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PROGRAMME

IX international conference on novel psychoactive substances

24–26 October 2022

Panama City (hybrid event)

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Professor Francesco Botré, University of Lausanne

Conference website

www.novelpsychoactivesubstances.eu

Social media: #NPSPanama

Christian Vinante Giovannini, International Society for the Study of Emerging Drugs
Kathryn Robertson, European Monitoring Centre for Drugs and Drug Addiction

Introduction

In recent years, there has been a dramatic increase in the number of new psychoactive substances (NPS) detected across the world. The NPS market remains resilient and highly dynamic and is characterised by the emergence of large numbers of new substances reported in a growing number of countries.

Between 2009 and 2021, 134 countries and territories reported the emergence of 1 127 NPS to the United Nations Office on Drugs and Crime (UNODC), through the UNODC Early Warning Advisory on NPS. In Europe, since 1997, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), has been monitoring and responding to NPS appearing on the market through the EU Early Warning System on NPS. At the end of 2021, the EMCDDA was monitoring over 880 NPS.

The increase in the number and availability of NPS in recent years has largely been driven by globalisation, the internet and rapid changes in technology. Yet, recently, there have been some encouraging signs. For example, the number of NPS reported annually for the first time in Europe has dropped from a high of around 100 in 2014 and 2015 to around 50 in 2017 and in successive years.

Nevertheless, NPS continue to pose numerous challenges in terms of: detecting, measuring and monitoring; understanding patterns of use and harms caused; and developing appropriate public health responses. In Europe, around one new substance is still detected every week, increasing the overall number to be monitored. Major new problems have also emerged that have led to an increasing number and range of risks for people who use psychoactive substances. These include an increase in the number of highly potent NPS on the market — many of which are synthetic cannabinoids or synthetic opioids — and the impact of the COVID-19 pandemic.

Faced with the numerous challenges posed by NPS, the International Society for the Study of Emerging Drugs (ISSED) strives to strengthen multidisciplinary and international collaboration, enhance knowledge and improve the quality of information-sharing in this complex area. In this context, this NPS conference series is the major international forum on NPS, attracting hundreds of participants worldwide. This year's conference is jointly organised by the ISSED, UNODC, the EMCDDA, the World Anti-Doping Agency (WADA), the University of Hertfordshire (UH), the Centre for Forensic Science Research & Education (CFSRE), the Government of Panama, the Regional Anti-Doping Organization of Central America and the Panamanian Anti-Doping Organization.

This year marks the 25th anniversary of the EU Early Warning System on NPS — the first regional early-warning mechanism set up to monitor and respond to NPS in Europe. It is also nine years since this series of international conferences on NPS started in Budapest. The increasing impact of NPS, and the role of global factors in shaping related threats, highlight both the key role of early-warning systems in providing reliable information in a timely manner and the need for international collaboration.

www.novelpsychoactivesubstances.org

Programme at a glance

Venue: Hotel Riu Plaza Address: Calle 50 con 53 este, Urb Marbella, Panama City, 0801, Panama					
	Monday 24 October		Tuesday 25 October		Wednesday 26 October
09.00–09.30 EST 16.00–16.30 CEST	Opening session				
09.30–10.15 EST 16.30–17.15 CEST	Plenary session I	09.00–10.15 EST 16.00–17.15 CEST	Plenary session II	09.00–10.15 EST 16.00–17.15 CEST	Plenary session III
10.15–12.45 EST 17.15–19.45 CEST	Parallel session I Detection, identification and characterisation — NPS in physical samples Parallel session II NPS use settings, experience and trends	10.15–12.45 EST 17.15–19.45 CEST	Parallel session V NPS pharmacology and toxicology Parallel session VI Policy and legislation	10.15–11.00 EST 17.15–18.00 CEST	Focus panel III — Clinical
12.45–13.00 EST 19.45–20.00 CEST	Poster session (online)	12.45–13.00 EST 19.45–20.00 CEST	Poster session (online)	11.00–12.15 EST 18.00–19.15 CEST	Parallel session IX Monitoring NPS markets (I) Parallel session X Monitoring NPS markets (II)
13.00–14.00 EST 20.00–21.00 CEST	<i>Break</i>	13.00–14.00 EST 20.00–21.00 CEST	<i>Break</i>	12.15–12.30 EST 19.15–19.30 CEST	<i>Break</i>
14.00–16.00 EST 21.00–23.00 CEST	Parallel session III Detection, identification and characterisation — NPS in biological samples Parallel session IV Intervention, risks, harms and clinical management of NPS	14.00–16.00 EST 21.00–23.00 CEST	Parallel session VII Early-warning systems and toxicovigilance Parallel session VIII Computational and targeted research projects on NPS	12.30–13.00 EST 19.30–20.00 CEST	Closing session <i>End of conference</i>
16.00–16.15 EST 23.00–23.15 CEST	<i>Break</i>	16.00–16.15 EST 23.00–23.15 CEST	<i>Break</i>		
16.15–17.00 EST 23.15–24.00 CEST	Focus panel I — Policy	16.15–17.00 EST 23.15–24.00 CEST	Focus panel II — Toxicology		
17.00 EST 24.00 CEST	<i>End of Day 1 — optional tour of the Panama Canal</i>	17.00 EST 24.00 CEST	<i>End of Day 2</i>		

