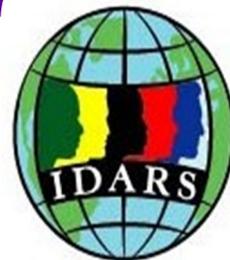




# IDARS Newsletter

International Drug Abuse Research Society News



Volume 1 Number 14, Fall 2017

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## President's Message

We recently concluded the 6th IDARS biennial meeting in Dubrovnik, Croatia which was remarkably successful. The success was a mix of terrific science and collegiality with presentations that were outstanding, using new tools and technology in drug addiction research. The comments from members during the final panel summary and discussion indicated high level of science and adds to the contribution of IDARS members to new knowledge and innovation in addiction research (See members news). Thus IDARS members have established a special niche with significant scientific productivity and leadership that the field needs in tackling the persistent public health burden of addiction including the current see the editorial comment in this issue.

Looking back and looking forward, this IDARS meeting provided another unique forum with presentations of recent findings using translation tools in drug abuse research. We began the meeting with the award ceremony and the travel awardees pictured below were Dr. Ana Canseco, received George Koob award, Jamie Peters' received the Michael Kuhar award and Bruk Getachew was the recipient of Eliot Gardner award. The meeting continued with topical symposium that ranged from the Neurobiology of opioid addiction to Emerging targets for medication development in substance use disorders, with the parallel themes of integrating across scientific disciplines (molecular biology to behavioral neuroscience) across different drugs across different cultures. We welcome feedback about the conference to continue improvements for the next meeting.

We are also continuing our established tradition of showcasing IDARS with an exhibition booth at the society of neuroscience (SFN) meeting, and having an IDARS social event with Guest speakers of high scientific expertise and accomplishment. At the IDARS social event during the 2016 SFN meeting in San Diego,



[Dr. George F Koob](#)

the key note speaker was Dr. Howard Becker whose presentation was on "Stress and alcohol interactions: Mechanisms and therapeutic potential therapeutics. For the IDARS social event in Washington DC, the keynote speaker will be Dr. David Goldman and his presentation is titled, "Is the heritability of addictions explained by thousands of genes?"

I am proud of the dedication of IDARS members and, thank Syed Ali for his tireless contribution in running IDARS and Michael Kuhar's promotion of IDARS journal of drug and alcohol research (JDAR). Together, as part of IDARS, we are moving drug abuse and addiction research forward in advancing evidence-based improvement in public health. I am looking forward to seeing you all in Washington DC for the 2017 SFN meeting and at the IDARS social event.

George Koob  
IDARS President

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## AWARD CEREMONY AT IDARS MEETING IN DUBROVNIK CROATIA





# *IDARS Meeting Report*

*International Drug Abuse Research Society News*



6th Biannual Meeting in Dubrovnik Croatia  
September 4-8, 2017

## Registration and setting up – photo gallery





# *IDARS Meeting Report*

*International Drug Abuse Research Society News*



6th Biannual Meeting in Dubrovnik Croatia  
September 4-8, 2017

## Photo gallery from Symposia and Panel summary





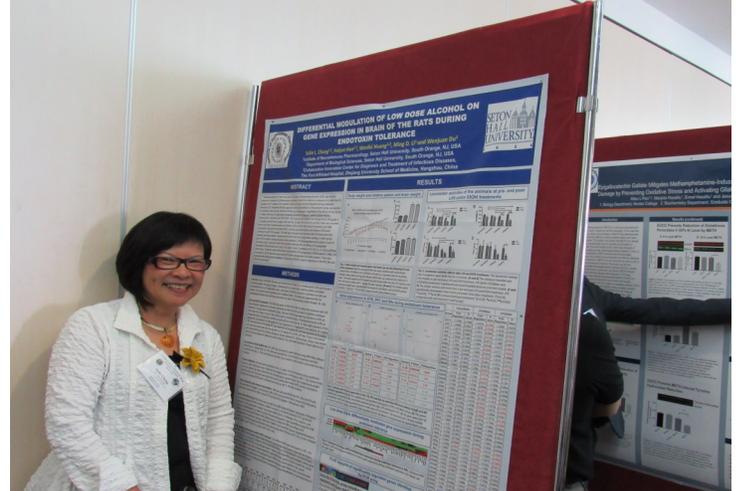
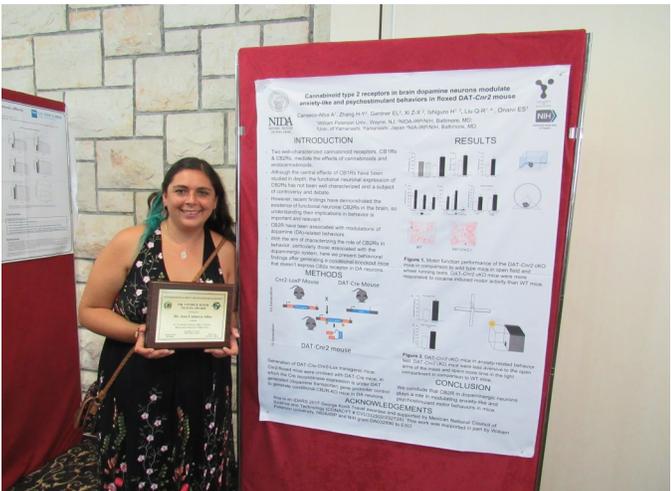
# IDARS Meeting Report

