



# IDARS NEWS

## IDARS PRESIDENT'S COLUMN

**George F. Koob, Ph.D.**



It is with deep gratitude and enthusiasm that I take over as the current President of the International Drug Abuse Research Society (IDARS). I was fortunate to come in following the successful creation of IDARS by Mike Kuhar and Syed Ali and together with the members, have laid a strong foundation for the society. Now is the time to build on this solid foundation to promote our organization, and to extend the IDARS model, which has an international appeal to the whole world. With a strong foundation for growing and pursuing our scientific and educational missions, I believe we have an opportunity to develop a vibrant and exciting international mechanism not only for scientific interactions in the domain of addiction between countries but also ultimately as resource for informing public policy in our understanding of the global problems of drug addiction..

As IDARS is now set up on a solid footing, we are preparing to extend the IDARS model to other countries by sponsoring an International Symposium on drugs of abuse in Rio de Janeiro in 2010. This is an exciting period in the study of the neurobiology of addiction where brain circuitry and molecular mechanisms are providing hope for understanding not only the vulnerability to addiction but also providing new targets for the treatment of drug addiction.

Our social event in Chicago during the Society for Neuroscience meeting in 2009, was a great success and included a dinner party, where Dr. Charles ("Bob") Schuster, former Director of NIDA and currently Distinguished Professor Emeritus of Psychiatry and Behavioral Neuroscience at Wayne State University's School of Medicine reviewed the history of drug-self administration (see summary in page three of this newsletter).

As we prepare for our IDARS sponsored symposium in Rio de Janeiro in Brazil in 2010 and our third IDARS meeting in Istanbul, Turkey in 2011, these planned events further demonstrates the international appeal and membership of IDARS to achieving our scientific and education missions. Please feel free to contact me if you have any thoughts or programs for helping IDARS become the International society for the promotion of drug abuse research.

With Every Good Wish  
George F. Koob, Ph.D.  
President, IDARS



**Dr. George F. Koob**

### Newsletter of the International Drug Abuse Research

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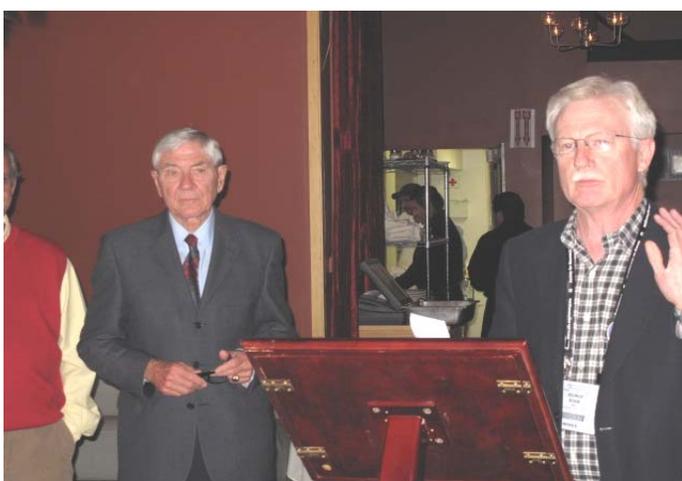
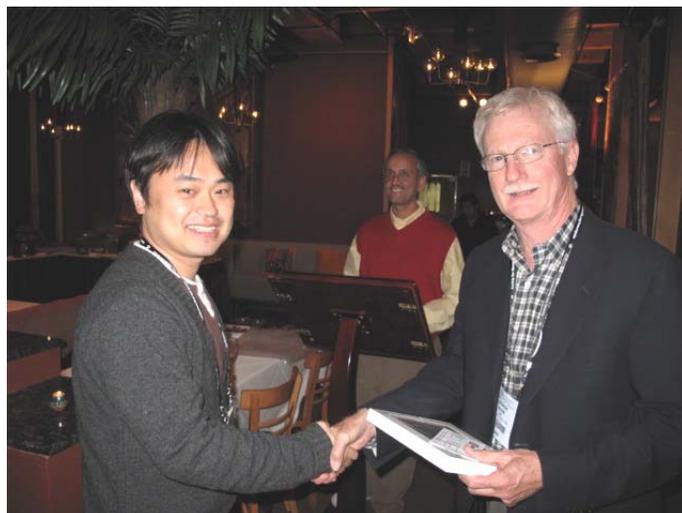
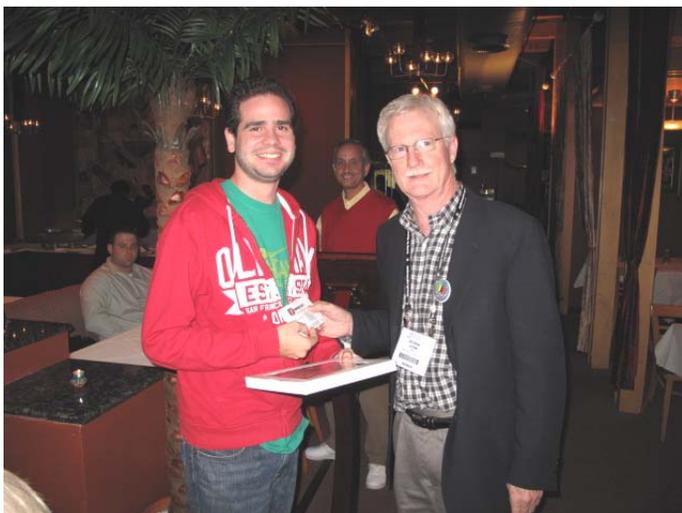
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**IDARS President  
George F. Koob**

