

# NEWSLINE

A PUBLICATION OF THE COLLEGE ON PROBLEMS OF DRUG DEPENDENCE, INC.  
Volume Twenty One, Number One • January 2017

## CPDD President's Column

**Leonard Howell, Ph.D.**  
**President**

Greetings to you all and welcome to a new academic year in the College. After two consecutive conferences out west in the desert heat, the 2017 annual meeting will take place in the cooler air of Quebec, Canada in Montreal. Named after the triple-peaked hill in the heart of the city, Montreal is a vibrant metropolis with a rich history and international reputation. There will be no shortage of activities off-property. Please mark your calendars now for June 17-22 and plan to attend what should be an outstanding scientific conference in a fabulous environment.

The closing of the 2016 annual meeting brought some important changes in leadership. Eric Strain rotated off the Executive Committee after completing his term as Past-President. His vision during a challenging transition in the College is greatly appreciated and his leadership will be missed. Sandy Comer will now assume the role of Past-President. I am especially fortunate to have another year to work with Sandy on the Executive Committee. She was an outstanding leader as President during the past year and will continue to make significant contributions to the College. New to the Executive Committee is Alan Budney, who will serve as President-Elect. It is already apparent that Alan will be engaged and will support the mission of the College from multiple perspectives. We also welcomed four new members to

the Board of Directors: Jack Bergman, Beatriz Rocha, Bill Stoops and Elise Weerts. There is every indication that the current Board of Directors will be a highly effective governing body for the College.

The transition in the College office over the past two years has been the focus of much effort by the Executive Committee and the Board of Directors. I am pleased to report that the transition has been successful and the office has evolved into a healthy state-of-equilibrium. Our Executive Officer, Loretta Finnegan, is in command of her new position and has met all of the challenges along the way. Ellen Geller continues to serve as Director of the Executive Office and provides a wealth of knowledge and expertise with the operations of the College. Connie Pollack retired from the office after many years of service. Our most recent addition to the staff, Liz Brown, has assumed Connie's role as website and listserv manager as well as other duties. We now have a rental agreement in place with Temple University for the physical space we use for the office, and we have a services agreement for Temple staff working for the College. In short, the office is in good order and the operations of the College are in capable hands.

We are in a strong position to think strategically about the future of the College and its mission to promote basic

President's Column *continued from page 1*

science, treatment and public policy. There has been a marked decline in the number of basic scientists who attend the annual meeting on a regular basis. The Program Committee continues to do an outstanding job of representing basic science in symposia, oral presentations, and workshops, but the number of abstract submissions by basic scientists has dropped below 15% of the total submissions in recent years. One of the most fundamental platforms of the College is that science drives evidence-based treatment and public policy. If we lose basic scientists, we lose a pillar of the organization. There was an encouraging increase in submissions of basic science abstracts this year to just over 18%. I want to emphasize that this trend should continue long-term in a robust manner for the health of the College. I am forming a working group to define better the needs of the College and specifically to identify what can be done to attract more basic scientists. If you are a basic scientist who has enjoyed the annual meeting in past years and appreciate the unique opportunity to interact with clinicians, treatment providers and epidemiologists, please make every effort to attend the conference in Montreal this year. Mark your calendars now and plan to bring your students, postdoctoral fellows, junior faculty, and, importantly, your best science. I hope that everyone who attends the annual meeting in Montreal witnesses a significant difference in the scope of basic science – it could be contagious.

The promotion of evidenced-based public policy is another key mission of the College. You are all aware of the heightened concerns about the escalating epidemic of prescription opioid and heroin use, addiction, and overdose in the United States. There has been unprecedented attention directed toward opioid addiction

and overdose from State and Federal Governments during the past year with ongoing legislative reforms that will have significant impact on policies and laws pertaining to prescription opioids and treatment. The College is fortunate to have a long-standing relationship with Van Scoyoc Associates Inc., a Federal Government affairs firm and independent lobbying company in Washington, D.C. The Executive Committee meets in Washington, D.C. twice each year and schedules time with Van Scoyoc in their office across from Capitol Hill. They are instrumental in serving as a conduit between the College and government policy makers. We also receive frequent communications from Van Scoyoc on recent events, briefings, and legislation related to drug abuse and addiction. To ensure that the College membership has full access to this information, there will be regular postings of communications from Van Scoyoc on the new CPDD website. Please consider checking the website on a regular basis if you are interested in public policy issues. Information that is especially pertinent and timely will be sent to the membership via the member listserv. The office is sensitive to email overload and will restrict emails to communications that are especially noteworthy.

I would like to close by saying thank you all for your contributions to the College and the people we serve. The major policy changes that are occurring in Washington, D.C. will be transformative and reflect your efforts as addiction scientists. The College is in a very good place and there is much reason for optimism. I look forward to a productive and engaging year.

## Meeting Highlights - The 2016 Nathan B. Eddy Award

*The Nathan B. Eddy Memorial Award was established in memory of one of the pioneers in the field of drug dependence following his death in 1973. The award recognizes outstanding research efforts that have advanced our knowledge of drug dependence.*

### Introduced by Stephen Higgins, PhD

I am privileged to have this opportunity to introduce Warren K. Bickel, PhD, as our 2016 Nathan B. Eddy Memorial Award winner. Warren's research is outstanding and has substantially advanced our knowledge of drug dependence.

As a collaborator, colleague, and close friend of Warren's for almost 40 years I have had the unique opportunity and privilege to witness his research and its impact on our field. His scientific creativity and breadth of contributions are rare, highly valuable, and have moved our field in important new directions that well deserve the recognition that the Eddy Award confers.

His contributions in behavioral economics began with a series of literature reviews, experimental studies, and edited volumes demonstrating that drug self-administration, and dependence more generally, could be conceptualized and analyzed using the concepts and methods of microeconomics. His work introduced our field to two

important economic concepts and associated methods. First, he introduced the concept of unit price, demonstrating that what heretofore was conceptualized as two fundamental determinants of drug self-administration—drug dose and response requirement—could be understood as a single economic parameter termed “unit price”.

