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# Toxikologische und Forensische Chemie

Special Issue with the Program and Abstracts of the  
48th Annual Meeting of the International Association of Forensic Toxicologists (TIAFT)  
Joint Meeting with the Society of Toxicological and Forensic Chemistry (GTFCh)  
Bonn, Germany, August 29 – September 2, 2010

# 48th Annual Meeting of the International Association of Forensic Toxicologists (TIAFT)

## Joint Meeting with the Society of Toxicological and Forensic Chemistry (GTFCh)

Bonn, Germany, August 29 – September 2, 2010

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## Welcome to Bonn

Dear colleagues and friends,

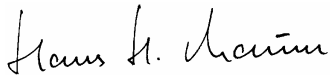
On behalf of the organizing committee, we would like to welcome you to the 48th Annual Meeting of the International Association of Forensic Toxicologists (TIAFT), a joint meeting with the Society of Toxicological and Forensic Chemistry (GTFCh) in Bonn, August 29 - September 2, 2010. We are meeting in the former German capital, founded by the Romans in which one of the greatest composers, Ludwig van Beethoven was born. He added to Friedrich Schillers "Ode to Joy" the words "Oh friends, not these tones! Rather let us sing more cheerful and more joyful ones. Joy! Joy! All people become brothers...". They describe an important part of TIAFT and GTFCh.

Besides Bonn's history and culture, Bonn University is an important part of the city. The University was founded almost 200 years ago, is considered to be one of Germany's most important institutes of higher education, and is home of learning to over 27.000 students.

Thanks to your numerous abstract submissions and a strong peer review system, we look forward to a great meeting with a high scientific level with contributions to major topics of forensic and clinical toxicology and doping control. This will be the basis for fruitful scientific discussions between participants from all over the world. We thank Thomas Kraemer and Frank T. Peters for their excellent work together with their scientific advisory committee consisting of excellent young, but experienced scientists.

According to the TIAFT and GTFCh tradition and to our congress motto, excellent science will be complemented by a highly en"joy"able social program, not only to make delegates feel welcome in the very pleasant ambience of Bonn, but also to stimulate cooperations between scientists to make more progress in Forensic and Clinical Toxicology and Doping Control.

Once again, welcome to Bonn!



Prof. Dr. Dr. h.c. Hans H. Maurer  
Co-chair, TIAFT-GTFCh 2010  
TIAFT and GTFCh Executive Member

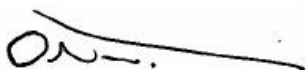


Prof. Dr. Frank Musshoff  
Co-chair, TIAFT-GTFCh 2010  
GTFCh President

Dear Delegates,

It is my pleasure to welcome you all to Bonn to the 48th TIAFT annual meeting held jointly with the (German Speaking) Society of Toxicological and Forensic Chemistry (GTFCh). Profs Hans Maurer and Frank Musshoff and their scientific organizing committee chaired by Profs Thomas Kraemer and Frank Peters have put together a wonderful and exciting program in the best traditions of TIAFT. There are presentations covering such areas as alcohol, drugs and driving, clinical toxicology, drug monitoring, drugs of abuse, drug facilitated crimes, forensic chemistry, post-mortem toxicology, workplace drug testing, and doping control. The social program also looks exciting and I'm sure will make the most of the proud traditions of the Germans and showcase the birthplace of Ludwig von Beethoven and his amazing music.

I look forward to seeing you all and sharing with you the developments in analytical and forensic toxicology and once again celebrate our annual event in the best TIAFT tradition.

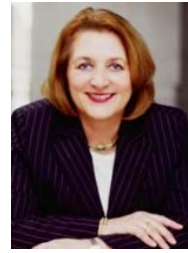


Prof. Dr. Olaf H.O. Drummer  
TIAFT President



**Sabine Leutheusser-Schnarrenberger**

Federal Minister of Justice  
Member of the German Federal Parliament



**Welcoming address at the opening of the 48th Annual Meeting of the  
International Association of Forensic Toxicologists (TIAFT)  
held jointly with the Society of Toxicological and Forensic Chemistry (GTFCh)  
from August 29 to September 2, 2010, in Bonn**

I should like to extend a very warm welcome to all scientists coming to Bonn for this Meeting. I am delighted that the Annual Meeting of the International Association of Forensic Toxicologists is taking place in Germany again, after a long interval, and my thanks go to the organisers, especially to the Society of Toxicological and Forensic Chemistry (GTFCh).

As the Minister of Justice, I know only too well that toxicology is a subject of major importance. In court business, toxicologists play a significant role as experts. They provide the courts with the scientific findings they need in order to evaluate facts in their legal dimension and to give a decision on that basis. But politicians, too, when working on legislation, depend on the expertise of scientists such as the toxicologists: it is only on the basis of their research that new factual circumstances can be made intelligible and be adequately regulated.

The close proximity between science and politics is illustrated by the topics covered at this Conference: "Alcohol, Drugs, and Driving" is an area where scientific knowledge has constantly influenced legislation in Germany. Hence, over the past decades, we have created a differentiated sanctions system to combat alcohol and (illegal) drugs in road traffic. This system has helped to improve road traffic safety and to reduce the number of accidents. In the nineties, there was already introduction of the BAC limit of 0.5 per mille and a zero tolerance provision against drugs in road traffic. At the time, the GTFCh played a crucial role in the evolution of this drugs ban. Here the inter-disciplinary co-operation between toxicologists and lawyers enabled delineation of the drugs ban to keep the focus on its practical utility in judicial practice while at the same time doing justice to the requirements of constitutional law; in the course of time, this ban has been confirmed by our highest court – the Federal Constitutional Court. In the meantime, the provision has been extended, also in the light of new knowledge in toxicology, and it has been adjusted to current developments. This all goes to show, impressively, how important close exchange of information and high levels of scientific expertise are for politics, for the justice system and for legislation.

A subject that calls for even greater future attention is the abuse of medicines and the impact this has in the road traffic context. Antidepressants, muscle relaxants, benzodiazepine and other sedatives are an important source of help for many patients. On the one hand, medicines make it possible for patients to take part in road traffic in spite of their illness. On the other hand, they may also increase the risk of errors of judgment and of accidents and therefore constitute a real safety problem. Here Parliament faces the challenge of separating the harmful from the beneficial. However, the number of potentially dangerous medicines is large, whilst the quantity of available data tends to be small; distinguishing between the appropriate and the hazardous use of medicines is difficult; moreover, the risks of accidents occurring are also a product of age, experience and other circumstances. Here we are in urgent need of more research.

I am delighted that part of the focus of this Conference is going to be on the dangers to traffic safety resulting from the abuse of medicines. Here we need continuing and extensive scientific exertions in order to be able to curb these dangers, through successful legislation, to be able to put rules in place and penalise contraventions, thus making our traffic even safer. There are other subjects this Conference will be focusing on – subjects also holding the prospect of valuable, new findings for the justice system, concerning drug-facilitated crimes, doping control and post-mortem toxicology. I am eager to hear the results and I wish all participants interesting lectures, productive debates, and also a pleasant stay in Bonn on the Rhine.

Sabine Leutheusser-Schnarrenberger  
Member of the German Federal Parliament

## MEETING PROGRAM

### Sunday, August 29, 2010 (Beethoven Hall)

12:00 – 17:00 Congress Registration Foyer

### Sunday, August 29, 2010 (Bonn Castle, “Kurfürstliches Schloss”)

Time	Meetings	Room
9:00	TIAFT Young Scientists Symposium	Lecture Hall I, ground floor
9:00	TIAFT Executive Board Meeting	Dozenten-zimmer, 1 <sup>st</sup> floor
11:30	TIAFT Regional Representatives Meeting	Seminar room No. 1, 2 <sup>nd</sup> floor
12:30	<b>Lunch for Young Scientists and TIAFT Board</b>	<b>Cafeteria</b>
14:00	TIAFT Young Scientists Committee Meeting	Dozenten-zimmer, 1 <sup>st</sup> floor
14:00	TIAFT STA Committee Meeting	Seminar room No. 1, 2 <sup>nd</sup> floor
14:00	TIAFT Internet Committee Meeting	Seminar room No. 3, 2 <sup>nd</sup> floor
18:00	<b>Opening Ceremony</b>	<b>Aula, 1<sup>st</sup> floor</b>
20:00	<b>Welcome Reception</b> <i>sponsored by</i> <i>Agilent Technologies</i>	<b>Festsaal and Senatssaal, 1<sup>st</sup> floor</b>

### Opening Ceremony (Aula Academica, Bonn Castle, 1st floor), August 29, 2010, 18:00

Chairs: Hans H. Maurer and Frank Musshoff

#### Welcoming Addresses:

Prof. Hans H. Maurer (Congress Chair)  
Prof. Frank Musshoff (GTFCh President and Congress Chair)  
Prof. Olaf Drummer (TIAFT President)  
Prof. Jürgen Fohrmann (Rector, Bonn University)  
Jürgen Nimptsch (Mayor, City of Bonn)

### Beethoven Violin Sonata No. 5 in F, op. 24 (Frühling/Spring), Movement 1: Allegro

(Lisa Schumann, Violin and Darko Kostovki, Piano)

### The death of Cleopatra: Alternatives to arsenic, cyanide et al.?

(Prof. Dietrich Mebs, Forensic Toxicology, Frankfurt/Main, Germany)

### Beethoven Violin Sonata No. 5 in F, op. 24 (Frühling/Spring), Movement 2: Adagio molto espressivo

(Lisa Schumann, Violin and Darko Kostovki, Piano)

### Ludwig van Beethoven: A Genius and his Drama

(Prof. Malgorzata Klys, Forensic Medicine. Krakow, Poland)

### Beethoven Violin Sonata No. 5 in F, op. 24 (Frühling/Spring), Movement 3: Scherzo - Allegro molto, Movement 4: Rondo - Allegro ma non troppo

(Lisa Schumann, Violin and Darko Kostovki, Piano)

### Invitation to the Welcome Reception

## The Death of Cleopatra: Alternatives to Arsenic, Cyanide et al.?

Dietrich Mebs, Forensic Toxicology, Johann Wolfgang Goethe University Frankfurt/Main, Germany

In Egypt, 30 BC, the Romans defeated Cleopatra's troops. While she was a prisoner of the Roman commander Octavian, she committed suicide by snakebite, as historians told us. But is it really true? Why did she select such an unpleasant death, when other means to end her life were available?

Murder and suicide by poisons such as arsenic, cyanide, pesticides or drugs are an easy exercise for the forensic toxicologist. But what about animal venoms and poisons? Are we prepared to detect these complex natural products? The cause of Cleopatra's death will never be conclusively elucidated. But she gave us a broad hint that there are alternatives to arsenic, cyanide and others.



