

# NIDA International Program

## Summary of Fiscal Year (FY) 2006 Program Accomplishments



National Institute on Drug Abuse  
National Institutes of Health

U.S. Department of Health and Human Services

To facilitate cooperation between countries, organizations, and individual scientists, the International Program of the National Institute on Drug Abuse (NIDA) supports collaborative research, regional networks, and scientific exchange activities that promote the Institute's scientific priorities. The International Program's funding announcements, research exchanges, and capacity-building programs address the public health impact of drug abuse and addiction through local, regional, national, and international drug abuse research networks.

NIDA formally created its International Program in 1990 because the Institute recognized that multinational cooperation was urgently required to effectively address the global burdens of drug abuse and its related health consequences. The NIDA International mission is to (1) take advantage of unique opportunities to advance scientific knowledge through research; (2) address the global impact of addiction on public health through activities that build research capacity internationally; and (3) effectively disseminate and share the knowledge gained through NIDA-supported research to scientists, treatment providers, and policymakers around the world.

Exhibit 1, *FY2006 NIDA International Program Activities*, summarizes the activities the NIDA International Program supports to successfully develop new international scientific networks, encourage junior scientists to become drug abuse researchers, and engage experts from underrepresented geographic areas in international collaborative research.

**Exhibit 1—Fiscal Year 2005 NIDA International Program Activities**

Category	Number of Activities	Number of Countries
<b>International Research Activities</b>		
• Domestic Grants With Foreign Components	90	39
• Direct Foreign Grants	15	11
• Binational Agreements	4	4
• Grants Awarded by Interagency Funding Agreements	51	46
<b>Fellowships and Research Exchanges</b>		
• DISCA/USDISCA	6	5
• INVEST Fellowships	4	3
• NIDA Hubert H. Humphrey Fellowships	13	13
• WHO/NIDA/CPDD International Traveling Fellowships	2	2
<b>Scientific Exchange and Capacity Building</b>		
• International Program Meetings	2	1
• Symposia	4	3
• Travel Support		
› NIDA Grantees	10	5
› Foreign Researchers	40	19



To accomplish its mission, the NIDA International Program has adopted strategies to:

- Encourage rigorous collaborative and peer-reviewed international research.
- Strengthen and stimulate international drug abuse research networks by:
  - › Providing professional development and technical consultation opportunities.
  - › Partnering with other international funding organizations.
  - › Developing distance learning programs and Web-based training and research opportunities.

Together, these strategies have resulted in new research initiatives, productive research exchanges, exemplary training programs, numerous publications in scientific journals, and substantive presentations at scientific meetings.

## **PART 1: ENCOURAGE RIGOROUS COLLABORATIVE AND PEER-REVIEWED INTERNATIONAL RESEARCH**

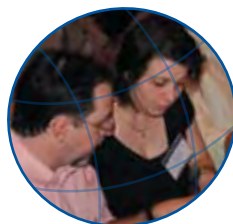
Enhancing efforts to promote high-quality research cooperation between NIDA grantees and drug abuse researchers from other countries, the NIDA International Program has adopted strategies and funding mechanisms that provide a catalyst for new research collaborations.

NIDA supports international collaborative research on the biomedical, behavioral, and environmental causes, consequences, prevention, and treatment of drug abuse and addiction. During FY2006, NIDA used domestic grants with a foreign component and direct foreign grants to provide support for more than 100 international research projects in 68 nations. The Institute also supported 51 international research projects in 46 nations through interagency funding agreements with the Fogarty International Center and the National Institute of Allergy and Infectious Diseases.

### **Research Funding**

#### **Program Announcements**

Program Announcements inform scientists about areas of science for which NIDA would like to receive grant applications. During FY2006, NIDA reissued the Program Announcement, *International Collaboration on Drug Abuse Research*, to solicit collaborative research proposals on drug abuse and addiction that take advantage of unusual talent, resources, populations, or environmental conditions in other countries; speed scientific discovery; and meet NIDA research priorities. The Institute's current scientific priority areas include linkages between HIV/AIDS and drug abuse, adolescent and prenatal tobacco exposure, methamphetamine, inhalant abuse, and drugged driving. Research must be conducted by U.S. investigators in collaboration with non-U.S.-based investigators, and applications may be for new or continuing funding.