I Opening session

DAY 1: Monday 24 October 2022

08.00–9.00 EST	On-site registration
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Opening session
09.00–09.30 EST | 16.00–16.30 CEST

Chair: *M.J. Menendez, Centre for Forensic Science Research & Education (CFSRE)*

Welcome

Official Representative of the Government of Panama
Ornella Corazza, University of Hertfordshire (UH)
Roumen Sedefov, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)
Justice Tettey, United Nations Office on Drugs and Crime (UNODC)
Olivier Rabin, World Anti-Doping Agency (WADA)
Barry Logan, Centre for Forensic Science Research & Education (CFSRE)

Plenary session I
09.30–10.15 EST | 16.30–17.15 CEST

Chairs: *Roumen Sedefov (EMCDDA) and Emily Lockhart (US Drug Enforcement Administration)*

Keynote I — A decade of NPS control — a success story?

09.30–09.50 EST	Justice Tettey, United Nations Office on Drugs and Crime (UNODC)
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Keynote II — Importance of international collaboration in supporting countries in the development of early-warning systems

09.50–10.10 EST	Marya Hynes, Inter-American Observatory on Drugs (OID)
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10.10–10.15 EST	Q&A
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Parallel session I — Detection, identification and characterisation — NPS in physical samples
10.15–12.45 EST | 17.15–19.45 CEST

Moderators: Ana Gallegos (EMCDDA) and Richard Bade (University of Queensland, Australia)

10.15 EST	<p>Methodical analysis of unconventional adulterants in diaCESTylmorphine from 2019–2021 in Delhi, India (<i>online</i>)</p> <p>A. Kumar, S. Dash, N. Vashishth, N. Tomar, S. Sinha, K. Goyal, Forensic Science Laboratory, Government of National Capital Territory of Delhi, India</p>
10.30 EST	<p>Novel psychoactive substances: laboratory limitation</p> <p>D. K. Saha, Office of the Chief Chemical Examiner, Bangladesh Police, CID, Bangladesh</p>
10.45 EST	<p>New psychoactive substances in 146 samples seized in Colombia (2021–2022) <i>In Spanish, with simultaneous translation into English</i></p> <p>D.M. Ocampo, W. Garzón, F. Parada, L. Cuadros, L.A. González, Centro Internacional de Estudios Estratégicos Contra el Narcotráfico, Policía Nacional, Bogotá D.C., Colombia</p>
11.00 EST	<p>N-MOC-MDMA, a novel ‘masked’ variant found by Argentina Federal Police <i>In Spanish, with simultaneous translation into English</i> (<i>online</i>)</p> <p>S.A. Guevara, U.D. Gomara, J.C. De Seta, Martinez, M.P., División Laboratorio Químico, Policía Federal Argentina, Argentina</p>
11.15–11.30 EST	<i>Break</i>
11.30 EST	<p>Comparing Density Functional Theory (DFT) calculations and Surface-enhanced Raman spectroscopy results to differentiate structurally similar fentanyl analogs</p> <p>S. Dogruer Erkok, E. Hernandez, B. McCord, Florida International University, USA</p>
11.45 EST	<p>Development and validation of a chiral LC-MS/MS method for the separation and quantification of (R)- and (S)- enantiomers of four synthetic cathinones in human whole blood (<i>online</i>)</p> <p>A.A. Aldubayyan, E. Castrignanò, S. Elliott, V. Abbate, Department of Analytical, Environmental and Forensic Sciences, Faculty of Life Sciences and Medicine, King’s College London, United Kingdom</p>
12.00 EST	<p>Optimisation of a gas chromatography coupled to mass spectrometry (GC-MS) method for simultaneous detection and quantification of psilocybin and psilocin (<i>online</i>)</p> <p>A.M. Brito Da Costa, R.J. Dinis Oliveira, A. Madureira Carvalho, D. Dias da Silva, Toxicology Research Unit, University Institute of Health Sciences, Gandra, Portugal</p>
12.15 EST	<p>Emergence of new psychoactive substances with enhanced toxicities caused by intentional adulteration and/or presence of contaminants in seizures (<i>online</i>)</p> <p>K.M. Muthumala, D.P.P. Weerasinghe, P.N. Amarabandu, The National Narcotics Laboratory of the National Dangerous Drugs Control Board, Sri Lanka</p>
12.30–12.45 EST	Q&A
12.45–13.00 EST	Poster session (<i>online</i>)
13.00–14.00 EST	<i>Break</i>

