

Cannabis adulterated with the synthetic cannabinoid receptor agonist MDMB-4en-PINACA and the role of European drug checking services

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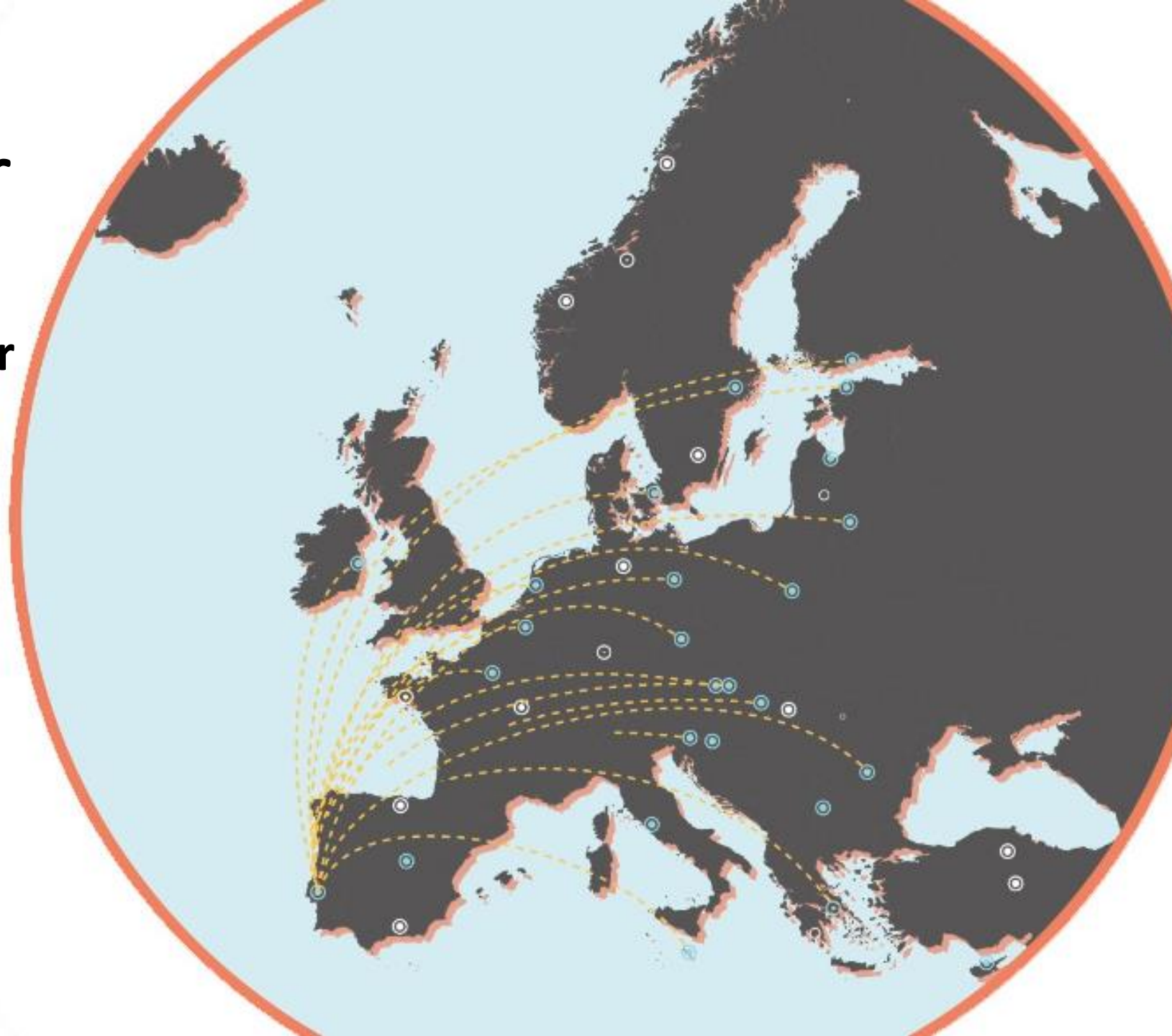
Conflict of interest

None.

