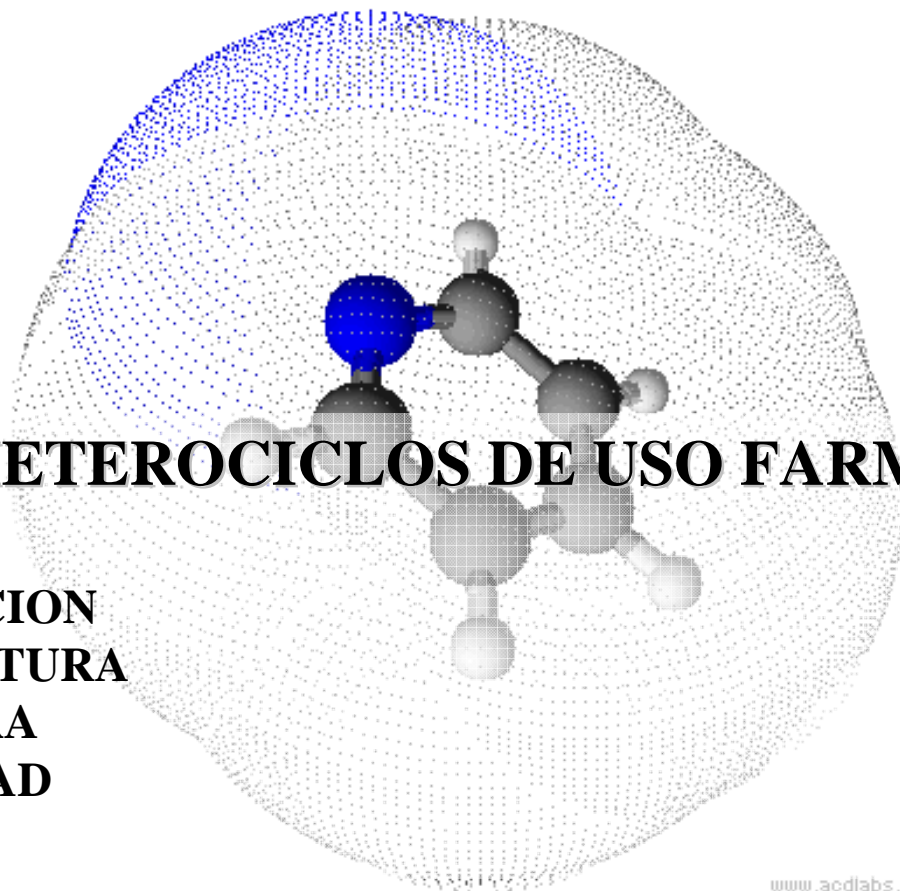


Consultar en: www.uah.es/otrosweb/quimica_organica/Docencia/lic de Farmacia/Heterociclos de Uso Farmacéutico
o en **Mi Portal**

CAP 01. HETEROCICLOS DE USO FARMACEUTICO

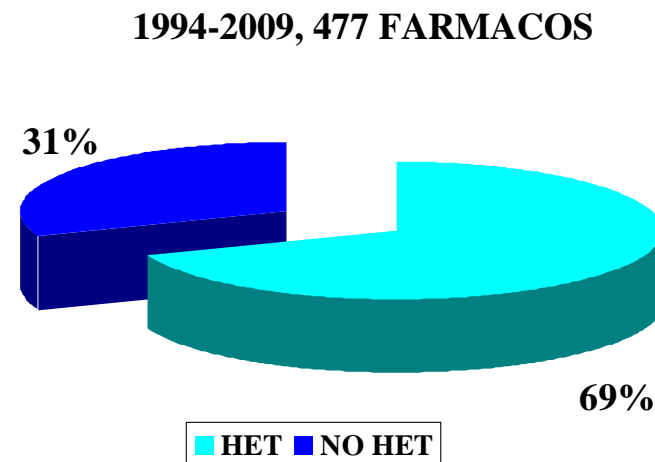
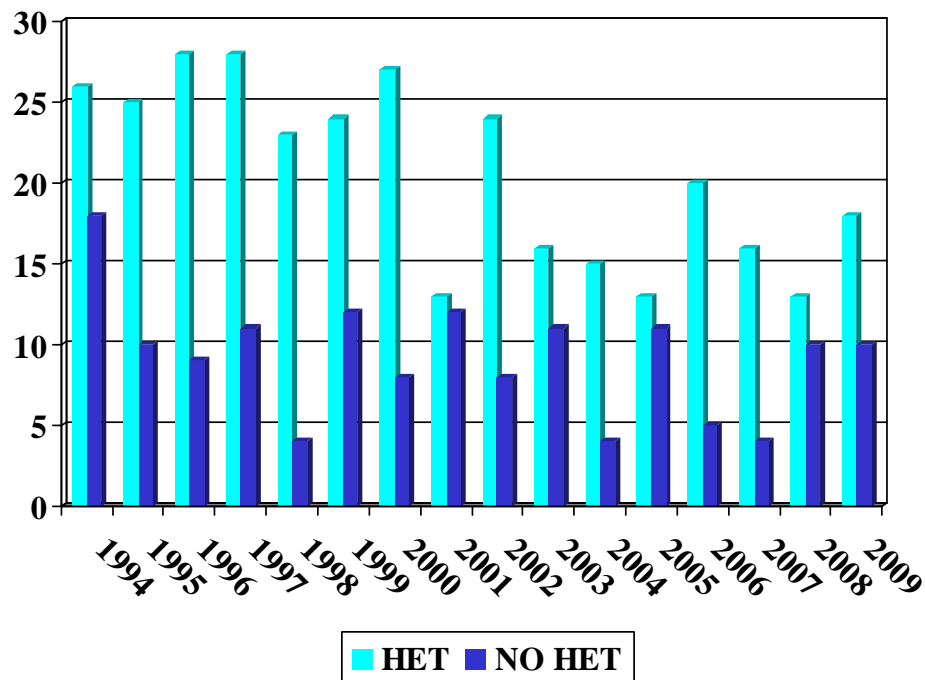
CLASIFICACION
NOMENCLATURA
ESTRUCTURA
REACTIVIDAD
SINTESIS



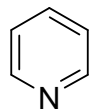
www.acdlabs.com

¿POR QUE ESTUDIAMOS HETEROCICLOS DE USO FARMACEUTICO?