Second, he introduced our field to the power of demand curves, relating unit price to consumption for characterizing the abuse potential of drugs or other commodities. Along with demand curves, of course, came the related metrics of elasticity of demand, complements, substitutes, and so on. These contributions were not minor. This was a situation wherein a still relatively young investigator known mostly for clinical research was challenging our entire field of preclinical and clinical researchers to recognize another way of conceptualizing and analyzing the abuse liability of drugs and drug dependence. As we know, these concepts and methods are now well integrated into our theoretical and methodological practices.

Another contribution that Warren brought to our field was the concept of delay discounting, and the methods to study this phenomenon in humans. Actually, to my knowledge, Warren was the first to apply the delay discounting concept and methods to human health



Warren Bickel (center) receives the 2016 Nathan B. Eddy Memorial Award. Also shown are Stephen Higgins (left) and Sandra Comer (right).

### Award Winners, *Continued from page 3*

research generally. Here too, Warren was introducing a new concept and set of methods to our field. Warren demonstrated that meaningful and reliable discounting functions could be generated in humans using hypothetical consequences. He demonstrated that, on average, individuals at risk for drug dependence had steeper discounting functions than those with lower risk, and that within those with drug dependence, there are important cross-commodity differences in discounting functions. Those empirical observations have now been sufficiently extended to other disorders to have Warren introducing our field to still another new concept referred to as trans-disease pathologies or reinforcement pathologies. We have to wait to see how this more recent conceptual extension plays out, but, from my own theoretical perspective, I have little doubt about its accuracy or importance.

A somewhat under-recognized behavioral economic research gem that Warren gave our field while pursuing this practice of using hypothetical consequences is the commodity purchase task. In terms of dissemination, let me mention that James MacKillop's body of work using the purchase task has recently garnered him an Early Career Contributions Award from the American Psychological Association, and this task is now being used broadly in many areas of substance abuse research.

A more recent contribution from Warren related to behavioral economics fits more properly under the heading of neuro-economics. Here Warren is proposing a neurobiological model that he refers to as the competing brain systems model of drug dependence and trans-disease pathologies. The basic concept is that impulses emerging from prefrontal cortices and associated "executive functions" compete with those from lower mesolimbic brain areas when making choices between different commodities, a neurobiological framework for the behavioral economic concepts outlined above. This contribution is more recent and hence perhaps

less familiar, but the pattern is clear. His papers on the topic are appearing in high-impact journals and I am confident will become part of our field's conceptual framework in the not too distant future.

It is important to realize is that Warren has made substantive contributions to our field in addition to those in behavioral economics. His contributions extend across drug discrimination, drug effects on learning and performance, and other areas of behavioral and clinical pharmacology research. However, in my opinion, none are more important than his contributions to the development of buprenorphine as a pharmacotherapy for opioid dependence. For example, in 1988 Warren was first author on the seminal paper demonstrating that buprenorphine blocked the acute effects of opioid agonist challenges in opioid-dependent volunteers. In that same year, he was also first author on the seminal paper demonstrating the efficacy of buprenorphine in detoxifying opioid-dependent outpatients that appeared in *Clinical Pharmacology and Therapeutics*. Warren then went on to establish the first opioid substitution clinic in Vermont using buprenorphine to bypass the strong political objections to methadone that were prevalent at that time. Of course, Warren also used this clinic to make many innovative research contributions on buprenorphine. For example, he led studies demonstrating that one could leverage buprenorphine's partial agonist properties by administering several days' worth of medication in a single bolus dose. Doing so did not cause discernible intoxication and would permit rural patients to come to the clinic less frequently without providing take-home doses and the associated risks of diversion. He and his colleagues also conducted seminal studies extending buprenorphine to opioid-dependent adolescents, and this was also the clinic where, under Warren's supervision, Nancy Petry, began doing what has come to be known as prize-based contingency management. Warren



### Award Winners, Continued from page 4

has authored at least 40 papers in this topic area, many in our field's highest impact journals.

Warren's overall scientific productivity is outstanding. He has more than 350 publications to his credit, along with numerous edited books and special issues of peer-reviewed journals. He served as Editor of Experimental Clinical Psychopharmacology for six years, and sits on the editorial board of many peer-reviewed journals in the areas of drug dependence, psychopharmacology, and behavioral science. He has been an outstanding scientific mentor to many accomplished investigators in our field, including Nancy Petry, Greg Madden, Lisa Marsch, Matthew Johnson, among many others. He regularly engages in service to CPDD and other scientific organizations, including a term as CPDD president, numerous terms on the CPDD board of directors, terms as President of two different divisions of the American Psychological Association, and fellowship status in these and other scientific organizations. He has had continuous NIH funding for more than 30 years. He is the recipient of numerous national awards for research excellence, including a prestigious NIH MERIT Award for his behavioral economics research, CPDD's Joseph Cochin Early Career Investigator Award, the American Psychological Association Division 28 Young Psychopharmacologist Award, the Brady Schuster Award for mid-career contributions, and Division 25 Don Hake Award for translational contributions in basic and applied behavior analysis.

By any standard that I can think of, Warren has made the type of outstanding research contributions that the Eddy Award was created to recognize. I am confident that Warren will bring distinction to the Eddy Award and to CPDD more generally.

### Acceptance Remarks by Dr. Bickel

I wish to thank the College on Problems of Drug Dependence, which has afforded me numerous opportunities to participate, learn, and grow as a professional. I would like to thank the Nominations Committee led by Mark Smith. I would also like to thank my nominators, Steve Higgins, Ken Silverman, and Alan Budney.

Every career has been helped by others such as mentors, colleagues, trainees, and friends. I would like to acknowledge those who have helped me. I would like to thank my post-doctoral mentors, Drs. Maxine Stitzer, George Bigelow, and Roland Griffiths for teaching me addiction science and, perhaps more importantly, how to write a grant application. I would also like to thank Bob Schuster and Jim Woods. First they served as role-models, then as mentors from afar, and finally as friends. I would like to thank my two best friends over 36 years, Steve Higgins and Ken Silverman. They have not only provided support, but challenged my ideas and, by doing so, made me stronger. I have been grateful for the outstanding trainees, such as Matt Johnson, Greg Madden, Lisa Marsch, and Nancy Petry, among others, who I think have taught me more than I taught them.