## **CICAD/NIDA Competitive Research Program to Support Drug Epidemiology**

Through its Latin American Initiative, NIDA and the Inter-American Drug Abuse Control Commission (CICAD) introduced the Competitive Research Program to Support Drug Epidemiology in FY2006. Awards will support pre- or postdoctoral students on projects designed to fully exploit research data and information from existing databases in order to generate new analyses and promote greater understanding of the drug problem in the hemisphere. The national drug commissions in Organization of American States member states review initial applications and forward appropriate projects to the CICAD Inter-American Observatory on Drugs for review by representatives from NIDA, CICAD, and the U.S. National Hispanic Science Network. The first awards will be made in FY2007.

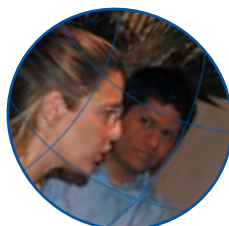
## **Funding for Fellowship Alumni**

Alumni of the NIDA International Program fellowships are eligible for small grants to support drug abuse research upon their return home. INVEST Drug Abuse Fellowship alumni may apply for the Global Health Research Initiative Program for New Foreign Investigators (GRIP) awards cofunded by NIDA and the Fogarty International Center. Dr. Min Zhao, NIDA 2001–2001 INVEST Fellow and 2005 Distinguished International Scientist, received a GRIP award in FY2006 to conduct a longitudinal study of gender-related differences in sexual and drug use risk behaviors among injection drug users (IDUs) in Shanghai, China.

Former NIDA Hubert H. Humphrey Drug Abuse Research Fellows may apply for IMPACT awards cofunded by the U.S. Department of State and the Institute for International Education to pursue objectives that expand the impact of the knowledge and skills that they gained as a result of their Humphrey Fellowship experiences. During FY2006, Dr. Monica Malta received an IMPACT Award to train Brazilian health professionals to treat HIV-positive drug users. Working with the Brazilian National Program of STD/AIDS, the Oswaldo Cruz Foundation, the Pan American Health Organization, and regional ministries of health, Dr. Malta disseminated a Spanish-language version of the Best Practices manual she developed during her Humphrey Fellowship.

## **Scientific Publications**

To provide an international perspective on research exploring the intersections between drug abuse and HIV/AIDS, the NIDA International Program supported *Drug Abuse and HIV/AIDS: International Research Lessons and Imperatives*, a 2006 supplement to *Drug and Alcohol Dependence* (82: S1). Approximately half of the studies included in the supplement were supported, at least in part, by NIDA research funding, and several of the authors received research training fellowships through the NIDA International Program. The 16 articles from 15 countries demonstrate the way in which NIDA captures the synergy of international collaborations to develop research-based prevention and treatment strategies that address licit and illicit drug use and HIV/AIDS. The supplement presented research findings delineating three themes: (1) the explosive nature of the spread of the HIV/AIDS epidemic, particularly in areas where drug abuse drives the epidemic; (2) the interrelationship



between HIV prevention and treatment and drug abuse prevention and treatment; and (3) research to understand and overcome barriers to conducting effective surveillance, prevention, and treatment interventions. Collaborating with scientists in countries with differing HIV epidemics allows NIDA-supported researchers to test the efficacy of HIV prevention interventions, including drug addiction treatment, in different stages of the epidemic; isolate variables to learn more about how misuse and abuse of specific drugs affect AIDS onset and progression; compare HIV transmission among various subgroups of drug users; and investigate immune system functions.