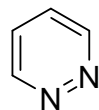
NCE y NBE 1994-2009. PRODUCTOS HETEROCICLICOS



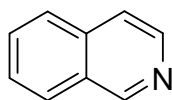
Heterociclos aromáticos



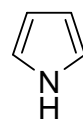
Piridina



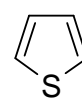
Piridazina



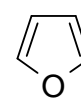
Isoquinolina



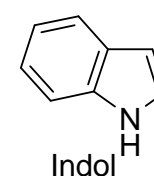
Pirrol



Tiofeno

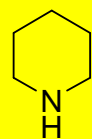


Furano

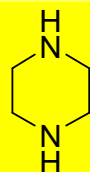


Indol

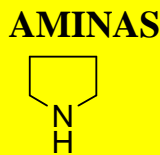
Heterociclos no aromáticos



Piperidina

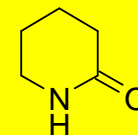


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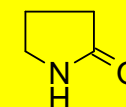


Pirrolidina

AMINAS

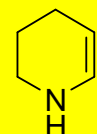


Piperidin-2-ona

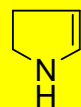


Pirrolidin-2-ona

AMIDAS

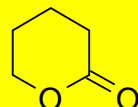


Tetrahidropiridina

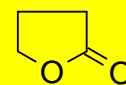


Pirrolina

ENAMINAS

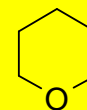


Tetrahidropiran-2-ona



Dihidrofuran-2-ona

ESTERES



Tetrahidropirano

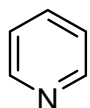


Tetrahidrofurano

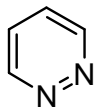
ETERES

HETEROCICLOS AROMATICOS. NOMBRES VULGARES

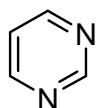
6 miembros y benzoanálogos



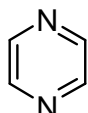
Piridina



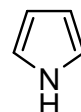
Piridazina



Pirimidina



Pirazina



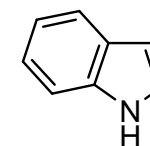
Pirrol



Tiofeno

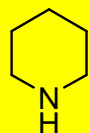


Furano

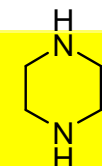


Indol

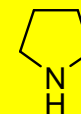
5 miembros y benzoanálogos



Piperidina



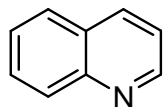
Piperazina



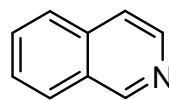
Pirrolidina



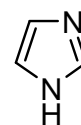
Tetrahidro
furano



Quinolina
o Quinoleina



Isoquinolina
o Isoquinoleina



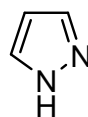
Imidazol



Tiazol



Oxazol



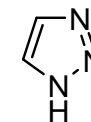
Pirazol



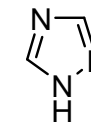
Isotiazol



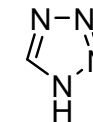
Isoxazol



1,2,3-triazol

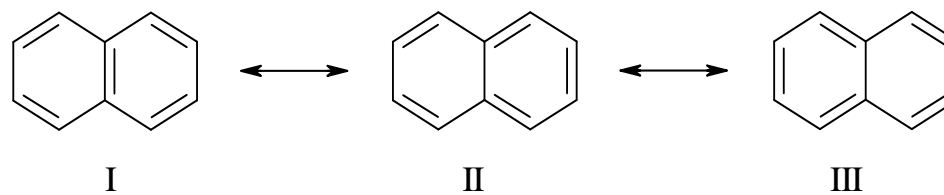
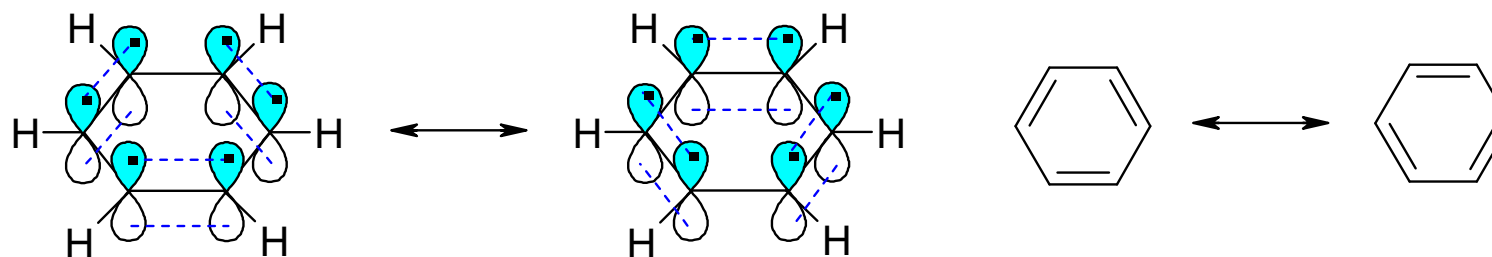


