

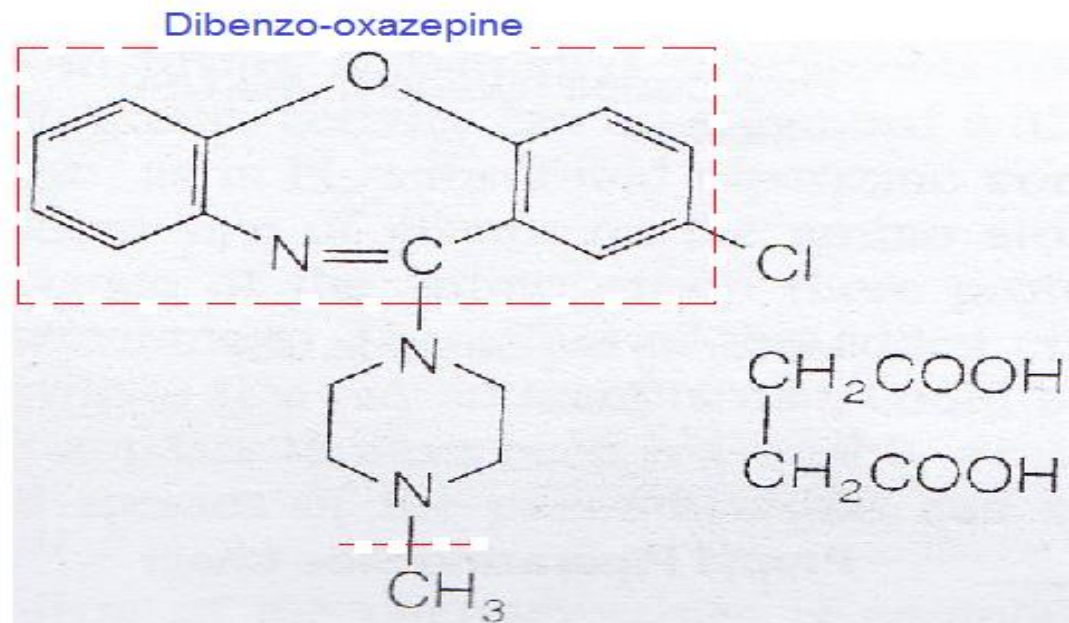
Ring analogs of Phenothiazines:

(additional tricyclic antipsychotic agents TCA)

Benzazepines (6-7-6 system), these newer atypical antipsychotics includes:

