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for Drugs and Drug Addiction

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# SELECTED EUROPEAN COUNTRIES 2008

NATIONAL DRUG-RELATED  
RESEARCH IN EUROPE





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for Drugs and Drug Addiction

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## Contents

Introductory note and acknowledgements	5
Introduction	7
Methodology	8
Previous and current EU work on drug-related research in Europe	9
National frameworks for drug-related research	11
Drug-related research in national policy	11
Examples of specialised drug-related research centres in Europe	13
A challenge to quality in research: lack of coordination	14
Funding arrangements	14
Funding rationales and priorities	15
Difficulties in quantifying expenditures on drug-related research	15
Limitations and gaps in drug-related research	16
A recent history of drug-related research in Europe	16
Research priorities in some reporting countries	18
Zooming in on five main studies in each country	18
The interface between research, policy and practice	20
Drug-related journals	22
Drug-related research dissemination	22
Internet and dedicated websites	25
Other dissemination channels	25
Conclusions	26
12 years later, where are we now?	26
Future developments in drug-related research	27
References	29



## Introductory note

Three in-depth reviews of topical interest are published as 'Selected issues' each year. These Selected issues are based on information provided to the EMCDDA by the EU Member States and candidate countries and Norway (participating in the work of the EMCDDA since 2001) as part of the national reporting process.

The three issues selected for 2008 are:

- Towards a better understanding of drug-related public expenditure in Europe
- National drug-related research in Europe
- Drugs and vulnerable groups of young people

All Selected issues (in English) and summaries (in 23 languages) are available on the EMCDDA website:

<http://www.emcdda.europa.eu/publications/selected-issues>

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- the members of the Management Board and the Scientific Committee of the EMCDDA;
- the Office for Official Publications of the European Communities.

## Reitox national focal points

Reitox is the European information network on drugs and drug addiction. The network is comprised of national focal points in the EU Member States, Norway, the candidate countries and at the European Commission. Under the responsibility of their governments, the focal points are the national authorities providing drug information to the EMCDDA.

The contact details of the national focal points may be found at: <http://www.emcdda.europa.eu/index.cfm?nodeid=403>



## Introduction

Drug-related research is crucial to understanding Europe's drug problems. Research enables Europe to learn lessons from the past, by identifying historical patterns of drug use, and studying the cycles and variations in the problem use of substances. Research sharpens Europe's awareness and monitoring of the present. It provides surveys and data on the scope and scale of drug problems, and looks into emerging trends and new patterns in drug use. Research helps Europe to prepare for the future, by looking at practical issues such as resource allocation, best practices, the piloting of innovative approaches to managing problem drug use. Research is also making great advances in understanding the biological mechanisms involved in addiction and how drugs affect the brain, thereby paving the way for new prevention and treatment options. In short, science and research enable policymakers to better understand the multiple facets of drug use as it affects both the individual and society.

Today, European drug policy is increasingly 'evidence-based'. This implies that policy is underpinned by scientific research and findings, and that research plays a role in defining policy priorities, best practice and options. Yet building a picture of drug-related research in Europe is challenging. Just as drug use cuts across broad sections of society, so drug-related research embraces numerous research disciplines, such as public health, psychiatry and psychology, sociology, medicine, law, criminology, political science and economics. Drug-related research projects themselves embrace a variety of disciplines and methodological approaches, with research on illicit drugs often sharing resources with licit substances such as alcohol, tobacco or prescription drugs, or more general concepts of addiction and compulsive behaviours. There are also numerous actors involved in drug-related research, from universities and government institutes, through NGOs and think-tanks, to pharmaceutical companies and forensic laboratories. Funding for research in Europe is similarly varied – in terms of periodicity and budgetary cycles, national, regional or international focus, prioritisation of research objectives, and the multiple sources of financial support. Added to this general variety are national, local and regional variations: drug-related research is not evenly distributed and available across EU Member States.

So those exploring the territory enter a complex field. Beyond mapping the actors involved in drug-related research, it is also important to examine what direct effects research has on decision-making. Again, policy decisions in the area of drug use, as in many other areas of governance, are complex. Scientific findings do not always immediately translate into policy. Professional practice in areas such as medicine, treatment, social work and law enforcement has its own traditions, structures and constraints, and these might delay modifications which reflect the latest research. Nevertheless, both policy and practice increasingly tend to listen to science so as to ensure that they can be guided by the most recent knowledge and the implementation objectively assessed by all relevant stakeholders.

## Methodology

This Selected issue summarises the available information from national focal points and other sources, including the EMCDDA's stakeholders such as its Scientific Committee, expert groups, the European Commission, and the Centre's staff. It provides an overview of the framework within which drug-related research is carried out in European countries. It focuses on a number of topics, including: the role of drug-related research at national level; coordination and funding arrangements; research and dissemination structures; as well as major recent research projects.

In 2007, the EMCDDA's Reitox network of national focal points in 27 Member States, Croatia, Norway and Turkey were requested to draft a chapter on drug-related research in their country. Responses were received from 25 Member States, Croatia, Norway and Turkey<sup>(1)</sup>. This report thus draws from the reports provided to the EMCDDA, which may vary in scope and coverage, based on availability of resources and data at Member State level. The request for information covered:

- an overview of national drug-related research structures and policies, in order to understand the role of research in national policy, and the focus of national drug research;
- a snapshot of current drug-related research within each Member State, in order to investigate the main current research areas in the EU, the beneficiaries of research funding and the centres of scientific excellence in Member States;
- a description of national structures and approaches for collecting and disseminating drug-related research results, in order to assess the availability of information on drug-related research at national level.

Both 'applied' and 'basic' research were included in the reporting exercise<sup>(2)</sup>. Research related to the supply reduction field – that is, in the area of criminology, policing, enforcement, and seizures – was excluded, as many national focal points have limited access to information in this area.

The reports from the Reitox national focal points enabled the Centre to build an overview of current drug-related research in Europe, and to apply a tentative framework of categories to classify (i) research actors in Europe, (ii) the broad themes and subjects of a corpus of research as reported to the Centre, and (iii) available dissemination channels.

## Drug-related research and the EU

Drug-related research is recognised as a key element of EU drug policy, and is mentioned specifically in two key documents defining current drug policy.

The EU drug strategy 2005–12<sup>(1)</sup> calls for 'a better understanding of the drugs problem, and the development of an optimal response to it through a measurable and sustainable improvement in the knowledge base and knowledge infrastructure'.

The EU action plan on drugs 2005–08<sup>(2)</sup> makes two mentions of research:

- Action 43, 'Promote research in the field of drugs', aims to promote research in the context of the Community programme for research and technological development – currently managed under the 7th framework programme<sup>(3)</sup> – and of Member States' own research programmes.
- Action 44, 'Create networks of excellence in drug research', aims at encouraging research networks, universities and professionals to develop and create networks of excellence for the optimal use of resources, together with the effective dissemination of results.

<sup>(1)</sup> <http://www.emcdda.europa.eu/index.cfm?nNodeID=6790>

<sup>(2)</sup> <http://www.emcdda.europa.eu/index.cfm?nNodeID=10360>

<sup>(3)</sup> <http://cordis.europa.eu/fp7/>

<sup>(1)</sup> Data was not available from Bulgaria and Italy, so this report focuses on responses from 25 Member States, plus Croatia, Norway and Turkey.

<sup>(2)</sup> By 'applied research' this report refers to research which is focused on epidemiological studies, specific interventions and policy measures relating to drug use. By 'basic research' this report refers to studies undertaken to acquire new knowledge about drug-related issues, without any immediate application in view.

## Previous and current EU work on drug-related research in Europe

This Selected issue may be viewed as a successor to a 1996 report, when the EMCDDA was first involved in a tentative overview of drug-related research in 15 Member States<sup>(3)</sup> (Kenis, 1996). In 1996, representatives of the 15 Member States and individual researchers were invited to a joint seminar, organised by the European Commission and the EMCDDA, entitled 'Drug research-related initiatives in the European Union'. The seminar was held under the European Commission's project *Inventing tomorrow* which aimed to propose guidelines for the Fifth research and technical development framework programme. National focal points were requested by the European Commission Drugs Coordination Unit and the EMCDDA to prepare 'national reports on the national drug research situation and identification of research needs' (Kenis, 1996). Thematic reports on the 'Evaluation of action against drug abuse in Europe' (Uchtenhagen, 1996), 'Research on the medical, socio-economic and detection aspects of drug abuse' (DGXII/Irish Presidency 1996) and 'Criminological research' (Fillieule, 1996) were also prepared.

The 1996 report 'Research related initiatives in the European Union' (Kenis, 1996) was commissioned by the European Commission during the early years of the EMCDDA. It differs somewhat in coverage and scope from the present exercise. Nonetheless, bearing in mind that, today, almost twice as many countries report to the EMCDDA – that is, Member States which have joined the EU since 1995, together with third countries – the information and recommendations which stemmed from the seminar form a baseline against which to assess progress and new developments in drug-related research today. This report identifies progress in comparison to the available information in 1996 and further identifies some limitations and gaps, suggesting future developments in this area.

This Selected issue also precedes further work done in the framework of an overview study, A comparative analysis of research into illicit drugs in the EU, launched by the European Commission's DG Justice, Freedom and Security (DG-JLS) in September 2007<sup>(4)</sup>. This study will look into the key research areas, research disciplines and recent research trends relevant to the illicit drug field, covering both drug demand and drug supply reduction efforts. The report will look in particular at the fulfilment of the objectives of the EU action plan 2005–08<sup>(5)</sup>. This study is due to be published early in 2009.

