



New Psychoactive Substances

Projects, Studies and Research funded by the European Commission

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PREFACE

The rapid spread of new psychoactive substances in the EU market is one of the main challenges to be addressed by drugs policy. New psychoactive substances, which imitate the effects of illicit drugs without being controlled under the UN Conventions on Drugs (hence the name ‘legal highs’), can cause serious harm to the people who use them.

More than 350 new psychoactive substances have been detected in the EU. The problem has worsened greatly in recent years: the number of substances notified through the EU Early Warning System, managed by the European Monitoring Centre for Drugs and Drug Addiction, more than tripled between 2009 and 2013, from 24 to 81 a year. The speed with which new substances are entering the market to replace those that are banned challenges the capacity of policymakers to respond.

Another major challenge is the lack of knowledge on these substances, most of which have recently appeared on the market and have never been tested on humans. In September 2013, the European Commission presented legislative proposals to strengthen the EU response to new psychoactive substances. Those proposals underline the need to support the development, sharing and dissemination of information and knowledge in this field.

The European Commission has provided support to projects on new psychoactive substances through five EU financial programmes, namely the *Drug Prevention and Information Programme 2007-2013*, *Prevention of and Fight against Crime Programme 2007-2013*, *Health Programme 2008-2013*, and the Sixth and Seventh Framework Programmes for research. The results of these projects — some of which are yet to be completed — provide useful insights into the detection and identification of these substances, their effects and risks, patterns and prevalence of use, or innovative prevention methods, for instance.

This document presents an overview of the projects relating to new psychoactive substances that have received funding from EU financial programmes since 2007. The purpose is to map out the available research, disseminate the results and encourage the development of evidence-based policies on new psychoactive substances.

*Anti-Drugs Policy Coordination Unit
Directorate General for Justice
European Commission
June 2014*

Drug Prevention and Information Programme 2007-2013

The Drug Prevention and Information Programme 2007-2013 (DPIP), with a budget of € 21 million, provided financial support to more than 40 drug-related projects. Eight of those projects dealt with new psychoactive substances. The overall aim of the DPIP was to support the exchange of best practices across the EU to improve the quality of prevention and treatment services, and to reduce drug use and drug-related health damage.

http://ec.europa.eu/justice/grants/programmes/drug/index_en.htm

Health Programme 2008-2013

The Second Programme of Community Action in the Field of Health 2008-2013 had three main objectives: improve citizens' health security, promote health and reduce health inequalities, and generate and disseminate health information and knowledge. It had a budget of € 321 500 000. Three projects related to new psychoactive substances have been funded from this programme.

Prevention of and Fight against Crime (ISEC) 2007-2013

Prevention of and Fight against Crime (ISEC) 2007-2013 aimed at contributing to citizens' security through projects designed to prevent and combat crime. It had a budget of € 600 million. It financed two projects related to new psychoactive substances, focused on reducing their supply.

http://ec.europa.eu/dgs/home-affairs/financing/fundings/security-and-safeguarding-liberties/prevention-of-and-fight-against-crime/index_en.htm

The Sixth Framework Programme for Research 2002-2006

The Sixth Framework Programme for Research and Technological Development (FP6) encompassed the EU's activities in the field of science, research and innovation. Its main aims were to support cooperation in the field of research, promote mobility and coordination, and harness research and innovation in the service of other EU policies. It had a total budget of € 17.5 billion. It funded one project on new psychoactive substances.

http://ec.europa.eu/research/fp6/index_en.cfm

The Seventh Framework Programme for Research 2007-2013

The Seventh Framework Programme for Research and Technological Development (FP7) was the EU's main instrument for funding research and innovations. It had a total budget of € 53.2 billion. It financed three projects related to new psychoactive substances.

http://ec.europa.eu/research/fp7/index_en.cfm

SPICE

► *'Spice' and synthetic cannabinoids: fast responses by means of forensic, toxicological and socio-scientific analysis with direct impact on prevention measures*

Research project aimed at ensuring a scientific knowledge base with a contribution to mass spectrometric libraries, assessment of toxicological properties and risk profiles, and development of bioanalytical methods, which is important in the detection process and in acquiring information on health risks. This information is supplemented with data from socio-scientific analysis of use patterns, prevalence and health and social risks, resulting in a proposal for the most suitable preventive action.

Testing carried out on six substances (AM-694, JWH-210, JWH-018, JWH-073, JWH-122 and CP-47 497-C8) suggested that there was a risk of DNA and chromosomal damage after use of some of the compounds, potentially causing specific health risks, particularly for habitual consumers. Furthermore, studies on mouse and human brain tissue showed that consumption of the investigated compounds produces effects on a neuronal level suggesting impairment of cognitive functions.

