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Education Center for Prevention of Drug Abuse
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Chief editor: Shu-Lung Yang
Executive editor: Hua-Fu Hsu
Vice executive editor: Yueh-Chung Ma
Document editor: Yuan-Hao Cheng, Freya Hsu
Executive department: Crime Research Center,
National Chung Cheng University

2018 Scientific Drug Treatment Conference in Taiwan

The Taiwan Society for Substance Abuse Research, the Department and Graduate Institute of Criminology, and Crime Research Center of National Chung Cheng University will hold the "The Seminar of Drug Treatment in Scientific Positivism" on December 7, 2018 at National Chung Cheng University International Hall under the support of the Correction Agency of the Ministry of Justice.

This Seminar was designed in response to the serious social harm caused by drug abuse in the recent years. The Correction Agency of the Ministry of Justice cited the 13 principles of drug treatment by the National Institute on Drug Abuse (NIDA) on October 25, 2017, and officially announced the promotion of the "Drug Offenders Treatment Patterns in Scientific Positivism" programs in seven major aspects as of January 1, 2018. The correctional system and the health administration, social administration, and labor administration have formed a four-way network, and are preparing to support the community-based treatment when the drug offenders are returning to society after rehabilitation. Therefore, the goal of this conference to reduce the harms of drugs, the brainstorming process and exchange of experience in the meeting will boost the context and strategy of treating drug addiction.

This conference invited Minister of Justice Ching-Hsiang, Tsai, Minister of Justice Director Chun-Tang, Huang, Minister without Portfolio Ping-Cheng, Lo, and President of National Chung Cheng University Zhang-Hua, Fong as special guests with over 300 correctional officers of Minister of Justice and experts will participate. This conference sincerely invites all the scholars, researchers, and specialists to share their visions and inspiring concepts. Please visit the Society's website for more information: http://tasar.ccu.edu.tw

Contact information: Wu, Zhi-hau Tel: 05-2720411#26304 Email: taiwanasar@gmail.com

UNODC Reports

Myanmar hosts talks on Asia Pacific strategy to control drug-making chemicals

➢ **Editorial Office**

7 November 2018 - High-level delegations from East, South and Southeast Asia are in the capital of Myanmar, Nay Pyi Taw, to consider the deteriorating synthetic drug situation in the region and negotiate a new strategy to address the diversion and trafficking of precursor chemicals used in production.

"We are very pleased these discussions are underway", remarked Myanmar Vice Minister of Home Affairs Major General Aung Thu. He continued, "we put ourselves forward to co-host at the last negotiations on the Mekong Memorandum of Understanding (MOU) on Drug Control, and we reminded the region that precursors are required for synthetic drug production to continue to go up. While we are a significant source of illicit drugs, we are not a source of the chemicals."

Methamphetamine production and trafficking in the region has reached alarming levels in recent years, with seizures to-date in 2018 already exceeding records set in 2017. Supply from the Golden Triangle vastly exceeds market demand in the surrounding Mekong region and Southeast Asia, and it is a primary source of supply for Australia, Japan, Korea and New Zealand.

The oversupply of methamphetamine has led to declining street prices across the region, with yaba tablets now available for $1-$5 USD down from $5 -$15 USD in 2014. A similar decline in the price of crystal methamphetamine has taken place across the region, making both forms of the drug more affordable and accessible.

At the same time, powerful synthetic opioids like fentanyl are being produced, diverted and trafficked in and from the region to North America and recently Australia, where they are being mixed into the opiate and heroin markets to maximise profits. Significant illicit production of ketamine has also been found in the Golden Triangle, primarily for export to China and Thailand, and it is increasingly being trafficked across the region in mixed shipments with methamphetamine.

"The surge in synthetic drugs, particularly meth, that can be traced back to Shan in Myanmar is like nothing we have ever seen before, and it has required a matching surge in precursor chemicals. At this point the trade is worth billions of dollars to the larger transnational organized crime groups as they have consolidated production into safe havens and started trafficking to increasingly distant markets", warned UNODC Regional Representative Jeremy Douglas.

He added, "The levels of production we're now seeing would simply not be possible without a steady and rising supply of precursor chemicals of one type or another. But at the same time governments are reporting little if any seizure of chemicals and pharmaceuticals that can be used to make synthetics drugs, indicating traffickers source them easily and move them freely across borders. It is important that countries with large industries in the region are here, but they also need to participate in a coordinated regional strategy and programme. Thankfully we've had good engagement leading up to this week, and we expect it to continue as it is in everyone's interests to agree a way forward."

