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Selected Articles on New Psychoactive Substances (NPS) (July- December 2015)

Identification and characterisation

Identification and characterization of a novel cathinone derivative 1-(2,3-dihydro-1H-inden-5-yl)-2-phenyl-2-(pyrrolidin-1-yl)-ethanone seized by customs in Jersey, L. Bijlsma, B. Miserez, M. Ibáñez, C. Vicent, E. Guillamón, J. Ramsey and F. Hernández, *Forensic Toxicology*, **2015**, 34, 144-150, <http://dx.doi.org/10.1007/s11419-015-0299-0>

Quantitation of Synthetic Cannabinoids in Plant Materials Using High Performance Liquid Chromatography with UV Detection (Validated Method), L. A. Ciolino, *Journal of Forensic Sciences*, **2015**, 60, 1171-1181, <http://dx.doi.org/10.1111/1556-4029.12795>

Identification and characterization of α -PVT, α -PBT, and their bromothienyl analogs found in illicit drug products, T. Doi, A. Asada, A. Takeda, T. Tagami, M. Katagi, S. Matsuta, H. Kamata, M. Kawaguchi, Y. Satsuki, Y. Sawabe and H. Obana, *Forensic Toxicology*, **2015**, 34, 76-93, <http://dx.doi.org/10.1007/s11419-015-0288-3>

Identification and characterization of a new designer drug thiothionone in seized products, V. Gambaro, E. Casagni, L. Dell'Acqua, G. Roda, L. Tamborini, G. L. Visconti and F. Demartin, *Forensic Toxicology*, **2015**, 34, 174-178, <http://dx.doi.org/10.1007/s11419-015-0289-2>

4F-PBP (4-fluoro- α -pyrrolidinobutyrophenone), a new substance of abuse: Structural characterization and purity NMR profiling, H. Gaspar, S. Bronze, S. Ciríaco, C. R. Queirós, A. Matias, J. Rodrigues, C. Oliveira, C. Cordeiro and S. Santos, *Forensic Science International*, **252**, 168-176, <http://dx.doi.org/10.1016/j.forsciint.2015.05.003>

Rapid screening of 35 new psychoactive substances by ion mobility spectrometry (IMS) and direct analysis in real time (DART) coupled to quadrupole time-of-flight mass spectrometry (QTOF-MS), S. Gwak and J. R. Almirall, *Drug Testing and Analysis*, **2015**, 7, 884-893, <http://dx.doi.org/10.1002/dta.1783>

Differentiation of ring-substituted bromoamphetamine analogs by gas chromatography–tandem mass spectrometry, H. Inoue, S. Negishi, Y. Nakazono, Y. T. Iwata, K. Tsujikawa, O. Ohtsuru, K. Miyamoto, T. Yamashita and F. Kasuya, *Forensic Toxicology*, **2015**, 34, 125-132, <http://dx.doi.org/10.1007/s11419-015-0296-3>

Three 25-NBOMe-type drugs, three other phenethylamine-type drugs (25I-NBMD, RH34, and escaline), eight cathinone derivatives, and a phencyclidine analog MMXE, newly identified in ingredients of drug products before they were sold on the drug market, A. Kaizaki-Mitsumoto, N. Noguchi, S. Yamaguchi, Y. Odanaka, S. Matsubayashi, H. Kumamoto, K. Fukuhara, M. Funada, K. Wada and S. Numazawa, *Forensic Toxicology*, **2015**, 34, 108-114, <http://dx.doi.org/10.1007/s11419-015-0293-6>

CBL-2201. Report on a new designer drug: Napht-1-yl 1-(5-fluoropentyl)-1H-indole-3-carboxylate, A. A. Kondrasenko, E. V. Goncharov, K. P. Dugaev and A. I. Rubaylo, *Forensic Science International*, **257**, 209-213, <http://dx.doi.org/10.1016/j.forsciint.2015.08.023>

Identification and quantification of synthetic cannabinoids in “spice-like” herbal mixtures: update of the German situation for the spring of 2015, N. Langer, R. Lindigkeit, H.-M. Schiebel, U. Papke, L. Ernst and T. Beuerle, *Forensic Toxicology*, **2015**, 34, 94-107, <http://dx.doi.org/10.1007/s11419-015-0292-7>



