



Development of anticancer and antiviral drugs from natural resources

Hanan Ahd Al-Hay Said Al-Ashaal

Division of Pharmaceutical and Drug Industries Research, National Research Centre, Egypt

Nature is considered as the major source of plants that could be utilized in pharmaceutical preparations. Since the early beginning of man on earth, many plants were used for treating several diseases, later, man has turned to synthetic drugs but many of which have severe side effects. Recently man turned to the mother nature to satisfy his needs from pharmaceuticals. The selected plants; *Solanum* (Fam. Solanaceac) and *Balanites* (Fam. Balantiaceae) are belonging to cortisone plants and characterized by the presence of many phytochemical groups and consequently different biological activities. Secondary metabolites had been derived from both mother plants and different stages of plant tissue and cell culture technology to overcome the problems of low yield, scarce of the active constituents and weather that affect the quantity and quality of these constituents. Among active constituents studied were, glycoalkaloids, flavonoids, saponins, oils, terpenoids and sterols. So, at the NRC we studied the possible use of these compounds and extracts as a natural sources for developing anticancer and antiviral drugs by economical and applicable methods.

Among the human carcinoma cell lines examined were, lung, liver, brain, breast, colon, larynx and lymphoplastic leukemia. Preliminary screening of the antiviral activity was performed against some selected virus strains as Herpes, Rota, Adeno and LAPI H5N1. Keen selections of the plants, bioanalytical methods of analysis were followed. We are looking for cooperation with pharmaceutical companies to continue work for developing drugs from these natural resources.

Biography

Dr. Hanan Abd Al-Hay Al-Ashaal has got her PhD from college of pharmacy, Cairo University, Egypt. She is working at Division of Pharmaceutical and Drug Industries Research, National Research Centre, Egypt. She has more than 20 publications and 2 patents under evaluation and attained 8 international conferences. She is also a reviewer in many international journals. Dr. Hanan is the responsible investigator of 3 projects at NRC with cooperation with Egyptian pharmaceutical company.