The implementation of medical monitoring programs following potentially hazardous exposures: a medico-legal perspective


Context
Clinical toxicologists may be called upon to determine the appropriateness of medical monitoring following documented or purported exposures to toxicants in the occupational, environmental, and medical settings.

Methods
We searched the MEDLINE database using the Ovid® search engine for the following terms cross-referenced to the MeSH database: ("occupational exposures" OR "environmental exposures") AND ("physiologic monitoring" OR "population surveillance"). The titles and abstracts of the resulted articles were reviewed for relevance. We expanded our search to include non-peer-reviewed publications and gray literature and resources using the same terms as utilized in the MEDLINE search. There were a total of 48 relevant peer-reviewed and non-peer-reviewed publications. Publications excluded contained no information relevant to medical monitoring following potentially harmful toxicologic exposures, discussed only worker screening/surveillance and/or population biomonitoring, contained redundant
information, or were superseded by more recent information.

**Approaches to medical monitoring**
A consensus exists in the peer-reviewed medical literature, legal literature, and government publications that for medical monitoring to be a beneficial public health activity, careful consideration must be given to potential benefits and harms of the program. Characteristics of the exposure, the adverse human health effect, the screening test, and the natural history of the disease are important in determining whether an exposed population will reap a net benefit or harm from a proposed monitoring program.

**Broader interpretations of medical monitoring**
Some have argued that medical monitoring programs should not be limited to exposure-related outcomes but should duplicate general preventive medicine efforts to improve public health outcomes although an overall reduction of morbidity, mortality and disability by modifying correctable risk factors and disease conditions. This broader approach is inconsistent with the targeted approach advocated by the Agency for Toxic Substances and Disease Registry and the United States Preventive Services Task Force and the bulk of the peer-reviewed medical literature.

**Medical monitoring in legal contexts**
Numerous medical monitoring actions have been litigated. Legal rationales for allowing medical monitoring claims often incorporate some of the scientific criteria for the appropriateness of monitoring programs. In the majority of cases in which plaintiffs were awarded medical monitoring relief, plaintiffs were required to demonstrate both that the condition for which medical monitoring was sought could be detected early, and that early detection and treatment will improve morbidity and mortality. However, the treatment of medical monitoring claims varies significantly depending upon jurisdiction.

**Examples of large-scale, comprehensive medical monitoring programs**
Large-scale, comprehensive medical monitoring programs have been implemented, such as the Fernald Medical Monitoring Program and the World Trade Center Health Program, both of which exceeded the scope of medical monitoring typically recommended in the peer-reviewed medical literature and the courts. The Fernald program sought to prevent death and disability due to non-exposure-related conditions in a manner similar to general preventive medicine. The World Trade Center Health Program provides comprehensive medical care for World Trade Center responders and may be viewed as a large-scale, federally-funded research effort, which distinguishes it from medical monitoring in a medico-legal context.

**Synthesis of public health approaches to medical monitoring**
Medical monitoring may be indicated following a hazardous exposure in limited circumstances. General causation for a specific adverse health effect must be either established by scientific consensus through a formal causal analysis using a framework such as the Bradford-Hill criteria. The exposure must be characterized and must be of sufficient severity that the exposed population has a significantly elevated risk of an adverse health effect. Monitoring must result in earlier detection of the condition than would otherwise occur and must confer a benefit in the form of primary, secondary or tertiary prevention. Outcome tables may be of use in describing the potential benefits and harms of a proposed monitoring program.

**Conclusions**
In the context of litigation, plaintiffs may seek medical monitoring programs after documented or putative exposures. The role of the clinical toxicologist, in this setting, is to evaluate the scientific justifications and medical risks and assist the courts in determining whether monitoring would be expected to result in a net public health benefit.

Full text available from: [http://dx.doi.org/10.1080/15563650.2017.1334913](http://dx.doi.org/10.1080/15563650.2017.1334913)
Massive paracetamol overdose: an observational study of the effect of activated charcoal and increased acetylcysteine dose (ATOM-2)


Context
Paracetamol is commonly taken in overdose, with increasing concerns that those taking "massive" overdoses have higher rates of hepatotoxicity and may require higher doses of acetylcysteine. The objective was to describe the clinical characteristics and outcomes of "massive" (≥ 40 g) paracetamol overdoses.

Methods
Patients were identified through the Australian Paracetamol Project, a prospective observational study through Poisons Information Centres in NSW and Queensland, over 3 and 1.5 years, respectively, and retrospectively from three clinical toxicology unit databases (over 2.5 to 20 years). Included were immediate-release paracetamol overdoses ≥ 40 g ingested over ≤ 8h. Outcomes measured included paracetamol ratio (defined as the ratio of the first paracetamol concentration taken 4–16 h post-ingestion to the standard (150 mg/L at 4 h) nomogram line at that time) and hepatotoxicity (ALT >1000 U/L).

Results
Two hundred paracetamol overdoses were analysed, reported median dose ingested was 50 g (interquartile range (IQR): 45–60 g) and median paracetamol ratio 1.9 (IQR: 1.4–2.9, n = 173). One hundred and ninety-three received acetylcysteine at median time of 6.3 h (IQR: 4–9.3 h) post-ingestion. Twenty-eight (14%) developed hepatotoxicity, including six treated within 8 h of ingestion. Activated charcoal was administered to 49(25%), at median of 2 h post-ingestion (IQR:1.5–5 h). Those receiving activated charcoal (within 4 h of ingestion), had significantly lower paracetamol ratio versus those who did not: 1.4 (n = 33, IQR: 1.1–1.6) versus 2.2 (n = 140, IQR: 1.5–3.0) (p < .0001) (paracetamol concentration measured ≥ 1 h after charcoal). Furthermore, they had lower rates of hepatotoxicity [unadjusted OR: 0.12 (95% CI: <0.001–0.91); adjusted for time to acetylcysteine OR: 0.20 (95%CI: 0.002–1.74)].

Seventy-nine had a paracetamol ratio ≥2, 43 received an increased dose of acetylcysteine in the first 21 h; most commonly a double dose in the last bag (100 to 200 mg/kg/16 h). Those receiving increased acetylcysteine had a significant decrease risk of hepatotoxicity [OR:0.27 (95% CI: 0.08–0.94)]. The OR remained similar after adjustment for time to acetylcysteine and paracetamol ratio.

Conclusion
Massive paracetamol overdose can result in hepatotoxicity despite early treatment. Paracetamol concentrations were markedly reduced in those receiving activated charcoal within 4 h. In those with high paracetamol concentrations, treatment with increased acetylcysteine dose within 21 h was associated with a significant reduction in hepatotoxicity.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1334915
The standard treatment protocol for paracetamol poisoning may be inadequate following overdose with modified release formulation: a pharmacokinetic and clinical analysis of 53 cases


Objective
The use of the standard procedure for managing overdoses with immediate release (IR) paracetamol is questionable when applied to overdoses with modified release (MR) formulations. This study describes the pharmacokinetics of paracetamol and the clinical outcomes following overdoses with a MR formulation.

Methods
Medical records including laboratory analyses concerning overdoses of MR paracetamol from 2009 to 2015 were collected retrospectively. Inclusion criteria were ingestion of a toxic dose, known time of intake and documented measurements of serum paracetamol and liver function tests. Graphical analysis, descriptive statistics and population pharmacokinetic modelling were used to describe data.

Results
Fifty-three cases were identified. Median age was 26 years (range 13–68), median dose was 20 g (range 10–166) and 74% were females. The pharmacokinetic analysis showed a complex, dose dependent serum versus time profile with prolonged absorption and delayed serum peak concentrations with increasing dose. Ten patients had persistently high serum levels for 24 h or more, six of them had a second peak 8–19 h after ingestion. Seven of 34 patients receiving N-acetylcysteine (NAC) within 8 h had alanine aminotransferase (ALT) above reference range. Three of them developed hepatotoxicity (ALT >1000 IU/l).

Discussion and conclusions
The pharmacokinetic and clinical analysis showed that the standard treatment protocol, including risk assessment and NAC regimen, used for IR paracetamol poisoning not appear suitable for MR formulation. Individual and tailored treatment may be valuable but further studies are warranted to determine optimal regimen of overdoses with MR formulation.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1339887

The toxicological significance of post-mortem drug concentrations in bile


Context
Some authors have proposed that post-mortem drug concentrations in bile are useful in estimating concentrations in blood. Both The International Association of Forensic Toxicologists (TIAFT) and the US Federal Aviation Administration recommend that samples of bile should be obtained in some circumstances. Furthermore, standard toxicological texts compare blood and bile concentrations, implying that concentrations in bile are of forensic value.

Aim
To review the evidence on simultaneous measurements of blood and bile drug concentrations reported in the medical literature.

Methods
We made a systematic search of EMBASE 1980–2016 using the search terms ("bile/" OR
"exp drug bile level/concentration/"") AND "drug blood level/concentration/", PubMed 1975-2017 for ("bile[tw]" OR "biliary[tw]" AND ("concentration[tw]" OR "concentrations[tw]" OR "level[tw]" OR "levels[tw]") AND "post-mortem[tw]" and also MEDLINE 1990–2016 for information on drugs whose biliary concentrations were mentioned in standard textbooks. The search was limited to human studies without language restrictions. We also examined recent reviews, indexes of relevant journals and citations in Web of Science and Google Scholar. We calculated the bile:blood concentration ratio. The searches together yielded 1031 titles with abstracts. We scanned titles and abstracts for relevance and retrieved 230, of which 161 were considered further. We excluded 49 papers because: the paper reported only one case (30 references); the data referred only to a metabolite (1); the work was published before 1980 (3); the information concerned only samples taken during life (10); or the paper referred to a toxin or unusual recreational drug (5). The remaining 112 papers provided data for analysis, with at least two observations for each of 58 drugs.

**Bile:blood concentration ratios**
Median bile:blood concentration ratios varied from 0.18 (range 0.058–0.32) for dextromoramide to 520 (range 0.62–43,000) for buprenorphine. Median bile concentrations exceeded blood concentrations by one order of magnitude for several drugs, including dihydrocodeine, quetiapine and sildenafil; and by two orders of magnitude of for buprenorphine, colchicine and 3,4-methylenedioxymethamphetamine (MDMA), among others. The minimum and maximum values for the ratio differed by a factor of three or more in three-quarters of the cases where data were available and by a factor of 10 or more for over half of the analytes.

**Limitations**
The data were difficult to find. Medline does not explicitly index the term "drug bile concentration". It may well be that other reports exist, although they would not alter our major conclusion. Many of the papers that contributed data failed to specify the source of the blood samples or the post-mortem interval, so that no judgment was possible regarding post-mortem redistribution in whole blood or bile.

**Conclusions**
For most drugs, there are wide ranges of bile:blood concentration ratios, which means that bile and blood concentrations are generally poorly correlated. Bile concentration measurements cannot readily be used to establish post-mortem blood concentrations; nor can they be extrapolated to ante-mortem concentrations. However, because drug concentrations in bile often exceed those in blood, bile may allow qualitative identification of drugs present, even when the blood concentration is below the limit of detection.

Full text available from: [http://dx.doi.org/10.1080/15563650.2017.1339886](http://dx.doi.org/10.1080/15563650.2017.1339886)

**Intraosseous administration of antidotes – a systematic review**

**Context**
Intraosseous (IO) access is an established route of administration in resuscitation situations. Patients with serious poisoning presenting to the emergency department may require urgent antidote therapy. However, intravenous (IV) access is not always readily available.

**Objective**
This study reviews the current evidence for IO administration of antidotes that could be used in poisoning. The primary outcome was mortality as a surrogate of efficacy. Secondary outcomes included hemodynamic variables, electrocardiographic variables, neurological
status, pharmacokinetics outcomes, and adverse effects as defined by each article.

Methods
A medical librarian created a systematic search strategy for Medline, subsequently translated to Embase, BIOSIS, PubMed, Web of Science, Cochrane, Database of Abstracts of Reviews of Effects (DARE), and the CENTRAL clinical trial register, all of which we searched from inception to 30 June 2016. Interventions included IO administration of selected antidotes. Articles included volunteer studies, poisoning, or other resuscitation contexts such as cardiac arrest, burns, dehydration, seizure, hemorrhagic shock, or undifferentiated shock. We considered all human studies and animal experiments to the exception of in vitro studies. Two reviewers independently selected studies, and a third adjudicated in case of disagreement. Three reviewers extracted all relevant data. Three reviewers evaluated the risk of bias and quality of the articles using specific scales according to each type of study design.

Results
A total of 47 publications (46 articles and one abstract) met our inclusion criteria and described IO administration of 13 different antidotes. These included one case series and 21 case reports describing 26 patients, and 25 animal experiments. Of those, seven human case reports and four animal experiments specifically reported the use of antidotes in poisoning. Human case reports suggested favorable outcomes with IO use of atropine, diazepam, hydroxocobalamin, insulin, lipid emulsion, methylene blue, phentolamine, prothrombin complex concentrate, and sodium bicarbonate. Clinical outcomes varied according to the antidote used. The only reported adverse event was ventricular tachycardia following IO naloxone. Regarding the animal experiments, IO administration of lipid emulsion and of hydroxocobalamin showed improved survival in bupivacaine-poisoned rats and in cyanide-intoxicated swine, respectively. Animal data also suggested an equivalent bio-availability between IO and IV administration for atropine, calcium chloride, dextrose 50%, diazepam, methylene blue, pralidoxime, and sodium bicarbonate. Adverse effect reporting of fat emboli after IO administration of sodium bicarbonate, for example, was conflicting due to the significant heterogeneity in the timing of lung examination across studies.

Conclusion
The evidence supporting the use of IO route for the administration of antidotes in a context of poisoning is scarce. The majority of the evidence consists of case reports and animal experiments. Common antidotes such as acetylcysteine, fomepizole, and digoxin-specific antibody fragments have not been studied or reported with the use of the IO route. Despite the low-quality evidence available, IO access is a potential option for antidotal treatments in toxicological resuscitation when IV access is unavailable.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1337122

Adverse events are rare after single-dose montelukast exposures in children
Arnold DH, Bowman N, Reiss TF, Hartert TV, Seger DL. Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1337123:

Study objective
Montelukast sodium is a leukotriene-receptor antagonist approved as a controller medication for chronic asthma and allergic rhinitis in children and adults. We sought to characterize adverse events associated with single montelukast exposures in children ages 5–17 years and to determine whether adverse events were dose related for all-dose and for ultra-high-dose (≥50 mg) exposures.
Methods
This is a retrospective analysis of data from the National Poison Data System for exposures that included montelukast in individuals aged 5–17 years for calendar years 2000–2016. Filters were applied to identify exposure events in which montelukast was the primary exposure and for which the exact or lowest-possible ingested dose was recorded. Characteristics of adverse events were examined using descriptive statistics and multivariable logistic models were used to examine whether associations of montelukast and adverse events were dose related.

Results
During the 17-year study period, there were 17,069 montelukast exposures available for analyses. Patients were median [interquartile range] age 7 (5, 9) years, and 10,907 (64%) male gender. Abdominal pain was the most common adverse event (0.23%). There were 618 ultra-high-dose exposures (≥50 mg). These patients had median age 6 (5, 8) years, and 347 (56%) male gender. Abdominal pain was the most common adverse event (1.46%). Increasing ingested dose was associated with abdominal pain (adjusted odds ratio, 1.01, 95% confidence interval 1.01, 1.02) after adjustment for age and gender. No serious or life-threatening events were reported.

