

GESELLSCHAFT FÜR
TOXIKOLOGISCHE UND FORENSISCHE CHEMIE

XIX. GTFCh-SYMPOSIUM

16. – 18. APRIL 2015
TAGUNGSZENTRUM ALTE MÄLZEREI
MOSBACH (BADEN)



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XIX. GTFCh-Symposium

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XIX. GTFCh-SYMPOSIUM

16. – 18. April 2015 in Mosbach (Baden)

Tagungszentrum Alte Mälzerei, Mosbach (Baden)

Programm

Mittwoch, 15. April 2015

Mittwochsvortrag für die Mosbacher Öffentlichkeit

20:00 Uhr **Dr. Klaus Stein, Bayerisches Landeskriminalamt, München**
„Wenn`s rummst - Tatortbearbeitung bei Sprengstoffexplosionen“

Donnerstag, 16. April 2015

Satellitensymposium

– für angemeldete Teilnehmer –

Soll Cannabis verboten bleiben? Ein wissenschaftlicher Diskurs

14:00 Uhr **Eröffnung und Begrüßung / *Opening and welcome***

Dr. Franjo Grotenhermen (Arzt, Rüthen)
Medizinischer Nutzen von Cannabis

Prof. Dr. Rainer Thomasius (Universitätsklinikum Hamburg-Eppendorf, Hamburg)
Cannabis – eine unterschätzte Gefahr für die Jugend?

Prof. Dr. Wolfgang Schubert (Präsident der Deutschen Gesellschaft für Verkehrspsychologie (DGVP))
Cannabis und Fahreignung: Steigerung der Verkehrssicherheit oder Sanktionen durch die Hintertür?

Sebastian Glathe (Rechtsanwalt, Freiburg)
Cannabis und Strafrecht: Unerwünschte Effekte der Cannabisprohibition

Dr. Bernd Wense (Centre for Drug Research, Goethe-Universität, Frankfurt am Main)
Prävalenz und gesetzlicher Status von Cannabis – ein europäischer Vergleich

Podiumsdiskussion Pro und Contra Cannabislegalisierung mit Frank Tempel (MdB)
und einem weiteren Diskutanten, Moderation: Prof. Dr. Volker Auwärter

18:00 Uhr **Sitzungsende / *End of session***

20:00 Uhr **Abendveranstaltung / *Evening event***

Empfang durch Herrn Oberbürgermeister Michael Jann
Gemeindesaal katholisches Pfarramt St. Cäcilia, Franz-Roser-Platz 2, Mosbach

Freitag, den 17. April 2015

XIX. GTFCh-Symposium

- 09:00 Uhr** **Eröffnung des Symposiums und Grußworte**
Opening of the symposium and welcome speeches
- 09:10 Uhr** **Vorträge: Neues aus der Kriminaltechnik, Trends**
Oral presentations: News from forensic science, trends
- V01 Harald John, Felix Gandor, Michael Gawlik, Andreas Kranawetvogel, Horst Thiermann, München, Berlin, Hamm
An albumin adduct with the chemical warfare agent sulfur mustard detected by LC-ESI MS/MS: a novel method for verification of poisoning
- V02 Susanne Vogt, Martina Hauschel, Verena Angerer, Jürgen Kempf, Volker Auwärter, Freiburg
Analysis of ‘poppers‘ products and analytical detectability of a single use of ‘poppers‘
- V03 Jan Schäper, Marc Wende, München
“Shake and Bake” synthesis of methamphetamine – an experimental study
- V04 Christian Bissig, Zürich (Schweiz)
Practical aspects of designer drug identification by means of solid phase GC-IR
- V05 Lars Müller, Volker Auwärter, Verena Angerer, Michael Pütz, Laura M. Huppertz, Wiesbaden, Freiburg
A novel single-run-approach to detect, identify and quantitate synthetic cannabinoids in seized material using UHPLC-UV/DAD-MSⁿ
- V06 Verena Angerer, Volker Auwärter, Freiburg,
Monitoring of ‘legal high‘ products 2013 and 2014
- V07 Sára Harkai, Michael Pütz, Münster, Wiesbaden
Comparison of rapid detecting optical techniques for the identification of new psychoactive substances in ‘Legal High‘ preparations
- V08 Volker Auwärter, Florian Franz, Verena Angerer, Bela Szabo, Maren Hermanns-Clausen, Siegfried Knasmüller, Ilkka Ojanperä, Bernd Wersé, Karsten Tögel-Lins, Krystallia Karachaliou, Michael Pütz, Renate Lind-Krämer, Teemu Gunnar, Lars Ambach, Wolfgang Weinmann, Freiburg, Wien (Österreich), Helsinki (Finnland), Frankfurt am Main, München, Wiesbaden, Bern (Schweiz)
The EU project ‘SPICE II Plus‘: Summary of the key findings
- V09 Michael Pütz, Volker Auwärter, Sascha Münster-Müller, Sabine Schneiders, Wiesbaden, Freiburg
The EU-project ‘SPICE-profiling‘ (2015-2017) - objectives and results of a pre-study
- 11:00 Uhr** **Kaffeepause / Coffee break**

