EAPCCT
European Association of Poisons Centres and Clinical Toxicologists

XXXIII INTERNATIONAL CONGRESS
28 – 31 May 2013
Copenhagen, Denmark

Co-sponsored by the American Academy of Clinical Toxicology

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Welcome to Copenhagen

The EAPCCT Board and the members of the Scientific and Meetings Committee are delighted to welcome you to the XXXIII International Congress of the European Association of Poisons Centres and Clinical Toxicologists in Copenhagen, and to the congress venue, the Radisson Blu Scandinavia Hotel. Great care has been taken to find a nice venue and to create a diverse and stimulating scientific programme. Thanks to the large number of interesting contributions received this year we are confident that the congress once again will meet up to your expectations and be a great success.

A pre-congress symposium in the series Continuing Education in Clinical Toxicology will be held on **Tuesday 28 May 2013**, entitled

- Extracorporeal elimination techniques in the management of the poisoned patient

The main academic programme is taking place from **Wednesday 29 May 2013 until Friday 31 May 2013**. The themes, chosen by EAPCCT members, are:

- Counterfeit and adulterated products and drugs of abuse
- Toxicity of antithrombotic agents
- Toxicity of herbal products and dietary supplements
- Skin and eye toxicology
- Usefulness and development of simple diagnostic tools in clinical toxicology
- New insights in toxicology of psychotropic drugs
- Severe adverse effects of poisoning therapies
- The toxicology of ethanol

There are also four mini-symposia:

- Poisoning outcome
- Acetaminophen poisonings
- Carbon monoxide and cyanide poisonings
- Improving poisons centre activities

With the help of the Danish Institute for Medical Simulation, DIMS, (Head: Dr Doris Østergaard), the Bispebjerg University Hospital (Medical Director: Dr Ane Friis Bendix), and the huge contribution of Dr Peter Skanning, simulation sessions in clinical toxicology are being organized each main congress day in parallel with the oral sessions: three scenarios have been prepared based on realistic poisoning presentations which are of daily concern in clinical practice, including recreational multidrug poisoning, severe cardiotoxicant poisoning, and toxic alcohol mass epidemics. We encourage you to take part in these stimulating and fun simulation sessions. Please do not forget to register for these sessions at the welcome desk, as early as is convenient for you, so you can participate actively in one or more of the sessions.

The Board and the Scientific Committee would particularly like to thank Drs Doris Østergaard, Ane Friis Bendix, and Peter Skanning, for their wonderful help in making these simulation sessions possible this year.

Also new for this year is a round table discussion on education and training in clinical toxicology. You will also find familiar, popular sessions: the presentation and discussion of selected posters and the session featuring a selection of the best papers, this time from 2012. As usual, abstracts have been published in the journal *Clinical Toxicology* in time for the Congress.
There will be three plenary lectures:

- **Dr Doris Østergaard (Denmark) on What simulation can bring to improve education in clinical toxicology (Wednesday 29 May, 08.30).** An introduction to the simulation sessions.

- **Dr Herman Autrup (Denmark) on Safety of engineered nanomaterials (Wednesday 29 May, 10.30)**

- **Major Richard Blanch (UK) on Toxicological eye injuries: Physiopathology and management (Thursday 30 May, 09.00)**

The **Louis Roche lecture** will be given by **Dr Hugo Kupferschmidt on Poisons Centres and the provision of antidotes, with a special focus on their pre-hospital use (Wednesday 29 May 13.45).**

The **Young Investigator Award** session will take place in the morning of Friday 31 May. Short-listed candidates will present their research and the prize will be awarded on the basis of the quality of the research and presentation. This will be run without a parallel session because of its popularity and importance.

We are grateful to Informa Healthcare for once again sponsoring two awards for **Best case report** and **Best scientific presentation.** Presentations shortlisted for these are marked with asterisk (*) in the programme. Awards will be announced at the Congress Dinner on Friday 31 May.

Continuing education credits for physicians and pharmacists are awarded by the American Academy of Clinical Toxicology to those who have applied and paid the appropriate registration.

**Copenhagen**

Copenhagen is the vibrant and historic capital of Denmark situated on the islands of Zealand and Amager, and the metropolitan area has a population of almost 2 million. The city has attractions and sights to suit every taste and interest – and most of them are within walking distance. With a history that dates back to 1043 the city is full of important landmarks, significant buildings and interesting sights. The more than 100 year old Tivoli amusement park, the statue of The Little Mermaid, and the freetown of Christiania are the top three attractions but it is also well worth visiting the Amalienborg Palace – home to the royal family, experiencing a guided canal tour of the harbour and walking down the shopping street Stroget. The art collection, the Royal Opera, the Glyptotek, the National Museum, and the National Museum of Art are all attractions of international caliber and absolutely worth visiting. One of the central city gems is the little picturesque Rosenborg Castle with its spectacular exhibition of the Crown Jewels and which is surrounded by the elegant Kings Garden. Public transport infrastructure is excellent, and all the major tourist and night-time attractions of the city are within easy travelling distance.

The XXXIII International Congress in Copenhagen offers an outstanding academic programme in an exciting environment and we hope you find it enjoyable, educational and stimulating.
Organised by the following Committees:

**EAPCCT Scientific and Meetings Committee**

Bruno Mégarbane (Chairman)  Bob Hoffman  Daniela Pelclová
Peter Hultén (Secretary)  Paul Dargan  Horst Thiermann
Alison Good (Abstract Editor)  Herbert Desel  Simon Thomas
Régis Bédry  Ana Ferrer-Dufol  Irma de Vries
Sally Bradberry  Kalle Hoppu  Suzanne White
Alexander Campbell  Knut Erik Hovda  Martin Wilks
Martin Caravati  Hugo Kupferschmidt

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Peter Hultén, General Secretary  Barbara Groszek  Martin Wilks
Hugo Kupferschmidt, Interim-Treasurer  Luc de Haro

**The EAPCCT also gratefully acknowledges the following:**

For EAPCCT website support:
Hugo Kupferschmidt (Webmaster)
Lloyd Fernando (Website Technician)

For their assistance reviewing abstract submissions: the members of the Scientific Committee, Board and the following individuals:

Alfred Aleguas  Maren Hermanns-Clausen  Fabrizio Sesana
Erik Andrew  Jonas Hőjer  Curtis Snook
John Archer  Christopher Holstege  Uwe Stedtler
Salomé Ballesteros  Dag Jacobsen  Wilfried Steffens
Nick Bateman  Leda Kovatsi  Janusz Szajewski
Jeffrey Brent  Anna Krakowiak  Joanna Tempowski
Miran Brvar  Ed Krenzelok  Ruben Thanacoody
Simon Clarke  Willie Laing  Joe Tracey
Vincent Danel  Carlo Locatelli  Gert Versteegen
Andrew Dawson  Davide Lonati  Richard Wang
Alison Dines  Jan Meulenbelt  David Wood
Edel Duggan  Viorela Nîtescu  Mark Zammit
Michael Eddleston  Mark Personne  Thomas Zilker
Florian Eyer  Fátima Ramón  Roberto Zoppellari
Norbert Felgenhauer  Andreas Schaper
Philippe Hantson  Donna Seger

For outstanding skill and enormous help with Congress administration: Ms Lisa Breitner

For valuable assistance in respect of continuing medical education: Bryan Hayes, Kirk Cumpston, Leigh de la Torre, Karen Simone, Matthew D Szajnkrycer
Congress supporters and exhibitors

The EAPCCT gratefully acknowledges support from the following organisations:

Main Sponsors and exhibitors

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Individual donors
Thanks to individual donors who have generously provided funds in support of the attendance of other delegates, from both within Europe and from other countries.
1 Detailed Scientific Programme
EXTRACORPOREAL ELIMINATION TECHNIQUES IN THE MANAGEMENT OF THE POISONED PATIENT

Session chair: Paul Dargan, Sophie Gosselin

09.00 Keynote lecture: Toxicokinetic factors that are important in determining the effectiveness of extracorporeal elimination techniques

Thomas D Nolin
Department of Pharmacy and Therapeutics, University of Pittsburgh School of Pharmacy, Pittsburgh, USA

At the end of this session the audience should be able to:
• discuss the basic pharmacokinetic/toxicokinetic determinants of extracorporeal removal of toxins
• list three important properties of toxins that influence removal by renal replacement therapies
• describe three extracorporeal renal replacement therapy-specific properties that influence toxin removal
• explain the primary limitations of using pharmacokinetic parameters derived from therapeutic dosing to predict extracorporeal removal during acute poisoning

09.30 Keynote lecture: Methods for assessing the impact of extracorporeal elimination techniques in the poisoned patient

Darren M Roberts
Renal Medicine, Addenbrooke’s Hospital, Cambridge, UK

At the end of this session the audience should be able to:
• discuss the range of methods that may be used to quantify the impact of extracorporeal techniques on the elimination of a poison
• interpret the extracorporeal elimination techniques, and understand its strengths and limitations
• determine an acceptable criteria for grading the usefulness of an enhanced elimination technique
• design a sampling regimen that will allow for the effect of an extracorporeal enhanced elimination

10.00 Keynote lecture: Extracorporeal elimination techniques - an overview of the methods available

Brian S Decker
Division of Nephrology, Indiana University School of Medicine, Indianapolis, USA

At the end of this session the audience should be able to:
• describe the current extracorporeal elimination techniques used in the treatment of poisonings
• list the key differences between the various extracorporeal elimination techniques used in treating poisonings
• describe the emerging extracorporeal elimination techniques used in the treatment of poisonings

10.30 – 11.00 Coffee
Tuesday 28 May 2013

Session chair: Kurt Anseeuw, Knut Erik Hovda

11.00 Keynote lecture: Extracorporeal elimination techniques - what are the indications in pharmaceutical poisoning?  

Marc Ghannoum  
Specialized Medicine, University of Montreal, Montreal, Canada

At the end of this session the audience should be able to:
- discuss the use of extracorporeal treatments for poisoning with anti-epileptics and barbiturates
- discuss the use of extracorporeal treatments for tricyclic antidepressants and theophylline
- present EXTRIP recommendations for these xenobiotics

11.30 Keynote lecture: Extracorporeal elimination techniques - what are the indications in toxic alcohol poisoning?  

Christopher Yates  
Emergency Department and Clinical Toxicology Unit, Hospital Universitari Son Espases, Palma de Mallorca, Spain

At the end of this session the audience should be able to:
- discuss the basic pathophysiology of toxic alcohol poisoning and its general management
- identify the role of extracorporeal elimination techniques in the treatment of patients suffering from toxic alcohol poisoning
- list the issues involved in the decision to initiate extracorporeal elimination in toxic alcohol poisoned patients including the rationale behind "traditional" and newer recommendations

12.00 Keynote lecture: Extracorporeal elimination techniques - what are the indications in pesticide/herbicide poisoning?  

Ashish Bhalla  
Post Graduate Institute of Medical Education and Research, Chandigarh, India

At the end of this session the audience should be able to:
- describe the basic pathophysiology of pesticide poisoning
- discuss the rationale for extracorporeal elimination in pesticide poisoning
- discuss the scientific evidence available for the use of extracorporeal elimination in pesticide poisoning
- list the different modalities of extracorporeal elimination available and discuss the utility of these techniques
- discuss the recommendations of the EXTRIP workgroup regarding extracorporeal elimination in pesticide poisoning

12.30 – 14.00 Lunch
Interactive case studies

Session chair: Jenny Lu, Thomas Nolin

14.00 Case 1: Lithium poisoning
Sophie Gosselin
Division of Medical Toxicology, Emergency Department, McGill University Health Centre, Montreal, Canada

14.45 Case 2: Salicylate poisoning
Florian Eyer
Toxikologische Abteilung, Klinikum rechts der Isar, Technische Universität Munich, Germany

15.30 – 16.00 Coffee

Session chair: Marc Ghannoum, Chris Yates

16.00 Case 3: Metformin poisoning
Timothy Wiegand
Department of Emergency Medicine, University of Rochester Medical Center, Rochester, USA

At the end of this session the audience should be able to:
• compare the use of haemodialysis and haemodiafiltration in lithium poisoning
• contrast the use of multiple dose activated charcoal, urinary alkalinisation and haemodialysis in salicylate poisoning
• explore the use of extracorporeal elimination in metformin poisoning

16.45 Pro/Con debate
Is continuous renal replacement therapy an acceptable alternative to haemodialysis for the poisoned patient requiring extracorporeal elimination?