1,2,4-triazol

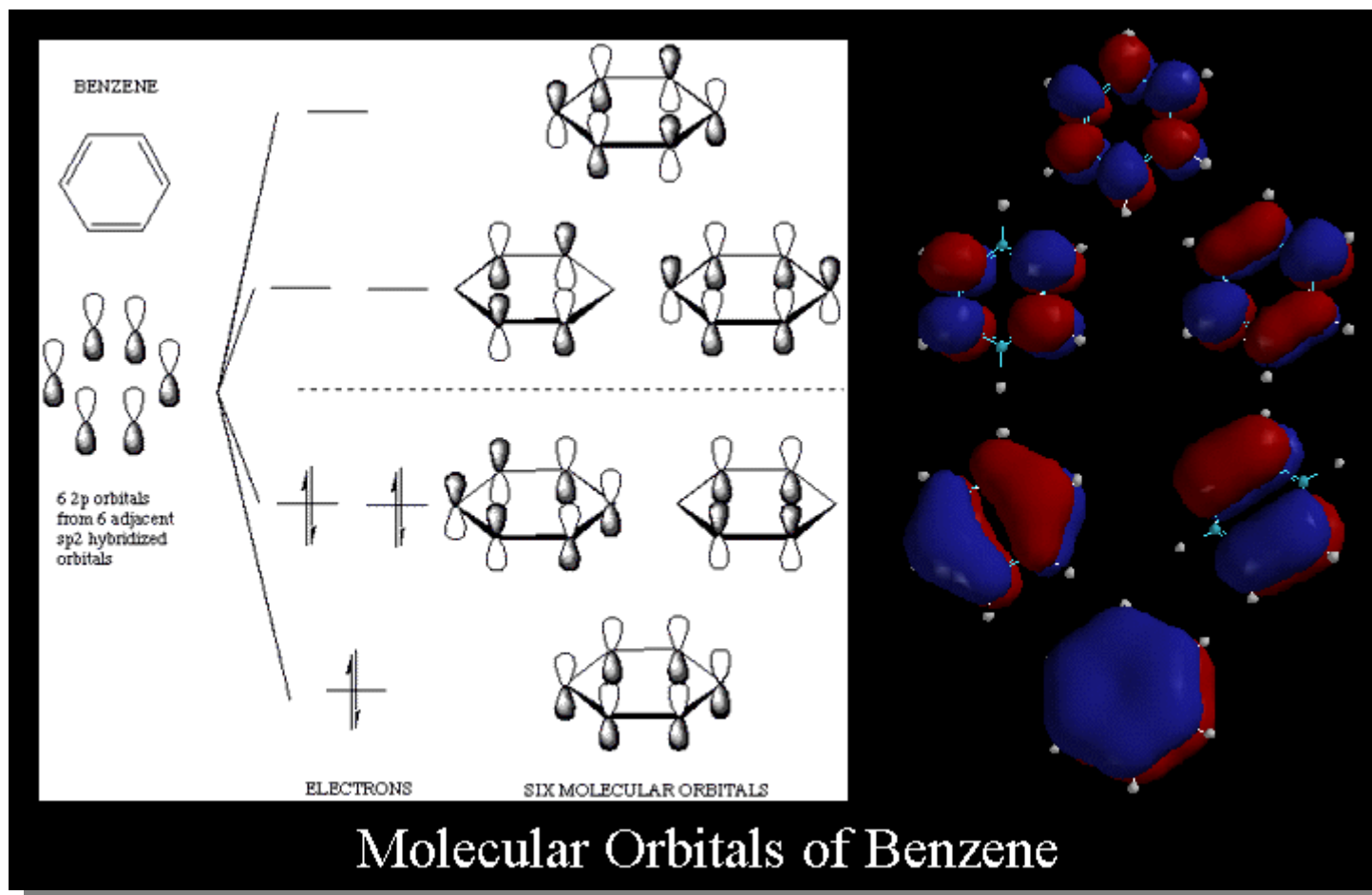


Tetrazol
5

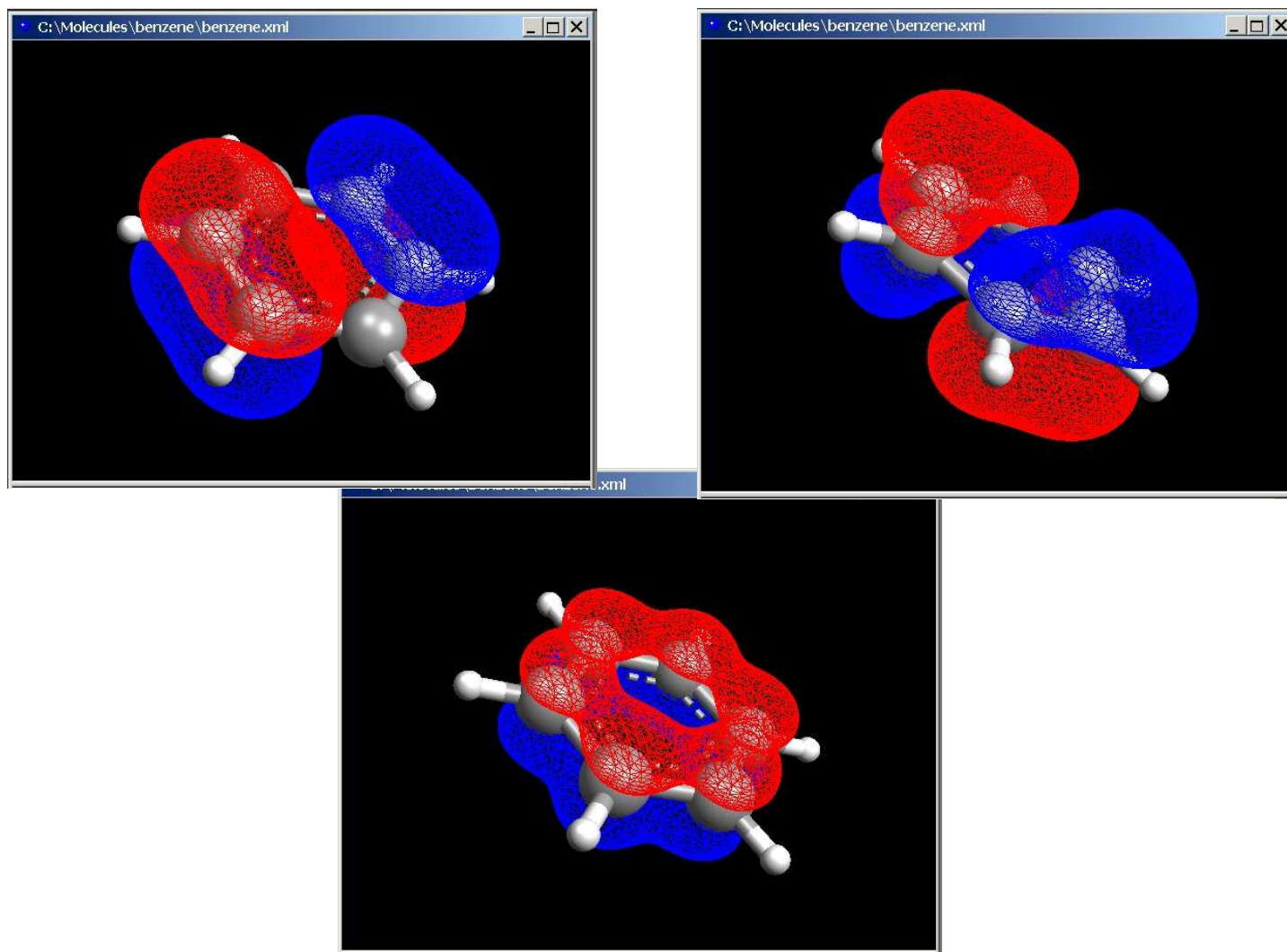
CARBOCICLOS AROMATICOS, ESTRUCTURA Y FORMAS RESONANTES



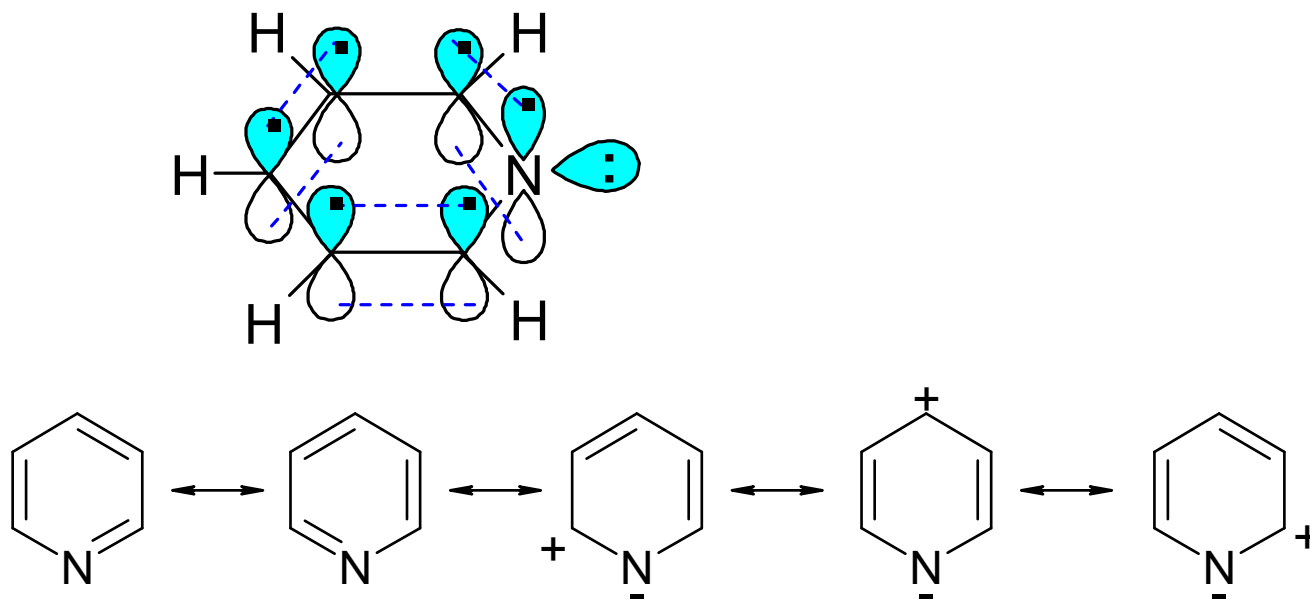
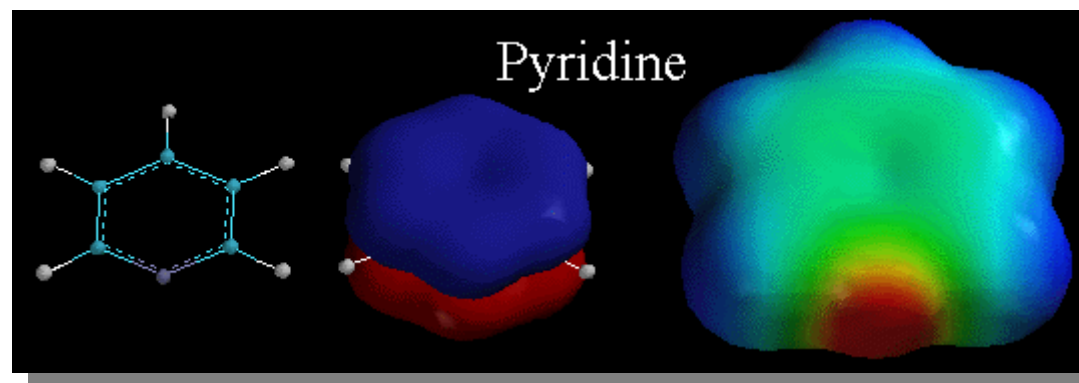
CARBOCICLOS AROMATICOS, ESTRUCTURA Y FORMAS RESONANTES



