May 17, 1955

Miss Jean Husted
W.B. Saunders Company
West Washington Square
Philadelphia 5, Pa.

Dear Miss Husted:

I hope it is not too late for a useful reply to your letter of April 13. You asked about a number of terms (in effect) and I wanted some time to think about them. Actually I am somewhat surprised that you should ask for a definition of transduction, unless you plan to include quite a number of equally relevant genetic terms.

Transduction is the transfer of a genetic fragment from one cell to another, e.gg, the "pneumococcus transformation" (Griffith,1928) and virus-mediated transduction in Salmonella (Zinder & Lederberg, 1952).

Heterogenote is a cell which has an additional genetic fragment, different from its intact genotype. It usually results from transduction.

Prototrophic means having the nutritional characteristics of the prototype strain. (Compare Davis' neologism, auxotroph).

Plasmid is a generic term for all types of intracellular inclusions that can be considered as having genetic functions, including plastids, viruses, plasmagenes, endosymbionts.

There are many additional, fairly new terms that others have coined, and still others that are important in established genetic terminology. You should consider definitions for the following:

lysogenic; colicin; heterokaryon; position effect; allelic; pseudoallelic; karyonide; micronucleus; macronucleus; segregation; hemizygous; monosomic; hyperploid; endomitosis; prophage; preprophage

I assume you already have such terms as:

heterozygous, homozygous; haploid; diploid; aneuploid; locus; DNA; clone.

If I can be of any further assistance with the above please let me know.

Yours sincerely,

Joshua Lederberg
Professor of Genetics