Parallel session II — NPS use settings, experience and trends 10.15–12.45 EST 17.15–19.45 CEST	
Moderators: Roumen Sedefov (EMCDDA) and Conor Crean (UNODC)	
10.15 EST	Synthetic cannabinoids scheduling impacts on positivity and markets B.K. Logan, Center for Forensic Science Research and Education, USA
10.30 EST	New psychoactive substances emerging in poly-substance combinations in the United States W.J. Heuett, C.A. Herdman, D.P. Pressley, L.L. Wong, T.L. Boos, US Drug Enforcement Administration, USA
10.45 EST	New psychoactive substances identified in Canada (online) S. Mohottalage, R.J. Ngendabanka, N. He, S. Rymill, C. Bacev-Giles, S. Racine, B. Brands, Office of Drug Research and Surveillance (ODRS), Controlled Substance Directorate (CSD), Controlled Substances and Cannabis Branch (CSCB), Health Canada, Ottawa, Canada
11.00 EST	‘Benzo-Dope’: exploring combinations of novel synthetic opioids and designer benzodiazepines D.M. Papsun, A.J. Krotulski, S. Walton, B.K. Logan, NMS Labs, USA
11.15–11.30 EST	<i>Break</i>
11.30 EST	Different trends in NPS misuse among young people after the COVID-19 lockdown V. Rapaccini, S. Biscontini, A. Savini, O. Corazza, A. Metastasio, Child neuropsychiatry and developmental disorders service, Usl2 Umbria, Terni, Italy
11.45 EST	Kratom use among people who use other substances: a critical review of published evidence from Southeast Asia (online) D. Singh, S. Narayan, M.F.I. Leong Bin Abdullah, V. Balasingam, M. Chawarski, University Sains Malaysia, Malaysia
12.00 EST	Understanding the reasons why prisoners use NPS whilst in custody and the need for suitable regulatory approaches (online) M. Vigar, S. Falcon, HM Prison Parc, Swansea, United Kingdom
12.15 EST	Rise of ketamine as a designer drug in Chile — risks and consequences <i>In Spanish, with simultaneous translation into English (online)</i> P.A. Fuentes, B.E. Duffau, Instituto de Salud Pública de Chile, Republic of Chile
12.30–12.45 EST	Q&A
12.45–13.00 EST	Poster session (online)
13.00–14.00 EST	<i>Break</i>

Parallel session III — Detection, identification and characterisation — NPS in biological samples
14.00–16.00 EST | 21.00–23.00 CEST

Moderators: *Paul Dargan (King's College London) and Valeria Catalani (University of Hertfordshire)*

14.00 EST	<p>An overview of presentations involving new psychoactive substances to the Euro-DEN Plus Emergency Departments in Europe</p> <p>P.I. Dargan, Guy's and St Thomas' NHS Foundation Trust, and King's College London, United Kingdom</p>
14.15 EST	<p>Large-scale retrospective identification of new psychoactive substances in clinical routine samples</p> <p>M.A.B. Axelsson, M. Andresen Bergstrom, Laboratory of Clinical Chemistry, Sahlgrenska University Hospital, Gothenburg, Sweden</p>
14.30 EST	<p>Forensic toxicological analysis of pregabalin from urine using FTIR-ATR</p> <p>N. Tomar, D. Yadav, S.K. Shukla, National Forensic Science University, Delhi, India</p>
14.45–15.00 EST	<i>Break</i>
15.00 EST	<p>Detection of the superwarfarin drugs and synthetic cannabinoids in human biological samples</p> <p>A.L.A. Mohr, H. Yu Lam, T.R. Fiorentin, F.X. Diamond, R.A. Middleberg, B.K. Logan, Center for Forensic Science Research and Education, United States of America</p>
15.15 EST	<p>Identification of 4F-MDMB-BINACA metabolites in human blood and urine with LC-QTOF (<i>online</i>)</p> <p>M.A. Gofenberg, A.M. Grigoryev, S.S. Kataev, V.A. Shevyrin, O.N. Dvorskaya, Regional Narcological Clinic, Yekaterinburg, Russian Federation</p>
15.30 EST	<p>A two-year portrait of novel psychoactive substances findings in Quebec (Canada) (2020–2021) (<i>online</i>)</p> <p>J. Ouimet, C. Amireault, B. Garneau, B. Desharnais, P. Mireault, Laboratoire de sciences judiciaires et de médecine légale, Montréal, Québec, Canada</p>
15.45–16.00 EST	Q&A
16.00–16.15 EST	<i>Break</i>

Parallel session IV — Intervention, risks, harms and clinical management of NPS

14.00–16.00 EST | 21.00–23.00 CEST

Moderators: *Noam Fast (Columbia University) and Elisabeth Prevede (Sapienza University)*