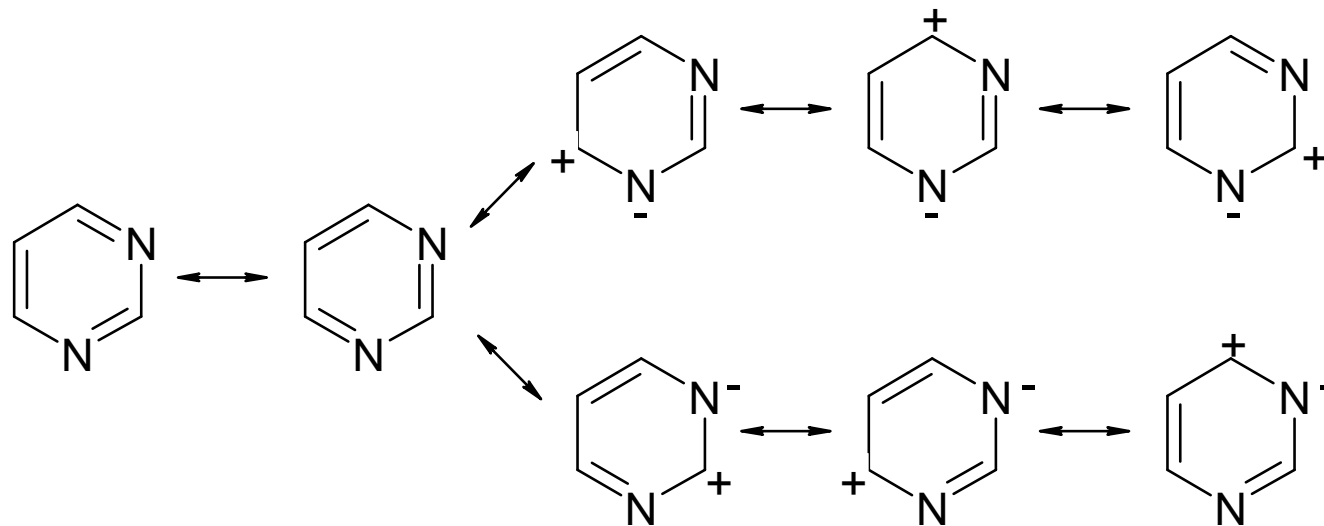
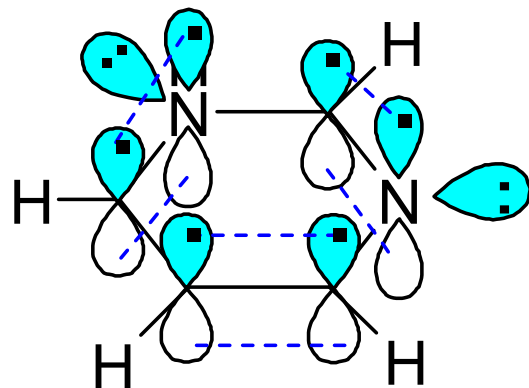
CARBOCICLOS AROMATICOS, ESTRUCTURA Y FORMAS RESONANTES ORBITALES MOLECULARES ENLAZANTES



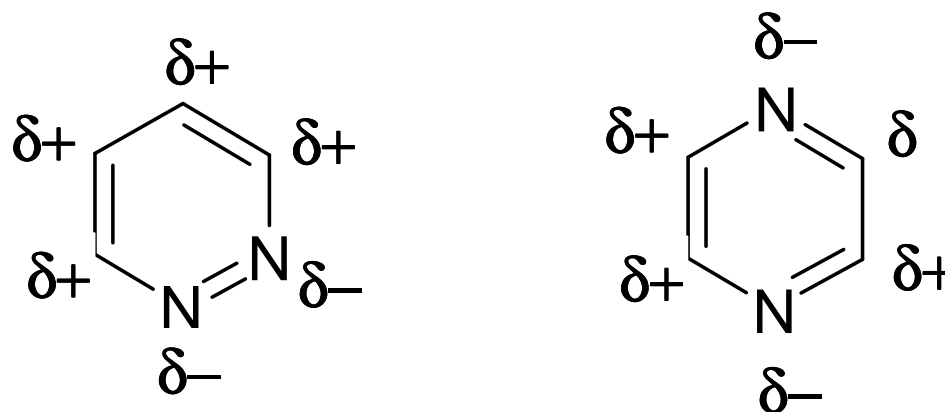
PIRIDINA, ESTRUCTURA Y FORMAS RESONANTES



