- Zuclopenthixol and Mirtazapine: **minimal reduction** [3]
- Chlorpromazine: **24% reduction** [2]
- Fluvoxamine: **32-33% reduction** [2,3]
- Olanzapine: **12-50% reduction** [2,3]
- Clozapine: **18-50% reduction** [2,3]
- TCA, Duloxetine and Benzodiazepines: **up to 50% reduction** [3]
- Haloperidol: **20-70% reduction** [2,3]

When people stop smoking, enzyme activity reduces over about a week, and plasma levels of affected drugs will then rise, sometimes substantially. Dose reduction will usually be necessary. If smoking is re-started, enzyme activity increases, plasma levels fall and dose increases are then required. The process is complicated and effects are difficult to predict [1–3].

Conclusions: Tobacco smoking can influence psychopharmacological drugs action by the actions of nicotine and of the PAH present in tobacco smoke. These actions have distinct implied mechanisms and have the clinical significance of directly influencing drug prescriptions. The most important interactions might be the inducing of CYP isoenzymes by the PAH, considerably diminishing Haloperidol, TCA, Duloxetine, Benzodiazepines, Olanzapine, Clozapine, Fluvoxamine and Chlorpromazine plasmatic concentrations.

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P.691 Psychedelic fauna for psychonaut hunters

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Background and purpose: Humans have used a range of naturally occurring psychoactive substances to modify their minds, for recreational/mystic/spiritual/religious/psychedelic purposes, over millennia [1]. Many psychotropic chemicals, widely distributed in plants and animals, were discovered by ancient hunter-gatherers prior to the Neolithic agricultural revolution [2]. Most commonly abused natural drugs and, nowadays, novel psychoactive substances (NPS), cause changes in brain systems that alter consciousness or affect moods/emotions in some way [1–3]. Moreover, ritualistic/spiritual use of these psychoactive substances has a long history among ancient tribes/shamanic communities, by suggesting some evolutionary benefits related to the historical spread of plant- and/or animal-derived compounds possessing psychoactive properties, mostly entheogens/hallucinogens [3]. Despite many psychoactive substances/NPS have been easily found in plant sources, a variety of animal sources of psychoactive substances appear to be equally abused, potent and risky. The present study aiming at providing an overview of the presence of some substances with psychoactive/psychedelic properties in fauna, by identifying their potential human abuse/misuse, their pharmacological and clinical effects on humans, in order to better qualify them.

Methods: Given the limitation of peer-reviewed data published so far, a preliminary nonparticipant multilingual qualitative study of a list of prodrug websites and other online resources was conducted to obtain a list of potentially representatives of the 'psychedelic fauna'. A systematic Internet search was conducted on Duckduckgo® and Google® which included the following keywords: "animal's name" and/or possible acronyms, street names etc. plus "to buy", "experience", "trip", "legal high", "psychedelic", "hallucinogen", "psychoactive". Within the time frame January–July 2017, data were collected from 12 unique prodrug websites. Some 2,900 fora threads were screened. After removal of those Web pages, which were either duplicates or nonrelevant to the aims of the study, 268 fora threads, were analysed and used to identify four main species implicated. Ethical approval for the study has been sought and granted by the Department of Pharmacy Ethics Committee at the University of Hertfordshire (December 15, 2010, reference code PHAEC/10-42), with a further extension of the approval granted in November 2013. Then, we combined the search strategy of free text terms and exploded MESH headings for the topics of Psychedelic Fauna and Novel Psychoactive Substances as following: ((((Psychedelic OR hallucinogenic OR psychoactive) substances) [Title/Abstract]) AND ((various name of Animals) [Title/Abstract]))), as previously identified with the above-mentioned online search. All articles published in English without time restriction were selected. Studies published through to 15 September 2017 were included.

Results: 'Psychoactive fauna' is currently used to denote the group of animals whose body parts or excretions contain one or more substances which, in a sufficiently high dose, have the potential to alter the user's state of consciousness.Several species are implicated (i.e., ants, amphibians, fish). Routes of administration depend on the animal/substance included/metabolism/toxicity and individual/social/cultural variability.

