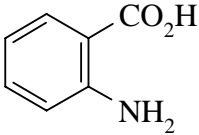
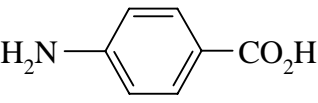
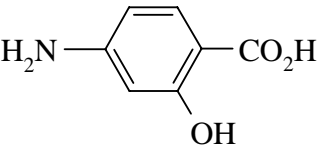


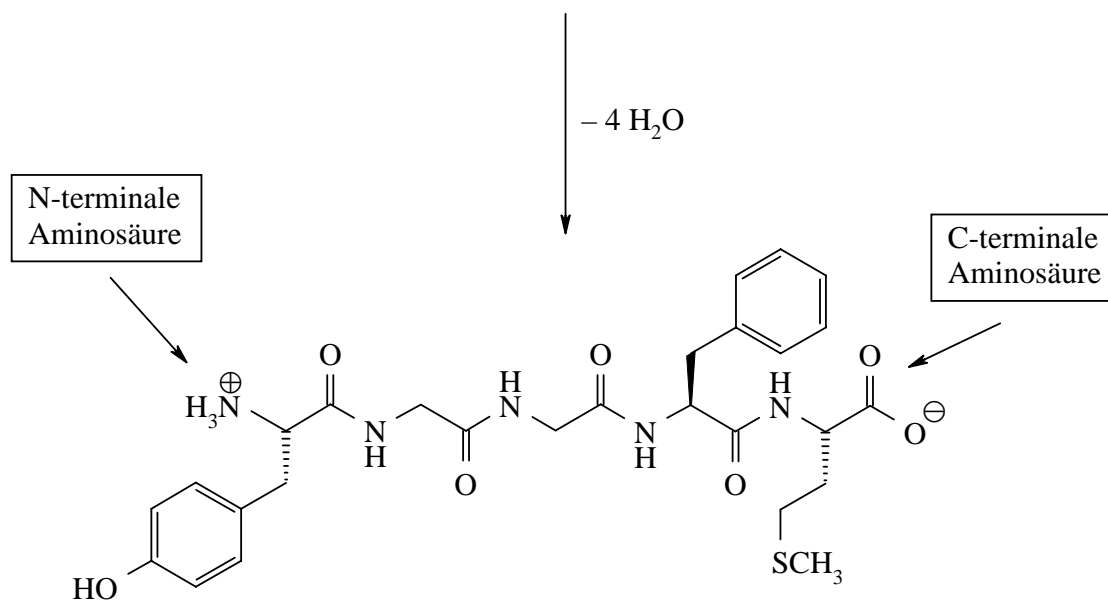
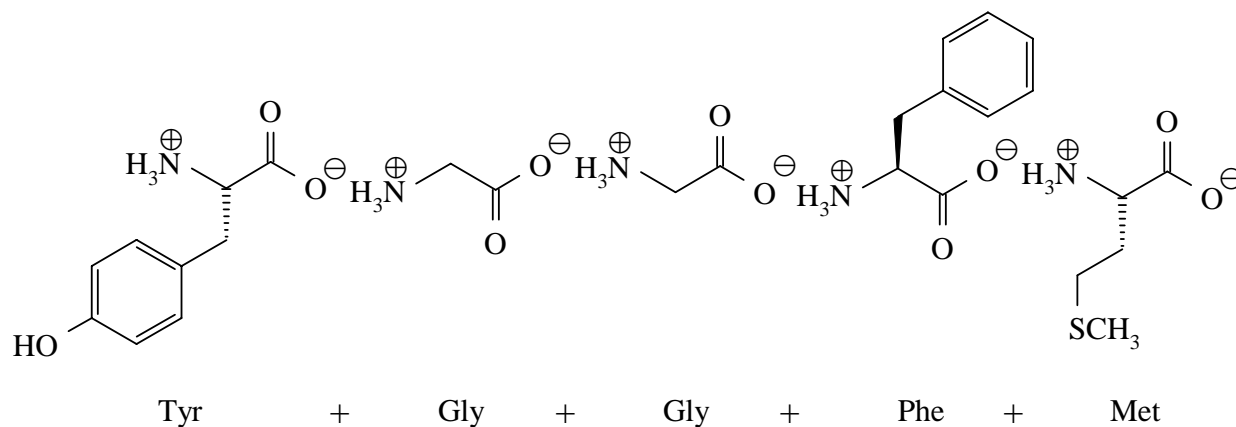
Aliphatische Aminosäuren

