

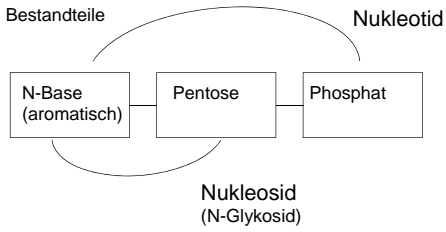
### 4. Nucleotide und Nucleinsäuren

**Nucleotide:**

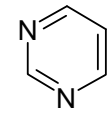
Bestandteil von Coenzymen der Oxidoreduktasen, Transferasen  
Bausteine der Nucleinsäuren

**Nucleinsäuren:**

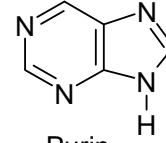
Speicherung, Umsetzung und Weitergabe der genetischen Information



### N-Heterocyclen der Nucleotide



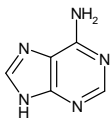
Pyrimidin  
(1,3-Diazin)



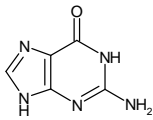
Purin

Pyrimidin + Imidazol

### Die N-Basen von DNA und RNA

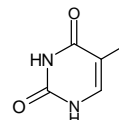
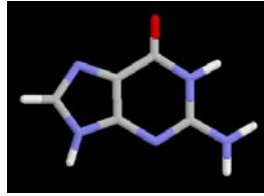
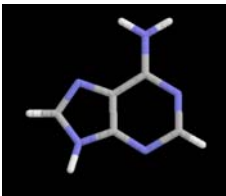


