



NEWSLINE

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CPDD President's Column

KATHRYN A. CUNNINGHAM, PH.D.
PRESIDENT

I thank you for honoring me with the office of president of the College on Problems of Drug Dependence (CPDD) and for allowing me to represent you. First and foremost, I am a proud member of this unique membership society. CPDD as an organization is characterized by its excellence and its long and continual contributions to understanding addiction. We seek evidence-based answers to questions in substance abuse and dependence across basic, translational, and clinical lines. We create new knowledge and share this knowledge in scientific forums and publications. We

work hard to bring young scientists into the fold and develop their capabilities. We are a community in the truest sense, and all of us are its vitality and soul.

But, we confront the brutal facts of a new reality and must move forward in the face of great uncertainty. Shrinking public resources and erosion of support for science threaten the future progress of our field. Our complacency with the doubling of the NIH budget is no longer a tenable position; the *status quo* has changed dramatically. In the words of Robert F. Quinn, it is time to embrace

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CPDD Executive Committee Meeting

The Fall CPDD Executive Committee meeting was held near Washington DC at the National Institute on Drug Abuse (NIDA) Headquarters and included Kathryn Cunningham (CPDD President), Warren Bickel (Past-President), Tom Kosten (President-Elect), Dorothy Hatsukami (Treasurer), Marty Adler (Executive Secretary), and Bill Dewey (Public Policy Officer). We covered several critical challenges for CPDD before meeting with Nora Volkow, Director of NIDA, to review the shared challenges facing NIDA and CPDD. The following day, we all went to Capitol Hill to visit our Congressional representatives, discuss the NIH budget and to press for the Senate version of the proposed 2006 NIH budget. We also indicated our support for a simple re-authorization of the NIH Institutes rather than the more complex

reorganization proposed by the House Commerce Committee under Representative Joe Barton of Texas. We were generally reassured that this House proposal for NIH reorganization is unlikely to move anywhere during this session of Congress, and that the November elections may further consolidate the typical bipartisan support for NIH, its budget, and its current organization with separately funded Institutes. This was all excellent news for NIDA and our membership.

Within the CPDD, we reviewed our budget and concluded that we need more revenue to face the rising costs of our annual meeting and the overhead of maintaining our organization. Our overhead is the lowest of any other comparable organization, so no savings were to be

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deep change in order to move forward; it is a matter of life, or slow death.¹ From meeting the challenges of the NIH Roadmap, to maintaining research support for our science, to sustaining the training of our successors, and to helping our world recognize the importance of addiction research, we must make a commitment to new ways of thinking and behaving. In this light, a first step is for the CPDD to function as a productive community in which members share a common purpose and each works for the benefit of all. There are many ways to bring forth a productive community in which "ordinary people can accomplish extraordinary results"¹ and I am asking you to take part in an enhanced initiative to move forward our public advocacy efforts as one step in accomplishing these goals.

The CPDD is fortunate to have a solid public policy effort, led by our Public Policy Officer, Dr. William Dewey, who works with our Washington representatives, Capitol Associates, and the Friends of NIDA (FON), to advocate for enhanced awareness of addiction and continued NIH resources for addiction research. Dr. Dewey in conjunction with Ed Long and Roxanne Burnham at Capitol Associates are ordinary people achieving extraordinary results. I extend my gratitude to Bill for his dedication to the public policy mission and I offer that we can all extend the value of his contributions.

My vision for the future is to advance our advocacy efforts and develop new policy initiatives of our college. To this end, we are crafting the CPDD Public Advocacy Taskforce (PAT) under the able leadership of Dr. Martin Iguchi. The **objectives** are to (1) create an organic, flexible, and responsive consortium focused on public advocacy; (2) recruit and maintain taskforce participants from CPDD members in all regions of country; (3) work closely with the CPDD Public Policy Officer, Capitol Associates and

Friends of NIDA (FON) to identify and prioritize advocacy initiatives; (4) make visits to the Capitol Hill and regional offices of congressional leaders, (5) utilize our online advocacy tool (CapWiz[®]) to get the "word out"; and (6) author brief articles for submission to CPDD's *Newsline* newsletter, to our *News and Views* pages in the CPDD-sponsored journal *Drug and Alcohol Dependence*, and to other journals and national newspapers. In the next few months, Dr. Iguchi will be soliciting input and participation in these efforts, and we welcome each of you to play a role in this community effort.

Our immediate Past-President, Warren Bickel, made great strides in the efforts of the College to increase openness, promote inclusion and create a productive community. I vow to continue that course of action and thank Warren for his leadership and service to the College. He has led the CPDD well and I, for one, am learning significantly from his insight and perspective.