"We've been building towards this for nearly two years now, and the need to coordinate on a strategy and programme with UNODC has become obvious," explained National Narcotics Control Commission of China Deputy Secretary General Min Tianshi. "There is growing momentum to address cross-border precursor diversion and trafficking, and we see the talks here this week as a step forward," he said.

This paper is from: United Nations Office on Drugs and Crime

https://www.unodc.org/unodc/en/frontpage/2018/November/myanmar-hosts-talks-on-asia-pacific-strategy-to-control-drug-making-chemicals.html?ref=fs2&fbclid=IwAR3WRizWfMsHgXbyJc-KDkthbh-fpA83Z3dI_zD8I9kAF9MdxpFHCkRn2ME

NIDA Reports

Cocaine-Induced Increase in an Immune Protein Promotes Addiction Behaviors in Mice

➢ **Editorial Office**

This research found that:

1. Cocaine produces a portion of its rewarding effects by increasing levels of granulocyte-colony stimulating factor (G-CSF) in the brain's reward center.
2. Treatments that prevent G-CSF signaling in the nucleus accumbens (NAc) might reduce motivation to use cocaine.

Dr. Erin Calipari, Dr. Drew Kiraly, and colleagues from the Icahn School of Medicine at Mount Sinai in New York have identified granulocyte-colony stimulating factor (G-CSF) as a potential target for medications to treat cocaine use disorder. Their work suggests that medications which modulate G-CSF levels could reduce motivation to take the stimulant without affecting desire for healthy rewards. Moreover, in their experiments, G-CSF produced no potentially addictive effects of its own.

G-CSF is a protein that is secreted by immune and other cells throughout the body and binds to cell-surface receptors to produce a wide variety of effects. The Mount Sinai researchers administered G-CSF followed by cocaine to a group of mice, and cocaine alone to a second group. They exposed the mice to a battery of behavioral tests and observed that the group pretreated with G-CSF exhibited:

1. More locomotor movement (i.e., moving from one point to another) compared with the group that only received cocaine, indicating greater sensitivity to cocaine's stimulant effect

2. Stronger preference for places where they had received cocaine, indicating more sensitivity to cocaine's rewarding effects
3. Willingness to expend more effort to receive infusions/injections of cocaine, indicating greater motivation for the drug
4. Greater cocaine consumption

Conversely, lowering G-CSF in the NAc reduced animals' motivation to seek out places where they had received cocaine. This suggests that when G-CSF activity in the NAc is blocked, cocaine no longer produces rewarding effects (see Figure).

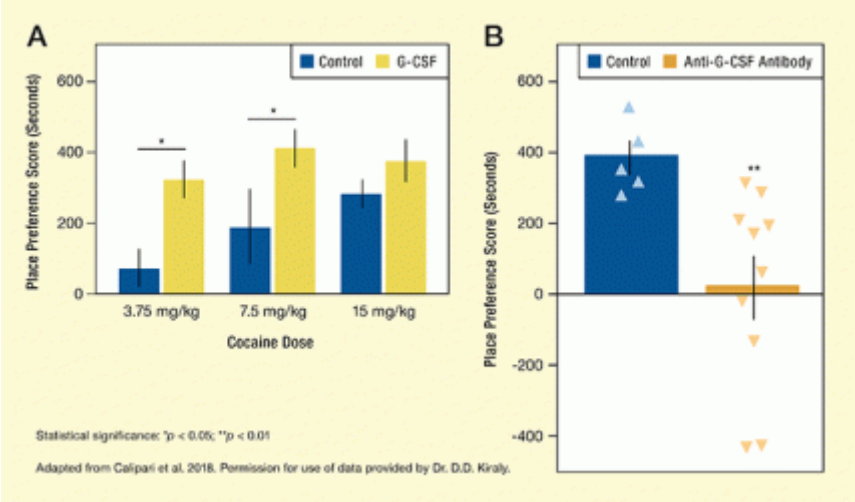

Figure. G-CSF in the Nucleus Accumbens Plays a Central Role in Reward Behaviors Associated With Cocaine

(A) Researchers pretreated mice with granulocyte-colony stimulating factor (G-CSF) or a saline solution (control), then exposed the animals to cocaine in one chamber and to saline in another chamber. Given free access to both chambers, both mouse groups spent more time in the cocaine-associated chamber than the saline-associated chamber, indicating that the drug experience was rewarding. The G-CSF group exhibited greater preference for the cocaine-associated chamber, indicating that the rewarding experience had a stronger effect on their behavior. (Place Preference Score = time spent in the cocaine-associated chamber minus time spent in the saline-associated chamber.) (B) Researchers infused

an antibody that neutralizes G-CSF (anti-G-CSF) or an antibody that does not affect G-CSF (control) into the nucleus accumbens of mice before and while exposing the animals to cocaine or saline solution. The anti-G-CSF mice exhibited no preference for the chamber where they received the drug over the one where they received saline, indicating that G-CSF plays a central role in cocaine's rewarding and behavioral effects. (Triangles indicate individual animals.)

