



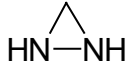









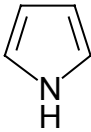
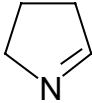
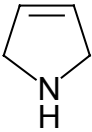
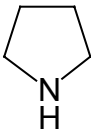
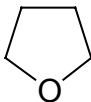
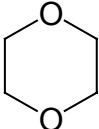
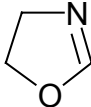
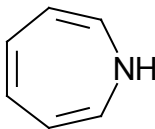
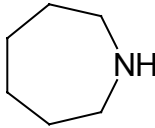
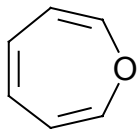
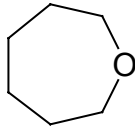


Nomenklatur der Heterocyclen

Wichtige Verbindungsamen sind durch **Fettdruck** hervorgehoben.

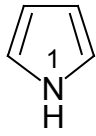
Beispiele: (weniger gebräuchliche Namen stehen in Klammern)

				
Δ ₂ -Azirin ¹⁾	Δ ₁ -Azirin ²⁾	Aziridin	Diazirin	Diaziridin
				
Oxiren (instabil)	Oxiran	Oxaziridin	Oxetan	Dioxetan
				
Thiiren (instabil)	Thiiran	Thiet	Thietan	
				
'Pyrrol' (Azol)	'Δ ₁ -Pyrrolin' ⁴⁾ (Δ ₁ -Azolin)	'Δ ₃ -Pyrrolin' ⁴⁾ (Δ ₃ -Azolin)	'Pyrrolidin' (Azolidin)	
				
Tetrahydrofuran bzw. ' THF ' (Oxolan)	1,4-Dioxan bzw. ' Dioxan ' (1,4-Dioxacyclohexan)	Δ ₂ -1-Ox-3-azolin ⁴⁾		
				
Azepin	Hexahydroazepin Azacycloheptan	Oxepin	Oxepan	

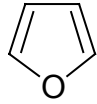
1) das 'Δ' gibt die Stellung der Doppelbindung an

Trivialnamen

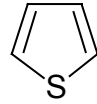
Bei heterocyclischen Verbindungen spielen Trivialnamen eine außerordentlich große Rolle, weswegen die wichtigsten Verbindungen dieser Klasse vorgestellt werden sollen. Die Bezifferung erfolgt entsprechend der üblichen Nomenklatur.



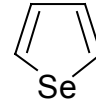
'Pyrrol'



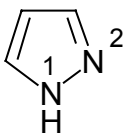
'Furan'



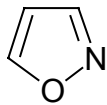
'Thiophen'



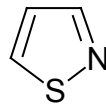
'Selenophen'



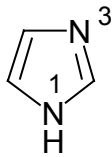
'Pyrazol'
1,2-Diazol



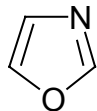
Isoxazol



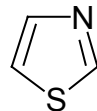
Isothiazol



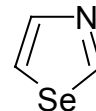
'Imidazol'
1,3-Diazol



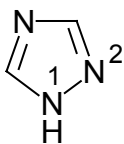
Oxazol



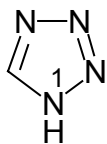
Thiazol



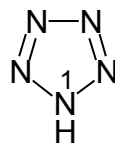
Selenazol



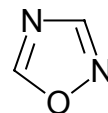
1,2,4-Triazol



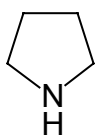
Tetrazol



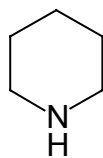
Pentazol



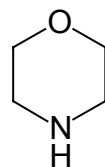
1,2,4-Oxadiazol



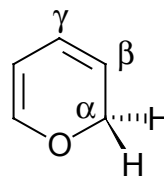
'Pyrrolidin'



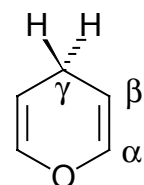
'Piperidin'



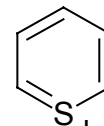
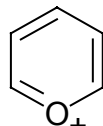
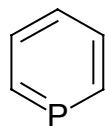
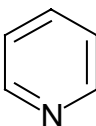
'Morpholin'