REITOX member

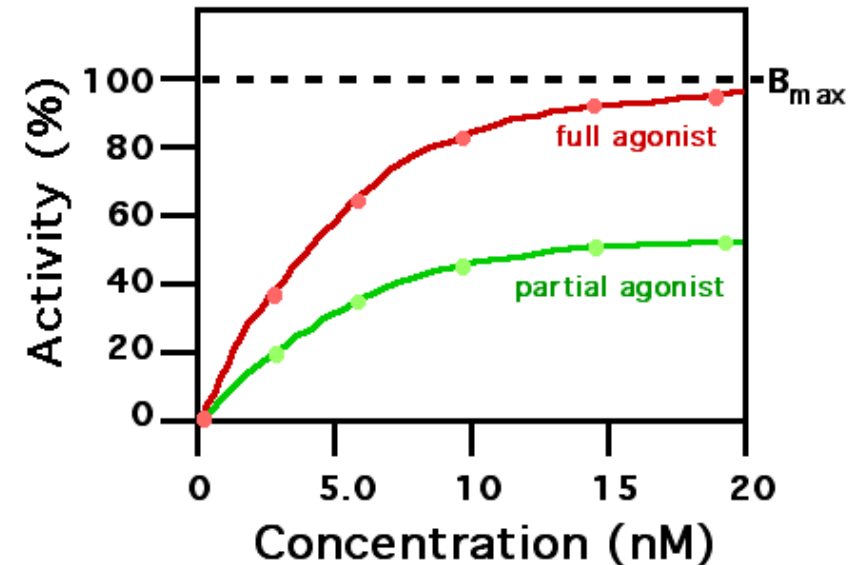
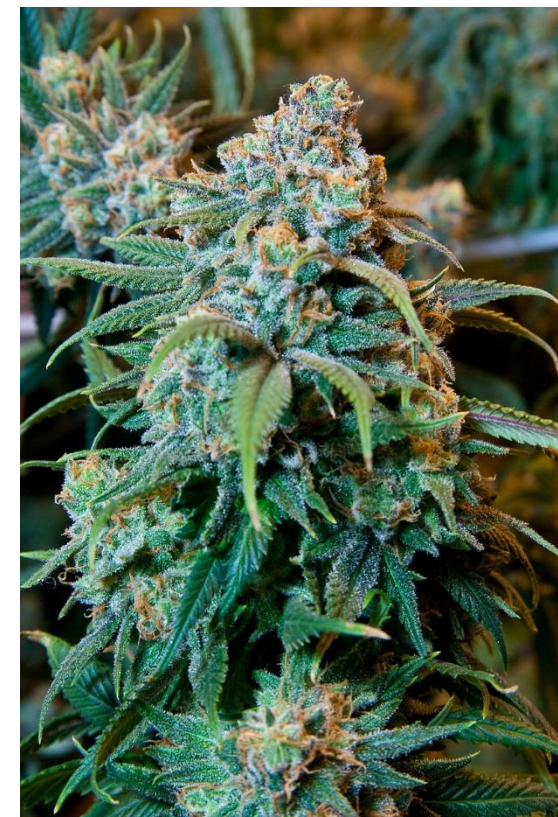
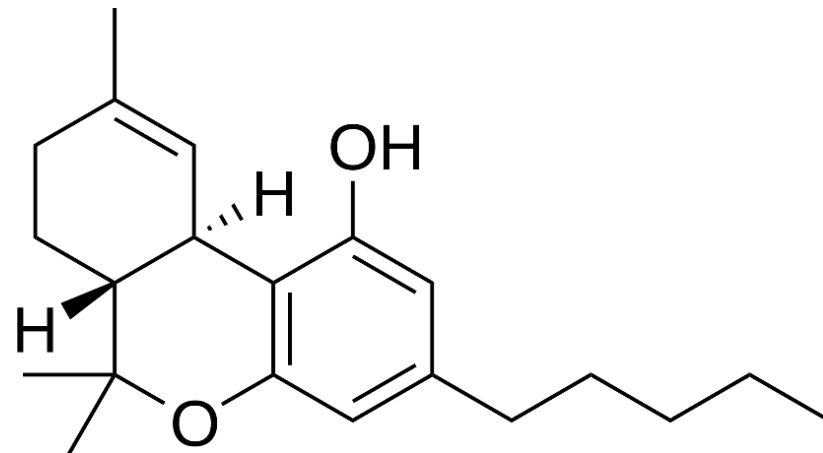
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the Dutch focal point for
the EMCDDA**