Lastly, I want to communicate the College's concern for all who have dealt with the devastation wrought by hurricanes this summer. Our good will goes out to you, and if there are areas of concern that can be addressed by the members of the College, we stand ready to assist your rebuilding efforts.

Good leaders must first become good servants. I commit to playing a role in moving our living and vital organization into the future. As your president, I am at your service. Please feel free to contact me (kcunning@utmb.edu) with your thoughts, suggestions, and hopes for our organization and the future of our science.

¹ Robert F. Quinn, *Change the World - How Ordinary People Can Accomplish Extraordinary Results*. San Francisco, CA: Jossey-Bass Publishers, 2000.

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Executive Committee Meeting Report – *continued from page 1*

gained there. To increase revenue we will implement several proposals including raising the registration fee for the annual meeting, modestly raising the annual dues, and restructuring the Fellows membership category to allow its expansion. This expansion will be accompanied by a change in the dues structure so that Fellows in CPDD can contribute their time and services to the College, while additionally making greater financial contributions to its ongoing operation. This may be accomplished via a one-time contribution that provides Fellows with tenure and a lifetime membership in CPDD.

Nominations for President and the BOD, as well as volunteering for Committee memberships, closed on November 1. We have several outstanding candidates for the various vacancies, and the ballots will be mailed soon. Please look for these ballots and return them promptly. The response of volunteers for CPDD committees has been overwhelming and very satisfying. We plan to continue our commitment to student members by including them on as many committees as possible. Many of the volunteers cannot be accommodated within the limited number of committee slots open this year for June 2006, but the enthusiasm of our membership for service to CPDD will be tapped in various ways including your willingness to respond to CapWiz requests to email your Congressional leaders on critical issues of the NIH budget and the NIH reauthorization, as described at the start of this article. We will also be asking for new membership in a type of consortium to provide political action regionally in the United States in order to enhance the outstanding work of the Friends of NIDA (FON) under Bill Dewey. FON will be celebrated its second anniversary on December 6, but its successes have been many more than expected in a mere two years. Our President, Kathryn Cunningham, addresses the Public Advocacy Taskforce (PAT) in the president's Column.

Plans for the 68th Annual Scientific Meeting at the Scottsdale Princess in Scottsdale, Arizona, June 17-22, 2006, are progressing well under the leadership of Sharon Walsh (Chair, Program Committee). There are 11 full symposia, 3 mini-symposia and 11 workshops confirmed for the meeting thus far. Presidential speakers are being arranged to complement our annual address by Nora Volkow. For abstract submission we will be using ScholarOne, which will complement, but can never replace the current distinguished and untiring work by our members Jonathan Kamien and Rich Eisenberg.

The remainder of the Executive Committee meeting covered several issues. One related to the WHO and the potential re-scheduling of buprenorphine (Suboxone) to Schedule 2, which would be a disaster for office-based opiate dependence treatment in the United States. CPDD will work to prevent this change in the medication's status. A second issue addressed was drafting a conflict of interest policy for CPDD. A third was repeating the very successful Open Forum session by the Animals in Research Committee at the upcoming Annual Meeting in Scottsdale.

Thank you all in the membership for your enthusiasm in supporting us, your leadership.

– *Contributed by Tom Kosten,
CPDD President-Elect*
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CPDD membership includes a subscription to Drug and Alcohol Dependence, ranked among the most cited substance abuse research journals.

Submit Meeting Abstracts Online
Deadline January 16, 2006. Go to
<http://www.cpdd.org>
Click "Abstract Submission"



*The Eddy Award...
has given me credibility in drug
abuse policy issues, ...[it] has
opened doors to some
influential people for me.*

Voice of Experience

An Interview with Charles R. Schuster

1990 CPDD Nathan B. Eddy Award Winner

Researcher, Policy Analyst and Frustrated Jazz Trumpeter

By Beatriz A. Rocha

Career paths can be surprising and enigmatic. Bob Schuster's career epitomizes the point of convergence where art, creativity and innovation transformed the substance abuse research field. From his roots in preclinical research up to treatment implementation his path has been steady, and has motivated all of us, young and not so young alike. In a couple of emails he told us about some of the rhythms of his dreams: *"I enjoyed answering the questions and hope my answers are worth reading!!"*

Newsline's Beatriz Rocha:

How did you come to be a researcher in the substance abuse field?