Conclusions
Single-dose exposures of montelukast up to 445 mg are rarely associated with any adverse events and are not associated with serious or life-threatening adverse events in children aged 5-17 years.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1337123

Management of severe bupropion poisoning with intravenous lipid emulsion

Background
Bupropion toxicity is characterized by central nervous system and cardiovascular toxicity. Intravenous lipid emulsion (ILE) has been suggested as a treatment by some for the treatment of refractory bupropion toxicity. This recommendation is based largely on published case reports and cases presented at scientific meetings. The objective of this study is to characterize the outcomes of patients with suspected bupropion toxicity in which ILE was administered and the indications for its use.

Methods
Electronic records from one regional poison center were searched for intentional bupropion ingestions from 1 January 2009 through 31 December 2015. Cases in which ILE was administered or death was listed as the outcome were further analyzed.

Results
There were 1274 cases of suspected bupropion ingestion reported during the study period with 14 reported deaths. Nine cases of ILE administration were identified. Of these, four patients expired and five survived. One of the survivors had neurologic sequelae necessitating placement in a long-term care facility. Patient complications after ILE administration were common and included continued hypotension in 7 cases, recurrent seizures in 3 patients, ARDS in two patients, and renal failure in one patient.

Conclusions
The high mortality and complication rate after ILE in this study sample does not reflect the positive outcome benefit seen in previous published case reports. Further characterization of
the efficacy and complications of ILE in bupropion toxicity is needed.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1337909

**Self-identification of nonpharmaceutical fentanyl exposure following heroin overdose**


**Objective**
To compare user self-identification of nonpharmaceutical fentanyl exposure with confirmatory urine drug testing in emergency department (ED) patients presenting after heroin overdose.

**Methods**
This was a cross-sectional study of adult ED patients who presented after a heroin overdose requiring naloxone administration. Participants provided verbal consent after which they were asked a series of questions regarding their knowledge, attitudes and beliefs toward heroin and nonpharmaceutical fentanyl. Participants also provided urine samples, which were analyzed using liquid chromatography coupled to quadrupole time-of-flight mass spectrometry to identify the presence of fentanyl, heroin metabolites, other clandestine opioids, common pharmaceuticals and drugs of abuse.

**Results**
Thirty participants were enrolled in the study period. Ten participants (33%) had never required naloxone for an overdose in the past, 20 participants (67%) reported recent abstinence, and 12 participants (40%) reported concomitant cocaine use. Naloxone was detected in all urine drug screens. Heroin or its metabolites were detected in almost all samples (93.3%), as were fentanyl (96.7%) and its metabolite, norfentanyl (93.3%). Acetylfentanyl was identified in nine samples (30%) while U-47700 was present in two samples (6.7%). Sixteen participants self-identified fentanyl in their heroin (sensitivity 55%); participants were inconsistent in their qualitative ability to identify fentanyl in heroin.

**Conclusions**
Heroin users presenting to the ED after heroin overdose requiring naloxone are unable to accurately identify the presence of nonpharmaceutical fentanyl in heroin. Additionally, cutting edge drug testing methodologies identified fentanyl exposures in 96.7% of our patients, as well as unexpected clandestine opioids (like acetylfentanyl and U-47700).

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1339889

**Non-health care facility medication errors resulting in serious medical outcomes**


**Objective**
The objective of this study is to provide an epidemiologic analysis of medication errors occurring outside of health care facilities that result in serious medical outcomes (defined by the National Poison Database System as "moderate effect," "major effect," "death," or "death, indirect report").
**Methods**

National Poison Database System data from 2000 through 2012 were used for this retrospective analysis of non-health care facility medication errors.

**Results**

From 2000 through 2012, Poison Control Centers in the United States received data on 67,603 exposures related to unintentional therapeutic pharmaceutical errors that occurred outside of health care facilities that resulted in serious medical outcomes. The overall average rate of these medication errors was 1.73 per 100,000 population, and there was a 100.0% rate increase during the 13-year study period. Medication error frequency and rates increased for all age groups except children younger than 6 years of age. Medical outcome was most commonly reported as moderate effect (93.5%), followed by major effect (5.8%) and death (0.6%). Common types of medication errors included incorrect dose, taking or administering the wrong medication, and inadvertently taking the medication twice. The medication categories most frequently associated with serious outcomes were cardiovascular drugs (20.6%) (primarily beta blockers, calcium antagonists, and clonidine), analgesics (12.0%) (most often opioids and acetaminophen, alone and combination products), and hormones/hormone antagonists (11.0%) (in particular, insulin, and sulfonylurea).

**Conclusions**

This study analyzed non-health care facility medication errors resulting in serious medical outcomes. The rate of non-health care facility medication errors resulting in serious medical outcomes is increasing, and additional efforts are needed to prevent these errors.

Full text available from: [http://dx.doi.org/10.1080/15563650.2017.1337908](http://dx.doi.org/10.1080/15563650.2017.1337908)

**New legal requirements for submission of product information to poisons centres in EU member states**


**Introduction**

In the past eight years, the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) has been intensively involved in a European Commission led process to develop EU legislation on the information of hazardous products that companies have to notify to EU Poisons Centres (or equivalent "appointed bodies"). As a result of this process, the Commission adopted Regulation (EU) No 2017/542, amending the CLP Regulation by adding an Annex on harmonised product submission requirements.

**Harmonised mixture information requirements**

Detailed and consistent information on the composition of the hazardous product will become available to EU Poisons Centres (PC). The information will be submitted by companies to PCs (or equivalent "appointed bodies") using a web-based software application or in-house software. Two new important features are introduced. Firstly, to be able to rapidly identify the product formula, a Unique Formula Identifier (UFI) on the product label links to the submitted information. Secondly, for better comparability of reports on poisonings between EU member states, a harmonised Product Categorisation System will specify the intended use of a product. Rapid product identification and availability of detailed composition information will lead to timely and adequate medical intervention. This may lead to considerable reduction in healthcare costs. Additionally, for companies trading across the EU, costs of submission of this information will be reduced significantly.

**Next steps**

From 2017, an implementation period has started, consisting of a three-year period for stakeholders to implement the new requirements, followed by a gradual applicability for
consumer products (2020), professional products (2021) and industrial use-only products (2024). Technical tools to generate the electronic format and the UFI together with guidance documents are expected to be made available by the end of 2017 by the European Chemicals Agency (ECHA). Guidance on interpretation of legal text and ECHA helpdesk support are planned to be ready at the end of 2018.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1339888

Occupational chemical exposures: a collaboration between the Georgia Poison Center and the Occupational Safety and Health Administration


Context
In the United States, regional poison centers frequently receive calls about toxic workplace exposures. Most poison centers do not share call details routinely with governmental regulatory agencies. Worker health and safety could be enhanced if regulators such as the Occupational Safety and Health Administration (OSHA) had the ability to investigate these events and prevent similar incidents. With this goal in mind, the Georgia Poison Center (GPC) began referring occupational exposures to OSHA in July 2014.

Methods
GPC began collecting additional employer details when handling occupational exposure calls. When workers granted permission, GPC forwarded call details to the OSHA Regional Office in Atlanta. These referrals enabled OSHA to initiate several investigations. We also analyzed all occupational exposures reported to GPC during the study period to characterize the events, detect violations of OSHA reporting requirements, and identify hazardous scenarios that could form the basis for future OSHA rulemaking or guidance.

Results
GPC was informed about 953 occupational exposures between 1 July, 2014 and 7 January, 2016. Workers were exposed to 217 unique substances, and 70.3% of victims received treatment in a healthcare facility. Hydrogen sulfide was responsible for the largest number of severe clinical effects. GPC obtained permission to refer 89 (9.3%) calls to OSHA. As a result of these referrals, OSHA conducted 39 investigations and cited 15 employers for "serious" violations. OSHA forwarded several other referrals to other regulatory agencies when OSHA did not have jurisdiction. At least one employer failed to comply with OSHA's new rule that mandates reporting of all work-related hospitalizations. This collaboration increased OSHA's awareness of dangerous job tasks including hydrofluoric acid exposure among auto detailers and carbon monoxide poisoning with indoor use of gasoline-powered tools.

Conclusions
Collaboration with the GPC generated a useful source of referrals to OSHA. OSHA investigations led to abatement of existing hazards, and OSHA acquired new knowledge of occupational exposure scenarios.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1338718
Safety profile of snake antivenom (use) in Hong Kong – a review of 191 cases from 2008 to 2015
Mong R, Ng VCH, Tse ML. Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1334916:

Introduction
The mainstay of treatment for significant envenoming from snakebites is antivenom. However, there is insufficient data regarding the safety of antivenom used in Hong Kong. We describe the incidence of hypersensitivity reactions from antivenom use and review the frequency and reasons for intensive care unit (ICU) admission.

Methods
The Hong Kong Poisons Information Centre database was reviewed. All patients given snake antivenom between 2008 and 2015 were included. Patient demographics, species of snake involved, details of antivenom used, treatment location, use of pre-treatment, reasons for ICU admission (where applicable) and details of early and late antivenom reactions were extracted.

Results
There were 191 patients who received snake antivenom. Most (93%) were treated with either the green pit viper antivenom from Thailand or the Agkistrodon halys antivenom from China. The incidences of early hypersensitivity reactions to green pit viper antivenom and Agkistrodon Halys antivenom were 4.7% and 1.4%, respectively. Most patients (69%) were managed in the ED observation ward or general ward. There were 59 patients managed in ICU, most (90%) of whom were admitted for close monitoring during antivenom administration. There were no cases of significant morbidity from antivenom administration. Eight patients (5.6%) had features suggestive of mild serum sickness.

Conclusions
The incidence of immediate hypersensitivity reaction to antivenom commonly used in Hong Kong is low. Majority of patients were managed safely in the emergency department observation ward or general ward. Serum sickness appears to be uncommon and possible cases presented with mild features.

Full text available from: http://dx.doi.org/10.1080/15563650.2017.1334916

Individual variability of venom from the European adder (Vipera berus berus) from one locality in Eastern Hungary

Abstract and full text available from: http://dx.doi.org/10.1016/j.toxicon.2017.06.004

Cobalt toxicity in humans—A review of the potential sources and systemic health effects
Leyssens L, Vinck B, Van Der Straeten C, Wuyts F, Maes L. Toxicology 2017; 387: 43-56.

Abstract and full text available from: http://dx.doi.org/10.1016/j.tox.2017.05.015
Cases of acute mercury poisoning by mercury vapor exposure during the demolition of a fluorescent lamp factory
Abstract and full text available from: http://dx.doi.org/10.1186/s40557-017-0184-x

Distinct arsenic metabolites following seaweed consumption in humans
Abstract and full text available from: http://dx.doi.org/10.1038/s41598-017-03883-7

Pediatric jellyfish envenomation in the Mediterranean Sea
Abstract and full text available from: http://dx.doi.org/10.1097/MEJ.0000000000000479

Phosgene-induced acute lung injury (ALI): differences from chlorine-induced ALI and attempts to translate toxicology to clinical medicine
Abstract and full text available from: http://dx.doi.org/10.1186/s40169-017-0149-2
TOXICOLOGY
General
Brown NW.
Toxicology in clinical laboratories: challenging times.
Br J Biomed Sci 2017; online early.
doi: 10.1080/09674845.2017.1331521:
Surmaitis R, Khalid M, McKeever R, Vearrier D, Greenberg M.
The American Academy of Clinical Toxicology question of the day.
Dis Mon 2017; online early:
doi: 10.1016/j.disamonth.2017.03.005:
Vearrier D, Greenberg MI.
The implementation of medical monitoring programs following potentially hazardous exposures: a medico-legal perspective.
Clin Toxicol 2017; online early:
doi: 10.1080/15563650.2017.1334913:
Analytical toxicology
Interest of single hair analysis to document drug exposure: literature review and a case report involving zuclopenthixol.
Curr Pharm Des 2017; online early:
doi: 10.2174/1381612823666170622100443:
Bertol E, Vaiano F, Mari F, Di Milia MG, Bua S, Supuran CT, Carta F.
Return of the lysergamides. Part IV: Analytical and pharmacological characterization of lysergic acid morpholide (LSM-775).
Drug Test Anal 2017; online early:
doi: 10.1002/dta.2222:
Couchman L, Fisher DS, Subramaniam K, Handlea S, Boughtflower RJ, Benton CM, Flanagan R.
Ultra-fast LC-MS/MS in therapeutic drug monitoring: quantification of clozapine and norclozapine in human plasma.
Drug Test Anal 2017; online early:
doi: 10.1002/dta.2223:
Rapid determination of 9 aromatic amines in mainstream cigarette smoke by modified dispersive liquid liquid chromatography tandem mass spectrometry.
J Chromatogr A 2017; online early:
doi: 10.1016/j.chroma.2017.05.056:
Doucette ML, Frattaroli S, Vernick JS.
Oral fluid testing for marijuana intoxication: enhancing objectivity for roadside DUI testing.
Injury Prev 2017; online early:
doi: 10.1136/injuryprev-2016-042264:
Fabresse N, Allard J, Sardaby M, Thompson A, Clutton RE, Eddieston M, Alvarez J-C.
LC-MS/MS quantification of free and Fab-bound colchicine in plasma, urine and organs following colchicine administration and colchicine-specific Fab fragments treatment in Göttingen minipigs.
Identification and quantification of predominant metabolites of synthetic cannabinoid MAB-CHMINACA in an authentic human urine specimen.
Drug Test Anal 2017; online early:
doi: 10.1002/dta.2220:
An accurate and robust LC-MS/MS method for the quantification of chlorfenvinphos, ethion and linuron in liver samples.
An atmospheric pressure ionization MS/MS assay using online extraction for the analysis of 11 cannabinoids and metabolites in human plasma and urine.
Ther Drug Monit 2017; online early:
doi: 10.1097/FTD.0000000000000427:
Klepacki J, Davvari B, Boulet M, Liarrraga R, Christians U.
A high-throughput HPLC-MS/MS assay for the detection, quantification, and simultaneous structural confirmation of 136 drugs and metabolites in human urine.
Ther Drug Monit 2017; online early:
doi: 10.1097/FTD.0000000000000429:
Krotulski AJ, Mohr ALA, Papsun DM, Logan BK.
Metabolism of novel opioid agonists U-47700 and U-49900 using human liver microsomes with confirmation in authentic urine specimens from drug users.
Drug Test Anal 2017; online early:
doi: 10.1002/dta.2228:
Rapid identification of psychoactive drugs in drained gastric lavage fluid and whole blood specimens of drug overdose patients using ambient mass spectrometry.
Hair analysis for the detection of drug use-is there potential for evasion?
Hum Psychopharmacol 2017; online early:
doi: 10.1002/hup.2587:
Pasin D, Cawley A, Bidny S, Fu S.
Current applications of high-resolution mass spectrometry for the analysis of new psychoactive substances: a critical review.
Anal Bioanal Chem 2017; online early:
doi: 10.1007/s00216-017-0441-4:
Simultaneous quantification of methiocarb and its metabolites, methiocarb sulfoxide and methiocarb sulfone, in five food products of animal origin using tandem mass spectrometry.
Raso S, Bell S.
Qualitative analysis and detection of the pyrolytic products of JWH-018 and 11 additional synthetic cannabinoids in the presence of common herbal smoking substrates.
J Anal Toxicol 2017; online early:
doi: 10.1093/jat/bbx039:

Salem SA, Gurung S, Maiti A. Urine fluorescence in antifreeze poisoning. BMJ Case Rep 2017; doi: 10.1136/bcr-2017-221373:


Söderberg C, Wernvik E, Jönsson AK, Druid H. Opioids in postmortem cases by UHPLC-ion trap-MSn. Arch Toxicol 2017; doi: 10.1007/s00204-017-1962-5:


**Biomarkers**


**Carcinogenicity**


**Cardiotoxicity**


Moon JM, Chun BJ, Cho YS, Lee SD, Hong YJ, Shin MH, Jung EJ, Ryu HH. Cardiovascular effects and fatality may differ according to the formulation of glyphosate salt herbicide. Cardiovasc Toxicol 2017; online early: doi: 10.1007/s12012-017-9418-y:


Oun R, Rowan E. Cisplatin induced arrhythmia: electrolyte imbalance or disturbance of the SA node? Eur J Pharmacol 2017; online early: doi: 10.1016/j.ejphar.2017.05.063:


Takotsubo-like cardiomyopathy after loperamide overdose.
Am J Ther 2017; online early: doi: 10.1097/MJT.0000000000000595:

Psikin Ö, Aydin BG.
Effects of insulin-glucose pretreatment on bupivacaine cardiotoxicity in rats.
Hum Exp Toxicol 2017; doi: 10.1177/0960327117712384:

Riaz IB, Khan MS, Kamal MU, Supriya QAR, Riaz A, Zahid U, Bhattacherjee S.
Cardiac dysrhythmias associated with substitutive use of loperamide: a systematic review.
Am J Ther 2017; online early: doi: 10.1097/MJT.0000000000000585:

Rickner SS, Cao D, Kleinschmidt K, Fleming S.
A little “dab” will do ya’ in: a case report of neuro-and cardiotoxicity following use of cannabis concentrates.
Clin Toxicol 2017; doi: 10.1080/15563650.2017.1334914:

Schroeder I, Zoller M, Angstwurm M, Kur F, Frey L.
Cardiac dysrhythmias associated with anticoagulation.
Cutan Ocul Toxicol 2017; doi: 10.1080/15569527.2017.1295251:

Developmental toxicology
Cattani D, Cesconetto PA, Tavares MK, Parisotto EB, De Oliveira PA, Rieg CEH, Leite MC, Prediger RDS, Wendt NC, Razzera G, Filho DW, Zamoner A.
Developmental exposure to glyphosate-based herbicide and depressive-like behavior in adult offspring: implication of glutamatergic excitotoxicity and oxidative stress.
Toxicology 2017; online early: doi: 10.1016/j.tox.2017.06.001:

Venlafaxine intoxication with development of takotsubo cardiomyopathy: successful use of extracorporeal life support, intravenous lipid emulsion and CytoSorb®.
Int J Artif Organs 2017; doi: 10.5301/ijao.5000595:

Vo KT, Tabas JA, Smollin CG.
Alternating ventricular complexes after overdose from an herbal medication.

Zutter A, Hauri K, Evers KS, Uhde S, Fassi J, Reuthenbuech OT, Berse T, Kuhne M, Donner BC.
"Chaotic arrhythmia" during successful resuscitation after ingestion of yew (Taxus baccata) needles.
Pediatr Emerg Care 2017; doi: 10.1097/PEC.0000000000001196:

Dermal toxicity
Fuji Y.
Severe dermatitis might be caused by a reaction between nickel and palladium and dental amalgam resolved following removal of dental restorations.

Teo SL, Santosa A, Bigiardi PL.
Stevens-Johnson syndrome/toxic epidermal necrolysis overlap induced by fexofenadine.

Vu TT, Gooderham M.
Adverse drug reactions and cutaneous manifestations associated with anticoagulation.
J Cutan Med Surg 2017; doi: 10.1177/1203475417716364:

Brominated and phosphate flame retardants (FRs) in indoor dust from different microenvironments: implications for human exposure via dust ingestion and dermal contact.

Zheng Y, Chaudhari PR, Malbachi HI.
Allergic contact dermatitis from ophthalmics.
Ann Indian Acad Neurol 2017; doi: 10.1016/j.jtox.2017.06.001:

Sakhi AK, Sabaredzovic A, Cequier E, Thomsen C.
Phthalate metabolites in Norwegian mothers and children: levels, diurnal variation and use of personal care products.
Sci Total Environ 2017; doi: 10.1016/j.scitotenv.2017.09.041:

Piersma AH, Hessel EV, Staal YC.
Retinoic acid in developmental toxicology: teratogen, morphogen and biomarker.
Reprod Toxicol 2017; doi: 10.1016/j.reprotox.2017.05.014:

Sakhi AK, Sabaredzovic A, Cequier E, Thomsen C.
Developmental toxicology
Piersma AH, Hessel EV, Staal YC.
Retinoic acid in developmental toxicology: teratogen, morphogen and biomarker.
Reprod Toxicol 2017; doi: 10.1016/j.reprotox.2017.05.014:

Taney J, Anastasio H, Paternostro A, Berghella V, Roman A.
Placental abruption with delayed fetal compromise in maternal acetaminophen toxicity.
Obstet Gynecol 2017; doi: 10.1097/AOG.0000000000002089:

Neonatal exposure to environmental pollutants and placental mitochondrial DNA content: a multi-pollutant approach.
Environ Int 2017; doi: 10.1016/j.envint.2017.06.041:

Effects of maternal acrolein exposure during pregnancy on testicular testosterone production in fetal rats.
Driving under the influence of alcohol and other drugs

Doucette ML, Frattaroli S, Vernick JS.

Oral fluid testing for marijuana intoxication: enhancing objectivity for roadside DUI testing.

Injury Prev 2017; online early: doi: 10.1136/injuryprev-2016-042264:

Veitenheimer AM, Wagner JR.

Evaluation of oral fluid as a specimen for DUID.

J Anal Toxicol 2017; online early: doi: 10.1002/tta.2232:

Epidemiology

Darke S, Kaye S, Duflou J.

Rates, characteristics and circumstances of methamphetamine-related death in Australia: a national 7 year study.

Addiction 2017; online early: doi: 10.1111/add.13897:

Helmerhorst GTT, Teunis T, Janssen SJ, Ring D.

An epidemic of the use, misuse and overdose of opioids and deaths due to overdose, in the United States and Canada: is Europe next?

Bone Joint J 2017; 99-B: 856-64.

Kordrostami R, Akhgari M, Ameri M, Ghadipasha M, Aghakhani K.


Daru 2017; 25: 15.


Epidemiology of fentanyl-involved drug overdose deaths: a geospatial retrospective study in Rhode Island, USA.

Int J Drug Policy 2017; online early: doi: 10.1016/j.drugpo.2017.05.029:

Mong R, Ng VCH, Tse ML.

Safety profile of snake antivenom (use) in Hong Kong – a review of 191 cases from 2008 to 2015.

Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1334916:

Pedersen B, Ssemugabobo C, Nabankema V, Jers E.

Characteristics of pesticide poisoning in rural and urban settings in Uganda.

Environ Health Insights 2017; 11: 1178630217713015.

Rasimas JJ, Smolcic EE, Sinclair CM.

Themes and trends in intentional self-poisoning: perspectives from critical care toxicology.


Santos TRA, Silveira EA, Pereira LV, Provin MP, Lima DM, Amaral RG.


Geriatr Gerontol Int 2017; online early: doi: 10.1111/ggi.13070:

Stewart K, Cao Y, Hsu MH, Artigiani E, Wish E.


J Urban Health 2017; online early: doi: 10.1007/s11524-017-0177-7:

Tang Y, Zhang L, Pan J, Zhang Q, He T, Wu Z, Zhan J, Li Q.


Am J Public Health 2017; online early: doi: 10.2105/AJPH.2017.303841:


Amanita phalloides mushroom poisonings – Northern California, December 2016.


Childhood pesticide poisoning in Zhejiang, China: a retrospective analysis from 2006 to 2015.

BMC Public Health 2017; 17: 602.

Young SS, Smith RL, Lopiano KK.

Air quality and acute deaths in California, 2000–2012.

Regul Toxicol Pharmacol 2017; online early: doi: 10.1016/j.yrtph.2017.06.003:

Foreign body ingestion


Foreign body aspiration in children: a study of children who lived or died following aspiration.


Forensic toxicology

Chung H, Choe S.

Overview of forensic toxicology, yesterday, today and in the future.


The use of pesticides in Belgian illicit indoor cannabis plantations.


Da Broi U, Moreschi C, Colatutto A, Marcon B, Zago S.

Medico legal aspects of self-injection of metallic mercury in cases of suicide or self-harming.


Dwyer JB, Janssen J, Luckasevic TM, Williams KE.

Report of increasing overdose deaths that include acetyl fentanyl in multiple counties of the southwestern region of the commonwealth of Pennsylvania in 2015–2016.

Elliott SP, Fais P.
Further evidence for GHB naturally occurring in common non-alcoholic beverages.
Forensic Sci Int 2017; online early:
doi: 10.1016/j.forsciint.2017.05.012:

Ferner RE, Aronson JK.
The toxicological significance of post-mortem drug concentrations in bile.
Clin Toxicol 2017; online early:
doi: 10.1080/15563650.2017.1339886:

Gerace E, Bovetto E, Di Corcia D, Vincenti M, Salomone A.
A case of nonfatal intoxication associated with the recreational use of diphenidine.
J Forensic Sci 2017; online early:
doi: 10.1111/1556-4029.13355:

Gebultowicz J, Ruzycka M, Wroczynski P, Purser DA, Stec AA.
Analysis of fire deaths in Poland and influence of smoke toxicity.
Forensic Sci Int 2017; 277: 77-87.

Gilard-Pioc S, Guerard P, Paraf F, François-Purssell I.
Sudden death by spontaneous epiglottic hematoma secondary to high blood levels of warfarin.
J Forensic Sci 2017; online early:
doi: 10.1111/1556-4029.13384:

Guerrini D, Rapp E, Roman M, Thelander G, Kronstrand R.
Acrylfentanyl: another new psychoactive drug with fatal consequences.
Forensic Sci Int 2017; online early:
doi: 10.1016/j.forsciint.2017.05.010:

Hedlund J, Forsman J, Sturup J, Masterman T.
Psychotropic medications in Swedish homicide victims and offenders: a forensic-toxicological case-control study of adherence and recreational use.
J Clin Psychiatry 2017; online early:
doi: 10.1080/15563650.2017.274662:

Huestis MA, Brandt SD, Rana S, Auwärter V, Baumann MH.
Impact of novel psychoactive substances on clinical and forensic toxicology and global public health.
Clin Chem 2017; online early:
doi: 10.1373/clinchem.2017.274662:

Kordrostami R, Akhgari M, Ameri M, Ghadipasha M, Aghakhani K.
Daru 2017; 25: 15.

Labay LM, Catanese CA.
Illicit drug delivery via administration of human blood.
J Forensic Sci 2017; online early:
doi: 10.1111/1556-4029.13573:

Peters FT, Wissenbach DK, Busardo FP, Marchei E, Pichini S.
Method development in forensic toxicology.
Curr Pharm Des 2017; online early:
doi: 10.2174/138161282366617062211331:

Pragst F, Stiegitz K, Runge H, Runow K-D, Quig D, Osborne R, Runge C, Ariki J.
High concentrations of lead and barium in hair of the rural population caused by water pollution in the Thar Jath oilfields in South Sudan.

Sastre C, Bartoli C, Baillif-Couniou V, Leonetti G, Pelissier-Alicot AL.
Post mortem redistribution of drugs: current state of knowledge.
Curr Pharm Des 2017; online early:
doi: 10.2174/1381612823666170622111739:

Schmit G, De BE, Vanhaebest J, Capron A.
Bupropion overdose resulted in a pharmacobezoar in a fatal bupropion (Wellbutrin®) sustained-release overdose: postmortem distribution of bupropion and its major metabolites.
J Forensic Sci 2017; online early:
doi: 10.1111/1556-4029.13497:

Shintani-Ishida K, Saka K, Nakamura M, Yoshida K, Ikegaya H.
Experimental study on the postmortem redistribution of the substituted phenethylamine, 25B-NBOMe.
J Forensic Sci 2017; online early:
doi: 10.1111/1556-4029.13583:

Söderberg C, Wernvik E, Jönsson AK, Druid H.
Reference values of lithium in postmortem femoral blood.

Vearrier D, Greenberg MI.
The implementation of medical monitoring programs following potentially hazardous exposures: a medico-legal perspective.
Clin Toxicol 2017; online early:
doi: 10.1080/15563650.2017.1334913:

Yumoto T, Tsukahara K, Naito H, Iida A, Nakao A.
A successfully treated case of criminal thallium poisoning.

Genotoxicity
Park H, Hwang Y-H, Ma JY.
Acute toxicity and genotoxicity of fermented traditional medicine oyakosugi-san.

Hepatotoxicity
Toxic drug-induced liver failure during therapy of rheumatoid arthritis with tocilizumab subcutaneously: a case report.
Rheumatology (Oxford) 2017; online early:
doi: 10.1093/rheumatology/kex221:

A nationwide study of the incidence rate of herb-induced liver injury in Korea.
Arch Toxicol 2017; online early:
doi: 10.1007/s00204-017-2007-9:

Successful management of acute liver failure in Italian children: a 16-year experience at a referral centre for paediatric liver transplantation.
Dig Liver Dis 2017; online early:
doi: 10.1016/j.dld.2017.05.026:

Hayashi PH.

Kotsampasakou E, Montanari F, Ecker GF. Predicting drug-induced liver injury: the importance of data curation. Toxicology 2017; online early: doi: 10.1016/j.tox.2017.06.003:


Inhalation toxicity


Kinetics

Dave RA, Follman KE, Morris ME. γ-hydroxybutyric acid (GHB) pharmacokinetics and pharmacodynamics: semi-mechanistic and physiologically relevant PK/PD model. AAPS J 2017; online early: doi: 10.1208/s12248-017-0111-7:


Mechanisms of toxicity


Meyer JN, Chan SSL. Sources, mechanisms, and consequences of chemical-induced mitochondrial toxicity. Toxicology 2017; online early: doi: 10.1016/j.tox.2017.06.002:

Medication errors

Hodges NL, Spiller HA, Casavant MJ, Chounthirath T, Smith GA. Non-health care facility medication errors resulting in serious medical outcomes. Clin Toxicol 2017; online early:

Metabolism


Nephrotoxicity


Neurotoxicity


**Occupational toxicology**


Taxell P, Santonen T.


**Ocular toxicity**


**Paediatric toxicology**


Corr TE, Hollenbeak CS. The economic burden of neonatal abstinence syndrome in the United States.
Addiction 2017; online early: doi: 10.1111/add.13842:

Indoor exposure to volatile organic compounds in children: health risk assessment in the context of physiological development.

Seizures after pediatric vilazodone ingestion: a case series.
Pediatri Emerg Care 2017; online early: doi: 10.1097/PEC.0000000000001174:

High blood levels of lead in children aged 6-36 months in Kathmandu Valley, Nepal: a cross-sectional study of associated factors.

Successful management of acute liver failure in Italian children: a 16-year experience at a referral centre for paediatric liver transplantation.
Dig Liver Dis 2017; online early: doi: 10.1016/j.dld.2017.05.026:

Pediatric jellyfish envenomation in the Mediterranean Sea.
Eur J Emerg Med 2017; online early: doi: 10.1016/j.jjemer.2017.05.004:

Safety profile of cough and cold medication use in pediatrics.
Pediatrics 2017; 139: e20163070.

Grossman MR, Berkwitt AK, Osborn RR, Xu Y, Esserman DA, Shapiro ED, Bizzarro MJ.
An initiative to improve the quality of care of infants with neonatal abstinence syndrome.
Pediatrics 2017; 139: e20163360.

