

Nukleiinhapped

- **Ld.nucleus=tuum**
- **DNA**-desoksüribonukleiinhape
- **RNA**-ribonukleiinhape
- Kõrgpolümeerid, mille monomeerideks on tuhandes **nukleotiidid**

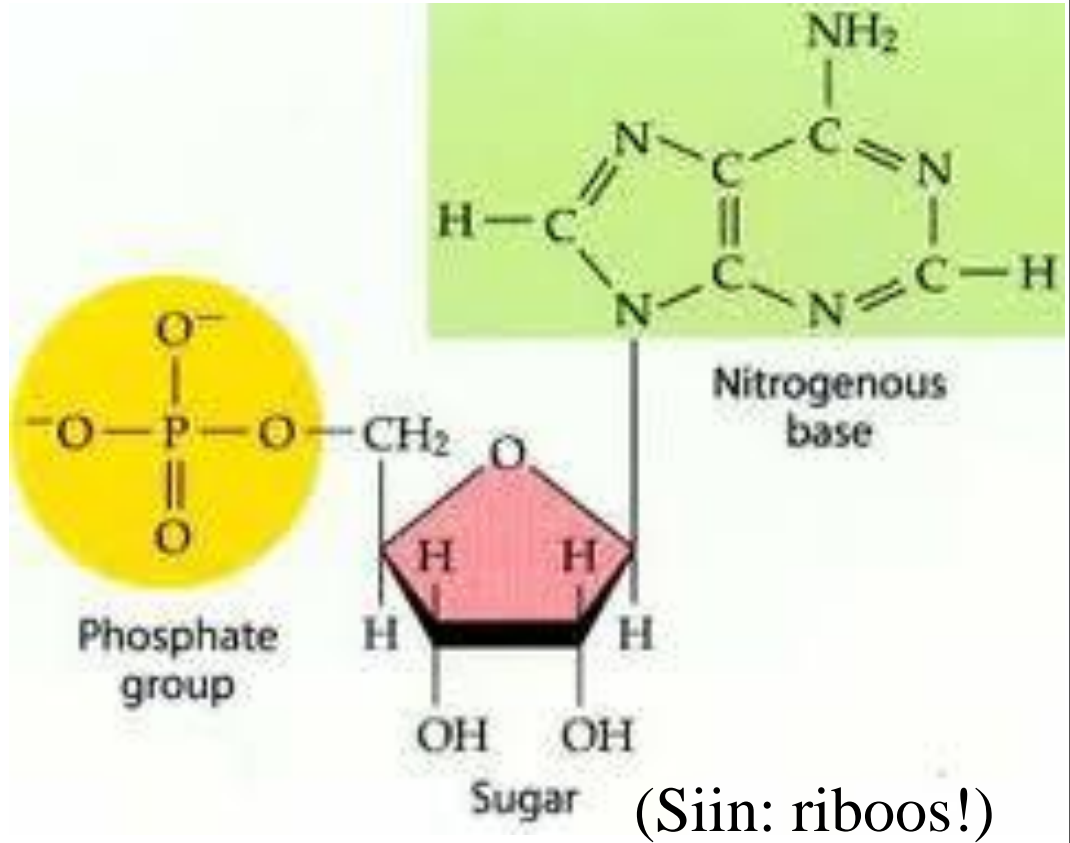
Nukleiinhapped

Nukleotiidid:

Süsivesik

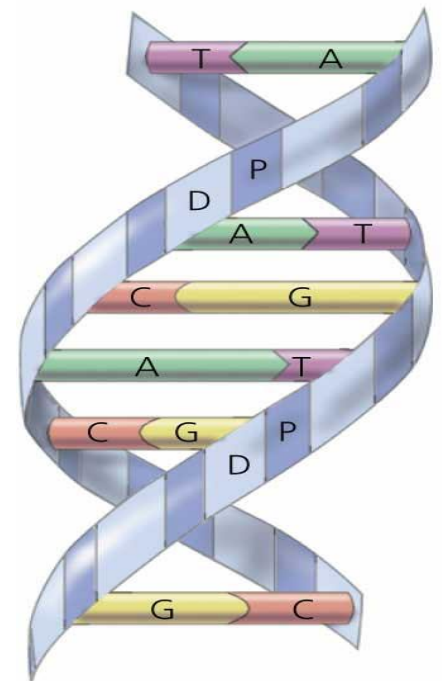
Fosforhappejääk

Lämmastikalus



DNA

- DNA on struktuurilt biheeliks e kaheaahelaline = sekundaarstruktuur (Välimuselt meenutab redelit)
- DNA ühe ahela nukleotiidne järjestus on tema primaarstruktuur