14.00 EST	A qualitative study of people who use new psychoactive substances and harm reduction services in eight countries of Eastern Europe and Central Asia region E. Kurcevič, Eurasian Harm Reduction Association
14.15 EST	The role of the Burke Test in measuring the cognitive efficiency of the drug impaired driver K.R. Burke, International Association of Chiefs of Police — Drug Recognition Expert section
14.30 EST	Ibogaine/noribogaine in the treatment of substance use disorders: a systematic review and meta-analysis of side effects (online) A. Mosca, S. Chiappini, A. Miuli, G. Mancusi, M.C. Santovito, F. Di Carlo, M. Pettoruso, J.M. Corkery, C. Canessa, G. Martinotti, M. Di Giannantonio, Department of Neuroscience Imaging and Clinical Sciences, University G. d'Annunzio, Chieti-Pescara, Italy
14.45–15.00 EST	<i>Break</i>
15.00 EST	Underground treatments: emerging trends in substance-assisted therapy A. Metastasio, S. Costi, V. Rapaccini, E. Prevede, A. Negri, O. Corazza, Camden and Islington NHS Foundation Trust, University of Hertfordshire, United Kingdom
15.15 EST	The Ibiza Experience: NPS and traditional substance use among a sample of inpatients of Can Misses Hospital Psychiatric ward A. Negri, S. Schiavone, C. Vannini, G. Martinotti, Department of Mental Health and Substance Use Disorders, ASST Santi Paolo e Carlo, Milan, Italy
15.30 EST	Associations of concomitant psychiatric disorders and kratom (Mitragnyna Speciose Korth) use (online) O. Grundmann, E. Cinosi, O. Corazza, G. Martinotti, S. Morcos, D. Singh, K.E. Smith, M.T. Swogger, C.A. Veltri, Z. Walsh, University of Florida, United States of America
15.45–16.00 EST	Q&A
16.00–16.15 EST	<i>Break</i>

Focus panel I: POLICY

Spotlight on the use of data to inform public health policy and practice — the US experience
16.15–17.00 EST | 23.15–24.00 CEST

Chairs: *M.J. Menendez (CFSRE) and Juan Ricardo Gómez Hecht (UNODC)*

Presenters:

Paul Wax, MD, FACMT, American College of Medical Toxicologists, United States of America
Alex Harocopos PhD, New York City Public Health, United States of America

17.00 EST
24.00 CEST

End of Day 1

DAY 2: Tuesday 25 October 2022**Plenary session II**

09.00–10.15 EST | 16.00–17.15 CEST

Chairs: *Sabrina Levissianos (UNODC) and Olivier Rabin (WADA)***Introduction to the activities of the International Society for the Study of Emerging Drugs (ISSED)**

09.00–09.30 EST

Presenters:Ornella Corazza, University of Hertfordshire, United Kingdom
Barry Logan, CFSRE, United States of America**Keynote III — EU Early Warning System: 25 years of monitoring and responding to new drugs in Europe**

09.30–09.50 EST

Ana Gallegos, EMCDDA

Keynote IV — From global to local policies: what can we learn from Panama's anti-doping?

09.50–10.10 EST

Saul Saucedo, President of the Regional Anti-Doping Organization of Central America