Heller NA, Logan BA, Morrison DG, Paul JA, Brown MS, Hayes MJ.
Neonatal abstinence syndrome: neurobehavior at 6 weeks of age in infants with or without pharmacological treatment for withdrawal.
Dev Psychobiol 2017; online early: doi: 10.1002/dev.21532:

Lai J, Chu J, Arnon R.
Pediatric liver transplantation for fulminant hepatic failure secondary to intentional iron overdose.
Pediatri Transplant 2017; online early: doi: 10.1111/petr.12994:

Masavkar SS, Mauskar A, Patwardhan G, Bhat V, Manglani MV.
Acquired methemoglobinemia – A sporadic Holi disaster.
Indian Pediatri 2017; 54: 473-5:

Miloslavsky M, Galler MF, Moawad I, Actis J, Cummings BM, El Saleeby CM.
The impact of pediatric-specific vancomycin dosing guidelines: a quality improvement initiative.
Pediatrics 2017; 139: e20162423.

Mohammad M, Saleem M, Mahseeri M, Alabdalla I, Alomari A, Za’atreh A, Qudaisat I, Shudifat A, Nasri Alzoubi M.
Foreign body aspiration in children: a study of children who lived or died following aspiration.

Safety profile of H1-antihistamines in pediatrics: an analysis based on data from VigiBase.
Pharmacoepidemiol Drug Saf 2017; online early: doi: 10.1002/pds.4246:

Perez-Maldonado IN, Ochoa-Martinez AC, Orta-Garcia ST, Ruiz-Vera T, Varela-Silva JA.
Concentrations of environmental chemicals in urine and blood samples of children from San Luis Potosi, Mexico.
Bull Environ Contam Toxicol 2017; online early: doi: 10.1007/s00128-017-2130-6:

Schröder C, Dörks M, Kollhorst B, Blenk T, Dittmann RW, Garbe E, Riedel O.
Extent and risks of antipsychotic off-label use in children and adolescents in Germany between 2004 and 2011.
J Child Adolesc Psychopharmacol 2017; online early: doi: 10.1089/cap.2016.0202:

Delirium and benzodiazepines associated with prolonged ICU stay in critically ill infants and young children.
Crit Care Med 2017; online early: doi: 10.1097/CCM.0000000000002515:

Toce MS, Stefater MA, Breault DT, Burns MM.
A case report of methadone-associated hypoglycemia in an 11-month-old male.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1338347:

Childhood pesticide poisoning in Zhejiang, China: a retrospective analysis from 2006 to 2015.
BMC Public Health 2017; 17: 602.

Yokel RA, Seger SE, Unrine JM.
Toxic and essential trace element content of commonly administered pediatric oral medications.

Poisons information and poison information centres
New legal requirements for submission of product information to poisons centres in EU member states.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1339888:

Psychiatric aspects
Chouinard G, Samaha A-N, Chouinard V-A, Peretti C-S, Kanahara N, Takase M, Iyo M.
Antipsychotic-induced dopamine supersensitivity psychosis: pharmacology, criteria, and therapy.

Ignacio Sandia S, Jorge Ramírez V, Javier Piñero A, Trino Baptista T.
Treating ‘devils breath’ intoxication: use of rivastigmine in six patients with toxic psychoses due to non pharmaceutical scopolamine.
Eur Neuropsychopharmacol 2017; online early: doi: 10.1016/j.euroneuro.2017.05.006:

Löfman S, Hakko H, Mainio A, Riipinen P.
Affective disorders and completed suicide by self-poisoning, trend of using antidepressants as a method of self-poisoning.
Psychiatry Res 2017; 255: 360-6.

Reprotoxicity
Rim K-T.
Reproductive toxic chemicals at work and efforts to protect workers’ health: a literature review.

Shin YJ, Choi JS, Ahn HK, Ryu HM, Kim MY, Han JY.
Pregnancy outcomes in women reporting ingestion of levsulpiride in early pregnancy.

Wiesner J, Knoss W.
Herbal medicinal products in pregnancy – which data are available?
Reprod Toxicol 2017; online early: doi: 10.1016/j.reprotox.2017.06.046:

Risk assessment
Indoor exposure to volatile organic compounds in children: health risk assessment in the context of physiological development.

Heibati B, Pollitt KJG, Karimi A, Yazdani CJ, Ducatman A, Shokrzadeh M, Mohammadyan M.
BTEX exposure assessment and quantitative risk assessment among petroleum product distributors.

Suicide
Da Broi U, Moreschi C, Colatutto A, Marcon B, Zago S.
Medico legal aspects of self-injection of metallic mercury in cases of suicide or self-harming.

Kordrostami R, Akhgar M, Ameri M, Ghadipasha M, Aghakhani K.
Daru 2017; 25: 15.

Löfman S, Hakko H, Mainio A, Riipinen P.
Affective disorders and completed suicide by self-poisoning, trend of using antidepressants as a method of self-poisoning.
Psychiatry Res 2017; 255: 360-6.

Muñoz NL, Buendia AB, Manterola FA.
Electrocardiographic changes after suicidal digoxin intoxication in a healthy woman.

Pfeifer P, Bartsch C, Hemmer A, Reisch T.
Acute and chronic alcohol use correlated with methods of suicide in a Swiss national sample.


Stone DM, Holland KM, Bartholow B, Logan J, McIntosh WL, Trudeau A, Rockett IRH.
Deciphering suicide and other manners of death associated with drug intoxication: a centers for disease control and prevention consultation meeting summary.

MANAGEMENT
General
Attilgan A, Islamoglu T, Howarth AJ, Hupp JT, Farha OK.
ACS Appl Mater Interfaces 2017; online early: doi: 10.1021/acsami.7b05494:

de Carvalho FO, Silva ÉR, Felipe FA, Teixeira LGB, Zago LBS, Nunes PS, Shamugam S, Serafini MR, de Souza Araújo AA.
Natural and synthetic products used for the treatment of smoke inhalation: a patent review.
Expert Opin Ther Pat 2017; online early: doi: 10.1080/13543776.2017.1339790:

Successful management of acute liver failure in Italian children: a 16-year experience at a referral centre for paediatric liver transplantation.
Dig Liver Dis 2017; online early: doi: 10.1016/j.dld.2017.05.026:

Clinical emergency treatment of 68 critical patients with severe organophosphorus poisoning and prognosis analysis after rescue.
Medicine (Baltimore) 2017; 96: e7237.

Chemical warfare agents detoxification properties of zirconium metal-organic frameworks by synergistic incorporation of nucleophilic and basic sites.
ACS Appl Mater Interfaces 2017; online early: doi: 10.1021/acsami.7b06341:

Laes JR, Olinger C, Cole JB.
Use of percutaneous left ventricular assist device (Impella) in vasodilatory poison-induced shock.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1335870:

Martel ML, Klein LR.
RE: A practical approach to the ethanol-intoxicated patient in the emergency department.

Rasimas JJ, Sinclair CM.
Assessment and management of toxidromes in the critical care unit.

Sabri A, Dabbous H, Dowli A, Barazi R.
The airway in inhalational injury: diagnosis and management.

Traub SJ, Saghaflian S, Buras MR, Temkit M.
Resource utilization in emergency department patients with known or suspected poisoning. J Med Toxicol 2017; online early: doi: 10.1007/s13181-017-0619-3:


**Antidotes**


**Acetylcysteine**


**Activated charcoal**


**Idarucizumab**


**Antivenom**


**Chelating agents**

Yajima Y, Kawaguchi M, Yoshikawa M, Okubo M, Tsukagoshi E, Sato K, Katakura A. The effects of 2,3-dimercaptosulfonic acid (DMPS) and meso-2,3-dimercaptosuccinic acid (DMSA) on the nephrotoxicity in the mouse during repeated cisplatin (CDDP) treatments. J Pharmacol Sci 2017; online early: doi: 10.1016/j.jphs.2017.05.006:

**Lipid emulsion therapy**


Hoeberg LCG, Gosselin S. Lipid resuscitation in acute poisoning: after a decade of publications, what have we really learned? Curr Opin Anaesthesiol 2017; online early: doi: 10.1097/ACO.0000000000000484:


**Naloxone**


McDonald R, Campbell ND, Strang J. Twenty years of take-home naloxone for the prevention of overdose deaths from heroin and other opioids–Conception and maturation. Drug Alcohol Depend 2017; 178: 176-87.

O'Halloran C, Cullen K, Njoroge J, Jessop L, Smith J, Hope V, Ncube F.
The extent of and factors associated with self-reported overdose and self-reported receipt of naloxone among people who inject drugs (PWID) in England, Wales and Northern Ireland.


Serdarevic M.
Potential issues with naloxone distribution in the community.


**Alpha ketoglutarate**
Sultana S, Talegaonkar S, Nishad DK, Mittal G, Ahmad FJ, Bhatnagar A.
Alpha ketoglutarate nanoparticles: a potentially effective treatment for cyanide poisoning.

Eur J Pharm Biopharm 2017; online early: doi: 10.1016/j.ejpb.2017.06.017:

**Calcium gluconate**
Yang K-W, Hung D-Z, Chang S-Y.
Splashed by a clear liquid.


**Epinephrine**
Safety of nebulized epinephrine in smoke inhalation injury.

J Burn Care Res 2017; online early: doi: 10.1097/BCR.0000000000000575:

**Extracorporeal treatments**
Ozaki T, Sofue T, Kuroda Y.
Severe glyphosate-surfactant intoxication successfully treated with continuous hemodiafiltration and direct hemoperfusion: case report.


Schroeder I, Zoller M, Angstwurm M, Kur F, Frey L.
Venlafaxine intoxication with development of takotsubo cardiomyopathy: successful use of extracorporeal life support, intravenous lipid emulsion and CytoSorb®.

Int J Artif Organs 2017; online early: doi: 10.5301/ijao.5000595:

**Gastric lavage**
Rapid identification of psychoactive drugs in drained gastric lavage fluid and whole blood specimens of drug overdose patients using ambient mass spectrometry.


**Herbal medicines**
Upasani SV, Beldar VG, Tatiya AU, Upasani MS, Surana SJ, Patil DS.
Ethnomedicinal plants used for snakebite in India: a brief overview.


**Insulin/glucose**
Piskin Ö, Aydin BG.
Effects of insulin+glucose pretreatment on bupivacaine cardiotoxicity in rats.

Hum Exp Toxicol 2017; online early: doi: 10.1177/0960327117712384:

**Ivabradine**
Ivabradine reduces digitalis-induced ventricular arrhythmias.

Basic Clin Pharmacol Toxicol 2017; online early: doi: 10.1111/bcpt.12829:

**Methylprednisolone**
Prolonged methylprednisolone therapy after the pulse treatment for patients with moderate-to-severe paraquat poisoning: a retrospective analysis.

Medicine (Baltimore) 2017; 96: e7244.

**Modafinil**
Dias VT, Vey LT, Rosa HZ, D’Avila LF, Silva Barcelos RC, Burger ME.
Could modafinil prevent psychostimulant addiction? An experimental study in rats.

Basic Clin Pharmacol Toxicol 2017; online early: doi: 10.1111/bcpt.12821:

**Naltrexone**
Healthcare utilization in adults with opioid dependence receiving extended release naltrexone compared to treatment as usual.

J Subst Abuse Treat 2017; online early: doi: 10.1016/j.jsat.2017.05.009:

**Opioid maintenance therapy**
Kelty E, Hulse G.
Fatal and non-fatal opioid overdose in opioid dependent patients treated with methadone, buprenorphine or implant naltrexone.


**Buprenorphine**
Chavoustie S, Frost M, Snyder O, Owen J, Darwish M, Dammerman R, Sanjurjo V.
Buprenorphine implants in medical treatment of opioid addiction.


**Methadone**
Leo RJ, Ghazi MA, Jaziri KS.
Methadone management of withdrawal associated with loperamide-related opioid use disorder.

J Addict Med 2017; online early: doi: 10.1097/ADM.0000000000000325:

**Rivastigmine**
Ignacio Sandia S, Jorge Ramirez V, Javier Pinoero A, Trino Baptista T.
Treating ‘devils breath’ intoxication: use of rivastigmine in six patients with toxic psychoses due to non-pharmaceutical scopolamine.

Eur Neuropsychopharmacol 2017; online early: doi: 10.1016/j.euroneuro.2017.05.006:

**Vitamin E**
Halvaei Z, Tehrani H, Soltaninejad K, Abdullahi M, Shadnia S.
Vitamin E as a novel therapy in the treatment of acute aluminum phosphate poisoning.


**DRUGS**
**General**
Chiavola A, Tedesco P, Boni MR.
Additive proarrhythmic effect of combined treatment with QT-prolonging agents.

Fudenberg R, Aronson JK.
The toxicological significance of post-mortem drug concentrations in bile.
Clin Toxicol 2017; online early:
doi: 10.1080/15563650.2017.1339886:

Drug-induced physeal abnormalities in preclinical toxicity studies.
Toxicol Pathol 2017; online early:
doi: 10.1177/0192623317713319:

Frazier KS.
Overview of causality assessment in drug-induced liver injury.

Hayashi PH.
Drug-induced liver injury.

Hume B, Gabella B, Hathaway J, Proescholdbell S, Sneddon C, Brutsche E, Hedin R, Drucker CJ.
Assessment of selected overdose poisoning indicators in health care administrative data in 4 states, 2012.
Public Health Rep 2017; online early:
doi: 10.1177/0033354917718061:

Irfan O, Gilani JA, Irshad A, Irfan B, Khan JA.
Pharmacological threat to lungs: a case series and literature review.
Cureus 2017; 9: e1232.

Kamboj AK, Spiller HA, Casavant MJ, Hodges NL, Chournthirath T, Smith GA.
Non-health care facility cardiovascular medication errors in the United States.
Ann Pharmacother 2017; online early:
doi: 10.1177/1060028017714271:

Klepacki J, Davari B, Boulet M, Lizarraque R, Christians U.
A high-throughput HPLC-MS/MS assay for the detection, quantification, and simultaneous structural confirmation of 136 drugs and metabolites in human urine.
Ther Drug Monit 2017; online early:
doi: 10.1097/FTD.0000000000000429:

Kotsampasakou E, Montanari F, Ecker GF.
Predicting drug-induced liver injury: the importance of data curation.
Toxicology 2017; online early:
doi: 10.1016/j.tox.2017.06.003:

Data-driven prediction of adverse drug reactions induced by drug-drug interactions.
BMC Pharmacol Toxicol 2017; 18: 44.

Hair analysis for the detection of drug use-is there potential for evasion?
Hum Psychopharmacol 2017; online early:
doi: 10.1002/hup.2587:

Mccuen K, Borlak J, Tong W, Chen M.
Associations of drug lipophilicity and extent of metabolism with drug-induced liver injury.

Molla F, Assen A, Abraha S, Masresha B, Gashaw A, Wandimu A, Belete Y, Melkam W.
Prescription drug use during pregnancy in southern Tigray region, North Ethiopia.

Nadesan K, Kumari C, Afiq M.
Dancing to death: a case of heat stroke.

Santos TRA, Silveira EA, Pereira LV, Provin MP, Lima DM, Amaral RG.
Geriatr Gerontol Int 2017; online early:
doi: 10.1111/ggi.13070:

Sastre C, Bartoli C, Bailliff-Couinou V, Leonetti G, Pelissier-Alicot AL.
Post mortem redistribution of drugs: current state of knowledge.
Curr Pharm Des 2017; online early:
doi: 10.2174/138162823666170622111739:

Stone DM, Holland KM, Bartholow B, Logan J, McIntosh WL, Trudeau A, Rockett IRH.
Dissecting suicide and other manners of death associated with drug intoxication: a centers for disease control and prevention consultation meeting summary.
Am J Public Health 2017; online early:
doi: 10.2105/AJPH.2017.303863:

Veitenheimer AM, Wagner JR.
Evaluation of oral fluid as a specimen for DUID.
J Anal Toxicol 2017; online early:
doi: 10.1093/jat/bkx036:

Yokel RA, Seger SE, Unrine J.
Toxic and essential trace element content of commonly administered pediatric oral medications.

