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INTERNATIONAL SOCIETY  
FOR THE STUDY OF  
EMERGING DRUGS



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PROGRAMME

# Seventh international conference on novel psychoactive substances

18–19 November 2020  
**Online**

## | 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 highly dynamic and is characterised by the emergence of large numbers of new substances reported in a growing number of countries.

Between 2009 and 2018, 119 countries and territories reported the emergence of 892 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 in the EU through the EU Early Warning System on NPS. At the end of 2019, the EMCDDA was monitoring around 790 NPS, 90% of which were identified for the first time in the last decade.

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, 2018 and 2019.

Nevertheless, NPS continue to pose numerous challenges in terms of: detecting 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 that needs 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 COVID-19 pandemic.

Given the numerous challenges posed by NPS, we are pleased to launch the *International Society for the Study of Emerging Drugs* (ISSED) to strengthen multidisciplinary and international collaboration to enhance knowledge and improve the quality of information-sharing in this complex area in a more coordinated way. In this context, the NPS conference series, now in its 7<sup>th</sup> edition, 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) and the Centre for Forensic Science Research & Education (CFSRE).

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## I Opening and plenary sessions

### Wednesday 18 November 2020

All oral presentations will be delivered in Zoom, while networking and poster sessions will be held in *Psychotropia*, a new platform built in virtual reality. Both links will be shared at the start of the meeting.

#### Opening session

12.00	<p><b>Welcome and opening remarks</b></p> <p>Launch of the new International Society for the Study of Emerging Drugs (ISSED) and the new <i>Journal on Emerging Trends in Drugs, Addictions and Health</i></p> <p>Ornella Corazza, University of Hertfordshire and Barry Logan, NMS Labs</p>
All times specified are in GMT/Lisbon time	

#### Keynote presentations 12.20–13.20

**Chairs:** Owen Bowden-Jones (UCL) and Sabrina Levissianos (UNODC)

	NPS in the time of COVID-19 — A. Gallegos, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)
	The growing complexity of the opioid crisis — J. Tettey, United Nations Office on Drugs and Crime (UNODC)
	NPS discovery: A programme for early detection of emerging trends in novel drugs in the United States — B. Logan, NMS Labs, United States
	'How to maintain activities during a crisis period' – O. Rabin, World-Anti Doping Agency (WADA)
13.20–13.30	Q&A session
13.30–13.45	Break and networking ( <i>Psychotropia/guided session</i> )

<b>Wednesday 18 November 2020</b>	
<b>Session 1 — Use, settings, experiences and trends 13.45–14.50</b>	
<b>Chairs:</b> <i>Emily Lockhart (DEA) and Fabrizio Schifano (University of Hertfordshire)</i>	
	A perspective from the EU Early Warning System – NPS in Europe — R. Christie, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)
	Fentanyl-related compounds and designer benzodiazepines analysed by the DEA Laboratory System — E.D. Lockhart, Drug Enforcement Administration, United States
	Identifying NPS patterns in the United States — W.J. Heuett, L.L. Wong, C.A. Herdman, D.P. Pressley and T.L. Boos, Drug Enforcement Administration, United States
	Effects of external influences on synthetic cannabinoid trends in New Zealand, 2014 to 2020 — C.R. Stansfield, R.F. Somerville, V.R. Hassan, E. Kolbe, H.K. Partington, K.A.J. Walsh and C.S. Johnson, The Institute of Environment Science and Research (ESR), New Zealand
	Identification of 11 substances known as ‘smart drugs’ in Japan — R. Tanaka, M. Kawamura, T. Hakamatsuka and R. Kikura–Hanajiri, National Institute of Health Sciences, Japan
14.50–15.00	<i>Q&amp;A session</i>
15.00–15.15	<i>Break and networking (Psychotropia)</i>

**Wednesday 18 November 2020****Session 2 — Monitoring new psychoactive substances 15.15–17.05****Chairs:** *Claude Guillou (EC) and Mariya Prilutskaya (Semey Medical University)*