The major metabolites of seven synthetic cannabinoids (JWH-018, JWH-073, JWH-081, JWH-122, JWH-210, JWH-250 and RCS-4) were identified and structurally characterised. The method applied was necessary to isolate compounds not available as reference standards. Analytical methods for the detection of synthetic cannabinoids in serum, oral fluid and hair were developed, validated and published. Techniques for direct analysis of solid drug material were developed and evaluated, as portable devices and small instruments seem to be most suitable for on-site testing.

As a result of surveys and the information gained from prevention organisations, a proposal for preventive interventions was drawn up, entailing development of a prevention website targeting users, parents and professionals, on-line counselling, a telephone hotline, website outreach work and other activities.

Websites:

Prevention website// <https://legal-high-inhaltsstoffe.de/en>

International Conference on SPICE Prevention Issues //

<http://www.uniklinik-freiburg.de/rechtsmedizin/forschung/forensische-toxikologie/spice-conference.html>

Synthetic Cannabinoids: Brochure for professionals //

<https://legal-high-inhaltsstoffe.de/de/information/flyerdownloads.html>

Duration :

24 months (01/01/2011 to 31/12/2012)

EU Contribution : € 401 716.14

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Associated partners :

Federal Criminal Police Office Wiesbaden, DE

National Bureau for Drug Prevention, PL

National Institute for Health and Welfare, FI

City of Frankfurt, Drugs Department, DE

University of Bern, CH

SPICE II PLUS

► *New synthetic cannabinoids and stimulants – evaluating risk behaviours, problematic use and toxicity for developing specific approaches in primary and secondary prevention*

The project aims to continue research initiated by the SPICE project, adding information on more substances like new stimulant drugs. Besides the development of bio-analytical methods for the detection of new psychoactive substances (NPS) in products and in blood or urine specimens, the project will also seek to acquire better knowledge on associated risks, including descriptions of users. The prevention strategies developed in the SPICE project will be evaluated and improved.

Based on the results of the SPICE project, health risks will be elucidated by characterising the type of damage, the underlying mechanisms and the detoxification pathways. Gaseous exposure experiments with synthetic cannabinoids using lung cells will assess cytotoxic/genotoxic effects under realistic exposure conditions. Some fundamental pharmacological properties of new synthetic cannabinoids *in vitro* and *in vivo* will be characterised (type of CB1 agonism).

From the social science perspective, identification and monitoring of new trends, patterns of use and problems and health risks connected to the use of NPS will be studied. Evaluation of data collected from a prospective study of emergency cases will complement the results of the online survey.

A triangulation of the different perspectives will be used to facilitate the development and implementation of innovative and effective prevention and harm reduction strategies. For this purpose an E-health intervention will focus on specific groups of users. The evaluation of these preventive measures is aimed at providing best-practice models for approaches to users of NPS and, taking into account the use of other drugs, the project also addresses specifics of poly-drug use.

Website:

Prevention website // <https://legal-high-inhaltsstoffe.de/en>

Duration :

36 months (01/01/2013 to 31/12/2015)

EU Contribution : 768 808.77 EUR

Project Coordinators :

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Associated partners :

Federal Criminal Police Office Wiesbaden, DE
National Institute for Health and Welfare, FI
University of Bern, Institute of Forensic Medicine, CH
City of Frankfurt, Drugs Department, DE

NADPI

► *New approaches in drug policy and interventions*

The NADPI project aims to strengthen the evidence base of European drug policymaking by expanding the knowledge base and exchanging best practices on a number of key policy dilemmas related to demand reduction, prevention and harm reduction strategies. This project is a continuation of an initiative by International Drug Policy Consortium and the Transnational Institute on *'Evaluation and prospects of international drug control'*.

The project brings the areas of practice, research and policy together in a series of expert seminars and informal policy dialogues to address some of the most challenging drug policy dilemmas on the European agenda. NADPI aims to bring technical detail into the policy debate to ensure that choices are evidence-based and outcomes pragmatic and constructive. NADPI activities strengthen collaboration between authorities, public services and NGOs and facilitate civil society involvement in the implementation of the EU Drug Strategy and Action Plan.

The main themes on which the project focuses include:

- the European stimulants market, more specifically the development of dependence risk reduction strategies to prevent problematic cocaine use patterns and the development of policy responses to better manage changes in the stimulants market occurring due to the appearance of NPS;
- the changing landscape of EU drug policymaking as a result of the Lisbon Treaty;
- options to redefine the role of law enforcement in synergy with a health and harm reduction policy framework;
- the costs and benefits of existing and potential future cannabis regulation models.

