

### **Chemical alkylation of nucleic acids**

Ryszard Wiaderkiewicz, Zofia Walter

Chemical alkylation of nucleic acids may be caused both by direct alkylation compounds and by agents which can be transformed in such a compounds by metabolic activation. Some of alkylation compounds are well known cancerogens, majority of them show mutagenic activity. All simple alkylation compounds reacted with the same sites in nucleic acids but substantial differences exist upon the level of alkylation in a certain site. The main product of nucleic acids alkylation is N<sup>7</sup> alkyl guanine but guanine moieties alkylated in O<sup>6</sup> position might be the essential reason of mutagenesis and cancerogenesis.