1-Dibenzoxazepine deriv

**Loxapine Succinate

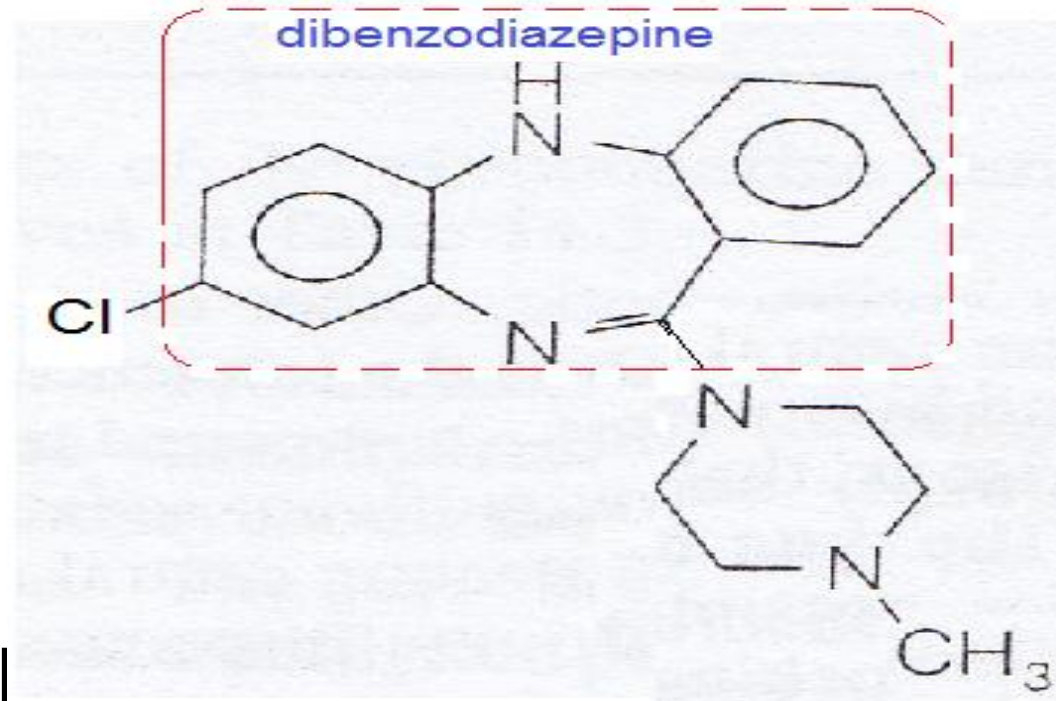


2-chloro- 11-(4-methyl-1-piperaziny) dibenz
[b,f][1,4] oxazepine succinate.

The structure relationship to phenothiazine antipsychotic and has side effects similar to those of reported for the phenothiazines.

2-Dibenzodiazepine deriv.

** Clozapine



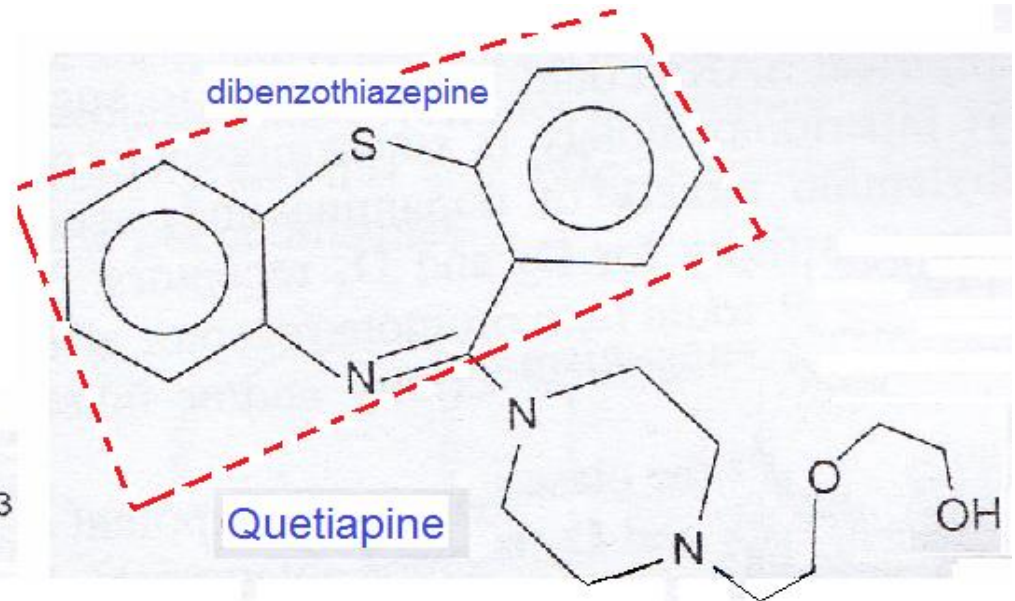
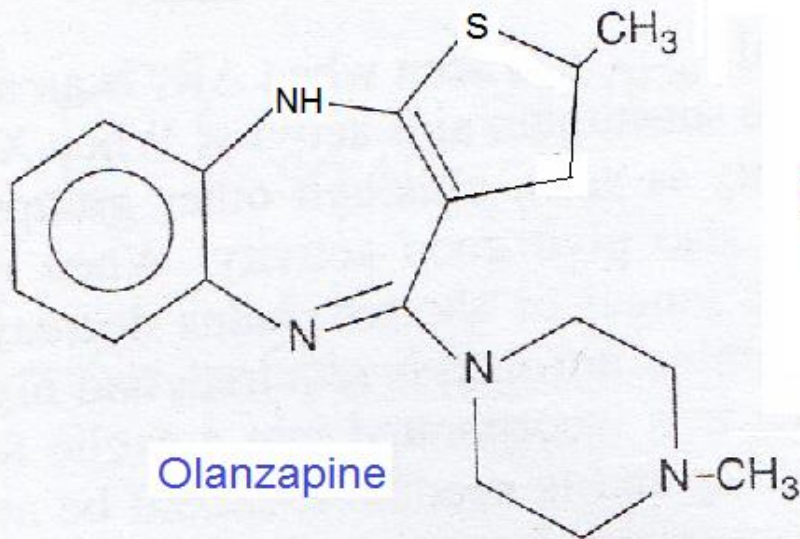
- it not potent antipsycl.....
- it is effective against both (+ve) & (-ve) symptoms of schizophrenia & has low tendency to produce EPS.