Operating guidelines *'Beyond the disease model, new perspectives in harm reduction: towards a self regulation and control model'* have been developed, focusing on the relationships between cocaine users' natural self-regulation strategies and controlled patterns of use and harm reduction approach, mission and services systems.

Website:

<http://www.undrugcontrol.info/en/about-us/about-us/item/5323-nadpi>

Duration :

12 months (from 01/01/2013 to 31/12/2014)

EU Contribution : € 468 699.92

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Forum Droghe

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CVO-Addiction Research Centre, NL
Scotisch Drug Forum, UK
State University of Florence, IT
VEZA, CZ
CNCA, IT
Romanian Harm Reduction Network, RO
CoopLotta, IT

Euro-DEN

► European drug emergencies network

Euro-DEN is a project that aims to gather and analyse data on acute toxicity associated with use of recreational drugs and NPS, and to improve acute toxicity management by training staff working in recreational settings.

An Internet survey of the REITOX network of National Focal Points on Drugs and other key stakeholders was conducted to determine what data are being collected at national level and to identify areas of best practice for data collection. This confirmed that there is limited systematic collection of data on acute drug/NPS toxicity.

The Euro-DEN network of sentinel centres facilitates data collection, using a minimum dataset tool of parameters to capture the most clinically important aspects of acute drug and NPS toxicity (demographics, drugs used, clinical effects, management and outcome of the cases). For 12 months (October 2013 – September 2014), 14 hospital emergency rooms in ten countries in Europe will collect these data, which will be collated at the lead centre in London, enabling analysis of geographical and time trends, clinical patterns and impact of acute drug/NPS toxicity.

Previous studies have shown that the management of acute drug and NPS toxicity by those working in night-time and other recreational settings (e.g. bars, night-clubs, festivals) can be sub-optimal. During the second year of the Euro-DEN project, training of people working in recreational settings will take place in Estonia, Norway, Spain and the UK. The training will include practical first aid and the use of guidelines to identify individuals with significant acute drug toxicity, requiring further clinical assessment in emergency rooms.

Article:

D.M. Wood et al. (2014) The European Drug Emergencies Network (Euro-Den). *Clinical Toxicology*, Vol. 52, No. 4: Pages 239-241 //

<http://informahealthcare.com/doi/abs/10.3109/15563650.2014.898771?journalCode=ctx>



Duration :

24 months (from 01/10/2012 to 01/10/2014)

EU Contribution : € 393 718.32

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Pärnu Hospital, Pärnu, EE
Bispebjerg Hospital, DK
Our Lady of Lourdes Hospital, IE
Mater Misericordiae University Hospital, IE
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Associated partners :

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North Estonia Regional Hospital, Tallinn, EE

LOCAL-PASS



► *A local approach towards the reduction of psychoactive substance use*

The general aim of the LOCAL-PASS project is to reduce the use of psychoactive substances and related harm in Europe, by developing effective, standardised local approaches to combat psychoactive substance use. The project is expected to produce tools which will help identify and assess the potential risks of new developments at local level, while also providing guidelines for rapid response.

Thematically the project covers two profiles:

- the consumption of new psychoactive substances which are not controlled but which may pose health and social risks at a local level;
- the consumption of controlled substances that are used in a different way and/or by different people.

When it comes to newly emerging trends, there is a significant 'gap' between the information available at national and EU levels and the information required for local policymaking and intervention strategies. As local developments are only visible at the micro-level, a guideline will be drawn up targeting local communities for standardised, rapid and effective identification of new developments in the field of psychoactive substance use.

The outcomes of national and European risk assessment procedures are not always representative of the local situation. The probability that some harm may occur at a national level is very low, whereas it could be a major problem at the local level. A simple and fast tool for assessing the risks of new developments within their region will be available to local organisations, helping communities to decide on the most suitable intervention.

A swift response to developments is important, because it maximises the chances of success and, due to the local scale of the intervention, the costs are as low as possible. Therefore, guidelines in respect of predefined and standardised interventions for different situations and target groups will be prepared.

It is planned to disseminate results of the project to municipalities, care organisations, policymakers, researchers, prevention professionals and other interested partners across Europe.

Duration :

24 months (from 01/11/2012 to 31/10/2014)

EU Contribution : € 454 017.27

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Municipality of Agueda, PT
ADPES, PT
Tilburg University, NL
Municipality of Breda, NL

Website:

www.localpass.eu

I-TREND



► *Internet tools for research in Europe on new drugs: interdisciplinary and integrated approaches to substances, users and markets*

I-TREND is a research project that aims to provide in-depth information on health and social risks linked to NPS sold on the Internet. A further aim is to provide experts involved in risk assessment procedures on NPS and forensic laboratories with a sustainable observation tool for interdisciplinary research on drugs. This tool is intended to help researchers identify and monitor new trends and patterns in the consumption of NPS.