	Identification, detection and monitoring: What's next? — C. Guillou, European Commission (EC)
	Adulteration of drugs with toxic cutting agents: an emerging global public health threat — T. Browne, Colombo Plan, United States
	Detection of synthetic opioids, synthetic cathinones and synthetic cannabinoids in wastewater in the U.S. A promising community early-warning system — B. Subedi, Murray State University, United States
	The UK's first Home Office–licensed and pharmacist-led community drug checking service — A. Guirguis, R. Gittins and F. Schifano, Swansea University, United Kingdom
16.05–16.15	<i>Q&amp;A session</i>
	How to detect the use of a new illicit substance by combining different strategy — P. Esseiva, University of Lausanne, Switzerland
	NPSfinder: a systematic tool to identify novel psychoactive substances (NPS) by crawling the pro drug/'psychonaut' websites — F. Napoletano, F. Schifano, J.M. Corkery, A. Guirguis, D. Arillotta, C. Zangani and A. Vento, Homerton University Hospital, United Kingdom
	Facing ever-changing trends: prevalence and patterns of new psychoactive substance use in the young population of Kazakhstan — M. Prilutskaya, Semey Medical University, Kazakhstan
	The NIST fentanyl classifier — A.S. Moorthy, A.J. Kearsley, W.G. Mallard and W.E. Wallace, National Institute of Standards and Technology, United States
17.05–17.15	<i>Q&amp;A session</i>
17.15–17.30	<i>Break and networking (Psychotropia)</i>

**Wednesday 18 November 2020****Panel and audience discussion: how to better strategise our actions 17.30–18.30****Chair:** *Oliver Rabin (WADA)***Panellists:** *M. Evans-Brown (EMCDDA), C. Guillou (EC), S. Levissianos (UNODC) and E. Lockhart (DEA)***Poster viewing and networking 18.30–19.30 (*Psychotropia*)****Facilitators:** *V. Catalani, I. De Luca and A. Negri (University of Hertfordshire)*

19.30

END OF DAY 1

**Thursday 19 November 2020****Session 3 — Detection, identification and characterisation: synthetic cannabinoid receptor agonists**  
12.00–13.05**Chairs:** *Barry Logan (NMS Labs) and Mandi Mohr (NMS Labs)*

	Analytical, pharmacological, and toxicological evaluation of prevalent synthetic cannabinoid receptor agonists — S. Banister, The University of Sydney, Australia
	The detection of synthetic cannabinoid receptor agonists in infused papers from prisons in a constantly evolving illicit market — C. Norman, B. McKirdy, G. Walker, P. Dugard, N. Daéid and C. McKenzie, University of Dundee, United Kingdom
	Monitoring synthetic cannabinoid trends in the United States — A.L.A. Mohr, A.J. Krotulski and B.K. Logan, NMS Labs, United States
	Semi-quantitative activity-based detection of JWH-018, a synthetic cannabinoid receptor agonist, in oral fluid after vaping — A. Cannaeert, Ghent University, Belgium
	In vitro activity-profiling of Cumyl-PEGACLONE variants at the CB1 receptor: fluorination versus isomer exploration — L. Janssens, A. Cannaeert, M.J. Connolly, H. Liu and C.P. Stove, Ghent University, Belgium
13.05–13.15	<i>Q&amp;A session</i>
13.15–13.30	<i>Break and networking (Psychotropia)</i>

**Thursday 19 November 2020****Session 4 — Detection, identification and characterisation: new opioids and other synthetics**  
13.30–14.35**Chairs:** Ana Gallegos (EMCDDA) and Alex Krotulski (CFSRE)

	Identification of isotonitazene, the first member of a novel emerging class of legal, highly potent benzimidazole NPS opioids — P. Blanckaert, Belgian Early Warning System Drugs, Sciensano, Belgium
	First report on brorphine: the next opioid on the deadly new psychoactive substances' horizon? — N. Verougstraete, M. Vandeputte, C. Lyphout, A. Cannaert, F. Hulpia, S. Van Calenbergh, A. Verstraete and C. Stove, Ghent University Hospital, Belgium
	<i>In vitro</i> functional characterisation of a panel of non-fentanyl opioid new psychoactive substances — M.M. Vandeputte, A. Cannaert and C.P. Stove, Ghent University, Belgium
	Profiling NPS in human clinical trials — J. Ramaekers, Maastricht University, Netherlands
	Functional characterisation of hallucinogenic NPS using different 5-HT <sub>2A</sub> R bioassays — E. Pottie, A. Cannaert and C.P. Stove, Ghent University, Belgium
14.35–14.45	<i>Q&amp;A session</i>
14.45–15.00	<i>Break and networking (Psychotropia)</i>



**Thursday 19 November 2020****Session 5 — Emerging harms 15.00–15.50****Chairs:** *Francesco Saverio Bersani (Sapienza University) and Kim Kuypers (Maastricht University)*

	Emerging drugs harms: new app and tools to train clinicians — O. Bowden–Jones, University College London, United Kingdom
	Acute effects of a moderate dose of a synthetic cannabinoid (JWH–018): implications for psychosis — E.L. Theunissen, Maastricht University, Netherlands
	Methadone as a possible cause of two healthy teenagers' death — V. Rapaccini and A. Metastasio, University of Tor Vergata, Italy
	Club drugs and induced psychopathology — G. Martinotti, University of Chieti–Pescara, Italy
15.50–16.00	<i>Q&amp;A session</i>
16.00–16.15	<i>Break and virtual networking (Psychotropia)</i>