The science-based information published by International Program alumni and NIDA-supported researchers contributes to international efforts to develop, adopt, and evaluate government policies, prevention programs, and treatment protocols that effectively address drug abuse and its consequences. During FY2006, scientists participating in International Program activities published more than 125 articles in scientific journals. Former NIDA INVEST and Humphrey Drug Abuse Research Fellows authored nearly two-thirds of those publications, as summarized in *Exhibit 2—FY2006 Publications by Former NIDA International Program Fellows*, and researchers supported by the International Program Distinguished International Scientist exchanges or binational agreements published 13 articles about research projects conducted in 7 nations. NIDA grantees conducting research in 29 nations through domestic grants with foreign components or direct foreign grants published an additional 37 articles.

**Exhibit 2—FY2006 Publications (N=78) by Former NIDA International Program Fellows\***

Scientific Journal (N=58)	Former NIDA Fellow (N=35)	Fellow's Home Country (N=21)	Year of Fellowship
Addictive Behaviors	Neo Morojele	South Africa	1998–1999
Addiction Biology	Chung Tai Lee	South Korea	1994–1995
Addiction	Debasish Basu	India	2001–2002
	Guilherme Borges	Mexico	1997–1998
	Isidore S. Obot	Nigeria	1991–1992
AIDS	Olga Toussova	Russia	2001–2002
AIDS and Behavior	Neo Morojele	South Africa	1998–1999
AIDS Care	Neo Morojele	South Africa	1998–1999
AIDS Education and Prevention	Neo Morojele	South Africa	1998–1999
American Journal on Addictions	Debasish Basu	India	2001–2002
American Journal of Forensic Medicine and Pathology	Arthur Guerra de Andrade	Brazil	1991–1992
American Journal of Otolaryngology	Debasish Basu	India	2001–2002
American Journal of Medical Genetics, Part B: Neuropsychiatric Genetics	Lan Zhang	China	2004–2005
	Min Zhao	China	2001–2002

\*As indexed in PubMed

\*\*Multiple articles published in this journal.



**Exhibit 2—FY2006 Publications (N=78) by Former NIDA International Program Fellows\* (continued)**

Scientific Journal (N=58)	Former NIDA Fellow (N=35)	Fellow's Home Country (N=21)	Year of Fellowship
Brain Research	Chuang Liu	China	2000–2001
Bulletin of the World Health Organization	Guilherme Borges	Mexico	1997–1998
	Isidore S. Obot	Nigeria	1991–1992
Chinese Journal of Integrative Medicine	Min Zhao	China	2001–2002
Clinical Toxicology (Philadelphia, PA)	Wei-Jen Tsai	Taiwan	1992–1993
Collegium Antropologicum	Irena Martin-Kleiner	Croatia	1995–1996
Computer Methods and Programs in Biomedicine	Yufeng Chen	China	2003–2004
Dialogues in Clinical Neuroscience	Gerald Zernig	Austria	1993–1994
Drug and Alcohol Dependence	Guilherme Borges	Mexico	1997–1998
	Henrik Druid	Sweden	2000–2001
	Eli Lawental	Israel	1993–1994
	Flavio Pechansky	Brazil	1993–1994
	Sandra Reid	Trinidad & Tobago	1992–1993
	Min Zhao	China	2001–2002
	Young Hoon Sung	South Korea	2005–2006
Drug News & Perspectives	Steve McGaraghty	Canada	1995–1996
European Journal of Pharmacology	Anton Beshpalov** (3)	Russia	1994–1995
	Marco Bortolato	Italy	2004–2005
	Silvia Cruz	Mexico	1996–1997
European Neuropsychopharmacology	Anton Beshpalov** (2)	Russia	1994–1995
Forensic Science International	Henrik Druid	Sweden	2000–2001
Indian Journal of Physiology and Pharmacology	Amit Chakrabarti	India	2002–2003
International Clinical Psychopharmacology	Gerald Zernig	Austria	1993–1994
International Journal of Dermatology	Raka Jain	India	1996–1997
International Journal of Behavioral Medicine	Neo Morojele	South Africa	1998–1999
International Journal of Epidemiology	Neo Morojele	South Africa	1998–1999
Journal of Acquired Immune Deficiency Syndromes	Olga Toussova	Russia	2001–2002
Journal of Adolescent Health	Neo Morojele	South Africa	1998–1999
Journal of Biological Chemistry	Danxin Wang	China	1996–1997
Journal of Clinical Psychiatry	Gerald Zernig	Austria	1993–1994
Journal of Ethnobiology and Ethnomedicine	Stephen Nsimba	Tanzania	2005–2006
Journal of Neurophysiology	Steve McGaraghty	Canada	1995–1996
Journal of Neuroscience	Olivier Manzoni	France	1997–1998
	Gerald Zernig	Austria	1993–1994