**Past-President  
Michael Kuhar**

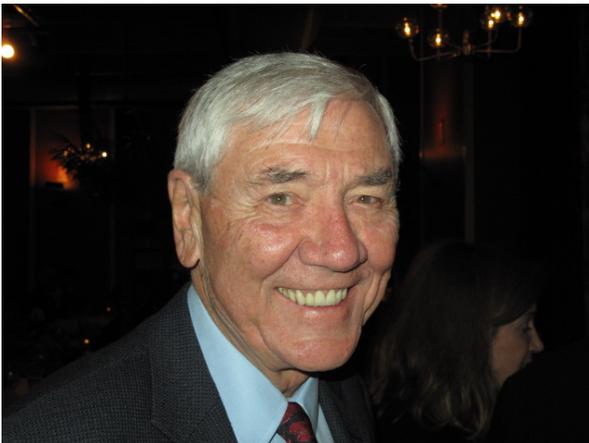
**Executive Officer  
Syed F. Ali**

## IDARS AWARDEES TO NIDA MINI-SYMPOSIUM AT SFN IN 2009.



During IDARS socials at SFN meeting in 2009, Dr. Koob presented the IDARS-NIDA awards, to: top left, Alvaro Llorente Berzal from Spain, top right is Jaesuk Yun from Japan. Middle left, Alicia Brusco, from Argentina, and middle right is Elias Blanco, from Santiago, Chile. Bottom left panel, George Koob introduces the Guest Speaker, Dr. Charles Schuster and bottom right Dr. Schuster's presentation. (See page 3 for summary).

## Historical Review of Drug—Self Administration



**Dr. Charles R. Schuster**

Neurosciences at Wayne State University's School of Medicine. Dr. Schuster has been a pioneer in the field of behavioral pharmacology. Dr. Schuster was one of the early workers in the development and validation of drug self-administration procedures as an animal model of drug dependence. In his historical review of the drug-self administration model, Dr. Schuster traced the origins of his interest in this area of research to his early exposure to people addicted to heroin when he was a young jazz musician.

In his early studies with Travis Thompson they found that precipitated or time induced withdrawal in physically dependent monkeys resulted in disruption of shock avoidance and food reinforced behavior and an increase in responding for morphine. Further, they demonstrated that pre-treatment with morphine decreased rates of responding for morphine. Thus, animal drug self-administration procedures could be used to screen for potential medications for the treatment of opioid dependence. Subsequently with Steve Goldberg he demonstrated that stimuli associated with antagonist induced withdrawal could acquire the ability to elicit some of the withdrawal signs in monkeys and an increase in rate of responding for morphine.