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Identification and characterization of new designer drug 4-fluoro-PV9 and α -PHP in the seized materials, M. Majchrzak, M. Rojkiewicz, R. Celiński, P. Kuś and M. Sajewicz, *Forensic Toxicology*, 2015, 34, 115-124, <http://dx.doi.org/10.1007/s11419-015-0295-4>

Four types of cannabimimetic indazole and indole derivatives, ADB-BINACA, AB-FUBICA, ADB-FUBICA, and AB-BICA, identified as new psychoactive substances, Z. Qian, Z. Hua, C. Liu and W. Jia, *Forensic Toxicology*, 2015, 34, 133-143, <http://dx.doi.org/10.1007/s11419-015-0297-2>

A phenethylamine derivative 2-(4-iodo-2,5-dimethoxyphenyl)-N-[(3,4-methylenedioxyphenyl)methyl]ethanamine (25I-NB34MD) and a piperazine derivative 1-(3,4-difluoromethylenedioxybenzyl)piperazine (DF-MDBP), newly detected in illicit products, N. Uchiyama, R. Kikura-Hanajiri and T. Hakamatsuka, *Forensic Toxicology*, 2015, 34, 166-173, <http://dx.doi.org/10.1007/s11419-015-0304-7>

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Analysis in biological specimens

In vivo detection of the new psychoactive substance AM-694 and its metabolites, E. Bertol, F. Vaiano, M. G. D. Milia and F. Mari, *Forensic Science International*, 256, 21-27, <http://dx.doi.org/10.1016/j.forsciint.2015.07.018>

Quantification of six cannabinoids and metabolites in oral fluid by liquid chromatography-tandem mass spectrometry, N. A. Desrosiers, K. B. Scheidweiler and M. A. Huestis, *Drug Testing and Analysis*, 2015, 7, 684-694, <http://dx.doi.org/10.1002/dta.1753>

α -PVP (“flakka”): a new synthetic cathinone invades the drug arena, M. Katselou, I. Papoutsis, P. Nikolaou, C. Spiliopoulou and S. Athanaselis, *Forensic Toxicology*, 2015, 34, 41-50, <http://dx.doi.org/10.1007/s11419-015-0298-1>

Simultaneous Determination of 11 Illicit Phenethylamines in Hair by LC-MS-MS: In Vivo Application, M. Nieddu, L. Burrai, M. P. Demontis, M. V. Varoni, E. Baralla, C. Trignano and G. Boatto, *Journal of Analytical Toxicology*, 2015, 39, 532-537, <http://jat.oxfordjournals.org/content/39/7/532.abstract>

Application of a validated LC-MS/MS method for JWH-073 and its metabolites in blood and urine in real forensic cases, S. Ozturk, Y. E. Ozturk, O. Yeter and B. Alpertunga, *Forensic Science International*, 257, 165-171, <http://dx.doi.org/10.1016/j.forsciint.2015.08.013>

Detection of synthetic cathinones in victims of sexual assault, K. S. Hagan and L. Reidy, *Forensic Science International*, 257, 71-75, <http://dx.doi.org/10.1016/j.forsciint.2015.07.040>



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Metabolism / pharmacology studies

4-Methoxy- α -PVP: in silico prediction, metabolic stability, and metabolite identification by human hepatocyte incubation and high-resolution mass spectrometry, K. N. Ellefsen, A. Wohlfarth, M. J. Swortwood, X. Diao, M. Concheiro and M. A. Huestis, *Forensic Toxicology*, **2015**, 34, 61-75, <http://dx.doi.org/10.1007/s11419-015-0287-4>

In vitro and in vivo human metabolism of the synthetic cannabinoid AB-CHMINACA, C. Erratico, N. Negreira, H. Norouzizadeh, A. Covaci, H. Neels, K. Maudens and A. L. N. van Nuijs, *Drug Testing and Analysis*, **2015**, 7, 866-876, <http://dx.doi.org/10.1002/dta.1796>