The Trimbos Institute is a
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Drugs and Drug Addiction
(REITOX)



Cannabinoids in cannabis

- Cannabis contains phytocannabinoids
- *trans*- Δ^9 -tetrahydrocannabinol (THC) can give rise to all of cannabis' psychoactive effects
- THC is a partial agonist of the CB₁ and CB₂-receptor



Synthetic cannabinoid receptor agonists (SCRAs)

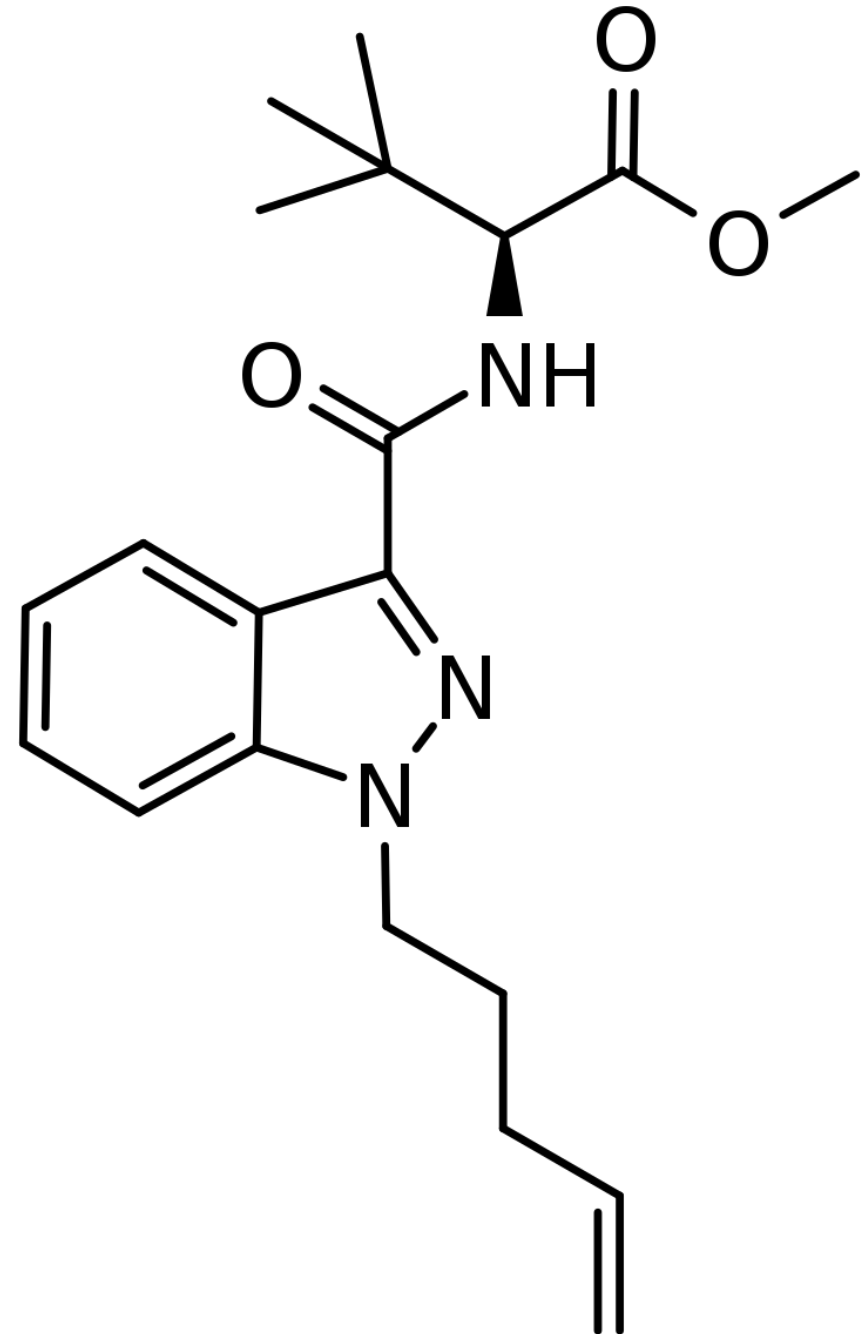
aka cannabimimetics, synthetic cannabinoids