Olanzapine & Quetiapine:

Clozapine analogs, possess TC systems with greater e density than chlorpromazine.

Both drugs are atypical antipsychotic.

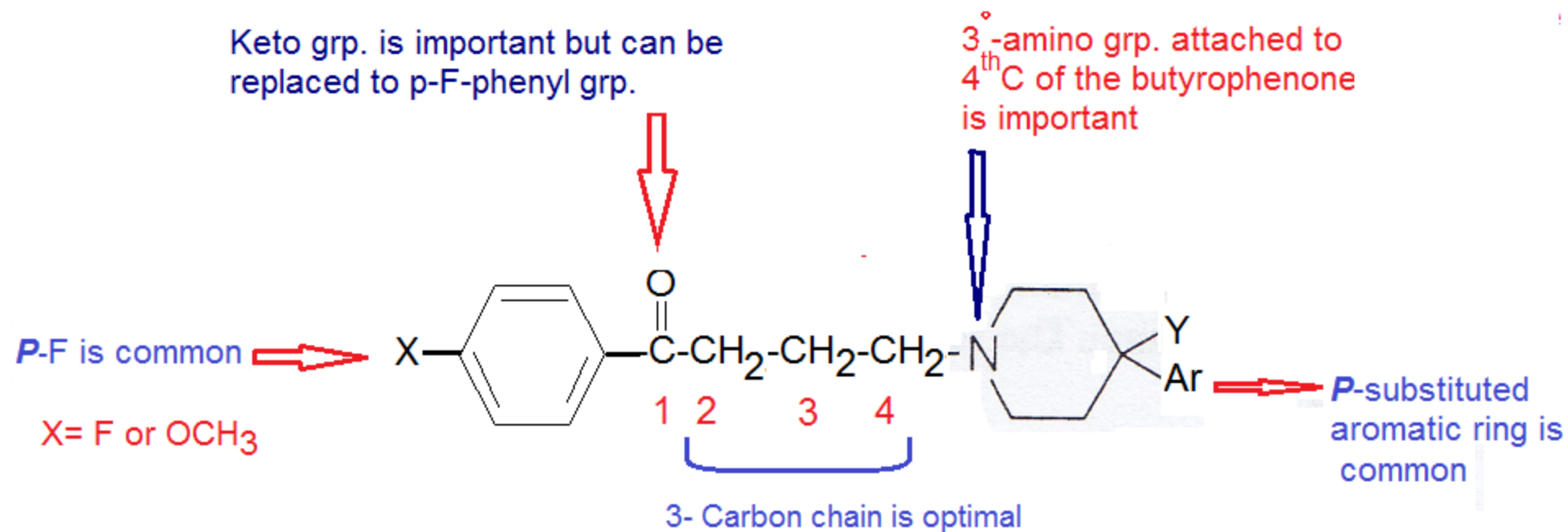
** these two cpds should bind less strongly to D2 receptors & permit more receptor selectivity among receptor subtypes than typical antipsychotics.