Conclusions: Online purchase and access are easy through tourism-related search strategies (‘frog trip”, ‘help of charmer snake’, ‘religious trip’). Further researches should be carried out in order to better identify the consume and dissemination of these ’new’ way to consume/misuse of these ’psychedelic’ animals.

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P.692 Analysis of epidemiological characteristics of alcohol use disorders in the Nizhniy Novgorod region (Russian Federation)

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Introduction: The Russian Federation takes one of the leading places by the number of alcohol consumption per capita. The prevalence of alcoholism in Russia has significant regional differences. The alcohol policy pursued in the country includes knowledge of the alcohol situation, the hierarchy of regions according to the severity of alcohol problems and the identification of cohorts of the population with the highest risk of alcohol. In light of this, the identification of regional characteristics of alcohol consumption can affect the organization of drug treatment and related preventive measures.
Aims: To analyze the epidemiological situation of the alcohol situation in the Nizhny Novgorod region; to compare it with the data of Russian Federation; to rate the districts on severity of alcohol problems.
Methods: 52 districts of the Nizhniy Novgorod region were analyzed. The study period 2009-2014. Ranking of territories was carried out by calculating the average prevalence / incidence ± two standard deviations (SD). Depending on indicators, we divided districts into three groups: low, medium and high indicators’ value. Statistical analysis (descriptive statistic) was carried out in Statistica 7.0. Information was obtained from the statistical reports of regional addictions dispensary and Statistical yearbook of National Research Center of Addictions.
Results: During the study period, prevalence rates of alcoholism and alcoholic psychoses in the Nizhny Novgorod region decreased by 0.9 and 1.3 times, respectively. However, these indicators exceed All-Russian prevalence of alcoholism and alcoholic psychosis over the same period of time sometimes 1.8 times.

On the territory of the Nizhny Novgorod region, the prevalence of alcoholism in certain districts (Ardatov and Sergach districts) varies by 19 times, and the level of primary alcoholism incidence by 10 times (Lyskovsky and Spassky districts).

The same differences among districts exist in terms of prevalence and incidence of alcoholic psychoses from 10.4 (3.4) to 325.6 (45.4) per 100 000 and 9.6 (3.1) to 79.6 (39, 8) per 100 000 respectively.

Ranking of districts for each indicator divide the Nizhny Novgorod region into four groups. First group with the low level of all 4 indicators and mainly low level (3 indicators out of 4) – 12 districts (23%). Second group medium level of all analyzed indicators (3 out of 4) - 11 districts (22%).Third group with the high level of all analyzed indicators and mainly high level of indicators (3 indicators out of 4) – 4 districts (8%).Fourth group characterized by the considerable variability of the levels of all indicators - 25 districts (49%).
Conclusion: Analysis of epidemiological data on alcohol situation in the Nizhny Novgorod region testifies to its stabilization with the trend to improve, but still remains worse than the average for Russia.

The difference in the spread of prevalence and primary incidence rates for both alcoholism and alcoholic psychoses within one region is enormous and requires detailed study.

Half of the region’s districts can not be ranked by the severity of alcohol related problems because of the significant variability of the studied indicators.

Established territorial features show the necessity of purposeful planning of preventive measures.

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P.693 Substance use disorders and attention deficit hyperactivity disorder – what should we treat first?

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Background: Attention Deficit Hyperactivity Disorder (ADHD) is often diagnosed in substance use disorders (SUD) patients [1,2]. ADHD can be treated with Central Stimulating (CS) drugs, which can lead to fewer relapses in drug abuse and decreased ADHD symptoms [1,3]. A challenge for opioid substitution treatment (OMT) program today is that clinicians rarely see pure opioid drug dependence in their assessments, instead its more usual to see multi-drug

