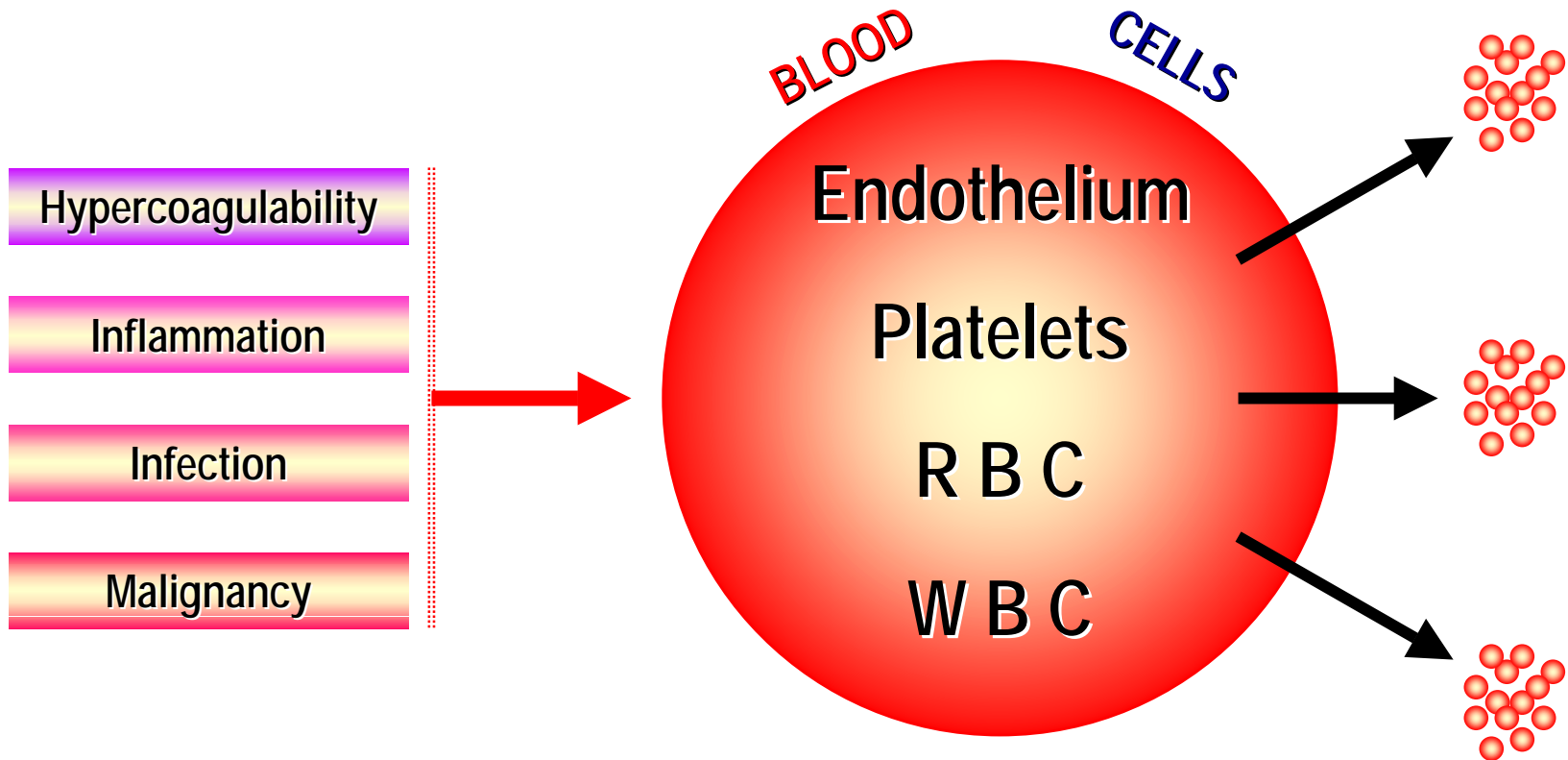
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# Measurement of cell derived specific microparticles



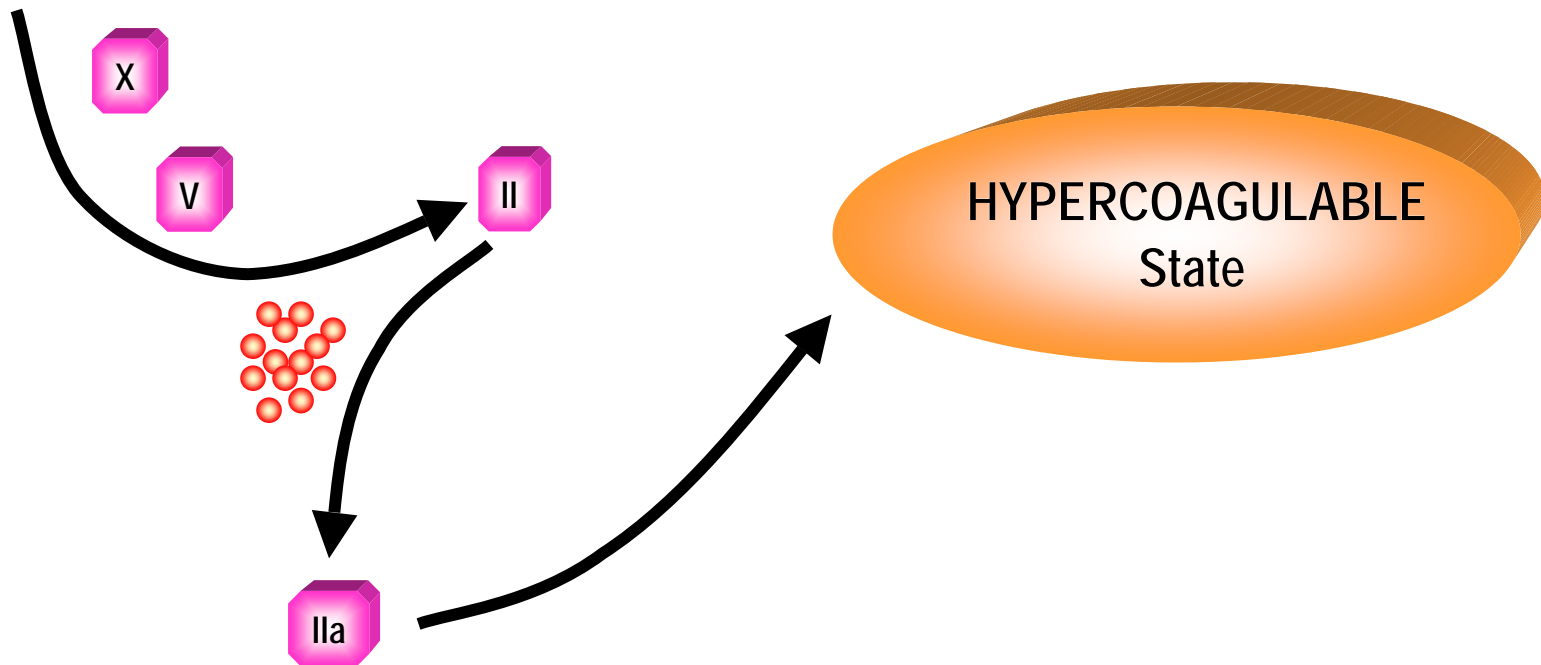
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# Microparticles as a diagnostic marker



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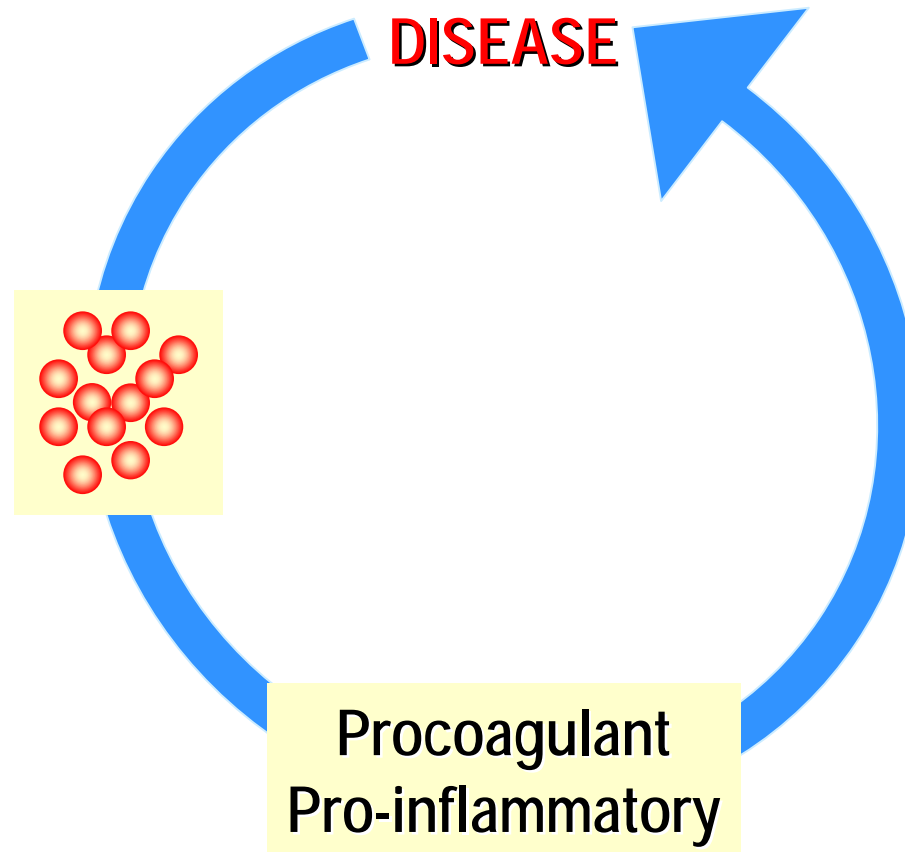
# Microparticles as a risk of disease



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# MICROPARTICLES:

## Cause and consequence of disease states



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# Clinical applications

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- Prognosis of myocardial infarction
- Follow-up and therapy monitoring of patients with myocardial infarction
- Prognosis of recurrence risk
- Diabetes, Malignancy, Pregnancy

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# Pathological variations of microparticles

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- Elevated in M.I. (x2 to x10)
- Elevated in cancer (predictor of metastasis?)
- Predicts vascular complications in diabetes
- Elevated in haemophilia (x10)
- Increased during Novoseven (VIIa) therapy
- Correlates with severity of hypertension

Note: responds to therapy efficacy

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# Procoagulant Micro-Particles

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- Many studies ongoing in Europe, Japan, USA
- Many clinical data available
- HYPHEN BioMed has got the worldwide licence rights for this patented technology
- Method: Elisa, Latex (?), Others (?)

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# Conclusions

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- New Assay for a New Parameter in Full « Concert » with Present Scientific Approaches.
- Many New Clinical Applications.
- Great Commercial potential for a Patented Assay.

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