<sup>(3)</sup> At the time: Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom.

<sup>(4)</sup> The tender document for this study is available at: [http://ted.europa.eu/Exec?DataFlow=ShowPage.dfl&Template=TED/N\\_one\\_result\\_detail\\_curr.htm&docnumber=228475-2007&docId=228475-2007&StatLang=EN](http://ted.europa.eu/Exec?DataFlow=ShowPage.dfl&Template=TED/N_one_result_detail_curr.htm&docnumber=228475-2007&docId=228475-2007&StatLang=EN)

<sup>(5)</sup> <http://www.emcdda.europa.eu/index.cfm?nnodeid=10360>



## National frameworks for drug-related research

### Drug-related research in national policy

Although continuously present as a topic of policy interest, emphasis on drug-related research has not always been mentioned as a formal priority across Member States. In 1996, EU Member States reported that drug-related research was considered, by both researchers and policymakers, to be 'a very important and relevant topic [...] particularly in recent years when drug research has experienced a rather dynamic development' (Kenis, 1996). Nevertheless, few links were identified between research and drug policy documents. Concrete mechanisms for setting priorities in this area were referred to as being 'extremely rare', and as varying from 'purely scientific considerations to purely political considerations, or a mixture of the two' (Kenis, 1996).

Since 1996, some progress can be reported. Research has been introduced into the drug policy documents in many European countries. Drug-related research is today mentioned in the national drug strategy or action plan of 20 of the 27 reporting countries, and either merits an entire topic to itself in these documents, or is referred to as an essential component of evidence-based policy<sup>(6)</sup>. For example, the Finnish drug policy 2004–07 stated that research knowledge and expertise are indispensable in order to effectively plan, evaluate, develop and design drug policy. This represents significant progress when compared to the situation in 1996, when only two Member States – Ireland and the Netherlands – reported specific approaches to drug-related research in their national policies (DGXII/Irish Presidency, 1996).

Member States which have joined the EU since 2004 have reported considerable progress, although some gaps remain. The main research efforts mentioned in the Romanian national strategy are a general population survey on knowledge, attitudes and practices regarding drug use, together with

a European school project on alcohol and other drugs (ESPAD)<sup>(7)</sup> survey. Similarly, in Estonia, Latvia, and Croatia, prevalence studies on drug use in the school and the general population, and on problem drug use, are now within the scope of national research planning. In Hungary, the national drug strategy dedicates a chapter to the importance of monitoring, and epidemiological research has mainly been conducted in recent years, although research on estimating the consequences of drug use is still missing. In Lithuania, the national strategy on drug addiction prevention and control 2004–08 includes scientific research and the development of a drugs information system. The Polish national drug programme highlights several monitoring and research priorities in the area of epidemiology and social responses, which include addressing the coverage of drugs in the media, and attitudes towards drugs and drug policies.

Many Member States explicitly highlight the need for evidence-based policy. In Ireland, the National Drug Strategy Review Group concluded that research was essential to enable the dissemination of models of best practice in line with EU and government policy, and the Irish action plan includes commitments to evaluating existing services, and to making better use of research findings. The Luxembourg national drug action plan 2005–09 explicitly refers to research and information as integrated parts of the transversal axes of demand and supply reduction. It stresses that research and information constitute a primary need for anti-drugs policy. Findings from research in the field of drugs are mentioned in various Dutch national drug policy documents, with their role in underpinning evidence-based drug policy highlighted. In Poland, the main objective for research and monitoring in this area is to provide information to support implementation of the national programme on drugs. In order to reinforce the link between research and practice, the Portuguese national drugs plan places emphasis on 'action-research', based on a recommendation of the external evaluation of

<sup>(6)</sup> National drug strategies and action plans can be consulted on the EMCDDA website at: <http://www.emcdda.europa.eu/?nnodeid=1360>

<sup>(7)</sup> <http://www.espad.org>

the 2004 national strategy which noted the lack of focus on assessing interventions. The Swedish national drug policy emphasises a need to reduce the number of new drug users, and as a consequence priority is given to research involving the identification of, and prevention within, high-risk social groups. The Czech Republic's national drug strategy mentions support of research and the integration of research output into practice, and emphasises a need for 'scientifically verified facts and data'. The German Action Plan on Drugs dedicates a chapter to research needs, mentioning for example its importance in guiding practical applications in areas such as early detection and early interventions, secondary prevention, and the prevention of relapse.

Priority-setting is important for matching available funding with research needs, and for managing limited resources effectively. Member States reported that priorities for drug-related research in Europe are mainly defined by decision-makers, and often form part of national strategies or action plans. Some countries, such as Belgium and Spain, report a 'top-down' approach, for example where a national research programme or strategy includes drug-related research within its scope. Countries, such as France and Austria, report a 'bottom-up' approach, emphasising the importance of individual institutions and researchers in setting an agenda in the field of drug-related research. While mentioning its 'top-down' approach, Germany also mentions 'bottom-up' approaches at federal level, and a focus on independence among scientific institutions. Finland and Norway stated that research priorities are defined based on a dialogue between researchers and government.

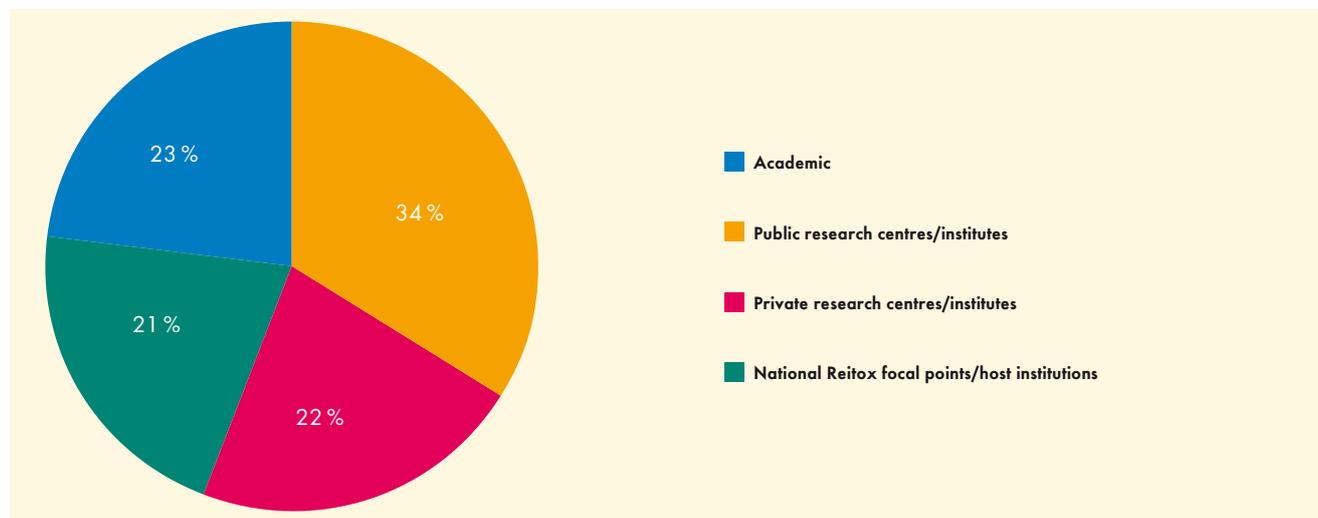
## National drug-related research structures

Universities are the main players in drug-related research in Member States. In the medical and treatment fields, much research is conducted in university hospitals, for example in psychiatric clinics, in faculties of pharmacology and toxicology, and in institutes for social medicine and public health. Institutes of psychology and education are often involved in drug-related prevention research. In the social sciences, the main faculties concerned are sociology and criminology, although some research is done at forensic institutes or law faculties.

Much drug-related research in Europe is also conducted at public research institutes, under the direct or indirect oversight of the state. This includes many of the national focal points<sup>(8)</sup> or the institutions that host them, and also national public health institutes, national offices for statistics, and national institutes for crime and forensic laboratories. Research may in addition be conducted in private scientific institutions, not necessarily linked to university institutes, which may benefit from public funding, for example via commissioned projects.

In total, more than 70 main research structures were cited by reporting countries<sup>(9)</sup>. These can be classified into four types of structure: (i) academic centres (including universities and university linked research centres); (ii) public research centres and institutes; (iii) private research centres and institutes (including foundations and the pharmaceutical industry); (iv) and institutions hosting Reitox national focal points (see Figure 1). As the EMCDDA's national reports in 1996 did not include questions to identify the main national structures for drug-related research, it is not possible to establish a comparison in this section.

**Figure 1:** Categorisation of 70 main drug-related research structures reported to the EMCDDA



<sup>(8)</sup> <http://www.emcdda.europa.eu/index.cfm?nodeid=403>

<sup>(9)</sup> A complete list is available on the EMCDDA website, <http://www.emcdda.europa.eu/themes/research>

## Examples of specialised drug-related research centres in Europe

Centre for Addictology, First Medical Faculty of the Charles University, Prague, Czech Republic.

<http://www.adiktologie.cz>

Centre for Alcohol and Drug Research, University of Aarhus, Denmark.

<http://www.crf-au.dk>

Centre for Interdisciplinary Addiction Research in Hamburg, Germany.