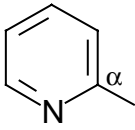
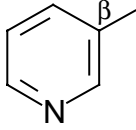
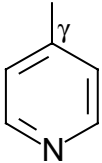
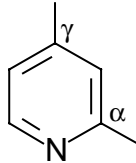
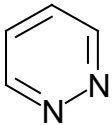
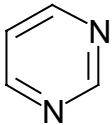
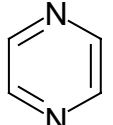
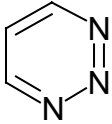
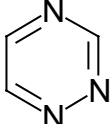
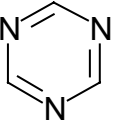
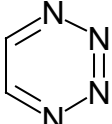
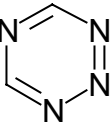
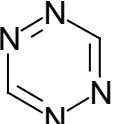
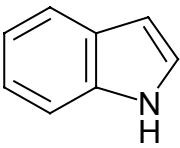
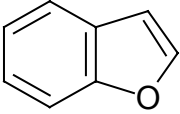
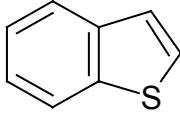
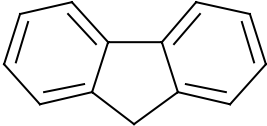
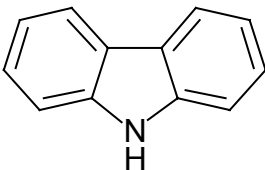
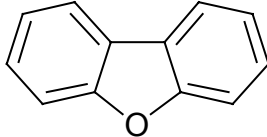


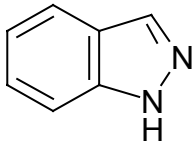
' α -Pyran'
'2H-Pyran'



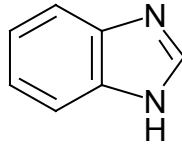
' γ -Pyran'
'4H-Pyran'



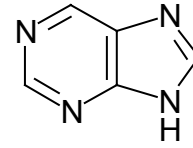
'Pyridin'	Phosphabenzol	Pyrylium Ion	Thiapyrylium Ion
			
'α-Picolin' 2-Methylpyridin	'β-Picolin' 3-Methylpyridin	'γ-Picolin' 4-Methylpyridin	'α,γ-Lutidin' 2,4-Dimethylpyridin
			
'Pyridazin' 1,2-Diazin	'Pyrimidin' 1,3-Diazin	'Pyrazin' 1,4-Diazin	
			
1,2,3-Triazin	1,2,4-Triazin	1,3,5-Triazin	
			
1,2,3,4-Tetrazin	1,2,3,5-Tetrazin	1,2,4,5-Tetrazin	
			
'Indol' (Benzopyrrol)	'Cumaron' 'Benzofuran'	'Thionaphthen' 'Benzothiophen'	
			
'Fluoren'	'Carbazol'	'Dibenzofuran' 'Diphenylenoxid'	



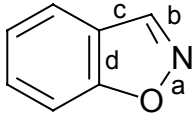
'1H-Indazol'



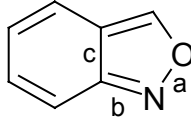
'Benzimidazol'



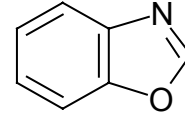
'Purin'



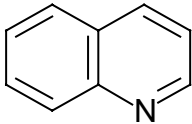
'Benzo[d]isoxazol'²⁾
'Indoxazol'



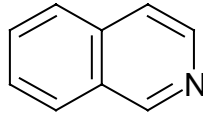
'Benzo[c]isoxazol'⁵⁾
'Anthranil'



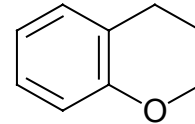
'Benzoxazol'



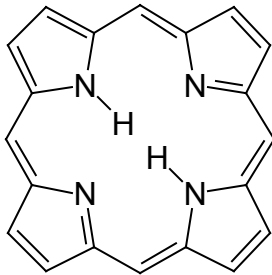
'Chinolin'



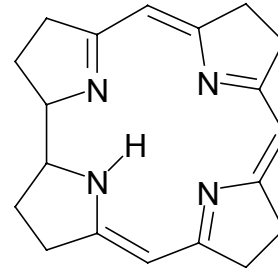
'Isochinolin'



'Chroman'

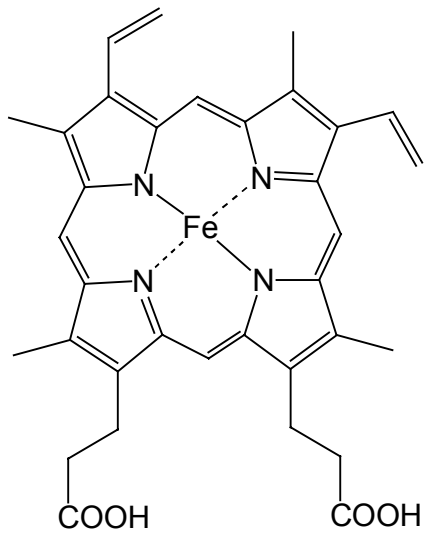


'Porphin'



'Corrin-Grundstruktur' in Vitamin B12
Synthese: ESCHENMOSER (1973)
WOODWARD (1973)

-
- 2) Bei benzo-kondensierten Heteroaromaten, für die kein Trivialname existiert, wird die verknüpfende Bindung durch einen **eckig eingeklammerten Kleinbuchstaben** gekennzeichnet, der den kürzesten Abstand zur Position 1 des Stammheterocyclus angibt (siehe Beispiele).



