

membranous structure called transformation which protrudes outside the cell.

* The transforming DNA is taken into these vesicles where it is internalised into the cell.

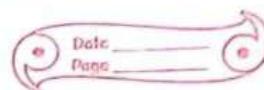
* DNA uptake in Haemophilus influenzae appears to require specific sequence termed uptake sequences, for example -
AAGTGCCTCA in
Haemophilus influenzae.

* The Haemophilus influenzae take up DNA of their own species by recognising uptake sequences whereas other species such as Streptococcus pneumoniae and Bacillus subtilis do not discriminate between their own and foreign DNA.

★ Process of transformation

* Once the free DNA comes in the contact with the competent bacteria, linear, double stranded DNA enter into the cell but one strand is degraded while the other is integrated into the chromosome by homologous recombination.

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* Recipient cells undergo this process and acquire a new phenotype as a result are said to be transformed.

* Single stranded exogenotes are unstable and will usually be degraded unless they are integrated into endogenote.

* By the process of homologous recombination, the transforming DNA integrates into the bacterial chromosome.