## International Drug Abuse Research Society News



6th Biannual Meeting in Dubrovnik Croatia  
September 4-8, 2017

### Photo gallery from Symposia and Poster Sessions





# IDARS Meeting Report

*International Drug Abuse Research Society News*

6th Biannual Meeting in Dubrovnik Croatia

September 4-8, 2017



## Photo gallery from City tour of Dubrovnik



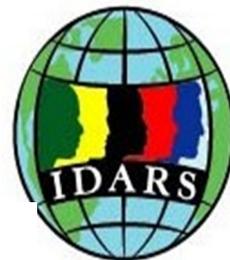


# IDARS Meeting Report

*International Drug Abuse Research Society News*

6th Biannual Meeting in Dubrovnik Croatia

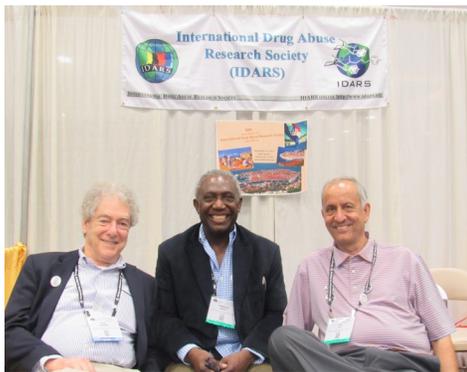
September 4-8, 2017



## Photo gallery from lunch and farewell party

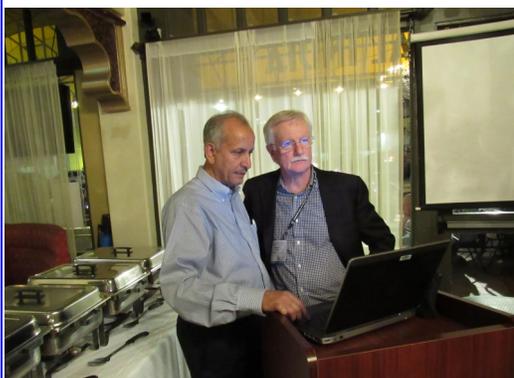


IDARS Booth at the 2016 SFN Meeting in San Diego



In continuation of our established tradition of showcasing IDARS with an exhibition booth at the society of Neuroscience meeting (SFN), the selected pictures above are IDARS members introducing IDARS to SFN attendees around the IDARS booth at the 2016 SFN meeting in San Diego.

**IDARS SPECIAL MEMBERS REPORT**  
**IDARS SOCIAL EVENT AT THE 2016 SFN WITH GUEST SPEAKER**



We have established a tradition to showcase IDARS with an exhibition booth at the society for neuroscience to attract additional members to IDARS for a truly international model of drug abuse research society. Selected pictures above are IDARS members and their guests during the 2016 SFN meeting social event in San Diego. The pictures are taken during the Guest lecture by Dr. Howard Becker followed by dinner.

**George F. Koob**  
President  
NIAAA-NIH, USA

**Michael Kuhar**  
Past-President  
Atlanta, GA, USA

**Syed F. Ali**  
Executive Officer  
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**Marcus Rattray**  
London, UK

**Carlos Jimenez-Rivera**  
San Juan, Puerto Rico

**Susan Schenk**  
Wellington,  
New Zealand

**Kiyofumi Yamada**  
Nagoya, Japan

**IDARS DINNER WITH GUEST SPEAKER AT SFN IN SAN DIEGO IN 2016.**



**Members of IDARS and their guests at the IDARS social event as describe earlier during the society for neuroscience meeting in San Diego in 2016.**

## Statin therapy and alcohol by Anna Bukiya



### Statin therapy exacerbates alcohol-induced constriction of cerebral arteries via modulation of ethanol-induced BK channel inhibition in vascular smooth muscle

Neurons rely heavily on uninterrupted supply of oxygen, the latter is provided by cerebral blood circulation. Thus, it is not surprising that cerebrovascular component has been increasingly recognized as an important contributor into disorders of central nervous system. Alcohol – the most widely used psychoactive drug – has profound effect on cerebral circulation. In particular, high alcohol levels constrict cerebral arteries (decrease cerebral artery diameter) in several species, including humans. Our group historically focuses on the role of dietary cholesterol in modulating alcohol effect on cerebral arteries. Using rats on high-cholesterol diet (2% cholesterol), we recently showed that cholesterol accumulation in cerebral artery protected against alcohol-induced constriction. Our most recent findings, however, focus on the consequences of statin administration, as statins represent most commonly prescribed cholesterol-lowering therapy. We showed that daily statin administration to rats on high-cholesterol diet removed excessive cholesterol from cerebral artery smooth muscle and exacerbated alcohol-induced constriction when compared to untreated hypercholesterolemia. Current efforts in the lab are aimed at pinpointing the exact molecular mechanism that underlies statin's ability to exacerbate cerebrovascular effect of a widely consumed drug of abuse. However, in light of existing findings, it may be advisable to withstand excessive alcohol drinking after adjusting cholesterol levels with statins.