PIRIMIDINA, ESTRUCTURA Y FORMAS RESONANTES

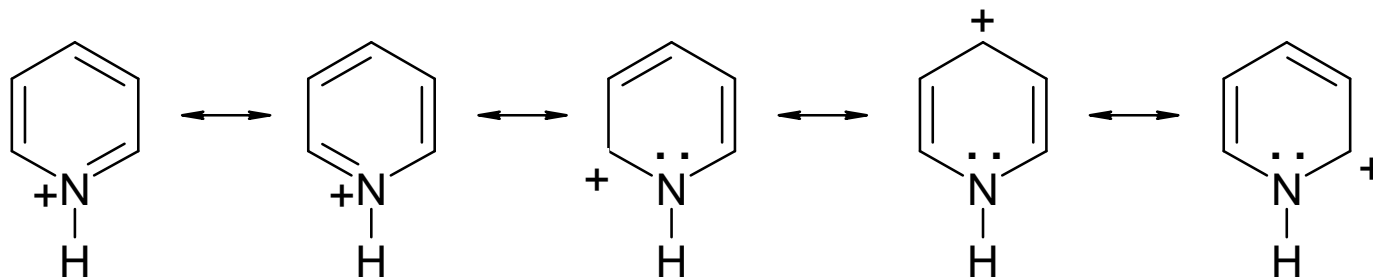
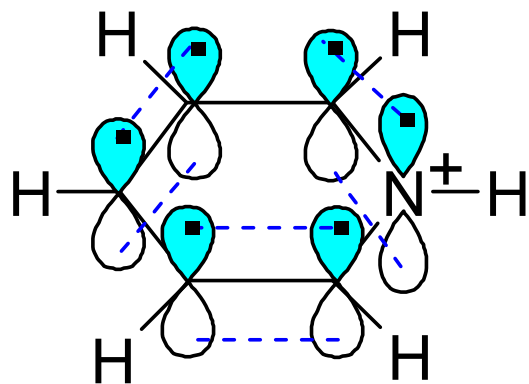


PIRIDAZINA Y PIRAZINA, ESTRUCTURA Y FORMAS RESONANTES

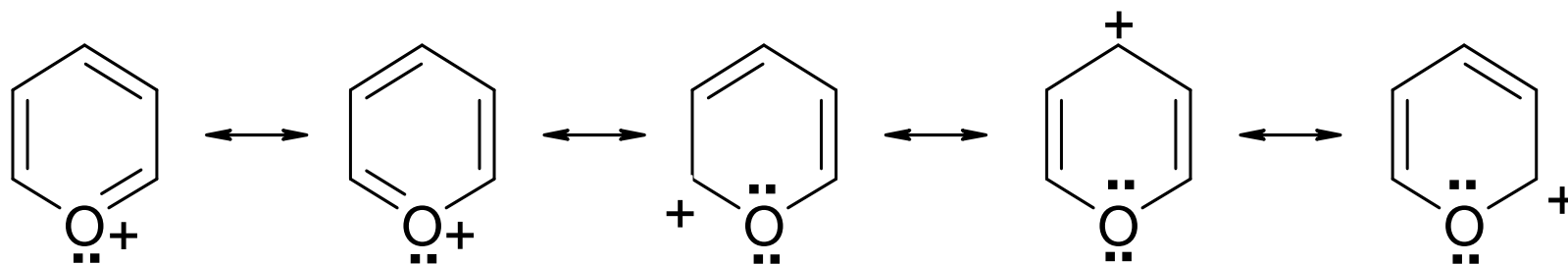
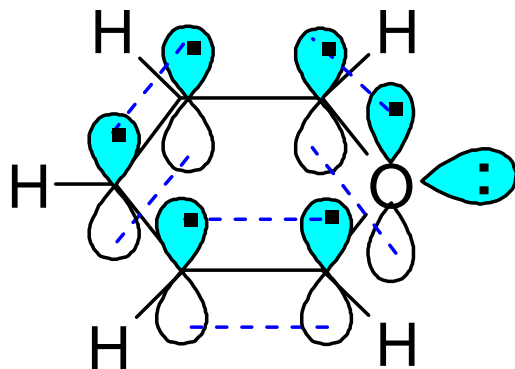