**Professor Dietrich Mebs** studied biology and biochemistry at the University of Frankfurt, spent a half year for studies on the biochemistry of snake venoms at the Instituto Butantan in Sao Paulo, Brazil and obtained his PhD in 1968 from the University of Frankfurt.

After graduating, he joined the Center of Forensic Medicine, where he has spent his entire career until his retirement in 2007. In 1970/71 he stayed for a half year as a post-doctoral researcher at the Institute of Protein Research, University of Osaka, Japan, where he elucidated the primary structure of alpha-bungarotoxin, a snake venom toxin which became an important tool in neurochemistry.

After his Habilitation in Forensic Sciences in 1979, he was promoted to Professor in 1985. Beside his forensic work in toxicology and DNA-typing his main research interest is devoted to venoms and poisons of plant and animals and their chemistry and mode of action.

He has published more than 250 scientific articles and four books among them "Venomous and Poisonous Animals" which first appeared in German ("Gifftiere") 1992. Dietrich Mebs teaches forensic medicine, toxicology and toxinology at the university as well as overseas (Philippines, Australia, South-Africa). Since 1982, he is Secretary-Treasurer of the International Society on Toxinology, the only scientific society devoted to studies on animal, plant and microbial toxins. Finally, he is the current President of the Toxinomics Foundation, Geneva.

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## Ludwig van Beethoven: A Genius and his Drama

Malgorzata Klys, Forensic Medicine, Jagiellonian University Krakow, Poland

In 2010, we celebrate the 240th anniversary of the birth of Ludwig van Beethoven – a brilliant composer and an extraordinary human being. His multi-faceted genius has been perceived as fascinating to this very day by our forefathers and also by our generation. Both music lovers and connoisseurs of his work are continuously enchanted anew by his music.

Today it appears that diseases that affected the composer, especially his deafness, most likely must have been much more severe as those reported by many of his biographers. He was weak, suffering, lonely, rejected by his nearest. Music was his entire life. To this very day, we are puzzled by the power of genius in the man who – in spite of his complete deafness – was able to compose. The drama of a composer who would never hear his work performed is difficult to perceive.

A genius of all time, he left behind not only a marvelous musical legacy, but also an insatiable appetite of various representatives of the world of medicine for divagations and speculations addressing his health and the drama of his creative work. Today, 240 years after he was born and more than 180 years after his death, discussions about his person seen in various aspects and categories continue, providing physicians of a multitude of specialties with riddles and problems to be solved. This is a reason that about Beethoven we want to contemplate and discuss again.



**Professor Malgorzata Klys** is a forensic toxicologist with 30-year experience and the current Chair of Forensic Medicine at the Jagiellonian University Collegium Medicum (Kraków, Poland). She is author and coauthor of more than 100 papers on toxicological methodology, casuistry, general problems of forensic toxicology. Her non-professional interests include classical music.

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**Beethoven Violin Sonata No. 5 in F, op. 24, Spring**

*Lisa Schumann, Violin and Darko Kostovki, Piano.*



**Lisa Schumann**, born in Cologne (Germany) in 1988, is studying the violin at the Cologne University of Music under the direction of Professor Zakhar Bron. She was elected several times as concert mistress of the Symphony Orchestra of the Cologne University of Music. Since the age of eight, she has won several national and international classical music competitions for young musicians among which those in Nowosibirsk and in Warsaw. She took part in master courses in Austria, Spain, Portugal and France. She gave already many solo concerts for example at the Tonhalle in Düsseldorf, the Philharmonic Hall in Cologne, and in the concert hall of the Japan Broadcasting Corporation NHK which was recorded for broadcasting.

**Darko Kostovki**, born in Skopje (Macedonia), studied the piano at the Cologne University of Music and made his exam as concert pianist in 2004. He was successful in many international classical music competitions and played together with the Belgrad Symphony Orchestra, the Macedonian Philharmonic Orchestra and the Jeunesse Musicales Orchestra. He played in various countries among others in the Philharmonic Hall in Cologne, in the Opera House in Bonn, in the Palace of Versailles, at the Klangbogenfestival in Vienna, at the Expo 2000 in Hanover, and at the Summer Festival in Ochrid/Macedonia. His repertoire includes piano works of Bach, Mozart, Haydn, Beethoven, Chopin, Tchaikovsky, Prokofjew, and of composers of the 20<sup>th</sup> century. Some of his concerts were published on DVDs.

BONN  
2010  
TIAFT  
GTFCH



The  
One  
Meeting  
of Science  
and Joy!

*“Oh friends, not these  
Tones! Rather let us sing  
More cheerful and more  
Joyful ones. Joy! Joy!  
All people become brothers...”*

*L. van Beethoven*





**Monday, August 30, 2010 (Beethoven Hall)**

**8:00 Registration, Posters, Exhibition**  
(Internet Café sponsored by LGC) **Foyer and**  
**Connected Rooms**

11:45 O-13 A liquid chromatography–high resolution mass spectrometry method for the simultaneous determination of 30 benzodiazepines and metabolites in hair  
Susanna Vogliardi, Donata Favretto, Marianna Tucci, Alessandro Nalesso, Rita Frassanito, Santo Davide Ferrara

11:57 O-14 Detection and validated quantification of 21 benzodiazepines/metabolites and 3 “Z-Drugs” in human hair by LC-MS/MS

Kristina Y. Rust, Markus R. Baumgartner, Natascha Meggiolaro, Thomas Kraemer

**Oral Sessions (Studio)**

**8:30 Topic: Alcohol, Drugs and Driving I**

**Chairs: Alan Wayne Jones, Aldo Poletti**

8:30 O-1 Detection and validated quantification ethylglucuronide and ethylsulfate in human urine

Jochen Beyer, Tu N. Vo, Dimitri Gerostamoulos, Olaf Drummer

8:42 O-2 Detection time of direct alcohol markers, ethyl glucuronide (EtG) and ethyl sulfate (EtS), in oral fluid and urine after dosing to 0.08%

Christine Moore, Paul Marques, Cynthia Coulter

8:54 O-3 Incidence of post-collection synthesis and hydrolysis of ethyl glucuronide (EtG) and ethyl sulfate (EtS) in random unpreserved urine specimens

Sumandeep Rana, Wayne Ross

9:06 O-4 Distribution of phosphatidylethanol homologues determined by LC-ESI-MS/MS and comparison to CDT during withdrawal therapy

Heike Gnann, Claudia Engelmann, Annette Thierauf, Gisela Skopp, Michaela Winkler, Frank Sporkert, Wolfgang Weinmann

9:18 O-5 A targeted lipidomic approach for the LC-HRMS quantitation of phosphatidylethanol molecular species in human blood

Alessandro Nalesso, Guido Viel, Giovanni Cecchetto, Massimo Montisci, Donata Favretto, Santo Davide Ferrara

9:30 O-6 Comparison of blood ethanol concentration and breath ethanol concentration in practice

Marc Augsburger, Frank Sporkert, Patrice Mangin

9:42 O-7 Prevalence of drugs of impairment in oral fluid from random roadside testing

Mark Chu, Dimitri Gerostamoulos, Jochen Beyer, Martin Boorman, Olaf Drummer

**10:00 Coffee Break, Posters, Exhibition**

**10:45 Topic: Alcohol, Drugs and Driving II**

**Chairs: Alain Verstraete, Nele Samyn**

10:45 O-8 The extent of drug-associated driving in Victoria

Olaf Drummer, Irene Kourtis, Jochen Beyer, Martin Boorman, Dimitri Gerostamoulos

10:57 O-9 Significant increased detection rate of drugs of abuse in urine following the introduction of new German driving licence re-granting guidelines

Ronald Agius, Thomas Nadulski, Hans-Gerhard Kahl, Bertin Dufaux

11:09 O-10 Influence of ethanol on cannabinoid pharmacokinetic parameters in chronic users

Stefan W. Toennes, Kirsten Schneider, Gerold F. Kauert, Cora Wunder, Manfred R. Moeller, Wendy Bosker, Eef L. Theunissen, Jan G. Ramaekers

11:21 O-11 Stability of cannabinoids in plasma and whole blood of authentic specimens

Bertrand Brunet, Adeline Ane, Yves Papet, Patrick Mura

11:33 O-12  $\Delta^9$ -Tetrahydrocannabinolic acid A in hair - a novel marker for external contamination with cannabis smoke

Volker Auwärter, Ariane Wohlfarth, Jessica Traber, Dettlef Thieme, Wolfgang Weinmann

**12:15**

**Lunch Break, Posters, Exhibition**

**13:15**

**Siemens Vendor Seminar (Studio)**

**-14:00**

**14:15**

**Topic: Drug Facilitated Crime**

**Chairs: Marc LeBeau, Simon Elliott**

14:15 O-15

Drug facilitated crime (“DFC”) using tetrazepam

Frédéric Aknouche, Thierry Besnard, Robert Buti, Henri-Pierre Duval

14:27 O-16

Determination of clonazepam and 7-aminoclonazepam in hair after a single intake by HPLC-ESI-MS-MS. Application to forensic case of drug facilitated crime

Sebastian Rojek, Malgorzata Klys

14:39 O-17

Hair analysis in a suspected rape case involving zolpidem

Alberto Salomone, Daniele Di Corcia, Enrico Gerace, Marco Vincenti, Michele Petrarulo

14:51 O-18

Disposition of ketamine and its metabolites in hair after a single dose

Ping Xiang, Qiran Sun, Baohua Shen, Min Shen

15:03 O-19

The role of variations in growth rate and sample collection on interpreting results of segmental analyses of hair

Marc LeBeau, Madeline Montgomery, Jason Brewer

15:15 O-20

Measurement uncertainty in quantitative segmental analysis of hair for amphetamine and methamphetamine

Madeline Montgomery, Marc LeBeau, Cynthia Morris-Kukoski, Jason Schaff, Marc LeBeau

15:27 O-21

Drug and alcohol facilitated sexual assault litigation

Michael Smith, David Lesser, John Jemionek, Eric Shimomura, Timothy Lyons

**15:45**

**Coffee Break, Posters, Exhibition**

**16:30**

**Topic: Extraction Techniques and Matrix Effects**

**Chairs: Olof Beck, Thomas Stimpfl**

16:30 O-22

A new “Dilute and Shoot” method for the detection and quantification of more than 50 drugs of abuse and their metabolites for quick routine analysis in urine, serum, and hair via LC-MS/MS

