

Requisites for Transformation (a 501)

- DNA release from cells
- Persistence of extracellular DNA
- Development of Competence of DNA
- DNA uptake, inheritance, expression

Strong selection for
plasmids to have
chromosomal genes

Expects suppressors
of muts to
be selfish
elements.

Rosie Redfield

What Limits Horizontal Transfer

- prophage induction by SOS
 - in thymine ... SOS induced, cells die due to prophage induction
- DNA uptake specificity
- restriction
- absence of vectors
- sequence divergence
- mismatch
- physical isolation
- no DNA in environment
 - no release
 - degradation

~~Phage~~ Flohen

Bacillus ... transformation --- no obvious role of MutS, L

... rates of recombination are low -- and too low to prevent speciation