\*As indexed in PubMed

\*\*Multiple articles published in this journal.





**Exhibit 2—FY2006 Publications (N=78) by Former NIDA International Program Fellows\* (continued)**

Scientific Journal (N=58)	Former NIDA Fellow (N=35)	Fellow's Home Country (N=21)	Year of Fellowship
Journal of Neuroscience Research	Isabelle Husson	France	2002–2003
Journal of Pharmacology and Experimental Therapeutics	Marco Bortolato	Italy	2004–2005
Psychological Medicine	Guilherme Borges	Mexico	1997–1998
Nature	Henrik Druid	Sweden	2000–2001
Neuroimmunomodulation	Irena Martin-Kleiner	Croatia	1995–1996
Neuropsychopharmacology	Marco Bortolato**(2)	Italy	2004–2005
	Zhengxiong Xi	China	1995–1996
Neuroscience	Steve McGaraghty	Canada	1995–1996
Nordic Journal of Psychiatry	Marjattertu Pajulo	Finland	2003–2004
Pharmaceutical Research	Danxin Wang	China	1996–1997
Pharmacogenetics and Genomics	Danxin Wang	China	1996–1997
Proceedings of the National Academy of Sciences of the United States of America	Marco Bortolato	Italy	2004–2005
	József Langó	Hungary	1997–1998
Progress in Neuro-Psychopharmacology & Biological Psychiatry	Chung Tai Lee	South Korea	1994–1995
Psychopharmacology	Gerald Zernig	Austria	1993–1994
	Min Zhao	China	2001–2002
Revista Brasileira de Psiquiatria	Arthur Guerra de Andrade	Brazil	1991–1992
	Sergio Nicastri	Brazil	1997–1998
	Vladimir Stempliuk	Brazil	2003–2004
Revue Médicale Suisse	Gerald Zernig	Austria	1993–1994
Revista Panamericana de Salud Pública	Guilherme Borges	Mexico	1997–1998
Revista de Saúde Pública	Arthur Guerra de Andrade	Brazil	1991–1992
	Vladimir Stempliuk	Brazil	2003–2004
The Science of the Total Environment	Maritza Rojas	Peru	1996–1997
Sexually Transmitted Diseases	Lan Zhang	China	2004–2005
Southeast Asian Journal of Tropical Medicine and Public Health	Stephen Nsimba	Tanzania	2005–2006
Tobacco Control	Neo Morojele	South Africa	1998–1999
Toxicology Letters	Henrik Druid	Sweden	2000–2001
Toxicon: Official Journal of the International Society on Toxinology	József Langó	Hungary	1997–1998
Tropical Medicine & International Health	Stephen Nsimba	Tanzania	2005–2006

\*As indexed in PubMed

\*\*Multiple articles published in this journal.



## **PART 2: STRENGTHEN AND STIMULATE INTERNATIONAL DRUG ABUSE RESEARCH NETWORKS**

The problems of drug abuse and addiction know no boundaries, and every nation is affected by them. By coordinating global and regional scientific networks, the NIDA International Program helps address public health issues related to drug abuse and addiction using NIDA research methodologies and findings. The International Program works to strengthen and stimulate international drug abuse research networks through a wide variety of activities that fall into three broad categories: (1) providing professional development and technical consultation opportunities; (2) partnering with other international funding organizations; and (3) developing distance learning programs and Web-based training and research opportunities.