**Thursday 19 November 2020****Session 6 — Performance- and image-enhancing drugs 16.00–16.40****Chairs:** *Francesco Botrè (University of Lausanne) and Irene Mazzoni (WADA)*

	A sentinel population: the public health benefits of monitoring enhanced body builders — J. McVeigh, M. Salinas and R. Ralphs, Manchester Metropolitan University, United Kingdom
	Spice stories from the slammer — real life experiences of NPS users in prison — M. Vigar and C. Watkins, HMP & YOI Parc, United Kingdom
	Performance- and image-enhancing drugs and related psychopathology: clinical issues — P. Simonato, University of Hertfordshire, United Kingdom
16.40–16.45	<i>Q&amp;A session</i>
16.45–17.00	<i>Break and virtual networking (Psychotropia)</i>

**Thursday 19 November 2020****Session 7 — Policy and legislation 17.00–17.50****Chairs:** *M.J. Menendez (NMS Labs) and B. Vicknasingam (University Sains Malaysia)*

	'Keeping Control': The ethics of prosecuting substance abuse offenses in the COVID pandemic — M.J. Menendez, NMS Labs, United States
	Mapping NPS policy in the EU: legal frameworks, healthcare provision and outcomes — J. Neicun and A. Roman-Urresterazu, Maastricht University, Netherlands
	Elaboration of generic legislation for phenethylamines in Brazil — M.L.S. Macedo, Brazilian Health Regulatory Agency (ANVISA), Brazil
	Treatment compliance among Incarcerated and fined Amphetamine-Type-Stimulant (ATS) users in a community supervision programme in Malaysia: a preliminary study — D. Singh, N. Saref, S. Narayanan, O. Hayden Griffin III and B. Vicknasingam, Centre for Drug Research, University Sains Malaysia
17.50–18.00	<i>Q&amp;A session</i>

**Thursday 19 November 2020**

**Panel and audience discussion: NPS in times of COVID-19: new challenges, new solutions?**  
18.00–19.00

**Chairs:** *Martin Raithelhuber (UNODC)*

**Panellists:** *R. Sedefov (EMCDDA), G. Bersani (Sapienza University), M.J. Menendez (NMS Labs), O. Corazza (University of Hertfordshire), B. Logan (NMS Labs), O. Rabin (WADA)*

**Poster viewing and networking (*Psychotropia*)**  
19.00

**Facilitators:** *D. Cicconcelli (University of Hertfordshire), V. Giorgetti (University of Hertfordshire), E. Prevete (Sapienza University)*