David Bassan, Ralf Krüll, Heike Wollersen, Freidoon Erdmann

16:42 O-23

Application of molecularly imprinted solid phase extraction (MISPE) and liquid chromatography tandem mass spectrometry (LC-MS/MS) to the detection of amphetamines in whole blood

Norlida Harun, Robert, A Anderson

16:54 O-24

Fully automated offline sample preparation - from whole blood to injection-ready samples with a single mouse click

Brian Schou Rasmussen, Kristian Linnet

17:06 O-25

Rapid quantification of tilidine, nortilidine and bisnortilidine in urine by automated online-SPE-LC-MS/MS

Christoph Köhler, Thomas Grobosch, Torsten Binscheck

- 17:18 O-26 Automated SPE-LC-MS-MS analysis of codeine, morphine, oxycodone, oxymorphone, hydrocodone, and hydromorphone in human urine specimens: application for a high-throughput urinalysis laboratory  
Paul Robandt, Huong Bui, Kevin Klette
- 17:30 O-27 Development and validation of a library-assisted toxicological screening system using online extraction  
Daniel Mueller, Katharina Rentsch
- 17:42 O-28 Comparison of ion suppression and enhancement effects of co-eluting analytes in a LC-MS/MS multi-analyte procedure using APCI and ESI  
Daniela Remane, Markus R. Meyer, Dirk K. Wissenbach, Hans H. Maurer

**18:00** **Wine and Cheese Reception in Exhibition**  
***sponsored by Waters***

## Tuesday, August 31, 2010 (Beethoven Hall)

8:00 Registration, Posters, Exhibition, (Internet Café sponsored by LGC) Foyer and Connected Rooms

## Oral Sessions (Studio)

8:30 Topic: Analytical Toxicology

Chairs: Franco Tagliaro, Dimitri Gerostamoulos

8:30 O-29 Determination of tetramine concentrations in hair: A case study

Min Shen, Ping Xiang

8:42 O-30 Glucarpidase – an investigational agent for patients with toxic MTX blood levels or reduced MTX clearance

Thomas Grobosch, Lars Ambach, Torsten Binscheck

8:54 O-31 Analysis of phenol in blood by GC-MS

Chia Han Lin, Bud-Gen Chen, Ray H. Liu, Chin-Hsing Lai, Thomas J. H. Chen, Wen-Yi Lin, Yee-Lin Wu, Shiv D. Kumar

9:06 O-32 Analysis of drugs of abuse in hair: Evaluation of the immunochemical method VMA-T vs. LC-MS/MS

Markus Baumgartner, Rosetta Guglielmello, Monique Fanger, Thomas Kraemer

9:18 O-33 Method validation of a survey of thevetia cardiac glycosides in serum samples

Sarah Kohls, Barbara Scholz-Böttcher, Jürgen Rullkötter, Jörg Teske

9:30 O-34 Chiral analyses of dextromethorphan/levomethorphan and their metabolites in rat and human samples using LC-MS/MS

Ruri Kikura-Hanajiri, Maiko Kawamura, Atsuko Miyajima, Momoko Sunouchi, Yukihiko Goda

9:42 O-35 Development and validation of a highly sensitive UFLC-MS/MS method for the analysis of fentanyl and its major metabolite norfentanyl in urine and whole blood in forensic context

Ruth Verplaetse, Jan Tytgat

10:00 Coffee Break, Posters, Exhibition

10:45 Topic: Drug Metabolism and Kinetics

Chairs: Marilyn Huestis, Marta Concheiro

10:45 O-36 Degradation kinetics and detection windows of succinylcholine and succinylmonocholine in serum and urine for forensic-toxicological applications

Uta Kuepper, Frank Musshoff, Frank Herbstreit, Ralf A. Hilger, Burkhard Madea

10:57 O-37 Investigation of in vitro phase I metabolites of the synthetic cannabinomimetic JWH-018

Annette Wintermeyer, Ines Moeller, Mario Thevis, Martin Juebner, Justus Beike, Markus A. Rothschild, Katja Bender

11:09 O-38 Identification of the main metabolites of JWH-018, an active ingredient of K2 (Fake Weed) in human urine

Sumandeep Rana, Jeremiah Morris, Wayne Ross, Alexandre Wang, Matthew Clabaugh, Hua-fen Liu

11:21 O-39 Monitoring of Kratom alkaloids and Their metabolites in urine using LC-Linear Ion Trap-MS<sup>n</sup> and GC-MS

Anika-Anina Philipp, Dirk K. Wissenbach, Armin A. Weber, Josef Zapp, Siegfried W. Zoerntlein, Jidapha Kanogsunthornrat, Peter G. M. Zweipfenning, Hans H. Maurer

11:33 O-40 Phase-II metabolism of MDMA: Sulfation kinetics of DHMA and HMMA and their capability to inhibit human sulfotransferases

Andrea E. Schwaninger, Markus R. Meyer, Hans H. Maurer

11:45 O-41 Studies on the metabolism of the alpha-pyrrolidinophenone designer drug methylenedioxy-pyrovalerone (MDPV) using GC-MS and LC-high-resolution-MS and its detectability in urine

Markus R. Meyer, Peng Du, Frank Schuster, Hans H. Maurer

11:57 O-42 Cocktail approach for phenotyping of five major CYP450 isoenzymes: methodology and pilot test

Ariane Wohlfarth, Sebastian Dresen, Wolfgang Weinmann, Volker Auwärter

12:15

Lunch Break, Posters, Exhibition

13:15

Waters Vendor Seminar (Studio)

-14:00

14:15 Topic: Hormones in Doping Control and Forensics

Chairs: Detlef Thieme, Johan Ahlner

14:15 O-43 Anabolic steroid adverse findings among specific population groups in the United States: classic vs. designer drugs

Victor Uralets

14:27 O-44 Anabolic androgenic steroids in police cases in Sweden 1999-2009

Yvonne Lood, Arne Eklund, Johan Ahlner

14:39 O-45 Steroid concentrations in brain and potential psychiatric effects

Detlef Thieme, Claudia Rautenberg, Sybille Fieseler

14:51 O-46 Determination of human insulin and its synthetic analogues in human plasma by electrospray ionization liquid chromatography/tandem mass spectrometry

Cornelius Hess, Frank Musshoff, Andreas Thomas, Mario Thevis, Burkhard Madea

15:03 O-47 Screening for urinary insulin and other bioactive peptides by nanoUPLC-MS/MS for doping control purposes

Andreas Thomas, Maxie Kohler, Wilhelm Schänzer, Mario Thevis

15:15 O-48 Selective androgen receptor modulators in sports drug testing

Mario Thevis, Enrico Gerace, Simon Beuck, Andreas Thomas, Wilhelm Schänzer

15:27 O-49 In-vitro metabolism of the PPAR-delta agonist GW1516 and implementation of its major metabolites in routine doping controls

Ines Möller, Andreas Thomas, Simon Beuck, Grigory Rodchenkov, Wolfgang Bornatsch, Hans Geyer, Wilhelm Schänzer, Mario Thevis

15:45

Coffee Break, Posters, Exhibition

16:30

Topic: Alternative Matrices

Chairs: Carmen Jurado, Madeline Montgomery

16:30 O-50 MDMA and metabolite disposition in expectorated oral fluid following controlled oral MDMA administration

Allan Barnes, Erin Kolbrich-Spargo, Karl Scheidweiler, David Gorelick, Robert Goodwin, Marilyn A. Huestis

16:42 O-51 Determination of endogenous gamma-hydroxybutyric acid (GHB) levels in saliva by gas chromatography-mass spectrometry: last piece of the puzzle for GHB

Giorgia De Paoli, Katrina M. Walker, Derrick J. Pounder

- 16:54 O-52 Simultaneous analysis of buprenorphine, methadone, cocaine, opiates, nicotine, and metabolites in sweat by liquid chromatography tandem mass spectrometry  
Marta Concheiro, Daa M. Shakleya, Marilyn A. Huestis
- 17:06 O-53 Drug analysis of human tears by liquid chromatography coupled to tandem mass spectrometry  
Thierry Besnard, Frédéric Aknouche, Jacques Chofflet, Henri-Pierre Duval
- 17:18 O-54 Comprehensive drug screening of meconium  
Johanna Ristimaa, Merja Gergov, Anna Pelander, Ilkka Ojanperä
- 17:30 O-55 Correlations for maternal methadone dose, placental methadone and EDDP concentrations, and neonatal outcomes  
Ana de Castro, Daa Shakleyaa, Rolley Johnson, Robin Choo, Hendrée Jones, Marilyn A. Huestis
- 17:42 O-56 Drug testing using exhaled breath? Demonstration of a new possibility in toxicology  
Olof Beck
- 18:00 Agilent Technologies Vendor Seminar (Studio)**
- 20:00 Beer Garden Barbecue with Rhinelandian Culture (Rheinaue Park Restaurant)**

**Wednesday, September 1, 2010 (Beethoven Hall)**

**8:00 Registration, Posters, Exhibition**      **Foyer and**  
**(Internet Café sponsored by LGC)**      **Connected Rooms**

**Oral Sessions (Studio)**

**8:30 Topic: Postmortem Toxicology I**

**Chairs: Dan Isenschmid, Helena Teixeira**

8:30 O-57 Determination of ketone bodies in blood by HS/GC/MS  
Karen Jørgensen, Kristian Linnet, Brian Rasmussen,  
 Anders Pedersen

8:42 O-58 Evaluation of the Randox whole blood Drugs of Abuse  
 Array I for the analysis of alternative postmortem  
 toxicology samples

Poppy McLaughlin, Derrick Pounder, David Osselton

8:54 O-59 Combined use of LC-QTOF-MS and HPLC-DAD in  
 systematic toxicological analysis

Fritz Pragst, Sebastian Broecker, Abdulsallam Bakdash,  
 Sieglinde Herre, Michael Tsokos

9:06 O-60 Screening for benzodiazepines and antipsychotics in post  
 mortem blood using LC-QTOF in automated MSMS mode

Peter Stockham, Sheridan Martin, Claire Lenehan, Chris  
 Fouracre, Peter Felgate

9:18 O-61 MALDI mass spectrometric imaging in tissue sections as  
 a new tool in forensic toxicology

Tiffany Porta, Emmanuel Varesio, Gérard Hopfgartner,  
Thomas Kraemer

9:30 O-62 Stability of antipsychotic drugs in stored blood samples  
Eva Saar, Dimitri Gerostamoulos, Jochen Beyer, Olaf H.  
 Drummer

9:42 O-63 Stability of selected prescription drugs during  
 decomposition

Danielle Butzbach, Roger Byard, Hilton Kobus, D. Noel  
 Sims, Peter Stockham, Robert Lokan, G. Stewart Walker