Psychedelic Fauna for Psychonaut Hunters

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Background and purpose

Humans have used a range of naturally occurring psychoactive substances to modify their minds, for recreational/mystic/spiritual/religious/psychedelic purposes, over millennia [1]. Many psychotropic chemicals, widely distributed in plants and animals, were discovered by ancient hunter-gatherers prior to the Neolithic agricultural revolution [2]. Most commonly abused natural drugs and, nowadays, novel psychoactive substances (NPS), cause changes in brain systems that alter consciousness or affect moods/emotions in some way [1-3]. Moreover, ritualistic/spiritual use of these psychoactive substances has a long history among ancient tribes/shamanic communities, by suggesting some evolutionary benefits related to the historical spread of plant- and/or animal-derived compounds possessing psychoactive properties, mostly entheogens/hallucinogens [3]. Despite many psychoactive substances/NPS have been easily found in plant sources, a variety of animal sources of psychoactive substances appear to be equally abused, potent and risky. The present study aiming at providing an overview of the presence of some substances with psychoactive/psychedelic properties in fauna, by identifying their potential human abuse/misuse, their pharmacological and clinical effects on humans, in order to better qualify them.

Methodology

Given the limitation of peer-reviewed data published so far, a preliminary nonparticipant multilingual qualitative study of a list of prodrug websites and other online resources was conducted to obtain a list of potentially representatives of the 'psychedelic fauna'. A systematic Internet search was conducted on Duckduckgo® and Google® which included the following keywords: "animal's name" and/or possible acronyms, street names etc. plus "to buy", "experience", "trip", "legal high", "psychedelic", "hallucinogen", "psychoactive". Within the time frame January–July 2017, data were collected from 12 unique prodrug websites. Some 2,900 fora threads were screened. After removal of those Web pages, which were either duplicates or nonrelevant to the aims of the study, 268 fora threads, were analysed and used to identify four main species implicated. Ethical approval for the study has been sought and granted by the Department of Pharmacy Ethics Committee at the University of Hertfordshire (December 15, 2010, reference code PHAEC/10-42), with a further extension of the approval granted in November 2013. Then, we combined the search strategy of free text terms and exploded MESH headings for the topics of Psychedelic Fauna and Novel Psychoactive Substances as following: ((((Psychedelic OR hallucinogenic OR psychoactive) substances) [Title/Abstract]) AND ((various name of Animals) [Title/Abstract]))), as previously identified with the above-mentioned online search. All articles published in English without time restriction were selected. Studies published through to 15 September 2017 were included.

Conclusions

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Results

'Psychoactive fauna' is currently used to denote the group of animals whose body parts or excretions contain one or more substances which, in a sufficiently high dose, have the potential to alter the user's state of consciousness. Several species are implicated (i.e., ants, amphibians, fish). Routes of administration depend on the animal/substance included/metabolism/toxicity and individual/social/cultural variability.