The project covers four main research areas :

Analyses of drug forums – overview of users' interests in specific substances, knowledge of NPS and its role in influencing harm reduction activities, comparison of attitudes towards NPS and current legal and illegal substances, evaluation of drug forums to predict emerging substances and trends in use.

Toxicological analysis – analysis of NPS samples purchased on the Internet in five EU Member States participating in the I-TREND project.

Online survey – patterns of use of NPS compared to illicit substances, motivation to use NPS and knowledge about risks and harm, perception of online purchasing.

Analyses of online shops – the most marketed substances, list of the online shops selling NPS in each partner country, overview of online market, including marketing strategies with respect to pricing and sale strategy adapted to specific age groups, control measures and restrictions.

The results obtained from these research activities will be synthesised into technical folders, of which there will be between 20 and 100, aimed at providing information to stakeholders such as those working in the field and with users. The folders should include information on use patterns, dosage, risks, effects, marketing strategies and availability, toxicological composition of substances purchased.

Website:

www.i-trend.eu

Duration :

24 months (from 01/04/2013 to 31/03/2015)

EU Contribution : € 317 555.91

Project Coordinators :

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Partners :

Centre for Addictology at the First Faculty of Medicine, Charles University, CZ
University of Social Sciences and Humanities, PL
Trimbos Institute, NL
Liverpool John Moores University, UK

New Psychoactive Substances among Problem Drug Users : Towards effective and comprehensive health responses in Europe

The project aims to develop innovative methodologies for identifying and monitoring new trends and patterns in NPS consumption among problem drug users and related adverse consequences in order to develop targeted approaches to prevention, harm reduction and treatment, focusing on problem drug use.

Keywords of the project are research, practice and capacity building. The project combines research capacity with the expertise of a European network of drug and health services. It will enable grass-roots organisations to assess NPS use among problem drug users (PDUs) and to develop and implement tailored responses.

Specific objectives of the project are to:

- provide an overview of the use of NPS in populations of PDUs in the 28 EU countries and to identify the associated risks for harm, and the existing legislative, preventive and harm reduction responses;
- assess, identify and describe harmful patterns of NPS use among PDUs, NPS-related risks and harm in five selected countries, as well as identify and prepare adequate tailored public health responses;
- develop and implement targeted pilot interventions for prevention, demand reduction and harm reduction targeting NPS use among PDUs;
- build best practice guidance and capacity among harm reduction workers with a view to improving harm reduction responses; and disseminate the results of the Europe-wide inventory, 5-country assessment and local pilots on public health responses, through an online resource centre and a training manual, and also at regional and national conferences.

Duration :

24 months (01/01/2014 to 01/01/2016)

EU Contribution : € 403 728.00

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EU-MADNESS

► *Europe-wide monitoring, analysis and knowledge dissemination on novel/emerging psychoactive substances: integrated monitoring and profiling to prevent health harm and update professionals*

The EU-MADNESS project will focus on NPS scientific and toxicological studies to provide data for detection, associated effects and health risks. The resulting feedback will improve education and prevention knowledge relating to the types of NPS emerging in Europe, their associated characteristics and potential harmful effects.

Initially data from several countries on medical consequences, e.g. fatalities, non-fatal overdoses associated with ingestion of new psychoactive substances will be collected. These reports will inform the choice of compounds to be investigated further. It is planned that a number of validated, robust and easily accessible models of compounds will facilitate predictions of neuro-pharmacological activity of unknown substances based on spectral, biological and chemical data derived from known drugs of abuse. These models will be incorporated into the software in hand-held Raman spectrometers which can be used in the field. This will allow front-line healthcare providers to access detailed information to assist with rapid response in treatment.

Duration :

24 months (01/04/2014 to 01/04/2016)

EU Contribution : € 635 215.29

Project Coordinators :

Prof Fabrizio Schifano, UK
University of Hertfordshire

Affinity of new psychoactive substances will be tested to determine their relative efficacy versus standards such as cocaine, amphetamine-like drugs and LSD. Their neurochemistry *in vitro* will be compared with that of cocaine and amphetamine. The data from microdialysis studies will augment the knowledge acquired from *in vitro* studies as these studies will provide data relating to the index NPS metabolism and ability to cross the blood brain barrier.