Yu M.
Coping for medication-related poisoning and adverse effects.
Continuum (Minneap Minn) 2017; 23: e17-e19.

CSH guidelines for the diagnosis and treatment of drug-induced liver injury.
Hepatol Int 2017; 11: 221-41.

Zhang Z, Imperial MZ, Patlela-Vrana GI, Wedagedera J, Gaohua L, Unadkat JD.
Development of a novel maternal-fetal physiologically based pharmacokinetic model I: insights into factors that determine fetal drug exposure through simulations and sensitivity analyses.
Drug Metab Dispos 2017; online early:
doi: 10.1124/dmd.117.075192:

Zheng Y, Chaudhari PR, Malbach HI.
Allergic contact dermatitis from ophthalmics.
Cutan Ocul Toxicol 2017; online early: doi: 10.1080/15569527.2017.1295251:

**Acetaminophen (see paracetamol)**

**Amfetamines and MDMA (ecstasy)**
Darke S, Kaye S, Duflou J.
Rates, characteristics and circumstances of methamphetamine-related death in Australia: a national 7 year study.
Addiction 2017; online early: doi: 10.1111/add.13897:

Flack A, Persons AL, Kousik SM, Napier TC, Moszczynska A.
Self-administration of methamphetamine alters gut biomarkers of toxicity.

Johansen A, McFadden LM.
The neurochemical consequences of methamphetamine self-administration in male and female rats.

**Anaesthetics**

**Bupivacaine**
Piskin O, Aydin BG.
Effects of insulin+glucose pretreatment on bupivacaine cardiotoxicity in rats.
Hum Exp Toxicol 2017; online early: doi: 10.1177/0960337117712384:

**Halothane**
Sensitivity and reliability of halothane-anaesthetized microminipigs to assess risk of drug-induced long QT syndrome.
Basic Clin Pharmacol Toxicol 2017; online early: doi: 10.1111/bcpt.12838:

**Lidocaine**
Hasan B, Asif T, Hasan M.
Lidocaine-induced systemic toxicity: a case report and review of literature.
Cureus 2017; 9: e1275.

**Antiarrhythmic drugs**

**Amiodarone**
Singh VK, Maheshwari V.
Acute respiratory distress syndrome complicated by amiodarone induced pulmonary fibrosis: don’t let your guard down.

**Antibiotics**

**Tilmicosin**
Oda SS, Derbahal AE.
Impact of diclofenac sodium on tilmicosin-induced acute cardiotoxicity in rats (tilmicosin and diclofenac cardiotoxicity).
Cardiovasc Toxicol 2017; online early: doi: 10.1007/s12012-017-9414-2:

**Vancomycin**
Jeffress MN.
The whole price of vancomycin: toxicities, troughs, and time.
Drugs 2017; online early: doi: 10.1007/s40265-017-0764-7:

Miloslavsky M, Galler MF, Moawad I, Actis J, Cummings BM, El Saleeby CM.
The impact of pediatric-specific vancomycin dosing guidelines: a quality improvement initiative.
Pediatrics 2017; 139: e20162423.

**Anticoagulants**

**Warfarin**
Gilard-Pioc S, Guerard P, Paraf F, François-Purssell I.
Sudden death by spontaneous epiglottic hematoma secondary to high blood levels of warfarin.

**Anticonvulsants**

**Carbamazepine**
Jose M, Sreelatha HV, James MV, Arumughan S, Thomas SV.
Teratogenic effects of carbamazepine in mice.

**Phenytoin**
Gupta A, Yek C, Hendler RS.
Phenytoin toxicity.

**Valproate**
Caruana Galizia E, Isaacs JD, Cock HR.
Non-hyperammonaemic valproate encephalopathy after 20 years of treatment.
Epilepsy Behav Case Rep 2017; 8: 9-11.

Murru A, Torra M, Callari A, Pacchiarotti I, Romero S, Gonzalez de la Presa B, Varo C, Goikolea JM, Pérez-Sola V, Vieta E, Colom F.
A study on the bioequivalence of lithium and valproate salivary and blood levels in the treatment of bipolar disorder.
Eur Neuropsychopharmacol 2017; online early: doi: 10.1016/j.euroneuro.2017.06.003:

**Antidepressants**

Löfman S, Hakko H, Mainio A, Ripinen P.
Affective disorders and completed suicide by self-poisoning, trend of using antidepressants as a method of self-poisoning.
Psychiatry Res 2017; 255: 360-6.

Bupropion
Chhabra N, DesLauriers C, Wahl M, Bryant SM.
Management of severe bupropion poisoning with intravenous lipid emulsion.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1337909:

Schmit G, De BE, Vanhaeぼst J, Capron A.
Bupropion overdose resulted in a pharmacobezoar in a fatal bupropion (Wellbutrin®) sustained-release overdose: postmortem distribution of bupropion and its major metabolites.

Vilazodone
Seizures after pediatric vilazodone ingestion: a case series.
Pediatr Emerg Care 2017; online early: doi: 10.1097/PEC.0000000000001174:

Antiemetics
Samavati R, Ducza E, Hajagos-Tóth J, Gaspar R.
Herbal laxatives and antiemetics in pregnancy.
Reprod Toxicol 2017; online early: doi: 10.1016/j.reprotox.2017.06.041:

Antifungal drugs
Voriconazole
Andersen CU, Senderskov LD, Bendstrup E, Voldby N, Cass L, Ayrton J, Hillberg O.
Voriconazole concentrations in plasma and epithelial lining fluid after inhalation and oral treatment.

Voriconazole-induced QT prolongation among hematopoietic patients: clinical characteristics and risk factors.

Antihistamines
Motola D, Donati M, Biagi C, Calamelli E, Cipriani F, Melis M, Monaco L, Vaccheri A, Ricci G.
Safety profile of H1-antihistamines in pediatrics: an analysis based on data from VigiBase.
Pharmacoepidemiol Drug Saf 2017; online early: doi: 10.1002/pds.4246:

Fexofenadine
Teo SL, Santosa A, Bigiardi PL.
Stevens-Johnson syndrome/toxic epidermal necrolysis overlap induced by fexofenadine.

Antihypertensive drugs
Hsieh M-T, Lin P-Y, Tsai C-J, Chang C-C, Lee Y.
Tardive akathisia related to the anti-hypertensive agent Sevikar-a case report.

Antimalarial drugs
Bitta MA, Kariuki SM, Mwita C, Gwer S, Mwai L, Newton CRJC.
Antimalarial drugs and the prevalence of mental and neurological manifestations: a systematic review and meta-analysis.

Antineoplastic drugs
Cisplatin
Oun R, Rowan E.
Cisplatin induced arrhythmia; electrolyte imbalance or disturbance of the SA node?
Eur J Pharmacol 2017; online early: doi: 10.1016/j.ejphar.2017.05.063:

Yajima Y, Kawaguchi M, Yoshikawa M, Okubo M, Tsukagoshi E, Sato K, Katakura A.
The effects of 2,3-dimercapto-1-propanesulfonic acid (DMPS) and meso-2,3-dimercaptosuccinic acid (DMSA) on the nephrotoxicity in the mouse during repeated cisplatin (CDDP) treatments.
J Pharmacoel Sci 2017; online early: doi: 10.1016/j.jphs.2017.05.006:

Oxaliplatin
Pulvers JN, Marx G.
Factors associated with the development and severity of oxaliplatin-induced peripheral neuropathy: a systematic review.
Asia Pac J Clin Oncol 2017; online early: doi: 10.1111/ajco.12694:

Antipsychotics
Chouinard G, Samaha A-N, Chouinard V-A, Peretti C-S, Kanahara N, Takase M, Iyo M.
Antipsychotic-induced dopamine supersensitivity psychosis: pharmacology, criteria, and therapy.

Schröder C, Dörks M, Kollhorst B, Blenk T, Dittmann RW, Garbe E, Riedel O.
Extent and risks of antipsychotic off-label use in children and adolescents in Germany between 2004 and 2011.
J Child Adolesc Psychopharmacol 2017; online early: doi: 10.1089/cap.2016.0202:

Clozapine
Couchman L, Fisher DS, Subramaniam K, Handley SA, Boughtflower RJ, Benton CM, Flanagan RJ.
Ultra-fast LC-MS/MS in therapeutic drug monitoring: quantification of clozapine and norclozapine in human plasma.
Drug Test Anal 2017; online early: doi: 10.1002/dta.2223:

Levosulpiride
Shin YJ, Choi JS, Ahn HK, Ryu HM, Kim MY, Han JY.
Pregnancy outcomes in women reporting ingestion of levosulpiride in early pregnancy.

Zuclopenthixol
Interest of single hair analysis to document drug exposure: literature review and a case report involving zuclopenthixol.
**Antitussives**
Safety profile of cough and cold medication use in pediatrics.
Pediatrics 2017; 139: e20163070.

**Dextromethorphan**
Dilich A, Girgis C.
Robo-tripping: a case of robitussin abuse in a methadone maintenance patient.
Psychosomatics 2017; online early: doi: 10.1016/j.psym.2017.03.010:

**Anxiolytic**

**Phenibut**
Joshi YB, Friend SF, Jimenez B, Steiger LR.
Dissociative intoxication and prolonged withdrawal associated with phenibut: a case report.
J Clin Psychopharmacol 2017; online early: doi: 10.1097/JCP.0000000000000731:

**Apixaban**
Latuga N.
Re: Drug-drug interactions between methadone and apixaban.

**Baclofen**
Issa SY, Hafez EM, El-Banna AS, Abdel Rahman SM, AlMazroua MK, El-Hamd MA.
Baclofen systemic toxicity: experimental histopathological and biochemical study.
Hum Exp Toxicol 2017; online early: doi: 10.1177/0960327117712369:

Miller JJ.
Baclofen overdose mimicking anoxic encephalopathy: a case report and review of the literature.

**Benzodiazepines**
High enhancer, downer, withdrawal helper: multifunctional nonmedical benzodiazepine use among young adult opioid users in New York City.

O'Brien PL, Karmell LH, Gokhale M, Kenneth Pack BS, Campopiano M, Zur J.
Prescribing of benzodiazepines and opioids to individuals with substance use disorders.

Delirium and benzodiazepine associated with prolonged ICU stay in critically ill infants and young children.
Crit Care Med 2017; online early: doi: 10.1097/CCM.0000000000002515:

**Nitrazepam**
Konishi K, Fukami T, Gotoh S, Nakajima M.
Identification of enzymes responsible for nitrazepam metabolism and toxicity in human.
Biochem Pharmacol 2017; online early: doi: 10.1016/j.bcp.2017.06.114:

**Caffeine**
Prenatal caffeine exposure induced high susceptibility to metabolic syndrome in adult female offspring rats and its underlying mechanisms.

**Cannabis (marijuana)**
The use of pesticides in Belgian illicit indoor cannabis plantations.

Doucette ML, Frattaroli S, Vernick JS.
Oral fluid testing for marijuana intoxication: enhancing objectivity for roadside DUI testing.
Injury Prev 2017; online early: doi: 10.1136/injuryprev-2016-042264:

An atmospheric pressure ionization MS/MS assay using online extraction for the analysis of 11 cannabinoids and metabolites in human plasma and urine.
Ther Drug Monit 2017; online early: doi: 10.1097/FTD.0000000000000427:

Rickner SS, Cao D, Kleinschmidt K, Fleming S.
A little “dab” will do ya’ in: a case report of neuro-and cardiotoxicity following use of cannabis concentrates.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1334914:

**Colchicine**
Fabresse N, Allard J, Sardaby M, Thompson A, Clutton RE, Eddeleston M, Alvarez J-C.
LC-MS/MS quantification of free and Fab-bound colchicine in plasma, urine and organs following colchicine administration and colchicine-specific Fab fragments treatment in Göttingen minipigs.

**Contraceptives**
Jödicke AM, Dahmke H, Damke B, Schäublin M, Kullak-Ublick GA, Weller S.
Severe injection site reactions after subcutaneous administration of Sayana©.
Swiss Med Wkly 2017; 147: w14432.

**Digoxin**
Muñoz NL, Buendia AB, Manterola FA.
Electrocardiographic changes after suicidal digoxin intoxication in a healthy woman.

Serin SO.
Neglected facts in digoxin intoxication.

**Eye drops**
Cristaldi M, Olivieri M, Lupo G, Anfuso CD, Pezzino S, Rusciano D.
N-hydroxymethylglycinate with EDTA is an efficient eye drop preservative with very low toxicity: an in vitro comparative study.
Cutan Ocul Toxicol 2017; online early: doi: 10.1080/15569527.2017.1347942:

**Gamma hydroxybutyrate**
Dave RA, Follman KE, Morris ME.
γ-hydroxybutyric acid (GHB) pharmacokinetics and pharmacodynamics: semi-mechanistic and physiologically relevant PK/PD model.
AAPS J 2017; online early: doi: 10.1208/s12248-017-0111-7:

Elliott SP, Fais P.
Further evidence for GHB naturally occurring in common non-alcoholic beverages.
Forensic Sci Int 2017; online early: doi: 10.1016/j.forsciint.2017.05.012:

Intoxication by gamma hydroxybutyrate and related analogues: clinical characteristics and comparison between pure intoxication and that combined with other substances of abuse.
Toxicol Lett 2017; online early: doi: 10.1016/j.toxlet.2017.05.030:

Morse BL, Chadha GS, Felmlee MA, Follman KE, Morris ME.
Effect of chronic γ-hydroxybutyrate (GHB) administration on GHB toxicokinetics and GHB-induced respiratory depression.

**Herbal medicines, ethnic remedies and dietary supplements**
A nationwide study of the incidence rate of herb-induced liver injury in Korea.
Arch Toxicol 2017; online early: doi: 10.1007/s00204-017-2007-9:

Fu Y, Si Z, Li P, Li M, Zhao H, Jiang L, Xing Y, Hong W, Ruan L, Wang J-S.
Acute psychoactive and toxic effects of *D. metel* on mice explained by 1H NMR based metabolomics approach.
Metab Brain Dis 2017; online early: doi: 10.1007/s11011-017-0389-9:

Lee JH, Yoon JH, Kim SS, Ma SK, Kim SW, Bae EH.
Panax ginseng induces toxic hepatitis and acute kidney injury.

Park H, Hwang Y-H, Ma JY.
Acute toxicity and genotoxicity of fermented traditional medicine *oyaksungji-san*.
Integr Med Res 2017; 6: 214-22:

Samavati R, Duzca E, Hajagos-Tóth J, Gaspar R.
Herbal laxatives and antiemetics in pregnancy.
Reprotox Toxicol 2017; online early: doi: 10.1016/j.reprotox.2017.06.041:

Vo KT, Tabas JA, Smollin CG.
Alternating ventricular complexes after overdose from an herbal medication.

Wiesner J, Knöss W.
Herbal medicinal products in pregnancy – which data are available?
Reprod Toxicol 2017; online early: doi: 10.1016/j.reprotox.2017.06.046:

Yang F, Dong X, Yin X, Wang W, You L, Ni J.
*Radin bupleuri*: a review of traditional uses, botany, phytochemistry, pharmacology, and toxicology.

