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New Synthetic Drugs: Always One Step Ahead?



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New Synthetic Drugs (NSD)

- **Development in chemistry & neuropsychopharmacology**
- **Novel psychoactive substances: “designer drugs”**
- **Social impacts - or sinking into oblivion**
- **Similarities in the repeated patterns of social responses**

**History repeats itself, across ages and borders?
NSD are always one step ahead?**

**Cannabinoids, Opioids, Tryptamines,
Phenethylamines, Amphetamines, Cathinones**

Our Studies on Drug Use Purposes

2009 psychedelics survey

Online survey (in Hungarian)

N=667

23 drugs

14 purposes

2010 mephedrone survey

Online survey (in Hungarian)

N=150

14 purposes

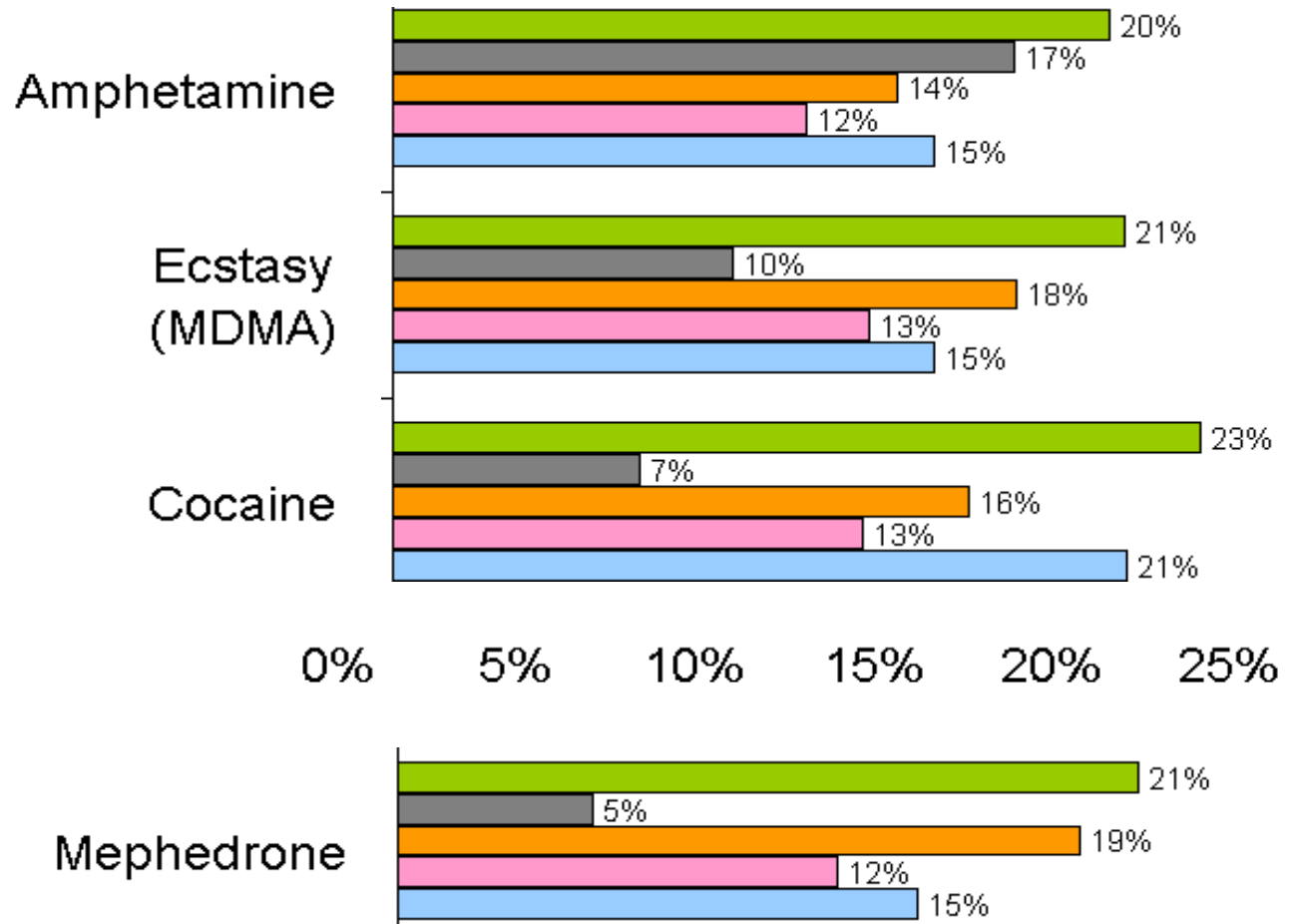
New quantitative methodological approaches:

