Aminoindanes – These substances, of which 5,6-methylenedioxy-2-aminoindane (MDAI) is an example, have been sold as NPS for their ability to produce the empathogenic and entactogenic effects of serotonin releasing drugs, such as MDMA.

Ketamine and phencyclidine-type substances – Ketamine is a human and veterinary anaesthetic which acts as a stimulant at low doses and a hallucinogen at high doses. It is one of the most widespread NPS in Asia. Phencyclidine (PCP) and ketamine show structural similarity and are classified as arylcyclohexylamines. One of the most frequently reported substances in this group is 4-methoxyphencyclidine (4-MeO-PCP).

Synthetic cathinones – These are analogues/derivatives of the internationally controlled substance cathinone, one of the active components of the khat plant. They generally have stimulant effects and include frequently reported NPS such as mephedrone and MDPV.

Phenethylamines – This group contains substances related to amphetamine and methamphetamine, and generally produces stimulant effects. However, modification of these compounds can lead to potent hallucinogens such as Bromo-Dragonfly.

Piperazines – These substances are frequently sold as ‘ecstasy’ due to their central nervous system stimulant properties. The most commonly reported members of this group are benzylpiperazine (BZP) and mCPP (1-(3-chlorophenyl) piperazine).

Tryptamines – These are derivatives of the naturally occurring tryptamine and have hallucinogenic properties. A common example is 5-Methoxy-N,N-dipropyltryptamine (5-MeO-DPT).

Plant-based substances – This group includes plants with psychoactive properties. The most frequently reported are:
- Kratom (Mitragyna speciosa Korth), a plant indigenous to Southeast Asia that contains the alkaloid mitragynine, a stimulant at low doses and sedative at high doses.
- Salvia divinorum, a plant indigenous to forest areas in Oaxaca, Mexico, which contains the active ingredient salvinorin A, a hallucinogenic substance.
- Khat (Catha edulis), a plant native to the horn of Africa and the Arabian peninsula. The leaves of the plant are chewed, resulting in the release of the stimulants cathinone and cathine.

Photos: University Medical Center Freiburg, Germany; Central Narcotics Bureau, Singapore; DEA; UNODC; Shutterstock. Please note that some of the products (Ketamine, Piperazines) shown in the photos are simulated.