Editorial

Analytical Method Development and Validation of Pharmaceutical Analysis Using Chromatographic Techniques

Bengi Uslu,¹ Henk Lingeman,² Sibel A. Ozkan,¹ Meehir Palit,³ and Burcu Dogan-Topal¹

¹ Department of Analytical Chemistry, Faculty of Pharmacy, Ankara University, Tandogan, 06100 Ankara, Turkey

² Division of BioMolecular Analysis, Faculty of Sciences, VU University Amsterdam, De Boelelaan 1083, 1081 HV Amsterdam, The Netherlands

³ Organisation for the Prohibition of Chemical Weapons, Johan de Wittlaan 32, 2517 JR The Hague, The Netherlands

Correspondence should be addressed to Bengi Uslu, buslu@pharmacy.ankara.edu.tr

Received 26 September 2012; Accepted 26 September 2012

Copyright © 2012 Bengi Uslu et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Analytical methods including chromatographic methods are commonly used for the quantitative and qualitative analysis of raw materials, drug substances, drug products, and compounds in biological samples in pharmaceutical industry. The components monitored include chiral or achiral drugs, process impurities, residual solvents, excipients such as preservatives, degradation products, extractable and leachable from container and closure or manufacturing process, pesticide in drug product from plant origin, and metabolites.

Validation of an analytical method which is used during drug development and drug manufacturing is required to demonstrate that the methods are fit for their intended purpose. Additionally, the pharmaceutical industry around the world is subject to extensive regulations due to the nature of its products.

Analytical chemists play important roles in monitoring the drugs in their dosage forms and biological samples. From the viewpoints mentioned above, the title of this special issue was chosen so as to ask chemists to appreciate their great roles in chemistry science. This special issue features 8 research articles. In this special issue, development of chromatographic methods such as high performance liquid chromatography, gas chromatography, micellar liquid chromatography, and their validations is presented.

The purpose of this special issue will be to serve as a guide to what chromatographic methods bring to analytical and medicinal chemistry and other pharmaceutical sciences as well as briefly review their role in drugs and the new developments and validation of assay methods of pharmaceutically

active compounds. Also, recent developments of application, evaluation, and validation of chromatographic methods are focused on by key topics in drug developments and analysis by assessment of the distinguished authors of this special issue. We hope that the reader will find a number of topics of interest and that additional new ideas will emerge from this special issue.

Acknowledgments

We would like to thank all the authors for their excellent contributions and the editorial board members of *Chromatography Research International* for their kind invitations to act as guest editors for this special issue.

Bengi Uslu
Henk Lingeman
Sibel A. Ozkan
Meehir Palit
Burcu Dogan-Topal