- First compounds arose in 1980s
- Initially researched as medicinal drugs (e.g. nabilone)
- Effects similar to THC, often stronger
- Largest group of NPS monitored by EMCDDA: 224 since mid-2000s



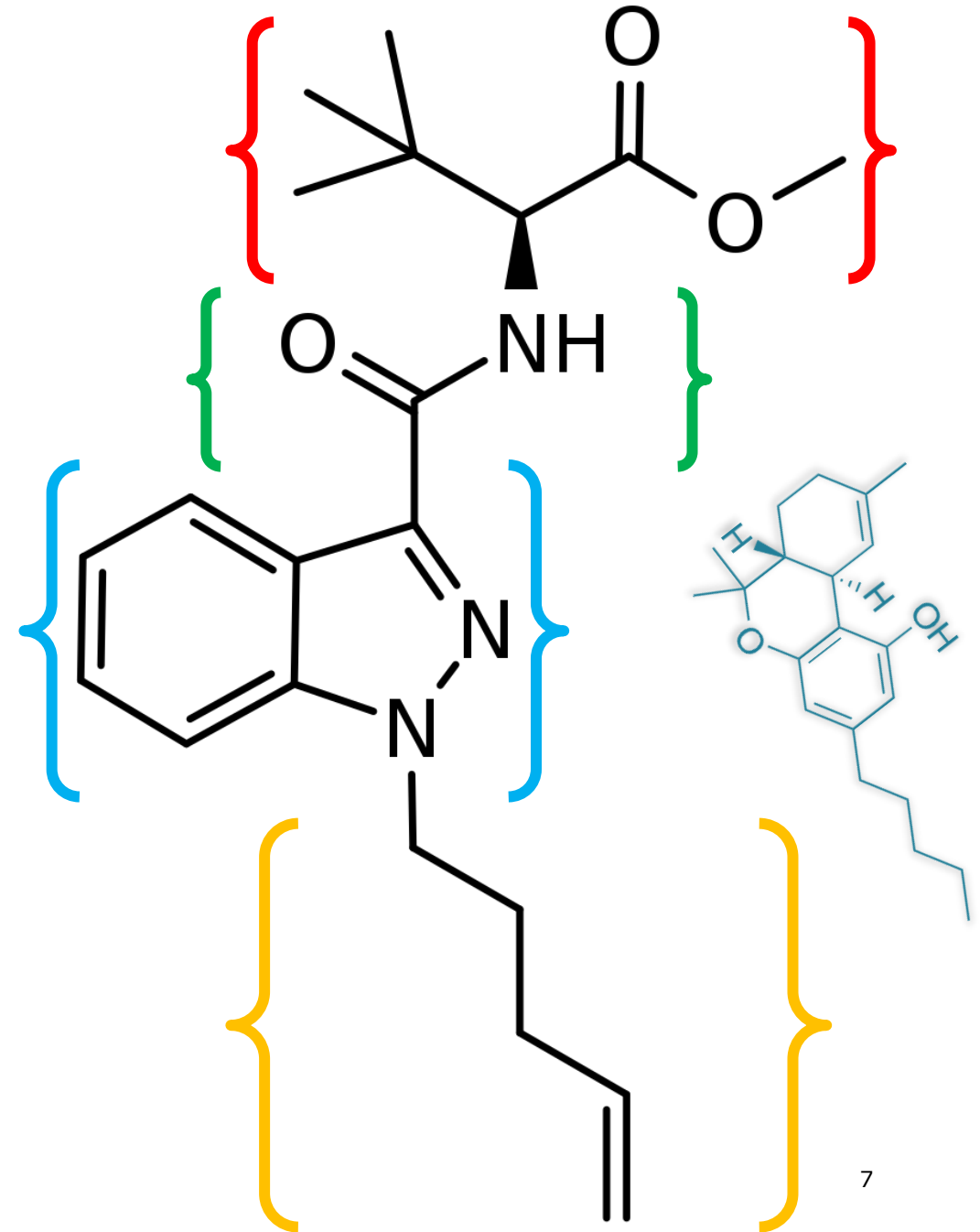
MDMB-4en-PINACA

- **Methyl (S)-3,3-dimethyl-2-(1-(pent-4-en-1-yl)-1H-indazole-3-carboxamido)butanoate**