9:54 O-64 The effect of the postmortem interval on the redistribution  
 of 52 drugs: A comparison of admission and autopsy  
 blood specimens

Dimitri Gerostamoulos, Jochen Beyer, Voula Staikos,  
 Penny Tayler, Olaf Drummer

10:06 O-65 Strategy to demonstrate external post mortem  
 contamination of hair: place of segmental analysis

Pascal Kintz

**10:20 Coffee Break, Posters, Exhibition**

**11:15 Topic: Postmortem Toxicology II**

**Chairs: Olaf Drummer, Robert Kronstrand**

11:15 O-66 Incidence of ethanol and drug consumption in fatal  
 accidents at the workplace

Carmen Jurado, M<sup>a</sup> Paz Gimenez, Luisa Escobar,  
 Rosario Garcia-Repetto, Agustin Gonzalez, Esperanza  
 Moreno, David Olano, Carmen Pareja, Angeles Pérez,  
 Ana del Peso, Isabel Rodríguez, Luisa Salas, Teresa  
 Soriano, M<sup>a</sup> Luisa Soria

11:27 O-67 Drug poisoning deaths in Sweden show a predominance  
 of ethanol in mono-intoxications, adverse drug-alcohol  
 interactions and poly-drug abuse

Alan Wayne Jones, Anita Holmgren, Fredrik Kugelberg,  
 Johan Ahlner

11:39 O-68 Smoking is associated with alcohol, drugs of abuse and  
 psychopharmaceuticals – A post-mortem database study  
 in young adults

Terhi Launiainen, Ilkka Ojanperä

11:51 O-69 Serotonin toxicity involving MDMA and moclobemide  
Jennifer L Pilgrim, Dimitri Gerostamoulos, Olaf H  
 Drummer

11:03 O-70 Reporting a sudden death due to accidental gasoline  
 inhalation

María Antonia Martínez, Salomé Ballesteros, Rafael  
 Alcaraz

12:15 O-71 *Cerbera manghas* vs. *Birgus latro*: where is the poison  
 coming from? A case report

Marc Deveaux, Marjorie Cheze, Yann Barguil, Michel  
 Maillaud, Carole Leleu, Guillaume Hoizey, Gilbert Pepin

12:27 O-72 Fatality with controlled release morphine

Ashraf Mozayani, Terry Danielson

12:39 O-73 The role of dihydrocodeine metabolites in dihydrocodeine  
 related deaths

Ahmed Al-Asmari, Robert Anderson

12:51 O-74 Interpretation of opiate concentrations in post-mortem  
 brain samples of heroin users

Cora Wunder, Jana Czoelder, Kettner Matthias, Peter  
 Schmidt, Stefan W. Toennes

**13:15 Excursion with Vineyard Olympics**  
**(Light Lunch on Board)**

**Thursday, September 2, 2010 (Old Waterworks)****Oral Sessions (Plenary Chamber)**

			14:06	O-87	Metabolite-based LC-MS urine screening using Linear Ion Trap technology, exemplified for antidepressants <u>Dirk K. Wissenbach</u> , Daniela Remane, Markus R. Meyer, Hans H. Maurer
			14:18	O-88	General unknown screening in hair by LC-QTOF-MS <u>Sebastian Broecker</u> , Fritz Pragst
<b>8:30</b>		<b>Topic: Forensic Chemistry</b>			
		<b>Chairs: Heesun Chung, Osamu Suzuki</b>			
8:30	O-75	The use of gas chromatographic isotope ratio mass spectrometry for cannabis profiling <u>Yuko Iwata</u> , Hiroyuki Inoue, Kenji Kuwayama, Kenji Tsujikawa, Hajime Miyaguchi, Tatsuyuki Kanamori, Hirofumi Fukushima	<b>14:30</b>		<b>Closing Ceremony (Plenary Chamber)</b>
8:42	O-76	Comparison of 'legal highs' composition <u>Boğumila Byrska</u> , Martyna Maciów, Dariusz Zuba	14:30		History of the German Bundestag
8:54	O-77	Identification of cathinone-derivatives in a „bath salt“ and a „glass surface protector“ – are these new ways to deal with drugs? <u>Andreas Ewald</u> , Thomas Kraemer, Jochen Wilske	15:00		Closing Remarks
9:06	O-78	Acute poisoning involving the pyrrolidinophenone-type designer drug 4'-methyl-alpha-pyrrolidinohexanophenone (MPHP) <u>Christoph Sauer</u> , Kerstin Hoffmann, Polina Mattis, Frank T Peters	<b>15:15</b>		<b>Business Meeting (Plenary Chamber)</b>
<b>9:20</b>		<b>Coffee Break (Bundeshaus Foyer)</b>			
<b>10:20</b>		<b>Topic: Alcohol Markers in Hair</b>			
		<b>Chairs: Fritz Pragst, Michele Yegles</b>			
10:20	O-79	Epidemiological evaluation of ethylglucuronide levels in different keratinic matrices Valentina Pirro, Daniele Di Corcia, Sergio Pellegrino, Marco Vincenti, <u>Alberto Salomone</u>			
10:32	O-80	Incorporation of ethyl glucuronide into rat hair as function of ethanol dose and hair pigmentation <u>Frank Sporkert</u> , Hicham Kharbouche, Christian Staub, Patrice Mangin, Marc Augsburg			
10:44	O-81	Ethyl glucuronide in hair after abstinence and low alcohol consumption. A controlled study in 44 subjects <u>Robert Kronstrand</u> , Linda Brinkhagen, Fredrik Nystrom			
10:56	O-82	Comparison of the ethyl glucuronide (EtG) and fatty acid ethyl esters (FAEEs) concentrations in hair for testing abstinence <u>Maria Elena Albermann</u> , Frank Musshoff, Burkhard Madea			
11:08	O-83	Impact of hair-care products on FAEE hair concentrations in substance abuse monitoring <u>Joey Garej</u> , Brice Appenzeller, Gideon Koren			
<b>11:20</b>		<b>Lunch Break (Bundeshaus Foyer)</b>			
<b>12:30</b>		<b>Thermo Fisher Vendor Seminar (Plenary Chamber)</b>			
<b>- 13:15</b>					
<b>13:30</b>		<b>Topic: Recent Developments in LC-MS Screening</b>			
		<b>Chairs: Willy Lambert, Ilkka Ojanpera</b>			
13:30	O-84	High resolving power time-of-flight mass spectrometry in drug screening: preliminary evaluation <u>Anna Pelander</u> , Petra Decker, Carsten Baessmann, Ilkka Ojanpera			
13:42	O-85	Differentiation of isomers by LC/Q-TOFMS using fragmentation prediction <u>Elli Tyrkkö</u> , Anna Pelander, Ilkka Ojanpera			
13:54	O-86	LC-TOF-based toxicological drug screening: a chemometric approach <u>Aldo Poletini</u> , Eloisa Liotta, Anna Bertaso, Rossella Gottardo			

**August 30 - September 1 (Beethoven Hall)****Poster Session ("Seminarraum 1-3").**

- Topic: Alcohol, Drugs and Driving**
- P-1 Specific measurement of ethanol in serum and urine with an assay kit on the fully automated RX series analysers  
P. McGivern, T. Lipton, R. I. Bell, J. Campbell, S. P. Fitzgerald
- P-2 Alcohol and drugs in fatal road accidents between 1999 and 2009  
Cristiana Stramesi, Claudia Vignali, Maria Luisa Fino, Angelo Groppi
- P-3 The effects of reducing the legal blood alcohol concentration limit for driving in Sao Paulo, Brazil  
Gabriel Andreuccetti, Heraclito Barbosa Carvalho, Cheryl Cherpitel, Julio Carvalho Ponce, Vilma Leyton, Tulio Kahn
- P-4 Self reported (il)licit drug use in Belgian drivers  
Trudy Van der Linden, Peter Silverans, Cristina Isalberti, Sara-Ann Legrand, Alain Verstraete
- P-5 Analytical evaluation of five oral fluid drug testing devices  
Cristina Isalberti, Sylvie Vanstechelman, Sara-Ann Legrand, Trudy Van der Linden, Alain Verstraete
- P-6 Prevalence of alcohol, drugs and benzodiazepines among drivers and pedestrians involved in road accidents in the South Region of Portugal during the years 2008 - 2009  
Nuno Goncalves, Susana Fonseca, Mário Dias
- P-7 Amphetamines, cocaine and cannabinoids use among truck drivers in the roads of the State of Sao Paulo, Brazil  
Vilma Leyton, Daniele Mayumi Sinagawa, Keziah Cristina Barbosa Gruber de Oliveira, Wagner Schmitz, Gabriel Andreuccetti, Bruno Spinosa De Martinis, Daniel Romero Munoz
- P-8 Alcohol and psychoactive substance related road traffic injuries in Pakistan  
Aimal Khan Khoso
- Topic: Drug Facilitated Crime**
- P-9 Use of hydrophilic interaction liquid chromatography–tandem mass spectrometry for fast determination of gamma-hydroxybutyrate (GHB) in plasma and urine  
Jose Luiz Costa, Rafael Lanaro
- P-10 In vitro production of GHB in untreated blood and serum samples under varied storage conditions  
Siegfried W. Zoerntlein, Alexandra Kopp, Juergen Becker, Thomas J. Kaufmann, Joerg Roehrich, Reinhard Urban
- P-11 GHB in hair - a mathematical approach to the evaluation of a possibly positive case  
Klaas J. Lusthof, Ingrid J. Bosman
- P-12 GBL as counterfeit wine for date-rape  
C. Tangbanluekal, T. Sinchai, P. Suteerakune
- P-13 Sexual abuse and anti-wrinkle cream: evidence from octocrylene  
Carole Jamey, Antoine Tracqui, Bertrand Ludes
- Topic: Extraction Techniques**
- P-14 Comparison of the efficiency of extraction procedures in post-mortem multi-target GC-MS screening for prevalent drugs in Hungary  
Elod Hidvegi, Agnes Kerner, Agnes Ruff, Peter Fabian, Gabor Pal Somogyi
- P-15 Application of a non-conditioning solid-phase extraction method for determination of opiates in human urine by GC-MS  
Fotini Athanasiadou, Konstantina Spagou, Georgios Theodoridis, Nikolaos Raikos, Helen Gika, Tsoukali Helen
- P-16 Automated solid-phase extraction procedure for body fluids and tissue samples  
Thomas Stimpfl
- P-17 Extraction of THC and metabolites from urine and plasma using supported liquid extraction (SLE) prior to LC-MS/MS analysis  
Rhys Jones, Lee Williams, Helen Lodder, Steve Jordan, Steve Plant, Richard Calverley, Claire Desbrow, Gary Dowthwaite
- P-18 Extraction of cocaine and metabolites using resin-based mixed-mode cation exchange SPE with LC-MS/MS analysis  
Rhys Jones, Lee Williams, Helen Lodder, Steve Jordan, Steve Plant, Richard Calverley, Claire Desbrow, Gary Dowthwaite
- P-19 Mephedrone: evaluation of extraction using mixed-mode cation exchange SPE with LC-MS/MS analysis  
Rhys Jones, Lee Williams, Helen Lodder, Steve Jordan, Steve Plant, Richard Calverley, Claire Desbrow, Gary Dowthwaite
- P-20 First experiences with automated on-line SPE-LC-QqTOF for the use in systematic toxicological analysis  
Christoph Köhler, Thomas Grobosch, Torsten Binscheck
- P-21 Quantification of THC, 11-OH-THC and THC-COOH in whole blood by on-line extraction - liquid chromatography tandem mass spectrometry  
Stefan König, Stephan Lanz, Martina Gasser, Beat Aebi, Wolfgang Weinmann
- P-22 Analysis of cocaine, ecstasy, 6-acetylmorphine and buprenorphine in human plasma and urine by online extraction TurboFlow™– Mass spectrometry  
Samuele Scurati, Cecilia Gechtman, Benedict Duretz, Sarah Robinson, Adriano Masarin
- P-23 Analysis of THC and THC-COOH in plasma and urine using online extraction LC-MS/MS  
Samuele Scurati, Cecilia Gechtman, Benedict Duretz, Sarah Robinson, Adriano Masarin
- P-24 Analysis of clozapine and norclozapine in plasma using automated sample preparation and LC-MS/MS  
Phillip Morgan, Sarah Robinson, Shane McDonnell, Benedicte Duretz, Samuele Scurati
- P-25 Analysis of methamphetamine and amphetamine in human plasma using pipette tip solid-phase extraction and high-performance liquid chromatography/tandem mass spectrometry  
Akemi Marumo, Takeshi Kumazawa, Xiao-Pen Lee, Masaya Fujishiro, Keizo Sato, Chika Hasegawa
- P-26 Analysis of benzodiazepines from urine and whole blood by novel disposable pipette extraction (DPX) coupled to LC/MS/MS  
Oliver Lerch, Fred D. Foster, Edward A. Pfannkoch, William E. Brewer, Tom Gluodenis
- P-27 GC-MS screening for pesticides in plant material using a novel isolation method based on disposable pipette RP-extraction  
Thomas J. Mahier, Athra Al-Shaikh, Mohammed Al-Tufail, Maciej J. Bogusz
- Topic: Analytical Toxicology**
- P-28 Development of a sensitive polyclonal antibody for the detection of dextromethorphan and the main metabolite dextrorphan  
M.E. Benchikh, P. Lowry, R.I. McConnell, S.P. Fitzgerald
- P-29 Development of polyclonal antibodies for the detection of antidepressants  
M.E. Benchikh, P. Lowry, R. I. McConnell, S. P. Fitzgerald
- P-30 Development of sensitive polyclonal antibodies for the detection of zaleplon and zolpidem  
M.E. Benchikh, P. Lowry, R. I. McConnell, S. P. Fitzgerald
- P-31 Development of simultaneous biochip array-based immunoassays for the detection of Z drugs in blood  
M.E. Benchikh, P. Lowry, R. I. McConnell, S. P. Fitzgerald

