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Preface

Increasing demand for analysis, isolation and study of physico-chemical properties of complex structurally-related analytes in biological matrices has prompted the exploitation of highly selective, subtle and reversible interactions between the ligate and the biosensor surface. As evidenced by abundant scientific papers and books on the subject, the application of the underlying principle has extended the areas of applications both in chromatography and electrophoresis. It has also provided a better understanding of biological interactions, and made possible isolation, purification and detection of biologically relevant materials, such as peptides and large biopolymers, under conditions which enable preservation of biological activity for further testing. The corresponding techniques are termed ''affinity'' or ''bioaffinity'' chromatography and electrophoresis. More specifically, the use of antibodies or antibody-related reagents as a stationary phase affords a particular selectivity which has made immunoaffinity chromatography and immunodetection a rapidly growing area of research and development.

The current interest in genomic research and the prospected therapeutic benefits have given a particular impetus to these types of separations and their importance is expected to increase even more in the future. Other areas, such as biotechnology, environmental monitoring and fundamental research, to name a few, have also benefited from analytical developments based on bioaffinity interactions.

We believe it was timely to assemble presentations by an international panel of authorities on the multiple facets of bioaffinity interactions which we hope illustrate the current interests and achievements in this area of separation science.

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