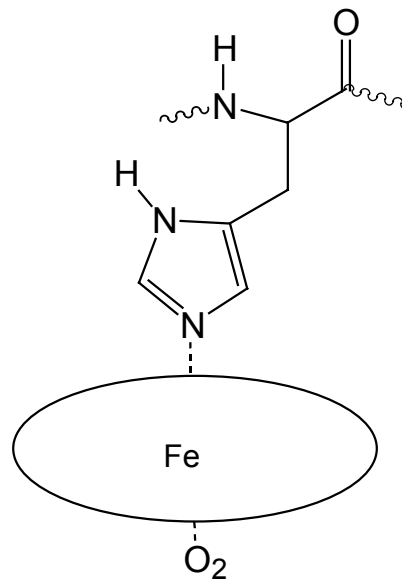
'Hämin'

HANS FISCHER

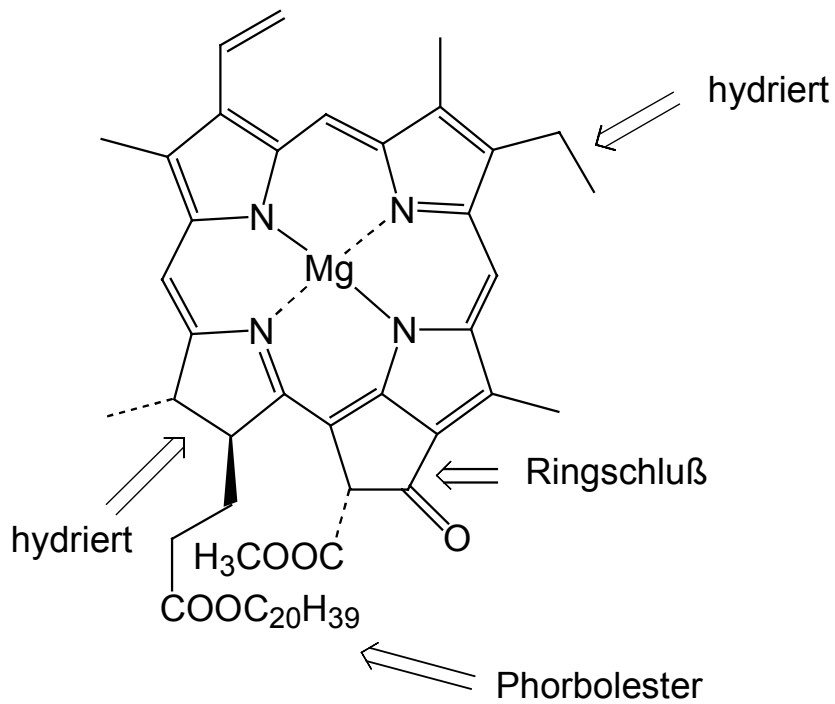
Nobelpreis 1930

1921 als Nachfolger von H. Wieland

bis 1945 (64 Jahre), 31.3.



in Hämoglobin



WOODWARD

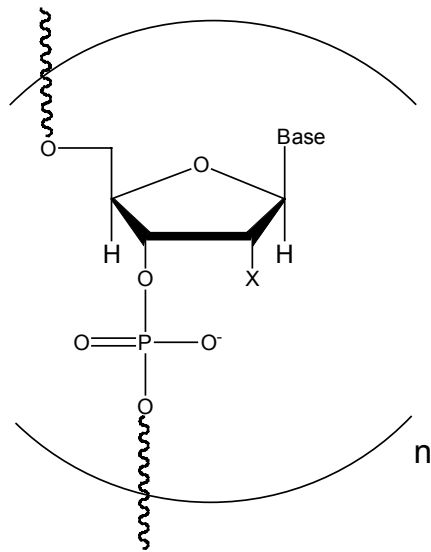
1960

Nobelpreis

1965

4.6 Nukleinsäuren

Nukleinsäuren bestehen aus:



B = Base

X = H: Zucker: Desoxyribose
Oligonukleotid: DANN

X = OH: Zucker: Ribose
Oligionukleosid: RNA

Basen:

