

Ansar MEFTEH
Faculty of Medicine of Monastir

& Fatma ZAABI
Faculty of Pharmacy of Monastir

Formerly considered as highly specific for SLE, but this specificity is actually debated.

• **Low prevalence <5% in SLE**
• **High titers of anti-PCNA antibodies may be specifically associated with SLE**

Besides SLE, can be present in;

- Rheumatoid arthritis/ Systemic sclerosis/ Sjogren syndrome
- Autoimmune thyroiditis
- Hepatitis B and C virus infection
- Even in healthy individuals
- Associated with malignancies (lymphoma)

Anti-PCNA antibodies

- Firstly reported in **1978** in a **Japanese woman** diagnosed with **systemic lupus erythematosus (SLE)**
- Initially designated as '**Ne**' then as **blastogenic nuclear antigen** (high expression of the target antigen in mitogen-stimulated or proliferating lymphocytes) and ultimately identified as **PCNA** (elevated Antigen expression in rapidly Proliferating Cell Nuclei)

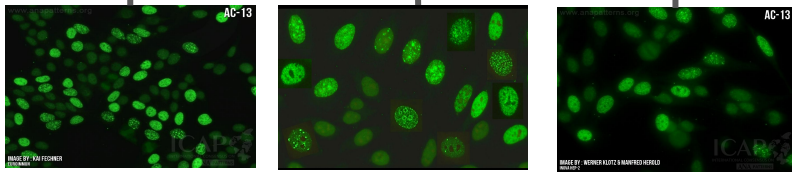
- **Family:** Antinuclear antibodies
- **Target antigen:** **34 kDa** auxiliary protein of DNA polymerase δ , involved in **DNA replication and repair**.

Screening technique: **IIF (Indirect immunofluorescence)** on HEP-2 cells (IIF prevalence of 0.07%)

IIF pattern on Hep-2 cells: **speckled pleomorphic fluorescence** (30-60% of cells) grains of variable size and distribution, no marking of cells in mitosis

Confirmation techniques:

- **Double immunodiffusion** according to Ouchterlony, **line/dot blot, ELISA, ALBIA, NALIA, LIA..**
- At cut-off values resulting in 100% specificity, 52.5% (ELISA), 42.5% (ALBIA) and 35% (LIA) of samples with a proliferating cell nuclear antigen-like IIF staining pattern were positive



In case of pleomorphic staining not confirmed on confirmation techniques:

- consider **pseudo-PCNA antibody** testing
- **rule out first a malignancy, rather than SLE.**