Pro: Bruno Mégarbane
Department of Critical Care Medicine, Lariboisière Hospital, Paris-Diderot University, Paris, France

Con: Robert MacTier
Renal Unit, Glasgow Royal Infirmary, Glasgow, Scotland, UK

At the end of this session the audience should be able to:
• describe the use of continuous renal replacement therapy (CRRT) in the poisoned patient
• compare CRRT and haemodialysis in poisoned patients requiring extracorporeal elimination

17.45 Close
### Session chair: Fridtjof Heyerdahl, Peter Skanning

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<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tr>
<td>08.30</td>
<td><strong>PLENARY LECTURE</strong></td>
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<td>08.50</td>
<td><strong>What simulation can bring to improve education in clinical toxicology</strong></td>
<td>Doris Østergaard&lt;br&gt;&lt;i&gt;Danish Institute for Medical Simulation, Copenhagen, Denmark&lt;/i&gt;</td>
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<td>At the end of this session the audience should be able to:</td>
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<td>• describe why simulation based training is needed and how simulation based training could be done</td>
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<td>• discuss the importance of team work for effective communication, situation awareness and decision making</td>
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<td>• specify how to write learning objectives and scenarios for training the medical expert role in clinical toxicology</td>
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<td>• compose learning objectives and scenarios for training effective communication, situation awareness and decision making</td>
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<td>08.50</td>
<td><strong>Introduction to the organization of the simulation sessions</strong></td>
<td>Peter Skanning&lt;br&gt;&lt;i&gt;Danish Poisons Information Centre, Bispebjerg University Hospital, Copenhagen, Denmark&lt;/i&gt;</td>
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<td>09.00</td>
<td><strong>Mini-symposium: Poisoning outcome</strong></td>
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<td><strong>Keynote lecture: Methanol outbreak in the Czech Republic in 2012: Epidemiology and clinical features (1)</strong></td>
<td>Daniela Pelclová¹, Sergej Zakharov¹, Tomas Navratil¹, Knut Erik Hovda²&lt;br&gt;&lt;i&gt;¹Toxicological Information Centre, 1st Medical Faculty, Charles University in Prague, Czech Republic; ²The Norwegian Center for NBC Medicine, Department of Acute Medicine, Oslo University Hospital, Norway&lt;/i&gt;</td>
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<td>At the end of this session the audience should be able to:</td>
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<td>• describe the epidemiology of methanol poisoning that appeared unexpectedly in the Czech Republic in 2012</td>
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<td>• list the clinical symptoms and findings of patients with methanol poisoning in the Czech Republic in 2012</td>
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<td>• describe the sequelae of severe methanol poisoning, treated by hemodialysis and/or antidotes ethanol and fomepizole</td>
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<td>09.15</td>
<td><strong>A long term epidemic of methanol poisoning deaths in Finland (2)</strong></td>
<td>Terhi Lampinen¹, Kalle Hoppu¹, Ilkka Ojanperä²&lt;br&gt;&lt;i&gt;¹Finnish Poison Information Centre, Helsinki, Finland; ²Hjelt Institute, Department of Forensic Medicine, University of Helsinki, Finland&lt;/i&gt;</td>
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<td>09.30</td>
<td><strong>Description of 3924 courses of chelation with 2,3-dimercaptosuccinic acid in children with severe lead poisoning in Zamfara, northern Nigeria (3)</strong></td>
<td>Natalie Thurtle¹, Jane Greig¹, Lauren Cooney¹, Yona Amitai², Mary Jean Brown³, Muhammad K Janyau⁴, Michael J Kosnett⁵, Krystel Moussally⁶, Lauren Shanks¹, Paul I Dargan⁶&lt;br&gt;&lt;i&gt;¹Médecins Sans Frontières, Holland, UK and Nigeria; ²Department of Maternal, Child and Adolescent Health, Ministry of Health, Jerusalem, Israel; ³Centers for Disease Control and Prevention, Atlanta, USA; ⁴Zamfara State Government, Nigeria; ⁵Division of Clinical Pharmacology and Toxicology, University of Colorado Health Sciences Center, Denver, USA; ⁶Clinical Toxicology, Guy’s and St Thomas’ NHS Foundation Trust, London, UK&lt;/i&gt;</td>
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<td>09.45</td>
<td><strong>Long-term follow-up of three cohorts of self-poisoning (4)</strong></td>
<td>Fridtjof Heyerdahl, Mari A Bjornaaas, Cathrine Lund, Dag Jacobsen, Øivind Ekeberg&lt;br&gt;&lt;i&gt;Department of Acute Medicine, Oslo University Hospital, Oslo, Norway&lt;/i&gt;</td>
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<td>10.00</td>
<td><strong>Coffee and Posters (17-57; 59-95)</strong></td>
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*Short-listed for Informa Best Scientific Presentation*
PLENARY LECTURE (Finland/Norway)
What simulation can bring to improve education in clinical toxicology
and
Introduction to the organization of the simulation sessions

Symposium: Counterfeit and adulterated products and drugs of abuse

Session chair: Alvin Bronstein, Andreas Stürer

09.00 Keynote lecture: Counterfeit drugs: A growing global threat (general overview with epidemiology and risks for poisoning)
Graham Jackson
Consultant Cardiologist, London Bridge Hospital, London, UK

At the end of this session the audience should be able to:
• discuss the worldwide size of the counterfeit drug problem
• recognise that counterfeit drugs have infiltrated legitimate pharmacies
• describe how lives are being jeopardised or lost due to fake and/or toxic preparations
• recognise the importance of the need for a concerted international collaboration to criminalise and severely punish counterfeiters

09.20 Keynote lecture: Analysis of products/medicines purchased through the Internet
Sandra Sinno-Tellier
Toxicosurveillance Unit, French Institute for Public Health Surveillance (InVS), Saint-Maurice, France

At the end of this session the audience should be able to:
• describe how French Health authorities, authorities responsible for Consumer Policy, and Poison Control and Toxicovigilance centers collect poisoning cases related to products purchased through the Internet and manage health threats when relevant
• explain why analysis of products purchased through the Internet is essential to assess causality regarding poisoning cases
• discuss why investigation of poisoning cases related to products bought through the Internet is useful to better characterize profiles of consumers

09.40 Keynote lecture: Prescription drugs purchased through the internet: Who are the users?
Richard C Dart
Rocky Mountain Poison and Drug Center, Denver Health & Hospital Authority, Denver, USA

At the end of this session the audience should be able to:
• describe the extent of global prescription drug abuse
• relate how the Internet is used as a source of prescription drugs
• describe the populations of “end users” of prescription drugs that are obtained through the Internet without a prescription

10.00 – 10.30 Coffee and Posters (17-57; 59-95)
Wednesday 29 May 2013

Session chair: Martin Wilks

10.30 – PLENARY LECTURE  Safety of engineered nanomaterials (5)  11.15

Herman Autrup

Occupational and Environmental Medicine, University of Aarhus, Denmark

At the end of this session the audience should be able to:
• describe the general principle of nanomaterial regulation
• outline the general mechanism of the toxicity of nanoparticles
• discuss the toxicological mechanism of silver nanoparticles

Mini-symposium: Acetaminophen poisonings

Session chair: Vincent Danel, Bob Hoffman

11.20  Keynote lecture: A randomised controlled trial of ondansetron anti-emetic prophylaxis and a new acetylcysteine regimen in paracetamol poisoning. The Scottish and Newcastle Anti-emetic Pre-treatment for Paracetamol Poisoning Study

D Nicholas Bateman, HK Ruben Thanacoody, Judy Coyle, Simon HL Thomas, Jamie Cooper, David J Webb, Michael Eddleston, James W Dear, Alasdair Gray

1 National Poisons Information Service (Edinburgh Unit), Royal Infirmary, Edinburgh, UK; 2 National Poisons Information Service (Newcastle Unit), Regional Drug and Therapeutics Centre, Newcastle-upon-Tyne, UK; 3 Dept of Emergency Medicine, Royal Infirmary, Edinburgh, UK; 4 Dept of Emergency Medicine, Aberdeen Royal Infirmary, Aberdeen, UK; 5 Dept of Clinical Pharmacology, University of Edinburgh, Edinburgh, UK

At the end of this session the audience should be able to:
• describe the epidemiology of paracetamol poisoning in the UK
• identify the adverse effects of acetylcysteine when managing paracetamol overdose
• give examples of the challenges in design and conduct of a controlled randomized clinical trial in paracetamol poisoning
• outline the pharmacokinetics of acetylcysteine in man and the implications for IV dosing regimens
• describe the primary and secondary objectives within a clinical trial methodology, and evaluate whether ondansetron is effective in preventing acetylcysteine-induced nausea and vomiting

11.45  *Mechanistic biomarkers provide early and sensitive detection of paracetamol-induced acute liver injury at first presentation to hospital (6)


1 NPIS Edinburgh, Royal Infirmary of Edinburgh, UK; 2 MRC Centre for Drug Safety Science, University of Liverpool, UK; 3 NPIS Newcastle, University of Newcastle, Newcastle-upon-Tyne, UK; 4 Novartis Institutes for Biomedical Research, Basel, Switzerland

12.00  Pro/Con debate

Acetylcysteine should be administered to all patients with acute paracetamol overdose?

**Pro:** Kim Dalhoff, Department of Clinical Pharmacology, Bispebjerg University Hospital, Copenhagen, Denmark

**Con:** Simon Thomas, National Poisons Information Service (Newcastle Unit), Regional Drug and Therapeutics Centre, Newcastle-upon-Tyne, UK

At the end of this session the audience should be able to:
• describe the use of acetylcysteine in paracetamol overdose in different parts of the world
• discuss recent changes in the use of acetylcysteine in paracetamol overdose in the UK
• evaluate whether acetylcysteine should be administered to all paracetamol poisoned patients

12.45 – 13.45 Lunch and Posters (17-57; 59-95)

*Short-listed for Informa Best Scientific Presentation*
10.30 – PLENARY LECTURE (Finland/Norway)
11.15 Safety of engineered nanomaterials

Symposium: Counterfeit and adulterated products and drugs of abuse
(continued)

Session chair: Fabio Bucaretchi, David Wood

11.20 Keynote lecture: Adulterated food supplements, health risks and poisons information center data (7)
Antoinette JHP van Riel¹, Bastiaan J Venhuis², Dries de Kaste², Jan Meulenbelt¹, Irma de Vries¹
¹National Poisons Information Center (DPIC), University Medical Center Utrecht; ²National Institute for Public Health and the Environment, Bilthoven, The Netherlands

At the end of this session the audience should be able to:
• discuss why people use illegal food supplements
• outline marketing strategies used to sell illegal food supplements
• list categories of illegal food supplements with high health risks
• describe the known health risks and discuss what is still unclear
• explore what PCs can contribute to prevent poisoning by adulterated food supplements

11.40 Methoxetamine: A case series of analytically confirmed cases (10)
Lovisa Östberg¹, Peter Hultén¹, Yasir Al-Saffar²
¹Swedish Poisons Information Centre, Stockholm; ²Department of Laboratory Medicine, Karolinska Institute, Karolinska University Laboratory, Stockholm, Sweden

11.55 The impact of an MDPV-epidemic on a medium sized Swedish city (9)
Erik Lindeman¹, Peter Hultén¹, Bengt Carlvik¹, Stefan Ström², Mats Enlund², Yasir Al-Saffar³, Anders Helander³
¹Swedish Poisons Information Centre, Stockholm; ²Department of Anaesthesiology and Intensive Care and Centre for Clinical Research, Västmanland Hospital, Västerås; ³Department of Laboratory Medicine, Karolinska University Laboratory, Stockholm, Sweden

12.10 *Trends in intoxications of novel psychoactive substances in Sweden during 2012 (8)
Matilda Bäckberg¹, Jenny Westerbergh¹, Yasir Al-Saffar², Erik Lindeman¹, Anders Helander²
¹Swedish Poisons Information Centre, Stockholm; ²Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden

12.25 *Gender and strain contributions to the variability of buprenorphine-related respiratory toxicity in mice (58)
Hisham Alhaddad¹, Salvatore Cisternino¹, Bruno Saubaméa¹, Bruno Mégarbane²
¹INSERM U705, Paris-Descartes-University, Paris, France; ²Department of Critical Care Medicine, Lariboisière Hospital, Paris-Diderot University, Paris, France

12.40 General discussion

*Short-listed for Informa Best Scientific Presentation
Symposium: Toxicity of antithrombotic agents

Session chair: Jan Meulenbelt, Simon Thomas

14.45 Keynote lecture: Fundamentals of coagulation and new insights into the pharmacology and pharmacogenetics of anticoagulant therapy (11)  
Angela Thomas
Department of Haematology, Royal Hospital for Sick Children, Edinburgh, UK

At the end of this session the audience should be able to:
- describe how the coagulation system works in vivo
- contrast how in vivo coagulation relates to in vitro testing
- list the mechanisms of action of different anticoagulation classes
- discuss the influence of personal and environmental factors on anticoagulation therapy

15.15 Keynote lecture: Pharmacology and clinical applications of new oral anticoagulants  
Gregory YH Lip
University of Birmingham Centre for Cardiovascular Sciences, City Hospital, Birmingham, UK

At the end of this session the audience should be able to:
- outline the clinical pharmacology of the oral direct thrombin inhibitors and oral factor Xa inhibitors
- outline the clinical data for the oral direct thrombin inhibitors and oral factor Xa inhibitors, when used for stroke prevention in atrial fibrillation
- discuss the clinical data for oral direct thrombin inhibitors and oral factor Xa inhibitors, when used for other indications e.g. venous thromboembolism and acute coronary syndrome
- describe how oral direct thrombin inhibitors and oral factor Xa inhibitors have featured in guidelines for stroke prevention in atrial fibrillation
Symposium: Toxicity of herbal products and dietary supplements

Session chair: Eduardo de Capitani, Luc de Haro

14.45  Keynote lecture: Alternative medicine and toxicology: Are the risks well known? (14)

Carlo A Locatelli, Sarah Vecchio, Valeria M Petrolini, Andrea Giampreti, Davide Lonati, Luigi Manzo
Pavia Poison Control Centre and National Toxicology Information Centre,
IRCCS Maugeri Foundation and University of Pavia, Italy

At the end of this session the audience should be able to:
- describe “complementary and alternative medicine”
- list which complementary medicines could result in a toxicological risk
- describe the toxicological risks associated with the use of complementary medicines
- discuss toxicological problems related to the purchase of these products from illegal trades

15.05  Keynote lecture: "Herbal legal highs" purchased on the Internet

Peter Hultén
Swedish Poisons Information Centre, Stockholm, Sweden

At the end of this session the audience should be able to:
- list herbal hallucinogenic drugs available on the Internet
- describe the Spice phenomenon and the complexity of synthetic cannabinoid receptor agonists
- discuss the new area of “herbal legal highs”

15.25  Keynote lecture: Toxicity of energy drinks: Myth or reality?

Christopher OH Hoyte
Medical Toxicology and Emergency Service, University of Colorado School of Medicine,
Aurora, USA

At the end of this session the audience should be able to:
- give examples of the individual ingredients found in energy drinks
- highlight potential adverse effects based on the ingredients
- describe the actual adverse effects observed

15.45 – 16.15 Coffee and Posters (17-57; 59-95)
Symposium: Toxicity of antithrombotic agents (continued)

Session chair: Philippe Hantson, Donna Seger

16.15  **Keynote lecture: Management of bleeding associated with vitamin K antagonists (12)**  
**Betty C Chen**  
New York City Poison Control Center, New York University School of Medicine, Bellevue Hospital Center, New York, USA

At the end of this session the audience should be able to:
- review the British Committee for Standards in Haematology and American College of Chest Physicians guidelines for the management of bleeding associated with the vitamin K antagonists
- describe the advantages and disadvantages of the factor replacement options
- discuss vitamin K dosing and administration based on clinical scenario and specific agents

16.35  **Keynote lecture: Managing bleeding associated with newer anticoagulants**  
**Marie Louise Schougaard Christiansen**  
Amager Hospital, Copenhagen, Denmark

At the end of this session the audience should be able to:
- compare and contrast the mechanism of action of newer anticoagulants with that of traditional anticoagulants
- describe which pharmacokinetic and pharmacodynamic properties and which interactions of the newer anticoagulants might contribute to their toxicity
- outline the clinical nature of the challenge associated with bleeding related to therapeutic use of the newer anticoagulants
- outline the clinical nature of the challenge associated with bleeding related to toxic exposure to the newer anticoagulants
- describe a rational stepwise approach to the management of bleeding associated with the newer anticoagulants