Synthesis, characterization, and monoamine transporter activity of the new psychoactive substance 3',4'-methylenedioxy-4-methylaminorex (MDMAR), G. McLaughlin, N. Morris, P. V. Kavanagh, J. D. Power, B. Twamley, J. O'Brien, B. Talbot, G. Dowling, O. Mahony, S. D. Brandt, J. Patrick, R. P. Archer, J. S. Partilla and M. H. Baumann, *Drug Testing and Analysis*, **2015**, 7, 555-564, <http://dx.doi.org/10.1002/dta.1732>

Synthetic cannabimimetic agents metabolized by carboxylesterases, R. Thomsen, L. M. Nielsen, N. B. Holm, H. B. Rasmussen, K. Linnet and I. C. the, *Drug Testing and Analysis*, **2015**, 7, 565-576, <http://dx.doi.org/10.1002/dta.1731>

Identification of AKB-48 and 5F-AKB-48 Metabolites in Authentic Human Urine Samples Using Human Liver Microsomes and Time of Flight Mass Spectrometry, S. Vikingsson, M. Josefsson and H. Gréen, *Journal of Analytical Toxicology*, **2015**, 39, 426-435, <http://jat.oxfordjournals.org/content/39/6/426.abstract>

Pharmacology of Indole and Indazole Synthetic Cannabinoid Designer Drugs AB-FUBINACA, ADB-FUBINACA, AB-PINACA, ADB-PINACA, 5F-AB-PINACA, 5F-ADB-PINACA, ADBICA, and 5F-ADBICA, S. D. Banister, M. Moir, J. Stuart, R. C. Kevin, K. E. Wood, M. Longworth, S. M. Wilkinson, C. Beinat, A. S. Buchanan, M. Glass, M. Connor, I. S. McGregor and M. Kassiou, *ACS Chemical Neuroscience*, **2015**, 6, 1546-1559, <http://dx.doi.org/10.1021/acschemneuro.5b00112>

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Publications related to serious adverse events

Assessment of the stability of mephedrone in ante-mortem and post-mortem blood specimens, F. P. Busardò, C. Kyriakou, R. Tittarelli, G. Mannocchi, F. Pantano, A. Santurro, S. Zaami and G. Baglio, *Forensic Science International*, 256, 28-37, <http://dx.doi.org/10.1016/j.forsciint.2015.07.021>

Trends of novel psychoactive substances (NPSs) and their fatal cases, H. Chung, J. Lee and E. Kim, *Forensic Toxicology*, **2015**, 34, 1-11, <http://dx.doi.org/10.1007/s11419-015-0286-5>

Analysis of phenazepam and 3-hydroxyphenazepam in post-mortem fluids and tissues, M. L. Crichton, C. F. Shenton, G. Drummond, L. J. Beer, L. N. Seetohul and P. D. Maskell, *Drug Testing and Analysis*, **2015**, 7, 926-936, <http://dx.doi.org/10.1002/dta.1790>



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Death due to diabetic ketoacidosis: Induction by the consumption of synthetic cannabinoids?, C. Hess, S. Stockhausen, G. Kernbach-Wighton and B. Madea, *Forensic Science International*, 257, e6-e11, <http://dx.doi.org/10.1016/j.forsciint.2015.08.012>

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A review of ethylphenidate in deaths in east and west Scotland, C. Parks, D. McKeown and H. J. Torrance, *Forensic Science International*, 257, 203-208, <http://dx.doi.org/10.1016/j.forsciint.2015.08.008>

Case reports of synthetic cannabinoid XLR-11 associated fatalities, K. G. Shanks, D. Winston, J. Heidingsfelder and G. Behonick, *Forensic Science International*, 252, e6-e9, <http://dx.doi.org/10.1016/j.forsciint.2015.04.021>

Phenazepam: A review of medico-legal deaths in South Scotland between 2010 and 2014, K. Shearer, C. Bryce, M. Parsons and H. Torrance, *Forensic Science International*, 254, 197-204, <http://dx.doi.org/10.1016/j.forsciint.2015.07.033>