### **Providing Professional Development and Technical Consultation Opportunities**

Since 1990, the NIDA International Program has provided unparalleled research training and professional development opportunities for 117 drug abuse experts from 48 nations through 1 of 3 programs designed for: (1) postdoctoral researchers; (2) mid-career professionals from developing and transitional countries; or (3) senior scientists. Working with the World Health Organization (WHO) and the College on Problems of Drug Dependence (CPDD), the International Program also supports International Traveling Fellowships for researchers from developing and transitional countries. The International Program organizes scientific meetings—particularly the annual NIDA International Forum—to help participants meet drug abuse scientists from other countries, strengthen existing research collaborations, and identify potential partners and new topics for cooperation. When scientific meetings sponsored by other organizations advance NIDA research priorities, scientific discoveries, or identified needs, the International Program may contribute programmatic or financial support. Talented researchers from the United States and other countries may apply for International Program support to cover travel or registration fees to attend major scientific meetings or consult on specific NIDA research methods, findings, or tools.

### **Research Exchanges and Fellowships**

NIDA Distinguished International Scientist Collaboration Award (DISCA) and Distinguished International Scientist Collaboration Award for U.S. Citizens and Permanent Residents (USDISCA) are 1- to 3-month, result- and product-oriented awards that support visits by veteran researchers from other countries and their NIDA grantee partners. DISCA recipients travel to the United States; USDISCA recipients travel to their research partner's home country. The FY2006 DISCA/USDISCA awards included:





- Dr. Pierre-Paul Rompre, Canada; and Dr. Roy A. Wise, NIDA Intramural Research Program, investigated the reward-relevant substrate within the brain's medial posterior mesencephalon and its link with the ventral tegmental area, and prepared a scientific article.
- Dr. Raka Jain, All India Institute of Medical Sciences; and Dr. Michael H. Baumann, NIDA Intramural Research Program, completed pilot studies assessing the acute neurochemical effects of modafinil on extracellular dopamine and serotonin levels; preliminary results suggest modafinil may be an effective pharmacotherapy for cocaine addiction.
- Dr. Tatiana P. Tsarouk, Moscow State Medical Stomatology University, Russia; and Dr. Elaine Thompson, University of Washington, tested a drug use and HIV prevention model designed for Russian adolescents, submitted two scientific articles, and are developing a grant application.
- Dr. Hari Sharma, Uppsala University, Sweden; and Dr. Eugene Kiyatkin, NIDA Intramural Research Program, examined the relationship between the permeability of the blood-brain barrier and methamphetamine-induced increases in brain and core body temperature, finding that drugs influencing serotonin neuro-transmission can either enhance or decrease METH-induced body temperature in rats.
- Dr. Thomas F. Babor, University of Connecticut; and Dr. Robin Room, Stockholm University, Sweden, examined the linkages between addiction science and drug policy, drafting a concept paper on alcohol and drug treatment systems and five chapters of a book for the Drugs and Public Policy Project. With WHO, the team is developing a new instrument to collect planning data on drug and alcohol treatment services.
- Dr. Ronald E. See, Medical University of South Carolina; and Dr. Juan Canales, University of Valencia, Spain, assessed the underlying neural mechanisms in an animal model of relapse to cocaine-seeking behavior, submitted a grant application, and planned future exchanges.