Online discussion group narrative analysis

Online (MSN/Skype) interviews of drug users

Stimulants: Use Purposes

- Enhancing mood
- Enhancing physical power
- Increasing sensation and pleasure
- Increasing social contact
- Out of curiosity



Demand for 'e-nør-jē\

Increased:

Mood + Sensation + Sociality + Stamina

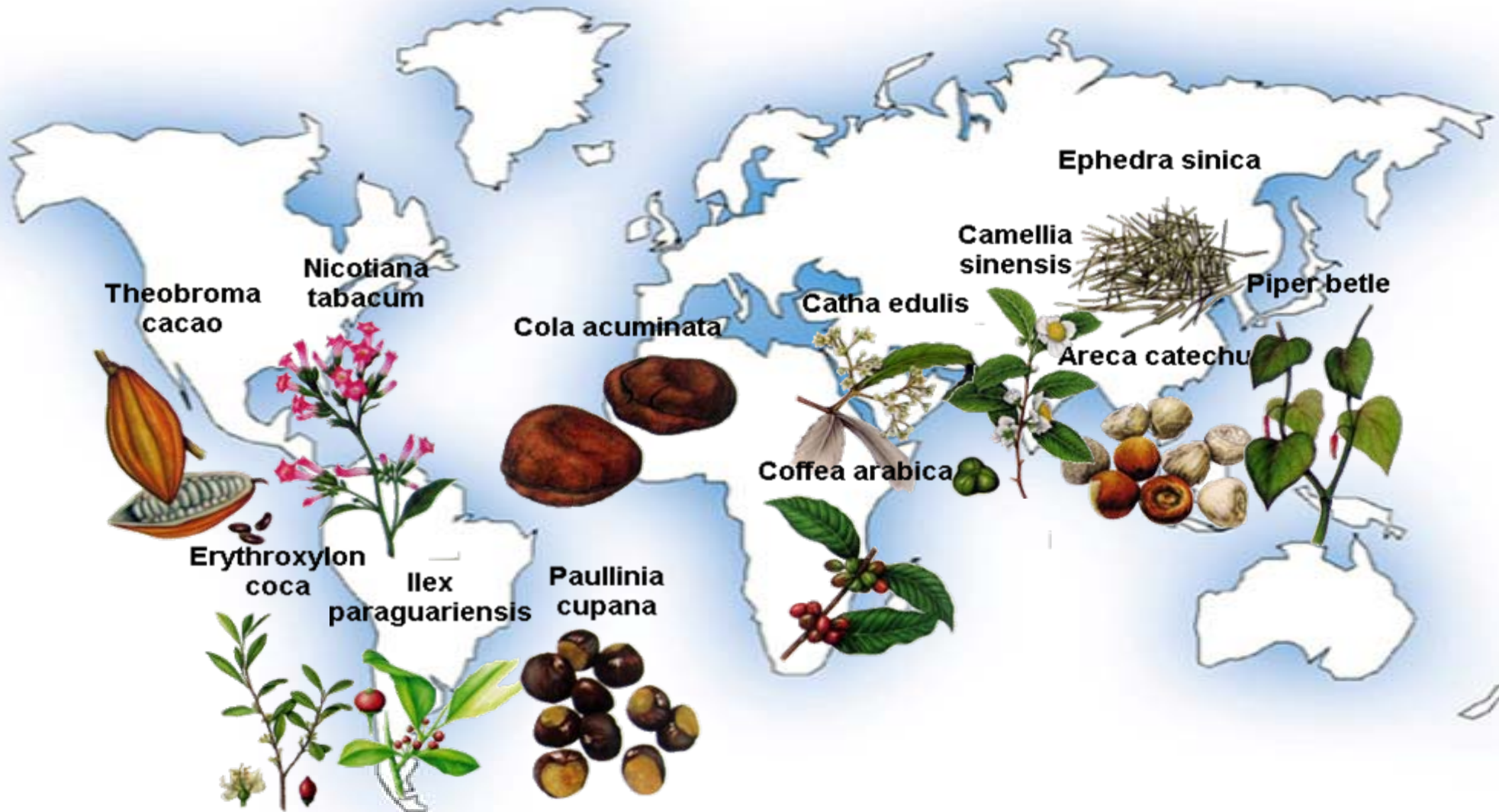
more “Buzz” and “Uptime”

