Preface

Although pharmacology and toxicology have a long history and even a name to share – pharmakon was both a drug and a toxic substance to the ancient Greeks – the growth of the two disciplines has led, among other things, to parallel developments and discoveries, often mutually ignored. Thus, the metabolic activation of drugs and toxic chemicals and the influence of diet in the response to therapeutic agents, and in the development of some forms of toxicity, offer interesting examples of advances in knowledge where a dual paternity can easily be recognized.

The goals of this symposium were to explore different areas where pharmacology and toxicology converge, with the hope that this may result in a better understanding of drug responses and toxic effects. Enzyme induction by environmental agents, particularly insecticides and organic solvents, can markedly modify the fate and effects of drugs. The genetic susceptibility to this induction may explain, at least in part, why carcinogenic influences are more likely to result in the development of neoplasia in some individuals than in others.

It has often been stated that adverse reactions to drugs can mimick any form of disease. Some liver reactions to different therapeutic agents can be virtually indistinguishable from viral hepatitis in most regards; drug-induced aplastic anemia may exhibit the same clinical picture as the spontaneously occurring disorder. A point that is readily accepted, but rarely put forward, is that some toxic effects of chemicals may be mistaken by an adverse drug reaction, and vice versa. When hypersensitivity is the origin of the process, the distinction should be considered with care, since cross-sensitization may be operating. Again in this field, open discussion between toxicologists, pharmacologists and clinicians will undoubtedly foster knowledge.

Finally, society must pay attention to the possible use of drugs to modify environmental toxicity. This should not be construed as an invitation to stop worrying about the prevention of environment degradation – this should always be the prime concern – but as a plea to take full advantage of the pharmacological tools now available to counteract some toxic effects, and to favor the development of new agents in this field. The benefits of this effort are not to be ignored. Research in this area is quite active, but some of the ventures remain somehow isolated. This may be a good time for the different experts to compare approaches and to discuss possibilities.

It seems obvious, therefore, that this symposium on **Interactions between drugs and chemicals in industrial societies** will offer many different opportunities for advance in the fields of pharmacology and toxicology. We are indebted to the participants for their valuable contributions and, above all, for the great intellectual pleasure of sharing their company.

G.L. Plaa
P. du Souich
S. Erill