I want to thank my family – my daughters, Layla and Corena, and my son, Keefer. Of course, I wish to thank my wife Rebecca Esch. I wish to thank my family not only for their love and support, but also for their forbearance putting up with my preoccupation with work. In my family, everyone knows the answer to the question, "Where is Dad?" is "He is writing a grant." Lastly, I dedicate this lecture to the memory of my father, Walter Warren Bickel. Again, thank you for the honor of receiving the Eddy Award.

## Meeting Highlights - The 2016 Marian Fischman Lectureship Award

*This award in memory of Marian W. Fischman, a much-admired leader in drug abuse research and an excellent scientist, was established in 2001 to recognize the contributions of an outstanding woman scientist in drug abuse research*

### Introduced by Jack Henningfield, PhD

What an honor and pleasure it is to introduce Dr. Marilyn Huestis for the Marian W. Fischman Memorial Lectureship Award! This is a joyous occasion, as it commemorates the enduring impact of a pioneer in our field, a powerful force in the College, and dear friend to so many of us. Dr. Fischman was a scientist, deeply appreciated mentor, inspiring teacher, and a leader among leaders. Our memories are mixed with love, respect, and yet with sadness that she no longer graces our meetings. Recipients of the Marian Fischman Award are a remarkable powerhouse of talent, achievement, and mentors of future scientists. Dr. Marilyn Huestis is another such powerhouse whose award will further honor Marian Fischman.

I met Marilyn Huestis in 1989 when I headed the Clinical Pharmacology Research Branch of the NIDA Intramural Research Program (IRP) – then referred to as the Addiction Research Center. She was in the second year of her PhD program at the University of Maryland and was highly recommended to us by her advisors Naim Khazan and Ed Morton. She already had two decades of experience providing toxicology services in the private and governmental sectors. This real-world experience has permeated her research and fueled her passion for science that truly served public health.

Though she was already a seasoned toxicologist, Marilyn was eager to learn all that she could. In the Chemistry and Drug Metabolism laboratory of the Clinical Pharmacology Branch, under the leadership of Edward Cone, she was driven to develop and carry out a very challenging series of studies investigating the pharmacodynamics and kinetics of acute marijuana smoking that focused on minute-to-minute effects and blood analyte concentrations during smoking by employing a novel continuous blood withdrawal pump system. In her spare time, she collaborated with Dr. Cone in other clinical studies involving cocaine and other drugs.

Upon completion of her doctorate in 1992, she left NIDA to create her own company and provide toxicology and drug testing services to some of the many organizations that had been seeking her assistance. We made it clear that we would very much like her back as a scientist at NIDA and we did not have to wait as long as we feared. She missed the opportunities to conceive and conduct research and came back to NIDA despite the fact that our IRP salary was not competitive with the private sector.

Dr. Huestis returned to NIDA in 1995 as a Senior Research Scientist in the Chemistry and Drug Metabolism laboratory. The University of Maryland offered her a joint academic appointment thus expanding opportunities for collaborative research and student training. When Dr. Cone retired from NIDA in 1998, Dr. Huestis was the obvious candidate to head the laboratory; and he could rest assured that his world premier substance abuse focused clinical chemistry laboratory was in good hands that would take it to the next level – and so she did!

### Award Winners, Continued from page 6

Over nearly three decades her research has covered many substances, products, and formulations, and is very widely cited. With the resurgence of interest in the dose-related cognitive effects of cannabis, I have noticed a recent spike in mentions of our work together. Her research has already yielded nearly 400 publications, with many more on the way.

She has been an inspiration to hundreds of young scientists. She has directly mentored 13 doctoral students, and many others at various stages of their careers, including more than 35 Visiting Scientists and international students from more than 20 countries. Talk about global impact! I guess this is some of the reason for the journal *Clinical Chemistry* featuring Dr. Marilyn Huestis as an "Inspiring Mind" in 2015.

Dr. Huestis currently serves on the National Commission on Forensic Science, the World Anti-doping Agency's Prohibited List Committee, the National Safety Council's Alcohol, Drugs and Impairment Division Executive Board, and several other organizations. Dr. Huestis is past president of the Society of Forensic Toxicologists, past chair of the Toxicology Section of the American Academy of Forensic Sciences and a distinguished fellow of the Academy. Always breaking ground, she was the first female president of The International Association of Forensic Toxicologists.

Dr. Huestis is the recipient of many prestigious awards including NIH's Women in Science Award, the Alan Curry Award for Lifetime Achievement, and an honorary doctorate from the University of Helsinki. This past April, she was awarded the Saferstein Memorial Distinguished Lecturer at Northeastern University. These honors and awards are testament to the far-reaching impact she has had on the science represented by CPDD, and standards for drug testing nationally and globally, on human safety, and on national drug control policy.

She generously used her travel invitations to advance the careers of her mentees, frequently including them. Her mentees found such travel fun and as well as life and career enhancing. They appreciated that she both looked out for them and gave them opportunities to grow and distinguish themselves. On one trip to Rome, when the younger scientist's own flights were so delayed as to rule out any chance of seeing some of the city's wonders, Dr. Huestis arranged to have a private driver give him and others a whirlwind tour of Rome on the afternoon before leaving.

Mentees describe her as an "awesome collaborator, mentor and friend, and as a kind and thoughtful colleague", always looking out for them but not hesitant to email on Thanksgiving or Christmas for updates on manuscript preparation. Her mentees also describe her as "an incredible advocate for female scientists, who helped to launch the careers of many young women in the fields of forensic toxicology and analytical chemistry."

With Dr. Huestis's retirement from NIDA this past February, the Institute has lost a powerhouse. I have no idea how you follow more than four decades of the NIDA Addiction Research Center Chemistry program run back to back by Ed Cone then Marilyn Huestis. Those two leave Paul Bunyan-like shoes to fill.