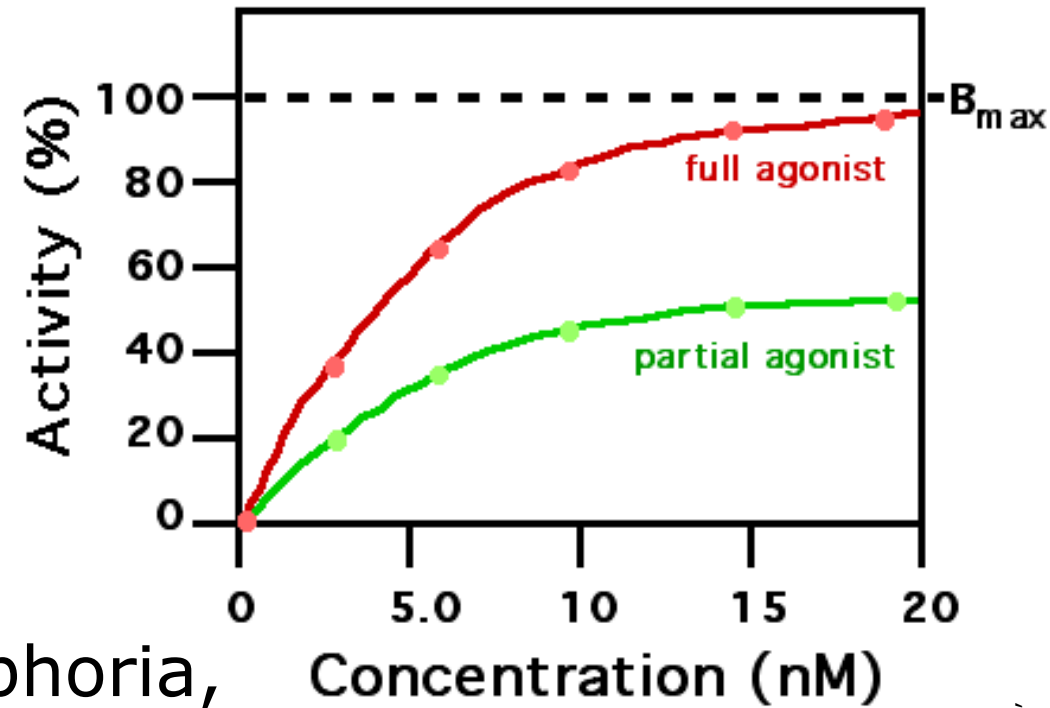


MDMB-4en-PINACA

- **Methyl (S)-3,3-dimethyl-2-(1-(pent-4-en-1-yl)-1H-indazole-3-carboxamido)butanoate**
- Activity at CB₁ orders of magnitude greater than THC
- In Europe since 2017, large increase since 2019
- 99% of MDMB-4en-PINACA powder seized between April and June 2020



MDMB-4en-PINACA



- Full agonist
- Psychoactive effects: relaxation, euphoria, confusion, anxiety (more severe than cannabis)
- Adverse effects: nausea, paranoia, depersonalization, hallucinations, agitation, chest pain, palpitations, seizures, loss of consciousness
- 10 severe incidents (hospital) & 4 deadly, 3 (partial) cause of death

