

G. Somero - Vent Man - Proteins & T°

3/2/95

- Free energies of stabilization of globular proteins are low.
 - ∴ proteins are only marginally stable in cell
 - slight Δ's in cell T° v. important
- Minor Δ's in sequence can lead to major changes in stability & flex.
- Protein stability & flex. largely dependent of medium - - solute, other prots, H₂O

ANTARCTIC FISH

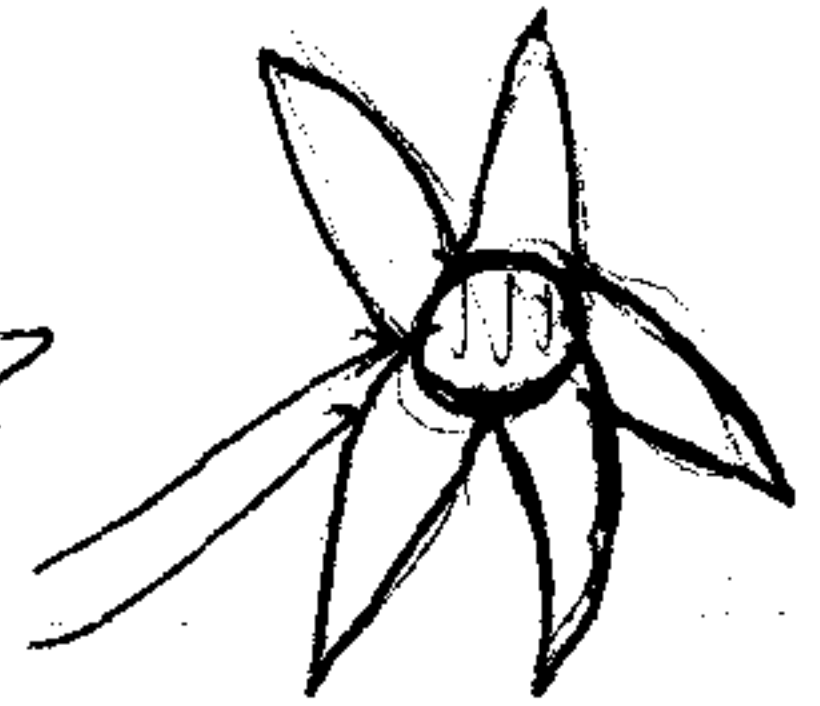
- cannot tolerate > 4°C
- v. low T° range

What possible adaptations at high T°?

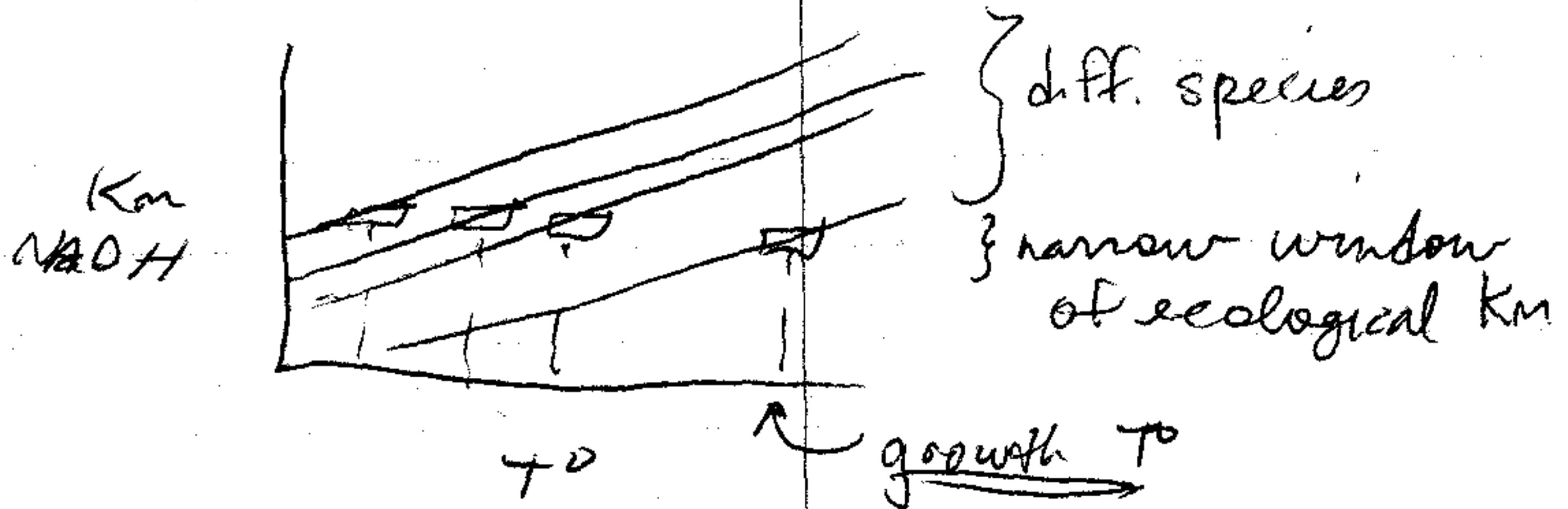
- ① sequence Δ
- ② environment Δ
- ③ heat shock - - refold
- ④ ubiquitination - - destroy

Why not make most stable protein?