Behavioural studies will shed some light on the chronic effects of a range of NPS, which may putatively cause permanent cognitive disturbances and increased impulsivity as well, which is crucial information for risk assessment.

A range of educational tools will be produced in a range of EU languages, e.g. lectures, online teaching and e-learning resources for integrated spiral curricula on the health risks of NPS for use in inter-professional medical, psychology, psychiatry, pharmacy, social work and health education settings.

Website:

<http://www.madnessproject.org/>

PSYCHONAUT WEB MAPPING PROJECT



Two-year EU funded project focused on developing a web scanning system to identify and categorise novel recreational drugs and psychoactive compounds, and new trends in drug use based on information available on the Internet. In the absence of any scientific and toxicology study, the project's technical reports provided an accurate picture of the effects, side-effects and users' experience of NPS.

There have been 412 NPS (151 chemical, 121 herbal) and combinations (140) identified from the multilingual, exploratory qualitative searches conducted in each of the participating countries, and incorporated into the online database in the password-protected area of the Psychonaut Web Mapping website. Overall, the project was able to set up an integrated mapping and monitoring system on the Internet, which allowed the early identification of emerging trends in recreational drug abuse.

The web scanning system website operated as a mechanism for establishing and communicating with key professional and scientific networks, as well as being a means of disseminating project results and providing information about upcoming conferences and publications.

Moreover, the project has demonstrated that it is possible to rely on the information available and shared on the Internet to build up a reasonably accurate understanding of the characteristics of these novel and recreational compounds. This information is vital for many health professionals and the online database and technical reports are helping to fill this gap in knowledge.

Website:

<http://www.psychonautproject.eu>

Duration :

24 months (from 01/01/2008 to 31/12/2009)

EU Contribution : € 388 884.90

Project coordinator:

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Partners:

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De Sleutel, Brussels, BE
Bergen Clinics Foundation, Bergen, NO
Addiction Research Group, Department of Psychiatry and Psychotherapy, LVR-Hospital, Essen, DE
Servizio Salute Regione Marche, Ancona, IT
Institut Municipal d'Assistència Sanitària (IM-IMAS), Barcelona, ES

ReDNet

► *Recreational Drugs European Network*

The ReDNet was a multinational project aimed at identifying and researching NPS and providing evidence-based information to risk groups, healthcare providers and policymakers using a number of innovative information communication technologies (ICTs) (e.g. SMS, social networking sites, Second Life and other multimedia platforms).

ReDNet relied on the experience gained from Psychonaut Web-mapping in 2010 and was able to improve intelligence and generate original data on the availability and misuse of more than 700 NPS by monitoring the Internet on a daily basis in eight different languages and disseminating evidence-based information via ICTs. The project provided evidence-based information to health professionals on prevention and harm reduction activities using ICTs, and highlighting the fact that new technologies can be used in prevention, although further research on the best approach must be conducted.



The main phases of ReDNet:

- content development part included: an extensive multilingual literature review with respect to NPS misuse, an EU-wide survey on the level of knowledge and current sources of information about NPS, the establishment of reference groups of professionals and young people to assess the information presented and the feasibility of the technology, prior piloting.
- technical development and piloting of a variety of tools were developed to better disseminate information to target audiences — users, potential users, as well as professionals. It included tools as videos for Youtube, virtual seminars in *Second Life*, Facebook profile, *SMAIL* mobile application and *News Bites* blog.
- besides information disseminated using developed ICT, project group prepared scientific publications and a large number of presentation in conferences.

In 2013 the project received the European Health Award at the European Health Forum Gastein.

Websites:

<http://www.rednetproject.eu/>

<http://www.clipshow.info/?lang=en/>



Duration :

24 months (01/04/2010 to 31/03/2012)

EU Contribution : € 449 663.00

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NEWIP



► *New implementation nightlife empowerment and well-being*

The NEWIP project brought together networks of health, prevention and harm reduction experts, regional authorities, field workers and volunteers to address drug problems from the practical side using recreational settings as initial outreach locations in order to respond to emerging trends.

Several supplementary sub-projects or work packages were carried out:

- The *PARTY+* Network addressed the implementation and enhancement of quality labels and charters for nightlife venues. Twenty-three new label processes were initiated with the support of Party+.
- *Techno Plus* addressed field interventions during eight big party events in Europe, e.g. festivals. In total 92 volunteers from 13 countries around Europe were involved in these interventions. Volunteers offered harm reduction information and materials, chill-out areas, psychological support, drug checking services and 'Serious Video' games.
- The *Emerging Media Work Package* activity prepared the study of mediated interaction in several situations and with different technologies, with methods centred on the analysis of action along with more classic psychological methods.
- As part of the project, systematic drug checking was carried out by TEDI (Trans European Drug Information) from 10 partner organisations in seven countries (Austria, Belgium, France, Germany, the Netherlands, Spain, Portugal). There were 458 new substances in the TEDI database (210 synthetic drugs were detected as well as 18 new adulterants). TEDI has made 6 contributions to the early warning system on new psychoactive substances. Results of the drug checking are regularly published in trend reports.