Bitte beachten Sie die Hinweise zur Abfassung und Einsendung der Beiträge zu den Proceedings des XIX. GTFCh-Symposiums auf Seite 114.

Freitag, den 17. April 2015**11:30 Uhr Vorträge: Neues aus der Kriminaltechnik, hochauflösende Massenspektrometrie**
Oral presentations: News from forensic science, high-resolution mass spectrometry

- V10 Laura M. Huppertz, Philippe Bisel, Folker Westphal, Florian Franz, Volker Auwärter, Bjoern Moosmann, Freiburg, Kiel
Characterisation and *in-vitro* metabolite identification of the four new designer benzodiazepines clonazolam, deschloroetizolam, flubromazolam and meclonazepam
- V11 Julian A. Michely, Julia Dinger, Simon D. Brandt, Markus R. Meyer, Hans H. Maurer, Homburg (Saar), Liverpool (England)
N,N-Diallyltryptamine (DALT) designer drugs: Metabolism, CYP inhibition potential, and urinary detectability of five typical representatives using GC-MS, LC-MSⁿ, and LC-HR-MS/MS techniques
- V12 Achim T. Caspar, Andreas G. Helfer, Volker Auwärter, Simon D. Brandt, Markus R. Meyer, Hans H. Maurer, Homburg (Saar), Freiburg, Liverpool (England)
25I-NBOMe: Metabolism and detectability of a novel synthetic hallucinogen - studied by GC-MS, LC-MSⁿ, and LC-HR-MS/MS
- V13 Andreas G. Helfer, Julian A. Michely, Armin A. Weber, Markus R. Meyer, Hans H. Maurer, Homburg (Saar)
LC-HR-MS/MS standard urine screening approach: Comparison of urine dilution, precipitation, or TurboFlow online extraction exemplified for 20 cardiovascular drugs
- V14 Sabrina Lehmann, Tobias Kieliba, Justus Beike, Markus A. Rothschild, Katja Mercer-Chalmers-Bender, Köln
Rapid determination of new psychoactive substances in biological matrices using an automated ITSPTM solid-phase extraction and LC-MS/MS

12:30 Uhr Mittagspause / Lunch break**13:15 Uhr Posterausstellung mit Kaffeetheke / Poster session and coffee bar**

- P01 Frank Sporkert, Thomas Daldrup, Ulrich Demme, Marek Dziadosz, Freidoon Erdmann, Cornelia Franzelius, Stefanie Hammer, Gertrud Rochholz, Thomas Stimpfl, Jörg Teske, Michaela Winkler, Lausanne (Schweiz), Düsseldorf, Jena, Hannover, Giessen, Kiel, Dortmund, Wien (Österreich), Ulm
Extraction of further toxicologically relevant compounds with 1-chlorobutane – a systematic investigation
- P02 Verena Angerer, Fabian Süßenbach, Nina Hirschinger, Volker Auwärter, Freiburg
Validated LC-MS/MS method for qualitative and quantitative analysis of 75 synthetic cannabinoids in serum
- P03 Florian Franz, Georg Weinfurtner, Nadja Schwörer, Volker Auwärter, Freiburg, Regensburg
Immunoassay screening in urine for synthetic cannabinoids – a feasible approach for forensic applications?
- P04 Sarah Schumacher, Harald Seitz, Potsdam
Multiplex approach for an immunological detection of drug abuse: A validation study
- P05 Katharina M. Köhler, Raija Hammer, Kathrin Riedy, Volker Auwärter, Merja A. Neukamm, Freiburg
Validation of CEDIA[®] and DRI[®] drugs of abuse immunoassays for urine screening on a Thermo Scientific Indiko Plus analyser