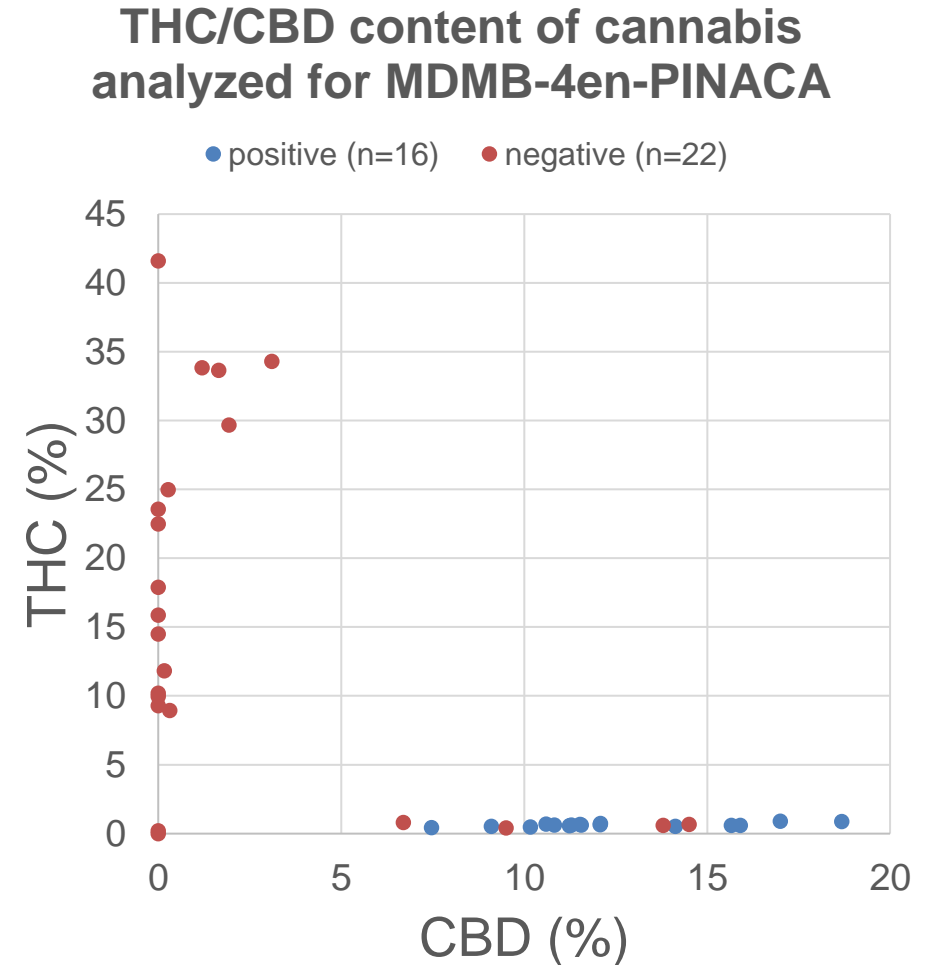
Adulterated cannabis

- In February 2020 first detection of SCRAs on cannabis (floral) by DCS in Zürich, Switzerland (saferparty.ch)
- Number of samples increased over the summer: mainly MDMB-4en-PINACA
- Almost all samples contained $<1\%$ THC, “normal” amounts of CBD: typical Swiss problem?



Adulterated cannabis in the Netherlands

- Since Nov '20 45 samples analyzed, 18 MDMB-4en-PINACA-positive (40%)
- Street dealers (9), coffeeshops (9)
- Weed (15), hashish (2), joint (1)
- Quantitative THC/CBD-analysis on subset of samples
 - All positive samples <1% THC
 - CBD-median THC-monitor '20: 0.3% (weed), 6.7% (hashish)

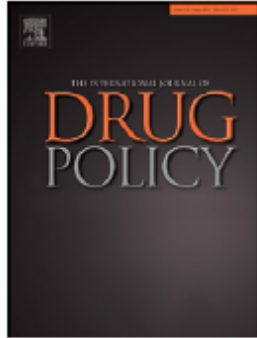




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Short Report

Cannabis adulterated with the synthetic cannabinoid receptor agonist MDMB-4en-PINACA and the role of European drug checking services



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Actions

- User reports tachycardia and aggression
 - 3 hospitals
- Risks further
 - Cannabis
 - Cannabis
- Warnings
 - PWUD: v
 - Medical s
 - Special t



WARNING

Adulterated hashish and weed is in circulation in The Netherlands

- Cannabis adulterated with the synthetic cannabinoid MDMB-4en-PINACA is in circulation.
- Use of this chemical has more risks than of normal cannabis and can result in severe health problems, such as frightening hallucinations and irregular heartbeat.
- The adulterated cannabis has been sold by street dealers as well as coffeeshops.
- It is not possible to identify adulterated hashish or weed by eye.
- If you consume from a new baggie of cannabis: only take one toké and wait for the effects to start (about 10 minutes).
- If you experience negative, unexpected results: stop the use and call 112 for medical assistance if necessary!

If you have experience unexpected negative effects after using cannabis, you can get your sample tested.
For locations, see: www.drugs-test.nl

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Current status

- Reported within TEDI on cannabis since 2021: 5F-MDMB-PICA, 4F-MDMB-BINACA, ADB-BUTINACA
- Adulteration of cannabis widens remit of drug-checking services
- Re-evaluation of barriers to testing experienced by cannabis users?
- International trends demand international monitoring



Thank you for your attention

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