The finding that animals would self-administer the same drugs that humans abuse and avoid those that humans find aversive allows this technique to be used to screen new drugs for their abuse potential. Such data is critical in the FDA's decision to recommend that a new medication be placed in the Controlled Substances Act. Thus in addition to being a useful procedure for screening for potential medications to treat drug dependence they can also be useful to prevent new medications with abuse potential from being marketed without adequate controls. Finally, and of major importance, is that the drug self-administration procedure can be used to study the brain circuitry involved in the reinforcing effects of drugs and the transition to addiction. There is no question that this area of research has been of great importance to our understanding of not only drugs as reinforcers but the brain pathways involved in mediating the reinforcing effects of food, water, sex, etc. Thus, these procedures have had a far-reaching impact on the field of neuroscience.

Dr. Schuster continues his busy life style traveling and working with his wife and colleague Dr. Chris-Ellyn Johanson.

One of the activities during IDARS social event at the Society For Neuroscience (SFN)

meeting in Chicago in 2009 included a dinner party where Dr. Charles Schuster gave a historical review on the origins and early work using drug self-administration procedures in animals. Dr. Schuster is a Distinguished Professor Emeritus of Psychiatry and Behavioral

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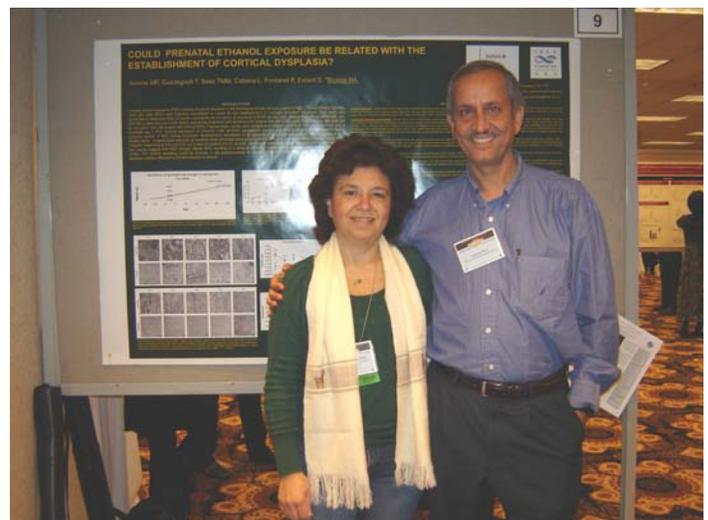
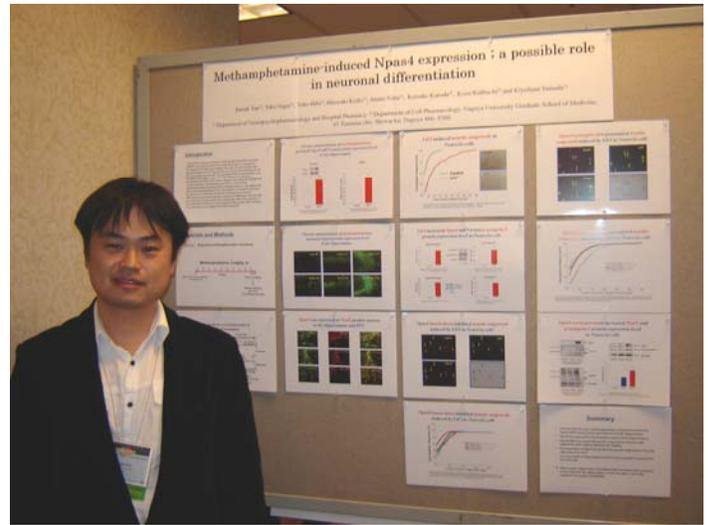
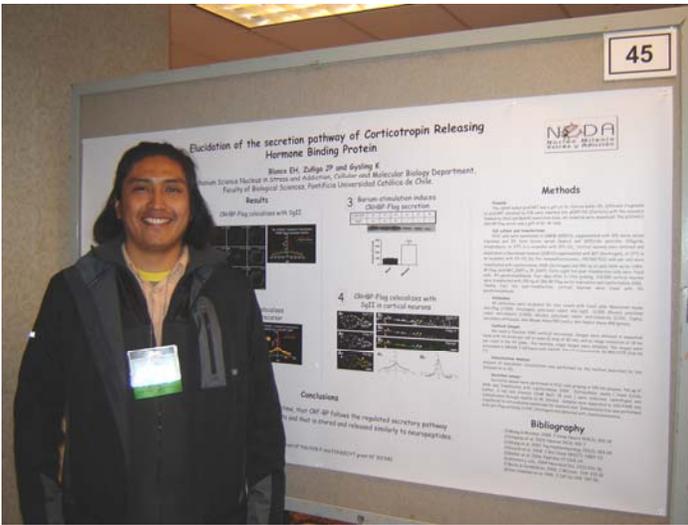
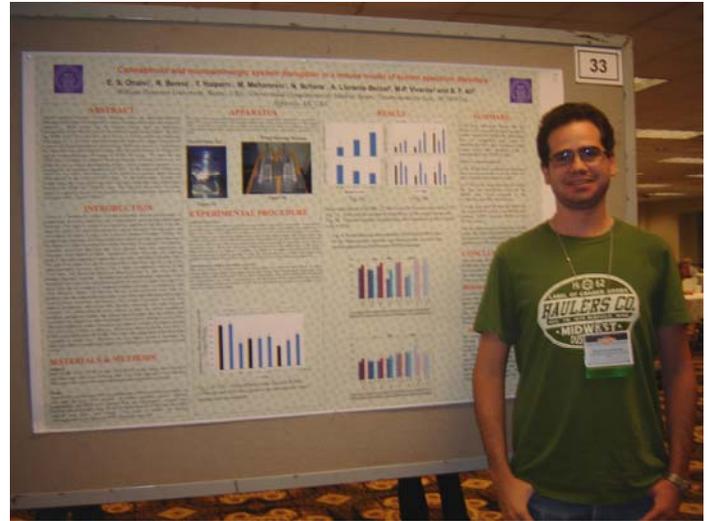
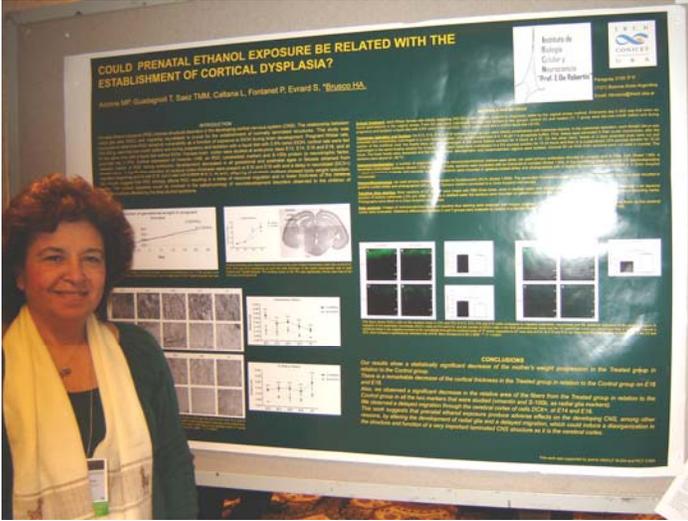
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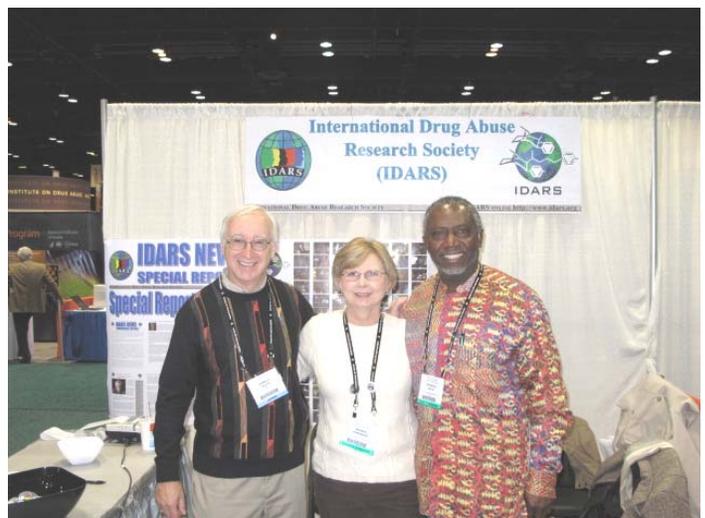
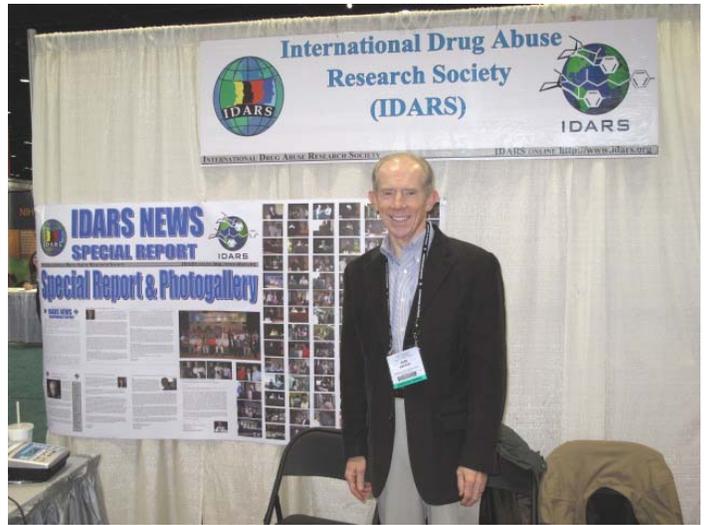
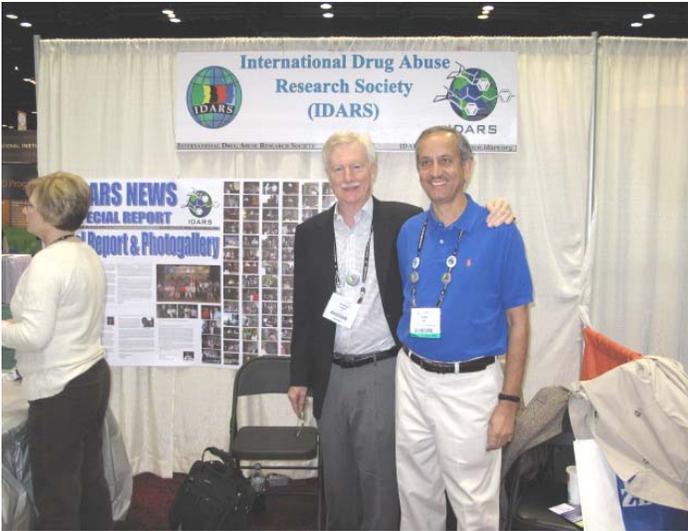
**WWW.IDARS.org**

