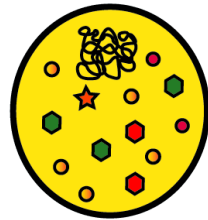
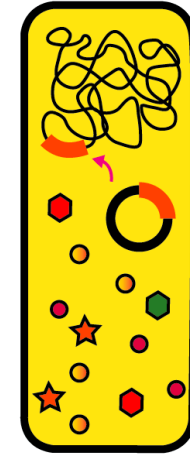


Cell-Free Systems

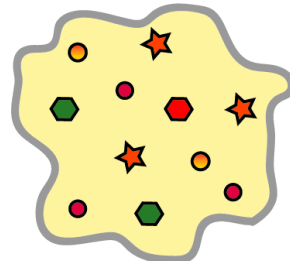
in vivo



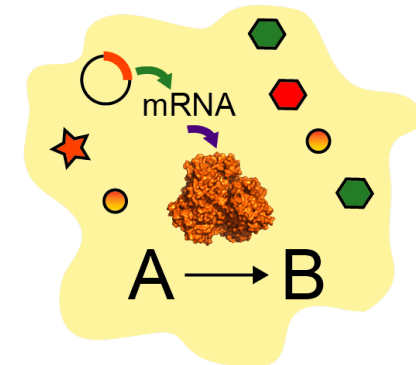
~ 1 – 3 weeks



in vitro
(Cell-Free)

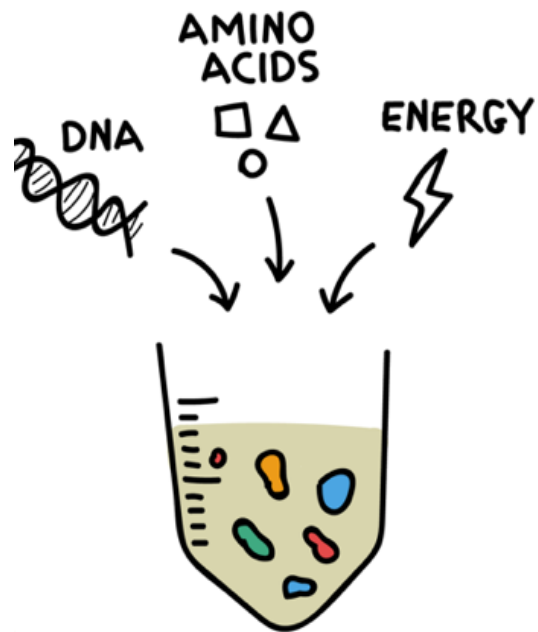


~ 1 hour



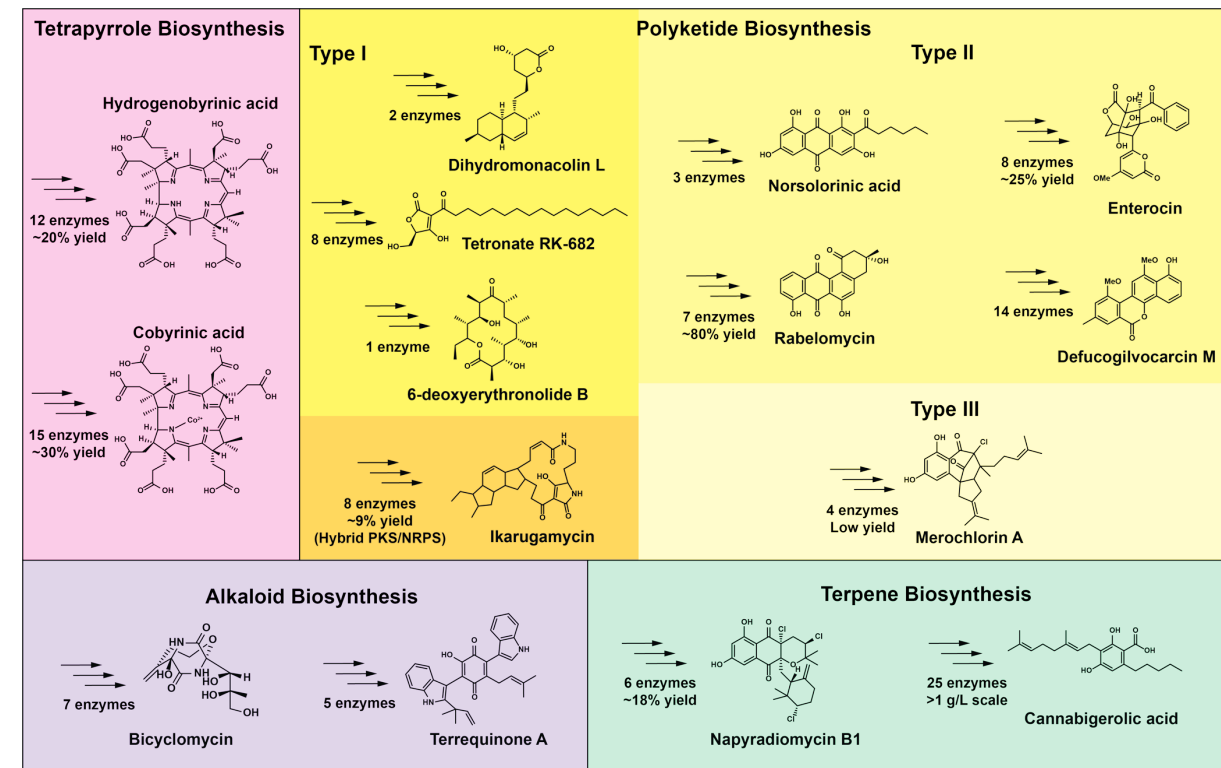
Cell-Free Biosynthesis

1. Cell-Free Protein Synthesis



- *Peptide libraries*
- *Toxic metabolites*
- *HT screening*
- *Non-canonical AAs*
- *Antimicrobials*