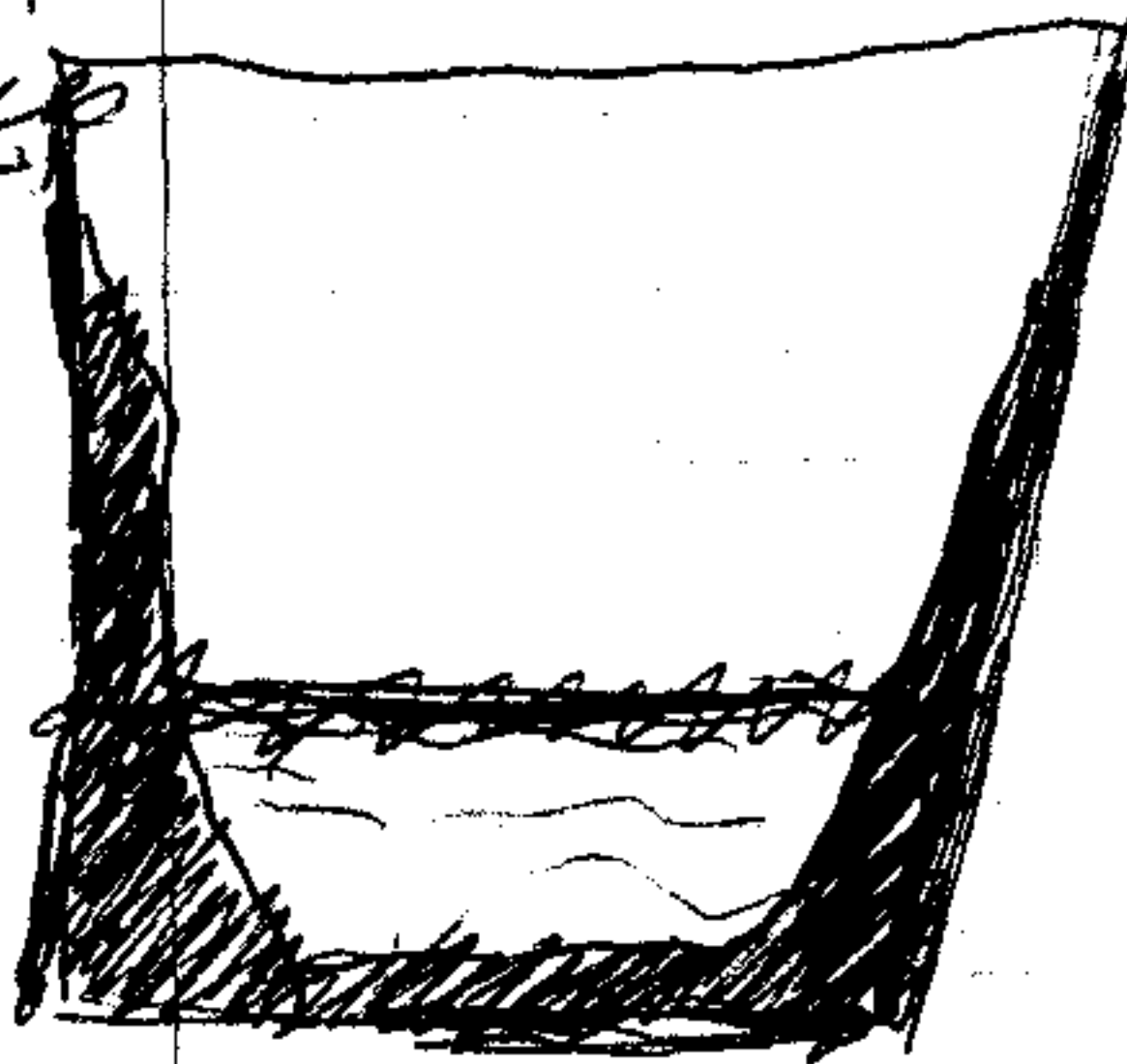
- ① need for lability
- ② need for degradation



LDH



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Chris Somers