On the other hand, I see no evidence that she is leaving our field for the golf course, though I know she looks forward to more time with her family. I think that the next phase of her global

### Award Winners, Continued from page 8

impact will more than likely accelerate without having to write intramural progress reports or manage the NIDA laboratory.

There is much more that I could tell you, but it all comes to a simple conclusion for me, as a person who deeply respected and cared about Dr. Marian Fischman since first meeting her in the 1970s: Marilyn has done Marian proud! Dr. Huestis stands well among the very distinguished past awardees. She embodies Marian Fischman's own spirit and legacy. It is an honor for me to have this opportunity to thank her on behalf of all of us and welcome to the podium.

#### Acceptance Remarks by Dr. Huestis

Thank you for the wonderful honor of receiving the 2016 Marian W. Fischman Lectureship Award. I consider myself lucky to have known Marian while she was at Johns Hopkins and after her move to Columbia University. I admired and respected her as a scientist and as a person. She contributed greatly to our knowledge of cocaine, heroin, cannabis, and methamphetamine self-administration, and her efforts to identify and evaluate new pharmacotherapeutic agents for treatment of drug dependence and addiction are highly valued. Marian collaborated with and mentored many excellent scientists in the field. She is sorely missed as a researcher, teacher, colleague, and friend, and the establishment of the Marian

Fischman Award is one important way in which we honor her accomplishments and her life.

Thank you, Nora Volkow, Wilson Compton, and Jack Henningfield for nominating me for this prestigious award. I retired as Chief of Chemistry and Drug Metabolism at the Intramural Research Program at NIDA in January after more than 23 years. After working in the fields of toxicology and clinical chemistry for 46 years. I, like you, love the opportunity to design novel research, complete studies—despite the myriads of obstacles that confront human drug abuse investigations, and to immerse myself in the data looking for critical new findings that might move the field forward. My path to tenure at NIH was atypical, with many jobs around the country as a military spouse and finishing my PhD at 44 years of age. My first paper was published during my dissertation, and now, 25 years later we are at 418. So, for anyone who got a late start in research, or who had a break to create a family, or changed careers: it is never too late to chase your dreams.

But with this lovely award comes the responsibility of giving the lecture. I chose the controversial topic "The Great US Cannabis Experiment: Educating the Public To Make Informed Decisions" because it enabled me to present our new research, address a major cultural shift in our country, and discuss our responsibility as scientists to provide accurate and



Marilyn Huestis (second from right) receives the 2016 Marian Fischman Lectureship Award. Also shown are Loretta Finnegan (left), Sandra Comer (second from left), and Jack Henningfield (right).



## Award Winners, Continued from page 8

relevant data to the public so that individuals can make informed decisions about their own drug use and to educate their children on the effects of drugs, and to enable evidence-based drug policies and legislation. Over the past 4 years I have testified before many state legislatures, worked with the FDA, DEA, SAMHSA, NHTSA, ONDCP, Departments of Defense and Transportation, Attorneys General, judges, prosecutors, defense attorneys, and the press to discuss the complexities of cannabinoid medicalization and legalization. The amount of misinformation distributed to the American public and our legislators is frightening and confusing for adults and adolescents. Thank you for the wonderful honor of receiving this award.

## Meeting Highlights - The 2016 CPDD Mentorship Award

*This award is given yearly to a member of CPDD who has been an exemplary mentor to developing researchers in the field of drug dependence.*

### Introduced by Thomas Prisinzano, Ph.D.

It is my pleasure introduce Dr. Kenner C. Rice as the 2016 CPDD Mentorship Awardee. Kenner is an outstanding scientist and mentor at the National Institute of Drug Abuse. He has had a major impact on the discipline of medicinal chemistry, as well as drug abuse research. Kenner is the epitome of a southern gentleman and has had a major influence on medicinal chemistry through his unique insight, mentoring and training of young scientists, service work, and his own hard work at the bench. He has led his group by example and inspires his younger colleagues with his knowledge in medicinal chemistry and his substantial ability in organic chemical synthesis.

I first met Kenner when he visited the Medical College of Virginia, Virginia Commonwealth University, where I was in graduate school. Kenner was an adjunct faculty member in our Department and was in town to attend the dissertation defense of one of my colleagues. When I began my search for a postdoctoral fellowship, I immediately contacted Kenner and he invited me up to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). I was very impressed with the science going on in his lab and it was easy to see the rapport he had with his current postdocs. After going out to lunch with his group, I was thoroughly convinced I wanted to join the group. Kenner was an outstanding mentor and I remember my time well. In one instance, I was having trouble getting a particular reaction to work and growing increasingly frustrated. After much soul searching, I decided to ask Kenner for some advice. I assumed this would be a quick answer from him and he would have to get back to doing the other more important things he was already engaged in. After about 3 hours in his office, Kenner had told me just about everything there was to know about my reaction and given me about 36 different ideas to try all in numerical order of what might work best. In fact, the first suggestion he gave me worked like a charm and I was off and running.

When I was getting late in my postdoctoral fellowship and starting to look for jobs, Kenner did something that I now realize was a great moment of mentorship. Kenner had arranged for me to meet some investigators in the Mental Health Institute about a project I was thinking of proposing based on mifepristone. After a really nice chat, Kenner and I were walking back to Building 8 and I was excited about the project based on the nice feedback. I mentioned to Kenner maybe we should start working on this proposal. Kenner looked me in the eye and said, "Absolutely not." Horrified based on what I thought was some really positive feedback, I asked why? He said there would be no way for me to establish myself as an independent scientist if I started to work on this project in his

### Award Winners, *Continued from page 9*

lab. Even if I had his blessing, it would always be perceived as a simple extension of his work. He told me to save that idea and work on it when I had my own independent position. The really amazing part of this was that he easily could have picked up another nice project but rather chose to keep my best interests in mind. The even better part was this was not the only time he did this. After finally deciding that I wanted to pursue an academic career, I was thinking of potential research projects. One of the projects that I was considering was the medicinal chemistry of a novel natural product that worked at opioid receptors. Kenner had come to know about salvinorin A and had asked me to attempt to purify it because he had inadvertently contaminated it with high vacuum grease. We discussed the natural product and what it might mean but I unfortunately was unable to purify it for Kenner. Not too long after this, the publication describing salvinorin A as an opioid ligand appeared. I asked Kenner if he planned to work on the medicinal chemistry of salvinorin A and he said, "No. However, I think this would be a great project for you to work on." This particular project has been very good for my career and I owe it to Kenner for helping me get started.

