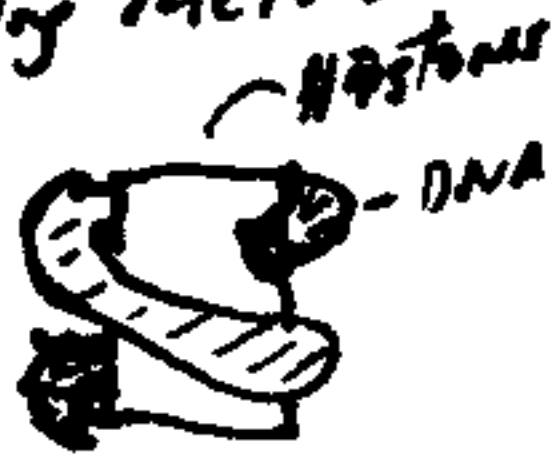


Chromatin + Access

- Chromatin repeating subunit: nucleosome
- Nucleosome limits access of transacting factors

- Histone blocks DNA
- DNA blocks DNA
- Histone tails block DNA



- *in vitro* - binding by tx. factors is reduced ~ 2-5 orders of magnitude by presence of nucleosomes

- Histone - structure

- TFIID components similar in structure

TAFII 40 } heterodimeric
TAFII 60 }

These may be able to form nucleosome-like structures

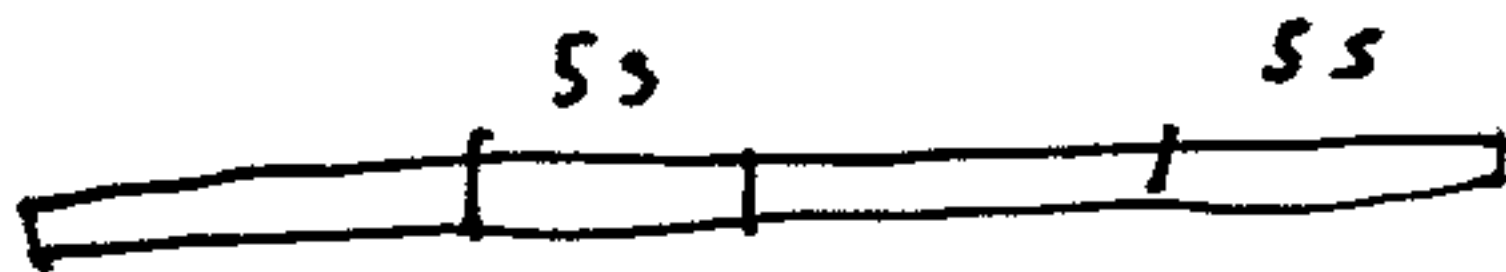
- CBF-A, CBF-C also do this

- CENP-B CENP-E

→ NI show some similarity to HMF.

Histone H3 = Linker Histone

- resembles winged-helix proteins (HTH-like)



Test nucleosome assembly

- depending on where on DNA histone
assembles, get diff. mobility



- run 2D gel to see how stable each is



Proposes histone H2 serves to lock histones
in place, in a seq. specific way

Proposes that proper nucleosome positioning will allow DNA sites (e.g. tx binding region) to be presented in correct manner.

Also can get "static loops" to bring two DNA regions together.

Acetylation changes conformation but is not always the only thing needed for tx. changes.

Acetylation factors

GCN5 in yeast has some activity
PCAF

many tx. co-factors have histone acetylation activity

This may be how they modify tx.

Thyroid hormone regulator of TRBA in frog development

TH Receptor --- can inhibit tx

-- can induce when TH around

Chromatin disruption NOT dependent on tx