16.55  **Keynote lecture: Non-haemorrhagic complications of anticoagulation (13)**  
**Robert S Hoffman**  
New York City Poison Center, New York, USA

At the end of this session the audience should be able to:
- discuss the mechanism of warfarin skin necrosis and the purple toe syndrome
- describe the presentation and treatment of heparin induced thrombocytopenia and thrombosis
- explain the manifestations of thrombotic thrombocytopenic purpura from antiplatelet agents

17.15  **Keynote lecture: Managing bleeding from antiplatelet drugs**  
**Ludovic Drouet**  
Department of Angiohematology, Hospital Lariboisière, Paris, France

At the end of this session the audience should be able to:
- explain how platelets are the main actors of primary hemostasis
- outline how the pharmacology of antiplatelet drugs helps in understanding the management of bleeding from these drugs
- discuss whether platelet transfusion can efficiently compensate for platelet inhibition induced by antiplatelet agents

17.35  General discussion

17.45 Close
Symposium: Toxicity of herbal products and dietary supplements
(continued)

Session chair: Ashish Bhalla, Carlo Locatelli

16.15  Keynote lecture: Toxicity of traditional Chinese medicines (15)  Jou-Fang Deng

*The National Poison Center, Taipei Veterans General Hospital, Taipei, Taiwan*

At the end of this session the audience should be able to:
- describe the dispensing formats practiced in Traditional Chinese medicine
- identify the potential toxicity incurred with the use of Traditional Chinese medicine
- list the two major potential risk factors which may result in a toxicity associated with the consuming of Traditional Chinese medicines
- describe the difficulty in handling poisonings associated with the consumption of Traditional Chinese medicines

16.35  Keynote lecture: Dangers of traditional cosmetics from Mediterranean countries  Rachida Soulaymani Bencheikh

*Centre Anti Poison et de Pharmacovigilance du Maroc, Rabat, Morocco*

At the end of this session the audience should be able to:
- define and classify traditional cosmetics versus modern ones
- describe the magnitude of the problem
- outline the underlying causes of their use
- define the risk for the local and foreign populations
- describe the importance of Poison Control in the management of risks related to traditional cosmetics

16.55  Keynote lecture: Clinical toxicology of Ayurvedic medicines (16)  Ruben HK Thanacoody

*National Poisons Information Service (Newcastle), Newcastle-upon-Tyne, UK*

At the end of this session the audience should be able to:
- recognise Ayurveda as a complementary form of healthcare
- describe the toxicity associated with use of Ayurvedic medicines
- recognise Ayurvedic medicines as a potential cause of heavy metal poisoning

17.15  Keynote lecture: Plant food supplements: Data from the European PlantLIBRA project  Hugo Kupferschmidt

*Swiss Toxicological Information Centre, Associated Institute of the Zurich University, Zurich, Switzerland*

At the end of this session the audience should be able to:
- discuss the aims of the PlantLIBRA project, particularly the investigation of adverse reactions due to plant food supplements
- list the plant food supplements and their botanical ingredients, which were reported by the European Poisons Centres to the PlantLIBRA group in a retrospective study of adverse effects due to plant food supplements
- outline the role Poisons Centres and clinical toxicologists have in the identification and communication of adverse reactions due to plant food supplements

17.35  General discussion

17.45 Close
Symposium: Skin and eye toxicology

Session chair: Andrew Dawson, Daniela Pelclová

<table>
<thead>
<tr>
<th>09.00 – 09.45</th>
<th>PLENARY LECTURE</th>
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<tbody>
<tr>
<td></td>
<td>Toxicological eye injuries: Physiopathology and management (96)</td>
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<tr>
<td></td>
<td>Richard J Blanch, Robert AH Scott</td>
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<tr>
<td></td>
<td>Ophthalmology, Royal Centre for Defence Medicine, Birmingham, UK</td>
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</tbody>
</table>

At the end of this session the audience should be able to:
- discuss the high cost of ocular injury and its morbidity
- describe ocular burns and differentiate those caused by acids and alkalis
- discuss injuries caused by intraocular foreign bodies particularly if there is a history of high speed tool use or hammering
- explain the different groups of ocular war injuries - penetrating injuries, blunt injuries and ruptured globes
- outline the stages of recovery from an eye injury and discuss visual prognosis

<table>
<thead>
<tr>
<th>09.50</th>
<th>Keynote lecture: In vitro skin corrosion and irritation: Recent advances in the European and international regulatory framework</th>
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<tr>
<td></td>
<td>Chantra Eskes</td>
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<td></td>
<td>SeCAM Services &amp; Consultation on Alternative Methods, Agno, Switzerland</td>
</tr>
</tbody>
</table>

At the end of this session the audience should be able to:
- outline the latest European regulatory requirements regarding in vitro skin corrosion and irritation testing
- select appropriate in vitro skin corrosion and irritation test methods
- contrast the usefulness and limitations of in vitro skin corrosion and irritation regulatory test methods

<table>
<thead>
<tr>
<th>10.10</th>
<th>Keynote lecture: Toxicity of cosmetic products</th>
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<tr>
<td></td>
<td>Herbert Desel</td>
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<tr>
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<td>CPNP Frame Formulation WG, GIZ-Nord Poisons Centre, Göttingen, Germany</td>
</tr>
</tbody>
</table>

At the end of this session the audience should be able to:
- list cosmetic products with high poisoning risks
- explain the differences in product labelling in the EU between hazardous cosmetic products and other hazardous mixtures
- describe poisoning risks originating from exposure to cosmetics used in the intended way
- describe typical poisoning risks that are caused by the non-intended use of cosmetic products
- explain the rules for product notification in the European Union’s (EU) Cosmetic Products Notification Portal (CPNP) if dangerous substances are involved

| 10.30 – 11.00 | Coffee and Posters (109-186) |
Mini-symposium: Carbon monoxide and cyanide poisonings

Session chair: Michael Eddleston, Florian Eyer

09.50  *Incidence of carbon monoxide calls to a US poison center following Hurricane Sandy (99)

Lauren K Shawn\textsuperscript{1,2}, Betty C Chen\textsuperscript{1,2}, Nicholas Connors\textsuperscript{1,2}, Lewis S Nelson\textsuperscript{1,2}, Robert S Hoffman\textsuperscript{1,2}, Silas W Smith\textsuperscript{1,2}

\textsuperscript{1}New York City Poison Control Center, New York; \textsuperscript{2}New York University School of Medicine, New York, USA

10.05  *The effectiveness of hyperbaric oxygen in carbon monoxide poisoning is time dependent: \textit{in vitro} and \textit{in vivo} studies (100)

Damijana M Juric\textsuperscript{1}, Zarko Finderle\textsuperscript{2}, Bostjan Luzar\textsuperscript{3}, Dusan Suput\textsuperscript{1}, Matjaz Bune\textsuperscript{1}, Miran Brvar\textsuperscript{1,3}

\textsuperscript{1}Institute of Pharmacology and Experimental Toxicology, Faculty of Medicine; \textsuperscript{2}Institute of Physiology, Faculty of Medicine; \textsuperscript{3}Institute of Pathology, Faculty of Medicine; \textsuperscript{4}Institute of Pathological Physiology, Faculty of Medicine; \textsuperscript{5}Poison Control Centre, Division of Internal Medicine, University Medical Centre, Ljubljana, Slovenia

10.20  Keynote lecture: Cyanide antidotes - methodology, assessment and results of the ECETOC taskforce

Wilfried Steffens\textsuperscript{1}, Frédéric Baud\textsuperscript{2}, Thomas Zilker\textsuperscript{3}, Heidi Hrabetz\textsuperscript{3}, Henk Vrijhof\textsuperscript{4}

\textsuperscript{1}Global QHSE, Bayer CropScience AG, Monheim, Germany; \textsuperscript{2}Réanimation Médicale et Toxicologique, Hôpital Lariboisière, Paris, France; \textsuperscript{3}Department of Toxicology, 2nd Medical Clinic, Klinikum rechts der Isar, Munich, Germany; \textsuperscript{4}ECETOC, Brussels, Belgium

At the end of this session the audience should be able to:
- explain the methodology of assessing sequential antidote applications using an adapted Poisoning Severity Score
- describe the different possible scenarios of cyanide poisoning
- explain aspects to be considered for cyanide antidote selection
- list the modes of action and side effects of cyanide antidotes that need to be considered for the selection in a specific poisoning situation
- select the adequate antidote or antidote combination for a specific cyanide poisoning situation

10.35 – 11.00 Coffee and Posters (109-186)
Symposium: Skin and eye toxicology (continued)

Session chair: Keith Burkhart, Herbert Desel

<table>
<thead>
<tr>
<th>11.00</th>
<th>Pro/Con debate</th>
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<tr>
<td></td>
<td>Have solutions other than water or saline any additional value for skin and eye decontamination after corrosive exposure?</td>
</tr>
<tr>
<td><strong>Pro:</strong></td>
<td>Howard Maibach, <em>Department of Dermatology, University of California, San Francisco, California, USA</em></td>
</tr>
<tr>
<td><strong>Con:</strong></td>
<td>Jeffrey Brent, <em>University of Colorado, School of Medicine, Denver, USA</em></td>
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</tbody>
</table>

At the end of this session the audience should be able to:
- describe the use of water and saline in eye and skin decontamination after corrosive exposures
- evaluate the use of other solutions in such exposures

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<thead>
<tr>
<th>11.55</th>
<th>Halogenated pyrimidines: An unusual cause for skin burns (97)</th>
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<tr>
<td></td>
<td>Wilfried Steffens, <em>Global QHSE, Bayer CropScience AG, Monheim, Germany</em></td>
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<tr>
<th>12.10</th>
<th>Keynote lecture: The use of stem cells for improved wound healing of chemical-induced skin wounds (98)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Dirk Steinritz\textsuperscript{1}, Annette Schmidt\textsuperscript{1,2}, Horst Thiermann\textsuperscript{1}</td>
</tr>
<tr>
<td></td>
<td>\textsuperscript{1}Bundeswehr Institute of Pharmacology and Toxicology, Munich; \textsuperscript{2}Department of Molecular and Cellular Sports Medicine, German Sports University, Cologne, Germany</td>
</tr>
</tbody>
</table>

At the end of this session the audience should be able to:
- describe the physiological processes during wound healing after mechanical injuries
- outline the challenges arising during treatment of chemically induced skin wounds
- differentiate the different entities of stem cells and their role in wound healing
- describe how toxic substances (e.g. alkylating chemicals) can affect wound healing with special focus on the effects of these substances on stem- and progenitor cells

| 12.30 – 14.00 Lunch and Posters (109-186) |
Symposium: Usefulness and development of simple diagnostic tools in clinical toxicology

Session chair: Ana Ferrer-Dufol, Joanna Tempowski

11.00 Keynote lecture: How can simple diagnostic tools make a difference in the developing world: A Médecins Sans Frontières perspective

Morten Rostrup
Médecins sans Frontières, Geneva, Switzerland

At the end of this session the audience should be able to:
- outline what kind of organization Médecins Sans Frontières (MSF) is
- describe examples of simple diagnostics already in use by MSF
- give examples of how simple diagnostics would also be important in toxicology

11.20 Keynote lecture: Simple lead diagnostics: An evaluation from the Zamfara lead poisoning incident

Paul I Dargan
Clinical Toxicology, Guy's and St Thomas' NHS Foundation Trust and King's Health Partners, London, UK

At the end of this session the audience should be able to:
- describe the problems with conventional lead assays (e.g. atomic absorption spectrophotometry and inductively coupled plasma mass spectrometry) in resource poor settings
- outline how near patient tests such as the Lead Care II assay can be used in the assessment of patients with lead poisoning
- describe the novel dilutional technique for Lead CareII that was developed to be able to undertake blood lead concentrations in the Zamfara incident

11.40 Keynote lecture: The qualitative paraquat test; the clinical value of a definite diagnosis

Andrew Dawson
National Poisons Register & Clinical Toxicology, Royal Prince Alfred Hospital, Sydney, Australia

At the end of this session the audience should be able to:
- describe the importance of estimating prognosis in paraquat self poisoning
- list available tools of estimation of paraquat poisoning
- describe the mechanism of toxicity of paraquat poisoning
- describe the sensitivity and specificity of the urine dithionite test
- list the limitations of the urine dithionite test

12.00 Keynote lecture: Formate analysis as a simple methanol diagnostic approach: The cost-beneficial answer for evaluating metabolic acidosis

Knut Erik Hovda
The Norwegian NBC Center, Department of Acute Medicine, Oslo University Hospital Ullevaal, Oslo, Norway

At the end of this session the audience should be able to:
- explain why methanol poisoning in general poses a diagnostic problem
- define the rationale for the formate method
- describe the simple biochemical principles for the formate method
- list two reasons why using a glucose meter would add benefit compared to the laboratory method

12.20 General discussion
Symposium: New insights in toxicology of psychotropic drugs

Session chair: Lotte Høgberg, Timothy Wiegand

14.00 Keynote lecture: Changing patterns of psychotropic drug use: Balancing efficacy and adverse effects

Roger Smyth
Department of Psychological Medicine, Royal Infirmary of Edinburgh, Edinburgh, UK

At the end of this session the audience should be able to:
- describe the main classes of psychotropic drugs used in psychiatric practice and consider the use of each drug category in individual psychiatric disorders
- discuss the recently introduced and prospective new drugs for psychiatric disorder and their potential benefits over conventional treatments
- outline the changes in psychotropic drug prescribing over the last decade
- compare the adverse effects of established psychotropics to relatively novel psychotropics and balance these adverse effects against actual and potential benefits

14.20 Keynote lecture: Prospective follow-up study on potentially toxic methylphenidate exposures (102)

Laura Hondebrink1, Saskia J Rietjens1, Nuriye Kelleci1, Gulhan Yasar1, Irma de Vries1, Jan Meulenbelt1,2

1National Poisons Information Center, University Medical Center Utrecht;
2Institute for Risk Assessment Sciences, Utrecht University, Utrecht, The Netherlands