In closing, I imagine my experience with Kenner Rice, as my mentor, has been repeated many, many times over the past 30 years. He is a wonderful organic/medicinal chemist and a nurturing and generous teacher. He taught me and other postdoctoral fellows from around the world the value of collaboration and how to be great chemists. He also taught us that being fair and a "good guy" could still be compatible with leadership positions, even when models were not always in place. For these reasons, I hope that you will join me in congratulating the 2016 CPDD Mentorship Awardee, Dr. Kenner C. Rice.

### Acceptance Remarks by Dr. Rice

First I would like to say that I am thrilled and highly honored to receive the CPDD Mentorship

Award. This is truly one of the highlights of my career and I am extremely grateful to have been selected. I want to thank Tom Prisinzano for nominating me, and those that wrote supporting letters, and the Awards Committee for selecting me. Also, I want to give special thanks to Dr. Everett May for giving me a chance to join his lab as a postdoctoral fellow in 1974. He was a great mentor and wonderful role model for me. He, more than anyone, made our present program possible and enabled me to become a mentor in our field. Without his help, I wouldn't be standing here today. With his help, I've been able to carry on and advance our present program that is one of the oldest continuous programs at NIH. Also, I owe a great deal to my longtime NIH colleagues Arthur Jacobson and Mariena Mattson, and Richard Rothman and all of the 89 postdoctoral fellows from 21 countries that have been in the group since I began. Some are now in leadership roles in our field, and are mentors in their own right.

I also want to thank all of our collaborators at NIH and elsewhere for helping make our program a success. Time doesn't permit me to mention each person and their contributions, but let me say thank you very much. I am fortunate to have been a student of those that largely trained me in organic chemistry: my PhD advisor, the late Dr. John Dyer, and the late Drs. Harry Petree and Dan Dickle of Ciba-Geigy Pharmaceutical. I also want to thank three NIH institutes: NIDDK, NIAAA, and NIDA for providing support for our program. I also thank Nancy Lew for her support during the entire program. Finally, I owe many thanks to Mallinckrodt Inc. for support of our program in one way or another since 1934 when it was under the leadership of Dr. Lyndon Small, the first chief of our group. Thank you all very much.

## Meeting Highlights - The 2016 Joseph Cochin Young Investigator Award

*This award, in memory of a highly esteemed leader in drug abuse research and a former Chairman and Executive Secretary of CPDD, was established in 1986 to recognize research contributions in any facet of the field of drug abuse. It is given annually to an investigator who has not attained his/her 40th birthday by July 1 in the year of the award.*

### Introduced by Charles France, PhD

I am honored to introduce Dr. Jun-Xu Li, this year's recipient of the Joseph Cochin Young Investigator Award, and I want to thank the Awards Committee for what I imagine is always a difficult decision. Like many of you, I receive a lot of email messages from people who say they want to study in our laboratory. Many of those messages come from abroad and often they are neither compelling nor personalized. In 2004 I received an email message from China that included a comprehensive summary of our research, a series of detailed questions, and a very strong CV from an MD who was about to receive a PhD in pharmacology from Peking University. In a telephone conversation that applicant interviewed me for more than 45 minutes, asking about funding, personnel, equipment, research strategies, access to research subjects, plans for the future, and so on. He knew what he was looking for and when he arrived in San Antonio, Jun-Xu was ready to take advantage of every opportunity.

Dr. Joseph Cochin was a very active member of the College. Like Dr. Cochin, Jun-Xu has spent much of his scientific effort studying addiction, pain, and opioids. And, like Dr. Cochin, Jun-Xu's work is comprehensive and parametric, including full time- and dose-response functions, multiple compounds from each drug class, antagonists for confirming site of action, and rigorous experimental controls. His research explores novel mechanisms to develop new treatments. Jun-Xu was one of the first to document that imidazoline I<sub>2</sub> receptor agonists have antinociceptive effects in the absence of the abuse liability, tolerance, and dependence that occur with opioids. Recently, he published exciting results on trace amine associated receptor (TAAR) agonists that have promise for treating stimulant abuse.

Jun-Xu's momentum as a graduate student carried over to his time in the U.S. For example, from his research as a student in Beijing he published 9 papers, 5 as first author. From 5 years in San Antonio he published 22 papers, 13 as first author. Since relocating to the University of Buffalo, where he is a tenured Associate Professor, he has published another 45 papers, including 14 (more than one per month) in 2014 alone! Add a dozen review articles and a few book chapters and you have a total of 90 publications, for someone who received his PhD in 2005. Moreover, he publishes in



Kenner Rice (center) receives the 2016 CPDD Mentorship Award. Also shown are Thomas Prisinzano (left) and Sandra Comer (right).



Jun-Xu Li (center) receives the 2016 Joseph Cochin Young Investigator Award. Also shown are Sandra Comer (left) and Charles France (right).

### Award Winners, Continued from page 11

highly respected journals such as Biological Psychiatry, Journal of Neuroscience, JPET, and Drug and Alcohol Dependence. In 2013, NIH reported that, on average, an MD/PhD researcher would get their first R01 at age 44; that year, at age 37, Jun-Xu was awarded both an R21 and an R01.

Jun-Xu is active in scientific organizations including the CPDD and he is an enthusiastic mentor of the next generation of addiction researchers. I am extremely proud to have him as a former trainee and current friend and colleague, and I cannot imagine a more deserving recipient of the Joseph Cochin Young Investigator Award.