- P-32 Development of simultaneous biochip immunoassays for salicylate and salicylic acid for the effective monitoring of aspirin in urine  
M.E. Benchikh, P. Lowry, J. Porter, R.I. McConnell, W. Snelling, S. Fitzgerald
- P-33 Simultaneous determination of hallucinogens with Evidence biochip arrays  
M.E. Benchikh, P. Lowry, R. I. McConnell, J. Porter, S. P. Fitzgerald
- P-34 Measurement of lithium in serum using a colorimetric assay with enhanced stability and sensitivity on the fully automated RX series analysers  
T. Lipton, P. McGovern, R. Bell, J. Campbell, S. P. Fitzgerald
- P-35 Determination of six drugs of abuse in urine on the RX series analysers with assay kits using multi-analyte calibrators  
P. McGovern, E. Donnelly, J. Thompson, R. Bell, J. Campbell, S. Fitzgerald
- P-36 Performance characteristics of ten drug of abuse assays using Syva EMIT II Plus reagents adapted to the ADVIA 1200, 1650/1800, and 2400 Chemistry Systems  
Richard Edwards, Gena Fischer, Jessica Whalen, Nancy Carmosino, Claus Pruemper, Patrick Cusack, Jose Fernandez
- P-37 New Emit® II Plus 6-acetylmorphine assay on the V-Twin®/Viva-E® Analyzers  
N. Morjana, H. Yau, A. Dominowski, C. Schaible, Y.F. Zheng, Douglas Clark, Gerald E. Siefing
- P-38 Multicenter evaluation of ONLINE DAT Amphetamines II Assay on Roche Hitachi, cobas® Analyzers, and COBAS INTEGRA Systems  
Alain Verstraete, I. Rogiers, W. Haase, D. LeGatt, C. Shalapy, J. Collins, R. Setterstrom, C. Beck, I. Domke, Mary Jane Coffing
- P-39 Multicenter evaluation of ONLINE DAT Benzodiazepines II Assay on Roche Hitachi, cobas® Analyzers, and COBAS INTEGRA Systems  
Alain Verstraete, I. Rogiers, W. Haase, D. LeGatt, C. Shalapy, J. Collins, R. Setterstrom, D-A. Wildbredt, C. Beck, I. Domke, Mary-Jane Coffing
- P-40 Five urine specimen validity tests evaluated on automated, high-throughput ADVIA Chemistry Systems, ADVIA 2400, ADVIA 1650/1800, and ADVIA 1200, from Siemens Healthcare Diagnostics  
Jian Dai, Jacobson Robert, Cherian Saji, Ming Guo, Claus Pruemper, Algarin Principe, Roseta Sword
- P-41 Comparison of concomitant Cedia immunoassay drugs of abuse results in urine and oral fluid samples  
Frances Flores, Brian Johns, Felix Norman-Williams, Sally Benton
- P-42 Validation of an automated enzyme assay for quantitation of GHB in human serum and urine  
Lara Hasan, Michel Scotti, Thomas Jermann, Jakob Weber, Wolfgang Jöchle, Daniel Gygax, André Scholer
- P-43 The importance of norbuprenorphine cross-reactivity in a buprenorphine urine immunoassay  
Michael Vincent, Guohong Wang, Kim Huynh, James Bourland, Cynthia Coulter, Christine Moore
- P-44 Immunobased SPFS biosensor for determination of CRP in serum  
Andreas Scholten, Martin Juebner, Markus A. Rothschild, Katja Bender
- P-45 Single dose of 267 mg fenofibrate results in false-positive amphetamine and ecstasy screen results in urine  
Ayse Parlar, Aslihan Yapıcı, Ahmet Ayer
- P-46 Determination of selected antihypertensive drugs in human serum by liquid chromatography-linear ion trap mass spectrometry  
Vilma Habrdova, Marcel Bima, Jiri Ceral, Romana Psenickova, Vladimir Palicka, Viktor Vorisek
- P-47 Simultaneous screening for 54 toxic alkaloids in blood by liquid chromatography - tandem mass spectrometry  
Wei Liu, Min Shen
- P-48 An LC-MS method to measure cathinone, norpseudoephedrine and phenylpropanolamine in urine  
Samantha King, Molly Zaman, Frances Flores, Sally Benton
- P-49 Liquid chromatography - mass spectrometry: an objective and fast diagnostic method for the Amanita muscaria and Amanita pantherina intoxication  
Peter Ondra, Barbora Merová, Marie Staňková, Jan Stříbrný
- P-50 Specific cannabinoid analysis using LC-MS/MS  
Jason Causon, Daniel Leigh
- P-51 Analysis of drugs of abuse in urine by head-space APCI/ITMS  
Masuyoshi Yamada, Takefumi Yokokura, Tsukasa Shishika, Hidetoshi Morokuma, Hiroaki Hashimoto, Masako Ishimaru, Hiroyuki Inoue
- P-52 LC-MS study for detection of „Spice“-ingredients in forensic psychiatry  
Jörg Teske, Jens-Peter Weller, Urs-Vito Albrecht, Axel Weber
- P-53 Electrospray ionization tandem mass spectrometric determination of monomethylarsonic acid and dimethylarsinic acid after adduct formation with citric acid  
Kayoko Minakata, Kunio Gonmori, Hideki Nozawa, Itaru Yamagishi, Sanae Kanno, Koutaro Hasegawa, Kanako Watanabe, Osamu Suzuki
- P-54 Measurement of dasatinib and imatinib in human plasma/serum by LC-MS/MS  
Michelle Ann Birch, Patty Nooijen, Lewis Couchman, Phillip Edgar Morgan, Aloysius Ho, Robert James Flanagan
- P-55 Rapid screening and confirmation of six anticoagulant rodenticides in whole human blood using liquid chromatography tandem mass spectrometry  
Hui Yan, Min Shen, Xianyi Zhuo
- P-56 Simultaneous determination of 14 oral antidiabetics in human plasma by electrospray ionization liquid chromatography/tandem mass spectrometry  
Cornelius Hess, Frank Musshoff, Burkhard Madea
- P-57 Screening for and qualification of 20 hypotensive drugs in whole blood by liquid chromatography-tandem mass spectrometry  
Bogdan Tokarczyk, Maria Kala
- P-58 Determination of Tranexamic Acid in Blood, Cerebrospinal Fluid and Internal Organs by LC-MS/MS : A case report  
Sujin Jeong, Jihyun Kim, Hyojeong Hong, Eunmi Kim, Jaesin Lee, Sangki Lee, Yoosin Park and Heesun Chung
- P-59 Simultaneous and sensitive analysis of dasatinib, imatinib, norimatinib, and nilotinib in human plasma using Turboflow LC-MS/MS  
Lewis Couchman, Patty Nooijen, Michelle Birch, Sarah Robinson, Robert Flanagan
- P-60 Ultra-performance liquid chromatographic method for measurement of voriconazole in human plasma  
Rafael Linden, Marina Antunes, Paula Boeira, Alessandro Pasqualotto
- P-61 Quantitative analysis of 21 benzodiazepine drugs, zolpidem and zopiclone in serum using UPLC/MS/MS  
Mark Roberts, Stephanie Marin, Gwen McMillin, Michelle Wood
- P-62 Determination of the most frequently used drugs in whole blood by using ultra performance liquid chromatography tandem mass spectrometry (UPLC/MS/MS)  
Caroliene Boone, Beitske Smink, José Roque, Albert Dijkhuizen
- P-63 Stereoselective analysis of venlafaxine and its major metabolites in human plasma and whole blood by liquid chromatography-tandem mass spectrometry  
Maria Kingbäck, Martin Josefsson, Louise Karlsson, Johan Ahlner, Finn Bengtsson, Fredrik C. Kugelberg, Björn Carlsson