10.10–10.15 EST

Q&A

Parallel session V — NPS pharmacology and toxicology

10.15–12.45 EST | 17.15–19.45 CEST

Moderators: *Irene Mazzoni (WADA) and Christophe Stove (Ghent University)*

10.15 EST	Pharmacological evaluation and forensic case series of <i>N</i>-pyrrolidino etonitazene (etonitazepyne), a newly emerging 2-benzylbenzimidazole ‘nitazene’ synthetic opioid C.P. Stove, M.M. Vandeputte, A.J. Krotulski, D. Walther, G.C. Glatfelter, D. Papsun, S.E. Walton, B.K. Logan, M.H. Baumann, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium
10.30 EST	Towards better understanding SCRA and metabolites in recreational drug intoxications associated with 5F-MDMB-PICA use L. Janssens, S. Hudson, D.M. Wood, C. Wolfe, P.I. Dargan, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium
10.45 EST	Increased neuronal differentiation of NG108-15 cells promoted by the synthetic cannabinoid AMB-FUBINACA is associated with decreased DNA methylation (<i>online</i>) J.P. Silva, R.F. Malheiro, M. Almeida, H. Carmo, F. Carvalho, UCIBIO-REQUIMTE, Associate Laboratory i4HB, Institute for Health and Bioeconomy, Laboratory of Toxicology, Department of Biological Sciences, Faculty of Pharmacy, University of Porto, Portugal
11.00 EST	Effects of the synthetic cannabinoid ADB-FUBINACA on the neurodifferentiation of primary hippocampal neurons (<i>online</i>) R. Silva, D.J. Barbosa, H. Carmo, F. Carvalho, D.D. Silva, J.P. Silva, Associate Laboratory i4HB, Institute for Health and Bioeconomy, Faculty of Pharmacy, University of Porto, Portugal
11.15–11.30 EST	<i>Break</i>
11.30 EST	Off-target activity of NBOMes and NBOMe analogs at the μ opioid receptor M.H. Deventer, M. Person, H. Gréen, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium
11.45 EST	The <i>in vitro</i> profile of 5-MeO-tryptamine derivatives on the serotonergic system — a structure-activity study R. López-Arnau, P. Puigseslloses, M. Giraldo, X. Berzosa, N. Weiss, D. Pubill, J. Camarasa, E. Escubedo, Department of Pharmacology, Toxicology and Therapeutic Chemistry, IBUB, Faculty of Pharmacy and Food Sciences, University of Barcelona, Spain
12.00 EST	Assessment of developmental neurotoxicity in mice after repeated postnatal exposure to MDPV (<i>online</i>) K. Kuczyńska, J. Wojcieszak, J.B. Zawilska, Department of Pharmacodynamics, Medical University of Łódź, Poland
12.15 EST	Citotoxicity and addictive potential of novel ethcathinone derivatives E. Escubedo, N. Nadal Gratacós, X. Berzosa, D. Pubill, J. Camarasa, R. López-Arnau, Department of Pharmacology, Toxicology and Therapeutic Chemistry, IBUB, Faculty of Pharmacy and Food Sciences, University of Barcelona, Spain
12.30–12.45 EST	Q&A
12.45–13.00 EST	Poster session (<i>online</i>)
13.00–14.00 EST	<i>Break</i>

Parallel session VI — Policy and legislation

10.15–12.45 EST | 17.15–19.45 CEST

Moderators: *Juan Ricardo Gómez Hecht (UNODC) and Vicknasingam Balasingam Kasinather (University Sains Malaysia)*

10.15 EST	International cooperation to address global public health harms caused by NPS <i>(online)</i> D. Poovendran, S. Nielsen, J. White, G. Forte, World Health Organization
10.30 EST	A comprehensive action plan of Department of Narcotics Control (DNC) to address the NPS challenge in Bangladesh M. Hasan, Department of Narcotics Control, Bangladesh
10.45 EST	HIV-related services for people who use new psychoactive substances (NPS): needs and barriers Z. Kosmukhamedova, Regional EECA Adviser (HIV/Drugs), Global focal point on law enforcement and HIV, UNODC
11.00 EST	A game of tug of war between legislation and NPS: the case of fluetizolam M. Degreef, M. Balcaen, C. Guillou, I. Vinckier, Unit Drugs, Lifestyle and Chronic diseases, Sciensano, Belgium
11.15–11.30 EST	<i>Break</i>
11.30 EST	Improvement of the Brazilian regulatory model for substance control through the creation of an inter-institutional working group L.S. Lopes, G.H. Giudice, M.S. Macedo National Health Surveillance Agency (Anvisa)
11.45 EST	Philippine Angel's trumpet: exploring a non-regulated psychoactive plant <i>(online)</i> A.D. Salvador, Uy SP Jr., S.S. Seville, J.L.M. Jaranilla, Y.K.S. Desamito, R.J.A. Narceda, Philippine Drug Enforcement Agency, Philippines
12.00 EST	NPS-related health responses implemented in Europe through the lens of an intersectional risk environment approach <i>(online)</i> J. Neicun, Department of International Health, Care and Public Health Research Institute (CAPHRI), Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands
12.15 EST	'Synthetic cannabinoids' and NPS: harnessing the terminological and conceptual naming and classification issues <i>(online)</i> K. Riboulet-Zemouli, Foundation for Alternative Approaches to Addiction, FAAAT think & do tank
12.30–12.45 EST	Q&A
12.45–13.00 EST	Poster session <i>(online)</i>
13.00–14.00 EST	<i>Break</i>