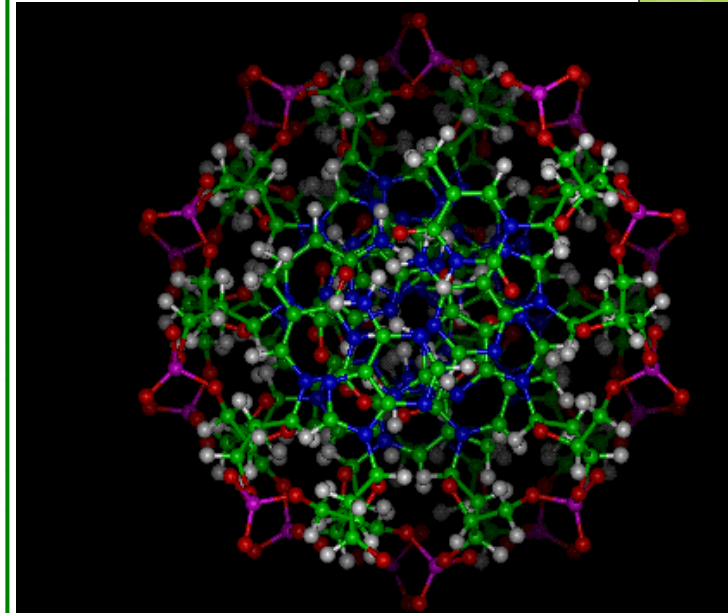
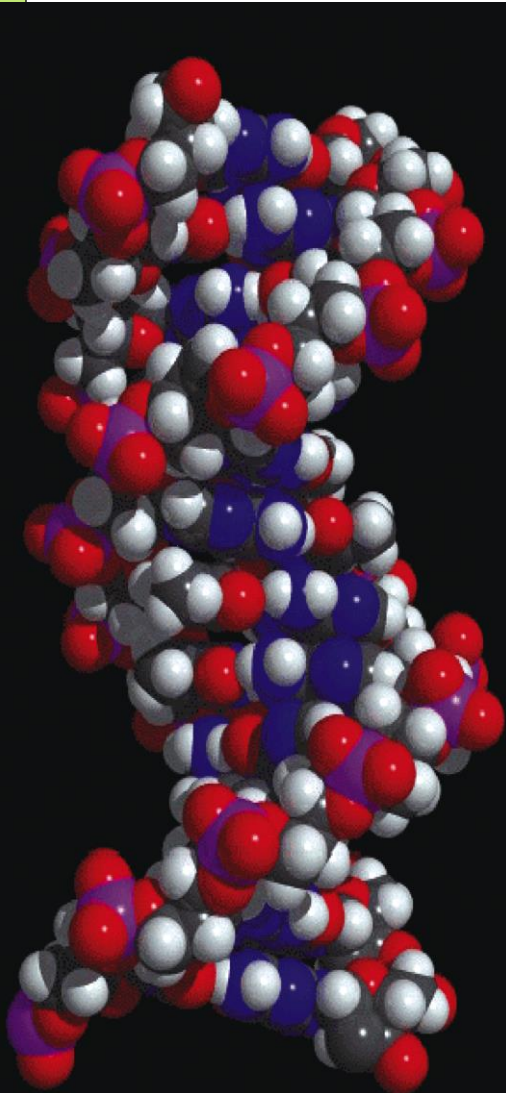
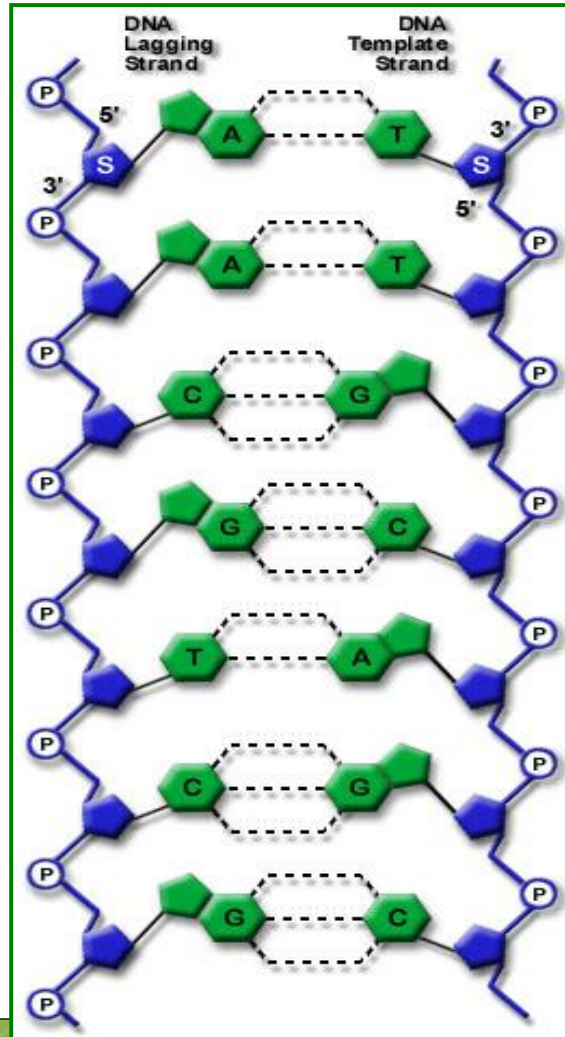


DNA

- Nukleotiidide fosforhappejääk ja desoksüriboos ahelana ja desoksüriboosist lähtub (nagu redelipulk) N-alus
- Olemas **4** erinevat N-alust! Kuna ainult nendes seisneb nukleotiidide erinevus, siis tulenevad nukleotiidide nimetused N-alustest.
- Õppige pähe nimetus ja tähis!

Desoksüribonukleiinhape

DNA

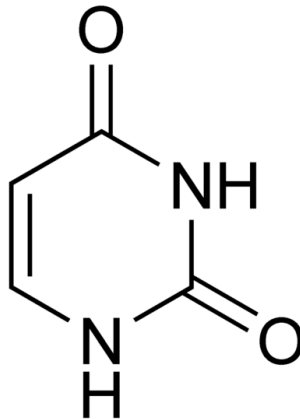


Nukleiinhapped

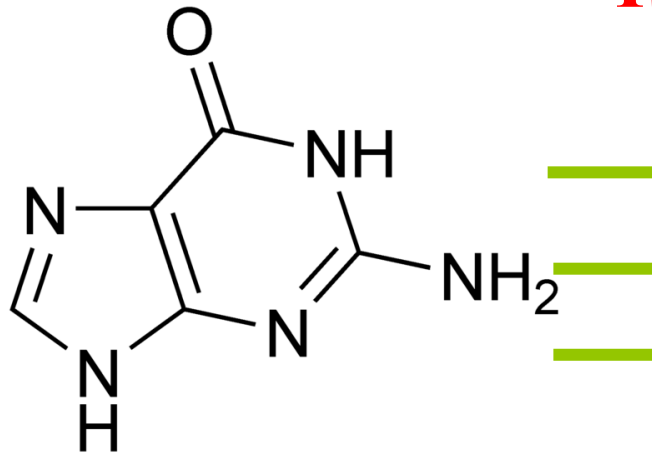
Lämmastikaluseid DNA-s on 4:



