

**B11** Polyamine analogues as potential anticancer agents

H.M. Wallace

*Departments of Medicine and Therapeutics and Biomedical Sciences, University of Aberdeen, Polwarth Building, Foresterhill, Aberdeen AB25 2ZD, Scotland, UK*

The polyamine pathway has been identified as a legitimate therapeutic target for chemotherapeutic and chemopreventative intervention. Although some success was achieved using single enzyme inhibitors it is now clear that in order to deplete the polyamine content of cancer cells active agents must influence biosynthesis, catabolism and transport. The most successful agents in this respect are the polyamine analogues. Several generations of polyamine analogue have been synthesised. Initially, the symmetrical analogues, the bis(ethyl)polyamimes, were produced and these showed significant promise as antiproliferative drugs. The second generation were the unsymmetrically substituted analogues that also prevented the growth of various types of tumour cell. The latest generation are the conformationally restricted analogues which exhibit a range of activities against a number of disease states. A number of these analogues have been investigated in human leukaemia, breast and colon cancer model systems and their potency and efficacy against each malignancy will be compared. The potential of each of these categories of analogue for development as new anticancer agents will be discussed.