At the end of this session the audience should be able to:
- discuss the characteristics of patients exposed to potentially toxic doses of methylphenidate
- describe the clinical symptoms and common treatment options
- evaluate the relationship between the exposure (dose of methylphenidate) and the clinical effects (dose-response)
- estimate the frequency of co-exposure(s) during exposure to potential toxic doses of methylphenidate
- contrast accidental and intentional methylphenidate exposures
Symposium: Usefulness and development of simple diagnostic tools in clinical toxicology (continued)

Session chair: Alison Jones, John Thompson

14.00 Keynote lecture: Amatoxin analysis and its clinical relevance

Thomas Zilker
Klinische Toxikologie, Klinikum rechts der Isar, Munich, Germany

At the end of this session the audience should be able to:

• discuss the usefulness of a urine test for amatoxins in Amanita poisoning and the problem of false negative tests
• discuss the correlation of concentration of amatoxin with severity of poisoning
• contrast the usefulness of urine and blood tests in diagnosis of Amanita poisoning
• describe the use of determination of amatoxins in therapy and the relevance of liver enzymes

14.20 Keynote lecture: A ready to use kit for therapeutic drug monitoring in organophosphorus compound poisoned patients (105)

Horst Thiermann, Timo Wille, Franz Worek
Bundeswehr Institute of Pharmacology and Toxicology, Munich, Germany

At the end of this session the audience should be able to:

• describe the reactivation of organophosphorus compound (OP) inhibited acetylcholinesterase including the fact that it is dependent on the properties of the OP, the oximes and the species
• discuss the fact that effective reactivation can be assumed when activity of the inhibited erythrocyte acetylcholinesterase increases substantially after oxime administration
• describe how reactivation can be prevented by aging, a high poison load and by properties of the OP
• summarise how an on-site laboratory test system is available which allows prompt determination of erythrocyte acetylcholinesterase, butyrylcholinesterase, reactivatability of OP inhibited actetylcholinesterase and presence of inhibitory material (equivalent of poison)
• describe how the use of this laboratory test system allows on-line monitoring of therapeutic effectiveness of oximes thereby enabling optimized patient oriented oxime treatment
Symposium: New insights in toxicology of psychotropic drugs (continued)

Session chair: Lotte Høgberg, Timothy Wiegand

14.40 Keynote lecture: The toxicology of mood stabilising drugs

Martin Laliberté

Department of Emergency Medicine, McGill University Health Centre, Montreal, Canada

At the end of this session the audience should be able to:

• discuss the importance of pharmacological agents in the treatment of bipolar disorder
• describe the clinical toxicity of pharmacological agents used in the treatment of bipolar disorder
• assess the risk associated with acute and chronic poisoning with pharmacological agents used in the treatment of bipolar disorder
• create an effective management strategy for patients poisoned with pharmacological agents used in the treatment of bipolar disorder

15.00 Keynote lecture: Just how poisonous are SSRIs and SNRIs?

Andrew Dawson

National Poisons Register & Clinical Toxicology, Royal Prince Alfred Hospital, Sydney, Australia

At the end of this session the audience should be able to:

• recognise clinical situations that produce high risk of serotonin toxicity
• distinguish between the clinical syndromes of SSRI and SNRI toxicity
• identify compounds with higher relative toxicity
• conduct a risk assessment for cardiotoxicity

15.20 General discussion

15.30 – 16.00 Coffee and Posters (109-186)
Symposium: Usefulness and development of simple diagnostic tools in clinical toxicology (continued)

Session chair: Alison Jones, John Thompson

14.40 Keynote lecture: Illicit drug screening at the bedside in the emergency setting
Laurence Labat
Laboratoire Pharmacologie et Toxicologie, Groupe Cochin, Assistance Publique – Hôpitaux de Paris, France

At the end of this session the audience should be able to:

- report on on-site analysis drug testing for illicit or licit drugs or classes of drugs in urine samples
- recognise discrepant results for some drugs (cannabinoids, cocaine...) - rapid tests versus both immunoassays and chromatography mass spectrometry methods
- evaluate new drugs (synthetic cannabinoids, bath salts) not found with immunologic screening
- describe when rapid tests may be recommended
- outline the limitations of assays used at the bedside and the use of confirmatory laboratory analysis to identify the different analytes from a drug family e.g. for opiates

15.00 Keynote lecture: Analysis of carbon monoxide hazards in deployment location
Marco P Pfeuffer
Fire Department Wiesbaden, Germany

At the end of this session the audience should be able to:

- describe clinical symptoms caused by carbon monoxide (CO) exposure at different ambient air concentration levels and exposure times
- describe appropriate preclinical and clinical medical treatment measures for CO poisonings
- state and explain typical CO occupational threshold limit values
- recognize the typical sources/scenarios of hidden CO release at deployment locations for emergency medical service personnel
- state and evaluate CO level alarm limits for emergency medical service personnel at deployment locations

15.20 General discussion

15.30 – 16.00 Coffee and Posters (109-186)
Symposium: New insights in toxicology of psychotropic drugs (continued)

Session chair: Nick Bateman, Andis Graudins

16.00  Keynote lecture: Is there a role for flumazenil in the management of poisoning with non-benzodiazepine hypnotics?  
Donna Seger  
*Vanderbilt University Medical Center, Nashville, Tennessee, USA*

At the end of this session the audience should be able to:
• discuss the mechanism of action of flumazenil as more than a benzodiazepine receptor antagonist  
• discuss the mechanism of benzodiazepine receptor binding of non-benzodiazepines  
• review the potential complications of flumazenil administration and the clinical ramifications in an overdose patient  
• explore the role of flumazenil in a comatose patient with an unknown ingestion

16.20  Keynote lecture: Cardiotoxicity of newer antipsychotics: Mechanisms, diagnosis and management (103)  
Simon HL Thomas  
*Medical Toxicology Centre, Newcastle University, Newcastle-upon-Tyne, UK*

At the end of this session the audience should be able to:
• describe recent changes in the epidemiology of antipsychotic overdose  
• list the main cardiovascular and non-cardiovascular effects of antipsychotic overdose  
• explain the mechanism of the adverse electrophysiological effects encountered in patients with antipsychotic overdose  
• identify antipsychotic drugs associated with a high risk of dysrhythmia after overdose

16.40  *Toxicology of high-dose olanzapine treatment in clinical settings* (104)  
Andreas B Petersen, Mikkel Christensen, Stig E Andersen, Hanne L Larsen  
*Department of Clinical Pharmacology, Bispebjerg Hospital, Copenhagen, Denmark*

16.55 Close

17.10  EAPCCT GENERAL ASSEMBLY (Denmark)

*Short-listed for Informa Best Scientific Presentation*
Mini-Symposium: Improving poisons centre activities

Session chair: Kalle Hoppu, Ed Krenzelok

16.00  *Aspects of product safety which may facilitate the oral ingestion of cleaning and cosmetic products containing surfactant. Results from a prospective multicentre study in Germany (106)

Elke Färber¹, Rafael Wagner¹, Dagmar Prasa², Bettina Plenert³, Uwe Stedtler³, Sabine Stoletzki¹, Maren Hermanns-Clausen³

¹GIZ-Nord Poisons Centre, University Medical Center, Göttingen; ²Poisons Information Centre, Erfurt; ³Poisons Information Centre VIZ, Centre for Pediatrics and Adolescent Medicine, Freiburg, Germany

16.15  EAPCCT survey of European poisons centres: Services provided (107)

Alison M Good¹, Peter Hultén¹, Simon HL Thomas¹,³

¹EAPCCT; ²Swedish Poisons Information Centre, Stockholm, Sweden; ³National Poisons Information Service, Newcastle Unit, Newcastle-upon-Tyne, UK

16.30  ToxIndex: A tool to compare population poisoning risks for toxic agents (108)

Herbert Desel

GIZ-Nord Poisons Centre, University Medical Center Göttingen, Germany

16.45  Keynote lecture: The alerting, reporting and surveillance system for chemical health threats, phase III (ASHTIII)

Raquel Duarte-Davidson¹, Rob L Orford¹, Monique Mathieu-Nolf³, Herbert Desel⁴, Andreas Schaper¹, Daniela Pelcová³, Sergey Zakharov⁵, Gabija Dragelytė⁶, Erik Andrew⁷, Laura Settimi⁸, Fabrizio Sesana⁹, Gillian Jackson¹⁰

¹Health Protection Agency, Centre for Radiation, Chemicals and Environmental Hazards, Chilton nr Didcot, UK; ²Health Protection Agency, Cardiff Metropolitan University, Cardiff, UK; ³Centre Antipoison, CHRU de Lille, Lille, France; ⁴GIZ Nord Poisons Centre, University Medical Centre, Göttingen, Germany; ⁵Toxicological Information Centre, General University Hospital, Prague, Czech Republic; ⁶Health Emergency Situations Centre, Poison Control and Information Bureau, Vilnius, Lithuania; ⁷Poisons Information, Norwegian Directorate of Health, Oslo, Norway; ⁸National Center for Epidemiology, Surveillance and Health Promotion, National Institute of Health, Rome, Italy; ⁹Milan Poison Control Center, Milano, Italy; ¹⁰National Poisons Information Service, Edinburgh, UK

At the end of this session the audience should be able to:
• discuss how the EU plans to co-ordinate the response to serious cross border health threats and what this means for EU Poisons Centres
• list the types of chemical incidents that might be reported to the Rapid Alerting System for Chemical Health Threats when it ‘goes live’
• describe the main aims and objectives of the ASHTIII project and know how to get involved with this project

17.00 Close

17.10  EAPCCT GENERAL ASSEMBLY

*Short-listed for Informa Best Scientific Presentation
Friday 31 May 2013

YOUNG INVESTIGATOR AWARD

Session chair: Alexander Campbell, Martin Caravati

08.30 Introduction to Young Investigator Award

08.35 A randomised controlled study on the efficacy of prophylactic antibiotics in the management of kerosene-associated pneumonitis at a tertiary children’s hospital in South Africa (187)

   Kate H Balme1,2, Heather J Zar2, Michael D Mann2
   1Poisons Information Centre, Red Cross Children's Hospital, Rondebosch; 2Department of Paediatrics and Child Health, Red Cross War Memorial Children’s Hospital and University of Cape Town, Western Cape, South Africa

08.50 Poisoning due to metformin accumulation in diabetic patients on chronic therapy: Analysis of 66 patients with lactic acidosis and high plasma metformin levels (188)

   Sarah Vecchio1, Andrea Giampreti1, Valeria M Petrolini1, Davide Lonati1, Alessandro Protti2, Pietro Papa3, Carla Rognoni1, Antonella Valli4, Loretta Rocchi3, Laura Rolandi2, Luigi Manzo1, Carlo A Locatelli1
   1Pavia Poison Control Centre and National Toxicology Information Centre, IRCCS Maugeri Foundation, Pavia; 2Department of Anesthesia and Intensive Care, IRCCS Foundation Ca’ Granda Ospedale Maggiore Policlinico, Milan; 3Laboratory of Analytical Toxicology and Clinical Chemistry Service, IRCCS Foundation Policlinico San Matteo, Pavia, Italy

09.05 Hepatic toxicity of dronedarone in mice: role of mitochondrial beta-oxidation (189)

   Andrea Felser1,2, Andrea Stoller1,2, Réjane Morand Bourqui1,2, Jamal Bouitbir1,2,3, Stephan Krähenbühl1,2,3
   1Clinical Pharmacology and Toxicology, University Hospital Basel; 2Department of Biomedicine, University of Basel; 3Swiss Centre for Applied Human Toxicology (SCAHT), Basel, Switzerland

09.20 Risk factors for cardiovascular events in emergency department patients with drug overdose (190)

   Alex F Manini1, Robert S Hoffman2, Barry Stimmel1, David Vlahov4
   1Division of Medical Toxicology, Department of Emergency Medicine, Mount Sinai School of Medicine, New York; 2Department of Emergency Medicine, NYU School of Medicine, New York; 3Cardiology Division, Mount Sinai School of Medicine, New York; 4UCSF School of Nursing, San Francisco, USA

09.35 Judging commences

09.35 Keynote lecture: Poisonings in Greenland (Arctic toxicology)

   Niels E Ebbehøi
   Poison Information Centre, Bispebjerg University Hospital, Copenhagen, Denmark

   At the end of this session the audience should be able to:
   • describe acute intoxications in Greenland, and differentiate from those in Denmark
   • outline the logistic challenges in Greenland for diagnosis and treatment of acute poisonings
   • assess the chronic effects of environmental pollution with airborne and marine borne persistent industrial chemicals in Arctic toxicology
   • discuss research on body burden of these chemicals and the effects on biomarkers in Greenland

09.55 Presentation to the winner of the Young Investigator Award

10.00 – 10.30 Coffee and Posters (195-269)
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08.30 – 10.00</td>
<td>YOUNG INVESTIGATOR AWARD (Finland/Norway)</td>
</tr>
<tr>
<td>10.00 – 10.30</td>
<td>Coffee and Posters (195-269)</td>
</tr>
</tbody>
</table>
Symposium: Severe adverse effects of poisoning therapies

Session chair: David Juurlink, Raido Paasma

10.30 Keynote lecture: Sodium bicarbonate: Electrolyte and acid-base disturbances

Philippe Hantson
Intensive Care, Cliniques St-Luc, Université catholique de Louvain, Brussels, Belgium

At the end of this session the audience should be able to:
- describe the risks of the use of some buffers including sodium bicarbonate
- explain the mechanisms of cellular injury in case of excessive correction
- identify the documented indications for sodium bicarbonate administration

10.50 Keynote lecture: Salicylate poisoning: Acute deterioration during intubation

Jenny Lu
John H. Stroger, Jr. Hospital of Cook County, Chicago, USA

At the end of this session the audience should be able to:
- discuss published reports describing acute deterioration following intubation in severely salicylate-poisoned patients
- discuss theories about possible mechanisms contributing to acute deterioration following intubation in salicylate-poisoned patients requiring respiratory support
- discuss potential ways to ameliorate risk of decompensation in salicylate-poisoned patients

11.10 Keynote lecture: Beta-blockers for sympathomimetic hypertension - are they really contraindicated?

David Wood
Clinical Toxicology, Guy’s and St Thomas’ NHS Foundation Trust, London, UK

At the end of this session the audience should be able to:
- describe the mechanisms by which sympathomimetic drugs lead to hypertension
- discuss the potential complications of using beta-blockers for sympathomimetic-related hypertension
- explain the appropriate treatment options for sympathomimetic-related hypertension

