

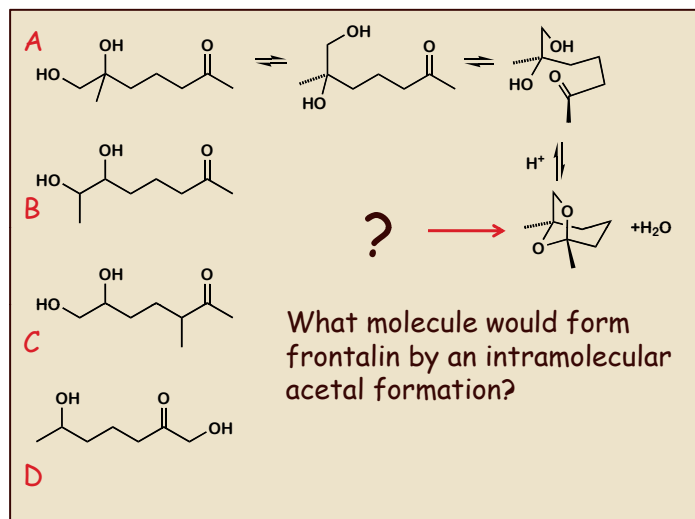
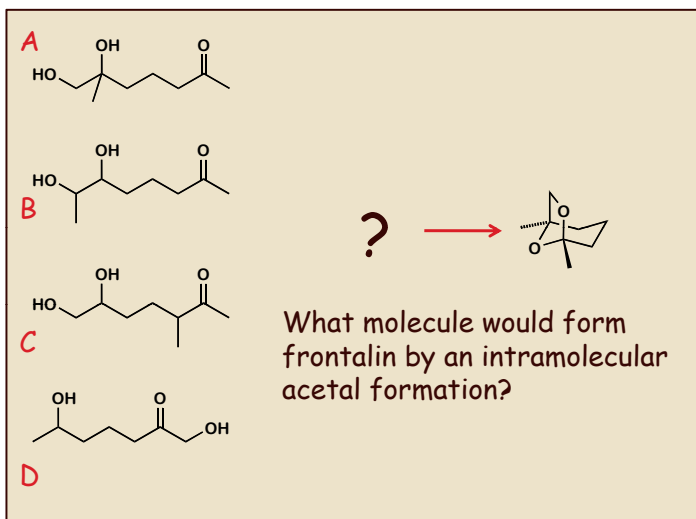
Dendroctonus frontalis Zimmermann (Coleoptera: Scolytidae)

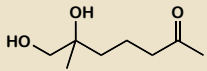
Southern Pine Beetle

Male elephants woo females with precise chemistry

(+) Frontalin (-) Frontalin

www.physorg.com/pdf9292.pdf

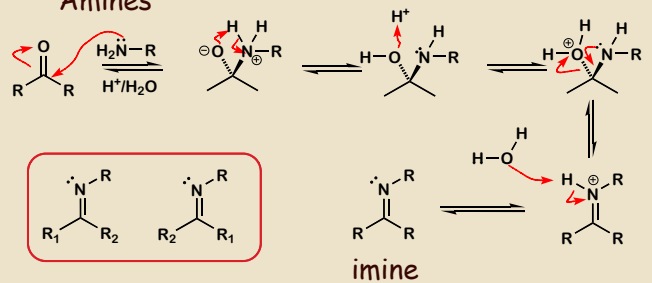




How would you make this molecule?

Good homework problem.

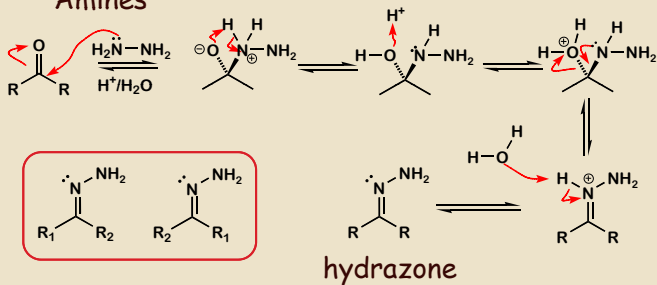
Amines



If groups are different
you get isomers

Instead of an amine use
Hydrazine NH_2NH_2

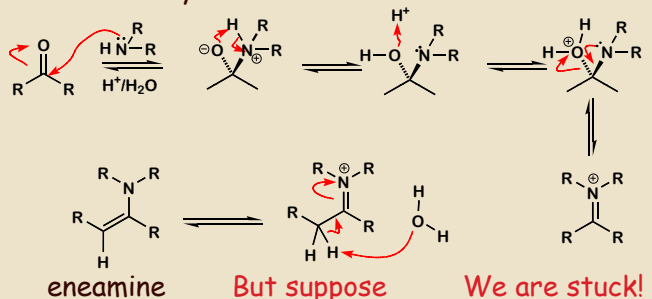
Amines



$\text{NH}_2\text{OH} \rightarrow$ Oxime

Hydrazine NH_2NH_2

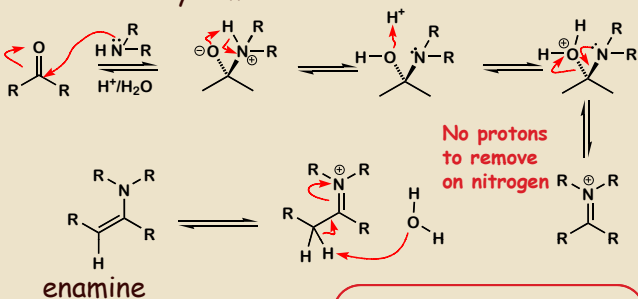
Secondary Amines



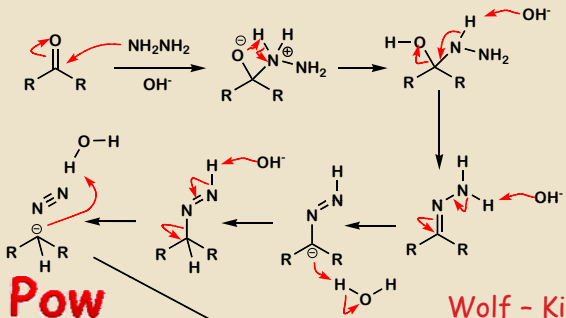
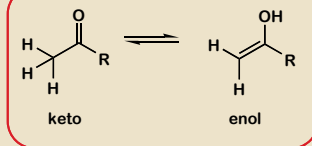
But suppose
the side group
has a H atom
or two.

We are stuck!
No H to remove.

Secondary Amines



Will be important
later for forming
C-C bonds.



Wolff - Kishner
Reduction of
aldehydes
and ketones

Does not reduce nitro groups