# IDARS AWARDEES PRESENTATION AT SFN NIDA-MINISYMPOSIUM



**IDARS Awardees presentation at NIDA-Mini-symposium in Chicago SFN meeting. Top left panel is Alicia Brusco and top right is Alvaro Llorente Berzal. Middle left is Elias Blanco and middle right is Jaesuk Yun. Bottom left panel are Alicia and Alvaro and, bottom right are Alicia and Syed.**

**IDARS Exhibition at the Society for Neuroscience meeting in Chicago 2009**



**IDARS members took turns to man the IDARS booth and to introduce IDARS to SFN members. Top left panel is IDARS President, George Koob and Executive Director, Syed Ali. Others are Bonnie, Patricia, & Glen Hansen in middle panel and bottom left panel are Susan & Syed, bottom right are Jerry, Bonnie and Emmanuel.**

**IDARS dinner party at the Society for Neuroscience meeting in Chicago 2009**



**Members of IDARS and guests at the dinner party during the Society for Neuroscience meeting in Chicago 2009.**

**IDARS dinner party at the Society for Neuroscience meeting in Chicago 2009**



**Members of IDARS and guests at the dinner party during the Society for Neuroscience meeting in Chicago 2009.**

## Editorial Corner: *Welcome to our Newsletter\**

Emmanuel Onaivi, Ph.D., Newsletter Editor 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.