11.30 Keynote lecture: Inotropes and vasopressors: Adverse effects in the poisoned patient

Régis Bédry
UHSI, Hôpital Pellegrin, Bordeaux, France

At the end of this session the audience should be able to:
- describe the physiology of the receptors involved in the mechanism of catecholamines and inotropes
- outline how such medications can be deleterious if they are wrongly used
- describe the manifestations of adverse effects of catecholamines and inotropes
- describe how to deal with the consequences of the adverse effects of catecholamines and inotropes

11.50 General discussion

12.00 - 13.30 Lunch and Posters (195-269)
Symposium: The toxicology of ethanol

Session chair: Ken McMartin, Darren Roberts

10.30 Keynote lecture: Current trends in the epidemiological profile of acute ethanol overdoses and alcoholism (191)

Michael G Holland

Department of Emergency Medicine, SUNY Upstate Medical University, Syracuse, USA

At the end of this session the audience should be able to:

- define what constitutes a standard drink, and relate the number of standard drinks per day and per week that define moderate versus binge drinking
- describe the differences in prevalence of alcohol use by gender and by age
- list the impact acute alcohol intoxication has on motor vehicle accidents, falls, drowning; and the alcohol level commonly associated with alcohol poisonings
- describe the worldwide increased mortality caused by alcohol abuse

10.50 Keynote lecture: Inter-individual ethanol toxicokinetic differences and effect variations

Ana Ferrer-Dufol

Toxicology Unit, Clinical University Hospital, Zaragoza, Spain

At the end of this session the audience should be able to:

- describe the different toxicokinetic models for the evolution of blood ethanol concentrations
- list the main factors affecting the ethanol absorption rates by all routes
- discuss the individual differences in ethanol distribution related to total body water because of factors such as age, sex and obesity
- explain the relevance of genetic polymorphisms in ADH/ALDH and CYP2E1 enzymatic systems, and of CYP2E1 induction
- describe the potency of new in silico models for understanding and interpreting ethanol kinetics

11.10 Keynote lecture: Toxicodynamic tolerance: acute and chronic neuroadaptation

Robin E Ferner

West Midlands Centre for Adverse Drug Reactions, City Hospital, Birmingham, UK

At the end of this session the audience should be able to:

- define toxicodynamic tolerance
- explain the extent of toxicodynamic tolerance in different populations
- distinguish between acute and chronic toxicodynamic tolerance
- describe the Mellanby effect and the function of the GABA receptor

11.30 Keynote lecture: Mixed acute poisonings including ethanol: Clinical and therapeutic implications

Alex F Manini

Division of Medical Toxicology, Mount Sinai School of Medicine, New York, USA

At the end of this session the audience should be able to:

- describe alterations to metabolism of cocaine in the presence of ethanol and implications for alterations in toxicokinetics and toxicodynamics
- evaluate predisposition to hepatotoxicity for mixed ingestions of acetaminophen and ethanol
- identify mixed acute poisonings with ethanol which predispose to disulfiram-like effects

11.50 General discussion

12.00 – 13.30 Lunch and Posters (195-269)
Symposium: Severe adverse effects of poisoning therapies (continued)

Session chair: Jeff Brent, Naren Gunja

13.30 Keynote lecture: Adverse drug effects from chelants used to treat metals poisoning (192)  
Alan D Woolf  
*Pediatric Environmental Health Center, Boston Children's Hospital, Boston, Massachusetts, USA*

At the end of this session the audience should be able to:
- list adverse drug effects from 3 different chemicals used to treat metals poisoning
- outline specific mechanisms of action underlying some ADEs due to chelating drugs
- describe therapies to treat and strategies to avoid ADEs associated with chelating drugs

13.50 Keynote lecture: A review of the toxicities of deferoxamine  
David N Juurlink  
*Medicine and Pediatrics, University of Toronto, Toronto, Canada*

At the end of this session the audience should be able to:
- discuss the chemistry and pharmacology of the chelating agent deferoxamine
- list the adverse effects reported in both overdose and iron overload
- evaluate the evidence regarding the adverse effects of deferoxamine

14.10 Keynote lecture: Naloxone and flumazenil: The withdrawal/recurrence tightrope  
Fridtjof Heyerdahl  
*Department of Acute Medicine, Oslo University Hospital, Norway*

At the end of this session the audience should be able to:
- describe different adverse effects of naloxone and flumazenil
- list different dosing regimes to reduce the frequency of adverse effects of naloxone and flumazenil
- outline the problems of opioid recurrence in the prehospital and hospital settings with regard to observation time, dosing of naloxone and type of opioid

14.30 – General discussion
14.40
### Poster discussion session

**Session chair:** Alison Good, Horst Thiermann

**Risk assessment of poisonous plants** (18)
- Maren Hermanns-Clausen, Iko-Elsa Koch, Hilke Andresen-Streichert, Jörg Pietsch, Axel Hahn, Kathrin Begemann

**Does routine CYP2D6 and CYP2C19 genotyping reduce the risk of adverse events related to antipsychotic drug treatment?** (161)
- Gesche Jürgens, Stig E Andersen, Heidi Jensen, Henrik B Rasmussen, Thomas Werge, Merete Nordentoft

**Metal-on-metal hip arthroplasty and the risk of cobalt intoxication: A follow-up procedure** (243)
- Marieke A Dijkman, Irma De Vries, Jan Meulenbelt

**Rabies: are we aligned with the international and national guidelines?** (268)
- Marta Mazzoleni, Davide Lonati, Andrea Giampreti, Sarah Vecchio, Valeria M Petrolini, Eleonora Buscaglia, Luigi Manzo, Carlo A Locatelli

**Intravenous lipid emulsion does not improve hemodynamics or survival in a rodent model of oral verapamil poisoning** (53)
- Danielle Perichon, Sophie Turfus, Andis Graudins

**Fire eater's lung: Analysis of 123 cases reported to a national poison centre** (178)
- Alessandro Ceschi, Malcolm Kohler, Colette Degrandi, Gerd A Kullak-Ublick, Daniel Franzen

At the end of this session the audience should be able to:
- discuss the risk assessment of poisonous plants in Germany
- evaluate whether routine genotyping reduces the risk of adverse events in antipsychotic drug treatment
- describe the risk of cobalt intoxication after metal-on-metal hip arthroplasty
- discuss the management of rabies in Italy
- evaluate whether intravenous lipid emulsion improves survival in rats poisoned with verapamil
- describe acute chemical toxic pneumonitis in fire eaters
Symposium: Severe adverse effects of poisoning therapies (continued)

Session chair: Jou-Fang Deng, Bruno Mégarbane

<table>
<thead>
<tr>
<th>14:40</th>
<th>Pro/Con debate</th>
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<td><strong>Should we administer an oxime to severe organophosphorus pesticide-poisoned patients?</strong></td>
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**Pro:** Horst Thiermann, *Bundeswehr Institute of Pharmacology and Toxicology, Munich, Germany*

**Con:** Michael Eddleston, *National Poisons Information Service (Edinburgh Unit), Royal Infirmary, Edinburgh, UK*

At the end of this session the audience should be able to:
- give examples of oximes to be used after exposure to different organophosphorus compounds
- discuss when it is appropriate to administer an oxime according to the circumstances of the patient

15.30 - 16.00 Coffee and Posters (195-269)
Symposium: The toxicology of ethanol (continued)

Session chair: Robin Ferner, Viorela Nitescu

14.30 Keynote lecture: Pathology, treatment, and consequences of the alcohol hangover (193)  
Joris C Verster  
Division of Pharmacology, Utrecht University, Utrecht, The Netherlands

At the end of this session the audience should be able to:

- discuss the fact that alcohol hangovers have serious socioeconomic, health and behavioral consequences that are often underestimated
- recognize that the pathology of alcohol hangover is unclear, although recent research suggests a role of the immune system in the pathogenesis of alcohol hangovers
- explain why current hangover treatments are not effective

14.50 Keynote lecture: From bottle to bottle: Ethanol intoxication in the young child  
Diane P Calello  
New Jersey Poison and Information System, New Jersey Medical School, Newark, USA

At the end of this session the audience should be able to:

- describe the epidemiology of ethanol intoxications in children, including the most common household sources and exposures most likely to lead to hospitalization
- predict the risk of hypoglycemia and significant morbidity/mortality in the young child given the amount ingested of a particular product
- describe significant toxicokinetic differences in ethanol metabolism in the young child
- discuss controversies in assessment and management including timing of hypoglycemia, prediction of toxicity, need for observation, and utility of extracorporeal removal in pediatric patients

15.10 Ethanol metabolism in infants under 6 months of age (194)  
May Yen¹, Mark J Neavyn², Diana Felton¹, Michele Burns¹  
¹Harvard Medical Toxicology Fellowship, Children's Hospital Boston, Boston; ²Division of Medical Toxicology, University of Massachusetts Medical School, Worcester, USA

15.25 General discussion

15.30 - 16.00 Coffee and Posters (195-269)
### Symposium: Round table on education

**Session chair:** Suzanne White, Martin Wilks

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<tr>
<th>Time</th>
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| 16.00 | Certification in clinical and human toxicology for physicians and scientists | Andreas Stürer  
    |                                                                      | *Poisons Information Centre, University Hospital, Mainz, Germany* |
| 16.10 | Education and training for poison information specialists             | Alex Campbell  
    |                                                                      | *NPIS, Birmingham, City Hospital, Birmingham, UK* |
| 16.20 | The American Fellowship programme in medical toxicology               | Marsha Ford  
    |                                                                      | *American Association of Poison Control Centers, Charlotte, USA* |
| 16.30 | How to become a European Registered Toxicologist - and why you should bother | Martin Wilks  
    |                                                                      | *Swiss Centre for Applied Human Toxicology, University of Basle, Basle, Switzerland* |
| 16.40 | Time for training in virtual learning environment in clinical toxicology | Kalle Hoppu  
    |                                                                      | *Finnish Poison Information Centre, Helsinki, Finland* |

**16.50 – 17.30** Discussion

At the end of this session the audience should be able to:
- describe a new international training programme for intensive care physicians, including accreditation
- discuss aspects of qualification and certification for clinical toxicologists

**17.30 Close**
The best paper session

Session chair: Régis Bédry, Barbara Groszek

16.00 The best papers of 2012

An international panel will each be asked to select a clinical toxicology paper published in the year 2012 that they consider to be among the best. Three speakers, from different countries will defend their choice in a brief 10 minute presentation followed by discussion.

Discussants:

Benoit Bailey  
*CHU Sainte-Justine, Montreal, Canada*

Philippe Hantson  
*Intensive Care, Cliniques St-Luc, Université catholique de Louvain, Brussels, Belgium*

Daniela Pelclová  
*Toxicological Information Centre, 1st Medical Faculty, Charles University in Prague, Czech Republic*

17.30 Close
Poisonings with plants and food supplements

17. Withdrawn

18. *Risk assessment of poisonous plants
   Maren Hermanns-Clausen, Iko-Elsa Koch, Hilke Andresen-Streichert, Jörg Pietsch, Axel Hahn, Kathrin Begemann

19. Poisoning by Boletus satanas causes hyperprocalcitoninemia: Case report
   Lucija Sarc, Tomaz Jurca, Natalija S Planinc

20. Acute liver failure after accidental intake of pyrrolizidine-containing plants
   Frieder Schroff, Norbert Felgenhauer, Rudi Pfab, Jochen Stenzel, Florian Eyer

21. *The bitterness .. a sign of alert
   Christine Tournoud, Christine Kummerlen, Olivier Martinet, Carole Jamey, Philippe Sauder, Françoise Flesch

22. Erycibe henryi induced acute cholinergic syndrome
   Han-Wei Mu, Kai-Wei Yang, Dong-Zong Hung

23. The killer from the countryside-intoxications with hydrogen sulphide in anaerobic digestion plants (Biogasanlagen)
   Andreas Schaper, Martin Ebbecke, Julia Eidt, Cornelius Radamm, Rafael Wagner, Guido Kaiser, Herbert Desel

24. Circumstances of lethal Mediterranean thistle Atractylis gummifera poisonings: Experience of the Algiers Poison Centre
   Barkahoum Alamir, Rania Abtroun, Luc de Haro

25. Neurological troubles after consumption of Mediterranean sea figs of the Microcosmus genus
   Corinne Schmitt, Mogane Kervégant, Mathieu Glaizal, Lucia Tichadou, Luc de Haro

26. Poisonous mushroom ingestions presenting to Northeast US emergency departments from 1996-2010
   Oliver L Hung, Diane P Calello, Richard D Shih

   Tiina Pohjalainen, Harriet Mustonen, Mervi Saukkonen, Kalle Hoppu

28. Retrospective poisons centres-based study on adverse effects due to plant food supplements

29. Two fatal cases following use of plant mixtures for weight gain
   Narjis Badrane, Souad Skalli, Abdrahim Chabat, Rachida Soulaymani Bencheikh

30. Withdrawn

*Poster discussion session (Friday 31 May)
*Short-listed for Informa Best Case Report
31. Acute hepatitis and jaundice due to *Tinospora sinensis* or *Tinospora crispa*  
*Ming-Ling Wu, Jou-Fang Deng, Chen-Yang Yang*

**Paracetamol poisoning**

32. Paracetamol-induced hepatotoxicity despite paracetamol concentrations below treatment threshold  
*Muhammad Elamin, Ruben Thanacoody*

33. Paracetamol-induced hepatotoxicity at therapeutic doses  
*Jolene Brown, Ruben Thanacoody*

34. Severe paracetamol poisoning with methemoglobinemia  
*Eva KE Olsson, Marie Lemberg*

35. Management of intravenous paracetamol overdose  
*Eva KE Olsson, Christina D Didner*

36. Acetaminophen and N-acetylcysteine dialysance during hemodialysis for massive ingestion  
*Ami M Grunbaum, Sara Kazim, Marc Ghannoum, Mary-Ann Kallai-Sanfaçon, Roman Mangel, Eric Villeneuve, Sophie Gosselin*

37. Dissemination and uptake of new UK guidance on the management of paracetamol poisoning: A survey of healthcare professionals  
*Andrew Hitchings, David M Wood, Paul I Dargan*

38. A new line - the potential impact of decreasing the paracetamol treatment line  
*Rana Biary, Nicholas J Connors, Betty C Chen, Hong K Kim, Lauren K Shaw, Mai Takematsu, Robert S Hoffman*