During FY2006, four researchers received the 12-month postdoctoral NIDA INVEST Drug Abuse Research Fellowship. Dr. Paulo Telles, State University of Rio de Janeiro, Brazil; and Dr. Kimberly Page Shafer, University of California, San Francisco, analyzed HCV infection protection or susceptibility among young IDUs. Dr. Wagner Alves de Souza Judice, Universidade Federal de São Paulo, Brazil; and Dr. Iris Lindberg, Louisiana State University, explored differences between PC1 and PC2 endoproteases to investigate their roles in the biosynthesis of opioid peptides. Dr. Paula M. Mayock, Trinity College, Ireland, worked with Dr. Michael C. Clatts, National Development and Research Institutes, Inc., to investigate ethno-epidemiological research approaches for out-of-treatment populations, particularly young, homeless IDUs. Dr. Doug Hyun Han, Seoul National University Hospital, South Korea; and Dr. Perry F. Renshaw, McLean Hospital/Harvard University, used functional magnetic resonance imaging (fMRI) to assess brain pathophysiology in Internet/video game and methamphetamine dependence.

NIDA sponsors a drug abuse research component of the U.S. Department of State Hubert H. Humphrey Fellowship Program. The NIDA Humphrey Fellowships add a research affiliation with a NIDA grantee to the State Department's academic study and professional development activities for mid-career professionals from



developing and transitional countries. During FY2006, NIDA supported Humphrey Fellows from Jamaica, Kenya, and Venezuela; the State Department supported Fellows from Armenia, Bangladesh, India, Panama, South Africa, Sri Lanka, Syria, Tanzania, Trinidad and Tobago, and Vietnam.

The WHO/NIDA/CPDD International Traveling Fellowships provide travel support for international researchers to conduct research visits to NIDA grantees and participate in two scientific meetings: the NIDA International Forum and the CPDD Annual Scientific Meeting. In FY2006, the Fellows were Kostyantyn Dumchev, M.D., Ukraine; and Min Zhao, M.D., Ph.D., China. Dr. Dumchev worked with Dr. Joseph E. Schumacher, University of Alabama at Birmingham, to analyze data from studies on behavioral treatments and predictors of HCV/HIV status in Ukrainian IDUs. Dr. Zhao and Dr. Walter Ling, University of California Los Angeles, planned a project to develop and validate a Chinese version of the Addiction Severity Index.

### **Scientific Meetings**

Each year, the NIDA International Program organizes the NIDA International Forum, a satellite to the CPDD annual meeting. More than 289 registrants from 53 countries participated in the 2006 NIDA International Forum—International Trends and Needs in Drug Abuse Research, which was held June 16–19 in Scottsdale, Arizona. The meeting featured reports on drug abuse research being conducted around the world, international drug control debates, and updates on NIDA research interests and funding priorities. Interactive workshops focused on preparing competitive grant applications, regional- and treatment-based drug abuse research networks, and Web-based tools for drug abuse scientists. During the poster session, more than 160 drug abuse scientists from around the world presented their research to NIDA International Forum and CPDD participants while representatives from nine NIDA components presented posters summarizing the units' goals, research interests, international focus, and international funding priorities. At the meeting, the NIDA International Program inaugurated an award to honor mentors, researchers, binational collaborative teams, and individuals whose efforts support the International Program mission. The 2006 NIDA International Program Awards of Excellence were presented to Robert L. Balster, Virginia Commonwealth University, for excellence in mentoring; Flávio Pechansky, Federal University of Rio Grande do Sul, Brazil, for excellence in international leadership; and George Woody, University of Pennsylvania, and Edwin Zvartau, Pavlov State Medical University, Russia, for excellence in collaborative research.

Despite differences in the underlying causes, the abused substances, and the patterns of use, inhalant abuse is a growing public health problem for rich and poor nations worldwide. To help set the direction for future international research and practice collaborations, the NIDA International Program organized *Inhalant Abuse Among Children and Adolescents: Consultation on Building an International Research Agenda*, which was held at NIDA on November 7–9, 2005. Cosponsors included the Fogarty International Center; the Institute of Neurosciences, Mental Health, and Addiction and the Institute of Aboriginal Peoples' Health, of the Canadian Institute



of Health Research; and CONADIC, the Mexican Consejo Nacional Contra las Adicciones. The 55 participants from 10 countries presented reports on the public health impact and global epidemiology of inhalant abuse; neurological effects of inhalants on the brain; interventions to prevent and treat inhalant abuse; and manufacturers' reformulation of products with abuse liability in response to research findings. Meeting participants identified two overarching priorities: (1) an international workgroup of pharmacologists and epidemiologists should be created to classify substances and develop questions for use in screening instruments and surveys; and (2) the cosponsors should establish a mode for communication and exchange of information on issues related to inhalants research.