Zhou M, Hong Y, Lin X, Shen L, Feng Y.
Recent pharmaceutical evidence on the compatibility rationality of traditional Chinese medicine.
J Ethnopharmacol 2017; 206: 363-75.

**Heroin (diacetylmorphine)**
Banta-Green CJ, Coffin PO, Schoeppe JA, Merrill JO, Whiteside LK, Ebersol AK.
Heroin and pharmaceutical opioid overdose events: emergency medical response characteristics.

Carroll JJ, Marshall BDL, Rich JD, Green TC.
Exposure to fentanyl-contaminated heroin and overdose risk among illicit opioid users in Rhode Island: a mixed methods study.
Int J Drug Policy 2017; online early: doi: 10.1016/j.drugpo.2017.05.023:

Self-identification of nonpharmaceutical fentanyl exposure following heroin overdose.
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1339889:

McDonald R, Campbell ND, Strang J.
Twenty years of take-home naloxone for the prevention of overdose deaths from heroin and other opioids-7 Conception and maturation.

Solis E, Jr., Cameron-Burr KT, Shabam Y, Kiyatkin EA.
Intravenous heroin induces rapid brain hypoxia and hyperglycemia that precede brain metabolic response.

Stewart K, Cao Y, Hsu MH, Artigiani E, Wish E.
J Urban Health 2017; online early: doi: 10.1007/s11524-017-0177-7:

Worley J.
A primer on heroin and fentanyl.
Hypoglycaemic drugs

**Metformin**

Nazer RJ, Alburikan KA. 
Metformin is not associated with lactic acidosis in patients with diabetes undergoing coronary artery bypass graft surgery: a case control study. 

Immunosuppressants

**Tocilizumab**

Toxic drug-induced liver failure during therapy of rheumatoid arthritis with tocilizumab subcutaneously: a case report. 
Rheumatology (Oxford) 2017; online early: doi: 10.1093/rheumatology/kex221:

Iron

Lai J, Chu J, Arnon R. 
Pediatric liver transplantation for fulminant hepatic failure secondary to intentional iron overdose. 
Pediatr Transplant 2017; online early: doi: 10.1111/petr.12994:

Ketamine

Pulseless ventricular tachycardia associated with chronic ketamine use. 

Laxatives

Samavati R, Ducza E, Hajagos-Tóth J, Gaspar R. 
Herbal laxatives and antiemetics in pregnancy. 
Reprod Toxicol 2017; online early: doi: 10.1016/j.reprotox.2017.06.041:

Levetiracetam

Agrawal A, Banergee A. 
A review of levetiracetam in neonates. 
Curr Drug Metab 2017; online early: doi: 10.2174/13892002002186666170607100054:

Lithium

Foulser P, Abbasi Y, Mathilakath A, Nilforooshan R. 
Do not treat the numbers: lithium toxicity. 
BMJ Case Rep 2017; doi: 10.1136/bcr-2017-220079:

Methylphenidate

Bjarnadottir GD, Johannsson M, Magnusson A, Rafnar BO, Sigurdsson E, Steingrimsson S, Asgrimsson V, Snorradottir I, Bragadottir H, Haraldsson HM. 
Methylphenidate disintegration from oral formulations for intravenous use by experienced substance users. 

Montelukast

Arnold DH, Bowman N, Reiss TF, Hartert TV, Seger DL. 
Adverse events are rare after single-dose montelukast exposures in children. 
Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1337123:

Nicotine

Cai H, Wang C. 
Graphical review: the redox dark side of e-cigarettes; exposure to oxidants and public health concerns. 
Prévôt N, de Oliveira F, Perinel-Ragey S, Basset T, Vergnon J-M, Pourchez J.
Nicotine delivery from the refill liquid to the aerosol via high-power e-cigarette device.

Nitrogen mustard
Helander A, Bradley M, Lapins J.
‘Is nitrogen mustard contamination responsible for the reported MT-45 toxicity?’ Reply from the authors.
Br J Dermatol 2017; online early: doi: 10.1111/bjd.15676:

Novel psychoactive substances
Assi S, Gulyamova N, Ibrahim K, Kneller P, Osselton D.
Profile, effects, and toxicity of novel psychoactive substances: a systematic review of quantitative studies.
Hum Psychopharmacol 2017; online early: doi: 10.1002/hup.2607:

Bäckberg M, Jönsson K-H, Helander A, Beck O.
Investigation of drug products received for analysis in the Swedish STRIDA project on new psychoactive substances.
Drug Test Anal 2017; online early: doi: 10.1002/2226:

Bertol E, Vaiano F, Mari F, Di Milia MG, Bua S, Supuran CT, Carta F.

Return of the lysergamides. Part IV: Analytical and pharmacological characterization of lysergic acid morpholide (LSM-775).
Drug Test Anal 2017; online early: doi: 10.1002/2222:

Elliott S, Sedefov R, Evans-Brown M.
Assessing the toxicological significance of new psychoactive substances in fatalities.
Drug Test Anal 2017; online early: doi: 10.1002/2225:

Gyarmathy VA, Péterfi A, Figeżyczki T, Kiss J, Medgyesi-Frank K, Posta J, Csorba J.
Diverted medications and new psychoactive substances—A chemical network analysis of discarded injecting paraphernalia in Hungary.

Huestis MA, Brandt SD, Rana S, Auwärter V, Baumann MH.
Impact of novel psychoactive substances on clinical and forensic toxicology and global public health.

Kapitány-Fövény M, Farkas J, Pataki PA, Kiss A, Horváth J, Urbán R, Demetrovics Z.
Novel psychoactive substance use among treatment-seeking opiate users: the role of life events and psychiatric symptoms.
Hum Psychopharmacol 2017; online early: doi: 10.1002/hup.2602:

Negre I, Galateanu B, Stan M, Balalau C, Dumitru MLB, Ozcağl E, Fenga C, Kovatsi L, Fragou D, Tsatsakis A.
Worldwide legislative challenges related to psychoactive drugs.

Palma-Conesa ÁJ, Ventura M, Galindo L, Fonseca F, Grifell M, Quintana P, Fornis I, Gil C, Farré M, Torrens M.
Something new about something old: a 10-year follow-up on classical and new psychoactive tryptamines and results of analysis.
J Psychoactive Drugs 2017; online early: doi: 10.1080/02791072.2017.1320732:

Passin D, Cawley A, Bidny S, Fu S.
Current applications of high-resolution mass spectrometry for the analysis of new psychoactive substances: a critical review.
Anal Bioanal Chem 2017; online early: doi: 10.1007/s00216-017-0441-4:

Thornton S, Lisbon D, Lin T, Gerona R.
Beyond ketamine and phencyclidine: analytically confirmed use of multiple novel arylcyclohexylamines.
J Psychoactive Drugs 2017; online early: doi: 10.1080/02791072.2017.1333660:

Wille SMR, Richeval C, Nachon-Phanithavong M, Gaulier JM, Di Fazio V, Humbert L, Samyn N, Allorge D.
Prevalence of new psychoactive substances and prescription drugs in the Belgian driving under the influence of drugs population.
Drug Test Anal 2017; online early: doi: 10.1002/2226:

Diphenidine
Gerase E, Bovetto E, Di Corcia D, Vincenti M, Salomone A.
A case of nonfatal intoxication associated with the recreational use of diphenidine.

Phenethylamines
Madsen GR, Petersen TS, Dalhoff KP.
NBOMe hallucinogenic drug exposures reported to the Danish Poison Information Centre.

Shintani-Ishida K, Saka K, Nakamura M, Yoshida K, Ikegaya H.
Experimental study on the postmortem redistribution of the substituted phenethylamine, 25B-NBOMe.

Złodkóvá M, Linhart I, Baliková M, Himl M, Dvůrácková V, Lhotková E, Pálenícek T.
Identification of three new phase II metabolites of a designer drug methylene formed in rats by N-demethylation followed by conjugation with dicarboxylic acids.
Xenobiotica 2017; online early: doi: 10.1080/00498254.2017.1349964:

Synthetic cannabinoids
Hum Psychopharmacol 2017; online early: doi: 10.1002/hup.2601:


Raso S, Bell S. Qualitative analysis and detection of the pyrolytic products of JWH-018 and 11 additional synthetic cannabinoids in the presence of common herbal smoking substrates. J Anal Toxicol 2017; online early: doi: 10.1093/jat/bkx039:

**Synthetic cathinones**


**Synthetic opioids**


**NSAIDs**


**Diclofenac**


**Opioids**


Helmerhorst GTT, Teunis T, Janssen SJ, Ring D. An epidemic of the use, misuse and overdose of opioids and deaths due to overdose, in the United States and Canada: is Europe next? Bone Joint J 2017; 99-B: 856-64.


Methadone


Toce MS, Stefater MA, Broalett DT, Burns MM. A case report of methadone-associated hypoglycemia in an 11-month-old male. Clin Toxicol 2017; online early:
**OxyContin**

Vosburg S, Haynes C, Besharat A, Green JL.


**Paracetamol (acetaminophen)**

Anon.


Castañeda-Arriaga R, Galano A.


Chiew AL, Isbister GK, Kirby KA, Page CB, Chan BSH, Buckley NA.

Massive paracetamol overdose: an observational study of the effect of activated charcoal and increased acetylcysteine dose (ATOM-2). Clin Toxicol 2017; online early; doi: 10.1080/15563650.2017.1334915:

Häkonsen H, Hedenurd T.


Nakamura N, Chang C-W, Yang X, Shi Q, Salminen WF, Suzuki A.


**Psychoactive drugs**

Hedlund J, Forsman J, Sturup J, Masterman T.


**Scopolamine**

Ignacio Sandía S, Jorge Ramírez V, Javier Piñero A, Trino Baptista T.

Treating 'devils breath' intoxication: use of rivastigmine in six patients with toxic psychoses due to non pharmaceutical scopolamine. Eur Neuropsychopharmacol 2017; online early: doi: 10.1016/j.euroneuro.2017.05.006:

**Silibinin**


Silibinin affects the pharmacokinetics of methadone in rats. Drug Test Anal 2017; online early: doi: 10.1002/dta.2235:

**SSRIs and SNRIs**

**Venlafaxine**

Schroeder I, Zoller M, Angstwurm M, Kur F, Frey L.


**Substance abuse**

Bjarnadottir GD, Johannsson M, Magnusson A, Rafnar BO, Sigurdsson E, Steingrimsson S, Asgrimson V, Snorradottir I, Bragadottir H, Haraldsson HM.


Carroll JJ, Marshall BDL, Rich JD, Green TC.

Exposure to fentanyl-contaminated heroin and overdose risk among illicit opioid users in Rhode Island: a mixed methods study. Int J Drug Policy 2017; online early: doi: 10.1016/j.drugpo.2017.05.023:

Cicero TJ, Ellis MS, Kasper ZA.


Dias VT, Vey LT, Rosa HZ, D’avila LF, Silva Barcelos RC, Burger ME.

Could modafinil prevent psychostimulant addiction? An experimental study in rats. Basic Clin Pharmacol Toxicol 2017; online early:
Tricyclic antidepressants

Amitriptyline


CHEMICAL INCIDENTS AND POLLUTION

Air pollution


Exhaust fumes


Pollution and hazardous waste

Neonatal exposure to environmental pollutants and placental mitochondrial DNA content: a multi-pollutant approach.

Water pollution
Chiavola A, Tedesco P, Boni MR.
Fate of selected drugs in the wastewater treatment plants (WWTPs) for domestic sewage.
Environ Sci Pollut Res Int 2017; online early: doi: 10.1007/s11356-017-9313-x:
Pragst F, Stiegelitz K, Runge H, Runow K-D, Quig D, Osborne R, Runge C, Ariki J.
High concentrations of lead and barium in hair of the rural population caused by water pollution in the Thar Jath oilfields in South Sudan.

CHEMICALS
General
The Committee for Recommendation of Occupational Exposure Limits, Japan Society for Occupational Health.
Occupational exposure limits for ethyleneglycol monobutyl ether, isopropanol, isopropyl acetate and propyleneimine, and classifications on carcinogenicity, occupational sensitizer and reproductive toxicant.
ADMET evaluation in drug discovery. 17. development of quantitative and qualitative prediction models for chemical-induced respiratory toxicity.
Mol Pharm 2017; online early: doi: 10.1021/acs.molpharmaceut.7b00317:
Meyer JN, Chan SSL.
Sources, mechanisms, and consequences of chemical-induced mitochondrial toxicity.
Toxicology 2017; online early: doi: 10.1016/j.tox.2017.06.002:
Associations between toxic and essential trace elements in maternal blood and fetal congenital heart defects.
Environ Int 2017; 106: 127-34.

Perez-Maldonado IN, Ochoa-Martinez AC, Orta-Garcia ST, Ruiz-Vera T, Varela-Silva JA.
Concentrations of environmental chemicals in urine and blood samples of children from San Luis Potosí, Mexico.
Bull Environ Contam Toxicol 2017; online early: doi: 10.1007/s00128-017-2130-6:

Rim K-T.
Reproductive toxic chemicals at work and efforts to protect workers’ health: a literature review.
Tustin AW, Jones A, Lopez GP, Ketcham GR, Hodgson MJ.
Occupational chemical exposures: a collaboration between the Georgia Poison Center and the Occupational Safety and Health Administration.

Acrolein
Kassem NOF, Kassem NO, Liles S, Zarth AT, Jackson SR, Daffa RM, Chatfield DA, Carmella SG, Hecht SS, Hovell MF.
Acrolein exposure in hookah smokers and non-smokers exposed to hookah tobacco secondhand smoke: implications for regulating hookah tobacco products.
Nicotine Tob Res 2017; online early: doi: 10.1093/ntr/ntx133:
Effects of maternal acrolein exposure during pregnancy on testicular testosterone production in fetal rats.

Alcohol (ethanol)
Karacanjojy IB, Jurica SA, Lasic D, Jurica K.
Facts about phthalate toxicity in humans and their occurrence in alcoholic beverages.
Martel ML, Klein LR.
RE: A practical approach to the ethanol-intoxicated patient in the emergency department.
Neufeld M, Lachenmeier DW, Walch SG, Rehm J.
The internet trade of counterfeit spirits in Russia – an emerging problem undermining alcohol, public health and youth protection policies?
F1000Res 2017; 6: 520:
Pfeifer P, Bartsch C, Hemmer A, Reisch T.
Acute and chronic alcohol use correlated with methods of suicide in a Swiss national sample.
Rosseheim ME, Thoms DL.
Estimated blood alcohol concentrations achieved by consuming supersized alcopops.
Spinola S, Maisto SA, White CN, Huddleston T.
Effects of acute alcohol intoxication on executive functions controlling self-regulated behavior.

Asbestos
Feder IS, Tischoff I, Theile A, Schmitz I, Merget R, Tannapfel A.
The asbestos fibre burden in human lungs: new insights into the chrysotile debate.

Boric acid
Vertoli U, Alessi M, Naso E, Naso A, Calb LA.
A very unique case of boric acid intoxication with very high-magnitude rhabdomyolysis.

Carbon dioxide
Understanding scuba diving fatalities: carbon dioxide concentrations in intra-cardiac gas.
Carbon monoxide
Jankowska D, Palabindala V, Salim SA.
Non-ST elevation myocardial infarction secondary to carbon monoxide intoxication.

Marchewka J, Gawlik I, Debiski G, Popiolek L, Marchewka W, Hydzik P.
Cardiological aspects of carbon monoxide poisoning.
Folia Med Cracow 2017; 57: 75-85.