more Efficiency, Experiences

more Friends, Partying, Sex, Fun

more Satisfaction, Pleasure, Life Quality

Stimulant World



Stimulants

<u>Plants</u>		<u>Molecules</u>
<i>tea plant</i>	→	<i>caffeine</i>
<i>khat</i>	→	<i>cathinone</i>
<i>coffee</i>	→	<i>caffeine</i>
<i>kola nut</i>	→	<i>caffeine</i>
<i>ephedra</i>	→	<i>ephedrine</i>
<i>coca</i>	→	<i>cocaine</i>
<i>maté</i>	→	<i>caffeine</i>
<i>tobacco</i>	→	<i>nicotine</i>
<i>guarana</i>	→	<i>caffeine</i>
<i>betel leaf</i>	→	<i>allylbenzenes</i>
<i>areca nut</i>	→	<i>arecoline</i>
<i>cocoa</i>	→	<i>theobromine</i>

Stimulants

Molecules

allylbenzenes

xanthines

nicotine

cathinone = β -keto-amphetamine

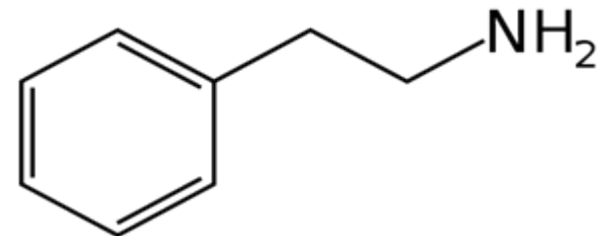
ephedrine = N-methyl- β -hydroxyamphetamine