The Mount Sinai study carried forward previous research indicating that stimulant drugs produce some of their addictive effects by disrupting the immune system. Dr. Kiraly explains, "Over the past 10 years, there has been a growing awareness that changes in immune system function play a role in the pathophysiology of many mental illnesses, but this has not been studied as extensively in addiction."

The researchers homed in on G-CSF by administering cocaine to mice and observing the effect on serum levels of 32 immune proteins. The only protein to rise significantly and show some indication of a behavioral effect was G-CSF. Shifting to the brain, the researchers found that:

1. Cocaine increased G-CSF production in the NAc, a key region in the brain's reward system.
2. G-CSF increased neuronal activation in the NAc, including cells that respond to dopamine. This latter activation may account for the protein's reward-enhancing effect, as dopamine is a key neurotransmitter in the brain's reward system.

When the researchers looked at *how* cocaine increases G-CSF production in the NAc, their experiments pointed to an indirect pathway. Their evidence suggests a positive feed-forward system: Cocaine increases activity of neurons in the medial prefrontal cortex, which increases their excitatory

output to the NAc, which prompts NAc neurons to ramp up G-CSF production, which further activates the NAc neurons, ultimately leading to enhanced behavioral effects.

Dr. Kiraly and colleagues propose that regulating G-CSF levels might be an effective treatment strategy for cocaine use disorder. They cite two potential advantages that such a strategy might have over targeting other molecules that have been implicated in cocaine's effects. In experiments, they found that G-CSF reduced animals' motivation for cocaine reward without affecting their motivation for other rewards such as sucrose. In addition, G-CSF showed no signs of potential to cause abuse on its own.

Dr. Kiraly says, "Our study raises the possibility that factors outside of the brain can affect the development of addiction, and, even more excitingly, the possibility that we could treat addiction by altering a factor in the blood." A next step for his team will be to analyze how G-CSF affects mouse behavior in models of drug relapse.

This study was supported by NIH grants DA044308, DA042111, and DA008227.

Source:

Calipari, E.S., Godino, A., Peck, E.G., et al. Granulocyte-colony stimulating factor controls neural and behavioral plasticity in response to cocaine. Nature Communications. *2018;9:9. DOI: 10.1038/s41467-017-01881-x.*

This paper is from: National Institute on Drug Abuse

https://www.drugabuse.gov/news-events/nida-notes/2018/10/cocaine-induced-increase-in-immune-protein-promotes-addiction-behaviors-in-mice

Taiwan Research News

I. The Influences of Sensation Seeking Toward Substance Abuse:

Sample of the Chiayi Prison

Shen-feng, Tai

Department and Graduate Institute of Criminology, National Chung Cheng University

According to the New-age Strategies of Anti-Drug decelerated by the Executive Yuan, the person-centered idea leads to the most important question: Who is the high-risk person of drug abuse? However, according to the prevalence rate of drug abuse, abusers are limited in a small population, so the psychologists are interested in the relationship between personality and drug abuse.

The present study is fund support by the Drug Abuse Prevention Center, Chiayi County, samples were 185 drug offenders from the Chiayi prison, and we used the sensation seeking scale adapted from Zuckerman et al. (1964), and the self-report scale of substance abuse to gather data.

Results showed that we conducted a 5-factors structure of sensation seeking, and we named them as “emphasize of quick effect”, ”trait of step by step”, ”novel trying tendency”, ” the patience toward bored”, and ”risk seeking ”. According to the result of ANOVA, we found that “emphasize of quick effect” and” novel trying tendency” had significantly promoted effect of samples’ self-report of alcohol and areca abuse. “risk seeking” had significantly promoted effect of samples’ self-report of areca abuse and promoted alcohol abuse in the earlier age. However, “trait of step by step” significantly inhibited samples’ self-report of smoking and areca abuse, it can also delay the beginning age of smoking.

