



Novel analytical technologies contributing to clinical and pharmaceutical research fields

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In May 2024, we are pleased to present a special issue on "Novel Analytical Technologies Contributing to Clinical and Pharmaceutical Research Fields." In the clinical and pharmaceutical research fields, analytical techniques have been developed to collect and analyze various molecules including trace biomolecules in living organisms. This has led to the elucidation of new physiological significance of the molecules and to the design new diagnostic methods of diseases.

Here, we have highlighted the latest analytical techniques/methods for biomolecules in various biological- and clinical-related samples. In this special issue, we have published two reviews, eleven original papers, and two notes. The reviews from Prof. Ogawa (Kanazawa Univ.) and Prof. Nagase (Keio Univ.) include the development of novel radiotheranostics ligands prepared by Ac and At isotopes for cancer therapies, and the bioanalytical techniques of temperature-responsive chromatography with poly(*N*-isopropylacrylamide)-based polymers, respectively. In addition, effective extraction methods from living organisms for diagnosis of various diseases, pretreatment methods for bioanalysis, liquid

chromatographic (LC) techniques combined with mass spectrometry (MS), and recent biosensor technologies are constructed as original papers and notes. These papers include studies on data processing and evaluation techniques, as well as a technique for examining the structure of G-quartet DNA on the genome, chiral separation of amino acids and peptides, and evaluation of biomolecules in various real world matrices. The guest editors are very pleased to publish this special issue on analytical techniques necessary for the development of the clinical and pharmaceutical research areas discussed here and strongly hope that these papers will become a useful collection of reference material for many analytical chemists in this field.

Finally, we would like to thank the authors for their contributions to this special issue and the reviewers for their valuable comments and fruitful discussions to improve the submitted papers. We would also like to thank the JSAC secretariat and the SN editorial office for their invaluable cooperation in the preparation of this special issue.

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