cocaine

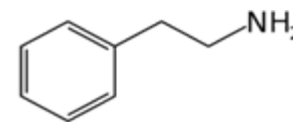
arecoline

alpha-methyl-phenyl-ethylamine

phenethylamine



Phenethylamines



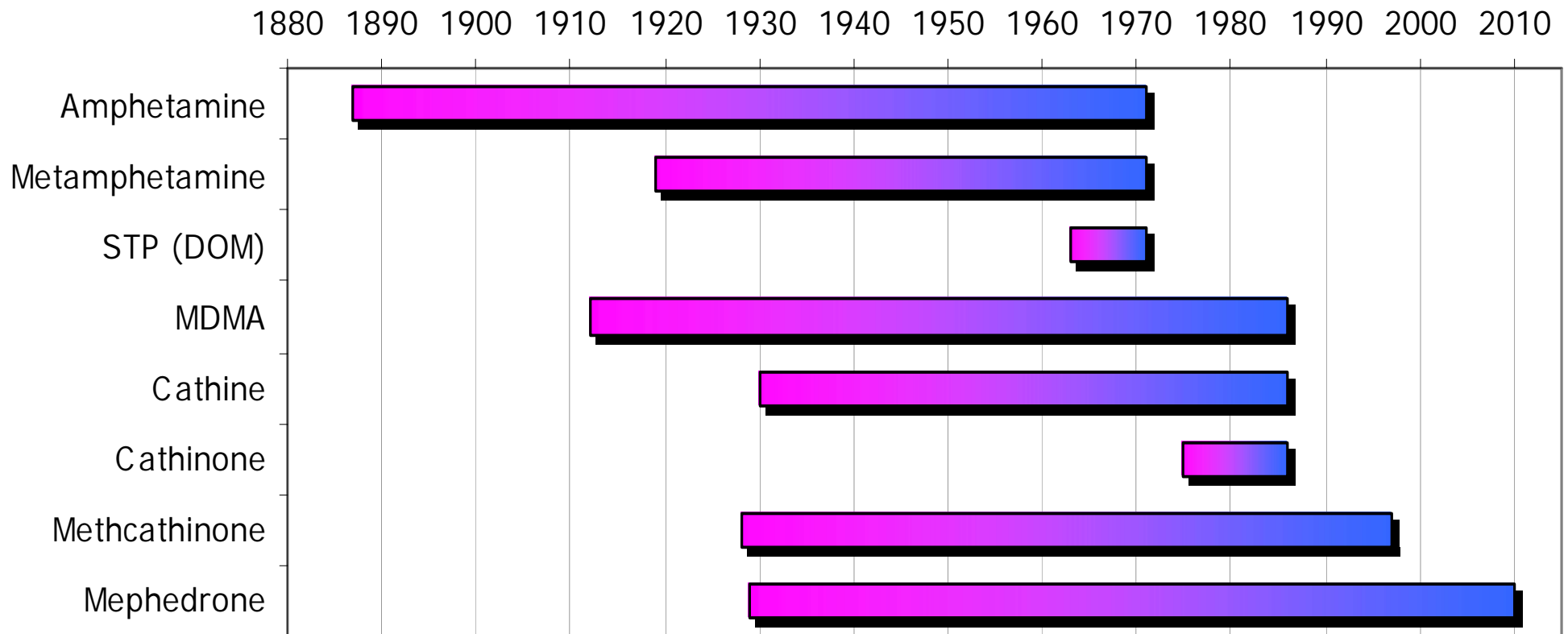
Derivatives

Amphetamines • Catecholamines • Cathinones • Phenethylamines • Phentermines • Phenylalkylpyrrolidines • Phenylisopropylamines