<http://www.zis-hamburg.de>

KETHEA, Greece.

<http://www.kethea.gr>

Addiction Research Centre at Trinity College in Dublin, Ireland.

<http://www.socialwork-socialpolicy.tcd.ie/units/addiction.php>

Amsterdam Institute for Addiction Research, Netherlands.

<http://www.onderzoekinformatie.nl/en/oi/nod/organisatie/ORG1237472/#lopendprg>

Scientific Bureau on Lifestyle, Addition and Related Social Developments (IVO) in Rotterdam, Netherlands.

<http://www.ivo.nl>

Ludwig Boltzmann Institute of Addiction Research (LBISucht) in Vienna, Austria.

<http://www.api.or.at/lbi>

Institute of Psychiatry and Neurology in Warsaw, Poland.

<http://www.ipin.edu.pl/>

Institute of Drug Dependencies at the Centre for the Treatment of Drug Dependencies in Bratislava, Slovakia.

[http://www.drogy.sk/cpldz/idz\\_e.htm](http://www.drogy.sk/cpldz/idz_e.htm)

Centre for Social Research on Alcohol and Drugs (SoRAD) in Stockholm, Sweden.

<http://www.sorad.su.se/>

National Addiction Centre in London, UK.

<http://www.iop.kcl.ac.uk/departments/?locator=932>

Bergen Clinics Foundation, Norway.

<http://www.bergenclinics.no>

Note: This is a non-exhaustive list, provided to illustrate the breadth and range of centres working on drug-related research in Europe. It excludes those based at national focal points. The full lists provided for this Selected issue by Member States are available on the Centre's website at:

<http://www.emcdda.europa.eu/themes/research>

## A challenge to quality in research: lack of coordination

Well-functioning coordination among researchers, research centres and research areas is a prerequisite for continuous, comprehensive and high quality research. A serious lack of such coordination was already noted by Kenis in 1996. Today, this still seems to be a fundamental structural problem in most reporting countries, and there is room for improvement with regard to cross-disciplinary research. Interdisciplinary, national research networks with sustainable funding were reported by only a few countries, although the reported initiatives developed in recent years have been able to build momentum. In Spain, the Addictive Disorders Network (RTA) was set up in 2002 and is financed as a network of excellence, embracing 22 research groups with a total of 177 researchers. The network aims to bring researchers working on basic, clinical and epidemiological research closer together. Its features comprise a training structure, including a distance training system, and an information dissemination system. A German network, consisting of four regional networks for research on addictions and covering the complete spectrum, from basic research to treatment evaluation, received financing from 2000 until 2007. The Polish Society for Research on Addictions was set up independently of public administration, and aims to promote, initiate and conduct interdisciplinary scientific research. In Portugal a drug-related research network was recently set up to improve coordination and boost synergies amongst researchers in this area. The Nordic Centre for Alcohol and Drug Research (NAD), based in Helsinki, is a significant player in the Nordic and the Baltic countries. NAD promotes and supports research cooperation in the social sciences that focuses on the issues of drugs and alcohol. In the Czech Republic, 'addictology' has been developed using an interdisciplinary approach, with a strong research focus.

In some countries, such as Germany and the UK, multidisciplinary societies or associations of drug researchers exist, but more often than not, these are discipline-specific, for instance related to addiction medicine, psychology or epidemiology. At a supranational level, EU-funded research projects are by default conducted by multinational networks, and this provides an incentive for cross-border collaboration. Researchers in some Member States, such as the Netherlands, have experiences of strong cooperation with the US National Institute on Drug Abuse (NIDA)<sup>(10)</sup>, which is a significant player at the global level in

funding drug-related research. In addition, various informal or semi-formal European networks of researchers exist, and many of these already existed in 1996, including the Pompidou Group<sup>(11)</sup> of the Council of Europe (Kenis, 1996).

## Funding arrangements

Drug-related research was already being funded by all the reporting Member States in 1996, mainly through public agencies (Kenis, 1996). The 1996 report also remarked on the positive impact of specific frameworks with earmarked funds for drug-related research, as opposed to those operating under 'general heading' frameworks such as health, social sciences, justice etc.).

Public funding remains the key enabler of drug-related research today. Countries reported that funding is typically sourced via a range of ministries, for example ministries of science, health, justice, social or interior affairs, research, education, defence etc. While governments may provide basic funding for some universities and research institutes, funds are mostly available through contracts for commissioned research or through framework programmes, to which researchers apply in open calls for proposals. In national framework programmes, drug-related research is usually funded under health and social science labels, but drug-related research, when funded within these labels might generally receive a relatively small proportion of global national research funds. Regional authorities and municipalities also play an important role in funding drug-related research in many European countries.

In some countries, funding specifically designated for drug-related research is made available through national drug coordination bodies (Czech Republic, Spain, France, Hungary, Portugal, Sweden). Other distribution channels include the national focal points (Poland, Norway), or specific government research programmes in the drugs field, as is the case in Belgium, the Netherlands, Slovakia and Finland. Publicly-financed foundations also fund drug-related research, and these include the Healthy Austria Fund (which funds application-oriented research projects, such as project evaluation), the Luxembourg National Fund Against Drug Trafficking, the Finnish Foundation for Alcohol Studies and the Swedish Council for Working Life and Social Research (FAS). Philanthropic foundations are also reported as key enablers of research, such as the Joseph Rowntree Foundation<sup>(12)</sup> and the Robertson Trust in the UK or

<sup>(10)</sup> <http://www.nida.nih.gov/>

<sup>(11)</sup> [http://www.coe.int/T/dg3/pompidou/Default\\_en.asp](http://www.coe.int/T/dg3/pompidou/Default_en.asp)

<sup>(12)</sup> The Joseph Rowntree Foundation Drug and Alcohol Research Programme ended in 2005, and currently runs an Alcohol Research Programme.

the Austrian national bank's and Swedish national bank's funds. Private organisations are also important, with pharmaceutical companies, insurance companies and NGOs providing financial backing for research projects.

At the supranational level, the European Commission provides funding for drug research through its framework programmes for research and technological development, and through specific programmes such as the Public Health Programme and the new Drug Prevention and Information Programme. The United Nations funds research through UNODC and UNDP. Its Global Fund to Fight against HIV/AIDS, Tuberculosis and Malaria allocates, for example, funds for different drug-related research in Estonia and Romania.

## Funding rationales and priorities

Currently, the most frequently reported reason for funding or commissioning drug-related research is to produce evidence-based knowledge that can be used to underpin national policies. In terms of other research rationales, most countries set out to establish a sound empirical basis of epidemiological research to determine the size and nature of drug problems (that is, epidemiological surveys). Assessing interventions in the area of drug problems are another key reason cited for research. So studies examining the needs of different populations in terms of prevention, treatment and, more specifically, infectious diseases prevention, are high on the agenda. The evaluation of government interventions, in terms of effectiveness and cost-effectiveness, are also often mentioned, as well as the cost to society of the drugs problem and the relationship between drugs and crime.

Research involving basic research, longitudinal and cohort studies, and the ongoing monitoring of drug use that allows for the establishment of time trends, are seldom listed as priorities by the majority of the reporting countries. However, the regular

and sustainable funding of such projects is frequently cited as being of particular importance, and on this issue there may exist a material gap between what policymakers desire at the strategy level, and what researchers require, in terms of sustainable funding, at the implementation level.

## Difficulties in quantifying expenditures on drug-related research

Quantifying and describing the expenditure on drug-related research across countries has proved a difficult task for this Selected issue. With regard to the topic of national expenditures, only a few Member States, notably some of those with more centralised national coordination mechanisms, were able to report more detailed information on the allocation of funds to drug-related research. These were: the Czech Republic, Ireland, Spain, France, Hungary, Portugal and Norway. Some Member States were able to report on funding for the main research projects (Germany, Luxembourg, Malta, Poland and Slovakia) or main research funding sources (Finland, the UK). However, for most reporting countries, almost no information on drug-related research funding was available.

The EMCDDA recently published a Selected issue, *Towards a better understanding of drug-related public expenditure in Europe*, and this provides some data on research budgets in some countries (EMCDDA, 2008). Among the Member States which reported to the EMCDDA on labelled public expenditures, six countries indicated funding for research and development in 2005, namely Luxembourg, Poland, Slovakia, Finland and the UK. They reported expenditure ranging from EUR 14 000 on drug-related health research in Slovakia to EUR 26 900 000 in general public services drug-related research in the United Kingdom (see Table 1).

**Table 1: 2005 reported public expenditures on drug-related research and development in six EU Member States, provided for the EMCDDA Selected issue on drug-related public expenditure (EMCDDA, 2008)**

Country	Year	R&D in general public services (EUR)	R&D in health services (EUR)	R&D in education services (EUR)	Total (EUR)
Ireland	2005	2 072 000			2 072 000
Luxembourg	2005		122 345		122 345
Poland	2005		54 500		54 500
Slovakia	2005		14 000		14 000
Finland	2005		8 000 000		8 000 000
UK	2005*	26 900 000	300 000	1 800 000	29 000 000

(\* ) UK financial year ending 31 March 2006.

The fact that only six countries were able to report on this item according to the proposed methodology indicates that more research on public expenditures and on the impact of drug-related research is needed.

