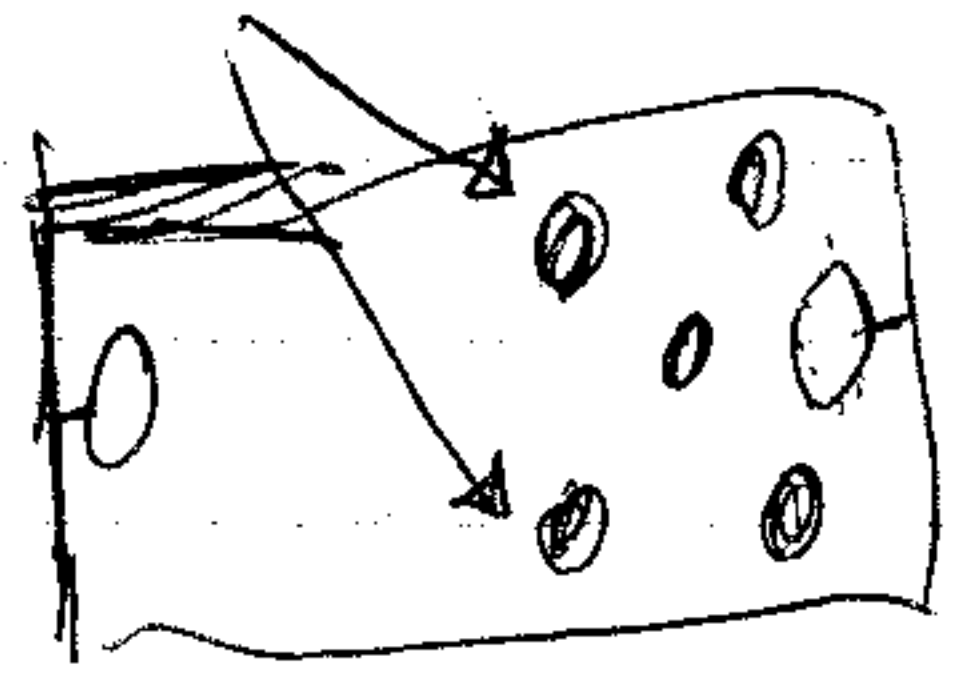


S. Assman - signal Transduction in Guard Cells

Guard Cells - cells that guard!

Signals

- light, intensity
- water status
- humidity
- pH
- hormones ... ABA



stomatal opening

- Forward Cells
- Center Cells

• signal $\xrightarrow{\text{K}^+, \text{Na}^+, \text{Cl}^-}$ stomatal change

ABA - use electrophysiology

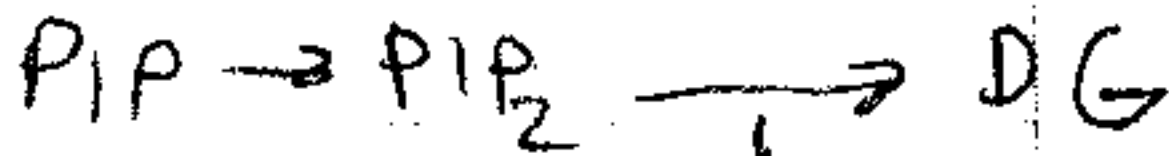
- inhibits K^+ uptake

Patch Clamping to study voltage gating

ABA

... sugg. thru phosphatidylcholine

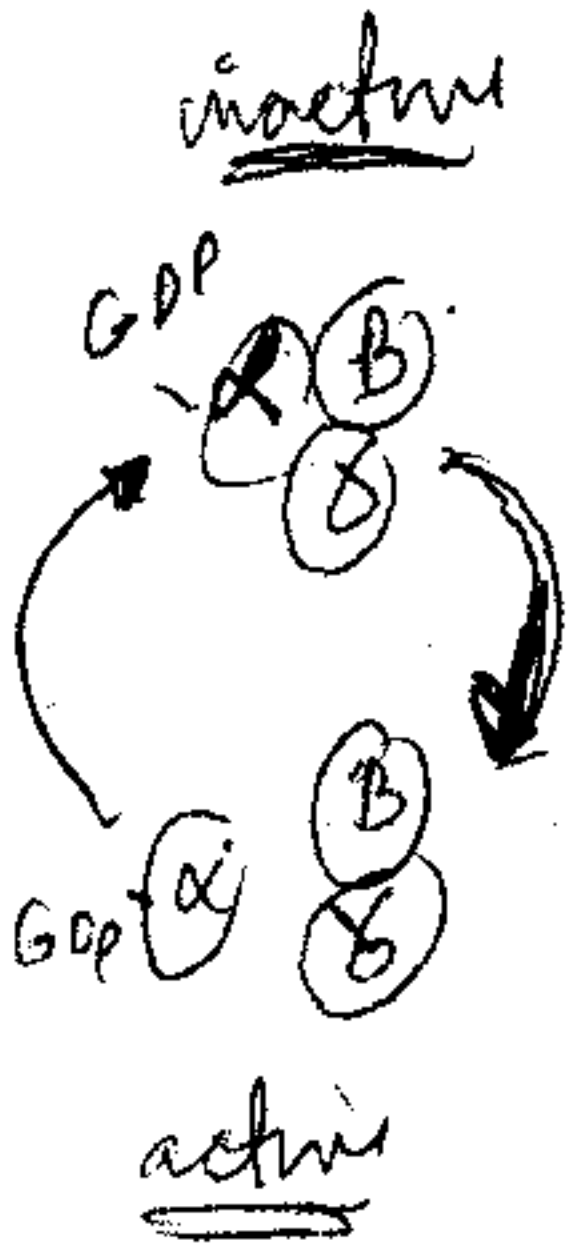
In animals



Calmodulin

\downarrow
PK

\downarrow
protein phosphorylation



Suggests that ABA does not work thru G-coupled receptor but intracellularly

- ① ABA works best @ low pH & low pH form can get thru bilayer