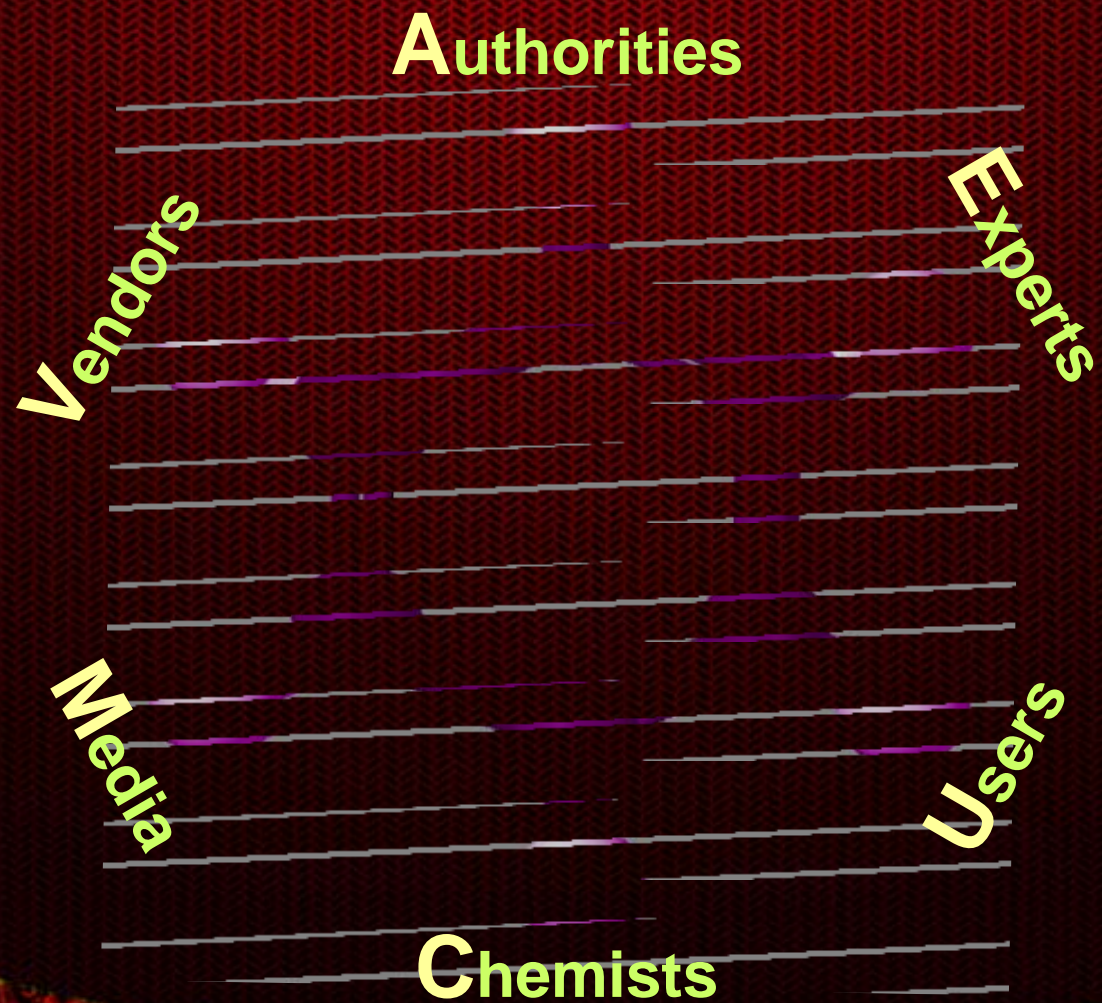
• α -Me-NE (Nordefrin, Levonordefrin) • α -Me-TRA (Norpholedrine) • α -Methyldopamine (α -Me-DA) • α -PBP • α -Phthalimidopropiophenone • α -PPP • α -PVP • α -PVT • β -Me-PEA • 2,3-MDA • 2-Fluoroamphetamine (2-FA) • 2-FMC • 2-Methyl-MDA • 2-Methylbutylone • 2-OH-PEA • 2C-B • 2C-B-FLY • 2C-C • 2C-D • 2C-E • 2C-G • 2C-I • 2C-N • 2C-P • 2C-SE • 2C-T • 2C-T-2 • 2C-T-4 • 2C-T-7 • 2C-T-8 • 2C-T-9 • 2C-T-13 • 2C-T-15 • 2C-T-17 • 2C-T-21 • 2C-TFM • 2C-YN • 3,4-DMMC • 3-Fluoroamphetamine (3-FA) • 3-FMC • 3-Methylamphetamine (3-MA) • 3-MMC • 3C-BZ • 3C-E • 3C-P • 4-CAB • 4-Desoxymescaline (DESOXY) • 4-EMC • 4-MEC • 4-Methylamphetamine (4-MA) • 4-Methylbuphedrone • 4-Methylmethamphetamine (4-MMA) • 4-Methylthioamphetamine (4-MTA) • 5-APDB • 5-IT • 5-Methyl-MDA • 5-Methylbutylone • 6-APB • 6-APDB • 6-FNE • 6-Methyl-MDA • 6-OHDA • Adrenochrome • Aleph • Alfetamine • Allylescaline • Amfecloral • Amfepentorex • Amfepramone • Amidephrine • Amiflamine • Amphetamine (Dextroamphetamine,