3- Fluoro butyrophenones:

** of which possess high antipsychotic activity.

** general structure r- expressed in the following structure:



SAR:

1- optimal activity is seen wn:

* attachment of 3° amino grp. to 4 th C of butyrophenone is essential for neuroleptic activity.

* shorting or lengthing or branching 3C-propyl chain decrease neuroleptic potency.

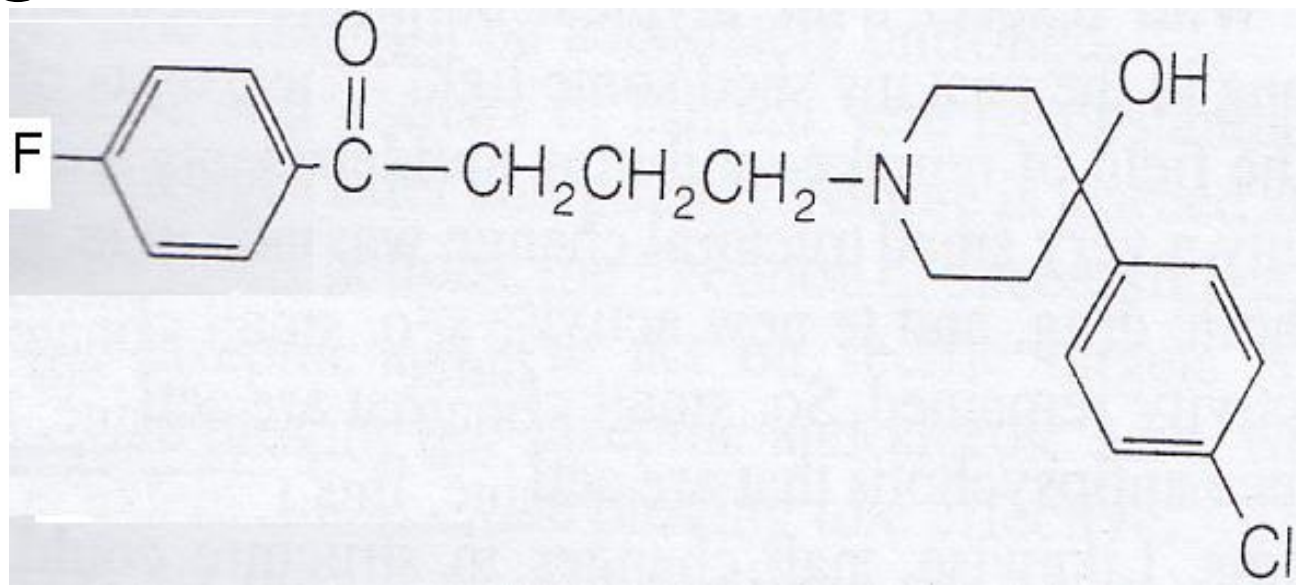
* aliphatic amino nitrogen is required and highest activity is seen wn incorporated into a cyclic form.

* C=O grp. Give optimal activity.