Parallel session VII — Early-warning systems and toxicovigilance 14.00–16.00 EST 21.00–23.00 CEST	
Moderators: <i>Sabrina Levissianos (UNODC) and Attilio Negri (University of Hertfordshire)</i>	
14.00 EST	New psychoactive substance trends in the United States E.D Lockhart ED, US Drug Enforcement Administration, United States of America
14.15 EST	Development and application of a border to grave real-time New Zealand integrated Drugs Surveillance System (ESR iDSS) (online) S.G.G. Russell, D.C. Kappatos, C.S. Johnson, W.L. Popplewell, D. Li, M.J. Mc Carthy, Institute of Environmental Science and Research Limited (ESR), New Zealand
14.30 EST	New psychoactive substance situation in the Philippines: an emerging challenge of drugs of abuse S.S. Seville, A.D. Salvador, Y.K.S. Desamito, N.M.A Barbo, K.J.D. Agustin, R.J.A. Narceda, Philippine Drug Enforcement Agency, Philippines
14.45–15.00 EST	<i>Break</i>
15.00 EST	Early and effective detection of addictive and hallucinogen potential in the next generation of NPS. The first steps of the NextGenPS project J. Camarasa, X. Berzosa, J. Kehr, M. Schmid, M. Solinas, M. Carbò, D. Pubill, E. Escubedo, R. López-Arnau, Department of Pharmacology, Toxicology and Therapeutic Chemistry, Pharmacology Section and Institute of Biomedicine (IBUB), Faculty of Pharmacy and Food Sciences, University of Barcelona, Barcelona, Spain
15.15 EST	Trends in hospital presentations following analytically confirmed synthetic cannabinoid receptor agonist exposure before and after implementation of the 2016 UK Psychoactive Substances Act S. Craft, M. Dunn, V. Vidler, J. Officer, I.S. Blagbrough, C.R. Pudney, G. Henderson, A. Abouzeid, P.I. Dargan, M. Eddleston, J. Cooper, S.L. Hill, C. Roper, T.P. Freeman, S.H.L. Thomas, Addiction and Mental Health Group (AIM), Department of Psychology, University of Bath, United Kingdom
15.30 EST	‘Croaking on Kambô’: intoxications and fatalities associated with use of secretions from phyllomedusa bicolor (giant leaf frog, giant monkey frog) J.M. Corkery, University of Hertfordshire, United Kingdom
15.45–16.00 EST	Q&A
16.00–16.15 EST	<i>Break</i>

Parallel session VIII — Computational and targeted research projects on NPS

14.00–16.00 EST | 21.00–23.00 CEST

Moderators: *Ana Gallegos (EMCDDA) and Francesco Botré (University of Lausanne)*

14.00 EST	<p>Assessment of structure-activity relationships and biased agonism in a set of (psychedelic) phenethylamine 5-HT_{2A}R agonists</p> <p>E. Pottie, C.B.M. Poulie, I.A. Simon, K. Harpsoe, L. D'Andrea, I.V. Komarov, D.E. Gloriam, A.A. Jensen, J.L. Kristensen, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium</p>
14.15 EST	<p>Hierarchical cluster analysis application on suspected plant-based new psychoactive substances found in the Philippines using FT-IR/ATR spectral data</p> <p>R.J.A. Narceda, M.M.M Racho, SP Uy Jr., Philippine Drug Enforcement Agency, Philippines</p>
14.30 EST	<p><i>In silico</i> studies on recreational drugs: 3D-QSAR prediction of classified and de novo designer benzodiazepines</p> <p>V. Catalani, G. Floresta G, M. Botha, J.M. Corkery, A. Guirguis, A. Vento, V. Abbate, F. Schifano, Psychopharmacology, Drug Misuse and Novel Psychoactive Substances Research Unit, School of Life and Medical Sciences, University of Hertfordshire, United Kingdom</p>
14.45–15.00 EST	<i>Break</i>
15.00 EST	<p>Flipped point-of-use detection of psychoactive substances by coupling Raman spectroscopy to computational approaches</p> <p>J. Calvo-Castro, S.N. Tchakounte, V. Guarino, A.A. Ahmed, J.L. Stair, University of Hertfordshire, United Kingdom</p>
15.15 EST	<p>Structure-activity relationships of novel synthetic substituted lysergamides and tryptamines at the human serotonin 2a receptor</p> <p>D.E. Kim, H.J.J. Kim, A.L. Brandt, M. Patel, N. Mladjenovic, F. Langlois, R.B. Laprairie, College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, Canada</p>
15.30 EST	<p>Understanding the evolving nature of novel psychoactive substances: a scientometric perspective</p> <p>G. Esposito, University of Trento, Italy</p>
15.45–16.00 EST	Q&A
16.00–16.15 EST	<i>Break</i>

Focus panel II: TOXICOLOGY**Approaches and best practices: surveillance technologies and analytical strategies for rapid identification of new and emerging drug threats**

16.15–17.00 EST | 23.15–24.00 CEST

Chairs: *Barry Logan (CFSRE) and Andrés-Roman Urrestarazu (University of Cambridge)***Presenters:**

Joshua DeBord, CFSRE, United States of America
Mei Ching, Singapore Health Sciences Authority, Singapore
Pirkko Kriikku, University of Helsinki, Finland

17.00 EST
24.00 CEST*End of Day 2*

DAY 3: Wednesday 26 October 2022**Plenary session III**

09.00–10.15 EST | 16.00–17.15 CEST

Chairs: *Barry Logan (CFSRE) and Valeria Catalani (University of Hertfordshire)***Emerging trends in drugs, addictions and health — the first open access journal with a focus on novel psychoactive substances**