39. Withdrawn

40. Audit of admission and acetylcysteine administration rates for paracetamol overdose following licence changes recommended by the UK’s Commission for Human Medicines  
*Janice M Pettie, Margaret A Dow, Euan A Sandilands, Michael Eddleston*

41. Online behaviour of TOXBASE® users seeking advice on paracetamol poisoning management  
*David J Lupton, Gillian Jackson, Michael Eddleston*

42. Consequences of changing the referral threshold for acetaminophen-related calls to the Quebec poison control centre  
*Sophie Gosselin, Catherine Savard, Anne Letarte, Guillaume Belair, Véronique Gross, Marie-Pier Ferland*

**Animal poisonings and envenomations**

43. Snake bites in Sikasso, Mali  
*Sanou Khô Coulibaly, Hinde Hami, Ababacar Maïga, Abdelrhani Mokhtari, Rachida Soulaymani-Bencheikh, Abdelmajid Soulaymani*

44. Scorpion stings in Gao, Mali  
*Sanou K Coulibaly, Hinde Hami, Ababacar Maïga, Rachida Soulaymani-Bencheikh, Max Goyffon, Abdelmajid Soulaymani*
45. Withdrawn

46. Severity of *Vipera berus* bites in Finland
   *Outi Lapatto-Reiniluoto, Juha Grönlund*

47. Neurotoxicity caused by *Vipera ammodytes* bite: A case report
   *Lucija Sarc, Sasa Sega, Janez Zidar*

48. Coagulopathy as the sole systemic manifestation after envenoming by a juvenile South American rattlesnake (*Crotalus durissus terrificus*): Case report
   *Fabio Bucaretti, Mario Pincelli-Netto, Eduardo M De Capitani, Maira M Branco, Luciane CR Fernandes, Stephen Hyslop*

49. Cantharidin intoxication: A rare but lethal case in Taiwan
   *Bing-Yan Jiang*

50. The effect of neostigmine on in-hospital mortality of adult patients with severe puffer fish poisoning: A pooled analysis of case reports and case series
   *Chih Chuan Lin, Shu-Chen Liao, Jiun-Jen Lynn, Cho-Ju Wu*

51. Clinical evidence of Italian viper venom neurotoxicity: 11-year experience of the Pavia poison control centre
   *Davide Lonati, Andrea Giampreti, Valeria M Petrolini, Sarah Vecchio, Monica Aloise, Francesca Chiara, Daniela Flachi, Luigi Manzo, Carlo A Locatelli*

52. Deleterious outcome following prolonged ice application of an *Agkistrodon contortrix* envenomated finger
   *William F Rushton, Christopher P Holstege*

**Experimental investigations**

53. Intravenous lipid emulsion does not improve hemodynamics or survival in a rodent model of oral verapamil poisoning
   *Danielle Perichon, Sophie Turfus, Andis Graudins*

54. An animal model demonstrating significant bladder inflammation and fibrosis associated with chronic methoxetamine administration
   *David T Yew, David M Wood, Willman Liang, Hong C Tang, Paul I Dargan*

55. Neutralization with proteolytic enzyme and a phospholipase A<sub>2</sub> inhibitor reduces the toxicity of *Micrurus fulvius* venom
   *Jennifer L Cote-Parker, Kori L Brewer, Dorcas O’Rourke, Matthew Rosenbaum, Susan N Miller, William J Meggs*

56. Persistent neurotoxic effect of aluminum exposure on Wistar rats: Neurocognitive and histological aspects
   *Fatima-Zahra Azzaoui, Hinde Hami, Samira Boulbaroud, Ahmed Ahami, Hafida Bouamama, Mohamed Najimi, Fatiha Chigr*

57. Role of Insulin-like growth factor 1 signaling in statin-induced myotoxicity
   *Annalisa Bonifacio, Karin Brecht, Stephan Krähenbühl*

^Poster discussion session (Friday 31 May)
Wednesday 29 May 2013

Difficult and unusual poisonings

59. Blindness following closantel poisoning: Report of three cases
   Narjis Badrane, Asmae Abbada, Hanane Chaoui, Leila Aoued, Naima Rhalem,
   Badr Saoud Benjelloune, Rachida Soulaimani Bencheikh

60. Amitraz acute toxic exposure: A retrospective case series
   Mario Pincelli-Netto, Carla B Fernandes, Eduardo M De Capitani, Carolina Oliveira,
   Adriana S Toledo, Fábio Bucaretchi

61. *Dangers of 2,4-dinitrophenol as a weight loss agent: A case report
   Wui Ling Chan, Evelyn Peng, Dong Haur Phua

62. Ciprofloxacin-induced methaemoglobinaemia
   Wui Ling Chan, Charmaine Manuais, Dong Haur Phua

63. A case report of early levothyroxine toxicity in a young child
   Mark J Neavyn, May Yen, Maurine Williams, Kathryn W Weibrecht

64. The role of a P-glycoprotein inhibitor in a fatal multidrug intoxication, simvastatin and colchicine
   Abraham Chavarin, Alexander Smithson, Silvia Lopez-Coll, Cristina Netto

65. Hypoxic-ischemic encephalopathy from hydrogen sulfide poisoning treated with therapeutic hypothermia: A case report
   Shih Hao Wu, Chun Kuei Chen, Chih Chuan Lin, Yi Ling Chan

66. “Waterproofing syndrome” after spreading a stain repellent with a trigger spray on dry-stone
   Christine Payen, Corine Pulce, Anne-Marie Patat, Anouska Reglioni, Jacques G Descotes

67. Subcutaneous self-injection of tetrodotoxin and ouabain
   Haymond Lam, Catherine Hayhurst, Peter Holmes, HK Ruben Thanacoody, Simon HL Thomas

68. Barium chloride poisoning: A case report with gastric, blood, serum and urine barium concentrations
   Magdalena Łukasik-Glebocka, Karina Sommerfeld, Adam Grzegorowski, Anetta Hanč,
   Danuta Baralkiewicz, Barbara Zielińska-Psuja

69. *Berries that weren't that sweet after all...- A case of raspberry ketone intoxication
   Mai Takematsu, Silas W Smith, Robert S Hoffman, Lewis S Nelson

70. Acute levothyroxine overdose - unpredictable clinical outcome and late onset symptoms: A case series
   Birgitte Nygaard, Kim P Dalhoff, Eva Saedder, Lotte Lydeking, Gesche Jürgens

71. *Prolonged QTc and ventricular tachycardia after ibogaine ingestion
   Matthew R Dettmer, Brian Cohn, Evan Schwarz

72. Acute clenbuterol poisoning
   Nicolas Bentin, Martine Mostin

73. Blindness caused by self-treatment with the veterinary drug closantel
   Iris Bergmann, Germaine Frimlova, Simone Just, Andreas Schaper, Anne Stürzebecher,
   Cornelius Radamm, Helmut Hentschel

*Short-listed for Informa Best Case Report
74. “Benzofury” poisoning that mimics meningoencephalitis/septicemia
   Carlo A Locatelli, Davide Lonati, Eleonora Buscaglia, Sarah Vecchio, Andrea Giampreti,
   Valeria M Petrolini, Francesca Chiara, Monia Aloise, Emanuela Corsini, Piero Papa, Antonella Valli,
   Laura Andreoni, Claudia Rimondo, Catia Seri, Giovanni Serpelloni

75. *Gastric perforation after liquid nitrogen ingestion
   James S Pollard, Joanne E Simpson

76. Nefopam poisoning: A case report with analytical confirmation
   Zubair Mohamed, Elizabeth Martin, Jane Eastwood, Matthew Garner, Jost Mullenheim,
   David M Wood

77. Severe encephalopathy after poisoning with a degreasing mixture
   Ilenuta Danescu, Radovan Macovei, Dana Burlacu

Cardiotoxicants

78. Poisonings due to transfer from digitoxin to digoxin in Norway
   Christian Haga

79. Prophylactic management of QTc-prolongation in drug-poisoning: New guidelines from the Swedish
    Poisons Centre
   Jonas Höjer

80. Lipid emulsion in treatment of cardiovascular collapse in acute poisoning
    Jasmina Jovic-Stosic, Vesna Putil, Snezana Djordjevic, Natasa Vukcevic, Slavica Vunicic,
    Gordana Ercegovic

81. Increased in-hospital mortality in acutely poisoned patients with hypotension at triage
    Jiun-Hao Yu, Chih-Chuan Lin, Chun Kuei Chen, Meng-Huan Wu

82. Respiratory arrest, seizures and broad complex tachycardia due to propranolol overdose
    Pippa Alamango, Francoise Ticehurst

83. Initial emergency department cardiac troponin is highly predictive of mortality from drug overdose
    Alex F Manini, Barry Stimmel, David Vlahov, Robert S Hoffman

Medication accidents and exposures

84. The increasing prevalence in New Zealand of exposures of children to nicotine replacement therapies
    Lucy M Shieffelbien, Wayne A Temple, D Michael G Beasley

85. Three cases of attempted suicide by ingestion of nicotine liquid used in e-cigarettes
    Lars B Christensen, Tinie van't Veen, John Bang

86. Unintentional exposures to methylergometrine maleate in oral solution
    Franca Davanzo, Laura Settimi, Anna Celentano, Felice Giordano, Fabrizio Sesana,
    Elisabetta Urbani, Giovanni Milanesi, Maurizio Bissoli, Valeria Dimasi, Luciana Cossa,
    Rita Borghini, Maurizio Borghini, Giscard Pazzavolta, Alberto Tomoiaga

87. Infants exposed to metformin: A case series
    Daniela Acquarone, Andreas Stürer, Carola Seidel, Christine Rauber-Lüthy, Dieter Genser,
    Dagmar Prasa

*Short-listed for Informa Best Case Report
88. Methemoglobinemia secondary to rapid dose escalation of dapsone
   Dorian Jacobs, David Vearrier, Michael I Greenberg

89. “Say NO to Poisons!” The development and evaluation of poison prevention resources for childcare practitioners to teach pre-school children about poison safety
   Nicola Cassidy, Martina Osborne, Patricia Casey, Joseph A Tracey, Edel Duggan

90. Unintentional injection of sodium hypochlorite instead of procaine for a dental nerve block
   Ross Sullivan, Michael Hodgman, Richard Hall

91. Veterinary product exposure inquiries to the New Zealand Poisons Information Centre, 2003 to 2011
   Richard W Mason

92. Risperidone: A cause of medication errors in children
   Thierry Vial, Andrea D’Amico, Corine Pulce, Patrick Harry, Maryvonne Hayek, Patrick Nisse, Robert Garnier, Christine Payen, Jacques G Descotes

93. Multicentre analysis of pediatric tizanidine exposures
   Katharina M Schenk-Jaeger, Christine Rauber-Lüthy, Petra Hoffmann-Walbeck, Dieter Genser, Elke Färber, Uwe Stedtler, Alessandro Ceschi

94. Effect of safety update on quinine use in leg cramps on prescribing and toxicity in the UK
   Paul Acheampong, Gill Cooper, Behshad Khazaei, David J Lupton, Sue White, Margaret T May, Simon HL Thomas

95. Pediatric patients with exposures rarely need advanced life support prehospital care
   Brian W Walsh, Diane Calello, Kristen Walsh, Alex Troncoso
Poisons centre and regulatory activities

109. Quality guidelines for poison centers: A systematic review
    Tais F Galvao, Marcus T Silva, Andressa W Silva, Alvin C Bronstein, Mauricio G Pereira

110. Pregnant and lactating women’s fear of teratogenic risk and the impact of counselling
    Gro C Havnen, Anita von Krogh, Carina Gundersen, Ann-Christin Olsen, Hedvig Nordeng

111. Cases of human exposure to cosmetic products 1995-2011: Risk assessment by product groups using the new Cosmetic Products Notification Portal (CPNP) categories
    Andreas Stürer, Stephan Hipp, Heidemarie Zeimentz, Oliver Sauer, Hans-Jürgen Reinecke

112. Trained nurses in poisons information: An approach to increase effectiveness in poisons information
    Torsten Binscheck, Antje Engel, Janine Borchert Avalone, Rafael Schyska

113. Establishing real-time communications with TOXBASE® users via TOXBASE® on-line and the TOXBASE® App, when agents of interest are accessed; a report on behalf of the National Poisons Information Service
    Gillian Jackson, David J Lupton, Sally M Bradberry, Rosie Spears, Gillian Cooper, John P Thompson, Michael Eddleston

114. Enquiries to UK national poisons information service centres from ambulance services
    William J Laing, Rosie A Spears, John P Thompson, Gillian Jackson, Michael Eddleston

115. Human exposures to veterinary medicines reported to the Poisons Information Centre Erfurt from 2002-2011
    Helmut Hentschel, Dagmar Prasa, Iris Bergmann, Gisela Enden, Germaine Frimlova, Simone Just, Gesine Liebetrau, Bettina Plenert, Anne Stuerzebecher, Michael Deters

116. The greater proportion of the inquiries to the Norwegian Poisons Centre is due to self-inflicted exposures
    Kristian Franer, Anita von Krogh

117. Changes in referral rates for acute toothpaste ingestions reported to the NPIS
    Catherine L Crawford, Gill Cooper, Gillian Jackson, J Allister Vale, Simon HL Thomas, John P Thompson, Michael Eddleston

118. Implementing the first step of the article 45 CLP-regulation: - notification of “dangerous mixtures” under the new § 16e chemicals law in Germany
    Kathrin Begemann, Ronald Keipert, Mareike Budelmann, Renate Kolbusa, Frank Buchert, Axel Hahn

119. A European Chemical Emergency Network: Developing capabilities for responding to cross border chemical health threats [20121101]
    Raquel Duarte-Davidson, Rob Orford, Helen Crabbe, Mark Griffiths, Herbert Desel, Andreas Schaper, Sally Hoffer, Lisbeth Hall, Ann Göransson Nyberg, Per Leffler, Lina Thors, José Javier García del Águila, Manuel González-Guzmán, Jose A Valverde

120. National Poison Data System environmental encounters: Pesticides and carbon monoxide over time and geographic information system
    Daniel A Spyker, Alvin C Bronstein

121. Initial reception of the TOXBASE® app, a poisons information resource for mobile devices
    Lindsay D Gordon, David J Lupton, Gillian Jackson, Michael Eddleston
Thursday 30 May 2013

122. Enquiries to the National Toxicological Information Centre from the general public
   Blazena Caganova, Silvia Plackova