systematischer Name (Trivialname)	Struktur	Vorkommen, Bedeutung
2-Aminoethansäure (α -Aminoessigsäure, Glycin)	$\text{H}_3\text{N}^{\oplus}-\underset{\alpha}{\text{CH}_2}-\text{CO}_2^{\ominus}$	Proteine, Peptide
3-Aminopropansäure (β -Aminopropionsäure, β -Alanin)	$\text{H}_3\text{N}^{\oplus}-\underset{\beta}{\text{CH}_2}-\text{CH}_2-\text{CO}_2^{\ominus}$	Bestandteil des Vitamins Pantothensäure
4-Aminobutansäure (γ -Aminobuttersäure, GABA)	$\text{H}_3\text{N}^{\oplus}-\underset{\gamma}{\text{CH}_2}-\text{CH}_2-\text{CH}_2-\text{CO}_2^{\ominus}$	im Gehirn Neurotransmitter
6-Aminohexansäure (ϵ -Aminocaprinsäure)	$\text{H}_3\text{N}^{\oplus}-\underset{\epsilon}{\text{CH}_2}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CO}_2^{\ominus}$	Vorstufe von Perlon

Aromatische Aminosäuren

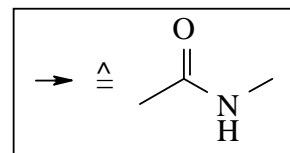
systematischer Name (Trivialname)	Struktur	Vorkommen, Bedeutung
2-Aminobenzoessäure (Anthranilsäure)		Zwischenstufe bei der Biosynthese von Tryptophan
4-Aminobenzoessäure		Bakterienwuchsstoff
4-Amino-2-hydroxybenzoessäure (p-Aminosalicylsäure, PAS)		Tuberkulostatikum

Aufbau eines Pentapeptids



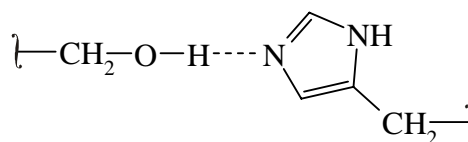
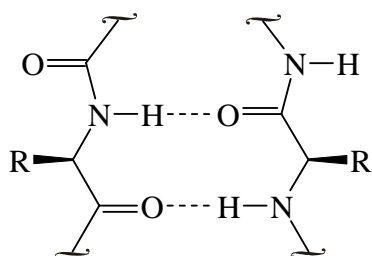
Tyr → Gly → Gly → Phe → Met

Methionin-Enkephalin
(Neuropeptid)