2. 'One-pot' Biosynthesis

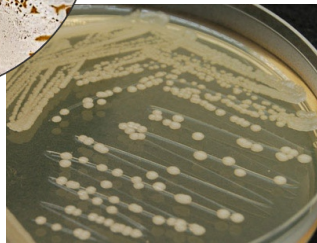


Moore SJ *et al* (2017) *Biotech J* doi: 10.1002/biot.201600678

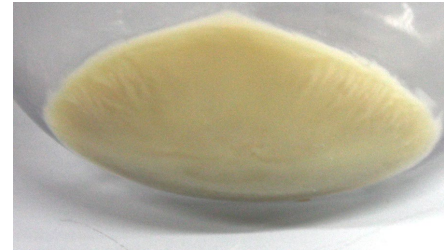
Moore SJ *et al* (2018) *PNAS* 115, E4340-E4349

Moore SJ (2019) *in review*

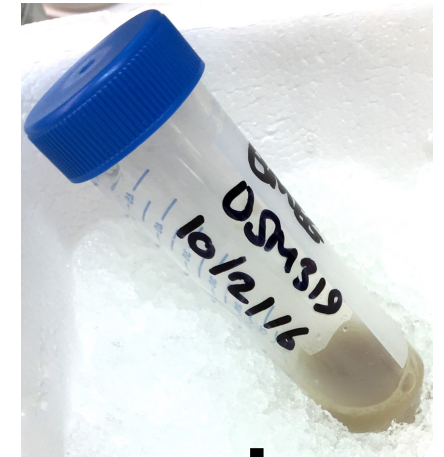
Cell-Free Protein Synthesis



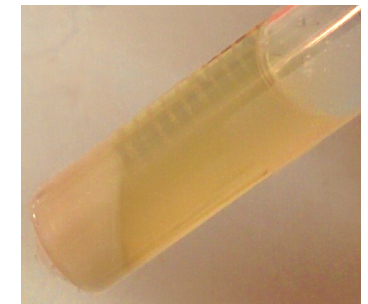
Growth



Wash



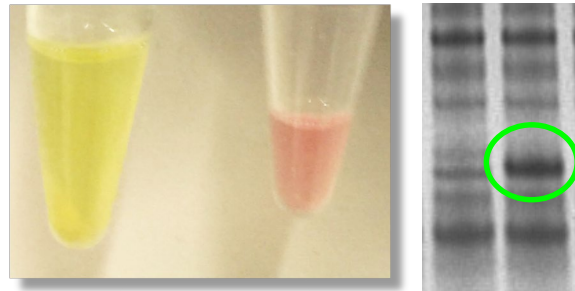
Lysis



Transcription + Translation

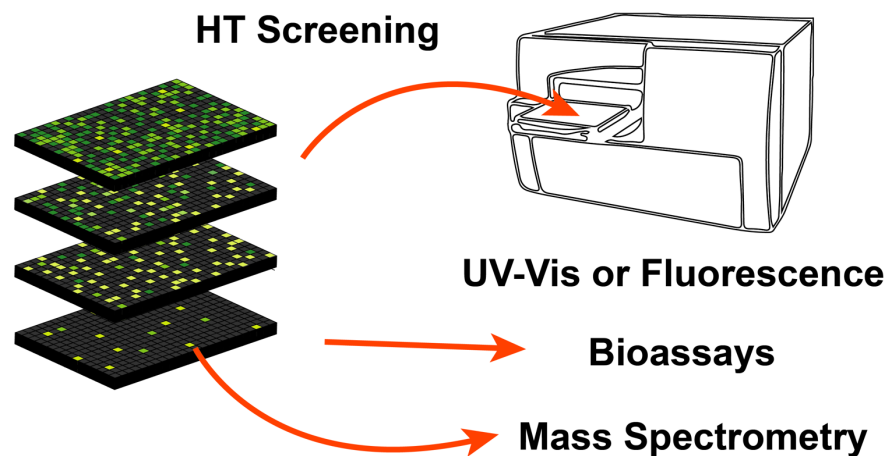
Potential for Antibiotics

1. Antimicrobials / toxic products
2. High-throughput assays
3. Rapid timescales / low-volume



μM to mM yields

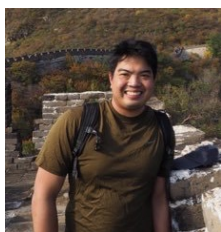
Proteins / peptides / small molecules



Automation and Screening

Moore SJ et al (2018) PNAS 115, E4340-E4349

University of Warwick



Dr Emzo De Los
Santos



Dr Christophe
Corre