Adenin

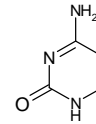


Guanin

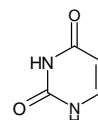
**Purin-Basen**



DNA Thymin

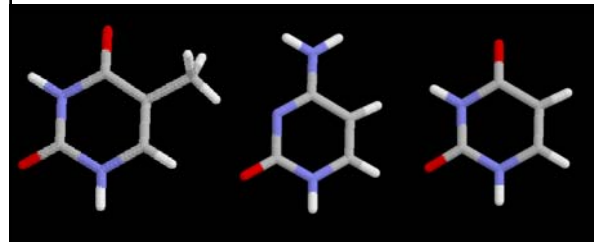


Cytosin

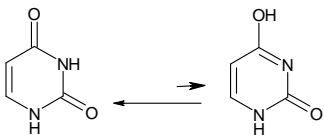


Uracil RNA

**Pyrimidin-Basen**



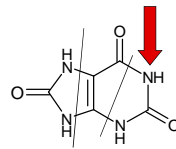
### Lactam-Lactim Tautomerie



Uracil: Lactamform

Lactimform

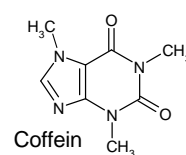
### Abbau der Purinbasen zu Harnsäure



Harnsäure

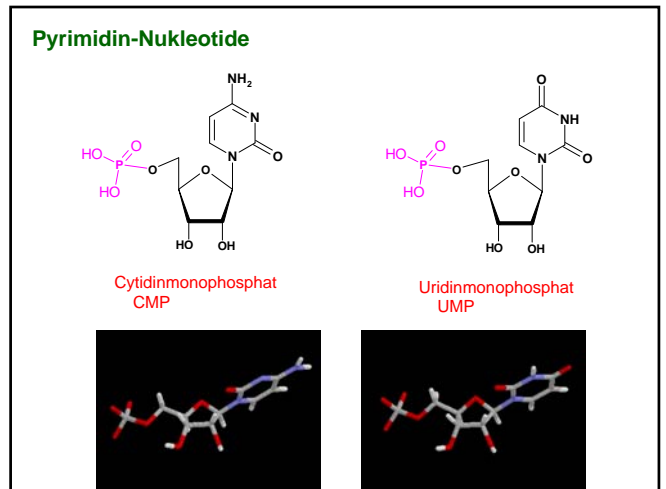
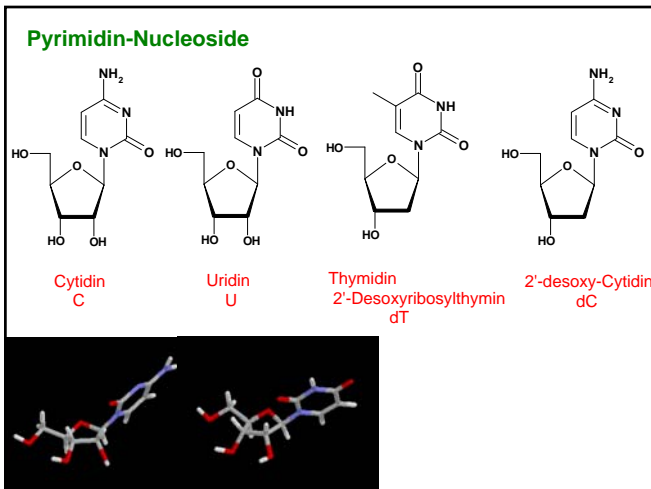
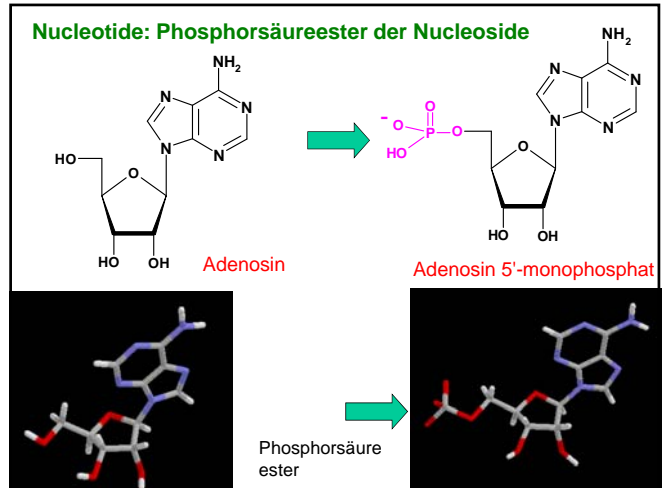
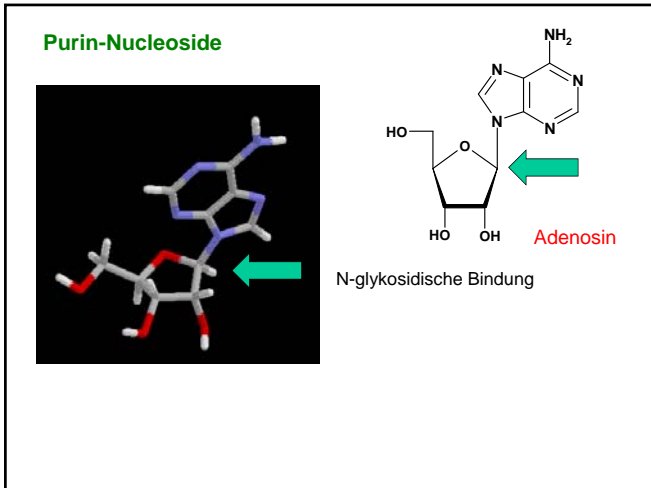
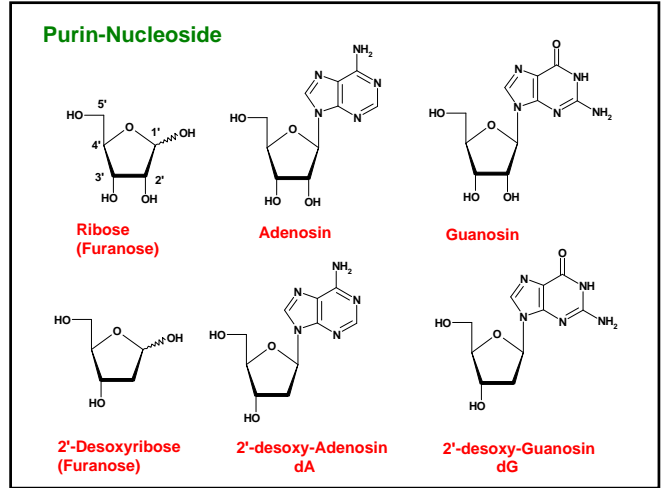
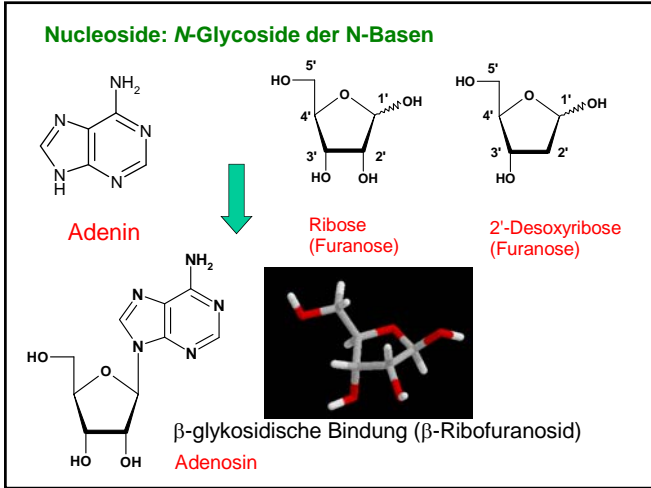
pKs: 5.4