Bindende Wechselwirkungen zwischen Peptidketten

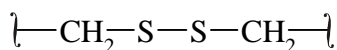
Wasserstoff-Brücken



Ser

His

Disulfid-Brücken



Cys

Cys

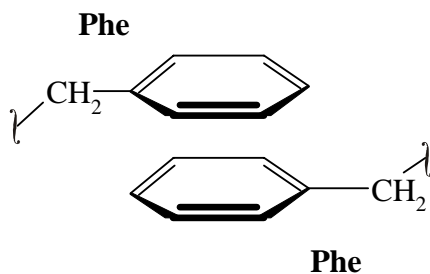
Elektrostatische Anziehung



Lys

Glu

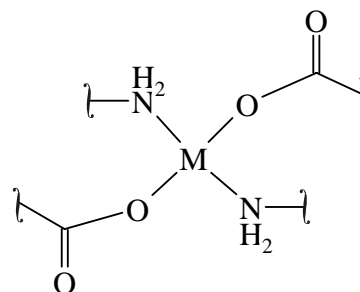
Hydrophobe Wechselwirkungen

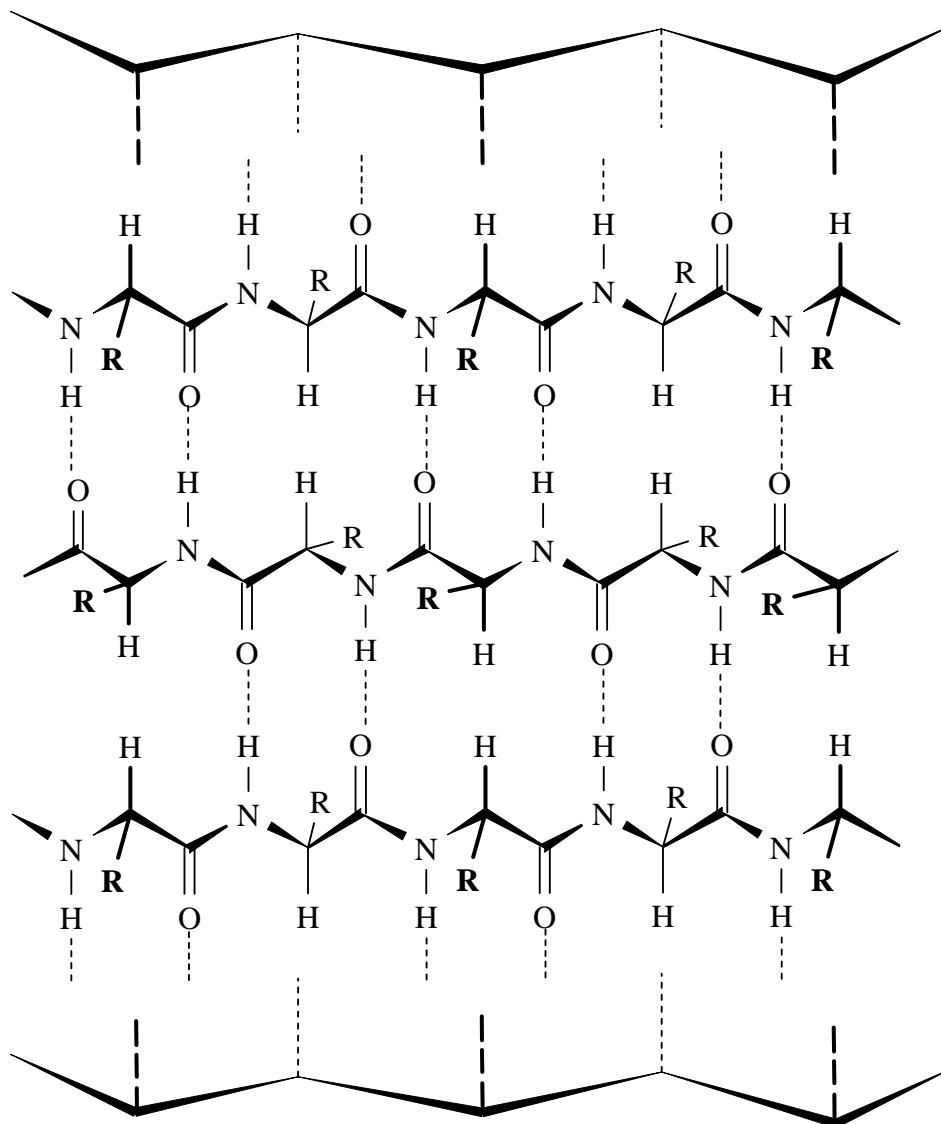


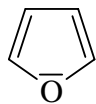
Phe

Phe

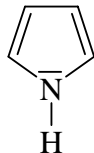
Bildung von Chelat-Komplexen



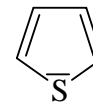
Faltblattstruktur mit gegenläufigen (antiparallelen) Peptidketten

