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Nitrile Hydratases NH

- very large enzymes w/ iron centers
 - CN inhibited system
 - tested growing cells in Co not Fe
 - impervious to CN
- can get 50% of soluble activity in NH₃ enzyme



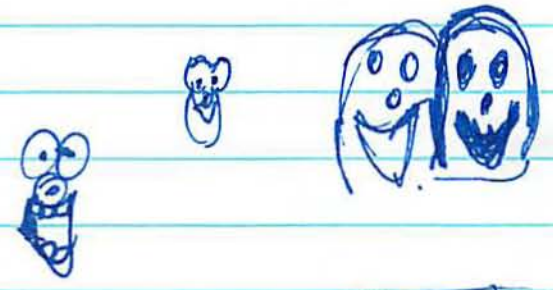
Nitrile hydratase



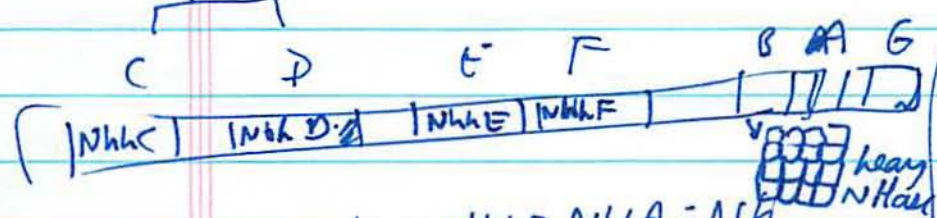
Can you evolve new activity/cells?

Cells adapted to incr. yield:

- porins/Co transport
- in addition to NH₃ export



+ regulators



- combine NhhB, NhhA = NH₃
- amide required for oligomer assembly
- Light-Nhhase

NhhO NhhC NhhB NhhA NhhF Amide

NhhF = Co transport
 NhhD = regulator
 NhhC = "
 NhhE = "
 NhhO = "
 NhhB = L-Nhhase B
 NhhA = L-Nhhase α
 NhhB = H-Nhhase B
 NhhA = N-Nhhase α