123. Advantages and disadvantages of using Cloud technology to provide telephone services to the
   National Poisons Information Service
   Stephen SD Jones, Gloria L Alldridge, John P Thompson

124. EAPCCT survey of European poisons centres – staff profile
   Alison M Good, Peter Hultén, Simon HL Thomas

125. Abuse of energy drinks among young people: Experience of the Pavia Poison Control Center
   Sarah Vecchio, Francesca Chiara, Eleonora Buscaglia, Andrea Giampreti, Davide Lonati,
   Valeria M Petrolini, Claudia Rimondo, Catia Seri, Giovanni Serpelloni, Carlo A Locatelli

**Caustic injuries**

126. Caustic effects due to sodium hypochlorite ingestion: Toxicological properties, clinical
   manifestations and esophago-gastro-duodenoscopy
   Andrea Giampreti, Francesca Chiara, Davide Lonati, Valeria M Petrolini, Sarah Vecchio,
   Monica Aloise, Daniela Flachi, Carla Rognoni, Luigi Manzo, Carlo A Locatelli

127. *Severe respiratory and esophageal effects resulting from ingestion of unit dose liquid laundry
   detergents: A case report
   Anna Celentano, Fabrizio Sesana, Laura Settimi, Giovanni Milanesi, Francesca Assisi,
   Maurizio Bissoli, Rossana Borghini, Tiziana Della Puppa, Valeria Dimasi, Marcello Ferruzzi,
   Paola Moro, Ilaria Rebutti, Angelo Travaglia, Franca Davanzo

128. Ocular toxicity of unit dose liquid laundry detergents: A case report
   Anna Celentano, Fabrizio Sesana, Laura Settimi, Giovanni Milanesi, Antonella Pirina, Francesca Assisi,
   Maurizio Bissoli, Rossana Borghini, Tiziana Della Puppa, Valeria Dimasi, Marcello Ferruzzi,
   Paola Moro, Ilaria Rebutti, Angelo Travaglia, Franca Davanzo

129. Skin injuries resulting from accidental exposure to unit dose liquid laundry detergents: A case report
   Anna Celentano, Fabrizio Sesana, Laura Settimi, Giovanni Milanesi, Francesca Assisi,
   Maurizio Bissoli, Rossana Borghini, Tiziana Della Puppa, Valeria Dimasi, Marcello Ferruzzi,
   Paola Moro, Ilaria Rebutti, Angelo Travaglia, Franca Davanzo

130. Market withdrawal of a caustic product due to infraction of the Belgian pesticide regulation and
   misleading labeling
   Geert Verstegen, Martine Mostin

131. A case of corneal lesion after use of anti-fog for swimming goggles
   Yves Haerden, Martine Mostin

132. A case of immediate and delayed skin reaction after oral contact with cashew seed shell
   Yves Haerden, Martine Mostin

133. Bone scintigraphy images in a case of 70% hydrofluoric acid burns treated with intra-arterial
   calcium gluconate
   Eduardo M De Capitani, Elcio S Hirano, Carla FB Fernandes, Thiago M Santos, Camila C Prado,
   Maira M Branco, Luciane C Fernandes, Carlos HPV Cerqueira, Fábio Bucareti

*Short-listed for Informa Best Case Report*
134. A retrospective analysis of caustic ingestions in Slovakia
   Silvia Plackova, Katerina Placha, Blazena Caganova, Jaroslav Bibza

135. Pepper spray (capsaicin) exposure: Decontamination with amphoteric, chelating and hypertonic solution
   Miran Brvar

Psychotropic drugs

136. Toxic coma in children - nine year retrospective study
   Viorela G Nitescu, Simona Stanca, Alexandru Ulmeanu, Dora Boghitoiu, Catalin Stemate, Coriolan E Ulmeanu

137. Neuroleptic malignant syndrome toxidrome mimic: A case report
   Evan M Grosjeans, Andaleeb H Raja, Nathan B Menke, Andrew M King, Anthony F Pizon

138. Valproic acid poisonings: An old and new concern
   Radovan Macovei, Ilenuta Danescu, Gina Caragea, Mihai Ionica

139. Clinical features and severity of clozapine poisoning
   Simone Just, Wolfgang Ackermann, Michael Deters, Dagmar Prasa, Helmut Hentschel

140. Recreational abuse of gabapentin and pregabalin are under-recognized causes of hospitalization related to these prescription drugs
   Timothy J Wiegand, Rachel M Gorodetsky

141. A case of perphenazine decanoate poisoning
   Christina Gade, Tina B Futtrup, Kim P Dalhoff

142. Evaluation of quetiapine abuse and misuse reported to poison centers
   Wendy Klein-Schwartz, Larry Gonzales, Bruce D Anderson

143. Gastroscopic bezoar removal in acute quetiapine poisoning
   Jochen Stenzel, Leonie Ruhnau, Henrik Einwächter, Nobilet Felgenhauer, Katrin Romanek, Raphael Stich, Rudi Pfab, Florian Eyer

144. Poisoning due to tramadol in New Zealand: An emerging hazard
   Leo J Schep, Robin J Slaughter, Chip Gresham

145. “Sleep well!” – epidemiological and clinical findings in zopiclone / zolpidem poisoning
   Ingo Sagoschen, Heidemarie Zeimentz, Joachim Kaes, Frank Thömke, Oliver Sauer, Ludwig S Weilemann, Andreas Stürer

146. Prolonged delirium and abnormal movements in paediatric lamotrigine ingestion
   Angela L Chiew, Kate Cush, Betty SH Chan

147. Misuse of prescription benzodiazepines and non-prescription sedative hypnotics (‘Z drugs’) in the United Kingdom
   David M Wood, Jody L Green, Marie-Claire Le Lait, Paul I Dargan

148. Delayed presentation of serotonin syndrome after co-ingestion of serotoninergic agents and benzodiazepines
   Hsien-Yi Chen, Meng-Huan Wu, Jian-Jen Lynn, Hang-Cheng Chen, Shu-Chen Liao

*Short-listed for Informa Best Case Report
Thursday 30 May 2013

149. A case of pregabalin abuse  
Julie Nordgaard, Gesche Jürgens

150. Oral chloroform poisoning  
Mare Oder, Kristiina Pöld

Carbon monoxide and cyanide poisonings

151. Blood cyanide concentrations in fire smoke poisoning  
Guido Kaiser, Herbert Desel

152. Smoke inhalation - decontamination study of toxic substances on an in vitro model of human airway epithelium  
Laurence Mathieu, François Burgher, François Lutz, Céline Fosse, Samuel Constant, John F Fraser

153. Google trends analysis of carbon monoxide searches in the wake of Hurricane Sandy  
Diane P Calello, Alex B Troncoso, John Allegra

154. Carbon monoxide exposures presenting to Northeast US emergency departments from 1996-2010  
Oliver L Hung, Richard D Shih

155. A case of "mud bogging" resulting in carbon monoxide toxicity  
Nathan B Menke, Andaleeb H Raja, Andrew M King, Jawaid Akhtar, Michael J Lynch

156. Carbon monoxide exposure following Hurricane Sandy  
Frederick Fiesseler, Richard Shih, Diane Calello, Renee Riggs, Brian Walsh

157. Carbon monoxide exposure during pregnancy, a five year review  
Frederick Fiesseler, Oliver Hung, Alex Troncoso, Dave Salo, Renee Riggs

Laboratory investigations

158. Withdrawn

159. Detection of paracetamol indicates phenacetin-induced methemoglobinemia in a bodypacker  
Stefan Poechacker, Eva Klingbacher, Stephan Lang, Gerald Raab, Julia Reichel, Rainer Schmid, Burkhart Gustorff

160. The use of pharmacogenomic testing in overdose – what role does it have?  
Shannon Manzi, May Yen, Diana Felton, Michele Burns

161. Does routine CYP2D6 and CYP2C19 genotyping reduce the risk of adverse events related to antipsychotic drug treatment?  
Gesche Jürgens, Stig E Andersen, Heidi Jensen, Henrik B Rasmussen, Thomas Werge, Merete Nordentoft

162. Validation of an acetaminophen immunoassay for unconventional matrices  
Ami M Grunbaum, Sophie Gosselin, Mary-Ann Kallai-Sanfaçon

163. Drugs highly associated with infusion reactions enhance nitric oxide signaling  
Keith K Burkhart, Darrell Abernethy

$Poster discussion session (Friday 31 May)
164. Serum perfluorooctanoic acid concentration is associated with clinical renal disease but not clinical cardiovascular disease
   
   David Vearrier, Dorian Jacobs, Michael I Greenberg

**Chemical threats and poisonings**

165. Delayed bullae formation after sulfur mustard exposure
   
   David Vearrier, Michael I Greenberg

166. Nosocomial poisoning risk in sodium azide ingestion: Analysis of an exposure
   
   Michael A Downes, Katrina E Taliana, Tracy M Muscat, Ian M Whyte

167. Symptoms associated with accidental and intentional ingestions of acetone-containing nail polish remover
   
   Elaine Donohoe, Edel Duggan

168. Achieving access to apartments of migrants in Berlin to assess risks for their children concerning chemical consumer products
   
   Axel Hahn, Gesa Kröger, Nina Adelberger

169. Aerotoxic Syndrome: Five cases in Germany
   
   Axel Hahn, Nina Glaser, Esther Feistkorn, Miriam Friedemann, Kathrin Begemann

170. A case of methanol toxicity from huffing paint lacquer
   
   Nathan B Menke, Andaleeb H Raja, Andrew M King, Jawaid Akhtar, Michael G Abesamis

171. The last dinner: Fatality from 2-chloroethanol intoxication
   
   Dong-Zong Hung, Hong Ping Li

172. Thirty-nine cases of acute respiratory distress following one single exposure event for a surface coating product
   
   Paula EC Hammer, Patricia Duch, Niels Ebbehoej

173. Mustard gas poisoning - an unusual occupational injury
   
   Cornelius C Radamm, Herbert H Desel, Martin M Ebbecke, Kai K Khe, Oliver O Schwarz, Enno E Striepling, Andreas A Schaper

174. Cutaneous cyclohexylamine exposure resulting in significant dermal burns without systemic toxicity
   
   Lewis S Hardison, Elizabeth B Gorbe, William F Rushton, Christopher P Holstege

175. Gasoline exposures following Hurricane Sandy
   
   Mai Takematsu, Hong Kim, Rana Biary, Robert Hoffman, Silas Smith

176. Indoor environmental exposure to polychlorinated biphenyls
   
   Ellen B Pedersen, Peter Jacobsen, Harald W Meyer, Charlotte Brauer, Niels E Ebbehøj, Thomas Göen

177. Container incidents, a serious problem or a media hype
   
   Elisabeth J Scholtens, Irma de Vries, Jan Meulenbelt

178. Fire eater’s lung: Analysis of 123 cases reported to a national poison centre
   
   Alessandro Ceschi, Malcolm Kohler, Colette Degrandi, Gerd A Kullak-Ublick, Daniel Franzen

$Poster discussion session (Friday 31 May)
179. Influential factors of impact of chemical, biological, radiation, and nuclear personal protective equipment on the performance of emergency airway management in the emergency medicine setting
   Chung-Cheng Wang, Hang-Cheng Chen, Wen-Ling Lin, Meng-Huan Wu

Epidemiology of poisoning

180. Medication poisoning in Morocco: Retrospective study from 1980 to 2009
   Narjis Badrane, Fatima Abadi, Lahcen Ouammi, Naima Rhalem, Abdelmajid Soulaymani, Rachida Soulaymani-Bencheikh

181. Self-induced abortion in Mali
   Hinde Hami, Tidiane Diallo, Ababacar Maïga, Abdelrhani Mokhtari, Rachida Soulaymani-Bencheikh, Abdelmajid Soulaymani

182. Pattern of acute poisoning in Mali
   Hinde Hami, Tidiane Diallo, Ababacar Maïga, Abdelrhani Mokhtari, Rachida Soulaymani-Bencheikh, Abdelmajid Soulaymani

183. Epidemiology of toxic exposures reported by military personnel to a National Poison Center
   Ophir Lavon, Yedidia Bentur

184. Analysis of self-poisoning cases among schoolchildren and adolescents in four different years reported to a regional poison center
   Ansam Sawalha, Oliver Sauer, Waleed Sweileh, Andreas Stürer

185. Gender, dose escalation and mortality during opioid therapy
   Eric Kaplovitch, Tara Gomes, Ximena Camacho, Irfan Dhall, Muhammad M Mamdani, David N Juurlink

186. Repetition of deliberate self-poisoning: A population-based cohort study
   Yaron Finkelstein, Simon Hollands, Marco LA Sivilotti, Janine Hutson, Muhammad M Mamdani, David N Juurlink
Drug and opioid abuse

195. Unintentional pediatric opioid exposures as reported to the Global Toxicosurveillance Network (GTNet) from 2008-2010

196. The pattern of methylphenidate exposures in Denmark
   Louise S Jensen, Kim P Dalhoff

197. Intoxications by synthetic cannabinoids - current trends
   Maren Hermanns-Clausen, Stefan Kneisel, Bela Szabo, Volker Auwärter

198. Detection of use of novel psychoactive substances by attendees at a music festival in the North West of England
   David M Wood, John RH Archer, Fiona Measham, Simon Hudson, Paul I Dargan

199. Misuse of opioid containing prescription and over the counter medications in the United Kingdom
   Paul I Dargan, Jody L Green, Marie-Claire Le Lait, David M Wood

200. Reduction in the availability and price of alpha-methyltryptamine from Internet suppliers over time
   David M Wood, Paul I Dargan

201. Awareness and use of 4-methylamphetamine is significantly lower than amphetamine in a high-drug using population
   David M Wood, Fiona Measham, Laura J Hunter, Paul I Dargan

202. Acute neurotoxicity associated with recreational use of methylnethaqualone confirmed by liquid chromatography tandem mass spectrometry
   Katharina E Hofer, Greta Giardelli, Daniel M Müller, Suraj Elavumkudy, Alex F Manini, Christine Rauber-Lüthy, Alessandro Ceschi

203. Toxicity associated with recreational use of nitrous oxide in the United Kingdom. A report from the UK National Poisons Information Service
   Gillian Cooper, Gill Jackson, J Allister Vale, Simon HL Thomas

204. Variability in recreational drugs and novel psychoactive substances detected in anonymous pooled urine samples from street pissoirs (street urinals) over time: A technique to monitor trends in drugs use
   John RH Archer, Paul I Dargan, Wui L Chan, Simon Hudson, David M Wood