- P-64 Validation and application of a rapid LC-MS/MS method for the enantioselective determination of methadone and EDDP in clinical serum samples  
Michael Boettcher, Stefan Lierheimer, Olof Beck
- P-65 Turbulent flow chromatography as fast and reliable method for the quantitative determination of antipsychotic drugs with LC-MS/MS  
Daniel Mueller, Katharina Rentsch
- P-66 LC-TOF screening technique for drugs of abuse – evaluation in authentic patient urine samples  
Nicolai Stephanson, Aljona Saleh, Olof Beck
- P-67 Identification of remifentanyl and its metabolite by LC-quadrupole–time of flight mass spectrometry  
Peter Stockham, Amanda Thompson, Heather Felgate, Karen Heath, Peter Felgate
- P-68 Screening analysis for drugs dangerous to road safety in whole blood using ultra performance liquid chromatography time-of-flight mass spectrometry (UPLC-TOFMS)  
Rasmus Telving, Mette Findal Andreassen
- P-69 Determination of Salvinorin A and Salvinorin B in body fluids by LCMS-IT-TOF system  
Marie Stankova, Roman Oros, Petr Kurka, Vladimira Gebauerova
- P-70 THCVA-A – a new additional marker for illegal cannabis consumption  
Lars Radünz, Folker Westphal, Edmund Maser, Gertrud Rochholz
- P-71 MRM<sup>3</sup> - a highly selective and sensitive technique for the determination of various xenobiotics in complex matrices  
Jens Trafkowski, Jan Lembecke, Axel Besa
- P-72 Beta-glucuronidase-mediated reduction of temazepam and its glucuronide to diazepam  
Shanlin Fu, Peter Bowron, Hongjie Wang, Michael Dawson
- P-73 Development of new methods for maninil analysis for forensic - chemical investigation of biological substrates  
Mareta Ibragimova, Latif Ikramov
- P-74 Oxidation of MDMA in urine after exposure to bleach  
Annie Pham, Shanlin Fu, Michael Dawson
- P-75 Drug cocktail poisoned twelve people in a psychiatric session: MDMC, MDMA and MDA were identified by the TOX.I.S  
Thomas Grobosch, Lucie Dubugnon, Torsten Binscheck
- P-76 Structure-retention relationships for basic drugs separated on different GC phases  
Linda Glowacki, Dimitri Gerostamoulos, Paul Wynne
- P-77 Oxidative adulterants and their influence on the detectability of drugs of abuse in urine by immunoassay and GC-MS  
Frank Sporkert, Dorothee Nicolier, Magali Dovat-Sabatella, Marc Augsburg
- P-78 Minimising false positive results of 'Drugs of Abuse' in urine samples by GC-TOF/MS and novel target identification algorithms  
Petra Gerhards, Juergen Sawazki, Pierre Schanen, Gerhard Horner, Luzia Schaaf
- P-79 Study of rapid chiral analysis of amphetamines in whole blood by GC-MS – Application of diatomaceous earth extraction  
Hiroshi Fujii, Kenji Hara, Mitsuyoshi Kageura, Masayuki Kashiwagi, Aya Matsusue, Shin-ichi Kubo
- P-80 Simultaneous quantitation of amphetamines, cannabinoids, cocaine, and opiates in human urine by GC-MS  
Jae Chul Cheong, Min Kyoung Kim, Sungll Suh, Yong Jun Suh, Moon Kyo In
- P-81 Detection of the synthetic drug 4-Fluoroamphetamine (4-FA) in serum and urine  
Jörg Röhrich, Siegfried Zörtllein, Jürgen Becker, Thomas Kaufmann, Reinhard Urban
- P-82 Analysis of expanded sympathomimetic amines on single quadrupole GC/MS  
Matthew Lambing, Jason Cole, Anton Mayer
- P-83 Intoxication with butylone and phenazepam among young cocaine users  
Maria Teresa Pinorini-Godly, Frank Sporkert, Markus Schläpfer, Manuel Rusconi, Ario Conti
- P-84 High-throughput confirmation and quantitation of a THC metabolite in urine by GC/MS  
Matthew Lambing, Jason Cole, Anton Mayer
- P-85 Simple and practical sample preparation for detection of triazolam in body material by gas chromatography-negative ion chemical ionization mass spectrometry  
Kenji Hara, Masayuki Kashiwagi, Aya Matsusue, Tomoko Sugimura, Mitsuyoshi Kageura, Shin-ichi Kubo
- P-86 Determination of ibotenic acid and muscimol in urine of a person intoxicated with Amanita pantherina  
Jan Stříbrný, Miloš Sokol, Barbora Merová, Petr Ondra
- P-87 Monolithic spin-column extraction and gas chromatography-mass spectrometry method for the simultaneous assay of diquat, paraquat, and feintrothion in human serum and urine  
Takeshi Saito, Akira Namera, Yuko Yui, Shota Miyazaki, Akihiro Nakamoto, Sadaki Inokuchi
- P-88 Polychlorinated biphenyls in adipose tissue by GC/MS  
Mariza Insaurrealde, Arlene Schuller, Gustavo Díaz Gill, Renate Díaz Gill, Eleuterio Umpiérrez, Haydee Romero
- P-89 Determination of GHB in dried blood spots using a simple GC-MS method  
Ann-Sofie Ingels, Willy Lambert, Christophe Stove
- P-90 Characterization of pentoxyverine and its metabolites in urine using GC/MS after intoxication with Silomat R cough drops  
Jochen Stegk, Folker Westphal, Thomas Junge, Gertrud Rochholz, Andrea Neusüß, Lars Radünz
- P-91 Fast and simple HPLC-DAD analysis for TDM of voriconazole  
Daniëlle Borrey, Veronique Engelrelst, Eric Nulens, Bart Gordts
- P-92 Development of methods for hexamine isolation and discovery from biological objects while forensic - chemical investigation  
Jalilov Fazliddin, Mansur Tojiyev
- P-93 Internet based computer processing of thin-layer chromatography data in systematic toxicological analysis  
Rafael Linden, Estefânio Kellermann
- P-94 Analysis of oral antidiabetic drugs by TOXI-LAB's thin-layer chromatographic method  
Mareta Ibragimova, Ilhom Akhmedjanov
- P-95 Stability of diazepam and bromazepam in various samples at different storage conditions  
Vasil Atanasov, Atanas Runiov, Silviya Stoykova, Tsvetelina Dimitrova, Mariana Mitewa
- P-96 Does the application of propanols used for hand disinfection affect the congeners analysis?  
Harald Below, Elke Below, Britta Bockholdt, Nora Bieber, Thomas Nicolai, Alexander Usche, Ojan Assadian, Günter Kampf, Wolfram Parzefall, Axel Kramer
- P-97 Correlation between exhaled carbon monoxide and self-reported smoking status with urinary cotinine  
Guilherme Petersen, Laura Marder, Carlos Leite, Julia Machado, Flavia Thiesen, Jose Miguel Chatkin
- P-98 Intoxication by thallium  
Petr Kurka, Marie Stankova, Jana Kubackova, Vladimira Gebauerova
- P-99 Lead exposure - A case study of Indian bangle makers  
Yeshvandra Verma, S.V.S. Rana

**Topic: Drug Metabolism and Kinetics:**

- P-100 In vitro metabolism of the emerging drug candidate S107 in preventive doping research  
Simon Beuck, Wilhelm Schänzer, Mario Thevis
- P-101 Residue and microsomal P450 analysis of ACTP-ester in goat  
Chittaranjan Sahu, Biplab Bagchi
- P-102 Stereoselective disposition of venlafaxine and its major metabolites in postmortem femoral blood in relation to CYP2D6 polymorphism  
Louise Karlsson, Maria Kingbäck, Anna-Lena Zackrisson, Björn Carlsson, Martin Josefsson, Finn Bengtsson, Johan Ahlner, Fredrik Kugelberg
- P-103 Analysis of quetiapine metabolites in patient samples using high-performance liquid chromatography/tandem mass spectrometry  
Danielle S. Fisher, David Taylor, Phillip E. Morgan, Robert J. Flanagan
- P-104 The metabolism and excretion of quinine by the greyhound  
Linda Glowacki, Dimitri Gerostamoulos, Paul Wynne
- P-105 Species differences in the metabolism of Phalaris alkaloids  
Paul Wynne, Linda Glowacki, Dimitri Gerostamoulos
- P-106 Quantification of daptomycin with LC-MS/MS in plasma samples of patients undergoing continuous veno-venous hemodiafiltration  
Katharina Rentsch, Ursula Gutteck-Amsler, Natascia Corti, Alain Rudiger, Marco Maggiorini

**Topic: Hormones in Doping Control and Forensics**

- P-107 Validation of a GC/MS method for the detection of two quinolinone-derived selective androgen receptor modulators in doping control analysis  
Enrico Gerace, Alberto Salomone, Renzo Costa, Antonella Di Stilo, Marco Vincenti
- P-108 Determination of new doping substances by LC-MS/MS using various urine preparation methods  
Irina I. Sukhanova, Marina A. Dikunets, Sergey L. Bolotov, Grigory M. Rodchenkov
- P-109 Common LC-MS/MS fragment ions of prohibited substances for target and non-target doping analysis  
Svetlana Appolonova, Natalia Mesonzhnik, Dasha Brazhnikova, Gregory Rodchenkov
- P-110 High resolution and high mass accuracy: A new approach for screening in doping control analysis  
Benedicte Duret, Yves Moulard, Yves Bonnaire, Sarah Robinson, Samuele Scurati
- P-111 Development of an automated LC-TOFMS screening method for the identification and confirmation of doping agents in urine  
Juan Carlos Dominguez-Romero, Juan Francisco Garcia-Reyes, Antonio Molina-Diaz
- P-112 Quantitation of testosterone esters in oil-based injectables with micellar electrokinetic chromatography (MEKC-DAD)  
Matthias Balsam, Diana Domke, Thomas Knepper, Michael Pütz
- P-113 Possible biomarkers of Synacthen abuse by athletes  
Svetlana Appolonova, Grigory Rodchenkov
- P-114 Effects of endurance exercise on the urinary proteome analyzed by 2D-PAGE and Orbitrap mass spectrometry  
Katja Walburgis, Maxie Kohler, Andreas Thomas, Markus de Marées, Joachim Mester, Wilhelm Schänzer, Mario Thevis

