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## 30<sup>th</sup> Cologne workshop on dope analysis (Manfred Donike workshop)

The origin of the Cologne Workshop on Dope Analysis goes back to Manfred Donike (1938–1995), a well-known cyclist in Germany specialized in sprinting as well as track events (referred to as the Six-Day Races). Manfred Donike studied chemistry at the University of Cologne and finished his doctoral thesis in 1965. Already by 1966 he had published the first article regarding dope analysis focusing on gas chromatographic separation techniques.<sup>[1,2]</sup> In 1972 he was responsible for sports drug tests at the Olympic Games in Munich, applying for the first time, a gas chromatographic and mass spectrometric approach at an Olympic event.

In 1977 he was appointed Professor for Biochemistry at the German Sport University Cologne. Following the installation of a laboratory with modern analytical equipment, a small symposium was held in 1981 and participated by delegates of the IOC (International Olympic Committee) Medical Commission and the Medical Commission of the IAAF (International Amateur Athletic Federation) with the focus on dope control analysis.

At the first symposium the idea was born to establish a periodic workshop for practising and developing doping control laboratories all over the world, to share the experiences of the Cologne laboratory in sample preparation, derivatization techniques and detection methods by GC/MS.

In 1983 the first workshop was organised in Cologne and about twenty anti-doping scientists from different countries participated.

During the first years of the workshop, practical work in the laboratory was interspersed with scientific discussions. Over the years the workshop agenda was subject to numerous changes, the practical work in the lab was considerably reduced with the scientific presentations by participants becoming the most important part of the meeting.

In the first decade of the annual workshops, most contributions were dealing with analytical methods of gas chromatography in combination with mass spectrometry. The main challenge was to achieve, for highly polar compounds, stable derivatives with improved gas chromatographic properties. The metabolism of doping substances played an important role and anti-doping scientists presented research data of an unambiguous identification of a banned substance by an exclusive detection of its main or a long-term excreted metabolite.

With the introduction of sensitive and robust analytical instruments combining liquid chromatography (LC) and mass spectrometry (MS) the analytical facilities were improved and anti-doping researchers used LC-MS and LC-MS-MS to detect banned substances to a much greater extent.

In the last ten years anti-doping scientists have been confronted by the challenge of peptide hormones, modern detection methods for growth hormone, erythropoietin, and other banned peptide hormones, all of which have been presented and discussed at these symposia. Over the years, the Cologne Workshop has offered anti-doping scientists all over the world the platform to exchange their scientific experience and expertise. The lectures and posters of new developments and analytical improvements are a highly valued addition to the latest research knowledge. This has and will lead to the implementation of new techniques and new methods in routine doping control without delay - A clear sign to strengthen the fight against doping.

Selected articles from the 30<sup>th</sup> Cologne Workshop on Dope Analysis (Manfred Donike Workshop) are compiled in the following 2 issues of Drug Testing and Analysis.

Thanks to all participants for their excellent work and presentations.

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### References

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