Advanced neuroimaging of carbon monoxide poisoning.
Neuroradiol J 2017; online early: doi: 10.1177/1971400916689342:

Contrast media
Andreucci M, Faga T, Serra R, De Sarro G, Michael A.
Update on the renal toxicity of iodinated contrast drugs used in clinical medicine.

Dust
Dust exposure in workers from grain storage facilities in Costa Rica.
Int J Hyg Environ Health 2017; online early: doi: 10.1016/j.ijheh.2017.06.002:

Cyanide
Sultana S, Talegaonkar S, Nishad DK, Mittal G, Ahmad FJ, Bhatnagar A.
Alpha ketoglutarate nanoparticles: a potentially effective treatment for cyanide poisoning.
Eur J Pharm Biopharm 2017; online early: doi: 10.1016/j.ejpb.2017.06.017:

Dyes and pigments
Masavkar SS, Mauskar A, Patwardhan G, Bhat V, Manglani MV.
Acquired methemoglobinemia – A sporadic Holi disaster.
Indian Pediatr 2017; 54: 473-5.

E-cigarettes and e-liquids
Cai H, Wang C.
Graphical review: the redox dark side of e-cigarettes; exposure to oxidants and public health concerns.

Gubner NR, Pagano A, Tajima B, Gudysh J.
A comparison of daily versus weekly electronic cigarette users in treatment for substance abuse.

A novel hybrid tobacco product that delivers a tobacco flavour note with vapour aerosol (Part 1): Product operation and preliminary aerosol chemistry assessment.
Food Chem Toxicol 2017; online early: doi: 10.1016/j.fct.2017.05.022:

Ethylene glycol
Salem SA, Gurung S, Malti A.
Urine fluorescence in antifreeze poisoning.
BMJ Case Rep 2017; doi: 10.1136/bcr-2017-221373:

Flame retardants
Ali N, Shahzad K, Rashid MI, Shen H, Ismail IMI, Eqani SAMA.
Currently used organophosphate and brominated flame retardants in the environment of China and other developing countries (2000–2016).
Environ Sci Pollut Res 2017; online early: doi: 10.1007/s11356-017-9336-3:

Guzzonato A, Puype F, Harrad SJ.
Evidence of bad recycling practices: BFRs in children’s toys and food-contact articles.

Fragrance chemicals
RIFM fragrance ingredient safety assessment, 2-methyl-4(2,2,3-trimethyl-3-cyclopentenyl)butanol, CAS registry number 72089-08-8.
Food Chem Toxicol  2017; online early: doi: 10.1016/j.fct.2017.06.001:


RIFM fragrance ingredient safety assessment, 4-(3,4-methylenedioxyphenyl)-2-butane, CAS registry number 55418-52-5.

Food Chem Toxicol  2017; online early: doi: 10.1016/j.fct.2017.06.008:


RIFM fragrance ingredient safety assessment, 3-methylbutyl valerate, CAS registry number 2050-09-1.


RIFM fragrance ingredient safety assessment, methyl hexyl oxo cyclopentanone carboxylate, CAS registry number 37172-53-5.


RIFM fragrance ingredient safety assessment, isodecyl butylcyclohexanol, CAS registry number 13491-79-7.

Food Chem Toxicol  2017; online early: doi: 10.1016/j.fct.2017.05.062:


RIFM fragrance ingredient safety assessment, C7-9-branched alkyl esters, C8-rich, CAS registry number 108419-32-5.

Food Chem Toxicol  2017; online early: doi: 10.1016/j.fct.2017.05.066:

Hydrofluoric acid
Yang K-W, Hung D-Z, Chang S-Y.
Iodine
Lakhal K, Ehrmann S, Robert-Edan V.
Iodinated contrast medium renal toxicity: the phantom menace or much ado about nothing? Crit Care Med 2017; 45: e745-e746.

Isopropyl alcohol
Sharma A, Arrow JD.

Melamine
An L, Sun W.

Methanol
Rohani M, Munhoz RP, Haeri G.

Methylethylketone

Nanoparticles
Murugadoss S, Lison D, Godderis L, Van Den Brule S, Mast J, Brassinne F, Sebaihi N, Hoet PH.

Naphthalene
Human CYP2A13 and CYP2F1 mediate naphthalene toxicity in the lung and nasal mucosa of CYP2A13/2F1-humanized mice. Environ Health Perspect 2017; 125: 067004.

Octamethylcyclotetrasiloxane
Franzen A, Greene T, Van Landingham C, Gentry R.

Parabens

Petrol (gasoline) and petroleum oils
Hebati B, Polliott KJG, Karimi A, Yazdani CJ, Ducman A, Shokrzadeh M, Mohammadyan M.

Phthalates
Karakonji IB, Jurica SA, Lasic D, Jurica K.

Radiation

Retinoic acid
Piersma AH, Hessel EV, Staal YC.

Salt
Campbell NRC, Train EJ.

Silica
Murugadoss S, Lison D, Godderis L, Van Den Brule S, Mast J, Brassinne F, Sebaih N, Hoet PH.

Smoke
de Carvalho FO, Silva ÉR, Felipe FA, Teixeira LGB, Zago LBS, Nunes PS, Shamugam S, Serafini MR, de Souza Araújo AA.

Sodium bisulfite
Sodium hypochlorite
Nikpour S, Masoumi-Moghaddam E, Pazoki S, Hassanian-Moghaddam H, Zamani N.
Upper gastrointestinal endoscopic evaluation following household sodium hypochlorite ingestion.
J Burn Care Res 2017; online early: doi: 10.1097/BCR.0000000000000608:

Sucralose
Magnuson BA, Roberts A, Nestmann ER.
Critical review of the current literature on the safety of sucralose.
Food Chem Toxicol 2017; online early: doi: 10.1016/j.fct.2017.05.047:

Tobacco
Ali M, Jawad M.
Health effects of waterpipe tobacco use: getting the public health message just right.
Tob Use Insights 2017; 10: 1179173X17696055.

Rapid determination of 9 aromatic amines in mainstream cigarette smoke by modified dispersive liquid microextraction and ultraperformance convergence chromatography tandem mass spectrometry.
J Chromatogr A 2017; online early: doi: 10.1016/j.chroma.2017.05.056:

Kassem NOF, Kassem NO, Liles S, Zarth AT, Jackson SR, Daffa RM, Chatfield DA, Carmella SG, Hecht SS, Hovell MF.
Acreolein exposure in hookah smokers and non-smokers exposed to hookah tobacco secondhand smoke: implications for regulating hookah tobacco products.
Nicotine Tob Res 2017; online early: doi: 10.1093/ntr/ntx133:

A novel hybrid tobacco product that delivers a tobacco flavour note with vapour aerosol (Part 1): Product operation and preliminary aerosol chemistry assessment.
Food Chem Toxicol 2017; online early: doi: 10.1016/j.fct.2017.05.022:

Volatile organic compounds
Indoor exposure to volatile organic compounds in children: health risk assessment in the context of physiological development.

Water
Kashiura M, Sugiyama K, Hamabe Y.
Association between rapid serum sodium correction and rhabdomyolysis in water intoxication: a retrospective cohort study.

METALS
General
Intentional self-harm human poisoning with agricultural micronutrient foliar spray: from rural India of southern Karnataka.

Rehman K, Fatima F, Waheed I, Akash MSH.
Prevalence of exposure of heavy metals and their impact on health consequences.
J Cell Biochem 2017; online early: doi: 10.1002/jcb.26234:

Aluminium
Assunção JH, Malavolta EA, Gracitelli MEC, Filippi RZ, Ferreira AAN.
Multifocal osteonecrosis secondary to occupational exposure to aluminum.

Arsenic
Bencko V, Yan Li Foong F.
The history of arsenical pesticides and health risks related to the use of Agent Blue.

Relationship between arsenic and selenium in workers occupationally exposed to inorganic arsenic.

Barium
Pragst F, Steglitz K, Runge H, Runow K-D, Quig D, Osborne R, Runge C, Arik J.
High concentrations of lead and barium in hair of the rural population caused by water pollution in the Thar Jath oilfields in South Sudan.

Cadmium
Mallya R, Chatterjee PK, Vinodini NA, Chatterjee P, Mithra P.
Moringa oleifera leaf extract: beneficial effects on cadmium induced toxicities -a review.

Chromium
Serum protein expression profiling and bioinformatics analysis in workers occupationally exposed to chromium (VI).
Toxicol Lett 2017; online early: doi: 10.1016/j.toxlet.2017.05.026:

Cobalt
Leyszens L, Vinck B, Van Der Straeten C, Wuysts F, Maes L.
Cobalt toxicity in humans. A review of the potential sources and systemic health effects.
Toxicology 2017; 387: 43-56.

Iron
Lai J, Chu J, Amon R.
Pediatric liver transplantation for fulminant hepatic failure secondary to intentional iron overdose.
Pediatr Transplant 2017; online early: doi: 10.1111/petr.12994:

Welland JL, Sherrow LK, Jayant DA, Katz KD.
Chemical hand warmer packet ingestion: a case of elemental iron exposure.

Lead
Chan NCN, Chan KP.
Coarse basophilic stippling in lead poisoning.
Blood 2017; 129: 3270.

High blood levels of lead in children aged 6–36 months in Kathmandu Valley, Nepal: a cross-sectional study of associated factors.

Pragst F, Stieglitz K, Runge H, Runow K-D, Quig D, Osborne R, Runge C, Ariki J.
High concentrations of lead and barium in hair of the rural population caused by water pollution in the Thar Jath oilfields in South Sudan.

Sipahi H, Girgin G, Palabiyik SS, Tutkun E, Yilmaz ÖH, Baydar T.
Possible changes of new-generation inflammation markers with occupational lead exposure.
J Occup Health 2017; online early: doi: 10.1539/joh.16-0273-OA:

Tsi M-T, Huang S-Y, Cheng S-Y.
Lead poisoning can be easily misdiagnosed as acute porphyria and nonspecific abdominal pain.

Blood lead level is a positive predictor of uremic pruritus in patients undergoing hemodialysis.

Lithium
Foulser P, Abbasi Y, Mathilakath A, Nilforooshan R.
Do not treat the numbers: lithium toxicity.
BMJ Case Rep 2017; doi: 10.1136/bcr-2017-220079:

Permanent cerebellar degeneration after acute hyperthermia with non-toxic lithium levels: a case report and review of literature.
Cerebellum 2017; online early: doi: 10.1007/s12311-017-0868-3:

Manganese
Lee E-Y, Flynn MR, Lewis MM, Mailman RB, Huang X.
Welding-related brain and functional changes in welders with chronic and low-level exposure.
Neurotoxicology 2017; online early: doi: 10.1016/j.neuro.2017.06.011:

Mercury
Da Broi U, Moreschi C, Colatutto A, Marcon B, Zago S.
Medico legal aspects of self-injection of metallic mercury in cases of suicide or self-harming.

Da Silva-Junior FMR, Oleinski RM, Azevedo AES, Monroe KCMC, Dos Santos M, Da Silveira TB, De Oliveira AMN, Soares MCF, Da Silva Pereira T.
Vulnerability associated with "symptoms similar to those of mercury poisoning" in communities from Xingu River, Amazon basin.
Environ Geochem Health 2017; online early: doi: 10.1007/s10653-017-9993-7:

Do SY, Lee CG, Kim JY, Moon YH, Kim MS, Bae IH, Song HS.
Cases of acute mercury poisoning by mercury vapor exposure during the demolition of a fluorescent lamp factory.

Geier DA, Kern JK, Geier MR.
Increased risk for an atypical autism diagnosis following thimerosal-containing vaccine exposure in the United States: a prospective longitudinal case-control study in the Vaccine Safety Datalink.

Clin Toxicol 2017; online early: doi: 10.1080/15563650.2017.1338346:

Manganese
Lee E-Y, Flynn MR, Lewis MM, Mailman RB, Huang X.
Welding-related brain and functional changes in welders with chronic and low-level exposure.
Neurotoxicology 2017; online early: doi: 10.1016/j.neuro.2017.06.011:

Nickel
Fujii Y.
Severe dermatitis might be caused by a cross-reaction between nickel and palladium and dental amalgam resolved following removal of dental restorations.
Clin Case Rep 2017; 5: 795-800.

Palladium
Fujii Y.
Severe dermatitis might be caused by a cross-reaction between nickel and palladium and dental amalgam resolved following removal of dental restorations.
Clin Case Rep 2017; 5: 795-800.

Selenium
Relationship between arsenic and selenium in workers occupationally exposed to inorganic arsenic.

Thallium
Yumoto T, Tsukahara K, Naito H, Iida A, Nakao A.
A successfully treated case of criminal thallium poisoning.
PESTICIDES

General

The use of pesticides in Belgian illicit indoor cannabis plantations.

Knipe DW, Gunnell D, Eddleston M.
Preventing deaths from pesticide self-poisoning-learning from Sri Lanka’s success.

Pedersen B, Ssemugabo C, Nabankema V, Jørs E.
Characteristics of pesticide poisoning in rural and urban settings in Uganda.
Environ Health Insights 2017; 11: 1178630217713015.

Portier CJ, Clausing P.
Re: Tarazona et al. (2017): Glyphosate toxicity and carcinogenicity: a review of the scientific basis of the European Union assessment and its differences with IARC.
Arch Toxicol 2017; online early: doi: 10.1007/s00204-017-1962.5.

Agent blue
Bencko V, Yan Li Foong F.
The history of arsenical pesticides and health risks related to the use of Agent Blue.

Aluminium phosphide
Invasive mucormycosis in a case of aluminium phosphide poisoning.

Halvaei Z, Tehrani H, Soltaninejad K, Abdollahi M, Shadnia S.
Vitamin E as a novel therapy in the treatment of acute aluminium phosphide poisoning.

Bipyridyl herbicides
Prolonged methylprednisolone therapy after the pulse treatment for patients with moderate-to-severe paraquat poisoning: a retrospective analysis.
Medicine (Baltimore) 2017; 96: e7244.

Predictors of acute kidney injury after paraquat intoxication.
Oncotarget 2017; online early: doi: 10.18632/oncotarget.17975:

Carbamate insecticides
Methiocarb
Simultaneous quantification of methiocarb and its metabolites, methiocarb sulfoxide and methiocarb sulfone, in five food products of animal origin using tandem mass spectrometry.

Glyphosate
Cattani D, Cosconetto PA, Tavares MK, Parisotto EB, De Oliveira PA, Rieg CEH, Prediger RDS, Wendt NC, Razzer, G, Filho DW, Zamoner A.
Developmental exposure to glyphosate-based herbicide and depressive-like behavior in adult offspring: implication of glutamate excitotoxicity and oxidative stress.
Toxicology 2017; online early: doi: 10.1016/j.tox.2017.06.001:

Moon JM, Chun BJ, Cho YS, Lee SD, Hong YJ, Shin MH, Jung EJ, Ryu HH.
Cardiovascular effects and fatality may differ according to the formulation of glyphosate salt herbicide.
Cardiovasc Toxicol 2017; online early: doi: 10.1007/s12012-017-9418-y:

Ozaki T, Sofue T, Kuroda Y.
Severe glyphosate-surfactant intoxication successfully treated with continuous hemodiafiltration and direct hemoperfusion: case report.

Portier CJ, Clausing P.
Re: Tarazona et al. (2017): Glyphosate toxicity and carcinogenicity: a review of the scientific basis of the European Union assessment and its differences with IARC.
Arch Toxicol 2017; online early: doi: 10.1007/s00204-017-2009-7:

Indoxacarb
Yen C-K, Ku I-T, Chao C-M, Lai C-C.
Methemoglobinemia caused by indoxacarb poisoning.

