# Adrenergic receptor antagonists

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Tolazoline synthesis

#### Prazosin synthesis

$$\begin{array}{c} \text{CH}_{3\text{O}} \\ \text{CH}_{3\text{O}} \\ \text{CH}_{3\text{O}} \\ \text{CH}_{3\text{O}} \\ \end{array} + \begin{array}{c} \text{NaOCN} \\ \text{NaOCN} \\ \end{array} \begin{array}{c} \text{CH}_{3\text{O}} \\ \text{CH}_{3\text{O}} \\ \end{array} \begin{array}{c} \text{NH}_{3} \\ \text{CH}_{3\text{O}} \\ \end{array} \begin{array}{c} \text{CH}_{3\text{O}} \\ \end{array} \begin{array}{c} \text{CH}_{3\text{O}} \\ \end{array} \begin{array}{c} \text{CH}_{3\text{O}} \\ \text{CH}_{3\text{O}} \\ \end{array} \begin{array}{c} \text{CH}_{3\text{O}}$$

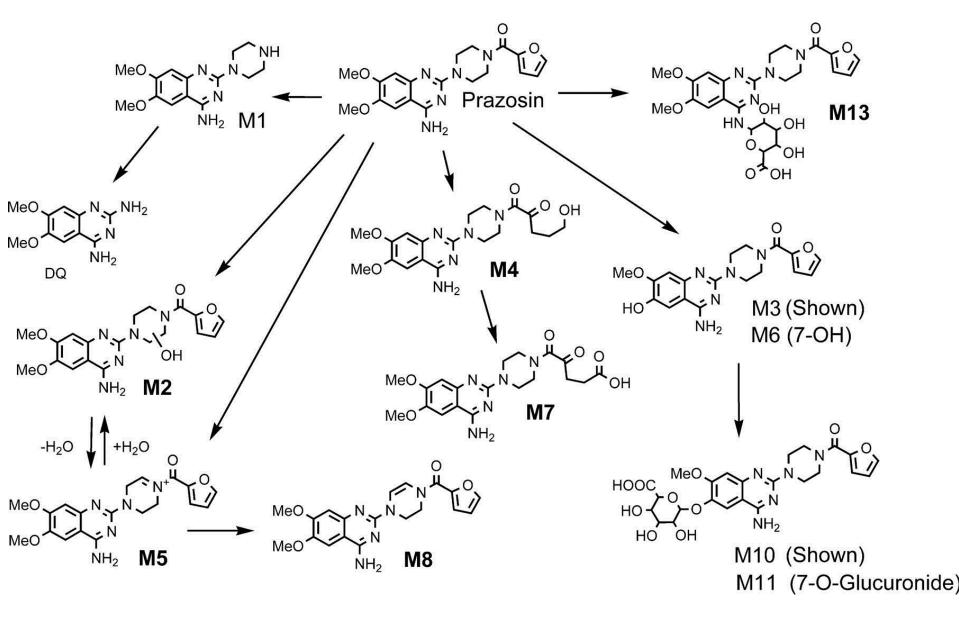
Propranolol synthesis – two general methods used in other betablockers synthesis as well

OH + O 
$$CH_2CI$$
 O  $CH_2CI$  O  $CH$ 

#### Metoprolol synthesis

12.1.5

## Metabolism of Prazosin



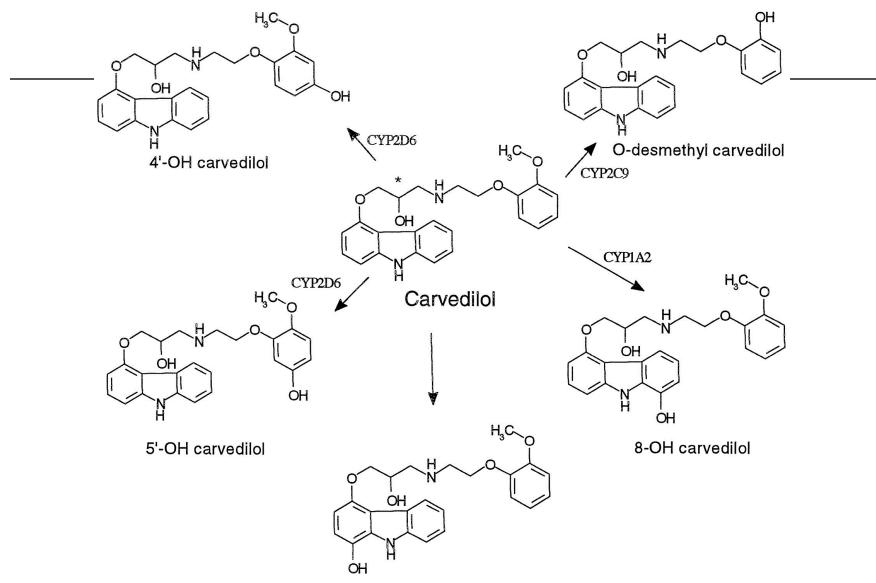
# Metabolism of Urapidil

### Metabolism of Pindolol

#### Metabolism of Pindolol

## Metabolism of Metoprolol

## Metabolism of Carvedilol



1-OH carvedilol