** Y grp. Can vary or assistant activity, (OH)

Haloperidol USP

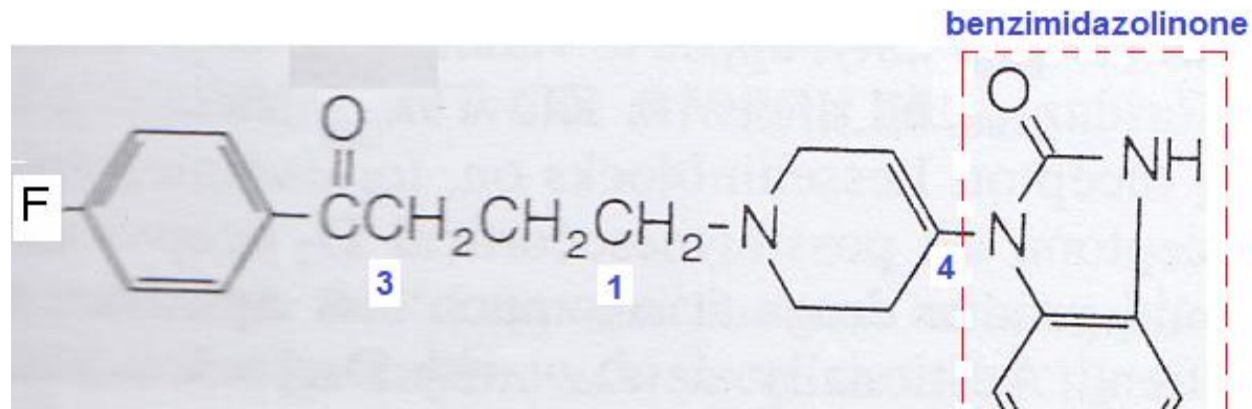
** it is a potent antipsychotic useful in schizophrenia & in psychosis associate w⁻ brain damage.



Droperidol

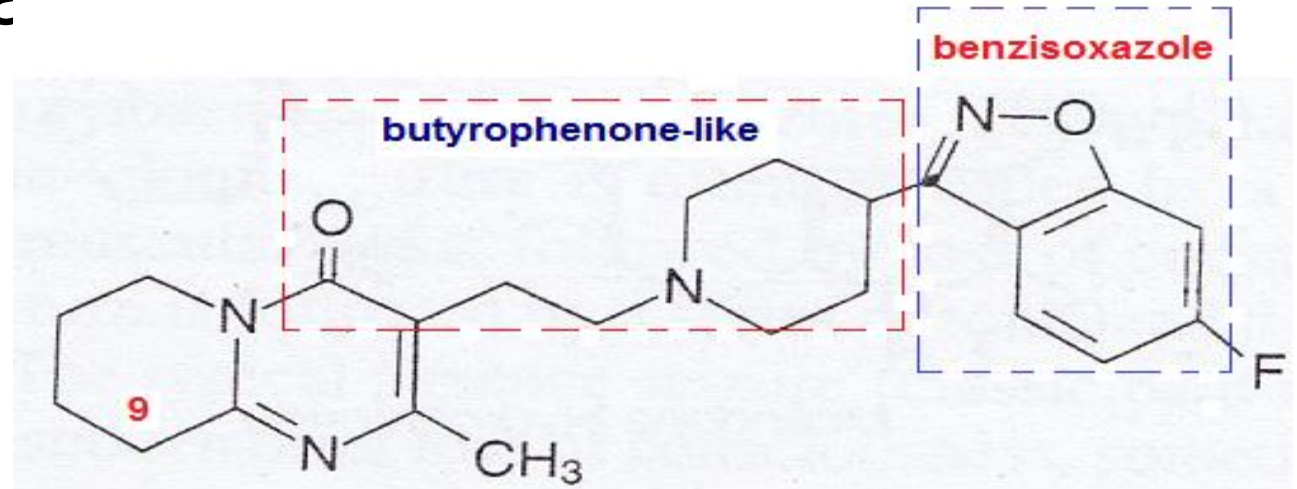
** 1-{1-[3-(p-fluorobenzoyl)propyl]-1,2,3,6-tetrahydro-4-pyridyl}-2-benzimidazolinone, may be used alone as a preanesthetic neuroleptic or as antiemetic.

**b_ of its very short acting and highly sedating properties, its most frequent use is in combination w- narcotic agent Fentanyl preanesthetically.



Risperidone

** hybrid molecule (.) a butyrophenone antipsychotic & a trazodone-like antidepressant



** it is reported to decrease the (-ve) syndrome (e.g. w-drawal, apathy) as well as the (+ve) (e.g. delusions, hallucinations) symptoms of schizophrenia.

Ziprasidone:

have structural features of hybrid molecule (.) a butyrophenone antipsychotic & a trazodone like antidepressant.