205. Telephone enquiries to the UK National Poisons Information Service relating to poisoning with recreational volatile nitrites and the frequency of use of methylthioninium chloride (methylene blue) for the treatment of methaemoglobinaemia
   Rosie A Spears, John P Thompson

206. A case series of acute intoxication with new psychoactive drugs in Japan: A vicious spiral of “Law” and “Market”
   Ayako Ide, Toshimitsu Ide, Yoshito Kamijo, Takashi Nishikawa, Kuniko Yoshimura, Miyo Mekari, Kazui Soma

207. What’s on the ‘Spice’ rack? Synthetic cannabinoid receptor agonist toxicity reported to the UK National Poisons Information Service
   Simon L Hill, Gill A Cooper, Gillian Jackson, David J Lupton, Sally Bradberry, Simon HL Thomas
208. Methoxetamine toxicity reported to the National Poisons Information Service: Clinical characteristics and the effect of the UK’s first Temporary Class Drug Order
   Simon L Hill, Sian Harbon, Gillian A Cooper, James A Coulson, John Thompson, Gillian Jackson, David J Lupton, J Allister Vale, Simon HL Thomas

209. Chasing the wrong dragon: Acute respiratory distress from inhaling the contents of a fentanyl patch
   Brenna M Farmer, Lauren K Shawn, Julio A Lanfranco Molina, Ben-Gary Harvey, Robert S Hoffman, Lewis S Nelson

210. “Synthetico-cocaine” as legal cocaine hides synthetic cannabinoids
   Carlo A Locatelli, Davide Lonati, Eleonora Buscaglia, Sarah Vecchio, Andrea Giampreti, Valeria M Petrolini, Francesca Chiara, Monia Aloise, Emanuela Corsini, Piero Papa, Laura Rolandi, Loretta Rocchi, Claudia Rimondo, Catia Seri, Giovanni Serpelloni

211. The dangers of buying “research chemicals” online, bromo-dragonfly mislabelled as 2C-B Fly: A confirmed case report, and its follow up in “research chemical” specific social media
   Abraham Chavarin, Santiago Nogue, Marta Castaneda-Pomeda, Victor Gil

212. Complications from ultra rapid opioid detoxification at a single detoxification center
   Hong K Kim, Rana Biary, Betty C Chen, David A Berlin, Robert S Hoffman, Lewis S Nelson, Brenna M Farmer

213. First report of misuse with PecFent® (fentanyl nasal spray) inducing life threatening features
   Francis Grossenbacher, Zoubir Djerada, Lucie Melin, Alexis Pintault, Catherine Feli, Claire Gozalo

214. Accuracy of on-site urine drug tests – an experimental study
   Lisa Franzén, Marinela Tusic, Olof Beck, Peter Hultén

215. Characteristics of Twitter conversations on illicit drug use
   Michael Chary, Nicholas Genes, Alex Manini

216. A case of life-threatening opioid withdrawal syndrome precipitated by buprenorphine abuse in 61 year-old methadone dependent patient
   Timothy J Wiegand

217. A cathinone of a different color – two cases of bupropion abuse presenting with seizures and serotonin syndrome
   Timothy J Wiegand

218. Parental cannabis abuse and accidental childhood exposure: Complementary and essential actions
   Fanny Pélissier, Isabelle Claudet, Anne Laure Pélissier-Alicot, Nicolas Franchitto

219. Third party payor status of drug abuse and dependence patients in a large emergency department database
   Diane P Calello, Richard D Shih, Oliver P Hung, Alex B Troncoso

Alcohols

220. The characteristics of acute ethanol poisoning in adolescents - five year study
   Viorela G Nitescu, Alexandru Ulmeanu, Isabel Ghita, Coriolan E Ulmeanu
221. *Severe diethylene glycol intoxication from smoke fluid ingestion*
   Agnes G van Velzen, Yolande M Vermeeren, Jan Meulenbelt, Irma de Vries

222. Alcoholic ketoacidosis: Highest reported serum lactate level
   Nathan B Menke, Andaleeb H Raja, Andrew M King, Michael J Lynch, Kenneth D Katz

**Pesticides and herbicides**

223. Prognostic factors in acute paraquat poisoning
   Kwang Young Lee, In O Sun, Sung Hye Shin, Moon Chul Kim, Jae Woo Park, Min A Yang, Cheon Beom Lee, Hyun Ju Yoon, Jeong Gwan Kim

224. Type II pyrethroids were associated with higher toxicity than type I pyrethroids in human exposures: A poison center based study in Taiwan
   Bo-Gang Huang, Ming-Ling Wu, Jou-Fang Deng, Chen-Chang Yang

225. The NPIS Pesticide Surveillance Project – neonicotinoids: Comparison of toxicity against other insecticide classes
   Richard D Adams, Liam Perry, Andrew Bennet, Simon HL Thomas, John P Thompson, J Allister Vale, Michael Eddleston, D Nicolas Bateman

226. The NPIS Pesticide Surveillance Project – eye contact with pesticides: Circumstances of exposure and toxicity
   Richard D Adams, Liam Perry, Andrew Bennet, Simon HL Thomas, John P Thompson, J Allister Vale, Michael Eddleston, D Nicolas Bateman

227. A life-threatening dichlorophen poisoning case: Clinical features and kinetics study
   Jerome Langrand, Christian Moesch, Rozenn Le Grand, Bruno Mégarbane

228. Severe toxicity from accidental glyphosate ingestion in a child
   Nete B Hansen, Lars B Christensen, Kolja Kvist, Lotte CG Hoegberg

229. Prospective outcomes following acute exposure to pyrethroid insecticides in pregnancy
   Dacia Jones, Sally Stephens, Laura M Yates, Simon HL Thomas

230. Prospective outcome data after acute exposure to carbamate insecticides in pregnancy
   Dacia Jones, Sally Stephens, Laura M Yates, Simon HL Thomas

231. Atropine: Antidote or killer in chlormequat poisoning?
   Patrick Nisse, Nathalie Assez, J Ph Kahn, Monique Mathieu-Nolf

232. Bendiocarb and clopyralid: A toxicovigilance study based upon 8 years of NPIS Pesticide Project data
   Liam Perry, Andrew R Bennett, Richard D Adams, Gillian Jackson, J Allister Vale, John P Thompson, Haymond Lam, Michael Eddleston

233. Comparison of current recommended regimens of atropinization in organophosphate poisoning
   Nicholas J Connors, Zachary H Harnett, Robert S Hoffman

234. Carbamate poisoning mixed with methanol intoxication - misfortunes never come singly: Case report
   Wu Meng Huan, Chen Hang Cheng, Wu Jiunn Yih

*Short-listed for Informa Best Case Report*
Heavy metals

235. Adult lead poisoning from ingested bullets
   Philip Craven, Martin Caravati, Christopher Tietze, Matthew Steenblik

236. Plain film as a quick investigation tool for acute arsenic poisoning
   Ching-Hsing Lee, Chun-Kuei Chen, Shu-Chen Liao, Hsien-Yi Chen, Meng-Huan Wu

237. Case report: Poisoning with elemental (metallic) arsenic
   Rudolf Pfab, Florian Ever, Raphael Stich, Katrin Romanek, Jochen Stenzel, Gabriele Roider,
   Henrik Einwaechter

238. Criminal thallium poisoning: A case series
   Diana Apostolova, Vasil Atanasov, Sonia H Ganeva, Zlatka Stoyneva, Evgenia Stankova,
   Reni Toncheva, Rosica Vladimirova, Tanya Kuneva, Margarita Gesheva, Margarita Raycheva,
   Tsvetanka Dimitrova, Aneliya Kamenova

239. When work comes home: Delayed elevation of plasma mercury concentration after an occupational
   mercury exposure
   Hong K Kim, George Friedman-Jimenez, Silas W Smith, Patricia M Fritz, Marcelo C Laiz,
   Robert S Hoffman, Lewis S Nelson

240. Time to reevaluate guidelines for aluminium content in dialysate solutions?
   Joelle Mardini, Karine Mardini, Valery Lavergne, Marc Ghannoum

241. *Excessive iron intake over two days resulting in liver transplantation. A case report
   Uwe Stedtler, Maren Hermanns-Clausen

242. Puberty blues - copper salt exposures in Australian schools
   Angela L Chiew, Jared A Brown, Betty SH Chan, Nicholas A Buckley

243. $Metal-on-metal hip arthroplasty and the risk of cobalt intoxication: A follow-up procedure
   Marieke A Dijkman, Irma De Vries, Jan Meulenbelt

244. Chelation therapy with intravenous high dose N-acetyl-cysteine for cobalt release from metal on
   metal hip replacement: A first case report
   Andrea Giampreti, Davide Lonati, Sarah Vecchio, Valeria M Petrolini, Veronica Basso,
   Francesca Zerbini, Anna Ronchi, Luca Chiovato, Luigi Manzo, Carlo A Locatelli

Antidote supply

245. Antidotes availability in the Italian health system: A national survey
   Carlo A Locatelli, Davide Lonati, Marta Mazzoleni, Valeria M Petrolini, Andrea Giampreti,
   Sarah Vecchio, Eleonora Buscaglia, Monia Aloise, Francesca Chiara, Emel Kaser,
   Carla Rognoni, Olha Maystrova, Luigi Manzo

246. Antidotes supply in emergency from Pavia Poison Control Centre
   Eleonora Buscaglia, Marta Mazzoleni, Davide Lonati, Andrea Giampreti, Sarah Vecchio,
   Valeria M Petrolini, Anna Losurdo, Carlo A Locatelli

247. Validation of criteria to guide pre-hospital antidote administration for drug overdoses
   Matt S Friedman, Alex F Manini

*Short-listed for Informa Best Case Report
$Poster discussion session (Friday 31 May)
248. Management of antidotes in a North Italian Region  
   Stefano Bianchi, Erica Bianchini, Preziosa Diana, Paola Scanavacca, Giovanna Felisatti, Giulia Dallocchio, Roberto Zoppellari

249. Antidote availability in acute hospitals in Ireland  
   John X Herbert, Edel Duggan, Joseph A Tracey

250. Summary of telephone enquiries relating to antidote exposures, graded as moderate or severe, that were received by the UK National Poisons Information Service between 01/04/2008 and 31/03/2012  
   Gillian Jackson, Liam Perry, Rosie Spears, Gillian Cooper, John P Thompson, Michael Eddleston

**General management of poisonings**

251. Metformin induced lactic acidosis reported to the New South Wales Poisons Information Centre  
   Betty Chan, Bashir Chakar, Arul Sivanesan, Naren Gunja, Jared Brown, Nicholas Buckley

252. Metformin-induced refractory vasodilatory shock successfully treated with methylene blue  
   Jenny Westerbergh, Jonas Höjer

253. Lactic acidosis and metformin: Intoxication or adverse effect?  
   Emilia Civeira-Murillo, Ana Ferrer-Dufol, Paula Millan, Sebastian Menao-Guillen, Antonio Ruiz-Guilar, Patricia Mora

254. Severe metformin-induced lactic acidosis: Case series of 10 patients  
   Cathrine Lund, Knut-Erik Hovda, Helga Gudmundsdottir, Kirsti S Andersson, Cecilie Nyvold, Sten Froyshov, Anne B Tafford, Dag Jacobsen

255. A case of cardiac arrest related to therapeutic use of metformin: Clinical and toxicological aspects  
   Roberto Zoppellari, Silvia Bortolazzi, Stefano Petrini, Marco Verri, Giulia Dallocchio, Giovanna Felisatti, Laura Petrini, Stefano Bianchi, Cesare Bertocco, Francesco M Avato

256. Severe metformin poisoning survived by continuous venovenous hemofiltration and extracorporeal membrane oxygenation  
   Te-Hao Wang, Wen-Jen Tsai, Yu-Ting Li, Chu Wei-Lan, Jou-Fang Deng

257. Methotrexate toxicity treated with continuous venovenous hemofiltration and leucovorin  
   Nicholas J Connors, Meghan E Sise, Lewis S Nelson, Robert S Hoffman, Silas W Smith

258. Increased serum osmolality and metabolic acidosis following massive \( \gamma \)-hydroxybutyrate consumption  
   Nicholas J Connors, Robert S Hoffman, Lewis S Nelson

259. Ketamine and midazolam for procedural sedation prevents respiratory depression in life-threatening aspirin toxicity  
   Brenna F Farmer, Betty C Chen, Robert S Hoffman, Lewis S Nelson, Rama B Rao

260. *Methylene blue used in the treatment of refractory vasoplegic shock resulting from severe quetiapine poisoning  
   Julia Fisher, Gopal Taori, Andis Graudins, George Braitberg

261. Naloxone is overused in elderly patients in the prehospital setting  
   Brian W Walsh, Alex Troncoso, Fred Fiesseler

*Short-listed for Informa Best Case Report*
262. Renal replacement in dabigatran intoxication
   Lotte CG Hoegberg, Anders Moeller, Morten Steensen, Jakob Stensballe

263. Lactate as a guide in nitrite treatment of hydrogen sulfide poisoning
   Chen Chun Kuei, Wu Shih Hao, Yu Jiun Hao, Chen Hsien Yi

264. Naloxone used to prevent intubation in a patient with severe hepatic encephalopathy
   Rana Biary, Sam Senturia, Mary Ann Howland, Robert S Hoffman, Lewis S Nelson,
   Brenna M Farmer, Jane M Prosser

265. On the phone medical dispatching of acutely self-poisoned patients: A three-year retrospective study
   Maxime Maignan, Anais Richard, Philippe Saviuc, Françoise Carpentier, Vincent Danel

266. Whole bowel irrigation indications in poison control centre overdose patients
   Richard Shih, Oliver Hung, Diane Calello, Steven Marcus, Bruce Ruck

Miscellaneous

267. Implementation and evaluation of high-fidelity simulation cases for the acutely poisoned patient: An inter-professional approach
   Daniel Repplinger, Thomas Kearney, Kent Olson, Craig Smollin

268. Rabies: are we aligned with the international and national guidelines?
   Marta Mazzoleni, Davide Lonati, Andrea Giampreti, Sarah Vecchio, Valeria M Petrolini,
   Eleonora Buscaglia, Luigi Manzo, Carlo A Locatelli

269. Medical practitioners and their poison
   Johann Grundlingh

^Poster discussion session (Friday 31 May)