Einfache aromatische Heterocyclen

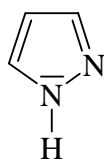
Furan



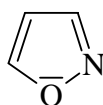
Pyrrol



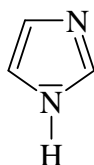
Thiophen



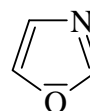
Pyrazol



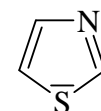
Isoxazol



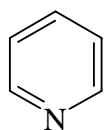
Imidazol



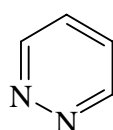
Oxazol



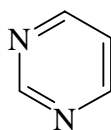
Thiazol



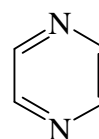
Pyridin



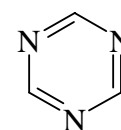
Pyridazin



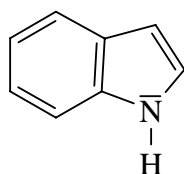
Pyrimidin



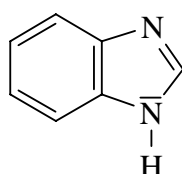
Pyrazin



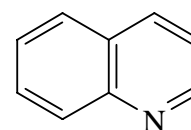
1,3,5-Triazin

Kondensierte Heterocyclen

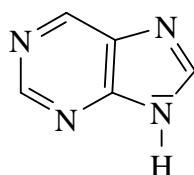
Indol



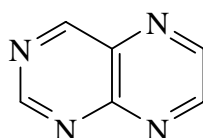
Benzimidazol