Revisar formas canónicas

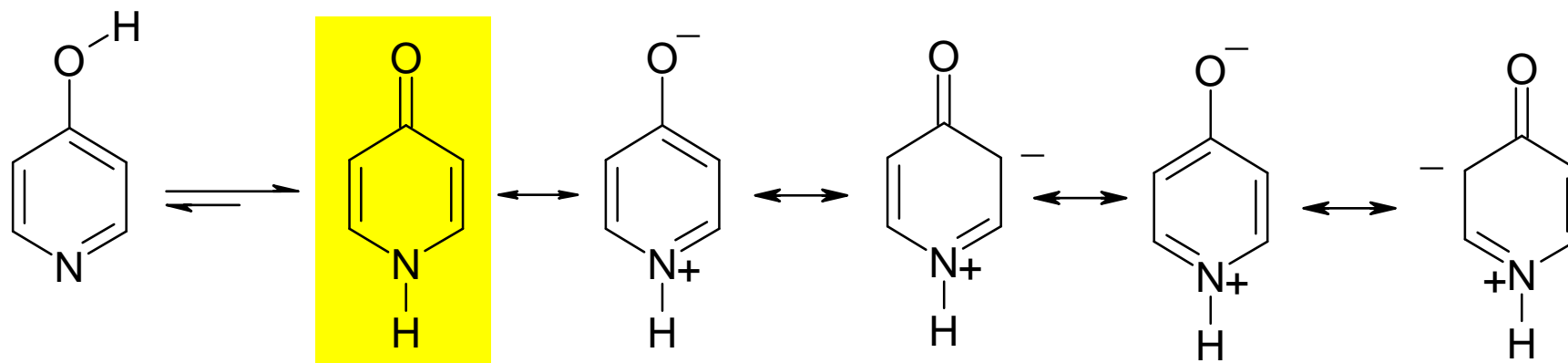
SALES DE PIRIDINIO, ESTRUCTURA Y FORMAS RESONANTES



SALES DE PIRILIO, ESTRUCTURA Y FORMAS RESONANTES

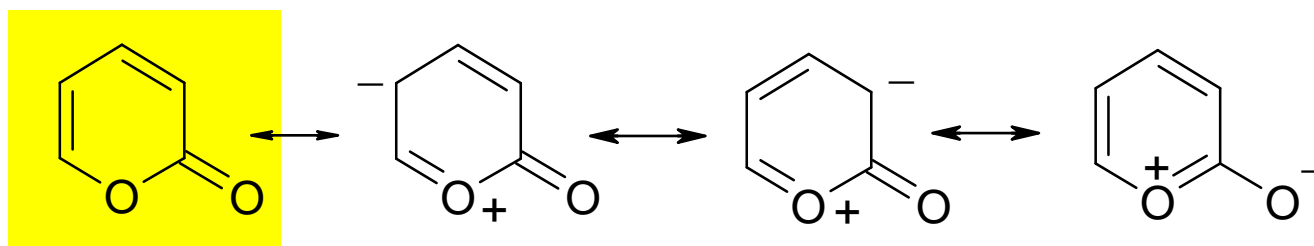


HIDROXIPYRIDINAS Y PIRONAS, ESTRUCTURA Y FORMAS RESONANTES



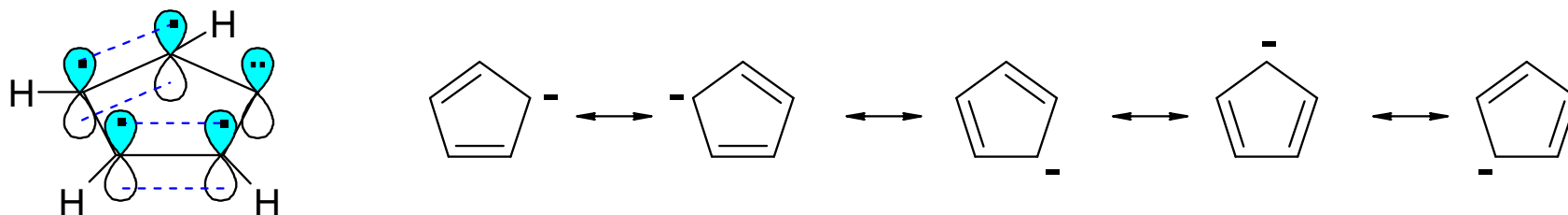
4-Hidroxipiridina

4-Piridona

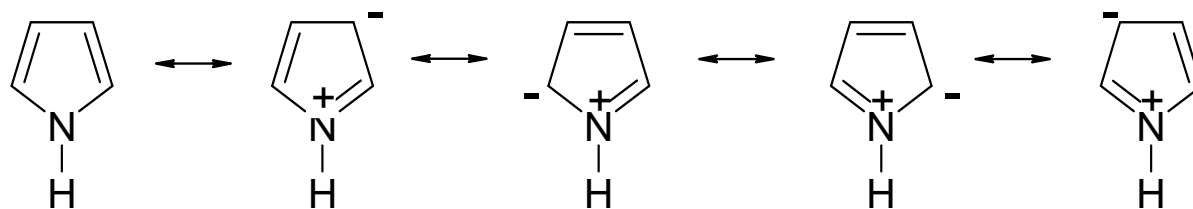
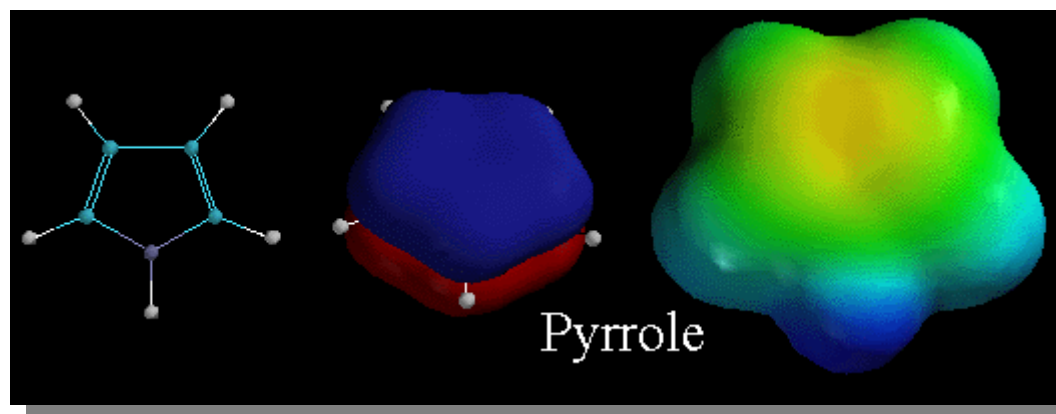
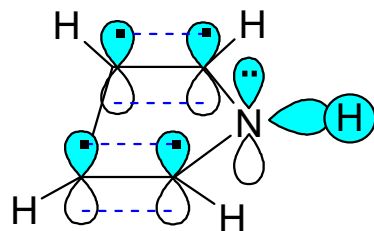


2-Pirona

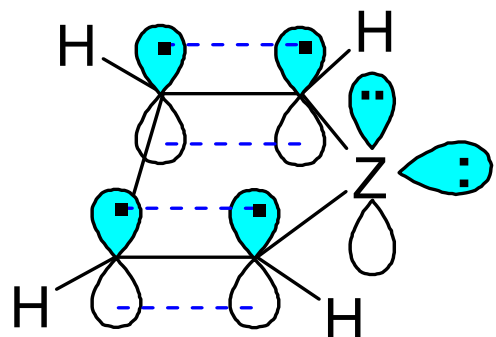
ANION CICLOPENTADIENILO, ESTRUCTURA Y FORMAS RESONANTES



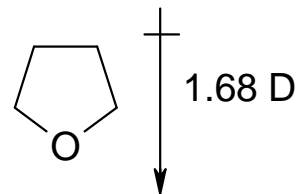
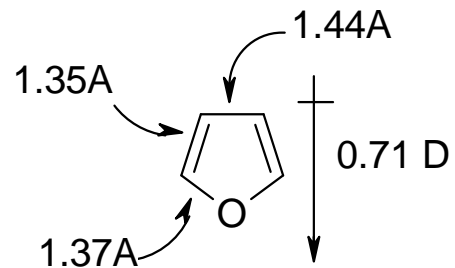
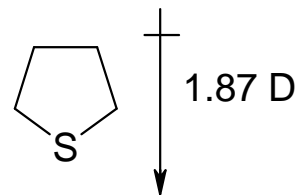
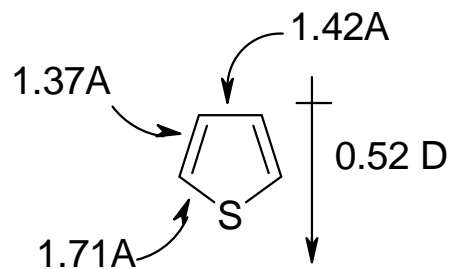
PIRROL, ESTRUCTURA Y FORMAS RESONANTES



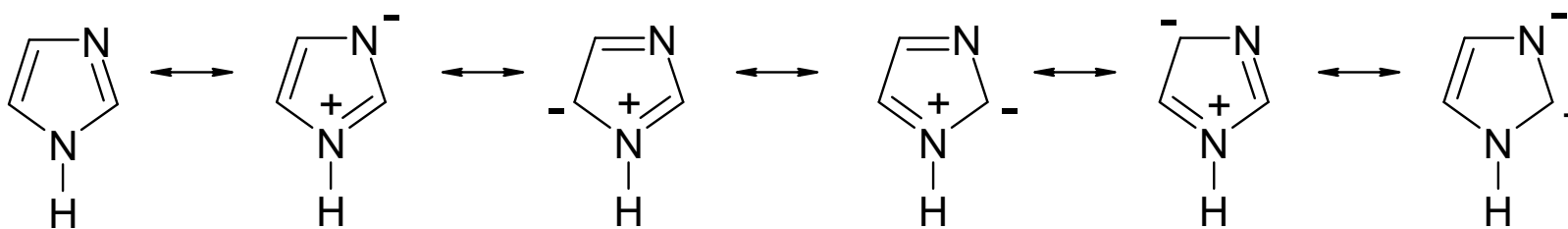
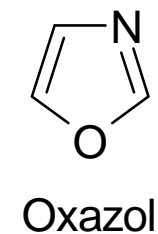
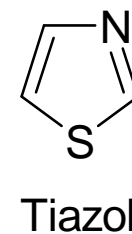
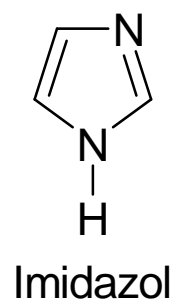
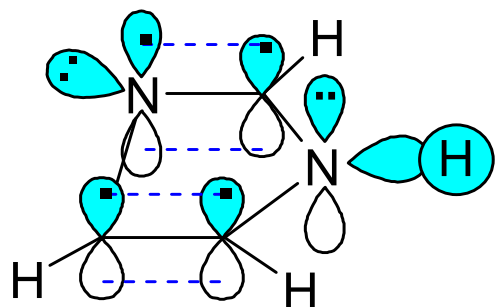
FURANO Y TIOFENO, ESTRUCTURA Y FORMAS RESONANTES