Duration :

36 months (01/01/2011 to 31/12/2013)

EU Contribution : € 900 000.00

Project coordinators:

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University of Padova (HTLab), IT

APDES, PT

Techno Plus, FR

Verein Wiener Sozialprojekte (CHEcK iT!), AT

NEWIP provided four best-practice standards addressing peer education interventions in nightlife settings, drug checking services, safer nightlife labels and charters, and 'serious games' in nightlife settings.

Webpages:

<http://www.safernightlife.org>

www.tediproject.org

www.partyplus.eu

Project presentation // http://ec.europa.eu/eahc/documents/health/presentation_2526112013_newip_en.pdf

European Network of Prosecutors Synthetic Drugs and Precursors II

A conference for European prosecutors was organised to discuss the entire synthetic drugs chain from the import and trade in raw materials and hardware to the production and sale of the end product.

The conference focused on new strategies and the Dutch 'barrier-model'. The barrier-model shows the possibilities of how and where to put up barriers to the production of synthetic drugs in the Netherlands and worldwide.

The aims were to create an EU-wide network of national prosecutors sharing knowledge, skills, experiences and best practices, to introduce the Dutch barrier-model at European level as well as develop a strategy for multi-disciplinary cooperation.

Duration :

12 months (from 11/06/2010 to 10/06/2011)

EU Contribution : € 38 171.00

Project Coordinators :

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SAVE OUR NET (S.O.N.)

The S.O.N is an Italy-based project that aims to design new and effective means of Internet monitoring and discourage the sale and trafficking of NPS to minors on the Internet.

From a conceptual point of view, the project provides for a balanced intervention on two levels: the first of a preventive-educational type and the second of a preventive-suppressing type.

Preventive-educational direction seeks to build a system preventing minors from accessing websites that sell NPS online. The system would interact with the National Early Warning System (EWS) on New Psychoactive Substances in order to update continuously information on dangerous websites. Additionally, the direction includes educational awareness-raising actions targeting parents and educators.

Preventive-suppressing direction entails joint action among EWS, Central Directorate for Anti-drug Services of the Ministry of the Interior, Judicial Authority and interbank services institutes to monitor and update information on dangerous websites, and cooperation with law enforcement units to combat sale of NPS online.

Some of the results of the project are:

- Gathered information on the profile of consumers who sell and buy NPS through the Internet.
- Special software for parents to prevent minors from accessing websites which offer NPS, meanwhile allowing parents to report on dangerous websites to EWS.
- Informative and awareness-raising campaign for parents addressing potential risks on the Internet.
- An experimental procedure involving cooperation between EWS and law enforcement units to intercept parcels of NPS addressed to minors.
- Study on legal framework in EU Member States to address NPS online selling to minors.

Websites:

www.allertadroga.it

Duration :

36 months (from 05/11/2011 to 03/11/2014)

EU Contribution : € 289 600.00

Project coordinator:

Department for Antidrug Policies, IT

Partners:

Central Directorate Antidrug Service, IT
Postal and Communication Police Service, IT
Addiction Department ULSS 20 of Verona, IT
Customs Agency, IT

CHAMP

► *Collaborative harmonisation of methods for profiling of amphetamine-type stimulants*

The objectives of the project included development of harmonised profiling methods for amphetamine-type stimulants (ATS) and a database with online access.

Except for actual amphetamines, information on ATS around the year 2000 was scarce and not much was known about harmonised chemical profiling methods for ATS such as 'speed' and MDMA (ecstasy). With MDMA, only in-house profiling methods existed. Profiling at international level required transmission of the samples abroad, which made the procedure time-consuming and difficult.

The project mainly focused on two different types of ATS, namely methamphetamine and MDMA, in order to develop methods required for reliable profiling of ATS. Additionally, during the research in laboratories, several new ATS were identified. Gathered data were used to develop minimum standards for identification of new ATS and results of the project allowed the profiling of drug seizures without sending samples to other laboratories.

Whilst the project did not focus on new substances, data obtained from laboratories (methods such as GC/MS and GC/IRM) enriched the information not only about known substances, but also newly identified ones, and have been widely used in later research and studies.