Adeniin - A

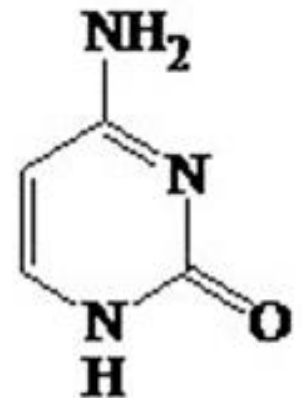


Tümiin - T

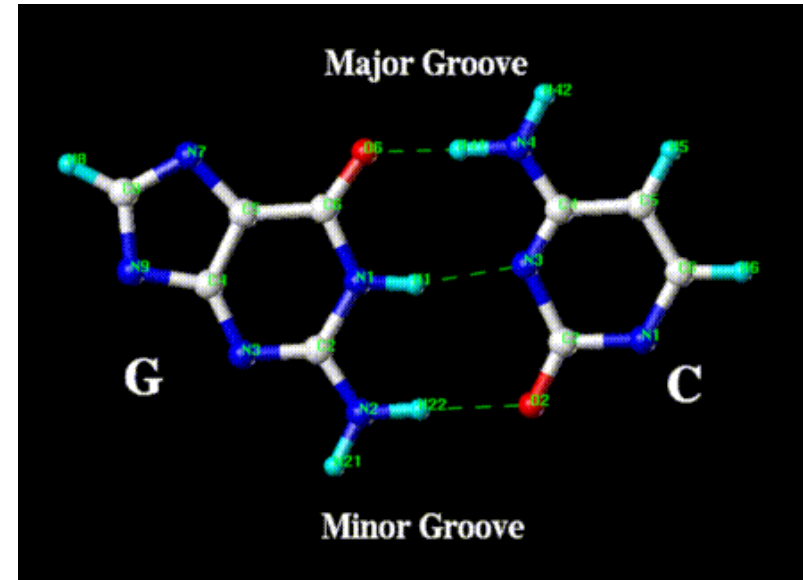
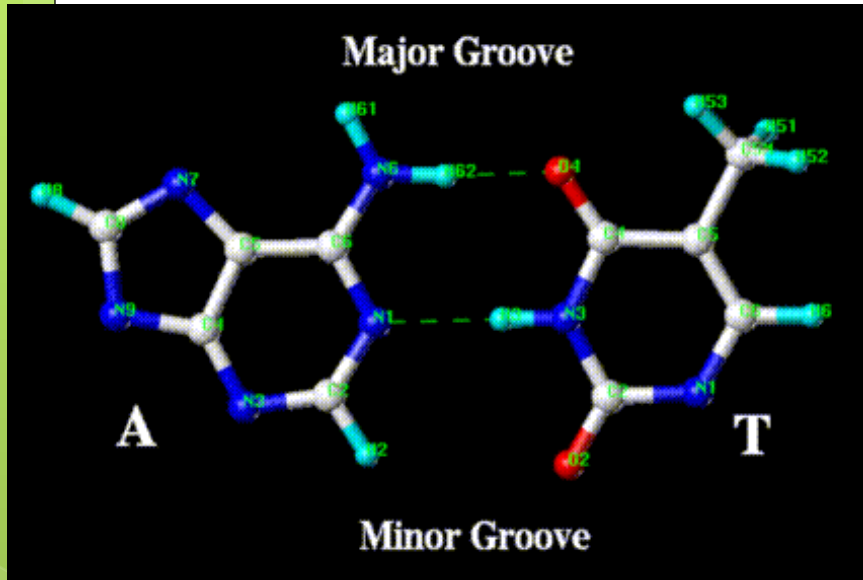