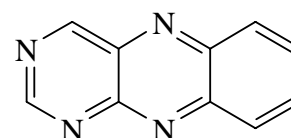
Chinolin



Purin

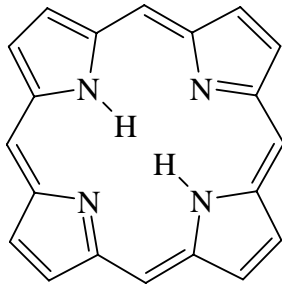


Pteridin

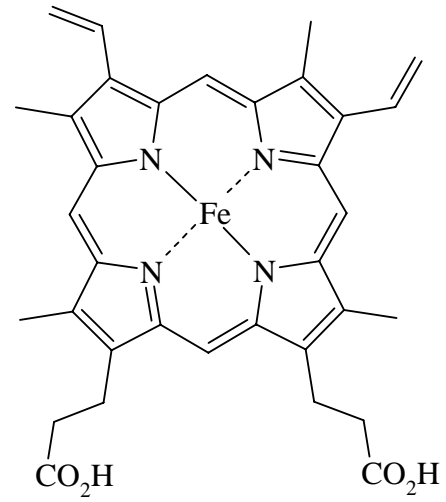


Benzo[g]pteridin

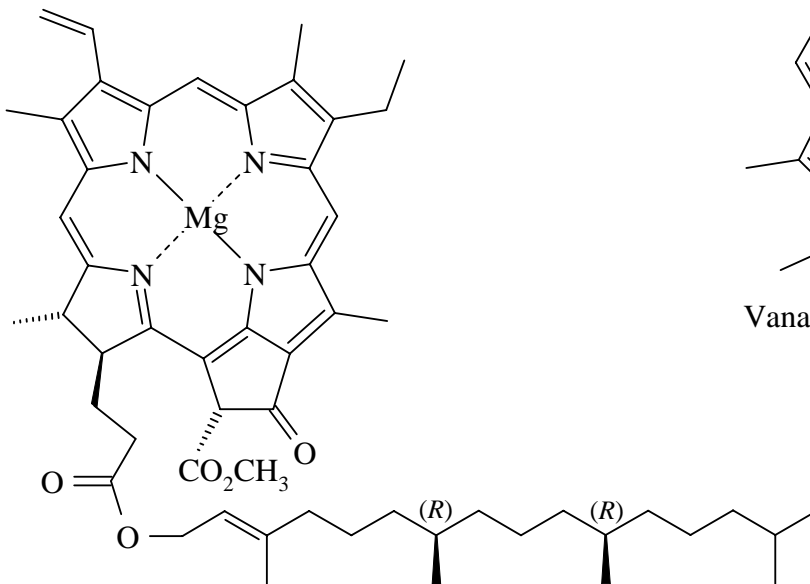
Cyclische Tetrapyrrol-Verbindungen



Porphyrin

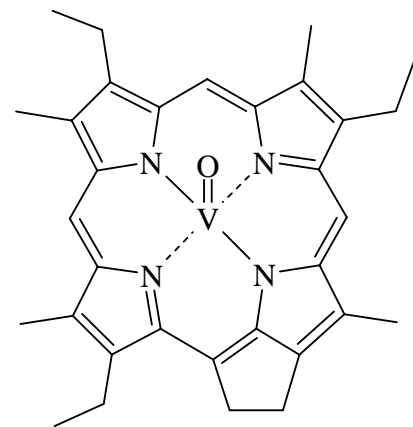


Häm



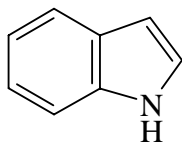
Alkohol = Phytol

Chlorophyll a

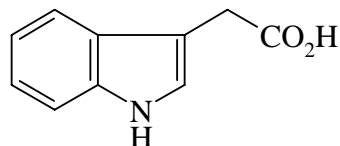
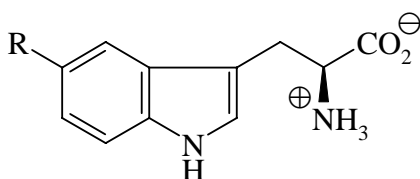
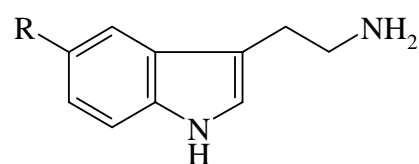
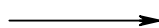
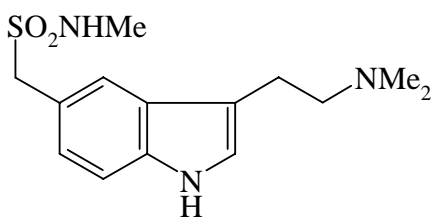
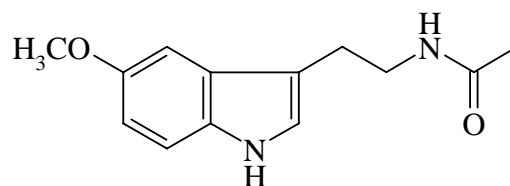
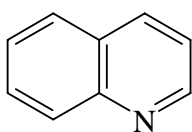


Vanadium-Komplex aus Erdöl

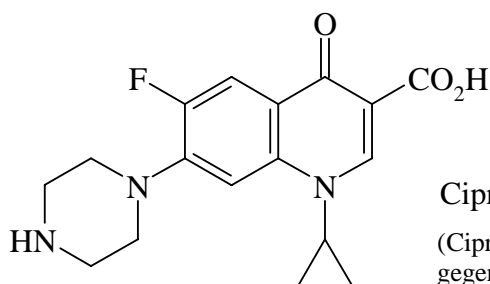
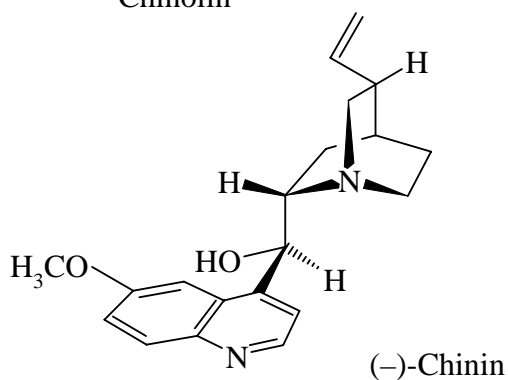
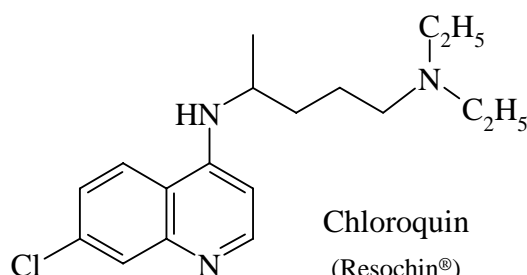
Kondensierte Heterocyclen mit einem Stickstoffatom