## *Understanding the global problem of drug addiction is a challenge for IDARS Scientists.*

Drug addiction is a chronically relapsing disorder that has been characterized by the compulsive use of addictive substances despite adverse consequences to the individual and society. Addiction to drugs and alcohol is increasingly becoming a worldwide trend in lifestyle that is prevalent in rich and poor countries alike. Addiction to alcohol, drugs and cigarette smoking is now regarded as a major public health problem. Other forms of addiction including computer games, gambling, sex and food also have severe consequences on the health of the individual and to society. The commonly abused drugs have profound action in the nervous system, particularly in the brain. Some of these substances such as opium, marijuana, cocaine, nicotine, caffeine, mescaline, and psilocybin are obtained from natural sources while others are synthetic or designer drugs. Furthermore some of these substances like alcohol and nicotine are legal while some others that are legally available by prescription have addictive potential in vulnerable individuals. A number of addictive substances are illegal in most countries and this fuel the illegal drug trafficking and business that are often associated with criminal activities. The initiation of the use of these substances induces euphoria, reward and a state of well-being that can lead to physical and psychological dependences. Withdrawal syndrome occurs when the individual attempts to stop the use of addictive substances and this leads to the cycle of dependency. The mechanism(s) associated with the cycle of addiction include neuronal adaptation with tolerance or sensitization involved in the action of addictive substances. A number of factors have also been associated with addiction, including the availability, cost, method of administration, environmental factors such as behaviors acceptable in a community, peer influences and genetic and epigenetic factors. Over the years a number of therapeutic approaches for drug and alcohol addiction have been utilized. However, relapse which is the resumption of drug taking following a period of drug abstinence, is considered the main hurdle in treating drug addiction. Unfortunately pharmacological treatment of drug and alcohol dependency has largely been disappointing and new therapeutic targets and hypotheses are needed. Drug addiction is also influenced by the interaction of genes, epigenetics and the environment. Twin studies consistently show that there is a heritable component to drug abuse and addiction. Now using modern genomic techniques, we are able to examine genetic variants, or single nucleotide polymorphisms that contribute to addiction vulnerability. So a lot more research needs to be done to better understand the neurobiological basis of drug addiction and hence a continuous challenge for IDARS scientists. IDARS is therefore engaged in a vibrant and exciting international mechanism, not only for scientific interactions among scientists in the domain of addiction research between countries but also as a resource for informing public policy across nations. This is an exciting period in the study of the neurobiology of addiction where brain circuitry and molecular mechanisms are providing hope for understanding not only the vulnerability to addiction but also providing new targets for the treatment of various types of substance abuse/dependence.

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### ***IDARS-NIDA AWARDEES***

- *Alvaro Llorente Berzal*  
*Madrid, Spain*
- *Alicia Brusco*  
*Buenos Aires*  
*Argentina*
- *Elias Blanco*  
*Santiago, Chile*
- *Jaesuk Yun*  
*Nagoya, Japan*

**IDARS is planning to sponsor an International symposium on drugs of abuse to be held in Rio de Janeiro in Brazil 2010.**

In association with the Brazilian Society for Alcohol and Drugs, IDARS is currently planning to sponsor the symposium on Drugs of abuse, which will be held in Rio de Janeiro, in Brazil from September 3-5, 2010. More information will be made available later at our website [www.idars.org](http://www.idars.org)

**3<sup>rd</sup> INTERNATIONAL DRUG ABUSE RESEARCH SOCIETY and INTERNATIONAL SOCIETY FOR NEUROCHEMISTRY MEETING**

We also plan to organize the 3rd IDARS meeting which will be held in collaboration with ISN/ESN as a satellite meeting in September 2011. More information will be made available later at our website [www.idars.org](http://www.idars.org)