Guaniin - G

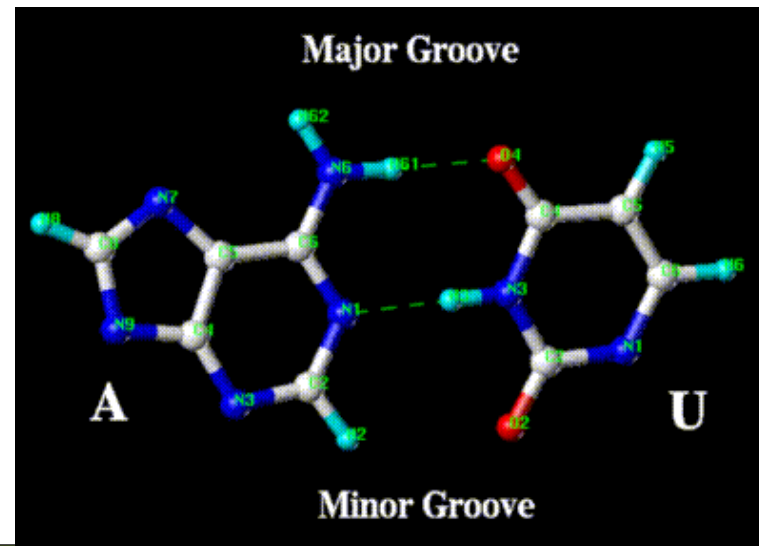
Tsütosiin - C



Nukleiinhapped

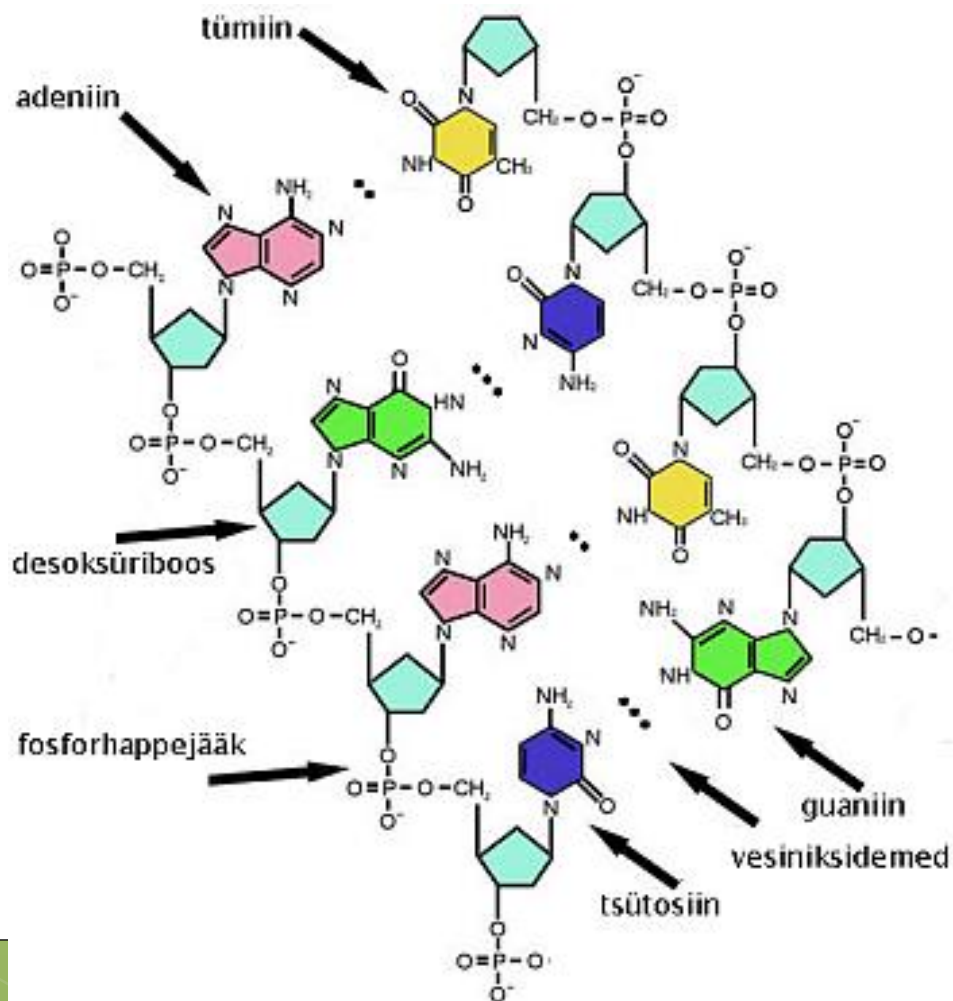


Komplementaarsus- ühele
lämmastikalusele vastab
teine konkreetne
lämmastikalus: A-T ja C-G