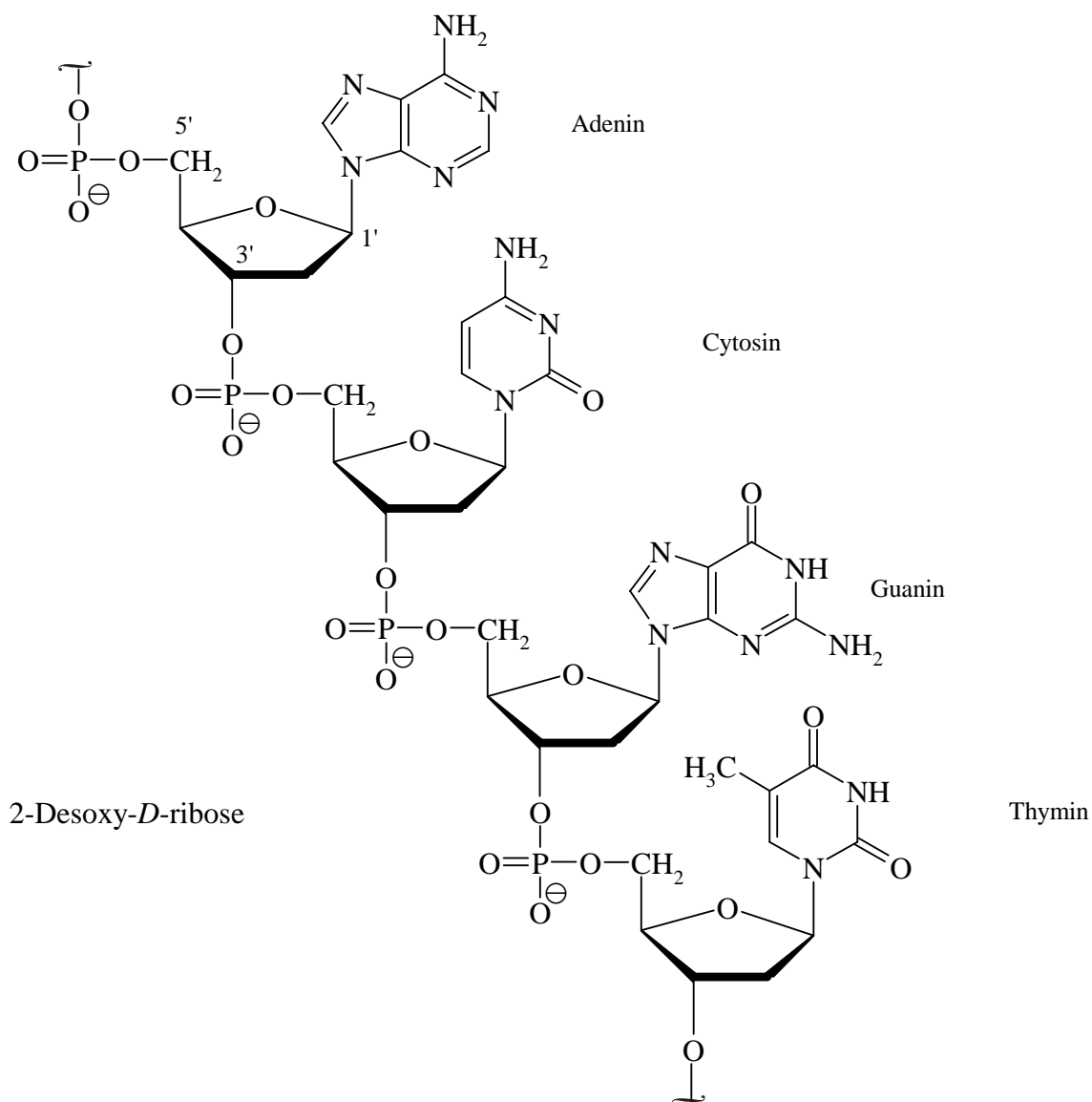
Indol

3-Indolyllessigsäure
(Pflanzenwuchsstoff)*(S)*-(-)-TryptophanR = H: Tryptamin
R = OH: 5-Hydroxytryptamin
(Serotonin, Neurotransmitter)Sumatriptan
(Migränemittel)Melatonin
(Zirbeldrüse, steuert biologische Uhr)

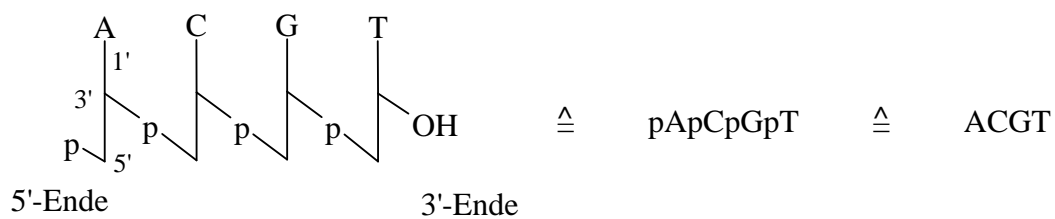
Chinolin

Ciprofloxacin
(Ciprobay®, antibakteriell
gegen Milzbrand)*(-)*-ChininChloroquin
(Resochin®)

Desoxyribonucleinsäure, DNA



abgekürzte Formulierungen

bei Ribonucleinsäure (RNA) statt Thymin **Uracil**

Basenpaarung der Nucleotide der DNA (RNA) nach Watson und Crick

