Fatma SGHAIER & **Ons ELHMADI**
Faculty of medicine of Sousse — *Faculty of pharmacy of Monastir*

Anti-Th/To antibodies

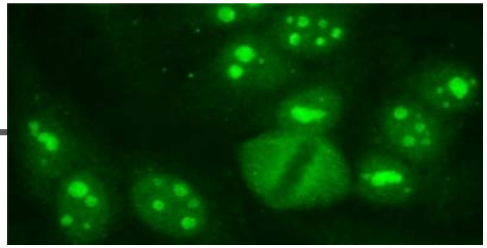
- Anti-Th and To antibodies were reported in 1982 and in 1983 independently,
- Later shown to be identical ⇒ anti-Th/To antibodies

- **Target antigen:** complexes located in the nucleolus of the cell nucleus
  - oTh = ribonucleoprotein 7–2/MRP-RNP
  - oTo = ribonuclease 8–2/RNP

Main disease:
Systemic Sclerosis (SSc)
Sensitivity : 3.3 % (0 – 14,3%)
Specificity : 98.7 % (90 – 99%)

- **Not included** in the 2013 ACR/EULAR classification criteria of SSc
- Useful for the diagnosis in case of negativity of the more common SSc-specific antibodies (anti-centromere, anti-topoisomerase I, anti- RNA-polymerase III)
- Associated with:
  - limited cutaneous subset (31-100%)
  - interstitial lung disease (18-54%)
  - pulmonary hypertension (23%)
  - myositis
- Cumulative 5- and 10-year survival rate: 78 % and 65%, respectively

Method	Indirect Immunofluorescence on HEp-2 cells	Immunoprecipitation	Line/dot blot immunoassay
Use	Screening	Confirmation	Confirmation
Advantages	- allows detecting associated patterns	- high specificity	-specific -multi-antigenic
Limits	-the nucleolar pattern is not specific -may be negative	- only performed in a small number of research laboratories -time-consuming	-false positives -semi-quantitative -cost

⇒ Combining IIF and immunodot improves specificity

IIF pattern on HEp-2 cells: homogeneous nucleolar: diffuse fluorescence of the entire nucleolus, while the metaphase plate shows no staining.
The most common SSc antibody found in patients with negative antinuclear antibodies