**Topic: Alternative Matrices**

- P-115 "Peri-analytics" reference ranges for drug screening in oral fluid using the Greiner-Bio-One collection device  
Michael Boettcher, Andreas Preidel, Olof Beck
- P-116 Performance evaluation of DAT oral fluid amphetamines, methamphetamine, opiates and phencyclidine assays on Roche Hitachi  
D. Kuntz, M. Meixner, K. Armstrong, B. Masters, Mary-Jane Coffing, I. Domke, C. Beck
- P-117 Investigation of salivary pH after different foods and drinks: Effects on immunoassay screening  
Eva Maria Reichardt, Dene Baldwin, David Osselton
- P-118 A sensitive method to detect and quantify  $\Delta^9$ -THC in oral fluid by liquid chromatography-tandem mass spectrometry  
Anna Molnar, Shanlin Fu, Philip Doble, John Lewis
- P-119 The use of F-SPE/ Fast LC-MS/MS for analyzing low level THC in oral swabs  
Jeffery Hackett, Albert Elian, Michael Telepchak
- P-120 The determination of cathinone in oral fluid by LC-MS-MS as part of a workplace testing program  
Peter Akrill, Claire George
- P-121 Rapid screening and UPLC/MS-MS toxicological analysis of oral fluid for diagnosis of acute intoxication in emergency  
Paola Cassandro, Anna Carfora, D. Di Candia, F. Lodi, C. Volpe, Renata Borriello
- P-122 Oral fluid results compared to self reports of recent illicit drug use by methadone maintenance patients  
Edward Cone
- P-123 Detection of paraquat in oral fluid by capillary electrophoresis for diagnosis of acute poisoning  
Rafael Lanaro, José Luiz Costa, Luciane C.R. Fernandes, Marina M.F Tavares, Alice Ap.M Chasin
- P-124 Retrospective analyses of immunoassay results in hair  
Katrin M Kirschbaum, Caroline Herzfeld, Katrin Graumann, Hans Sachs, Frank Musshoff, Burkhard Madea
- P-125 Simultaneous analysis of psychotropic phenylalkylamines in oral fluid by GC/MS with automated SPE  
Hyeoung Choi, Seungkyung Baeck, Moonhee Jang, Hwakyung Choi, Heesun Chung
- P-126 Hair testing and self-report of cocaine use  
Claudia Vignali, Cristiana Stramesi, Micol Vecchio, Angelo Groppi
- P-127 Measurement uncertainty in quantitative segmental analysis of hair for cocaine and benzoylecgonine  
Marc LeBeau, Madeline Montgomery, Cynthia Morris-Kukoski, Jason Schaff
- P-128 Products of cocaine and hydrogen peroxide reactions  
Mark L Miller, Sarah Himes, Madeline A Montgomery, Marc A LeBeau, Roman Aranda IV
- P-129 Combined analysis of meconium and maternal hair. A case report  
Merja Gergov, Johanna Ristimaa, Ilkka Ojanperä
- P-130 A sensitive determination of benzodiazepines in hair and nail with ultra-performance liquid chromatography-tandem mass spectrometry  
Rina Kaneko, Azusa Uchida, Tatsushi Mizutani, Tadashi Ogawa, Hideki Hattori, Hiroshi Seno, Osamu Suzuki, Akira Ishii
- P-131 Diazepam, nordiazepam and oxazepam in hair samples collected from newborn twins  
Wojciech Lechowicz, Roman Stanaszek, Wojciech Piekoszewski, Ewa Florek
- P-132 Investigation of the factors affecting endogenous GHB concentrations in human hair  
Samar Alzeer, Samar Alzeer, David Watson, Elizabeth Ellis

- P-133 Time resolved analysis of quetiapine and 7-OH-quetiapine in hair using LC/MS-MS  
Stephanie Teodoro, Serge Schneider, Michel Yegles
- P-134 Evidence of Haldol (haloperidol) long-term intoxication  
Enrico Gerace, Alberto Salomone, Marco Vincenti, Sergio Pellegrino
- P-135 Evaluation of copper levels in hair and liver samples obtained from Wilson's Disease patients  
Serap Annette Akgur, Hasan Ertas, Levent Elibol, Nuri Idiz, Gorkem Yararbas, Maşallah Baran, Çiğdem Arkan, Sema Aydoğdu
- P-136 Investigation of hair as a marker for the detection of diabetes mellitus  
Mareta Ibraqimova, Makhmudjon Shakhitov
- Topic: Postmortem Toxicology**
- P-137 Blue pieces of unknown substance in the stomach: An interesting unnatural death investigation  
Maria Afxentiou Stylianou, Katerina Liveri, Nantia Kolokassidou, Anna Krashia, Myriam Frantzi, Eleni Procopiou, Popi Kanari
- P-138 Intentional suicide by formic acid ingestion  
Jennifer Button, Rachael Jones, Frank Tames, Sebastian Lucas, David W. Holt
- P-139 A fatal intoxication by chloroprene  
Annette Rickert, Bernd Kardel, Johanna Teloh, Benno Hartung, Thomas Daldrup
- P-140 Fatal tolperisone poisoning: autopsy and toxicology findings in three suicide cases  
Frank Sporkert, Christophe Brunel, Marc Augsburg, Patrice Mangin
- P-141 Case report: suicidal ephedrine-caffeine blend ingestion  
Viktor Vorisek, Lenka Zatopkova, Lenka Prochazkova, Vladimir Palicka, Vilma Habrdova, Lenka Haklova
- P-142 Two fatalities involving pregabalin  
Jennifer Button, David Berry, David W. Holt
- P-143 Suicide by hanging under the influence of ketamine and ethanol  
Ricardo Jorge Dinis-Oliveira, Félix Carvalho, José Alberto Duarte, Ricardo Dias, Teresa Magalhães, Agostinho Santos
- P-144 Distribution of embutramide and mebenzonium iodide in a suicidal death after Tanax® injection  
Luca Morini, Fulvia Pozzi, Enrico Rizzo, Claudia Vignali, Angelo Groppi
- P-145 Detection of nalbuphine in postmortem samples  
Waqdy Abd-elmeged Soliman
- P-146 Fatal poisoning with *Taxus baccata*: Identification of monohydroxy-taxine, monohydroxy-monoacetyl-taxine and monohydroxy-diacetyl-taxine in postmortem specimens by liquid chromatography-electrospray ionization-tandem mass spectrometry  
Thomas Keller, Wolfgang Bicker, Fabio Monticelli, Hans Sachs, Thomas Ketterer
- P-147 Fatal poisoning with *Aconitum napellus* extract: Quantification of aconitine and identification of related alkaloids by liquid chromatography – electrospray ionization – tandem mass spectrometry  
Wolfgang Bicker, Fabio Monticelli, Hans Sachs, Thomas Ketterer, Thomas Keller
- P-148 Death linked to an uncommon fungus: Kombucha  
Frédéric Aknouche, Thierry Besnard, Robert Buti, Henri-Pierre Duval, Gérald Quatrehomme
- P-149 Comparison of blood-amphetamine concentration in drug poisoning deaths with people arrested for driving under the influence of this stimulant in Sweden  
Johan Ahlner, Anita Holmgren, Wayne Jones
- P-150 A preliminary investigation on the distribution of cannabinoids in man  
Antonia Gronewold, Gisela Skopp
- P-151 Estimating the time of last cannabis use from post mortem whole blood  $\Delta^9$ -THC and 11-nor-9-carboxy- $\Delta^9$ -THC concentrations  
Walter Martz
- P-152 Determination of venlafaxine in post-mortem whole blood by HS-SPME and GC-NPD  
Orthodoxia Mastrogianni, Konstantina Spagou, Teresa Henriques, Diva Violante, Nikolaos Raikos, Georgios Theodoridis, Athanasios Pouliopoulos, Antonios Tzikas, Konstantinos Psaroulis, Fotios Chatzinikolaou, Elisavet Thessalonikeos, Heleni Tsoukali
- P-153 Highly sensitive UFLC-MS/MS analysis of fentanyl and norfentanyl in different post-mortem matrices: seven forensic case studies  
Ruth Verplaetse, Eva Cuyppers, Coralie Silvestre, Dieter Waumans, Jan Tytgat
- P-154 Quantification in post-mortem blood, and identification in urine, of tramadol and its two main metabolites in two cases of lethal tramadol intoxication  
Benjamin De Backer, Françoise Renardy, Raphaël Denooz, Corinne Charlier
- P-155 Concentrations of morphine, codeine and 6-monoacetyl morphine in femoral blood in heroin-related deaths compared with apprehended drivers  
Anita Holmgren, Johan Ahlner, Alan Wayne Jones
- P-156 An UPLC-MS/MS method for the determination of valproic acid in blood of a fatal case of intoxication  
Paula Proença, João Miguel Franco, Carla Mustra, Mariana Marcos, Ana Rita Pereira, Francisco Corte-Real, Duarte Nuno Vieira
- P-157 The Lady in the Bath Water: A Propofol Assisted Death  
William Allender, Stuart Anderson, Susan Jennings and Judy Perl
- P-158 Evaluation of carboxyhemoglobin in carbonized victims submitted to postmortem examination at the Institute of Legal Medicine of Sao Paulo, Brazil  
Vilma Leyton, Maria de Lourdes SC Strombeck, Mario Jorge Tsuchiya, Paulo Dirceu Luchini, Jose Arnaldo Soares-Vieira, Julio Ponce, Daniel Romero Muñoz
- P-159 Quantitative analysis of methadone and EDDP in a single puparial case of blowflies (Diptera, Calliphoridae, *Lucilia sericata*,) using UPLC-MS/MS  
Matthias Gosselin, Vincent Di Fazio, Sarah M. R. Wille, Nele Samyn, Benoit Bourel, Pierre Rasmont
- P-160 Deaths involving selective serotonin reuptake-inhibitors  
Jennifer L. Pilgrim, Dimitri Gerostamoulos, Olaf H. Drummer
- P-161 A five years retrospective study of acute poisoning cases investigated by The Forensic Laboratory of Ministry of Justice in Upper Egypt  
Nady Sayed Aly
- P-162 Twenty years of heroin-related death statistics: how the Victorian drug scene has changed  
Jessica Woods, Dimitri Gerostamoulos, Olaf Drummer
- P-163 Presence of ethanol in suicidal deaths: a 12 year study in Epirus, North-western Greece  
Vassiliki Boumba, Kleo Fragkouli, Theodore Vougiouklakis
- P-164 The impact of post-mortem redistribution on the blood concentrations of therapeutic drugs  
Pierre-Yves Tremblay, Michel Lefebvre, Lyse Lefebvre
- P-165 Microbial ethanol production: Experimental study and multivariate evaluation  
Vassiliki Boumba, Vangelis Oikonomou, Nikos Kourkoumelis, Panagiota Gousia, Chrissanthy Papadopoulou, Theodore Vougiouklakis