09.00–09.30 EST

Jagna Mirska-Gent and Saritha Bhawarlal, Elsevier, The Netherlands
Andrés-Roman Urrestarazu, University of Cambridge, United Kingdom**Keynote V — Public health impacts of novel pharmacologically active adulterants in international drug supply**

09.30–09.50 EST

Thom Browne, Colombo Plan, Sri Lanka

Keynote VI — Fight against emerging drugs in sport: raising the game

09.50–10.10 EST

Olivier Rabin (WADA)

10.10–10.15 EST

Q&A**Focus panel III: CLINICAL****Management of NPS in clinical settings in the post-COVID-19 world**

10.15–11.00 EST | 17.15–18.00 CEST

Chairs: *Paul Dargan (King's College London) and Antonio Metastasio (Camden and Islington NHS Trust)***Presenters:**

Noam Fast, Columbia University, United States of America
 Giovanni Martinotti, University of Chieti-Pescara, Italy
 Fabrizio Schifano, University of Hertfordshire, United Kingdom
 Owen Bowden-Jones, University College London, United Kingdom
 Marija Prilutskaya, Semey Medical University, Kazakhstan
 Pierluigi Simonato, Parco dei Tigli Dual Diagnosis Clinic, Italy

Parallel session IX — Monitoring NPS markets (I)

11.00–12.15 EST | 18.00–19.15 CEST

Moderators: *Gianluca Esposito (University of Trento) and Marija Prilutskaya (Semey Medical University)*

11.00 EST	<p>Trends in the international use of novel psychoactive substances through wastewater analysis</p> <p>R. Bade, University of Queensland, Australia</p>
11.15 EST	<p>Epidemiology of emerging novel psychoactive substances in the United States using pooled medical examiner records (online)</p> <p>C.L. Shover, R. Romero, J.R. Friedman, G. Sixx, D. Goodman-Meza, University of California Los Angeles, United States of America</p>
11.30 EST	<p>Health Canada Drug Analysis Service (DAS) data story: how to use enforcement data in support of harm reduction initiatives</p> <p>M.L. Gilbert, M. Boileau Falardeau, M. Hrynkiw, C Leung Soo, O.W. Smith Lépine, C. Maurice Gélinas, J. Pitre, B. Archambault, Drug Analysis Service, Laboratories Division, Regulatory Operations and Enforcement Branch, Health Canada, Government of Canada, Canada</p>
11.45 EST	<p>Adulterants in samples of cocaine and NPS analysed in 2017–2020 in the forensic laboratory of the National Anti-Drug Secretariat, Paraguay <i>In Spanish, with simultaneous translation into English (online)</i></p> <p>R. Galeano, L. Sanchez, J. Sosa, N. Pedernera, L. Arevalos, R. Benitez, F. Barboza, Secretaria Nacional Antidroga (SENAD), Paraguay</p>
12.00–12.15 EST	Q&A
12.15–12.30 EST	<i>Break</i>

Parallel session X — Monitoring NPS markets (II)

11.00–12.15 EST | 18.00–19.15 CEST

Moderators: *Attilio Negri (University of Hertfordshire) and Mandy Mohr (CFSRE)*

11.00 EST	Reducing misdeclaration of NPS (online) A. Rahman, Department of Narcotics Control, Ministry of Home Affairs, Dhaka, Bangladesh
11.15 EST	Laboratory and instrumental indicators of cardiac disorders in people with NPS addiction (online) A. Shukimbayeva, M. Prilutskaya, Semey Medical University, Kazakhstan
11.30 EST	Preventing drug harm in Aotearoa, New Zealand. Part 2. The role of drug-checking services in detecting NPS and the associated challenges (online) L.M. Clark, C.S. Johnson, O.E. Johnson, D. Kappatos, H.K. Partington, G. Powell, K.A.J. Walsh, Institute of Environmental Science and Research Ltd (ESR), New Zealand
11.45 EST	Profiling users of image and performance enhancing drugs during the COVID-19 lockdown: a cross-cultural perspective I. De Luca, F. Di Carlo, J. Burkauskas, A. R. Dores, H. Fujiwara, C. Monteiro, G. Martinotti, M. di Giannantonio, G. Sani, O. Corazza, School of Life and Medical Sciences, University of Hertfordshire, United Kingdom
12.00–12.15 EST	Q&A
12.15–12.30 EST	<i>Break</i>

| Closing session

12.30–13.00 EST | 19.30–20.00 CEST

Official Representative of the Government of Panama
Ornella Corazza, University of Hertfordshire (UH)
Roumen Sedefov, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)
Justice Tettey, United Nations Office on Drugs and Crime (UNODC)
Olivier Rabin, World Anti-Doping Agency (WADA)
Barry Logan, Centre for Forensic Science Research & Education (CFSRE)

13.00 EST
20.00 CEST

End of conference

Posters (online)

Analytical method for the identification of new psychoactive substances using retention index and GC-MS — G.H. Giudice, A.H.L. Machado, M.P. Souza, L.N.B. Caldas, M.L. Vieira, E.D. Botelho, J.C.L. Ambrósio, J.J. Zacca, National Health Surveillance Agency (Anvisa) and Chemistry Institute, University of Brasília.