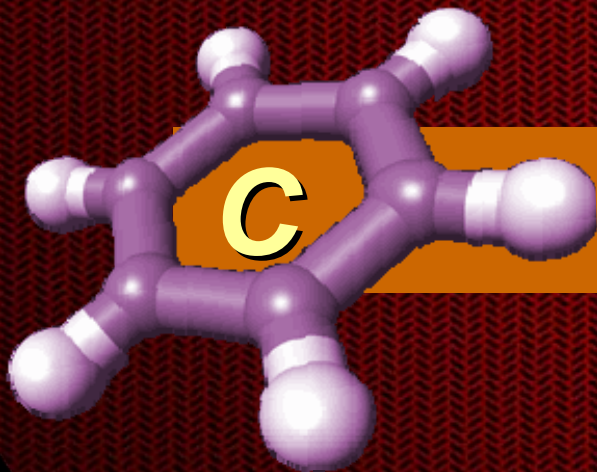
NSD Lifespan

Synthesis – Popularity+Commerce – Regulation



Interactions





Chemists

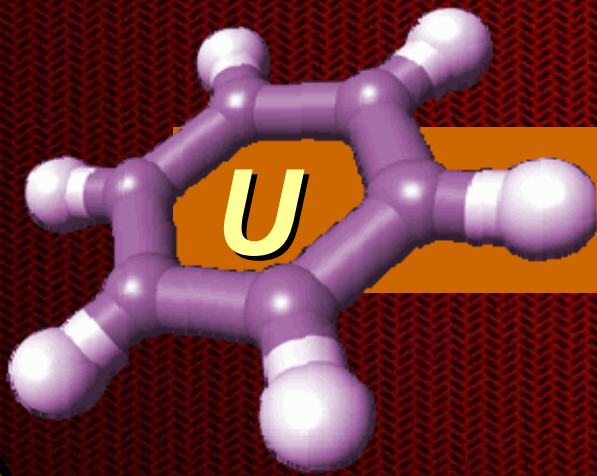
...will always synthesize



Licensed (or clandestine) professionals
Synthesis methods are public knowledge



Professional attitudes and personal motivations?
Care for applications of their products?



Users

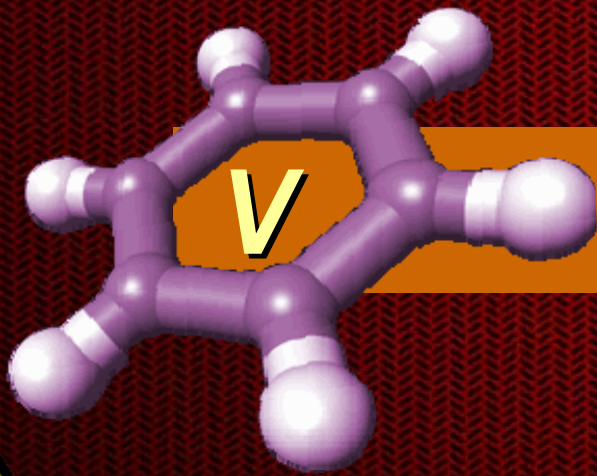
...will always demand



Pharmacological self-enhancement
Non-homogeneous drug subcultures



Drug use cultural transfer to new drugs?
Legality/availability as motivating factors?



Vendors

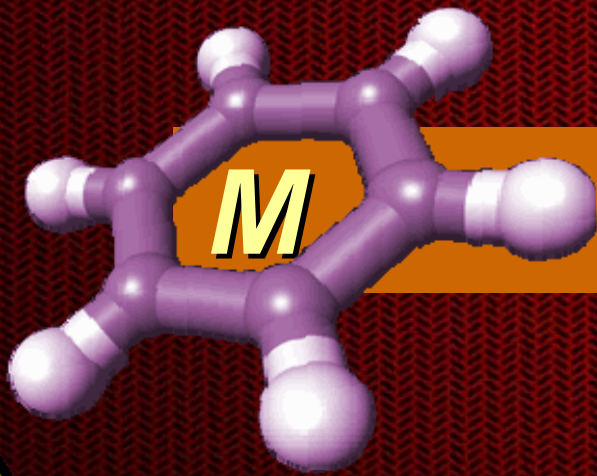
...will always supply



Industries, Big Pharma, “legal highs” market
Organized crime & online entrepreneurs



Vendor ethics: selling “unknown” substances?
Dynamics of grey/black market economy?



