

INTRODUCTION

The term "cytotoxic" is composed of the prefix cyto, comes from a greek word (Kytos), meaning a hollow (Cell), plus toxin. So, the term means a specific substance that inhibits or prevents the functions of cell, or causes destruction of cells, or both. With this conception, almost all drugs may be expected to interfere in one way or another with cell growth or multiplication if given in enough concentration (Taylor, 1970).

In this essay, we are concerned with drugs that in their smaller effective doses, interfere with one or more of the specific processes involved in protein synthesis and cell division. These drugs were originally developed as antineoplastic agents aiming at "total cellkill" (Dantzig, 1974; Calabresi and Parks, 1980).

The antineoplastic agents may be:

- 1- Cycle non-specific : act on resting or actively cycling cells.
- 2- Cycle specific : act on actively cycling cells.
- 3- Phase specific : act on cells in one particular phase of active cycle (Bertino and Hryniuk, 1978).

The cell cycle consists of 4 Phases:

- 1- Pre-synthetic phase(G_1).
- 2- DNA synthesis (S).
- 3- Post-synthetic phase (G_2).
- 4- Mitosis phase.

Many of the cytotoxic agents act on cells that are in the process of rapid division whether normal, as skin and hair follicles, or abnormal, as human malignancies and psoriatic epidermis, while other tissues will not be affected (Wade and Reynolds, 1977).