Freitag, den 17. April 2015

- P06 Amanda Leffler, Bernd Thierfelder, Seyed Sadjadi, Shahana Huq, Sean Orłowicz, Kalifornien (USA), Aschaffenburg
A comprehensive screening of illicit and pain management drugs from whole blood matrix using SPE and LC/MS/MS
- P07 Julian A. Michely, Andreas G. Helfer, Markus R. Meyer, Hans H. Maurer, Homburg (Saar)
Is LC-high-resolution-MS/MS a suitable alternative to ELISA in diagnosis of *Amanita phalloides* poisonings? - A two years' experience
- P08 Marianne Hädener, Wolfgang Weinmann, Stefan König, Bern (Schweiz)
Rapid extraction of THC-COOH and THC-COO-glucuronide from human urine and quantitative analysis by column-switching LC-MS/MS
- P09 Patrick C. Dolder, Evangelina Liakoni, Matthias E. Liechti, Katharina M. Rentsch, Basel (Schweiz)
Identification of recreational drugs in patients admitted to the emergency department – a retrospective analysis
- P10 Marcel Grapp, Herbert Desel, Göttingen
Systematic forensic toxicological screening by GC-MS in serum using automated mass spectral deconvolution and identification system
- P11 Susanne Nussbaumer, Thomas Wüthrich, Wolfgang Weinmann, Stefan König, Bern (Schweiz)
Metabolite profiling by SWATH acquisition: application to forensic samples
- P12 Helena Fels, Torsten Dame, Hans Sachs, Frank Musshoff, München
Development, validation and application of a qualitative LC-QTOF-MS screening method for post-mortem urine samples
- P13 Jürgen Kempf, Christine Stronczek, Laura M. Huppertz, Susanne Vogt, Freiburg
Automated ion trap LC-MS screening for xenobiotics in vitreous humor
- P14 Eberhard Scheuch, Sven-Olaf Kuhn, Ulrich Hoffmann, Greifswald
Prolonged half-life of some central depressant drugs in brain death
- P15 Konrad Sydow, Burkhard Madea, Frank Musshoff, Cornelius Hess, Bonn
Evaluation of post mortem amino acid concentrations in vitreous humor with known post-mortem intervals
- P16 Gernot Brauers, Tanja Hammen, Irina Steiner, Thomas Daldrup, Düsseldorf
Kidney juice, an alternative matrix for the forensic toxicology
- P17 Evelyn Pawlik, Hellmut Mahler, Benno Hartung, Gerd Plässer, Thomas Daldrup, Düsseldorf
Analysis of adulterants from cocaine preparations in lung tissue and blood
- P18 Julia Krüger, Matthias Graw, Frank Musshoff, Hans Sachs, Gabriele Roider, München
Analysis of propofol, midazolam and atracurium in dried spots on a carpet
- P19 Patrick C. Dolder, Matthias E. Liechti, Katharina M. Rentsch, Basel (Schweiz)
Quantification of LSD and 2-oxo-3-hydroxy LSD in serum and urine samples of five acute emergency toxicological cases
- P20 Helena Fels, Julia Krueger, Andreas Stoeber, Torsten Dame, Hans Sachs, Gabriele Roider, Frank Musshoff, München
Fatal intoxication after consumption of a high dose of the synthetic opioid AH-7921

Freitag, den 17. April 2015

- P21 Christina Grumann, Maren Hermanns-Clausen, Josephine Kithinji, Verena Angerer, Volker Auwärter, Freiburg
Accidental intoxication with 25I-NBOMe
- P22 Patricia Anielski, Bernd Schwarze, Detlef Thieme, Kreischa, Erlangen
Detection of the abortifacient mifepristone (Mifegyne, RU-486) in a hair sample after illegal administration
- P23 Sonja Heintl, Freidoon Erdmann, Oliver Lerch, Gießen, Mülheim an der Ruhr
Comprehensive automation of the determination of THC, CBN and CBD in hair by GC/MS
- P24 Silvana Witt, Stefan W. Toennes, Frankfurt (Main)
A rapid method for the detection of oxidative hair treatment using fluorescence microscopy
- P25 Alexander Müller, Stefanie Iwersen-Bergmann, Hilke Jungen, Lars Radünz, Hilke Andresen-Streichert, Hamburg
Analysis of ethyl glucuronide in human hair samples: A multivariate analysis of the impact of extraction conditions on quantitative results
- P26 Luc Kirchen, Michel Yegles, Juergen Schram, Dudelange (Luxemburg), Krefeld
Are new psychoactive drugs missed in routine forensic analysis of serum and hair?
- P27 Barbara Hinterberger, Bernd Bodiselitsch, Balazs Horvath, Olaf Nehlich, Thomas Stimpfl, Wien, Neutal (Österreich)
Extending the detection window for GHB in urine using isotope-ratio mass spectrometry
- P28 Nadja Schwörer, Verena Angerer, Laura M. Huppertz, Florian Franz, Volker Auwärter, Freiburg
Metabolism and urine analysis of the new synthetic cannabinoid MDMB-CHMICA
- P29 Cornelius Hess, Clara Schoeder, Christa E. Müller, Burkhard Madea, Bonn
CB₁ and CB₂ receptor affinities of synthetic cannabinoids sold on the illicit drug market
- P30 Marie Martin Fabritius, Wolfgang Weinmann, Marc Augsburg, Christian Giroud, Lausanne, Bern (Schweiz)
THCCOOH concentrations in whole blood: a useful tool to discriminate occasional from heavy smokers
- P31 Carsten Bartling, Michael Böttcher, Köln, Dessau
Stability studies on ethyl glucuronide (EtG) in bacterially contaminated urines
- P32 Michael Böttcher, David Kühne, Dessau
False-positive ethyl glucuronide immunoassay after anaesthesia with sevoflurane
- P33 Monika Jokiel, Gisela Skopp, Heidelberg
N-Acetyltaurine – preliminary work to prove its potential as a marker of alcohol consumption
- P34 Andreas Längin, Sebastian Wegerer, Werner Bernhard, Wolfgang Weinmann, Bern (Schweiz), Müllheim
Implementation of HS-GC-FID blood alcohol determination and data validation by a LIMS according to Swiss regulations