Ivermectin
Dey S, Kurade NP, Khurana KL, Dan A.
Clinicobiochemical changes in ivermectin toxicity in Doberman pinscher pups.

Organophosphorus insecticides
General
Cequier E, Sakhi AK, Haug LS, Thomsen C.


**Chlorfenvinphos**

**Pyrethroid insecticides**
*General*

**Rodenticides**
*Bromadiolone*

**Thallium**

**CHEMICAL WARFARE, BIOLOGICAL WARFARE AND RIOT CONTROL AGENTS**
*Chemical warfare*  

**Mustard gas**


**Phosgene**

**PLANTS**
*Datura metel L. (Devil’s trumpet)*
Fu Y, Si Z, Li P, Li M, Zhao H, Jiang L, Xing Y, Hong W, Ruan L, Wang J-S. Acute psychoactive and toxic effects of *D. metel* on mice explained by ‘1H NMR based metabolomics approach. Metab Brain Dis 2017; online early: doi: 10.1007/s11011-017-0038-9:

**Digitalis spp. (Foxglove)**

**Gelsemium elegans (Heartbreak grass)**

**Mushrooms**

**Panax spp. (Ginseng)**

**Glycyrrhiza glabra (Liquorice)**

**Palicourea aeneofusca**

**Radix bupleuri (Chaihu)**
Yang F, Dong X, Yin X, Wang W, You L, Ni J.
Comparison of proteomic profiles of the venoms of two of the 'Big Four' snakes of India, the Indian cobra (Naja naja) and the common krait (Bungarus caeruleus), and analyses of their toxins. Toxicon 2017; 135: 33-42.


Crotalinae (Pit vipers)


Viperinae (True vipers)


INDEX

Acetaminophen .......................................................... 34
Acetylcysteine ........................................................... 23
Acrolein .................................................................. 26
Activated charcoal .................................................... 36
Activated charcoal .................................................... 23
Agent blue ............................................................... 42
Air pollution ............................................................. 35
Alcohol .................................................................... 36
Alpha ketoglutarate .................................................. 24
Aluminium .............................................................. 40
Aluminium phosphide .............................................. 42
Amfetamines ........................................................... 26
Amiodarone ............................................................ 26
Amirtriptiline .......................................................... 35
Anaethetics .............................................................. 26
Analytical toxicology ................................................ 13
Animals, general ...................................................... 44
Antiarrhythmic drugs ............................................... 26
Antibiotoics ............................................................. 26
Anticoagulants ........................................................ 26
Anticonvulsants ....................................................... 26
Antidepressants ....................................................... 26
Antidotes ................................................................. 23
Antiemetics ............................................................. 27
Antifungal drugs ....................................................... 27
Antihistamines ........................................................ 27
Antihypertensive drugs ............................................. 27
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimalarial drugs</td>
<td>27</td>
</tr>
<tr>
<td>Antineoplastic drugs</td>
<td>27</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>27</td>
</tr>
<tr>
<td>Antitussives</td>
<td>28</td>
</tr>
<tr>
<td>Antivenom</td>
<td>23</td>
</tr>
<tr>
<td>Anxiolytic</td>
<td>28</td>
</tr>
<tr>
<td>Apixaban</td>
<td>28</td>
</tr>
<tr>
<td>Arsenic</td>
<td>40</td>
</tr>
<tr>
<td>Asbestos</td>
<td>36</td>
</tr>
<tr>
<td>Baclofen</td>
<td>28</td>
</tr>
<tr>
<td>Barium</td>
<td>40</td>
</tr>
<tr>
<td>Bee stings</td>
<td>44</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>28</td>
</tr>
<tr>
<td>Biological warfare</td>
<td>43</td>
</tr>
<tr>
<td>Biomarkers</td>
<td>14</td>
</tr>
<tr>
<td>Bipyridyl herbicides</td>
<td>42</td>
</tr>
<tr>
<td>Boric acid</td>
<td>36</td>
</tr>
<tr>
<td>Bromadiolone</td>
<td>43</td>
</tr>
<tr>
<td>Bupivacaine</td>
<td>26</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>24</td>
</tr>
<tr>
<td>Bupropion</td>
<td>27</td>
</tr>
<tr>
<td>Cadmium</td>
<td>40</td>
</tr>
<tr>
<td>Caffeine</td>
<td>28</td>
</tr>
<tr>
<td>Calcium gluconate</td>
<td>24</td>
</tr>
<tr>
<td>Cannabis</td>
<td>28</td>
</tr>
<tr>
<td>Carbamate insecticides</td>
<td>42</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>36</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>36</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>37</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>14</td>
</tr>
<tr>
<td>Cardiotoxicity</td>
<td>14</td>
</tr>
<tr>
<td>Chaihu</td>
<td>43</td>
</tr>
<tr>
<td>Chelating agents</td>
<td>23</td>
</tr>
<tr>
<td>Chemical warfare, general</td>
<td>43</td>
</tr>
<tr>
<td>Chemicals, general</td>
<td>36</td>
</tr>
<tr>
<td>Chlorfenvinphos</td>
<td>43</td>
</tr>
<tr>
<td>Chromium</td>
<td>40</td>
</tr>
<tr>
<td>Ciguatera</td>
<td>44</td>
</tr>
<tr>
<td>Cisplatin</td>
<td>27</td>
</tr>
<tr>
<td>Clozapine</td>
<td>27</td>
</tr>
<tr>
<td>Cobalt</td>
<td>40</td>
</tr>
<tr>
<td>Colchicine</td>
<td>28</td>
</tr>
<tr>
<td>Contraceptives</td>
<td>28</td>
</tr>
<tr>
<td>Contrast media</td>
<td>37</td>
</tr>
<tr>
<td>Crotaline</td>
<td>44</td>
</tr>
<tr>
<td>Cyanide</td>
<td>37</td>
</tr>
<tr>
<td>Dabigatran</td>
<td>26</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>15</td>
</tr>
<tr>
<td>Dermal toxicity</td>
<td>15</td>
</tr>
<tr>
<td>Developmental toxicology</td>
<td>15</td>
</tr>
<tr>
<td>Devil's trumpet</td>
<td>43</td>
</tr>
<tr>
<td>Dextromethorphan</td>
<td>28</td>
</tr>
<tr>
<td>Diacetylmorphine</td>
<td>29</td>
</tr>
<tr>
<td>Diclofenac</td>
<td>32</td>
</tr>
<tr>
<td>Dietary supplements</td>
<td>29</td>
</tr>
<tr>
<td>Digitalis spp</td>
<td>43</td>
</tr>
<tr>
<td>Digoxin</td>
<td>28</td>
</tr>
<tr>
<td>Diphenidine</td>
<td>31</td>
</tr>
<tr>
<td>Driving under the influence</td>
<td>16</td>
</tr>
<tr>
<td>Drugs, general</td>
<td>24</td>
</tr>
<tr>
<td>Dust</td>
<td>37</td>
</tr>
<tr>
<td>Dyes and pigments</td>
<td>37</td>
</tr>
<tr>
<td>E-cigarettes and e-liquids</td>
<td>37</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>26</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>16</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>24</td>
</tr>
<tr>
<td>Ethanol</td>
<td>36</td>
</tr>
<tr>
<td>Ethnic remedies</td>
<td>37</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>37</td>
</tr>
<tr>
<td>Exhaust fumes</td>
<td>35</td>
</tr>
<tr>
<td>Extracorporeal treatments</td>
<td>24</td>
</tr>
<tr>
<td>Eye drops</td>
<td>28</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>33</td>
</tr>
<tr>
<td>Fexofenadine</td>
<td>27</td>
</tr>
<tr>
<td>Fish/marine poisoning</td>
<td>44</td>
</tr>
<tr>
<td>Flame retardants</td>
<td>37</td>
</tr>
<tr>
<td>Foreign body ingestion</td>
<td>16</td>
</tr>
<tr>
<td>Forensic toxicology</td>
<td>16</td>
</tr>
<tr>
<td>Forensics</td>
<td>43</td>
</tr>
<tr>
<td>Foxglove</td>
<td>43</td>
</tr>
<tr>
<td>Fragrance chemicals</td>
<td>37</td>
</tr>
<tr>
<td>Gamma hydroxybutyrate</td>
<td>29</td>
</tr>
<tr>
<td>Gasoline</td>
<td>39</td>
</tr>
<tr>
<td>Gastric lavage</td>
<td>24</td>
</tr>
<tr>
<td>Gelsemium, elegans</td>
<td>43</td>
</tr>
<tr>
<td>Genotoxicity</td>
<td>17</td>
</tr>
<tr>
<td>Ginseng</td>
<td>43</td>
</tr>
<tr>
<td>Glyceryl guaiac</td>
<td>43</td>
</tr>
<tr>
<td>Glycol</td>
<td>23</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>42</td>
</tr>
<tr>
<td>Halothane</td>
<td>26</td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>35</td>
</tr>
<tr>
<td>Heartbreak grass</td>
<td>43</td>
</tr>
<tr>
<td>Hepatotoxicity</td>
<td>17</td>
</tr>
<tr>
<td>Herbal medicines</td>
<td>24, 28</td>
</tr>
<tr>
<td>Heroin</td>
<td>29</td>
</tr>
<tr>
<td>Hydrofluoric acid</td>
<td>38</td>
</tr>
<tr>
<td>Hypoglycaemic drugs</td>
<td>30</td>
</tr>
<tr>
<td>Idarucizumab</td>
<td>23</td>
</tr>
<tr>
<td>Immunosuppressants</td>
<td>30</td>
</tr>
<tr>
<td>Indoxacarb</td>
<td>42</td>
</tr>
<tr>
<td>Inhalation toxicity</td>
<td>18</td>
</tr>
<tr>
<td>Insulin/glucose</td>
<td>24</td>
</tr>
<tr>
<td>Iodine</td>
<td>39</td>
</tr>
<tr>
<td>Iron</td>
<td>30, 40</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>39</td>
</tr>
<tr>
<td>Ivermectin</td>
<td>44</td>
</tr>
<tr>
<td>Jellyfish</td>
<td>44</td>
</tr>
<tr>
<td>Ketamine</td>
<td>30</td>
</tr>
<tr>
<td>Kinetics</td>
<td>18</td>
</tr>
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<td>Laxatives</td>
<td>30</td>
</tr>
<tr>
<td>Lead</td>
<td>40</td>
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<td>30</td>
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<td>27</td>
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</tr>
<tr>
<td>Lipid emulsion therapy</td>
<td>23</td>
</tr>
<tr>
<td>Liquorice</td>
<td>43</td>
</tr>
<tr>
<td>Lithium</td>
<td>30, 41</td>
</tr>
<tr>
<td>Loperamide</td>
<td>30</td>
</tr>
<tr>
<td>LSD</td>
<td>30</td>
</tr>
<tr>
<td>Management, general</td>
<td>30</td>
</tr>
<tr>
<td>Manganese</td>
<td>41</td>
</tr>
<tr>
<td>Marijuana</td>
<td>28</td>
</tr>
<tr>
<td>MDMA</td>
<td>26</td>
</tr>
<tr>
<td>Mechanisms</td>
<td>18</td>
</tr>
<tr>
<td>Medication errors</td>
<td>18</td>
</tr>
<tr>
<td>Melamine</td>
<td>39</td>
</tr>
<tr>
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<td>39</td>
</tr>
<tr>
<td>Methiocarb</td>
<td>42</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>39</td>
</tr>
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</tr>
<tr>
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</tr>
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<td>39</td>
</tr>
<tr>
<td>Metazoic acid</td>
<td>39</td>
</tr>
<tr>
<td>Metabolism</td>
<td>19</td>
</tr>
<tr>
<td>Metals, general</td>
<td>40</td>
</tr>
<tr>
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</tr>
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<td>Methadone</td>
<td>24, 33</td>
</tr>
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<td>39</td>
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<td>42</td>
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<td>Methylyethylketone</td>
<td>39</td>
</tr>
<tr>
<td>Methylphenidate</td>
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<tr>
<td>Methylprednisolone</td>
<td>24</td>
</tr>
<tr>
<td>Modafinil</td>
<td>24</td>
</tr>
<tr>
<td>Montelukast</td>
<td>30</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>30</td>
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<tr>
<td>Mustard gas</td>
<td>43</td>
</tr>
<tr>
<td>Naloxone</td>
<td>23</td>
</tr>
<tr>
<td>Naltrexone</td>
<td>24</td>
</tr>
<tr>
<td>Nanoparticles</td>
<td>39</td>
</tr>
</tbody>
</table>
Naphthalene ................................................................. 39
Nephrotoxicity .............................................................. 19
Neurotoxicity ................................................................. 19
Nickel ............................................................................. 41
Nicotine ........................................................................... 41
Nitrazepam ................................................................... 28
Nitrogen mustard .......................................................... 31
Novel psychoactive substances .................................... 31
NSAIDs ............................................................................ 32
Occupational toxicology ................................................ 20
Octamethylcyclotetrasiloxane ........................................... 39
Ocular toxicity ................................................................. 20
Opioid maintenance therapy .......................................... 24
Opioids ............................................................................ 32
Organophosphorus insecticides, general ....................... 42
Oxaliplatin ........................................................................ 27
Oxycontin ...................................................................... 34
Paediatric toxicology ...................................................... 20
Paicheura aeneofusca ..................................................... 43
Palladium ......................................................................... 41
Panax sps ......................................................................... 43
Parabens ........................................................................... 39
Paracetamol ..................................................................... 34
Pesticides and cancer ..................................................... 42
Pesticides, general .......................................................... 42
Petrol ............................................................................... 39
Pharmacobezoars .......................................................... 34
Phenethylamines .............................................................. 31
Phenibut .......................................................................... 28
Phenytoin ......................................................................... 26
Phosgene ......................................................................... 43
Phthalates ......................................................................... 39
Pit vipers ........................................................................... 44
Plants, general ................................................................. 43
Poison information centres ........................................... 21
Poisons information ........................................................ 21
Pollution .......................................................................... 35
Polychlorinated chemicals ............................................. 39
Psychiatric aspects .......................................................... 21
Psychoactive drugs .......................................................... 34
Pyrethroid insecticides, general ..................................... 43
Radiation ........................................................................... 39
Radix bupleuri ................................................................. 43
Reprotoxicity ................................................................. 22
Retinoic acid ................................................................. 39
Risk assessment ............................................................. 22
Rivastigmine ..................................................................... 24
Rodenticides ..................................................................... 43
Salt .................................................................................. 39
Snake bites ....................................................................... 44
Sodium hypochlorite ...................................................... 40
SSRIs and SNRIs ............................................................. 34
Substance abuse ............................................................. 34
Sucralose ......................................................................... 40
Suicide ............................................................................. 22
Synthetic cannabinoids ................................................... 31
Synthetic cathinones ....................................................... 32
Synthetic opioids ............................................................. 32
Taxus baccata ..................................................................... 44
Thallium ............................................................................ 41, 43
Tilmicosin ......................................................................... 26
Tobacco ............................................................................. 40
Tocilizumab ....................................................................... 30
Toxicology, general ........................................................ 13
Tricyclic antidepressants .................................................. 35
True vipers ........................................................................ 44
Valproate .......................................................................... 26
Vancomycin ....................................................................... 26
Venlafaxine ....................................................................... 34
Vilazodone ........................................................................ 27
Viperinae .......................................................................... 44
Vitamin E ........................................................................... 24
Volatile organic compounds .......................................... 40
Voriconazole ..................................................................... 27
Warfarin .......................................................................... 26
Water ................................................................................. 40
Water pollution ............................................................... 36
Yew .................................................................................. 44
Zuclopenthixol ................................................................. 27

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