During FY2006, the NIDA International Program supported symposia at the Society for Neuroscience Research annual meeting and the U.S.-Mexico 6th Bi-National Drug Demand Reduction Conference. Working with the European Commission; European Monitoring Centre for Drugs and Drug Addiction; International Council on Alcohol, Drugs and Traffic Safety; International Association of Forensic Toxicologists; and the French Society of Analytical Toxicologists, the NIDA International Program supported two meetings on drugged driving to assess new detection devices for drugged drivers and draft standards for drugged-driving research to ensure the comparability of data from country to country. The International Program also provided travel support for 10 NIDA grantees who participated in 6 scientific meetings and 41 researchers from 19 countries who participated in 9 scientific meetings.

## **Partnering With Other International Funding Organizations**

The International Program frequently works with international organizations and drug abuse research institutions in other nations to promote collaborative research and information exchange. By cooperating regularly on issues of mutual interest, the NIDA International Program is better able to streamline collaborative efforts and to move rapidly to address emerging opportunities.

### **Binational Agreements**

Binational agreements between NIDA and research organizations in Mexico, the Netherlands, Russia, and Spain help the NIDA International Program develop new international scientific relationships and significantly enhance existing relationships. The binational teams cooperate on drug abuse research by cosponsoring symposia, supporting exchange visits, and exchanging information and materials about drug addiction research.

The International Program and the Dutch Addiction Program have developed a uniquely successful model of joint funding for binational collaborative research. The separate and joint scientific reviews ensure that each binational research project meets the individual nations' research criteria and scientific priorities. The arrangement has been highly productive. Since 1999, the 2 nations



have held 4 binational symposia and cofunded 10 binational research projects, which have resulted in 1 R01 grant award; 3 new collaborative links inspired by the U.S-Netherlands projects; 11 books, chapters, or reports; 19 articles in scientific journals, with 8 more articles in review; and 26 presentations at scientific meetings.

In addition to the Institute's agreement with the Dutch Addiction Program, NIDA currently has agreements with Pavlov Medical University in St. Petersburg, Russia; and the Spanish National Plan on Drugs. NIDA and Mexico's CONADIC are the lead agencies for cooperative drug abuse research under an agreement between the countries' ministries of health.

### **International Organizations and Institutional Partners**

NIDA cooperates with international organizations to develop research, training, and communications efforts that fulfill the institutions' shared scientific and public health missions. During FY2006, those organizations included the World Health Organization, UNAIDS, United Nations Office on Drugs and Crime, Inter-American Drug Abuse Control Commission, Pan American Health Organization, CONADIC, and two components of the Canadian Institute of Health Research: the Institute of Neurosciences, Mental Health, and Addiction; and the Institute of Aboriginal Peoples' Health.

### **Developing Distance Learning Programs and Web-Based Training and Research Opportunities**

Web-based resources permit the NIDA International Program to expand its global community through the creative use of time and technology, build research capacity through consistent learning opportunities, expand professional development opportunities, and facilitate scientific exchange among countries by providing electronic discussion forums and resource tools.

### **Publishing Addiction Research Internationally**

To assist international researchers in publishing their results, the International Program supported the International Society of Addiction Journal Editors in developing a Web site—Publishing Addiction Research Internationally, [www.PARINT.org](http://www.PARINT.org)—and a companion publication. Tools help researchers identify appropriate substance abuse journals, prepare scientific journal manuscripts, and respond to reviewer critiques. Journal editors can update data about their publications and access a database of scientists from low- and middle-income countries who can serve as authors, editors, or peer reviewers. Peer reviewers find advice on working with scientific journal editors and on preparing comments for authors.