Freitag, den 17. April 2015

- P35 Georg Schmitt, Gisela Skopp, Heidelberg
Control charts for internal quality control in forensic-toxicological analyses
- 14:15 Uhr Vorträge: Toxikokinetik**
Oral presentations: Toxicokinetics
- V15 Nadine Schaefer, Mattias Kettner, Matthias W. Laschke, Julia Schlote, Benjamin Peters, Dietmar Bregel, Michael D. Menger, Hans H. Maurer, Andreas H. Ewald, Peter H. Schmidt, Homburg (Saar)
Disposition of JWH-210, RCS-4, THC, and their main metabolites in pig serum and whole blood following intravenous administration - a pilot study
- V16 Andrea E. Steuer, Corina Schmidhauser, Yasmin Schmid, Anna Rickli, Matthias E. Liechti, Thomas Kraemer, Zürich, Basel (Schweiz)
Pharmacokinetic blood plasma analysis of MDMA and its phase I and phase II metabolites after controlled MDMA administration to humans
- V17 Julia Dinger, Julian A. Michely, Markus R. Meyer, Hans H. Maurer, Homburg (Saar)
In vitro cytochrome P450 (CYP) inhibition potential of 12 tryptamine-derived designer drugs elucidated by a novel cocktail inhibition assay
- V18 Stefanie Iwersen-Bergmann, Alexander Müller, Hilke Andresen, Hilke Jungen, Lars Radünz, Herbert Oberacher, Beate Beer, Hamburg, Innsbruck (Österreich)
Brain/blood ratios of methadone in methadone related deaths and ABCB1 polymorphisms
- V19 Markus R. Meyer, Lea Wagmann, Nicole Schneider-Daum, Brigitta Loretz, Cristiane de Souza Carvalho, Claus-Michael Lehr, Hans H. Maurer, Homburg (Saar), Saarbrücken
P-glycoprotein interactions of novel psychoactive substances - stimulation of ATP consumption and transport across Caco-2 monolayers
- V20 Florian Franz, Nadja Schwörer, Verena Angerer, Laura M. Huppertz, Bjoern Moosmann, Volker Auwärter, Freiburg
Metabolism of synthetic cannabinoids – similarities and differences between metabolic patterns of different structural subclasses
- V21 Nicole Stachel, Gisela Skopp, Heidelberg
In vitro formation of ethyl glucuronide and ethyl sulfate

15:30 – 17.30 Uhr Mitgliederversammlung / *Business meeting*

19:00 Uhr Festabend mit Verleihung des Jean-Servais-Stas-Preises und des Nachwuchspreises für Wissenschaftlerinnen und Wissenschaftler
Congress ceremony and dinner – Presentation of the 2015 laureate of the Jean-Servais-Stas award and of the winner of the GTFCh Young Scientists award

Festvortrag / Lecture
Prof. Dr. med. Burkhard Madea (Bonn): Der Fall Rohrbach

23:00 Uhr After Dinner Party (Hopfenkeller der Alten Mälzerei)