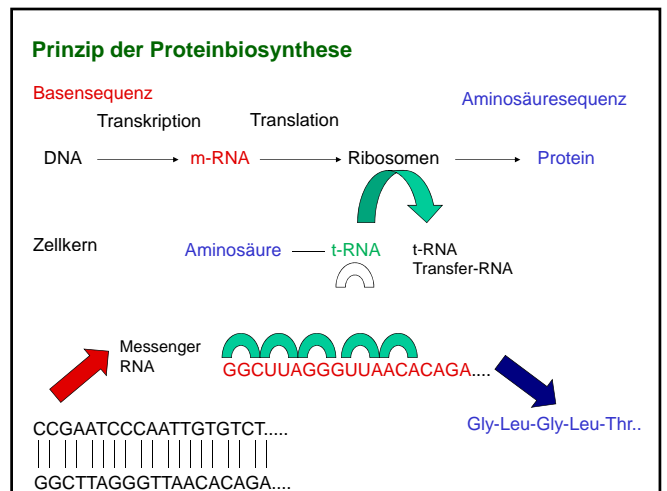
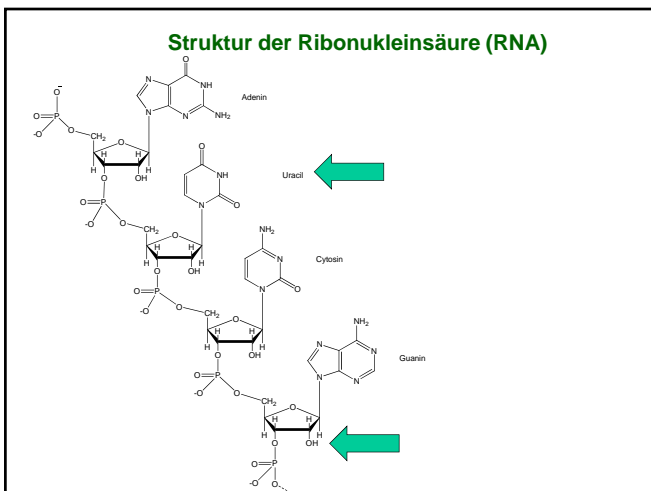
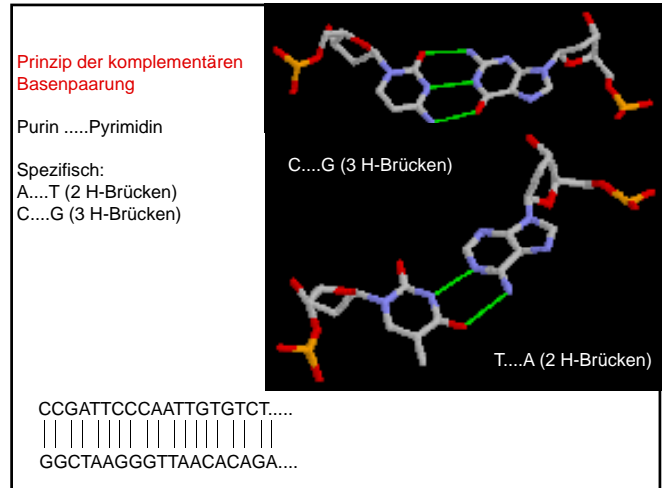
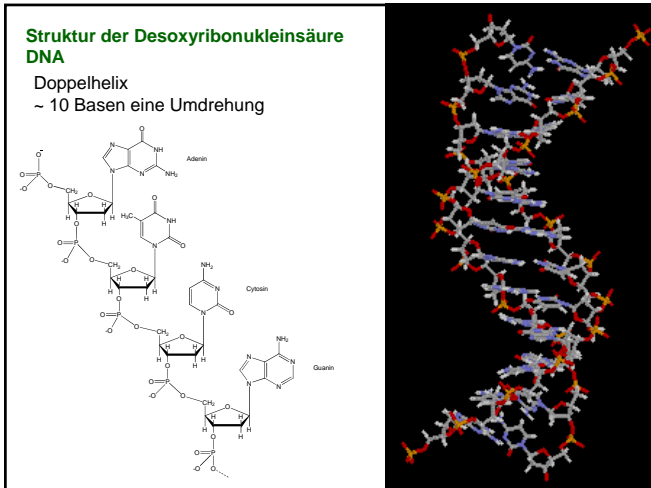
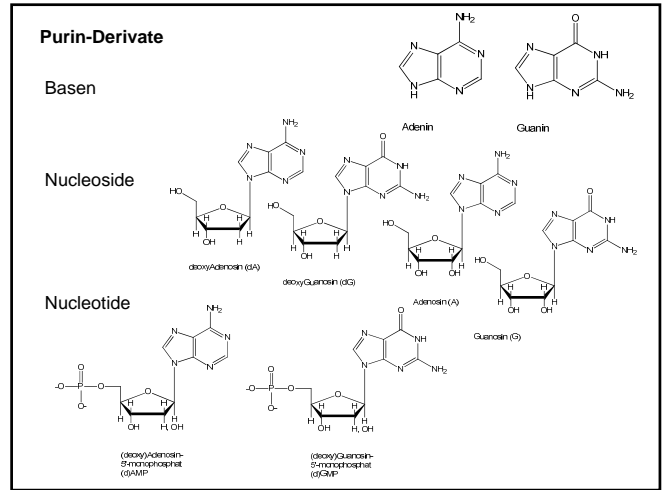
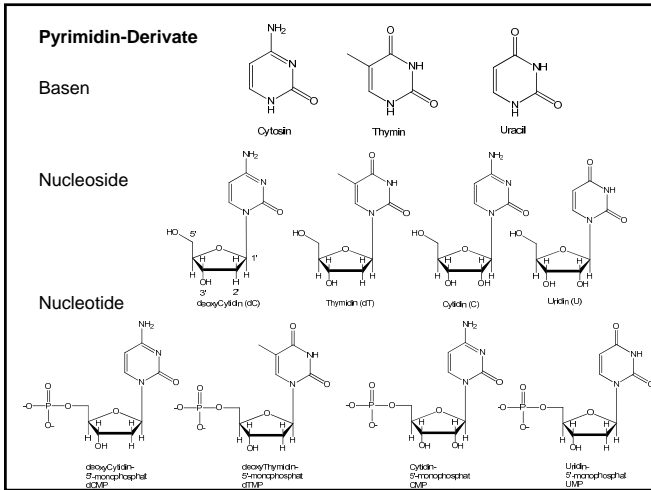
Weiterer Abbau zu Harnstoff (H<sub>2</sub>NCONH<sub>2</sub>)



Coffein







**Genetischer Code:**  
 Basentriplett codiert eine Aminosäure  $4^3 = 64$  Möglichkeiten

Aminosäure →

Struktur einer t-RNA

Anticodon →

Genetischer Code:  
 universell  
 degeneriert

**Proteinbiosynthese**