### Acceptance Remarks by Dr. Li

I would like to thank CPDD and the Awards Committee for this award. This means a great deal for me. I received my PhD in 2005 in China, and then joined Dr. France's lab in San Antonio, Texas. I attended the 2006 CPDD meeting in Scottsdale, Arizona and became a member in 2007. I have been a regular attendee ever since. CPDD is a great professional venue that attracts global drug abuse researchers to intermingle and communicate about new research findings, and I feel it is particularly valuable for its outreach to young investigators. This award is a great testimony.

I also want to thank Drs. Mike Nader and Leonard Howell for providing letters to support me for this award. I would like to thank Dr. Charles France for his mentoring and guidance over the years. When I joined his lab, I had little training experience in behavioral pharmacology. I did not even know much about drug discrimination. He showed his great patience in training me during my five-year's stay in his lab. His critical thinking and meticulous writing remains a hugely positive impact on me. I am

deeply indebted to him and value the friendship that we have shared over the past decade.

I also would like to thank other members of the behavioral pharmacology group in San Antonio, including Drs. Lisa Gerak, Rick Lamb, Wouter Koek, Lance McMahon, and Brett Ginsburg. This group of serious behavioral pharmacologists makes San Antonio an ideal place to learn behavioral pharmacology. I still miss the twice-weekly lab meetings, although initially it was a psychological challenge for me to present at the meetings. That group is very critical about science, and sometimes brutally so. But those challenging sessions truly shaped me into the scientist I am today.

I would like to thank my long-time chemist collaborator, Dr. Yanan Zhang, from RTI. Dr. Jim Woods used to warn the young behavioral pharmacologists that it is crucial to find a good chemist collaborator early in their career. I took his words to heart and began to collaborate with Yanan the day I became independent. My research would be very different without his collaboration.

I also would like to thank my chair Dr. Margarita Dubocovich for all of her help after I moved to Buffalo. My friend and colleague, Dr. David Dietz, a talented molecular neuroscientist, was always there to help when I decided to expand my research portfolio. I owe him a lot. Finally, I would like to thank my wife, Qian, and our lovely daughter, Joyce, for their support, and for forgiving me for working regularly during weekends. Thank you all!

### Meeting Highlights - The 2016 CPDD/NIDA Media Award

*This award is given to a member of the media who has made major contributions to the public understanding of scientific issues concerning drug use disorders.*

**Introduced by Bertha Madras, PhD**



### Award Winners, Continued from page 12

I am pleased to present this year's CPDD Media to Bess O'Brien for her documentary film "The Hungry Heart".

The location is Vermont - a small rural state, with a fascinating history, and for many, a splendid place to live. But, among its people are stories, lamentable stories of addiction, the anguish of relapse, the hope of recovery. As all powerful films do, "The Hungry Heart" tells a human story: of a remarkable pediatrician Fred Holmes, and some of his patients, patients who far outgrew the innocence of a pediatric practice. His patients were seduced by prescription opioids - some as teenagers, others as adults, some successful adults who revered that first encounter; many are lonely and are alone.

His patients narrate a timeline of their addictions; why they started using, the comfort and bliss of the early stage, and then escalating use; as the grim vise closes in, loneliness is compounded by homelessness, joblessness, encounters with the law for stealing to feed a \$3,000 a week habit, shocking parents, siblings, caregivers, as they witness brain injuries, the slide of their loved ones into an abyss they can't join in the descent.

And then, a first glimmer of desire for a life without drugs; they seek Dr. Holmes for help and explain why; and why they relapse. Dr Holmes faces dilemmas, his version of Sophie's choice: should he write another prescription for Suboxone: the patient trusts him, but he's not certain he should trust his charge. As a custodian of lives, he sees victories, defeats, and even devastating deaths. You may never see a more gripping portrayal of a humanitarian physician. You may never see more humanizing portraits of those addicted to opioids.

"The Hungry Heart" was initially screened in Vermont town halls, church basements, high schools, and health centers; it kindled a conversation on opioids and their capacity to

demolish individuals - bring them to the brink of life-or-death. Its message spread to medical conferences, towns, cities, other states, across the U.S., to other nations. It is viewed by those affected, their grieving families, and by people never affected: opioids-induced sadness, stumbling, nodding, slumbering or silencing of life. And hope, the hope wrought by one human's desire to save another.

The movie shows the power of compassion if bound to science, how the combination can reverse the descent, the decline, the deterioration. Without charity, without cloning of the mu opioid receptor, without synthesis of a partial agonist buprenorphine, combined with its antagonistic partner naloxone, Dr. Holmes could not have escorted so many to recovery. If it catalyzes expansion of quality and quantity of services, if it catapults newly minted scientists into addiction research, if it inspires humane, compassionate treatment of addictions, if it reduces the pipeline towards addiction, if it alerts us all to risks of the young, it will earn its placement among creators of a better world.

Ms. Bess O'Brien, this award is presented to you not only in recognition of your artistic prowess, not only because it records this catastrophic increase in human anguish, but because it can serve as a rallying cry for understanding, for compassion, for belief in the value of each human life, for the power of medication-assisted treatment, and above all, for prevention.

For more quotes, other awards and a trailer of the film, please see:

[www.thehungryheartmovie.org](http://www.thehungryheartmovie.org). To view the film in its entirety, please see:

<http://vimeo.com/71529153> (the password is "cutebaby").

### Acceptance Remarks by Ms. O'Brien

Thank you to CPDD for the honor of being given the 2016 Media Award for my Film "The Hungry Heart" about prescription drug addiction. I want

## Award Winners, Continued from page 13



Bess O'Brien (center) receives the 2016 CPDD/NIDA Media Award. Also shown are Sandra Comer (left) and Bertha Madras (right).

to especially thank all the courageous people in the movie who stepped up to the plate and told their stories: folks who are in recovery, parents, and family members. Opiate addiction is a health issue, one that we all need to rally around. We need to get rid of the stigma and treat people who are addicted to drugs with respect and understanding and get them help.