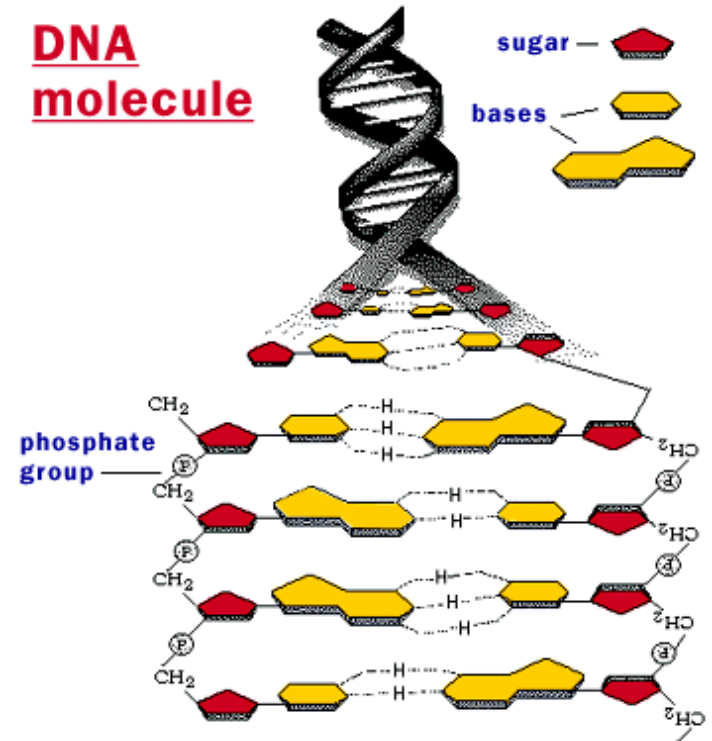


Desoksüribonukleiinhape

DNA



DNA
molecule



DNA

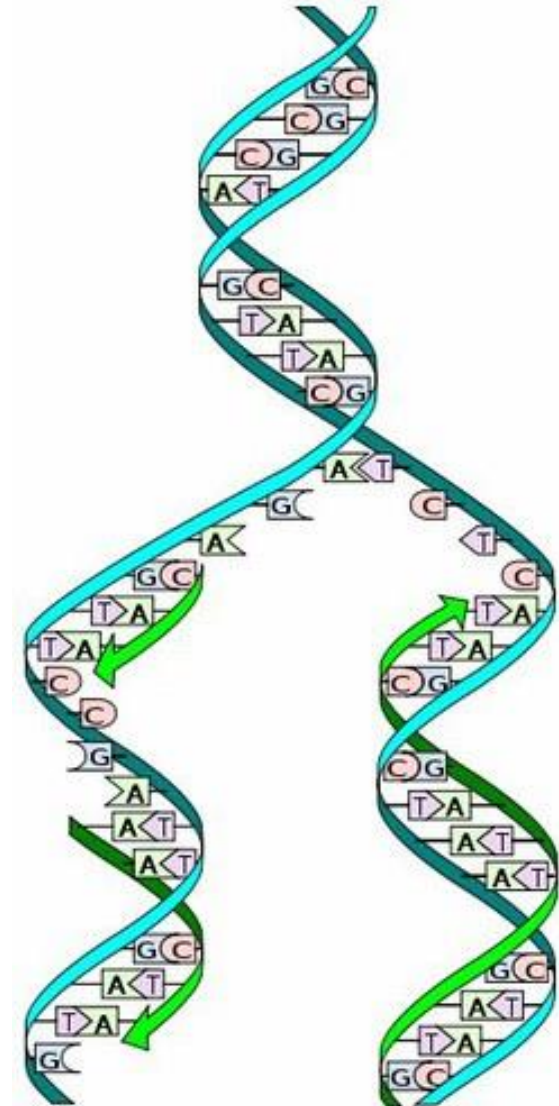
- Ülesanne:
 - päriliku informatsiooni säilitamine
 - Päriliku informatsiooni täpne ülekanne raku jagunemisel
- **Replikatsioon**=
DNA kahekordistamine
DNA-polümeraasi ja helikaasi abil

<http://www.youtube.com/watch?v=zdDkiRw1>

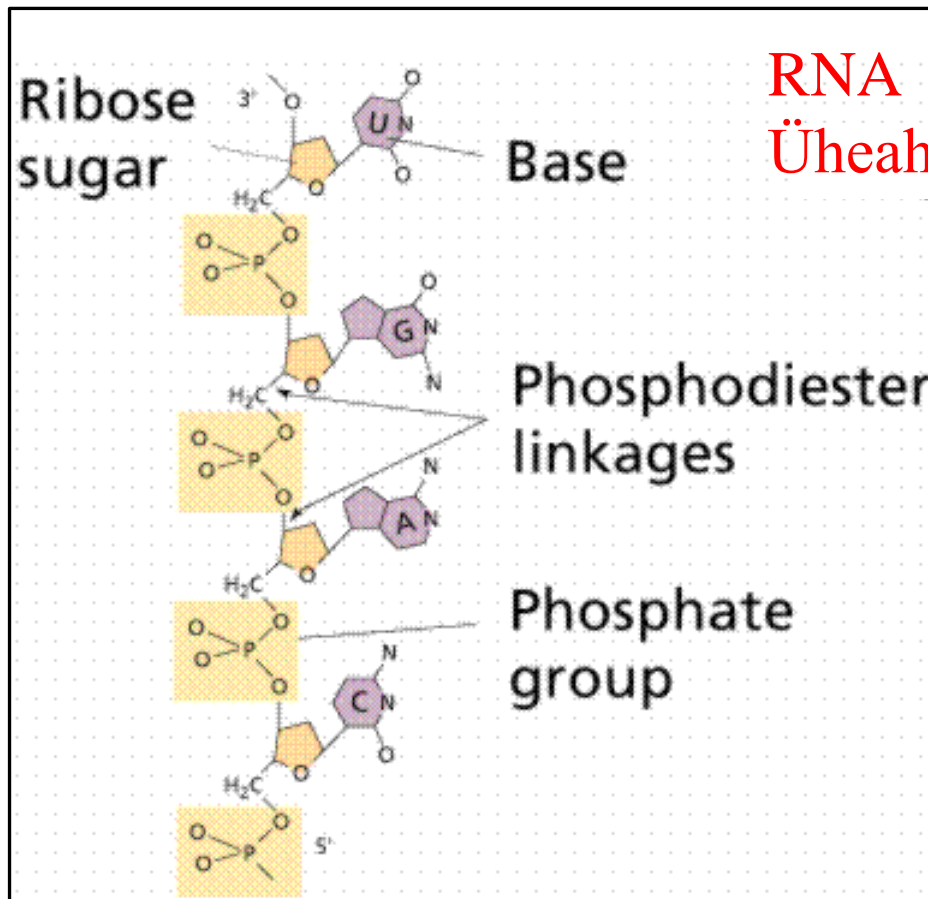
[PdU&feature=related](http://www.youtube.com/watch?v=PEPvrdZ3o)

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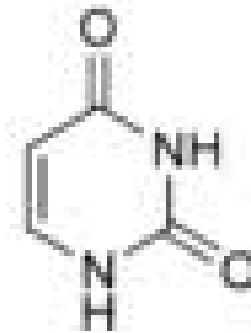
[8&NR=1](#)



Ribonukleiinhapped -RNA



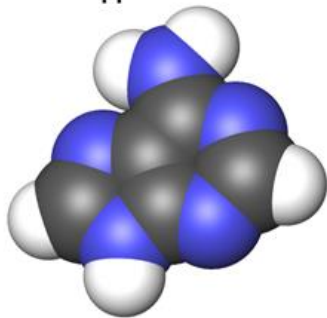
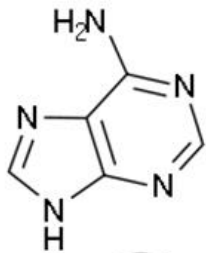
RNA
Üheahelaline



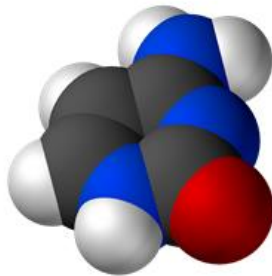
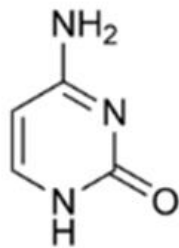
uratsiil

T-tümiini ei ole, selle asemel on U-uratsiil!
Seega koopia tegemisel DNA-st, kui tahaksime lisada T, siis selle asemel paneme U!