- P-166 Genetic analysis of rhabdomyolysis-associated genes and immunohistochemical study of myoglobin in the kidney in autopsy cases of methamphetamine abusers  
Aya Matsusue, Kenji Hara, Masayuki Kashiwagi, Mitsuyoshi Kageura, Tomoko Sugimura, Shin-ichi Kubo
- Topic: Forensic Chemistry**
- P-167 Identification of 1-butyl-3-(1-(4-methyl)naphthoyl)indole in a "SPICE"-like herbal mixture  
Folker Westphal, Frank Sönnichsen, Simone Thiemt
- P-168 Identification of new synthetic cannabinoids in herbal mixtures  
Wonkyung Yang, Sanggil Choe, Younan Park, Hwakyung Choi, Heesun Chung
- P-169 Non-Cannabinoids: identification of CB1 and CB2 selective ligands in an herbal blend (Mojo)  
Marilisa Ferri, Roberto Mencarelli, Federica Mentrasti, Raffaele Giorgetti, Adriano Tagliabracchi
- P-170 GC-MS detection and quantification of the non traditional cannabinoids JWH-018 and JWH-073 in a commercial herbal mixture  
Jennifer Pascali, Claudia Rimondo, Giovanni Serpelloni, Franco Tagliaro
- P-171 Applications of desorption-electrospray-ionization-mass spectrometry (DESI-MS) in forensic toxicology  
Christoph Härtel, Michael Pütz, Nathalie Martin, Uwe Karst
- P-172 Direct analysis of cannabis by thermal desorption counter-flow introduction atmospheric pressure chemical ionization mass spectrometry  
Hiroyuki Inoue, Hiroaki Hashimoto, Susumu Watanabe, Yuko T. Iwata, Kenji Tsujikawa, Tatsuyuki Kanamori, Hajime Miyaguchi, Kenji Kuwayama, Takefumi Yokokura, Masuyoshi Yamada
- P-173 Characteristics of cannabinoids composition of Cannabis plants grown in Northern Thailand and its forensic application-Part II: second generation studies  
Prapatsorn Tipparat, Dr.Surapol Natakankitul, Pipop Chamnivikaipong, Sirot Chutiwat
- P-174 Standardised analysis of cannabis products for the determination of the total  $\Delta^9$ -THC content  
Franz Dussy, Luginbuehl Marco, Thomas Briellmann
- P-175 Organic adulterants present in crack's seizure of São Paulo - Brazil  
André Fucushima, Alice Chasin, Virginia Carvalho, Débora Carvalho, Ernesto Diaz, Mariana Portugal
- P-176 Purity of "Street" ketamine preparations retrieved from night club amnesty bins in London  
Eva Maria Reichardt, John Ramsey, David Osselton
- P-177 Impurity profiling of methamphetamine by cross-matching test using liquid-liquid extraction and automated solid-phase microextraction  
Jaesin Lee, Yonghoon Park, Heesun Chung, Hiroyuki Inoue, Kenji Kuwayama, Eunmi Kim, Yujin Park, Jeonghill Park
- P-178 Online availability of designer drugs: Do you get what you pay for?  
Susannah Davies, Gareth Smith, David Wood, Jennifer Button, John Ramsey, David W. Holt, Paul I. Dargan
- P-179 Judicial-chemical research of some neuroleptics  
Roman Kalekin, Evgenie Salomatin, Viktoria Kalekina, Alla Volkova
- P-180 Simultaneous analysis of alpha-amanitin, beta-amanitin and phalloidin in toxic mushrooms by liquid chromatography coupled to time-of-flight mass spectrometry  
Walid Ahmed, Kunio Gonmori, Masako Suzuki, Hideki Nozawa, Itaru Yamagishi, Sanae Kanno, Koutaro Hasegawa, Kayoko Minakata, Kanako Watanabe, Osamu Suzuki
- P-181 Determination of atropine and scopolamine contents in *Datura wrightii*, an ornamental plant often present in public parks  
Patrick Mura, Sarah Chollet, Bertrand Brunet
- P-182 Standardized GC-MS (EI) procedure for monitoring the detection and identification performance applied to herbal remedies  
Thomas J. Mahier, Inaam J. Al-Doush, Athra Al-Shaikh, Mohammed Al-Tufail, Maciej J. Bogusz
- Topic: Alcohol Markers**
- P-183 Implementation of ultra-high resolution mass spectrometer Exactive™ for analysis of EtG and EtS in human urine  
Kent Johnson, Marta Kozak
- P-184 Extraction of ethyl glucuronide (EtG) using a new resin-based mixed-mode strong anion exchange SPE sorbent prior to LC-MS/MS analysis  
Rhys Jones, Lee Williams, Helen Lodder, Steve Jordan, Steve Plant, Richard Calverley, Claire Desbrow, Gary Dowthwaite
- P-185 Optimizing the detection of alcohol consumption: Screening for urinary ethyl glucuronide in addition to common alcohol markers in the blood  
Hilke Andresen, Niels Tobias, Stefanie Iwersen-Bergmann, Alexander Mueller, Bjoern Nashan, Martina Sterneck, Katharina Stauer
- P-186 Determination of ethyl glucuronide in hair samples of Chinese people by large volume injection- gas chromatography-tandem mass spectrometry (LVI-GC/MS/MS)  
Baohua Shen, Yan Shi, Hui Yan, Ping Xiang, Min Shen
- P-187 Carbohydrate Deficient Transferrin (CDT) is effective in identifying alcohol abuse also below the usual reference limits. Re-assessment of the reference limit  
Federica Bortolotti, Daniela Sorio, Franco Tagliaro
- Topic: Recent Developments in LC-MS Screening**
- P-188 Determination of acidic and neutral therapeutic drugs in human blood by liquid chromatography-electrospray tandem mass spectrometry  
Lambert K. Sorensen
- P-189 Unknown screening for toxic compounds and drugs in plasma and urine based on LC-MS/MS  
Samuele Scurati, Cecilia Gechtman, Benedict Duretz, Sarah Robinson, Adriano Masarin
- P-190 Evaluation of two alternative UPLC-MS approaches as potential replacements for the REMEDI HS drug profiling system  
Michelle Wood, Robert Lee, Mark Roberts, Nayan Mistry
- P-191 Toxicological screening of basic drugs in whole blood using a new UPLC-QTOF-MS method  
Petur Weihe Dalsgaard, Brian Schou Rasmussen, Kristian Linnet
- P-192 Development and practical application of a CID mass spectra library of toxic compounds for systematic toxicological analysis by LC-QTOF-MS  
Sebastian Broecker, Sieglinde Herre, Bernhard Wuest, Fritz Pragst
- P-193 A comparison of methods for the determination of xenobiotics in biological samples: Multiple Reaction Monitoring (MRM) vs. General Unknown Screening (GUS)  
Brad Patterson, Jochen Beyer, Dimitri Gerostamoulos, Olaf Drummer
- P-194 Development of an automated MS-based screening procedure for clinical and forensic toxicology  
Jürgen Kempf, Susanne Vogt, Sebastian Götz, Birgit Schneider, Petra Decker, Anna Sandhaas, Wolfgang Weinmann, Carsten Baessmann
- P-195 Comparison of forensic multi-target screening and unknown screening on an LC/MS/MS system with automatic library searching for compound identification

- Jens Trafkowski, Pauline Vollmerhaus, André Schreiber  
P-196 Optimizing library search performances for LC-MS/MS: SmileMS to cope with spectral variability and instrumentation heterogeneity  
Pierre-Alain Binz, Roman Mylonas, Yann Mauron, Annette Jordan, Bernard Favrat, Marc Augsburg, Alexandre Masselot, Nicolas Budin

**Various Topics**

- P-197 MDMA and MDA induced oxidative stress in brains of mice  
Luka Marumo, Sachiko Tanaka, Satoshi Numazawa, Takemi Yoshida  
P-198 Effects of synthetic cannabinoids on electroencephalogram power spectra in rats  
Nahoko (Otani) Uchiyama, Ruri Kikura-Hanajiri, Naomi Matsumoto, Zhi-Li Huang, Yoshihiro Urade, Yukihiro Goda  
P-199 Evaluation of the efficacy of the aqueous extract of *Senna occidentalis* in the amelioration of tetracycline-induced hepatotoxicity and nephrotoxicity in rabbits  
Gafer Ahmed, Melanie Abongwa, Oluwadamilola Arowolo  
P-200 Workplace drug testing performed in Naples (Italy) between 2000-2009  
Renata Borriello, Anna Carfora, Anna Cucciardi, Raffaella Petrella, Luisa Russello, Paola Cassandro  
P-201 Prevalence of drug abuse amongst workers in Italy. Results and evaluations after the recent enforcement of the National Workplace Drug Testing Law  
Isabel Kazanga, Silvia Tameni, Alberto Piccinotti, Ivan Floris, Gabriele Zanchetti, Aldo Polettini

- P-202 Hospital effluents as a problematic source of anthropogenic metals  
Jean-Pierre Goullé, Christian Lacroix, Elodie Sausseureau, Loïc Mahieu, Dominique Cellier, Joël Spiroux, Michel Guerbet  
P-203 The usefulness of commercial quantitation software in ibogaine LC-MS/MS analyses  
Gordana Koželj  
P-204 Reference materials for drugs of abuse testing in pharmacotoxicology: freeze-dried urine samples  
Simona Pichini, Stefano Bompadre, Francesco Brandimarti, Raffaele Giorgetti  
P-205 The accuracy profile: a universal and essential tool in forensic toxicology  
Aurélien Thomas, Julien Déglon, Estelle Lauer, Christèle Widmer, Christian Staub  
P-206 An acute case of intoxication with Microcystin in recreational water in Argentina. Clinical parameter and interrelation with the exposure to Microcystin-LR in mice  
L. Giannuzzi, D. Sedan, D. Andrinolo, L. Telese

**Poster Presenter Attendance at Posters:**

- Poster 1-50, Monday, afternoon coffee break  
Poster 51-100, Tuesday, morning coffee break  
Poster 101-150, Tuesday, afternoon coffee break  
Poster 151-206, Wednesday, morning coffee break