## Meeting Highlights - The 2016 J. Michael Morrison Award

*As a memorial to this well-liked and respected administrator at NIDA, an award is given every other year for outstanding contributions in the area of scientific administration related to drugs of abuse.*

### Introduced by Marilyn Carroll, PhD

Dr. Minda Lynch is the winner of J. Michael Morrison Award for 2016. Minda was a Health Science Administrator at NIDA from 1998–2001, and Branch Chief from 2001 to the present in the Behavioral and Cognitive Science Research Branch, Division of Neuroscience and Behavioral Research.

Minda has shown outstanding service at NIDA in an administrative capacity, as well as teaching and mentoring. She has stimulated much interest in neuropsychopharmacology and behavioral neuroscience. For more than 18 years, she organized and co-chaired over 40 NIDA-sponsored meetings in these areas of interest. She has also published 26 original research reports and served as a guest editor for special issues of several excellent journals.

As a Program Officer, Minda is very helpful and professional when conveying the Committees' sentiments about how to improve a grant for resubmission. She is also very effective and knowledgeable at mentoring PIs regarding how to better communicate with reviewers. She is also a great teacher: In her spare time, she keeps up these skills by teaching Physiological Psychology, Neuropsychopharmacology, and Research Methods at the University of Maryland and Montgomery College.

In addition to Minda's many contributions to the science and administration of NIDA, a fellow nominator, Dr. Michael Bardo, pointed out 3 of her strengths that are most important:

1. She is straightforward and helpful in her advice to extramural researchers, and she advocates for diversity in the next generation of researchers
2. She has been a strong advocate of translational research

### Award Winners, Continued from page 14

3. And, in the spirit of Dr. Roger Brown, Dr. Minda Lynch has been a strong force who has clearly articulated the integration of neuroscience and addictive behaviors within the NIDA mission. It is notable that she first assumed her role during the “transformative” decade of the brain.

I’m sure that all of us who know her and have worked with her will want to congratulate her on her outstanding service, and I think we all agree that she is highly deserving of the J. Michael Morrison Award.

### Acceptance Remarks by Dr. Lynch

Probably only a handful of people know that I started out in drug abuse research in the mid-seventies. As an undergrad I took a pharmacology course with Dr. John Rosecrans at the Medical College of Virginia, and – pun intended – after watching the movie “Panic in Needle Park” with Al Pacino, I was hooked.

My Master’s thesis in his lab began a long-standing interest in affective properties of drugs of abuse, and I still promote research that addresses how rewarding versus aversive drug effects influence individual differences in abuse and the development of addiction. My dissertation research was inspired by discoveries of Abe Wikler in Lexington KY, as I sought to investigate the ability of drug-paired contextual cues to enhance opiate reward in choice paradigms. My fascination with the power of Pavlovian associations, including those made with interoceptive stimuli, to direct craving, seeking, and drug taking has continued throughout my career.

As an independent investigator, I studied affective dimensions of psychopathology, investigating serotonergic modulation of cortical-subcortical neurocircuitry in anhedonia. When I left independent research, it was because I thought I could make a bigger impact by working at the “top,” and this honor I receive today is affirmation that my efforts are recognized as making a difference.

Along the way I’ve had great role models, and have been influenced by some of addiction science’s best and brightest. As part of the Balster lab at the Medical College of Virginia, I was privileged to work in a stellar behavioral pharmacology program beside colleagues like the late Bill Woolverton. I traveled to Concordia University for post-doctoral training with Roy Wise, where I studied central motivational neurocircuitry, probed using intra-cranial self-stimulation.

When I left the Syracuse, NY VA and Department of Psychiatry at Upstate Medical Center to join NIDA, I told my previous mentor and colleague, Bob Carey, “I can’t believe they’re going to pay me to have this much fun.” I’ve repeated that sentiment again, many times since.



Minda Lynch (center) receives the 2016 J. Michael Morrison Award. Also shown are Sandra Comer (left) and Marilyn Carroll

## Award Winners, Continued from page 15

I joined NIDA to replace Dr. David Shurtleff as a Program Officer when he was promoted to Deputy Division Director in 1998. I took his office and found the only items left in his desk were throat lozenges. I quickly learned that as Program Administrators, we talk to people A LOT. We work behind the scenes: tracking the science, trying to move it and shape it; we advise and guide the “next generation” of emerging addiction researchers. All of this involves a lot of talking – discussing your ideas, advising you in preparing your applications, de-coding your summary statements, and also presenting, discussing or chairing workshops and symposia to promote cutting-edge discoveries and emerging scientific areas. I’m fortunate to work in an environment where creativity and intellectual growth are limited only by hours in the day; and more recently, by dollars!

However, most of what we do is accomplished by collaborative endeavors. I appreciate the energy and inspiration of our team at NIDA – the Division of Neuroscience and Behavioral Research – as colleagues and partners in moving our science forward. I am truly lucky to interact professionally with the smartest and most interesting people imaginable: my NIH and NIDA colleagues and the extramural drug abuse research community. I greatly appreciate this honor. Thank you.

## Meeting Highlights - The 2016 Stephen G. Holtzman Travel Award for Preclinical Investigators

*The Stephen G. Holtzman Travel Award for Preclinical Investigators was established by family and friends of Dr. Holtzman to honor his memory in tribute to his long-time service and dedication to the College on Problems of Drug Dependence. This award will be given annually or biannually to either a predoctoral student or postdoctoral trainee*

*involved in preclinical research related to drug abuse and dependence.*

### Introduced by Martin Adler, PhD

One of Dr. Stephen Holtzman’s lasting scientific achievements is the role that he played in the development and validation of behavioral drug discrimination in the characterization of CNS-acting drugs. He was among the first to propose that the discriminative stimulus effects of drugs in animals are analogous to their subjective effects in humans.