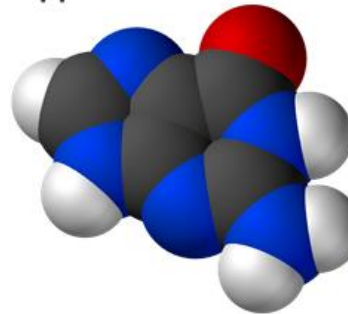
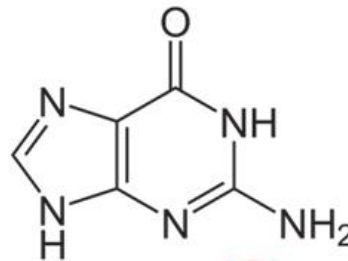
Ribonukleiinhape- RNA



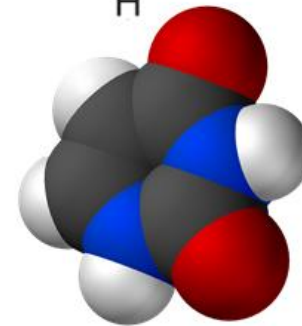
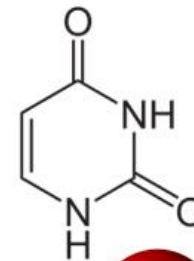
adeniin



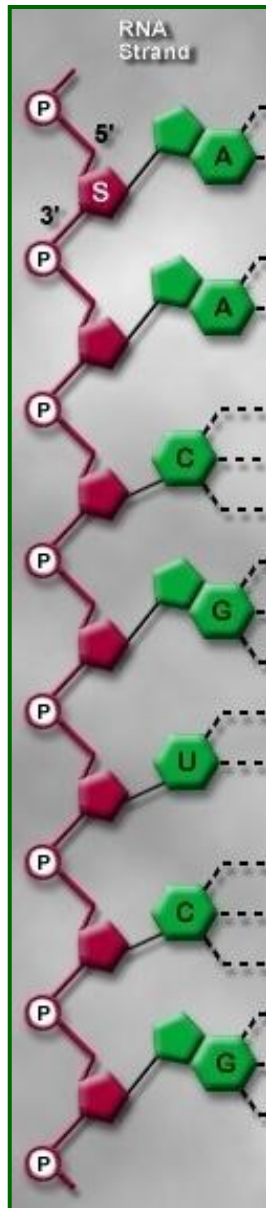
tsütosiin



guaniin



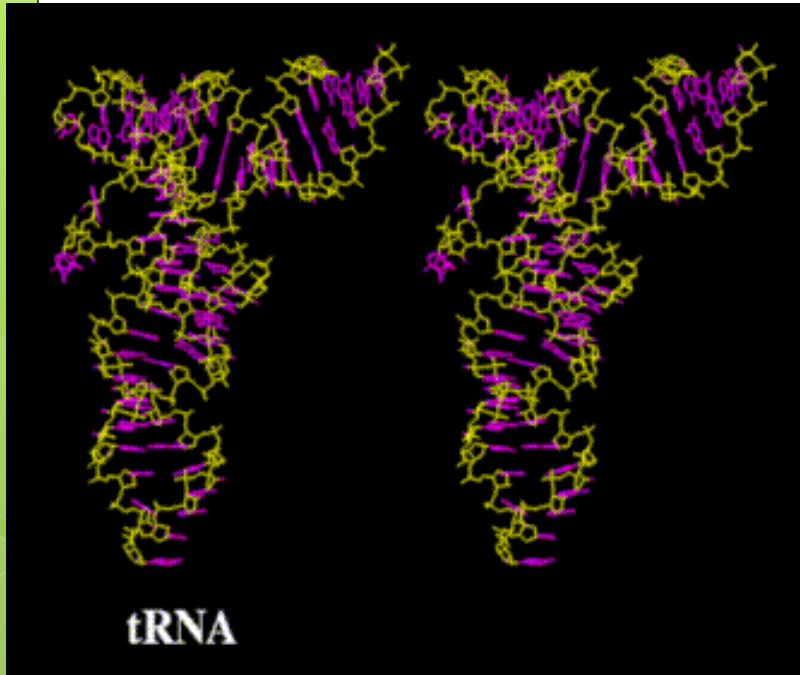
uratsiil



RNA

- **RNA-sid on erinevaid, meie olulisemad on:**
- **Informatsiooni mRNA-** Kopeerib DNA-lt informatsiooni valkude ehituse kohta (meie pärilikkus!)
- **Transpordi tRNA-** transpordib ribosoomi aminohapped
- **Ribosoomi rRNA-** Vastutab valkude tootmise eest, et meie pärilikud omadused saaksid avalduda