Additional reading: Simakova MN, Bisen S, Dopico AM, Bukiya AN. Statin therapy exacerbates alcohol-induced constriction of cerebral arteries via modulation of ethanol-induced BK channel inhibition in vascular smooth muscle. *Biochem Pharmacol.* 2017 Sep 1. pii: S0006-2952(17)30549-X. doi: 10.1016/j.bcp.2017.08.022. [Epub ahead of print]

## rTMS and the addicted brain by Marco Diana



Substance use disorders (SUDs) are one of the leading causes of mortality and morbidity worldwide. In spite of significant advances in understanding the neural underpinnings of SUDs, therapeutic options are limited. However, recent studies have highlighted the potential of repetitive Transcranial Magnetic Stimulation (rTMS) which represents an innovative, safe and cost-effective treatment for some SUDs. The fundamentals of rTMS and its putative mechanisms of action via neurocircuits related to addiction are in line with the principles of Hebbian plasticity. Connectivity changes as well as state-dependency of rTMS effects are additional factors in the beneficial effects of TMS in addiction. Optogenetic observations and visual imaging studies in animals support recent human pilot studies describing rTMS effect on drug craving and intake, pinpointing new advances and highlighting conceptual gaps to be filled by future controlled studies.

Further Reading Rehabilitating the addicted brain with transcranial magnetic stimulation by, Diana M, Raij T, Melis M, Nummenmaa A, Leggio L and Bonci, A. *Nature Reviews Neuroscience*, 2017

## Heroin use and social function by M. Foster Olive



### Does heroin use negatively influence social functioning

Recent efforts by researchers Seven Tomek and Foster Olive at Arizona State University have attempted to develop a novel preclinical model of impaired social function in opiate addiction using a “rescuing” paradigm. Rats are highly social creatures, and under normal conditions when a “free” rat is placed in the vicinity of a rat trapped in a plastic restrainer (see picture), it will release or “rescue” the trapped rat, particularly when the trapped and free rats are normally housed together in their home cage. Tomek and Olive observed baseline rescuing behavior over a two week period, after which rats were randomly chosen to either self-administer heroin intravenously or, as a control, orally consume sucrose pellets. Following two weeks of heroin or sucrose self-administration, rats were given the opportunity to choose between continuing to self-administer heroin or sucrose, and/or rescue their cagemate from the restrainer. It was observed that sucrose consuming rats consistently continued to rescue their cagemate, whereas heroin self-administering rats chose to self-administer heroin and leave their cagemate in the restrainer. These findings suggest a loss of motivation for social interaction following heroin use, which is consistent with specific diagnostic criterion for Opiate Use Disorder. Tomek and colleagues are currently utilizing chemogenetic techniques to activate brain regions associated with prosociality and heroin seeking, such as the insular cortex, in an attempt to restore prosocial functioning following chronic opiate use. Since social networks are key components of rehabilitation and recovery in addictive disorders, this research may lead to more effective approaches for treating opiate addiction, which are clearly needed in the context of the current opioid epidemic.



## Editorial Corner: Welcome to our Newsletter\*

Emmanuel Onaivi, Ph.D., Newsletter Editor of IDARS is delighted to publish our electronic newsletter, with information about the society, seeking ideas about our journal, and opportunities for our members. The intention of this newsletter is not only to communicate to you, but also, for you to be able to respond with suggestions for how IDARS may increase its role in your research. Please send us feedback, and get involved! As editor of this newsletter, I invite you to contact me with ideas for articles in future editions, or to volunteer to write an article yourself.

## Public health emergency over the opioid epidemic

We are facing an opioid epidemic fueled by the use of prescription opioid drugs like morphine, OxyContin, fentanyl, codeine that causes addiction that is now widely recognized as a disease. Some have described this epidemic as an opioid Tsunami and the United States is the epicenter of the opioid crisis, with overdose deaths, killing almost 100 people every day. Excerpts from the HBO Documentary, Warning: This Drug May Kill You. Turning the tide: As addiction is now recognized as a medical condition and not a moral failure or a criminal problem, research may soon usher in new treatments not only for addiction but also alternative pain relief devoid of the opioid addiction liability. This will lead prevention of the abuse and misuse of opioids.

**IDARS journal is the Journal of Drug and Alcohol Research (JDAR ). JDAR website: [http://](http://www.ashdin.com/journals/jdar/editors.aspx)**

**[www.ashdin.com/journals/jdar/editors.aspx](http://www.ashdin.com/journals/jdar/editors.aspx)**

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### IDARS-AWARDEES

- *Dr. Ana Canseco-Alba, Mexico-USA*
- *Dr. Jamie Peters  
USA*
- *Dr. Bruk Getachew  
USA*

### GUEST SPEAKER

- *Dr. Howard Becker  
USA*