Species	Origin	Psychopharmacological effects	References
HALLUCINOGENIC FISH			
a) Clown fish and damselfish (sp. *Abudefduf septemfasciatus*; commonly called "*Banded sergeant*") b) Rabbitfish (sp. *Siganus argenteus*; sp. *Siganus corallinus*; sp. *Siganus luridus*; sp. *Siganus rivulatus*; sp. *Siganus spinus*) c) Sea bream (sp. *Sarpa salpa*, commonly called '*Salema*') d) Sea chub (sp. *Kyphosus inerascens*; sp. *Kyphosus vaigiensis*; *Kyphosus bigibbus*) e) Surgeon fish (sp. *Acanthurus triostegus*, commonly called '*Convict surgeonfish*') f) Goatfish (sp. *Mulloidichthys flavolineatus*; sp. *Upeneus taeniopterus*) g) Mullet (sp. *Mgil cephalus*; sp. *Neomyxus leuciscus*) h) Groupers (sp. *Epinephelus corallicola*, commonly called '*Coral grouper*')	South Africa and Hawaiian and Norfolk Islands in the Pacific Ocean. The *Sarpa salpa* originates from temperate and tropical areas, from the Atlantic coast of Africa extending to the Mediterranean Sea, particularly near to Spanish coasts; occasionally found around the British coastline.	Fish contain hallucinogenic substances. **If ingested raw:** may induce hallucinatory and onyroid effects such as vivid/ terrifying auditory and visual hallucinations, dizziness, loss of equilibrium, lack of motor coordination and mental depression, terror and nightmares, itching, burning of the throat, muscular weakness, rarely abdominal distress. **If orally ingested:** "*Sarpa salpa*" fish may produce vivid auditory and visual hallucinations.	(18–22)
Sea chubs from the genus *Kyphosus*, supposed to be *K. Fuscus* or more likely *K. Vaigiensis*	Norfolk Island, between Australia and New Zealand	Hallucinations and '*dreadful nightmares*'	(18)
Urolophus jamaicensis species	The Caribbean and Colombia	Entheogen/intoxicant/inebriating and aphrodisiac effects originating from stingrays' venom	(23)
Siganus spinus	Waters around Réunion, South Atlantic	Psychedelic effects	(24)
Mulloides flavolineatus	Hawaii	Psychedelic effects	(24)
Tetraodontidae include puffers, balloon fish, blowfish, bubble fish, globefish, swellfish, toadfish, and toadies.	Tropical regions of South America, Africa and South East Asia	**If orally ingested:** poisonous puffer fish can cause a slight numbness of the lips and tongue, followed by increasing paresthesia in the face and extremities, sensations of lightness or floating. Headache, epigastric pain/nausea/diarrhea and/or vomiting may also occur. Reeling or difficulty in walking have been reported. The second stage of intoxication includes increasing paralysis, respiratory distress, altered speech, dyspnea, cyanosis, and hypotension. Whilst paralysis increases, convulsions, mental impairment, cardiac arrhythmia and death may occur.	(25, 26)
Fugu	Japan	Stimulant and aphrodisiac effects **If orally ingesting a non-lethal dose (i.e., <8** μg per kg body weight**):** tingling in the lips, fingers, and toes, and extremities may occur. **If orally ingesting a lethal dose (i.e., >8** μg per kg body weight**):** numbness, anesthesia, paresthesia, abdominal pain, nausea, and vomiting, muscle paralysis and respiratory insufficiency may occur.	(27, 28)
Somniosus microcephalus	North Atlantic and Artic Oceans	**If orally ingested:** may cause diarrhea/ vomiting/ hallucinations/ numbness. It may cause a state of near-death for several days, while the subject remains conscious.	(29)
Sea sponges such as *Smenospongia aurea*	Caribbean Sea	Psychedelic effects	(30–32)
Sea sponges such as *S. echina*	Caribbean Sea	Psychedelic effects	(30–32)
Sea sponges such as *erongula rigida*	Western Atlantic Ocean: Florida, Gulf of Mexico, and the Caribbean	Psychedelic effects	(30–32)
PSYCHEDELIC AMPHIBIANS			
Bufo alvarius and *Bufo marinus*	Mesoamerica	Used as ritual intoxicants owing to their viscous milky-white venom that contains bufotenin and bufotoxin. **If orally ingested:** *Bufo* toad venom can be fatal. Single deep inhalations of vaporized venom can produce intense and transient psychoactive effects mainly auditory and visual hallucinations.	(33)
Bufo marinus	North America	*B. Marinus* venom was used as "*Zombie's powder*". **If orally ingested:** *Bufo* toad venom can be fatal. Single deep inhalations of vaporized venom can produce intense and transient psychoactive effects mainly auditory and visual hallucinations.	(34, 35)
B. Alvarius	The Sonoran Desert an area of California across the southern half of Arizona and South Mexico.	It contains the enzyme O-methyl-transferase, which converts bufotenin (5-OH-DMT) to the potent hallucinogen 5-MeO-DMT. The skin also contains bufotenin analogs. **If orally ingested:** *Bufo* toad venom can be fatal. Single deep inhalations of vaporized venom can produce intense and transient psychoactive effects mainly auditory and visual hallucinations.	(36, 37)
Phillomedusa bicolor	The Peruvian and Brazilian Amazon	**Buccal absorption** of opioid peptides scraped from the skin may induce rapid pulse/incontinence/vomiting, a state of listlessness and euphoria.	(37, 38)
PSYCHEDELIC ANTS			
Red harvester ants (e.g., *Pogonomyrmex californicus*)	South and South Central California	**Oral ingestion** of live ants may cause hallucinogenic and/or mind-altering effects.	(39, 40)