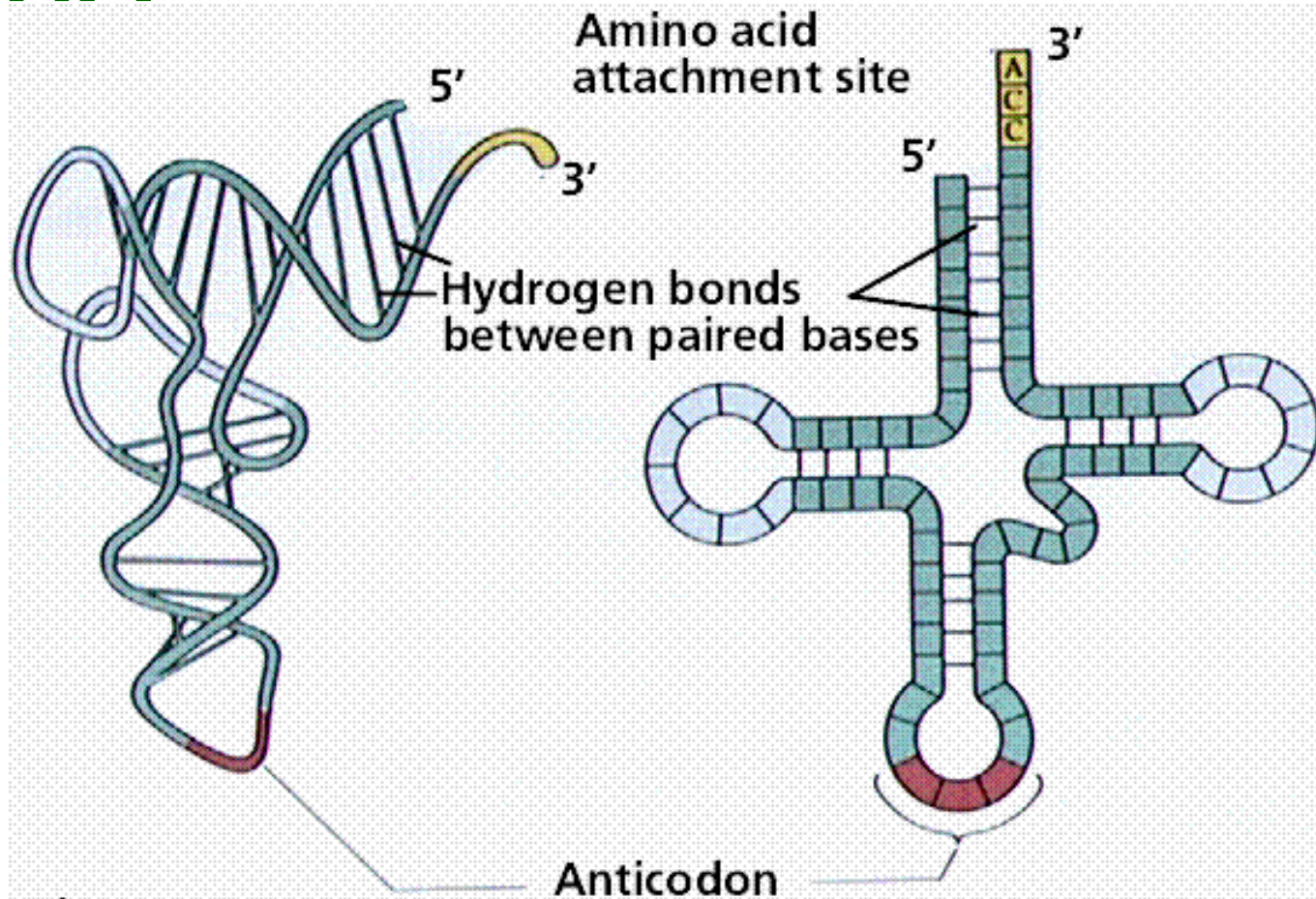
tRNA



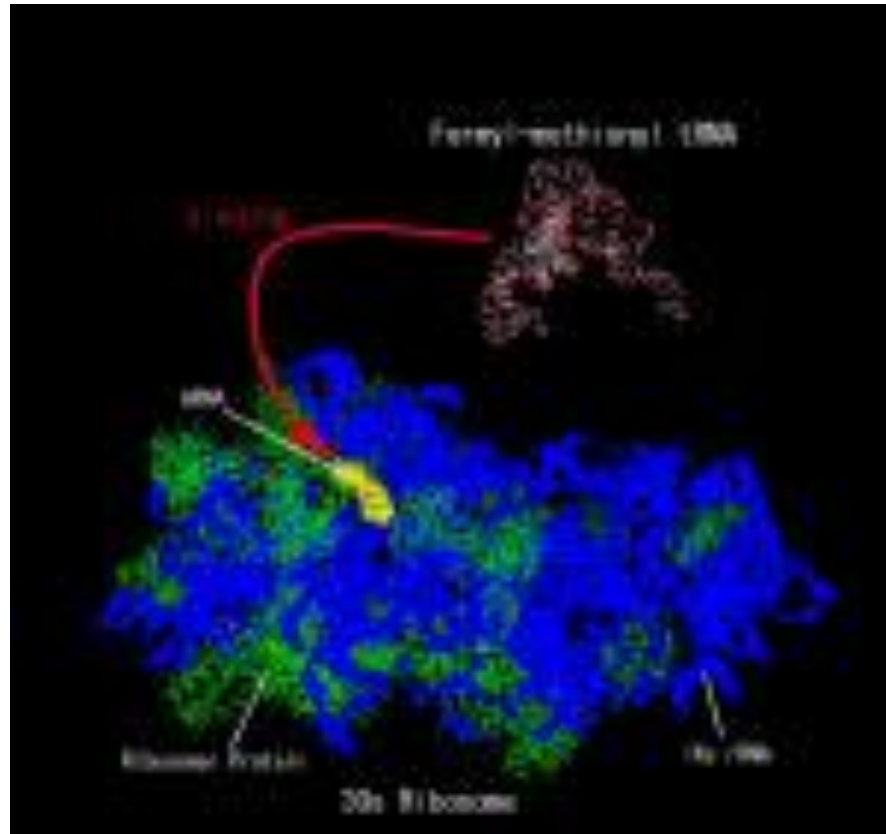
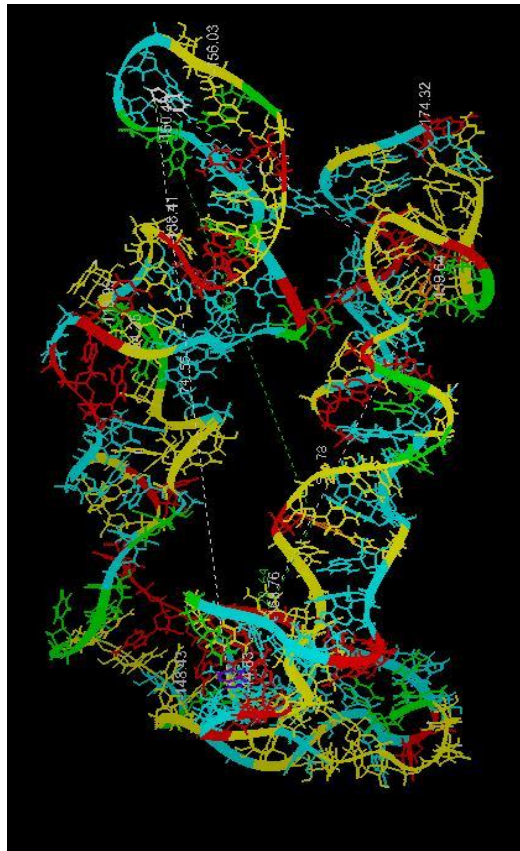
Meenutab ristikulehte: päises
nn antikoodon ja sabas
aminohape



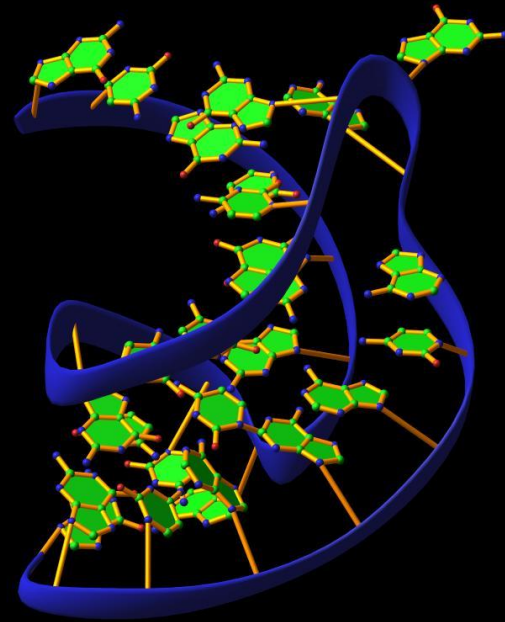
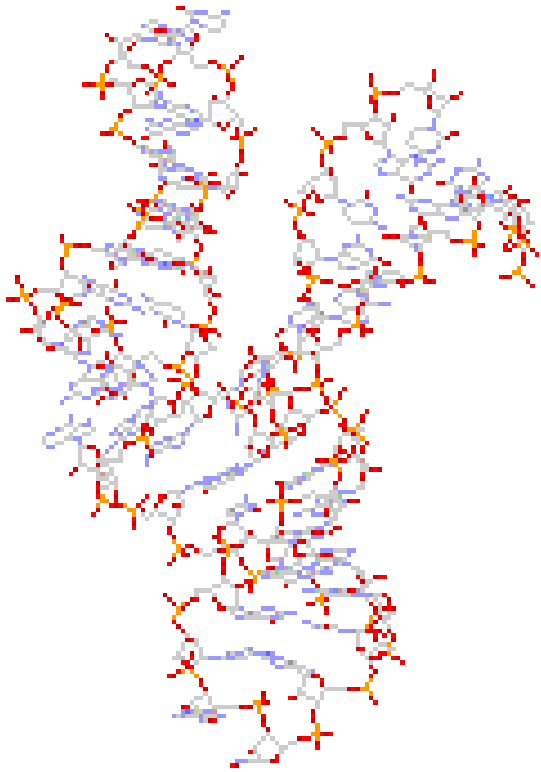
tRNA



mRNA



rRNA



Kasutatud kirjandus (Ülle Irdt)

- <http://www.ohtuleht.ee/191240>
- <http://et.wikipedia.org/wiki/T%C3%A4rklis>
- <http://janeajaveeb.wordpress.com/2008/10/02/ahjukartulid/>
- <http://www.mesindus.eu/node/107>
- <http://www.husqvarna.com/ee/construction/products/accessories-for-wall-saws/oli/>
- http://www.youtube.com/watch?v=PEPvrdZ3o_8&NR=1
- Kersti Veskimetsa esitluse materjalid.
- <https://www.youtube.com/watch?v=AGzsgTMgSog>
- <https://vara.e-koolikott.ee/node/279>
- <http://olivia.eu/et/content/44-toidurasvad-tasakaalu>
- <http://ee.yuanjinchemical.com/pharmaceutical-intermediate/lamivudine-intermediate/cytosine-cas-no-71-30-7.html>
- <https://www.taskutark.ee/m/rna-ja-dna/>