Aripiprazole:

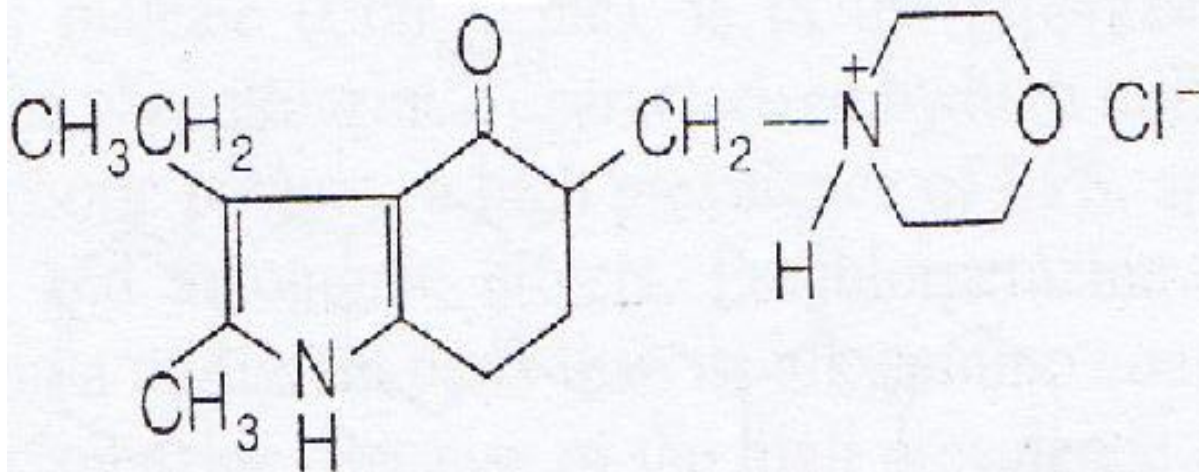
the newest, long acting aripiprazole

β - Aminoketones:

Several β -aminoketones can be used as antipsychotic agents:

*** **Molindone HCl**

* pharmacological activity is about as potent an antipsychotic as Trifluoperazine.