## Limitations and gaps in drug-related research

Defining and categorising drug-related research is a complex task. Indeed, the complexity of the field and the fact that it straddles various disciplines, may in itself constitute a limitation for organising and coordinating research at national level, as noted in the Greek national report. Classification of research may be done from different perspectives, depending on whether the focus is placed on disciplines (epidemiology, public health, sociology), objectives (basic vis-à-vis applied research), research questions (research on patterns of drug use, research on the consequences of drug use) or methodologies (quantitative, qualitative, experimental, laboratory research). Not surprisingly, a number of limitations to drug-related research at national level are reported. Issues include: funding (insufficient funding, lack of continuity, scattered resources); organisation (lack of coordination); training (lack of qualified research staff); and methodological aspects (data protection, difficulty to reach hidden populations, changes in legal regulations).

Many countries mention that limited available funding is a major constraint for drug-related research. This may be due,

in part, to the fact that funding programmes in health or social areas are usually very specific, and are focused on pre-defined topics. Drug-related research, meanwhile, tends to be multidisciplinary and cross-cutting, and it is sometimes difficult to fit into funding programmes focused on more rigidly-defined research segments. In particular, closer integration between medical research and the social sciences is required.

Another challenge linked to funding, and the long-term policy impact of research, is a reported lack of continuity in financing. Financial restrictions may hamper the possibilities of undertaking longitudinal studies, or of repeating national surveys to be able to follow a time trend. This is mentioned, for example, by Belgium and Latvia. Spain and Portugal have taken account of this problem in their drug policy documents, and have ensured that funds are earmarked for recurring or longitudinal studies. The structural limits faced by drug research also relate to short-term, project-related funding. Often, the time needed to evaluate results and place study results in context is lacking. Subsequent support of practice is often not possible, because the researchers involved may have left the research institute after a study has been concluded.

A general concern is the difficulty of attracting young and promising researchers to specialise in the field, since long-term career prospects may not be guaranteed. Reports from Greece, Latvia and Hungary, among others, mention a need for both institutionalised training, e.g. graduate and postgraduate studies, and further competence enhancement, e.g. through participation in international seminars, courses etc.

## A recent history of drug-related research in Europe

Drug-related research has been around in some shape or form in Europe for centuries, and follows the history of drug use itself. However, it is useful to sketch some of the overriding characteristics of research in recent decades. The following overview is neither to be considered authoritative or exhaustive, but offers insights into developments in the field, and is useful for building a chronology – albeit a partial one – of the research topics that have surfaced over the past thirty years.

Across EU countries, drug use and drug-related research has a long tradition. In the UK, social and criminological research into drug epidemiology and related social problems began in the 1960s. In parallel, a tradition emerged in psychiatry and addiction research (Hartnoll, 2004). The Netherlands started relatively early with drug-related epidemiological studies, while Germany has a long tradition of treatment research (Kenis, 1996). The Nordic countries have a long history of research into alcohol and alcohol policy, and since the 1960s illegal drugs have also been subject to sociological research (Kenis, 1996). Notably, the first European methadone study was conducted in Sweden in the 1960s (Lenke, Olsson, 1998).

Broadly-speaking, illicit drug use came to be seen as a visible problem later in most of the other European countries, and drug-related research followed suit. Nonetheless, France has a strong tradition in psychoanalytical drug research, and biomedical research has always been significant in Spain (van Lindt, 1993). Finally, in eastern Europe, drug problems were not very prevalent and, at the political level, not fully acknowledged before the beginning of the 1990s. In the former communist block, 'narcology', embracing all forms of substance-related problems, emerged as a discipline based on the disease model of addiction.

Research related to drug use and drug users took an additional, and different tack, with the emergence of HIV infection and AIDS in the mid 1980s. Injecting drug users were identified as a significant group at risk, both for attracting HIV infection and for spreading the virus. Initial epidemiological studies in Spain, Italy, the Netherlands and Scotland investigated HIV infection among injecting drug users, and these were followed by qualitative investigations of the social meanings and context of risk behaviour and intervention studies (EMCDDA, 2000). The risks of HCV infection among the injecting drug user population also received attention from researchers at a later stage. Today, studies on risk behaviour among injecting drug users and other risk groups as regards HIV infection have seen a revival in interest in the Baltic states. One is a model project on HIV prevention among drug users in prisons in the Baltic states, currently being funded by UNODC.

Another impetus for drug-related research has been the need for effectiveness studies – that is, cost-benefit analyses, economic measures, resource allocation studies etc. prompted by the scarcity of resources for health and welfare. Many of these studies are driven by greater demand for effective services and 'value for money'. Evaluative research of interventions are carried out at the national or regional level in Member States, where the evaluation of treatment services seem to be most prominent. In this context, studies on public expenditure on drugs attain increasing importance, for instance analysing the necessary resources and costs of different forms of treatment and imprisonment.

With the development of more refined biomedical methodologies, research has advanced substantially in

recent decades, particularly with regard to studies of the brain and the central nervous system, as well as the pharmacology, pharmacodynamics and health effects of illicit drugs. More sophisticated research is today, for example, unravelling the complex cerebral activities related to different substances such as alcohol and heroin, which act differently to, for example, cocaine and amphetamine. The effects of newer synthetic drugs such as ecstasy and 2 C-B have also been studied. Much research has been devoted to the effects of cannabis on the brain as a potentially dependence-inducing substance, the relationship between schizophrenia and cannabis use, and as a possible medication for specific diseases. In addition, the contribution of genetics in terms of addiction susceptibility has recently been recognised, and the identification of genetic risk factors and genes involved in the molecular basis of addiction is a new, and major challenge for drug-related research (GENADDICT, 2008).

In summary, reviewing the recent history of drug-related research in the EU, we can see some evidence of 'sequencing' taking place. There is a clear tendency for initial drug-related research priorities to be linked closely to the need for an estimation of the extent of drug use at national and regional level, in order to better plan interventions and policies. In a second stage, priorities shift to applied research, namely as far as needs assessment and evaluation of interventions and policies are concerned (such as treatment approaches and prevention interventions). In this phase, additional qualitative research of drug users and their patterns of use complements the quantitative epidemiological studies. Finally, in some countries, innovative and resource-intensive biomedical research has moved into the area of drug effects and predisposal.

This research development trend is also visible in other parts of the world, for instance in America, where Latin American and Caribbean countries, which typically have a more recent drug-related research tradition, focus their research priorities on epidemiological surveys (Aguilar-Gaxiola, 2006). The US and Canada, with a longer tradition in this area, report a higher investment in applied research to evaluate and increase service effectiveness and efficiency, as well as basic research (Canadian Institutes of Health Research, 2005; National Institute on Drug Abuse, 2008).

## Research priorities in some reporting countries

Studies of drug use and attitudes in the school population, in particular the *European School Survey Project on Alcohol and Other Drugs (ESPAD)*<sup>(13)</sup> – a collaborative effort of independent research teams in about forty European countries and the largest cross-national research project on adolescent substance use in the world – have a prominent place in all countries. The same holds true for general population surveys, although in some countries the regular repetition of such surveys has posed funding problems. Equally, studies to provide and improve the quality of data for the other EMCDDA key indicators generally have high priority. These are as follows: the treatment demand indicator, drug-related deaths, problem drug use, and drug-related infectious diseases.

A brief listing of developments is helpful in drawing attention to recent research priorities in specific reporting countries.

- In Belgium, the focus of drug research since 2001 has been on treatment and on drug-related public nuisance.
- In the Czech Republic, the Ministry of Health research priorities 2007-09 list three areas of particular relevance to the drugs field: neurotic and mental illnesses, infectious diseases and immunity disorders, and pharmacology and pharmaceuticals.
- Danish drug-related research is user-oriented, and based on assignments given by the authorities wishing to improve services and understand the needs of their users.
- In Germany, regional networks cooperated on addiction research, with a focus on examining the provision and adaptation of treatment services to address the heterogeneous profiles of treatment clients.
- In Ireland, research on the relationship between drug use and crime has helped to identify a number of gaps in knowledge in this area. Dealing with these gaps is regarded as necessary for the development of evidence-based policies in both the drugs and criminal justice.
- In Spain, neuroscience research is an important part of the research agenda, and the country invests importantly into addiction neurobiology.
- France equally has in the past invested considerable resources into neuroscience. However, it currently spends 60% of its funding on the areas of human and social sciences and public health, in order to build up and stabilise the research

potential in this area.

- In the Netherlands, the 2006-10 Dutch research programme targets risk behaviour and dependence, focusing on behaviour and determinants that characterise addiction. The programme aims to identify key factors that influence the onset, course and chronicity of substance dependence.
- Portugal reported the need to follow-up, monitor and evaluate services and support decision-making in new areas.
- Sweden has focused research on the identification of high risk groups and tailoring prevention for them, intervention in the workplace, and societal and behavioural sciences.
- In the UK, the Blueprint project is the largest drug-related research programme ever run in England and reviews evidence on drug-prevention programmes, supplementing this with research on teaching and learning practice up to curriculum development.

It is interesting that methodological concerns over gaps, information availability, research findings dissemination and also funding issues made their way into current policy documents on drug-related research. This seems to indicate a political sensitivity to the need to improve the quality of the data and information available, and to promote a sound evidence base for decision-making. For example in Ireland, a country with a long tradition of drug research, limitations on the methods previously used to estimate prevalence are recognised, e.g. in the case of the use of treatment data, which only reflect those who present themselves for treatment, and now research looks into how best to determine the size and nature of the drug problem in Ireland. In Luxembourg, research on the methodologies for problem drug use estimates are considered a research priority.