Bob Schuster:

I was surrounded by music as a child and began playing trumpet at the age of five. By fifteen I was playing with local bands at nightclubs, weddings and dances. Marijuana and other drugs, such as alcohol, amphetamine and heroin, were common among jazz musicians. After I abandoned my music career and was in graduate school at the University of Maryland, my mentor, Joe Brady, took me to Walter Reed Army Institute for Research where he was a Lieutenant Colonel in charge of the Psychology Research Section. He was working with an endocrinologist on the hormonal changes produced by stress in rhesus monkeys. To remotely collect blood samples, they surgically implanted a catheter in the external jugular vein, which was run subcutaneously to a pedestal mounted on the skull. I looked at this set-up and thought, "If they can take blood out, I can put things in! What should I put in?" Memories of musicians injecting heroin intravenously came to mind, and within a few months I was doing studies to see if we could get healthy-minded rhesus monkeys to inject morphine into their veins. It turned out to be much simpler than I could have imagined. All you had to do was make an intravenous dose available, contingent on a single lever press, and sit back and wait. Animals would rapidly learn to lever press for drugs that humans abuse, ignore those that were not psychoactive, and actively reject aversive drugs. To put it mildly, I was hooked! This finding was a powerful reinforcer, which helped to shape the rest of my career.

Which aspects of your career have been the most fulfilling and the most frustrating?

Establishing and directing the Drug Abuse Research Center at the University of Chicago was the most rewarding activity in my career. I was blessed with great students and colleagues in a truly interdisciplinary setting. Leaving that position to become the Director of the National Institute on Drug Abuse brought new challenges, rewards and great frustration. Frustration with others in the government who viewed AIDS as "just punishment" for misbehavior and methadone maintenance as "pandering" to junkies. It was fruitless to try to have an intellectual conversation about these topics with these people—and they were making policy! Legislation was passed in 1988 that stated that no federal monies could be used for needle-exchange programs until the Surgeon General certified that these programs decreased IV drug abuse and the

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Voice of Experience–Interview with Bob Schuster *continued from page 4*

spread of HIV infection. I would buy the latter requirement, but why would you require such programs to decrease IV drug abuse?? Not increasing IV drug use would make sense to me, but to have the law say it must decrease IV drug use was absurd. This is one example of how policy was formed by a moralistic conception of the problem of drug abuse as opposed to a public health perspective. I want to add, however, that I also had the privilege of working with many people at NIDA that were devoted to the pursuit of knowledge to inform our prevention and treatment interventions. They were great!!!

I have been privileged to work with a number of great formal and informal teachers. George M. Peterson, a student of Karl Lashley, made neuroanatomy fascinating for me when I was getting my Masters degree at the University of New Mexico. Richard Herrnstein and Jack Findley were informal mentors in the lab when I was a graduate student at the University of Maryland. By far however, Joe Brady was the greatest influence. His enthusiasm and dedication for the application of the principles of behavior analysis to the problems of human kind was, and still is, inspirational. He was by far the most important mentor I have ever had. He would say things that would sound trivial – “If the man wants a blue suit, turn on a blue light!” or “Never turn down a job you have not been offered” – but they have been important to me. When Joe says, “turn on a blue light”, he does not mean be deceptive. Rather, I believe he means if you want to accomplish something you believe to be really important you must “sell” the idea. That translates into relating the scientific questions you believe are important to the agenda of the funding agency.

I laughed when I got a call to come to Washington for a job interview for the directorship of NIDA. Frankly, I did not think with my (capital L) liberal history I stood a chance to be selected for that job during the Reagan years. But, I did not turn down a job I had not yet been offered. To my great surprise and delight, I was selected.

What do you view as the most important contribution you have made to the field of substance abuse research (so far!)?

Well, I would like to believe that the best is yet to come, but at my age that seems a little doubtful. I guess my contribution to demonstrating the relevance of the principles of behavior analysis to our understanding of the etiology, prevention, and treatment of drug abuse is the most important thing that I have done. I believe that I was part of a small group of people who, early on, recognized the implications of demonstrating that drugs can serve as positive (and negative) reinforcers in animals. That finding led to the recognition of the common variables that control behavior maintained by traditional positive reinforcers as well as drugs. This ultimately led to the development of the use of such things as alternative reinforcers for preventing substance abuse or for promoting abstinence in drug abusers. These are powerful techniques that had their origins in the finding that drugs could serve as reinforcers in animals and hence should be viewed with the context of the principles of behavior analysis. Whatever role I played in that conceptual development is my greatest accomplishment.

What was your reaction when you learned you were going to receive the Nathan B. Eddy Award, and how has it influenced your career?

I was delighted, honored, and thrilled. I could not (and still cannot) imagine why I should be given such a prize for doing work that has been so much fun. Waking up most mornings with enthusiasm for the day ahead – what more could you ask for? The Eddy Award was just frosting on the cake, but it has given me credibility in drug abuse policy issues. As I have matured, I have spent more time working on drug abuse policy issues and the Eddy Award has opened doors to some influential people for me.

