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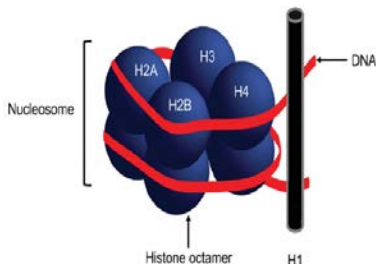
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Firstly described in **1959** in patients with Systemic Lupus Erythematosus (SLE).

Target antigen: Anti-histone antibodies (AHAs) may be directed against free histones or histones bound to DNA. IgG is considered the most clinically relevant and detected isotype.



Classically attributed to **SLE** and **drug-induced SLE DILE (>90%)**.

Most commonly involved drugs:

- **procainamide (sensitivity >90%)**
- **hydralazine**
- **interferon-α**
- **sulfasalazine**
- **captopril**



Correlated with:

- More severe renal involvement
- Oral ulcerations
- Lymphopenia

Anti-histones antibodies

Screening technique: Indirect immunofluorescence (IIF) on HEp-2 cells: Sensitivity up to 80% in active SLE. Sera with antibodies to certain histone classes or hidden determinants on native or denatured histones may show a weak or even negative ANA.

Subunit histone antibody analyses may also help distinguish SLE from certain cases of DILE: ANAs are more heterogeneous in SLE than in DILE and reflect epitope spreading.

Also found in:

- **Sjogren's syndrome,**
- **Idiopathic inflammatory myopathies**
- **Rheumatoid arthritis**
- **Vasculitis (Takayasu arteritis ++)** correlated with the presence of Neutrophils Extracellular Traps (NETs).

IIF Pattern on HEp-2 cells: Homogeneous: Homogeneous and regular fluorescence across all nucleoplasm [A]. Mitotic cells have the chromatin mass intensely stained in a homogeneous hyaline fashion [B]. A **mitotic chromosomal pattern (MCA-1)** can be seen with a modified histone H3.

Confirmation techniques:

- **Enzyme-linked immunosorbent assay (ELISA):** Sensitivity = 90%, Specificity = 84%
- **Chemiluminescence assays:** detection of **whole histone or histone subunits**
- **Line/dot blot immunoassays:** The major drawback to these assays is the histone antigens are **denatured** ⇒ **reduced sensitivity** in detecting antibodies against conformational epitopes.