## Zooming in on five main studies in each country

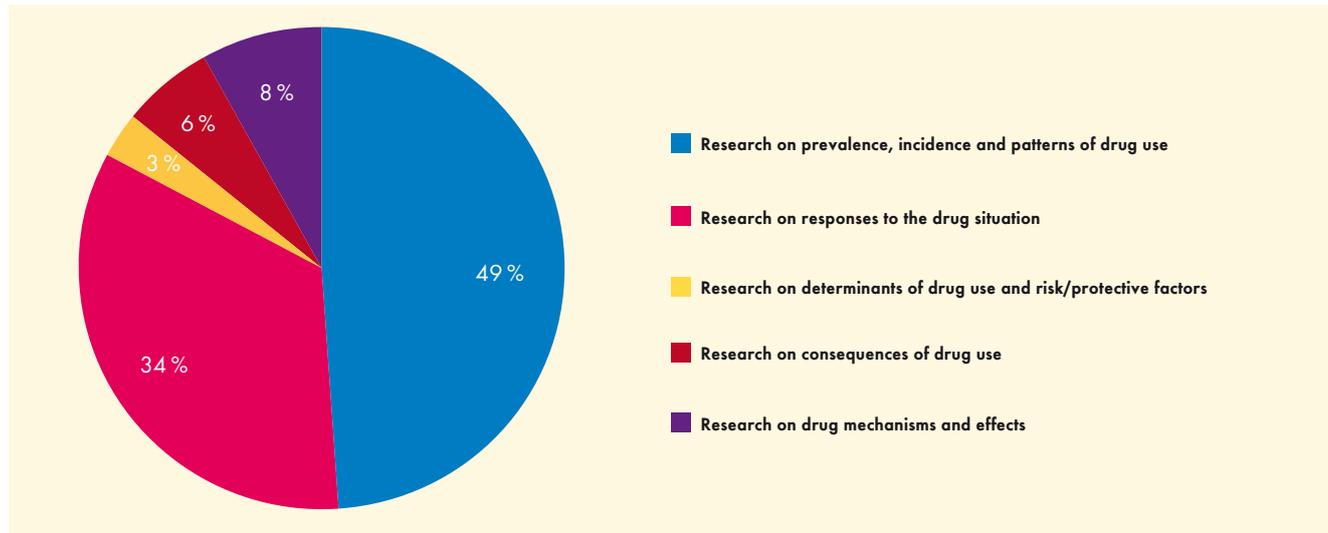
In the 1996 study, Kenis reports on observed research needs in basically all areas. However, the most pertinent need identified was research on prevalence, incidence and patterns of drug use and prevention (Kenis, 1996). Research into drug policies, treatment, risk factors, aetiology (causes and origins) and consequences of drug use, and health services was also considered important, but to a lesser degree. To gauge the present priorities, the national focal points were asked to select and report on five main studies

<sup>(13)</sup> <http://www.espad.org>

at national level in the last five years. This proved to be a difficult exercise for reporting countries, particularly for those with a higher number of major ongoing research projects: larger countries in particular, with many projects worthy of entry, found it difficult to build a meaningful shortlist. Most reporting countries selected the projects by size of budget,

as suggested by EMCDDA guidelines, but other used different criteria, for example on the basis of their diversity (Austria), relevance to the work of the EMCDDA (Portugal) or geographical representation (UK). The overview below (Figure 2) provides the results of this shortlisting exercise. It is not exhaustive, but it provides an overview of the main

**Figure 2:** Main research projects at national level, classified into five categories



Source: Reitox national focal points

research projects that are ongoing, or have been recently carried out at national level, and it facilitates a basic comparison with 1996 reported research needs.

The majority of the reported main projects on drug-related research were focused on estimating the prevalence and patterns of drug use. Population surveys on prevalence of drug use and infectious diseases are the most often cited studies, alongside estimates of problem drug use. A basic explanation for this result is that these are three of the EMCDDA's key indicators, and thus represent main priorities for Reitox national focal points. 22 of the 27 reporting countries selected at least one drug use survey as a main project at national level, and the ESPAD study of drug use prevalence in the school population was the most often mentioned epidemiological survey. Thus, the need identified as most important in 1996 has been met, although gaps still exist in many countries, particularly in terms of funding and sustainability of long-term research.

The second area covered by the selected projects is research on responses to the drug situation. These are reported from western and northern European countries, but also the

Czech Republic, Greece, Hungary, Austria, Poland, Slovakia and Slovenia. This is a broad category, which includes the evaluation of interventions (treatment, prevention etc.), policies, and the implementation of laws. It also includes estimations of public expenditure and economic costs in the field of drugs. In 1996, research into interventions was considered a priority need by the majority of the Member States, and the Kenis report suggested this type of research hardly existed at the time, with the exception of some evaluative research in the treatment setting. The evidence-base in this area has thus expanded considerably, although treatment research is still far more predominant than prevention research.

The following three areas are much less commonly reported. These are: research studies on drug mechanisms and effects in France, Lithuania, Slovakia, Austria, Slovenia and Sweden; research on the consequences of drug use, reported by Denmark, Ireland, Lithuania, Luxembourg, Poland and Croatia; and, finally, research on determinants of drug use (including risk and protective factors of drug use), in Hungary, Malta, Slovakia and Croatia.

## The interface between research, policy and practice

While most national drug strategies and action plans refer to the need for evidence-based policies and interventions, the link between research results and policymaking is difficult to assess. Overall, the vast majority of countries reported that research results inform drug policy, at least to some degree. A statement by the German national focal point seems to hold true for most Member States: 'just as German policymakers have an influence on research by virtue of the statutory framework and by funding certain studies, scientific findings also contribute to decisions made by policymakers, even if no linear relationship is directly perceivable'.

In Finland, the drug policy coordination group regularly listens to the latest findings of researchers engaged in drug-related research, and research can thus have a direct impact on guiding policy. A similar mechanism exists in Norway. The Portuguese report confirms a close link between drug-related research and policymaking, with national policy determining research priorities and consequently funding, and drug-related research allowing the follow-up of policy implementation, and the design of new policies.

National reports suggest that research that has been commissioned by policymakers has a greater chance of being taken into account in decision-making, be it routine monitoring, evaluation of specific intervention or policies, or when research is initiated to address a specific knowledge gap. However, building upon research findings to initiate or support policy changes is a complicated process. Many players are involved, and cooperation between research, politics and practice could be more effective in most countries.

There are many examples, nonetheless, where research and policy are more intimately linked. In Germany, results of population surveys reported a considerable increase in cannabis use from the 1990s onwards. This has subsequently driven policymakers to launch several projects addressing cannabis use, particularly among adolescents. In France, the drug coordinating MILDT regularly commissions critical analyses of available knowledge. These are carried out by a multidisciplinary scientific team, assembled for this purpose. The authorities thus obtain an objective overview of approved knowledge and learn about gaps of knowledge to include in future research priorities. In Denmark, general population surveys are used in healthcare planning and the prioritisation of health promotion and prevention. The evaluation and monitoring of research and data collection are often included

in the political decision-making process, via recommendations in evaluation reports, hearings and expert councils. In Romania, estimates on problem drug use in Bucharest, carried out in 2003 and 2004, indicated that the treatment system was under-dimensioned. These estimates led to an awareness-raising campaign about heroin use in the city, and a legislative framework which facilitates the provision of services to heroin users in methadone and syringe exchange programmes. Findings from population surveys are used in Cyprus for the design of information and awareness-raising campaigns and prevention programs although, as yet, research has not explicitly been used for policy purposes.

The demand for applied research in national drugs strategies is generally seen as a sign that policymakers expect research results that can be used to design and restructure existing interventions, or to evaluate them. Although research results are not always taken into account in the political decision-making or in practice, at least not in the short term, there are numerous examples of policymaking listening to research results. For example, in the Netherlands, indicators which pointed towards increasing problematic use of cannabis and cocaine prompted preventive measures, and research into effective treatment. Another concrete example of research informing drug policy is the large National Treatment Outcomes Research Study (NTORS) in the UK in the 1990s. This study concluded that 'treatment works', which is now an established principle, and which initiated major changes in both the extent and the quality of treatment provisions across the UK.

The Irish national report identifies four specific situations in which research projects had very concrete impact on policy and practice. These were: a study on treatment of under 18s presenting to addiction services; the criteria for selecting research into drug use and crime as a priority; the use of drug treatment demand data for service availability recommendations; and research on family support services.

Occasionally, research results may encounter obstacles, where scientific findings are faced with legal, ethical or political difficulties during implementation. For example, in Germany, research was funded to evaluate the effectiveness of diamorphine (heroin) treatment in comparison to methadone treatment in a model project. Although heroin appeared to be superior to methadone treatment for severely dependent drug addicted patients, an application for the licensing of diamorphine as a medication eligible for sale and prescription has not yet been approved. This would require a change in the law by the Federal Parliament. On the other hand, the outcomes of a Dutch trial on medical (co-

prescription of heroin was directly used by policymakers to initiate a permanent provision of this practice for heroin addicts who have benefited insufficiently from the currently available treatments.