In your opinion, what is the most important contribution anyone has made to the field of substance abuse research?

“If the man wants a blue suit, turn on a blue light!”

-Joe Brady

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Voice of Experience—Interview with Bob Schuster *continued from page 5*

At the risk of sounding self-serving, I believe that the finding that the same drugs that humans abuse will serve as positive reinforcers in animals set the stage for any number of advances linked to our emerging understanding of the neurobiology of drug reinforcement. The findings that alternative reinforcers could compete with drugs in choice studies gave rise to the whole field of contingency management for various treatment applications. Obviously, there is more to drug dependence than drugs acting as reinforcers. Many put this extra “something” into the brain and some call it a “switch” that is the basis of addiction. However, when I look at the DSM-IV I see that the characteristics of the individual that are used to define this condition are attributable to the schedule of drug reinforcement and alternative reinforcers. Preoccupation with drug use to the exclusion of other activities can be readily understood as a long chain of complex behaviors (hustling for money, searching for the dealer, ritualistic drug administration procedures) maintained by both conditioned reinforcers and powerful drug reinforcers. The individual who also has few competing non-drug reinforcers available or attainable is particularly at risk for addiction. The development of physical dependence also enters into the picture and clearly can enhance the reinforcing efficacy of drugs. But in my opinion, the most important characteristic of addiction is the preoccupation with drug seeking and taking, which in the real world comprises a long chain of complex behaviors. The work necessary to meet the contingencies for drug taking in the real world is demanding and time consuming. It can crowd out other activities. That is addiction.

If you had unlimited resources what would you like to work on that you have not had a chance to address yet?

How to develop an ideal treatment system that takes into consideration that drug dependence is a chronic relapsing disorder with significant physical and psychiatric comorbidities. Currently, we treat addiction as we do infections. People come in for treatment and after that treatment episode is over they are discharged. They may be given the name and telephone of the local AA or NA group, but there is no follow-up to see whether people really attend. Small wonder we see many of them again after they have relapsed with all of the costs to their physical and mental health as well the adverse impact on their family and community. I would like to work with experts in healthcare management to devise a cost-effective treatment system that monitors individuals after a successful treatment episode and engages them in more intensive treatment if they begin to falter in maintaining their abstinence. Such approaches are successful with other psychiatric disorders and should be developed for the substance abuse treatment area. More effective treatment interventions are important, but they will not be of long-term value if they are not imbedded in a coordinated healthcare management system.

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Do you think we are headed in the right direction for finding the best medications and approaches for treating addiction? What would you do differently, if anything?

I think we have been spoiled by the medications we have developed for the treatment of opiate dependence. Methadone, LAAM, buprenorphine and naltrexone all interact with the mu opiate system in the brain. We can administer these drugs across a wide range of doses for the treatment of opiate dependence and they have few side effects. Our efforts to find treatments for cocaine and methamphetamine dependence have been less successful. In part, this is because we have not fully investigated agonist therapies for these forms of drug addiction, probably because of a general anti-agonist medication prejudice in the field. In addition, if we had an antagonist for the treatment of cocaine or methamphetamine dependence it would be likely to produce mood alterations that would make it unacceptable to patients.

I think the methods we have developed for screening new treatment medications are

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Obviously, there is more to drug dependence than drugs acting as reinforcers.

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unrealistic. We expect to find drugs that are able to completely suppress drug taking. We should be looking for medications that have more subtle effects that may decrease the reinforcing efficacy of drugs and make it more likely that alternative non-drug reinforcers could compete for the individual's attention.

What is your favorite drug?

Cocaine. I am fascinated by the history of coca leaf use and the early experiments with it by Freud. In the 1970s Norm Krasnegor, who was a NIDA extramural staff member, came to Chicago to see me. He proposed that I put in a grant to study cocaine in humans. I thought this was a great idea, but also a bit scary. I talked to Marian Fischman, who had just completed her doctorate in my lab and asked if she would be interested in working on a cocaine grant. We allied ourselves with the cardiologists at the University of Chicago to give us medical coverage and were successful in getting a grant to study the human pharmacology of cocaine. The Provost at the U. of C. called me and said, "Schuster, I will sign off on this grant, but if you kill somebody—tenure or no tenure—I will fire you!!" Bill Martin told me that we were likely to produce conduction blocks in the heart and seriously endanger people by giving them cocaine. I simply knew that I had given rhesus monkeys, rats and pigeons behaviorally active doses of cocaine and had never observed an unexpected convulsion or death. So we proceeded, very cautiously, and conducted pharmacodynamic and pharmacokinetic studies and we have yet to see an unexpected adverse reaction. In the process we demonstrated that cocaine is a powerful reinforcer in humans, as it is in animals. We also demystified and deglamorized it to some extent. We showed it was a drug that had some interesting properties, but nothing special that made it stand apart from the amphetamines and other stimulants.