Samstag, 18. April 2015

- 9:00 Uhr** **Vorträge: Alternative Matrices, Kasuistiken**
Oral presentations: *Alternative matrices, case reports*
- V22 Miriam Klima, Laura M. Huppertz, Markus J. Altenburger, Volker Auwärter, Merja A. Neukamm, Freiburg
 In vitro studies on the incorporation of medical and illicit drugs into dental hard tissue
- V23 Merja A. Neukamm, Miriam Klima, Laura M. Huppertz, Markus J. Altenburger, Volker Auwärter, Andreas Reinecke, Simone Kraus, Freiburg, Berlin
 Analysis of prehistorical dental hard material for betel nut alkaloids by liquid chromatography-mass spectrometry (LC-MS/MS and LC-HR-TOF-MS)
- V24 Tina M. Binz, Mona Bosshard, Markus R. Baumgartner, Thomas Kraemer, Zürich (Schweiz)
 Development and validation of an LC-MS/MS method for the quantification of cortisol in hair
- V25 Thomas Franz, Detlef Thieme, Gerlinde Schwarz, Hans Sachs, Frank Musshoff, Rheinbach, München, Kreischa
 Evaluation of active cannabis consumption via testing of the THC-metabolites 11-hydroxy-THC and 11-nor-carboxy-THC
- V26 Bjoern Moosmann, Volker Auwärter, Freiburg
 Δ^9 -Tetrahydrocannabinol (THC) and 11-*nor*-9-carboxy-THC (THC-COOH) findings in hair samples after controlled oral intake of dronabinol
- V27 Sandra N. Staeheli, Andrea E. Steuer, Michael Poetzsch, Thomas Kraemer, Zürich (Schweiz)
 Validation of an LC-MS/MS quantification method for 85 substances in 8 postmortem matrices
- V28 Fritz Pragst, Bernd Kopetz, Sieglinde Herre, Berlin, Bad Saarow
 Accidental death by toxic lung edema in a cyclone for waste gas cleaning of an industrial heating station – a case report
- V29 Sarah Hangartner, Jasmin Steiner, Franz Dussy, Regula Möckli, Kathrin Gerlach, Thomas Briellmann, Basel (Schweiz)
 A pet's death
- V30 Wiebke Rudolph, Daniela Remane, Björn Moosmann, Sebastian Lemke, Volker Auwärter, Frank T. Peters, Jena, Freiburg
 First reported intoxication involving the four designer benzodiazepines, flubromazepam, diclazepam, pyrazolam, and etizolam
- 10:40 Uhr** **Kaffee-Pause / *Coffee Break***
- 11:10 Uhr** **Vorträge: Freie Themen aus der Forensischen Chemie und Toxikologie**
Oral presentations: *communications in forensic chemistry and toxicology*
- V31 Alexander Paulke, Christian Kremer, Cora Wunder, Stefan W. Toennes, Frankfurt (Main)
 Follow up on a new old natural high: Lysergic acid amide (LSA) containing seeds of *Argyrea nervosa*
- V32 Alexandra Schröck, Peter Bütikofer, Wolfgang Weinmann, Bern (Schweiz)
 Development of a standardised test for the activity of phospholipase D (PLD) responsible for biosynthesis of phosphatidylethanol (PEth)

Samstag, 18. April 2015

- V33 Stephanie Hanisch, Werner Pogoda, Alexander Paulke, Stefan W. Toennes, Frankfurt (Main)
Investigations on the nature of a recently detected THCCOOH isomer: incubation experiments
- V34 Lena-Maria Mehling, Alexandra Maas, Burkhard Madea, Frank Mußhoff, Annika Spottke, Cornelius Heß, Bonn
GHB-O-β-D-glucuronide – determination of endogenous concentrations in plasma and urine samples and estimation of a clinical trial
- V35 Susanne Lott, Thomas Piper, Lena-Maria Mehling, Annika Spottke, Alexandra Maas, Mario Thevis, Burkhard Madea, Cornelius Hess, Bonn, Köln
Measurement of exogenous gamma-hydroxybutyric acid (GHB) in urine using isotopic ratio mass spectrometry (IRMS)
- V36 Andreas T. Roemmelt, Andrea E. Steuer, Thomas Kraemer, Zürich (Schweiz)
Demultiplexing, deconvolution or variable Q1 windows? Best approach to enhance specificity of SWATH generated MS2 spectra
- V37 Jennifer Schürenkamp, Angela Gasse, Heidi Pfeiffer, Helga Köhler, Münster
Difficulties arising from new blood collection tubes for ethanol determination
- V38 Golo M. J. Meyer, Jochen Beyer, St. Gallen (Schweiz)
Fast and simple microwave assisted work-up procedure for urine analysis by GC-MS
- 12:50 Uhr** **Schlusswort zum Symposium / *Closing words***
- 13:00 Uhr** **Tagungsende / *End of the meeting***