Regionally- and locally-conducted research – for example, needs assessment and service evaluation – are typically closer to the target of study. As such, their findings may be more easily translated into practice. Belgian research projects have seen a better success rate in having an impact on practice when they have been developed and executed based on intensive cooperation with practitioners (e.g. research about the treatment chain, and about drug-related policies in schools). Another example was reported in Hungary, where a prevention programme, *Alternatíva*, was implemented according to the results of a study on the substance use, beliefs and prevention needs of youths visiting shopping centres. Furthermore, Croatia, with little to report in terms of national research initiatives, notes that local-level research initiatives have been used for planning prevention activities.

With regard to basic research – that is, research aimed at developing specific scientific knowledge about drugs, drug effects and drug use – the relationship between research and policy is less evident. Benchmarks for fundamental research are by their very nature different from the ones used for decision-making and policy. Moreover, very few decision-makers in the field of drugs policy have the scientific background that would enable them to directly

understand fundamental research. It was precisely in order to tackle such obstacles of explaining scientific findings to non-specialists, and summarising the scientific literature, that INSERM in France developed its ‘collective expertise’ centre, which develops publications aimed at informing the drug coordination authority MILDT and the wider public<sup>(14)</sup>.

Some countries point out the role of science in the development of organisational quality standards, human resources and training. In the Czech Republic, an evidence-based approach is applied in the process of certifying the professional competence of addiction services. The Spanish national plan for scientific research, development and technological innovation for 2008-11 places an emphasis on generating knowledge and skills oriented towards training and hiring highly-qualified staff in both the public and private sectors. The Finnish Government’s resolution concerning cooperation on drug policy for 2008-11 proposes that researcher training and international cooperation of Finnish researchers be promoted. Conversely, Denmark reports no higher education training related specifically to drug research; researchers come from established fields such as psychology, law, or medicine, and have often had to make ‘their own way’ to establish their expertise within the field. Norway’s government plan states that steps should be taken to facilitate research, combined with clinical work, and that professionals involved in interdisciplinary specialist treatment of addiction problems should be able to obtain research leave.

<sup>(14)</sup> <http://www.inserm.fr/fr/questionsdesante/mediatheque/expertises/>

## Drug-related research dissemination

Translating research findings into practice, be it in designing, implementing and evaluating interventions or in policymaking, has been addressed in many scientific fields and by many authors. An important part of this process is making sure that appropriate mechanisms are in place to reach all target audiences and that they are well-suited to the varying needs of the different partners and stakeholders.

In 1996, the Kenis report recorded that 'mechanisms for exchanging research results between researchers' existed in all the 15 EU Member States within the study (Kenis, 1996). Regular conferences and workshops were reported in almost all of these countries. Many of them also reported the existence of research networks as an important mechanism for sharing research results. At that time, 12 drug research scientific journals were listed in 10 of the 15 Member States, but no information was available on the number of published articles in those or other international scientific journals. The existence of the EMCDDA's Reitox national focal points was acknowledged as a positive factor in bringing together researchers and policymakers at national level.

In 2007, the 27 reporting countries describe a considerably more diversified dissemination infrastructure, which now includes a multitude of peer-reviewed and non-peer reviewed journals, newsletters and professional magazines, libraries and documentation centres, annual national reports, dedicated websites, professional and scientific conferences, and press conferences, to name those more frequently cited.

Building on the role identified in 1996, institutions hosting the Reitox national focal points play an important part in disseminating research results in all the reporting countries. National focal points' networks and websites are frequently used for disseminating research findings in addition to scientific and professional journals. They are also responsible for drafting the annual national reports commissioned

by the EMCDDA<sup>(15)</sup>, and in many cases host libraries and documentation centres, publish newsletters, manage dedicated websites, link with the media and are involved in the organisation of national and international drug-related conferences. In particular, NFPs may play a role in 'making sense' of scientific literature for policymakers, by publishing information of a synthetic, summarised nature, such as literature reviews and policy briefings.

### Drug-related journals

Dissemination of drug-related research findings is mainly achieved through the publication of articles in peer-reviewed journals. 27 drug research specialised peer-reviewed journals were reported in 2007, more than twice as many as in 1996 (Kenis, 1996). These journals are mainly published in each country's national language and many have a national focus but most publish English abstracts and many of them welcome European and international contributions. While most of these journals focus on addiction in general, and may include articles on alcohol problems, gambling or eating disorders, three of them focus more on illicit drug problems (*Salud y Drogas*, *Psychotropes and Toxicodependências*), three others on more specific areas within drugs (*Drugs: education, prevention and policy*, *The International Journal of Drug Policy and Mental Health and Substance Use: Dual Diagnosis*) and one of them addresses solely the toxicological dimension of drugs (*Annales de toxicologie analytique*).

However, distribution of journals is not identical across all reporting countries. In fact, only 12 Member States publish at least one drug research specialised journal, and more than half of the reported journals are concentrated in only four Member States (Germany, Spain, France and the UK). The fact that some countries do not publish their own drug research specialised peer-reviewed journals may indicate a collaborative effort

<sup>(15)</sup> <http://www.emcdda.europa.eu/index.cfm?nNodeID=435>

amongst different countries. For example, the *Nordisk alkohol & narkotikatidsskrift* (NAT) is a supranational journal, that is published in Finland but features articles in Danish, Swedish, Norwegian and English and is the main drug-related peer-reviewed journal in the Nordic countries. However, more often it indicates that a significant number of EU countries do not have a national drug research specialised journal, in which scientific articles can be published in their own language. This might be an obstacle to the dissemination of research findings, and therefore to their impact in practice and policymaking.

A higher number of journals may not necessarily facilitate better research: there may exist some overlap among journals, making tracing the results of research more difficult, as researchers compete to be published across a range of journals. The visibility of articles within international, typically Internet-based, databases may also play a role in the impact of research beyond national borders. There may be some imbalance between European countries with a longer and richer research tradition, and those which are seeking to establish a wider audience for their research results. This has an impact on the definition of drug-related problems, appropriate policies and responses, and the identification and prioritisation of research questions and procedures. Some non-English drug-related journals offer abstracts in English (see Table 2), and this may play a role in making results available to a wider public. Yet other factors may come into play, such as whether libraries at universities or on a national level subscribe to a full –or partial –set of journals. Researchers seeking to conduct literature searches ‘without blind spots’ may be helped by increased consistency in bibliographic recording, and wider, cross-country coverage within bibliographic databases. Thus librarianship has a role to play. Emergent specialised databases which focus on addiction- and drug-related research, may offer researchers better access to information than a more general approach using broader scientific databases such as PubMed and Web of Science.

Other peer-reviewed journals from a wide array of disciplines, ranging from public health to sociology or natural sciences, and professional journals, are also important dissemination channels for researchers wishing to publish drug-related research findings. More than 100 such European journals reportedly published drug-related articles in 2006.

For the purposes of this Selected issue, a corpus of journal articles and other references, supplied by national focal

points, was used to assess common themes and topics of research. The selection criteria stipulated articles published in 2006 by European researchers on illicit drugs. Out of 288 classified articles, 65 related to research on prevalence, incidence and patterns of drug use; 81 to research on responses to the drug situation; 51 to research on determinants of drug use and risk/protective factors; 29 to research on consequences of drug use; and 62 to research on drug mechanisms and effects (Figure 3).

This corpus of articles suggests that scientific publishing on drugs offers a balanced mix of themes and topics. However, it also showed a different picture when compared to the finding, in the previous section, concerning the distribution by categories of the main research projects (Figure 2). Possible explanations are a stronger tradition of scientific publishing in biomedical and behavioural sciences, coupled with the fact that epidemiological studies often are government-funded: they are, as such, published as grey literature – mainly reporting on statistics, as opposed to analysis and recommendations – and may be used more rarely as a basis for scientific articles.

Most of these articles were published in English language journals, mainly from the United Kingdom and North America. However, many were also published in the respective national languages of the country of publication. The Netherlands and the United Kingdom lead the list, with 77 published articles each. The Czech Republic, Belgium, Germany, Ireland, Austria, Poland and Portugal, Sweden listed between 21 and 10 articles. Estonia, Greece, Lithuania and Luxembourg, Hungary, Slovakia, Slovenia, Finland and Norway each mentioned 8 articles or fewer. Some countries were not able to report on this item, and many reported that the information available might not be comprehensive since there is no central register of this type of information. Thus the corpus of references reported to the EMCDDA is incomplete and underestimates the total number of drug-related scientific articles published in 2006 by European researchers in international peer-reviewed journals.

It is important to note that non-peer reviewed journals and professional magazines and newsletters complement peer-reviewed journals, and also play an important role in all countries. This may be particularly the case in those countries where peer-reviewed journals are not widely available, or drug-related research is still at an earlier stage of development.