19.30

END OF DAY 2

## Poster presentations

### Posters will be displayed in a dedicated virtual reality platform

- A. Al-Sarraf, A. Bewley, O. Corazza – Image Enhancing Drugs: an overlooked phenomenon? University of Hertfordshire, United Kingdom
- R. Bade – International Snapshot of Novel Psychoactive Substance Use: Case study of ten countries over the 2019/2020 New Year Period. University of South Australia, Australia
- R.T. Brown, J.P. Walterscheid – Updated trends and case studies in the revival of LSD. Armed Forces Medical Examiner System, United States of America
- K.R. Burke – Putting the Psycho back in the Psychophysical Roadside Testing for American Law Enforcement. Racine County Sheriff's Office, United States of America
- V. Catalani, F. Schifano, M. Botha, J. Corkery, A. Guirguis – NPSfinder® designer benzodiazepines: QSAR and Docking studies. University of Hertfordshire, United Kingdom
- S. Chiappini, F. Schifano, J.M. Corkery, A. Guirguis – Beyond the purple drank. Study of promethazine abuse according to the eudragialnce dataset. University of Hertfordshire, United Kingdom
- E. Deligianni, L. Lione, C. Kontogiorgis, G. Papazisis, D. Lazari – Use of novel psychoactive substances (NPS) of natural origin: an international survey. Aristotle University of Thessaloniki, Greece
- M. del Mar Boronat, D. Cowan, V. Abbate – Ambient ionization mass spectrometry applied to new psychoactive substance analysis. King's College London, United Kingdom
- I. De Luca, A. Negri, H. Townshend, V. Giorgetti, D. Cicconcelli, F.S. Bersani, C. Imperatori, O. Corazza – Unsupervised supplement intake: an unexplored land in online fitness settings. University of Hertfordshire, United Kingdom
- I.D. Ebuenyi, E.W. Dumbili, K.C. Ugoeze – Herbal based psychoactive substances in Nigeria: a case for more research in Africa. Maynooth University, Ireland
- A. Gant, C. Benham, S. Fergus, L. Lione – Functional and histological changes in rat urinary bladder following short- and long-term Ketamine exposure. University of Hertfordshire, United Kingdom
- M. Gofenberg, V. Shevyrin, P. Kavanagh, A. Grigoryev, O. Dvorskaya, G. Dowling – Laboratory diagnostics of acute poisoning with new synthetic cathinones (MDPHP,  $\alpha$ -PBP) in the Russian Federation. Regional Narcological Clinic, Russia
- H.H. Ha – NPS prevalence in on Sexual Assault, DUID, and Post-mortem Toxicology Cases in Orange County, CA, USA. Orange County Crime Laboratory, United States of America
- M. Herian, A. Wojtas, M. Skawski, M. Sobocinska, K. Madej, K. Golembiowska – Novel designer drug 25I-NBOMe affects neurotransmission and induces neurotoxicity in the rat frontal cortex. Maj Institute of Pharmacology of the Polish Academy of Sciences, Poland
- J. Kutzler, A. Poletini, S. Bleicher, C. Sauer, W. Schultis, M.A. Neukamm, V. Auwärter – Synthetic Cannabinoids in hair – Prevalence in driver's license regranting in Germany, March – September 2020. University of Freiburg, Germany
- J. Laquerre, B. Garneau, B. Desharnais, C. Côté, M.P. Taillon, P.Y. Martin, G. Daigneault, P. Mireault, A. Lajeunesse – A comprehensive analytical process from the identification of an NPS threat to systematic screening. Laboratoire de sciences judiciaires et de médecine légale, Canada
- E. Levari, M. Stefani, A. Franceschini, O. Corazza – The abuse of analgesic opioids: a clinical case study. Azienda Provinciale per i Servizi Sanitari di Trento, Italy
- P.A. Markin, N.E. Moskaleva, V.V. Tarasov, F. Tagliaro, S.A. Appolonova – The pharmacometabolomic approach in the investigation of pharmacological effects of physiologically active substances using Danio rerio model. I. M. Sechenov First Moscow State Medical University, Russia
- D.C. Mata – The Rise of Flualprazolam in DUID, Sexual Assaults and Postmortem Toxicology Cases in Orange County, CA, USA. Orange County Crime Lab, United States of America
- S. Mestria, S. Odoardi, S. Federici, G. Biosa, V. Valentini, M. Marti, S. Strano Rossi – Metabolism study of N-methyl 2-amino Indane (NM2AI) and determination of metabolites in biological samples by LC-HRMS. Catholic University of the Sacred Heart, Italy
- B. Pardo, K. Zamore, L. Short, E. Johnson – Synthetic Cannabinoids in the District: An assessment of the market indicators in Washington, DC. RAND Corporation, United States of America

- E. Prevede, A. Hupli, S. Marrinan, D. Singh, B. D'Udine, G. Bersani, K.P.C. Kuypers, J.G. Ramaekers, O. Corazza – Is Kratom (*Mitragyna speciosa*) a safe medicinal aid? A Netnographic Analysis of Experiences and Comments on YouTube™. Maastricht University, Netherlands
- K.M. Shestakova, P.A. Markin, F. Tagliaro, S.A. Appolonova – Pharmacokinetic study of a new synthetic cannabinoid 5F-APINAC and its influence on tryptophan metabolism in rabbit models. I. M. Sechenov First Moscow State Medical University, Russia
- L.C. Short – Deployment of an NPS Surveillance Program in the District. D.C. Department of Forensic Sciences, United States of America
- D. Singh, S. Narayanan, H. Krishnan, B. Singh, B. Balasingam Vicknasingam – The Relationship between Amphetamine-Type Stimulant (ATS) Use and Violent Crime in Penang, Malaysia: Findings from a Preliminary Study. University Sains Malaysia, Malaysia
- D. Singh, S. Narayanan, T. Shanmugam, B. Vicknasingam – Treatment Barriers Associated with Amphetamine-Type-Stimulant (ATS) Use in Malaysia. University Sains Malaysia, Malaysia
- D. Singh, S. Narayanan, B. Vicknasingam, W.C. Prozialeck, K.E. Smith, O. Corazza, J.E. Henningfield, O. Grundmann – Kratom (*Mitragyna speciosa* Korth.) Use among Opioid Users with Amphetamine-Type-Stimulant (ATS) Use History in Malaysia. University Sains Malaysia, Malaysia

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