Website:

http://ec.europa.eu/research/social-sciences/projects/208_en.html

Articles:

- L. Dujourdy et al.(2008) Drug intelligence based on organic impurities in illicit MA samples. Forensic Science International. Vol. 177, Issues 2–3, p. 153–161
- C. Weyermann et al. (2008) Drug intelligence based on MDMA tablets data: I. Organic impurities profiling. Vol. 177, Issue 1, p. 11–16
- R. Marquis et al. (2008), Drug intelligence based on MDMA tablets data. 2. Physical characteristics profiling, Forensic Science International. Vol. 178, Issue 1, p. 34–39

Start:

24 months (01/07/2004 to 30/06/2006)

Project Coordinator:

National Bureau of Investigation,
Crime Laboratory, FI

EU Contribution: € 867 180.00

Partners:

Nederlands Forensisch Instituut, NL
University of Lausanne, CH
Laboratoire de la Police Scientifique de Lyon, FR
Bundeskriminalamt, DE
Kriminalistický Ústav Praha, CZ
Drug Enforcement Administration, US



PREDICT-IV

► *Profiling the toxicity of new drugs: a non animal-based approach integrating toxicodynamics and biokinetics*

The overall aim of the Predict-IV project was to develop strategies to improve the assessment of drug safety in the early stage of development and late discovery phase, by an intelligent combination of non animal-based test systems, cell biology, mechanistic toxicology and in-silico modelling, in a rapid and cost-effective manner.

A better prediction of the safety of an investigational compound in early development was delivered, by applying advances in predictive toxicology (toxicogenomics and metabolomics, prediction of pharmacokinetics and high content imaging) and modelling. Margins of safety were deduced and the data generated by the proposed approach may also identify early biomarkers of human toxicity for pharmaceuticals. The results obtained from Predict-IV ought to enable pharmaceutical companies to create a tailored testing strategy for early drug safety.

The major advantages would be:

- reduced costs
- quicker turnaround times
- low amount of compound needed for testing, enabling toxicity screening early
- in drug discovery (e.g., during lead optimisation)
- early decisions on exclusion of candidates with unacceptable toxicity
- knowledge-based selection of most promising lead candidates (late stage)

Website:

<http://www.predict-iv.toxi.uni-wuerzburg.de/>

Publications online:

http://www.predict-iv.toxi.uni-wuerzburg.de/media_events/publications_online/

Duration :

66 months (from 01/05/2008 to 31/10/2013)

EU Contribution : € 11 330 906

Project coordinators:

University of Würzburg
Department of Toxicology, DE

List of partner institutions:

<http://www.predict-iv.toxi.uni-wuerzburg.de/participants/>

ROSFEN



► *Rapid on-site forensic analysis of explosives and narcotics*

The ROSFEN project is centred on delivering multiple technology innovations for fast on-site detection and direct analysis of explosive materials and narcotics.

This novel platform removes the need for slow, costly chromatography methods currently used in lab-based analysis. ROSFEN will enable total analysis time (samples, blanks, controls) to be reduced from hours to minutes, thus alleviating the load on forensic labs and enabling intelligence-led investigations.

ROSFEN will also innovate in the rapid analysis of new psychoactive drugs, by coupling the isomer selectivity of the ion filter technique with the detection sensitivity of tandem mass spectrometry. ROSFEN will thus enable European industry to develop and deliver innovative technologies into key global markets: Analytical instruments for security applications (\$ 2 billion annually) and the \$ 3.3 billion market for mass spectrometry.

The ROSFEN consortium comprises two research-intensive SMEs, two leading research groups and two end users. The end users have decades of expertise in forensic analysis of explosives and narcotics (FSNI), as well as crime scene analysis (PSNI).

Website:

www.rosfen.eu

Duration:

24 months (01/04/2013 to 31/03/2015)

EU Contribution: € 1 420 262

Project Coordinator:

University College Cork,
National University of Ireland, IE

Partners:

Microsaic Systems, UK
Environics OY, FI
University of Basel, CH
Department of Justice, Forensic Science Northern
Ireland, UK
Police Service of Northern Ireland, UK

ALICE RAP



► *Addiction and lifestyles in contemporary Europe – Reframing addictions project*

ALICE RAP is a five-year European research project that brings together over 100 scientists from more than 25 countries and 29 different disciplines. It aims to analyse the challenges posed by addictive legal and illegal substances and lifestyles to the cohesion, organisation and functioning of contemporary European society.

The project is divided into seven areas and 21 work packages (three in each area), making up an integrated multidisciplinary research strategy, encompassing history of addiction, classification and definition of addictions, policy analyses, the business of addiction, youth as customers, the impacts of new technologies on use, the interrelations of culture and biology and many other aspects. The results of the research, conferences and meetings are publicly available on the project's webpage.