**Table 2: Drug research peer-reviewed journals in Europe (16)**

Country of origin	Journal	Language(s)	Website
Czech Republic	<i>Adiktologie</i>	Czech with English abstracts	<a href="http://casopis.adiktologie.cz">http://casopis.adiktologie.cz</a>
Germany	<i>Addiction Biology</i>	English	<a href="http://www.blackwellpublishing.com/editors.asp?ref=1355-6215&amp;site=1">http://www.blackwellpublishing.com/editors.asp?ref=1355-6215&amp;site=1</a>
	<i>European Addiction Research</i>	English	<a href="http://content.karger.com/ProdukteDB/produkte.asp?Aktion=JournalHome&amp;ProduktNr=224233">http://content.karger.com/ProdukteDB/produkte.asp?Aktion=JournalHome&amp;ProduktNr=224233</a>
	<i>Sucht</i>	German with English abstracts	<a href="http://www.neuland.com/index.php?s=sen&amp;s2=prf">http://www.neuland.com/index.php?s=sen&amp;s2=prf</a>
	<i>Suchtmedizin in Forschung und Praxis</i>	German with English abstracts	<a href="http://www.ecomed-medizin.de/sj/sfp/startseite">http://www.ecomed-medizin.de/sj/sfp/startseite</a>
	<i>Suchttherapie</i>	German with English abstracts	<a href="http://www.thieme.de/fz/suchttherapie/index.html">http://www.thieme.de/fz/suchttherapie/index.html</a>
Greece	<i>Exartisis</i>	Greek and English	<a href="http://www.exartiseis.gr/index.asp">http://www.exartiseis.gr/index.asp</a>
	<i>Stigma</i>	Greek	
Spain	<i>Adicciones</i>	Spanish	<a href="http://www.adicciones.es">http://www.adicciones.es</a>
	<i>Revista Española de Drogodependencias</i>	Spanish	<a href="http://www.aesed.com/publicaciones.htm">http://www.aesed.com/publicaciones.htm</a>
	<i>Salud y drogas</i>	Spanish, English and French	<a href="http://inid.umh.es/inicio.asp?mod=revista&amp;ct=portada.asp">http://inid.umh.es/inicio.asp?mod=revista&amp;ct=portada.asp</a>
	<i>Trastornos Adictivos</i>	Spanish	<a href="http://www.doyma.es">http://www.doyma.es</a>
France	<i>Alcoologie et addictologie</i>	French with English abstracts	<a href="http://www.sfalcoologie.asso.fr/page.php?choix=B1">http://www.sfalcoologie.asso.fr/page.php?choix=B1</a>
	<i>Psychotropes</i>	French with English abstracts	<a href="http://www.cairn.info/revue-psychotropes.htm">http://www.cairn.info/revue-psychotropes.htm</a>
	<i>Annales de toxicologie analytique</i>	French and English with English abstracts	<a href="http://www.sfta.org/ATA/ATAintro.html">http://www.sfta.org/ATA/ATAintro.html</a>
Hungary	<i>Addiktológia</i>	Hungarian with English abstracts	<a href="http://www.addictologia.hu">http://www.addictologia.hu</a>
Austria	<i>Wiener Zeitschrift für Suchtforschung</i>	German with English abstracts	<a href="http://www.api.or.at/wzfs/">http://www.api.or.at/wzfs/</a>
Poland	<i>Alcoholism and Drug Addiction</i>	Polish with English abstracts	<a href="http://www.ipin.edu.pl/ain/en/aboutus.php">http://www.ipin.edu.pl/ain/en/aboutus.php</a>
Portugal	<i>Toxicoddependências</i>	Portuguese with English and French abstracts	<a href="http://www.toxicoddependencias.pt">http://www.toxicoddependencias.pt</a>
Slovakia	<i>Alkoholizmus a drogové závislosti</i>	Slovak with English abstracts	
Finland	<i>Nordisk alkohol &amp; narkotikatidsskrift (NAT)</i>	Danish, Norwegian, Swedish and English with abstracts in English	<a href="http://nat.stakes.fi/EN/nordicstudies.htm">http://nat.stakes.fi/EN/nordicstudies.htm</a>
UK	<i>Addiction</i>	English	<a href="http://www.addictionjournal.org/">http://www.addictionjournal.org/</a>
	<i>Addiction Research and Theory</i>	English	<a href="http://www.tandf.co.uk/journals/titles/16066359.asp">http://www.tandf.co.uk/journals/titles/16066359.asp</a>
	<i>Drugs: education, prevention and policy</i>	English	<a href="http://www.tandf.co.uk/journals/titles/09687637.html">http://www.tandf.co.uk/journals/titles/09687637.html</a>
	<i>The International Journal of Drug Policy</i>	English	<a href="http://www.elsevier.com/wps/find/journaldescription.cws_home/600949/description">http://www.elsevier.com/wps/find/journaldescription.cws_home/600949/description</a>
	<i>Mental Health and Substance Use: Dual Diagnosis</i>	English	<a href="http://www.tandf.co.uk/journals/rmhs">http://www.tandf.co.uk/journals/rmhs</a>
	<i>The Journal of Substance Use</i>	English	<a href="http://www.informaworld.com/smpp/title~db=all~content=t713655978~tab=sutmary">http://www.informaworld.com/smpp/title~db=all~content=t713655978~tab=sutmary</a>

(16) A list of addiction journals, both in Europe and worldwide, together with submission guidelines and editorial overviews, is provided by the resource list of the International Society of Addiction Journal Editors, available at: [http://www.parint.org/isajwebsite/isajebok/appendix\\_a\\_web.pdf](http://www.parint.org/isajwebsite/isajebok/appendix_a_web.pdf)

## Internet and dedicated websites

In 1996, electronic dissemination channels for drug-related research findings such as electronic mailing lists, e-mail or dedicated websites did not play a significant role. In 2007 all reporting countries report the use of electronic channels to disseminate results and findings from studies. While, in 1995, the *British Medical Journal (BMJ)* was the first general medical journal to launch itself in cyberspace (BMJ, 1995) and *Addiction* went online in 1997, today most scientific journals are published electronically. Nonetheless, there may be a need for awareness-raising about the research tools and web databases available to researchers.

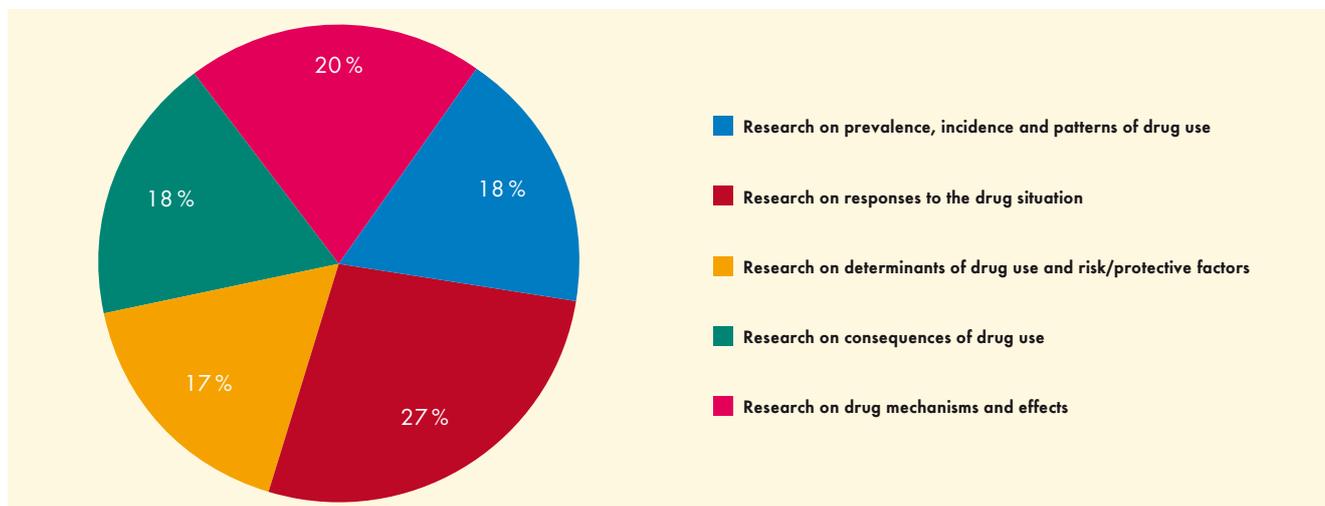
This significant new development shows that stakeholders in this field have taken advantage of new communication technologies and a wide array of easily accessible websites, databases, and portals on drug-related research are now available<sup>(17)</sup>. These new dissemination channels make more information available to more people in real time and at the click of a button. However, it has been suggested that they have also promoted an exponential growth of low-quality, pseudo-scientific information that is difficult to filter for the less knowledgeable public. After a period of enormous development and publication in this area, the time may have come to think of coordination and validation mechanisms, which may in the future add value to the information published in these media.

## Other dissemination channels

Libraries and documentation centres are also important means for communicating research findings to different audiences. Over 40 European alcohol and drug-related documentation centres across Europe are organised in European Association of Libraries and Information Services on Alcohol and other Drugs (ELISAD)<sup>(18)</sup>. In addition, the Greek national focal point maintains the *Greek Bibliography on Drugs*, a collection of drug-related scientific papers, published in journals or delivered in conferences by Greek experts. Ireland provides a publicly available electronic library of Irish drugs research, which serves as an important element in the information infrastructure supporting research. On its website, the Portuguese national focal point provides updated information about drug research in Portugal, together with reports of past and current projects.

Conferences organised by national or regional authorities or by professional organisations are important arenas for disseminating new knowledge to specific target groups. For example, in the Czech Republic, 'alcohol and toxicomania' ('AT') conferences have existed for 47 years. In France clinical psychologists' associations have taken the initiative of organising consensus conferences, which focus on therapeutic strategies for specific target groups. In the Netherlands, the development of multi-disciplinary, evidence-based guidelines for good practice have proven an important means to disseminate and implement research findings. Such guidelines are integrated into professional training, with patient versions of guidelines being published, often in electronic format. Finally, Reitox national reports, newsletters and media relations activities are mentioned as important vehicles for disseminating research conclusions.