Steve published over 400 scientific papers and was successful in receiving research grants for over 40 years. He was active in many scientific organizations, particularly ASPET and CPDD, serving as President of both organizations, as well as serving as Treasurer and chair of numerous committees within CPDD. Dr. Holtzman was a devoted teacher and mentor, and received the Mentor Award from CPDD. Most of all, Steve was a great colleague and a truly great friend to many of us.

The recipient of the second annual Stephen G. Holtzman Travel Award for Preclinical Investigators is Jae Kim. He is truly a worthy recipient, both in terms of his research and his character. His mentor at Temple University is Dr. Scott Rawls who, unfortunately, was not able to be with us today. It is with great pleasure that I present this award to Jae Kim. His research has targeted the glutamate and chemokine systems in cocaine addiction. He is currently first author on 2 articles published in highly respected journals. He has mentored numerous students at varying academic levels from high school to professional school and proven himself to be an effective communicator of scientific knowledge. Jae will graduate shortly and anticipates authoring 2 additional first-author publications before the completion of his Ph.D.



*Award Winners, Continued from page 16*

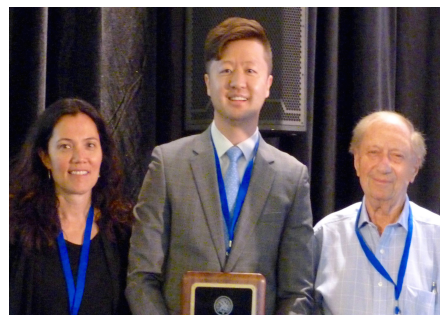
### Acceptance Remarks by Mr. Kim

I would like to thank CPDD and the members of the Awards Committee. It is a great honor to be this year's recipient of the Stephen G. Holtzman Award for Preclinical Investigators.

I would like to thank my mentor, Dr. Scott Rawls, for many late-night conversations about anything and everything in life—of course, including science. Those conversations ultimately shaped me into the person I am today. I would also like to thank my colleagues and friends. I am lucky to have worked with such wonderful people.

I cannot forget my wife and the two kids who stood by me through thick and thin to support my pursuit of scientific knowledge. Thank you. I could not have done it without you.

In closing, I would like to express my gratitude for generous financial support that allowed me to attend the conference. Without it, it would not have been possible to share my most recent research investigating the role of chemokines in cocaine reinforcement and relapse. Thank you for the honor of receiving the Stephen G. Holtzman Award for Preclinical Investigators.



Jae Kim (center) receives the Stephen G. Holtzman Travel Award for Preclinical Investigators. Also shown are Sandra Comer (left) and Martin Adler (right).

## Congratulations to our newly elected CPDD Officers and Board Members!

**President Elect:** Margaret Haney

**Treasurer:** Jack Bergman

### Board of Directors:

Mark Smith

Stacey Sigmon

Amy Janes

Geoffrey Mumford

### CPDD OFFICERS

LEONARD HOWELL, PHD, PRESIDENT  
SANDRA COMER, PHD, PAST-PRESIDENT  
ALAN BUDNEY, PHD, PRESIDENT-ELECT  
LINDA COTTLER, PHD, MPH,  
TREASURER  
LORETTA FINNEGAN, MD, EXECUTIVE  
OFFICER

### BOARD OF DIRECTORS

PATRICK BEARDSLEY, PHD  
JACK BERGMAN, PHD  
KATHLEEN CARROLL, PHD  
MARILYN CARROLL, PHD  
HOWARD CHILCOAT, SCD  
TIMOTHY CONDON, PHD  
TOBY EISENSTEIN, PHD  
MARGARET HANEY, PHD  
SARAH HEIL, PHD  
MARC J. KAUFMAN, PHD  
CHARLES O'KEEFFE, M.B.A.  
THOMAS PRISINZANO, PHD  
JENNIFER TIDEY, PHD  
ELISE WEERTS, PH.D.

### CPDD PUBLICATIONS COMMITTEE

SILVIA MARTINS, CHAIR  
DIANN GAALEMA  
LAUREN PACEK  
MARY TORREGROSSA  
DENISE VIDOT  
PAUL HARRELL  
JUN-XU LI  
CASTALDELLI-JOAO MAIA

### SEND MATERIALS FOR NEWSLINE TO:

LAUREN R. PACEK, PH.D.  
DUKE UNIVERSITY MEDICAL CENTER  
DEPARTMENT OF PSYCHIATRY AND  
BEHAVIORAL SCIENCES  
2608 ERWIN ROAD  
ROOM 3038  
DURHAM, NC 27705  
EMAIL: [LAUREN.PACEK@DUKE.EDU](mailto:LAUREN.PACEK@DUKE.EDU)

## 79<sup>th</sup> Annual Meeting

### LOCATION

Hôtel Bonaventure,  
Montréal, Canada

### DATES

June 17-22, 2017

### DEADLINES

*Symposia/Workshop*  
October 17, 2016

*CPDD Travel Awards for  
Early Investigators*  
December 7, 2016

*Holtzman Travel Award*  
December 7, 2016

*Abstract Submission*  
December 1, 2016

*CPDD International  
Travel Awards*  
January 4, 2017

*Awards for Excellence  
Nominations*  
February 1, 2017

*Late Breaking Research  
Submission*  
April 14, 2017

## Notable Committee News

### Education, Outreach, and Public Policy Committee

The Committee has drafted material on prescription opioid misuse and abuse and needs to develop additional materials. If CPDD members would like to volunteer to develop and curate informational material for the CPDD website please contact EOPP Chair Dennis McCarty at [Mccartyd@ohsu.edu](mailto:Mccartyd@ohsu.edu).

### Policy Forum

The 2016 Policy Forum featured Van Scoyoc Associates' update on key Congressional concerns and activities related to research on drugs of abuse and the prevention and treatment of drug use disorders. CPDD members may review the monthly reports from Van Scoyoc on the CPDD web site.

### Members-in-Training Committee

The committee held their second annual MIT Town Hall meeting at the 2016 CPDD annual meeting. The MIT committee co-chaired the 2<sup>nd</sup> annual workshop on careers in addiction science and began their second cycle of the MIT Mentorship Program with 20 mentor/mentee pairs.