Media

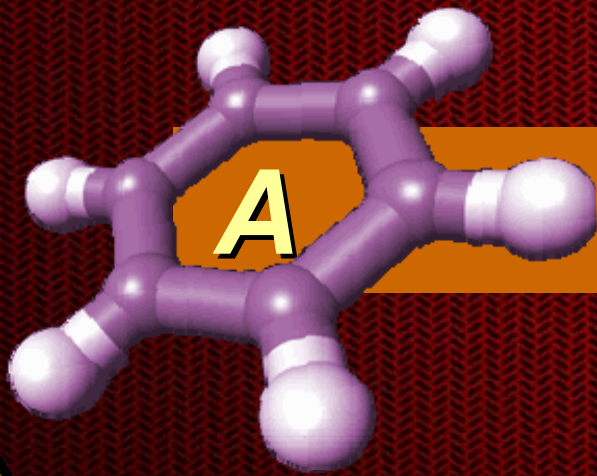
...will always popularize



Traditional public media: newspapers, TV
New online media: web, YouTube, blogs



How does the media spread drug popularity?
How does the media affect attitudes?



Authorities

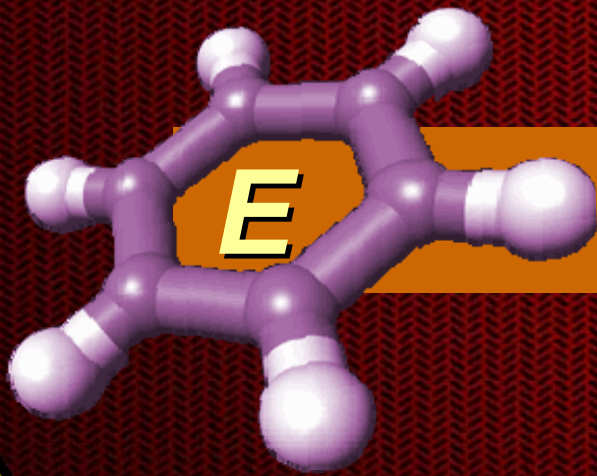
...will always regulate



Legislators, politicians
Public policy makers



Source of evidences for drug policies?
Bioethics and biopolitics of risk assessment?



Experts

...will always know better!



Interdisciplinarity: natural and social sciences, law, psychology, culture, neurosciences



Information to socially impacting knowledge?
Pharmacovigilance & harm reduction?

Bioethics & Biopolitics: Risk assessment criteria

- “Substantial similarity”
 - *except when there is profit*
- “Unknown risks”
 - *there are well-known risks taken*
- “Precautionary principle”
 - *violates the “innocent until proven guilty” principle*
- “Adverse effects”
 - *caused by drug use*
- “No medical use”
 - *no research before or after ban*

Unfounded and dubious!

Bioethics & Biopolitics: What is the problem with NSD?

Pharmacological self-enhancement?

Uncontrolled epidemic?

Long-term effects?

Undesired behavior?

Financial profit?

Let's find out!

Our Qualitative Studies: Preliminary results

What biopsychosocial parameters may affect the success and lifespan of a new drug?

Media attention, esp. internet

Are there any novel usage patterns emerging?

Mostly into “old drug” subcultures

What motivates users to try out NSD?

Availability, curiosity, popularity

How much effect legislative measures have on the users' decisions?

Not much

Thank meow
for your
attention!