What is the most interesting and inspiring scientific manuscript you've read in the past year?

Recently, John Falk sent me an old paper he wrote on the multiple roles of discriminative stimuli. It is a marvelous paper that shows the complex ways in which discriminative stimuli "motivate", as well as signal the availability of reinforcers. As always, his reasoning is complex and insightful, and coupled with a writing style that is delightful to read. I wish that more papers were as thoughtful and brilliantly presented.

If you could sit down to talk with any scientist, living or not, who would it be and what would you talk about?

I have a new interest in drugs and creativity. It has recently been disclosed that Crick was using low doses of LSD at the time he proposed the double-helical structure for DNA and the replication scheme. He also used cannabis for many years. I would be very interested in how he viewed the role of drugs in his scientific creativity. I believe that we have made black and white distinctions about the use of drugs for non-medical purposes. There are some grays.

How do you like to spend your time outside of science?

I am blessed with a number of interests that compete for my time. I like to walk and ride my bike with my wife, particularly in Chicago where we live part time. The lakefront is magnificent. We are currently going through the Chicago Art Museum systematically, room by room. We go for an hour and then discuss what we have seen as we walk back to our apartment. I also love to travel. Last year we went to Italy and Russia. This year it is Egypt and India. We try to prepare for our trips through reading travel guides, but more importantly, books that capture the flavor of the culture. I hope to travel more when I retire since there are still many places in the world to go!! Finally, I love music and enjoy concerts and live jazz wherever it is being played.

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*My favorite music is jazz:
Ellington, Strayhorn,
Hawkins, Parker, Gillespie,
Rhassan Roland Kirk, Miles,
Bill Evans...*

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Voice of Experience–Bob Schuster *continued from page 7***What is your favorite book? What's your favorite music?**

So many, and so hard to pick one...I like to read novels and have been impressed with so many in the past five years. I guess the one that has most impressed me recently is the short stories by Salman Rushdie. Magnificent language, coupled with an imaginativeness that is awesome. My favorite music is jazz: Ellington, Strayhorn, Hawkins, Parker, Gillespie, Rhassan Roland Kirk, Miles, Bill Evans, and on and on. How could you choose? It so depends on the day, the time of day, whether I am alone or not, and my mood. I never tire of listening, and imagining how I might play the song if I could execute what I imagine.

If you were not a scientist what would you have become?

I would say a jazz musician, but whether I really had the temperament and talent to be successful I will never know. But music is constantly intruding in my consciousness. I drive my wife nuts because I am always playing trumpet valves when I am holding her hand. I still love to play, but do not have enough time to do it proficiently. Playing for myself, however, I can hear it as I intend it to be – rather than the way it really sounds. It is intriguing to me that jazz improvisation is largely an unconscious activity. I rarely “think” about what I am going to play next – the next phrase just occurs. It is very different from how I function in science.

When grants are hard to get, manuscripts are hard to publish, and experiments don't always support your hypothesis, what should the aspiring younger scientist do?

Look for projects that you think are important, and which will be fun to investigate. Yes, fun! When you wake up in the morning and cannot wait to see today's results – that is going to keep you going during the hard times.

Benefits of Membership to CPDD

- A subscription to *Drug and Alcohol Dependence*, which has among the highest ratings for impact among substance abuse journals (not included in student membership).
 - Reduced registration fees to attend the Annual Scientific Meeting.
 - Eligibility to sponsor abstract submissions for presentations at the Annual Meeting (not for Student Members)
 - Eligibility to submit abstract for Late-breaking News session.
 - Impact on public policy, including educating our representatives and other governmental officials on the need to support addiction research, ensuring the science base for new policies as well as programs dealing with human and animal research issues.
 - Mentorship activities for trainees and early-career scientists.
 - Opportunities to serve on CPDD committees.
 - Access to Members Only section of CPDD website, containing directory information, easy email to other members and committee reports.
 - Membership Listserv, for rapid communication of items of interest to the entire membership and posting of job opportunities.
- Membership categories include Student or In-Training, Associate and Full Member categories. The cost of annual membership is \$120 (\$40 for Student and In-Training Members). Additional information about the College, membership criteria and student benefits can be obtained at the CPDD website:

<http://www.cpdd.org>