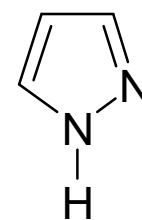
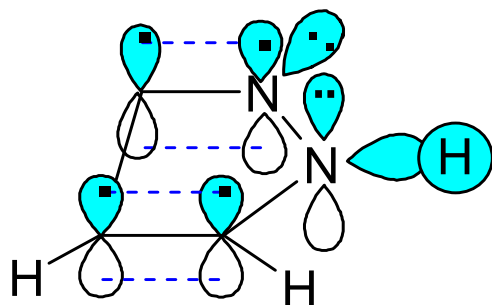
Z=O Furano
Z=S Tiofeno



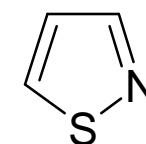
1,3-AZOLES, ESTRUCTURA Y FORMAS RESONANTES



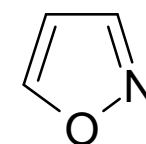
1,2-AZOLES, ESTRUCTURA Y FORMAS RESONANTES



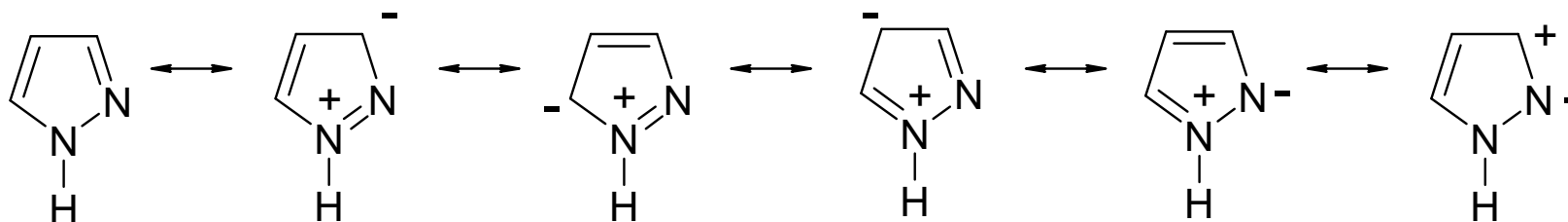
Pirazol



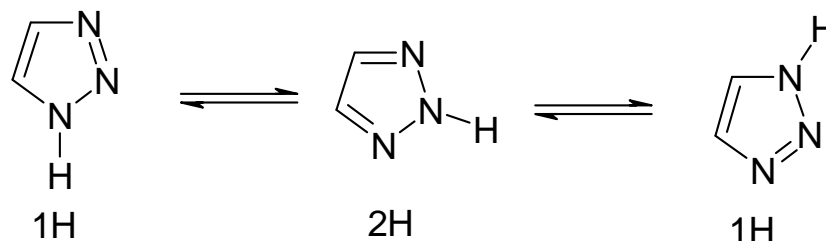
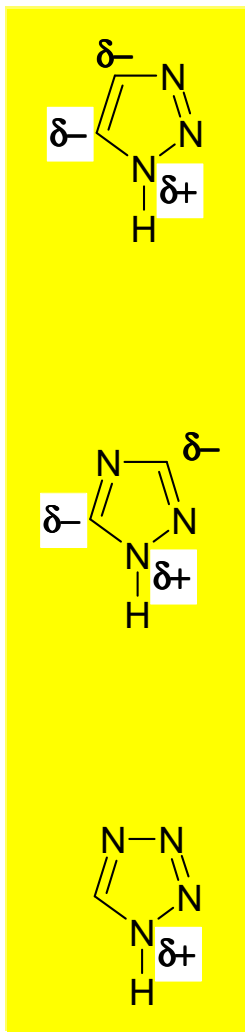
Isotiazol



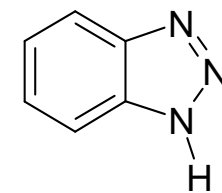
Isoxazol



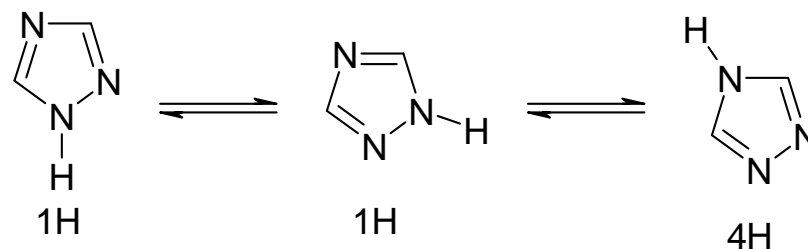
TRIAZOLES Y TETRAZOLES, ESTRUCTURA Y FORMAS TAUTOMERICAS



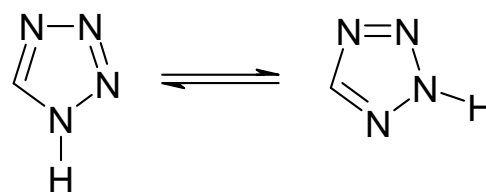
1,2,3-triazol



benzotriazol

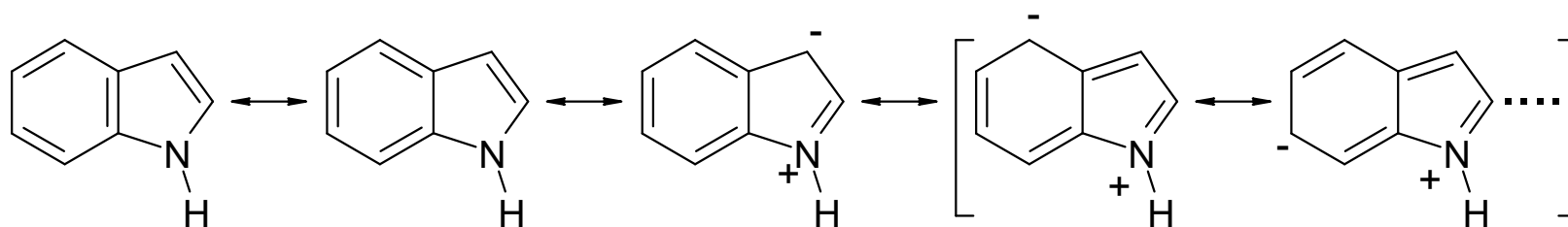
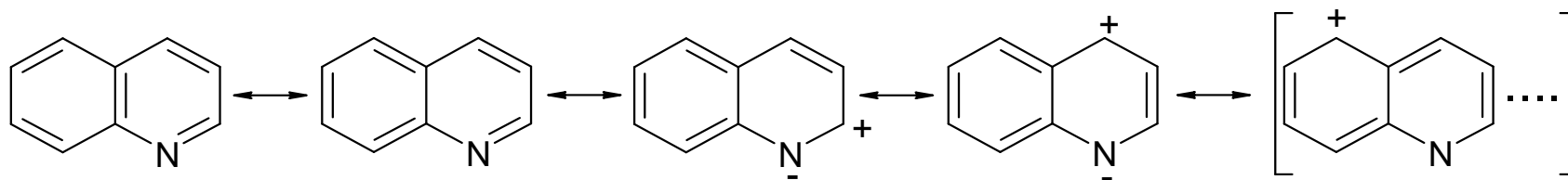
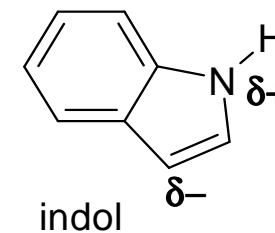
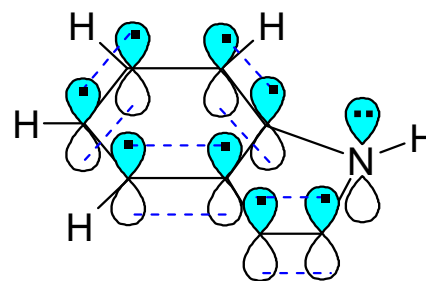
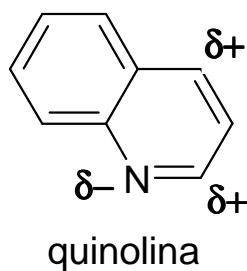
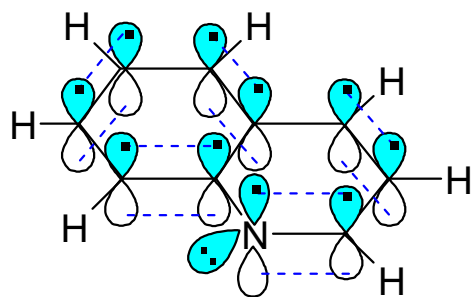