An Australian national prompt response network for emerging drugs — P.L. Hill, K.J. Siefried, S. Tzanetis, A. Peacock, S. Lenton, N. Ezard, National Centre for Clinical Research on Emerging Drugs, Australia.

An overview on toxicokinetics and toxicodynamics of *Salvia divinorum* and Salvinorin A — R.J. Dinis Oliveira, A.M. Brito da Costa, A. Madureira Carvalho, D. Dias da Silva, Toxicology Research Unit, University Institute of Health Sciences, Gandra, Portugal.

Changing trends and pattern of mephedrone drug in Mumbai — challenges for investigation agencies in India — S.O. Chetti, S.S. Prabhavale, S.V. Ghumatkar, Forensic Science Laboratories Maharashtra, India.

EU Early Warning System on NPS — 25 years — G. Planchuelo, A. Gallegos, M. Evans-Brown, R. Christie, R. Jorge, J. De Moraes, R. Sedefov, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). *Also available in Spanish.*

First identification, chemical analysis and pharmacological characterisation of N-piperidinyloctonitazene (etonitazepipne), a recent addition to the 2-benzylbenzimidazole opioid subclass — N.M. Vandeputte, N. Verougstraete, D. Walther, G.C. Glatfelter, J. Malfliet, M.H. Baumann, A.G. Verstraete, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium.

New generic ban evading synthetic cannabinoids shaking up the market? — M.H. Deventer, K. Van Uytvanghe, I.M.J. Vinckier, F. Reniero, C. Guillou, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium.

Pharmacokinetics, pharmacodynamics, and clinical aspects of psilocybin — D. Dias da Silva, A.M. Brito da Costa, R.J. Dinis Oliveira, A. Madureira Carvalho, Toxicology Research Unit, University Institute of Health Sciences, Gandra, Portugal.

Preventing drug harm in Aotearoa, New Zealand. Part 1. High alert: New Zealand's drug early-warning system works to identify NPS and prevent drug harm — N. Anda, L. Stiles, C. Trueman, J. Vermuelen, B. Macdonald B, Drug Information and Alerts Aotearoa, New Zealand.

Profile of Gym-Goers Performance-Enhancing Substance Use — A.S. Tavares, E. Carolino, A. Rosado, L. Calmeiro and S. Serpa.

Retrospective 2021 review of NPS in the US and prospective look forward — D.M. Papsun, A.J. Krotulski, B.K. Logan, NMS Labs, United States of America.

Sensing HIF stabilisation: a proactive effort to screen for performance enhancing HIF stabilisers based on their activity — L. Janssens, C.P. Stove, Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Belgium.

The reporting desk for new drugs; a unique system to monitor drug market dynamics and to verify signs of new psychoactive substances use in the Netherlands — L. Smit-Rigter, D van der Gouwe, Drug Monitoring and Policy, Trimbos Institute Utrecht, The Netherlands.

Toxicokinetics and toxicodynamics aspects of ayahuasca and *N,N*-dimethyltryptamine (DMT) — A. Madureira-Carvalho, A.M. Brito da Costa, D. Dias da Silva, R.J. Dinis Oliveira, Toxicology Research Unit, University Institute of Health Sciences, Gandra, Portugal.

Using emergency department drug surveillance (EDDS) data to describe and monitor drug exposure trends in ED patients — E.D. Wish, A.S. Billing, E. Massey, M. Hsu, E. Artigiani, Center for Substance Abuse Research (CESAR), University of Maryland College Park (UMCP), USA.

Volatile substances misuse and psychiatric comorbidity: a case report — S. Paletta, A. Negri, A. Bonfanti, A. Cataldo, F. Grasso, A. Calento, G. Cerveri, C. Varango, Department of Mental Health and Substance Use Disorders, Lodi, Italy.

IX international conference on novel psychoactive substances

This event follows on from conferences held in Budapest (2012, 2016), Swansea (2013), Rome (2014) Vienna (2017), Maastricht (2019) and online (2020, 2021).

It is organised by the: International Society for the Study of Emerging Drugs (ISSED), United Nations Office on Drugs and Crime (UNODC); European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); World Anti-Doping Agency (WADA); University of Hertfordshire and Centre for Forensic Science Research & Education (CFSRE).

The conference covers a range of topics, including: sharing evidence-based information on NPS trends; improving understanding of treatment and management approaches; and exploring socio-cultural factors underlying risky behaviours. International experts will examine the latest scientific research in this rapidly changing field.

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