Two work packages in ALICE-RAP investigate NPS:

- Researchers at the Institute of Psychiatry (UK) are carrying out a semi-systematic review of the Internet marketing of illicit drugs and 'legal highs' and analysing trends over five years. The work aims to identify more than 100 websites and analyse their marketing practices.
- As part of a broader work package, 16 researchers from Liverpool Moores University (UK) have investigated the evidence base of policies designed to respond to young people's participation in addictive behaviours (including use of NPS). The findings from this work are to be summarised in a framework for identifying the impact of young people's policy and made available through an electronic database. As part of this, at the end of 2013 the Policy Paper on Novel Psychoactive Substances was published, providing information on situations and policy responses.

Website:

<http://www.alicerap.eu>

Working package 16// <http://alice-rap.prevention-standards.eu/>

Articles:

Policy Paper 3 - Novel Psychoactive Substances. Nov 2013

http://www.alicerap.eu/resources/documents/cat_view/1-alice-rap-project-documents/19-policy-paper-series.html

Duration :

60 months (from 01/04/2011 to 31/03/2016)

Project coordinator:

Hostipal Clinic Barcelona, ES

EU Contribution: € 7 978 226

The list of participants and partner institutions available here:

<http://www.alicerap.eu/about-alice-rap/partner-institutions.html>ublished



DROSICAN

► *Support for the Andean Community in the area of synthetic drugs*

The aim of the project was to propose methodologies and tools for prevention and control of possible effects of the supply of and demand for illicit synthetic drugs in the Andean Community, by forming strategic partnerships with community organisations, civil society, and public and private agencies. .

Within the framework of the project studies on drug use among students in Bolivia, Colombia, Ecuador and Peru were conducted, revealing public health risks and associated factors.

As a result of the project, close to 3 100 health, educational, police, legal and customs professionals, among others, were given specialised training in the different areas of synthetic drug supply and demand through 50 training events offered during the course of the project.

Furthermore, the Andean Community countries were given assistance in strengthening their national observatories from the conceptual, methodological and operational viewpoints, with a view to their adoption of public policies based on scientific information and evidence. Experts from EU countries provided knowledge and research regarding the use of new synthetic drugs and the structures and nomenclature of 'designer drugs'. The EMCDDA complemented this with a description of its monitoring of new psychoactive substances and a presentation of the EU Early Warning System on NPS.

Networks had been formed of governmental and non-governmental institutions concerned with drug use, which promoted information sharing and experiences and coordinated actions in the areas of synthetic drug supply and demand.

Reports:

Epidemiologic Study on Public Health and Associated Factors of College Students in the Andean Countries (2009)// <http://www.comunidadandina.org/DS/DROSICAN/Estudio%20universitario%20Regional%20ingles.pdf>

Informe Final Memoria del Proyecto Drosican (2010)//

http://www.comunidadandina.org/DS/DROSICAN/MEMORIA_DROSICAN_ok.pdf

Duration:

21 months (from 30/09/2008 to 01/05/2010)

EU Contribution (Development Cooperation Instrument):

€ 2 500 000

Project Coordinator:

Tatiana Dalence Montaña,
General secretariat of Andean Community,
Peru

Countries:

Bolivia
Columbia
Ecuador
Peru

Justice Programme 2014-2020

The Justice Programme, which aims at contributing to the further development of a European area of justice, will fund projects relating to drugs, including new psychoactive substances. It has a budget of € 378 million.

http://ec.europa.eu/justice/grants1/programmes-2014-2020/justice/index_en.htm

The Internal Security Fund 2014-2020

The Internal Security Fund, which supports the implementation of the Internal Security Strategy, can provide funding for projects relating to drug supply – including regarding new psychoactive substances. It has a budget of around € 1 billion.

http://ec.europa.eu/dgs/home-affairs/financing/fundings/funding-home-affairs-beyond-2013/index_en.htm

The Health Programme 2014-2020

The Health Programme, whose objective is to promote health, prevent diseases and foster supportive environments for healthy lifestyles, will support health-related drug projects. It has a budget of € 449.4 million.

http://ec.europa.eu/health/programme/policy/index_en.htm

Horizon 2020

Horizon 2020 is the EU's Research and Innovation programme, with a budget of nearly € 80 billion. Its 'Health, demographic change and wellbeing' component will be able to fund research relevant to new psychoactive substances – for instance to develop innovative approaches to testing.

<http://ec.europa.eu/programmes/horizon2020/en>

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European Commission - Directorate-General for Justice

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