**Figure 3:** Categorisation of 70 main drug-related research structures reported to the EMCDDA



<sup>(17)</sup> An extensive list of websites dedicated to disseminating research results in several reporting countries is available at <http://www.emcdda.europa.eu/themes/research>

<sup>(18)</sup> <http://www.elisad.eu>

## Conclusions

### 12 years later, where are we now?

The conclusions of the 1996 European Commission–EMCDDA joint seminar state that more research was needed in a number of areas. These were: drug policies and strategies, treatment, risk factors, aetiology, socio-economic aspects, supply of drugs, prevalence, incidence and patterns of use and prevention. Priority cross-cutting needs were also defined, namely: (i) defining research priorities in terms of research questions rather than in terms of research disciplines; (ii) the value of cross-national and comparative studies; (iii) the comparability of research methods and research instruments; (iv) the importance of qualitative research; (v) the relevance of outcome and cost-effectiveness studies; (vi) the role of multi-factorial and therefore multi-disciplinary and inter-disciplinary studies. In addition, the conclusions also underlined the importance of support structures and mechanisms, which were deemed to be crucial for the effective implementation of the research needs.

The situation, 12 years later, seems to have developed along these lines. 25 EU Member States, Norway, Croatia and Turkey are today reporting on drug-related research projects and scientific outputs that include all the above areas and cross-cutting needs. Most countries also report relatively stable support and funding structures at the national level, though significant differences exist among them, and concerns about funding availability and sustainability are expressed.

The areas which have shown more visible progress in terms of research efforts are prevalence, incidence and patterns of use: in these areas, all countries now have recent or ongoing projects. Other key areas cited include the evaluation of interventions (mainly treatment, prevention and drug policies and strategies), together with economic aspects of drug policy. As for the cross-cutting needs mentioned above, the Reitox national focal points currently report national data to the EMCDDA using instruments and methods that promote data comparability and reliability, and using cross-national comparative studies, such as ESPAD. Qualitative research is

also routinely undertaken by a large number of countries in Europe. Furthermore, cost-effectiveness studies were listed as a priority by a number of the reporting countries, and a multi- and inter-disciplinary approach is generally accepted as a means to build understanding of the complex phenomenon of drug use and abuse. However, with regard to multi-disciplinary approaches, concerns were expressed that their practical application is not always straightforward or feasible.

The present review also confirms the three-stage ‘sequencing’ in the development of national drug-related research which was already noted by Kenis in 1996. A political need for drug-related research stems from a more general desire to set up basic indicators for monitoring the drug situation. Thus those countries which report a more recent tradition of drug-related research mainly focus on epidemiological surveys and indicators, and other quantitative methods for estimating drug use. Later, research requirements expand to embrace not only the use of drugs, drug-related harm and the study of services, but also to evaluating policy and measures. In a third stage, research areas and topics may be further diversified to include social, psychological, medical and biological mechanisms behind drug use.

Another area which has developed significantly in the past decade is the dissemination of research. In comparison to 1996, not only did the number of drug research journals increase, many of them peer-reviewed, but also new dissemination channels, notably those based on the Internet, have developed and have made access to research findings easier, quicker and available to a wider public. Considerable efforts have been made to bridge the gap between research, policy and practice, as the evidence-based approach to national strategies and action plans demonstrates. Nonetheless, more needs to be done to ensure the timely and practical implementation of state-of-the-art research findings in all the areas and disciplines that currently address drug-related research.

Significant limitations and gaps still exist, however. New challenges are arising as demands on the evaluation of interventions and policy design and implementation are

brought to the fore. Funding available for large-scale drug-related research projects – such as longitudinal studies or general population surveys but also important basic

research – is still limited. Finally, investments in specialised university education and research training are needed in most countries, in order to attract young researchers to the field.

## A few examples of good practice in European drug-related research

The European School Survey Project on Alcohol and Other Drugs (ESPAD) is a collaborative effort of independent research teams and the largest cross-national research project on adolescent substance use in the world. The ESPAD network includes about 40 researchers (and their institutions) and is coordinated by the Swedish Council for Information on Alcohol and Other Drugs (CAN).

In France, critical analyses of available knowledge are regularly commissioned by MILDT, the national drug coordination body, and carried out by multidisciplinary scientific teams. These collective assessment exercises are then presented to the French authorities. They encourage the emergence of shared viewpoints and highlight knowledge gaps.

In the Netherlands multi-disciplinary guidelines are developed by using research findings to formulate recommendations for good practice or evidence-based work. An implementation committee oversees that these guidelines are used as tools in professional training and that their implementation is evaluated.

In Spain, the Addictive Disorders Network (RTA) was set up in 2002 to bring together different types of research and to facilitate the use of research results into clinical practice. This network, which also makes drug-related training available, currently includes 22 research teams from seven autonomous regions in Spain.

## Future developments in drug-related research

Comparing the 1996 and 2007 findings, it is clear that the situation concerning drug-related research in Member States has developed in a positive way. Nonetheless, research must be further consolidated, particularly as regards its sustainability, training for young researchers and the harmonisation of monitoring instruments. It is hoped that the upcoming European Commission-funded study *A comparative analysis of research into illicit drugs in the EU* will enrich this overall picture, by providing an in-depth European overview with international comparisons, as well as recommendations on options for strengthening the drug-related research infrastructure in the EU.

One of the major priorities for all types of research seems to be knowledge transfer between (i) disciplines within the scientific community (ii) science and decision-making, and (iii) research and practice. Involving different stakeholders in the process of setting priorities for drug-related research and – ideally – including them as partners in research projects, is likely to encourage this transfer. There is a need to finding appropriate mechanisms for regularly updating university education and on-the-job training curricula, to reflect state-of-the-art research. Other, more practical, tools such as

synthetic reports targeted to decision-makers, or guidelines for practitioners based on the latest scientific evidence, may also play a significant role in bridging gaps between research, practice and policy. Indeed, such publications of a review nature – literature reviews, policy briefings and guidance etc. – may play a more important role in translating policy into practice than scientific journals alone.

On the other hand, though research into the areas of information dissemination and implementation has been increasing, more evaluation studies in these areas are needed, namely to help ‘clarify the circumstances that are likely to modify the effectiveness of a [dissemination] intervention’ (Bero 1998). One way forward for overcoming limitations and gaps in drug-related research may be to promote national research networks, which are dedicated not only to disseminating research findings, but also to influencing national priorities and organising funding.

As regards future developments in specific areas, the Research Platform of the Pompidou Group of the Council of Europe recently published two studies on current themes and future developments for psychosocial and biomedical drug-related research. These suggest, amongst other conclusions, that in the area of psychological drug-related research, more studies

are needed on the impact of personality traits and pathologies related to drug abuse (e.g. impulsivity, sensation-seeking, as well as drug expectancies) (Negreiros, 2006). They also suggest that physical and psychiatric co-morbidity, ethical considerations and academic training should be priorities for biomedical drug-related research (Muscat, 2006).

Other authors have suggested priorities for other research disciplines and areas. A recent publication on the epidemiology of drug abuse (Sloboda, 2005) suggests that research is needed to help clarify how distant, longer-term factors may affect closer, shorter-term factors that influence substance use or abuse. This publication also argues that the promotion of multidisciplinary approaches and the harmonisation of concepts and methodologies also be listed priorities for future drug-related research. Another recent study (Nowotny, 2005) discusses research concerns at a more general level: future priorities in applied research might be influenced by identified trends in general research. These may include: an increased attempt of steering research priorities at supranational and national levels (e.g. the influence of the EU and/or national strategy and action plans on drugs on research priorities); the increased commercialisation of research (such as funding by the pharmaceutical industry in specific research areas); and the increased accountability of science through efforts to evaluate its effectiveness and assess its quality.

However, only a limited number of publications exist of a forward-looking or prescriptive character with regard to drug-related research. There may be other areas where research

efforts might be strengthened. These include, for example, the increased availability of research into criminology and the law enforcement area; analysis of long-term developments in drug use, especially research which leverages non-subjective sampling, ever-improving sets of historical data and a gradual shift towards more cross-national studies.

Diversity may be a strength for European research. The existence of different types of research approaches across different Member States, or within specific Member States, can stimulate creativity and diversity in research, and may lead researchers to discover new approaches, or to question long-held assumptions. The more different types of research and research approaches are combined, the more comprehensive insights will be possible in understanding drug use and its consequences.

Tactical efforts channelled into specific areas may prove successful. Promotion of coordination, and the dissemination of information in an appropriate format, are vital. In order to build on investments made in the past, and to retain talent and expertise, goodwill is currently needed to ensure that research is planned, and financed, that is to be sustainable well into the future. Finally, a multidisciplinary approach, one that is able to engage researchers and stakeholders across ministerial, academic or country borders, must be a priority.

Regular overviews and monitoring of drug-related research, based on more harmonised data, may be helpful in keeping all stakeholders informed on future developments in the area and in identifying limitations, gaps and priorities for the future.

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The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is one of the European Union's decentralised agencies. Established in 1993 and based in Lisbon, it is the central source of comprehensive information on drugs and drug addiction in Europe.

The EMCDDA collects, analyses and disseminates factual, objective, reliable and comparable information on drugs and drug addiction. In doing so, it provides its audiences with an evidence-based picture of the drug phenomenon at European level.

The Centre's publications are a prime source of information for a wide range of audiences including policymakers and their advisors; professionals and researchers working in the field of drugs; and, more broadly, the media and general public.