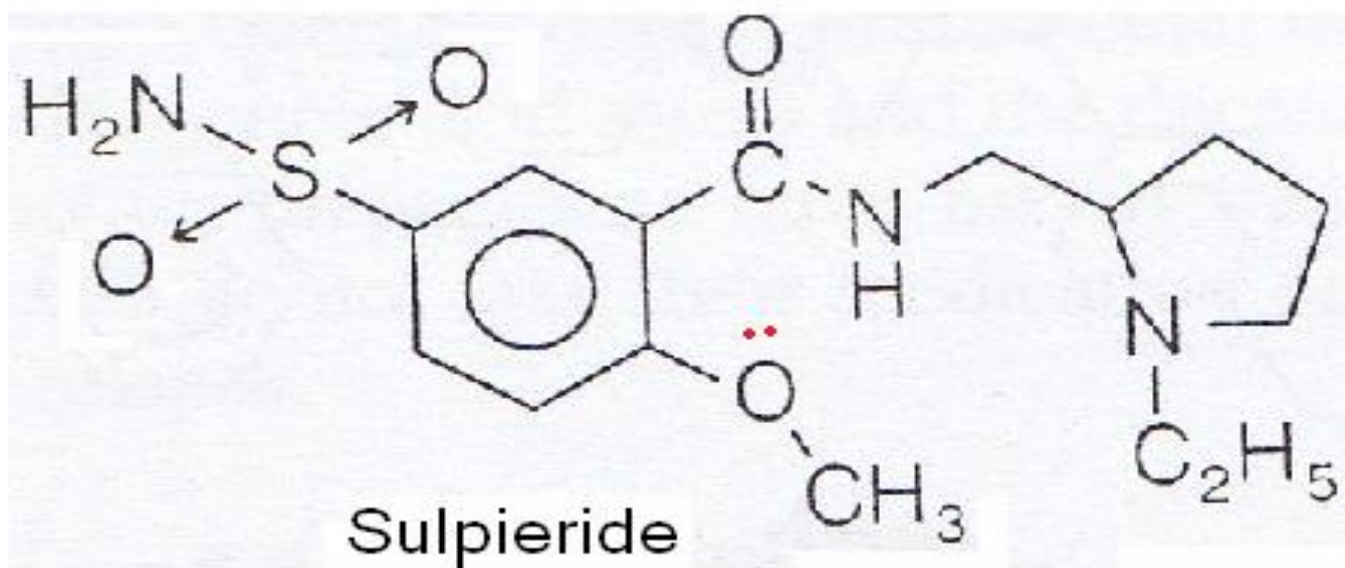


Benzamides:

The Benzamides evolved from observations that Gastroprokinetic & Antiemetic agent, metoclopramide has antipsychotic activity related to D2 Rec. block.

A H-bond (.) the amido H & the unshared e(s) of the methoxy group to generate a pseudo ring is considered important for antipsychotic activity in these compounds. Presumably, when the protonated amine is superimposed on that of protonated DA.

this pseudo ring would superimpose on dopamine's aromatic ring. These features can be seen in Sulpiride and Remoxipride



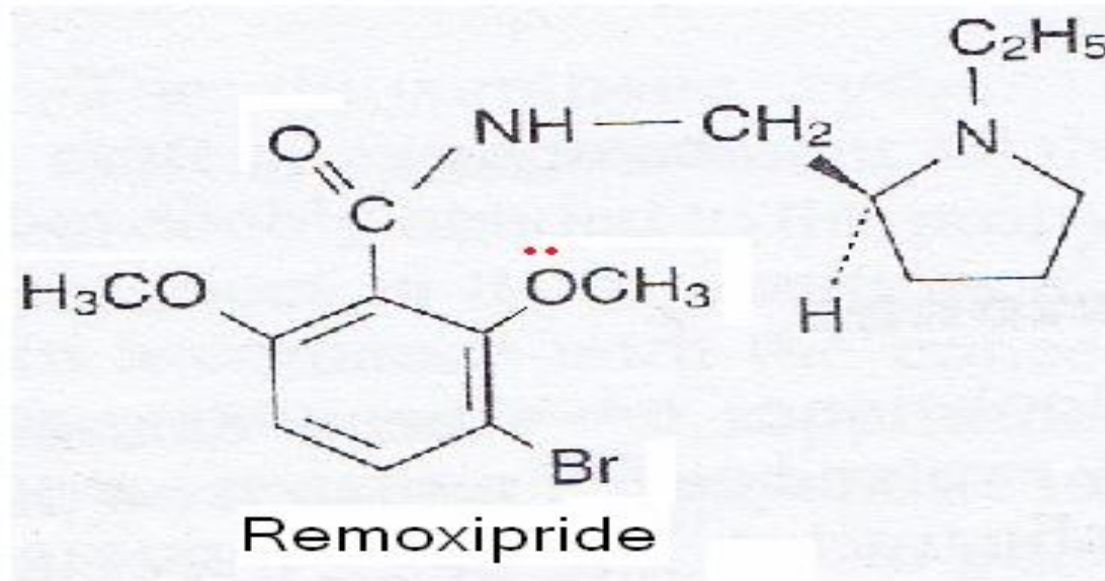
Remoxipride

* D₂ Rec. block

* effective as haloperidol w- fewer EPS.

* (-ve) symptoms of schizophrenia r- diminished.

The drug is classed as an atypical antipsychotic.



Antimanic Agent

Lithium salts:

lithium salts used in the U.S. are the carbonate & the citrate. Lithium chloride is not used:

- 1-b- of its hygroscopic nature and
- 2-b- it is more irritating than the carbonate or citrate to the GIT.

The active species in these salts is the lithium ion.

