

## MEETING REPORT\* ON INTERNATIONAL CONGRESS OF NUCLEIC ACID INTERACTIONS

This International Congress was held in Padova from the 13th to the 17th September 1987 and was organised jointly by members of the Universities of Padova (Italy), Yale (U.S.A.) and Cambridge (U.K.), and supported by the Consiglio Nazionale delle Ricerche (CNR—Italy), the National Foundation for Cancer Research (U.S.A.), and by the authorities of the city and region of Padova. Some 50 papers and 40 posters were discussed. The principal topics were the mechanisms of DNA, specific recognition of proteins and anti-tumour and anti-microbial drugs. Molecular models were presented for the mechanism of ligand activated genetic regulation, as were the function and molecular dynamics of nucleoproteins. Techniques of computer graphics, and the potential and restraint energies of the molecules were shown to be powerful tools for the rational design of new drugs.

A session was devoted to the topic of photochemistry which included discussion on the mechanisms of covalent DNA photobinding by psoralens, the sequence specificity of this reaction and of related biological effects. The structural basis was provided for understanding how DNA is damaged and how repair enzymes recognise the damaged sites. Crystallographic, NMR and model building studies on these cross-linked DNAs were also presented. The process of dark interaction between monofunctional furocoumarins and DNA was thoroughly reviewed. The final day of the Congress was occupied by the discussion of non-photochemical covalent binding reactions involving drugs and enzymes. Mechanism for DNA recognition by alkylating reagents and their sequence selectivity were examined using appropriate molecular models such as plasmids and SV40 minichromosome. The use of oligonucleotides covalently linked to intercalating drugs were described as sequence specific probes to selectively block gene expression at the levels of transcription and translation.

The reports published in this issue represent a cross section of the material presented at the Congress.

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\* The Editors of *Biochemical Pharmacology* are prepared to publish short, selected, extended abstracts containing factual information from small meetings or conferences, particularly those of which attendance had been restricted. These publications are refereed. Organisers of conferences who wish their meetings to be published in this way should contact the appropriate Regional Editor.