1,2,4-triazol

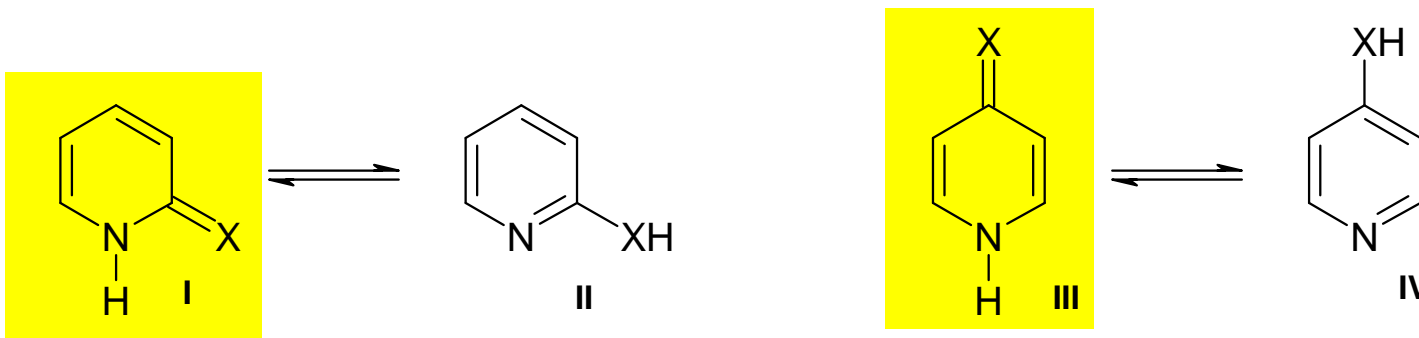


tetrazol

BENZOHETEROCICLOS, ESTRUCTURA Y FORMAS RESONANTES

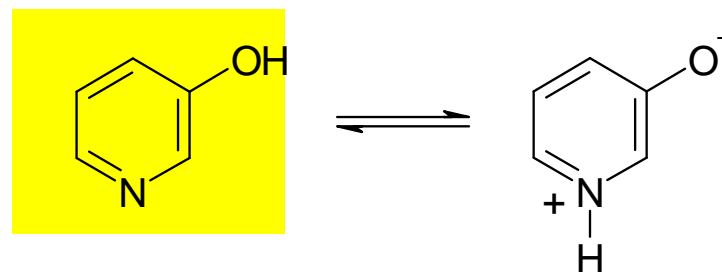


TAUTOMERIA DE DERIVADOS DE PIRIDINA

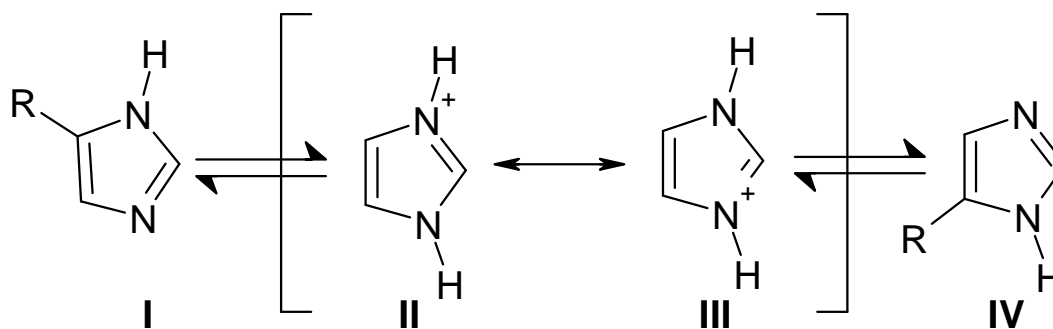


X=O, predominan I y III; X=N, predominan II y IV

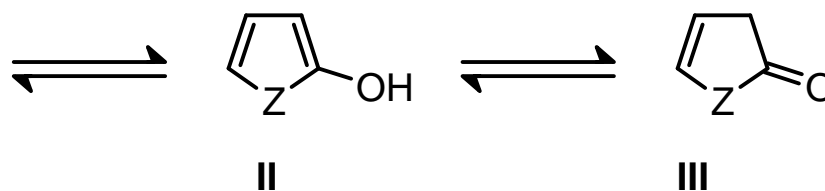
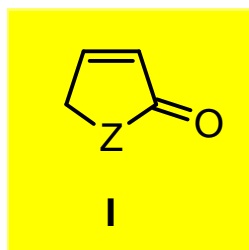
$\lambda_{\max}(\text{EtOH})$	$\lambda_{\max}(\text{EtOH})$	$\lambda_{\max}(\text{EtOH})$
229 (3.85)	230 (3.78)	270 (3.55)
300 (3.70)	305 (3.70)	



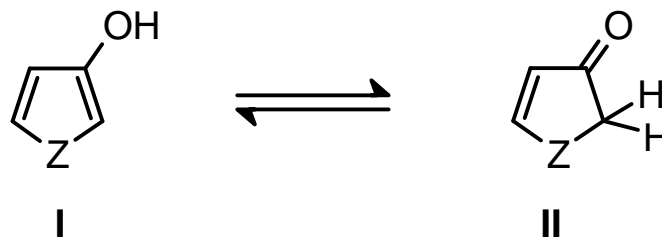
TAUTOMERIA EN AZOLES



No es posible distinguir un N de otro. Similar en pirazol



Z=O, S, NR predomina I



Z=S predomina I
Z=O, NR predomina II