II. Assessing the Use of Medical Cannabis: Referring Drug Laws in German

Yueh-Chung, Ma

Department and Graduate Institute of Criminology, National Chung Cheng University

In the past two years, the international call for the decriminalization of cannabis has become more and more high. With the development of globalization, the policy of legalization of marijuana has also affected Taiwan's future drug policy. We can see that in the summer of 2016, the public policy network participation platform proposal "Secondary drug cannabis was reduced to tertiary drug and open control medical research", while marijuana applicators also have a growing Thai trend. At the level of marijuana legalization, it should be divided into "entertainment" marijuana; or "medical" marijuana, the former must return to the drug hazard prevention regulations, the criteria for drug classification: "addiction "Abuse" and "social harm"; the latter must consider whether marijuana can be achieved for medical purposes, to restore health and reduce patient suffering. On January 19, 2017, the German government amended Article 3, item 2 of the Anesthetic Law: "The status of the exception may allow academic or other public interest to permit the cultivation of cannabis.

In severe conditions such as chronic pain or multiple sclerosis, cannabis as a medicine can help alleviate symptoms. On the initiative of the Drug Commissioners, a bill has been put in place so that seriously ill patients can be prescribed cannabis medicines and the costs are borne by the statutory health insurance funds. On 19 January 2017, the Bundestag passed the law amending narcotics and other regulations. It comes into force on March 10, 2017.

Cannabis medicines can be prescribed to patients with serious illnesses if, in the reasonable opinion of the treating physician, a noticeable positive effect on the course of the disease or on serious symptoms is

to be expected. This may be the case, for example, in pain therapy, in certain chronic diseases or in severe loss of appetite and nausea. The prescription can be made by any general practitioner. Changes in the Fifth Book of the Social Code (SGB V) extend the reimbursability of cannabis-based medicinal products in statutory health insurance, which was previously limited to authorize finished medicinal products in the respective approved area of application. In addition, a refund option of cannabis in the form of dried flowers for seriously ill people is created, whose suffering cannot be mitigated or treated by other means. The period of approval by the health insurance fund should not exceed three days for patients receiving specialized outpatient palliative care. This ensures fast and unbureaucratic help. To gain further insight into the effects of cannabis, a companion survey will be conducted. For this purpose, physicians provide data that are already available - for example for diagnosis, therapy, dose and side effects - anonymously to the Federal Institute for Drugs and Medical Devices (BfArM). The survey will also gather information on the long-term use of cannabis for medical purposes. In the future, a state-controlled cultivation of cannabis for medical purposes should also be possible in Germany. The tasks associated with this will be transferred to the Federal Institute for Drugs and Medical Devices (BfArM) (state-run "cannabis agency") in compliance with the internationally binding provisions of the United Nations Unitary Convention of 1961 on narcotic drugs. Until a government-controlled cultivation in Germany can be implemented by the cannabis agency, the supply of medicinal cannabis should be covered by imports.

This paper believes that cannabis should not be open to "entertainment supplies" at this stage. However, it seems that we can consider whether to open cannabis for medical purposes. The difficulties encountered in the course of German revision can also serve as a reference for future legislation in Taiwan.

Latest Conferences Information

➢ **Editorial Office**

Conference	Host Organization	Date	Location
The Seminar of Scientific Drug Treatment in Taiwan	Taiwan Society for Substance Abuse Research & Crime Research Center, National Chung Cheng University	December 07 2018	Chiayi, Taiwan Contact: http://deptcrc.ccu.edu.tw/index.php/news/
African Union & National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA)	International Society of Substance Use Professionals (ISSUP)	December 10-14 2018	Nairobi, Kenya Contact: https://www.issup.net/issup-events/nairobi-2018
SSWR 23rd Annual Conference - Ending Gender Based, Family and Community Violence	Society for Social Work and Research (SSWR)	January 16-20 2019	San Francisco, CA Contact: http://secure.sswr.org/2019-conference-home/
Substance Abuse and Mental Health Services Administration Prevention Day	Community Anti-Drug Coalitions of America (CADCA)	February 04-07 2019	National Harbor, Maryland, USA Contact: https://www.cadca.org/news/forum-registration-now-open
AAAS Annual Meeting – Science Transcending Boundaries	American Association for the Advancement of Science (AAAS)	February 14-17 2019	Washington, DC, USA Contact: https://www.aaas.org/programs/annual-meeting
SRNT 25th Annual Meeting	Society for Research on Nicotine and Tobacco (SRNT)	February 20-23 2019	San Francisco, CA, USA Contact: https://www.srnt.org/page/2019_meeting?