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## Editorial

### Editorial on “Current approaches to trace analysis of pharmaceuticals and personal care products in the environment”, by Wolfgang Buchberger

In recent years, there has been a heightened awareness of pharmaceuticals and personal care products as potential environmental contaminants. These species are consumed in vast amounts and considerable quantities enter the wastewater treatment cycle after excretion, metabolism, disposal of unconsumed products, etc. Due to their often high solubilities, these materials are frequently not extracted efficiently by sewage treatment plants and can therefore enter the environment. Alternatively, those species that are absorbed during sewage treatment may also enter the environment in the form of recycled sewage sludge used for agricultural purposes. The outcome of these processes is that pharmaceuticals and personal care products can now be detected in many surface waters, where they exert considerable environmental effects on a range of ecosystems.

Chromatographic determination of pharmaceuticals and personal care products has therefore assumed very great significance, so a detailed and comprehensive review of the approaches used is both timely and important. The present review prepared by Professor Wolfgang Buchberger provides an overview of the sampling procedures which form a critical step in the determination of very

low levels of the target analytes in water samples. The main analytical techniques used for analysis (HPLC–MS, GC–MS, capillary electrophoresis, and immunochemical methods) are also discussed. Importantly, the review also covers the highly significant area of the detection of illicit drugs in both water and sewage sludge.

Professor Buchberger from Johannes Kepler University, Linz, Austria is well known for his contributions to the general field of environmental analysis, and he was one of the early investigators who recognised the importance of the environmental effects of pharmaceuticals and personal care products. He has been highly instrumental in the development of appropriate technologies for analysis of these species and for raising awareness of this field in the wider scientific community. I was therefore delighted that he agreed to accept my invitation to prepare a review. This review will be of immense value to both experts and novices in the field and I am sure that it will provide an outstanding resource of information on this topic.

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