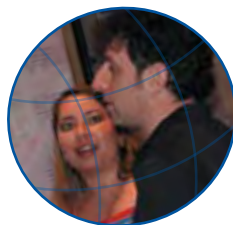
## **Web-Based Tools**

During FY2006, NIDA completed the online *Methadone Research Web Guide*, a quick-reference tool for the international community and NIDA grantees that presents U.S. research outcomes about methadone maintenance treatment, reviews best practices in treatment program design and implementation, and disseminates evidence-based treatment protocols. The project, which began in FY2004, updated a 1995 NIDA International Program publication, adding new research findings, an expanded history of methadone maintenance as a treatment modality in the United States, and providing links to other online resources. The *Methadone Research Web Guide* is available through the NIDA International Program Web page, at [http://international.drugabuse.gov/methadone/methadone\\_web\\_guide/toc.html](http://international.drugabuse.gov/methadone/methadone_web_guide/toc.html).

Three Small Business Innovation Research (SBIR) contract awards support the development of (1) the NIDA International Virtual Collaboratory, which supports live audio/video virtual meetings, discussion forums, and document-editing and storage tools; (2) International Collaboration Opportunities and Research Partnerships, a social networking Web site for researchers; and (3) Drug Abuse Research Training for International Researchers, an interactive Web portal which will include science-based, online drug abuse training modules. The NIDA International Program also supported development of the Online International Master's Degree Program in Addiction Studies, a collaborative effort between Virginia Commonwealth University, Kings College at the University of London, and the University of Adelaide in Australia.

## **Information Dissemination**

The NIDA International Program Web site, [www.international.drugabuse.gov](http://www.international.drugabuse.gov), and the bimonthly E-News Letter disseminate information about recent NIDA activities, funding opportunities, International Program research training and exchange programs, resources for researchers, NIDA-supported scientific meetings, and Web links to information or organizations of interest to the international drug abuse research community. Past issues of the E-News Letter are archived on the site.



## Exhibit 3—Summary of NIDA International Program Fiscal Year 2006 Accomplishments

### Encourage rigorous collaborative and peer-reviewed international research

#### Research Funding

- 156 international research projects funded in 68 nations
- Program Announcement
  - › International Collaboration on Drug Abuse Research
- CICAD/NIDA Competitive Research Award Program
  - › Pre- or postdoctoral funds to support drug epidemiology in OAS member states
- INVEST Fellowship Alumni GRIP Award
  - › Longitudinal study of gender-related differences in sexual and drug use risk behaviors among injection drug users in Shanghai, China
- Humphrey Fellowship Alumni Impact Award
  - › Train Brazilian health professionals to treat HIV-positive drug users

#### Research Publications

- Supplement to Drug and Alcohol Dependence
  - › 16 articles from 15 countries on drug abuse and HIV/AIDS
- 128 articles in scientific journals
  - › 78 articles published by 35 former Fellows from 21 countries
  - › 13 articles published by other IP-funded researchers conducting research in 7 nations
  - › 37 articles published by NIDA grantees conducting research in 29 nations through domestic grants with foreign components or direct foreign grants



### Strengthen and stimulate international drug abuse research networks by:

#### Providing professional development and technical consultation opportunities

##### Fellowships and Research Exchanges

- › DISCA Results
  - Pilot studies suggest modafinil may be effective treatment for cocaine abuse
  - Scientific articles submitted
  - R01 application submitted
  - Drugs influencing serotonin neurotransmission affect METH-induced temperature changes
- › USDISCA Results
  - Drafted 5 chapters of Drugs and Public Policy Project
  - With WHO, developing a new instrument to collect planning data on drug and alcohol treatment services
  - R01 submitted



- › INVEST Fellows' Research Topics
  - Ethno-epidemiological research approaches for out-of-treatment populations, particularly homeless, young IDUs
  - Analysis of HCV infection protection or susceptibility among young IDUs
  - Exploration of differences between PC1 and PC2 endoproteases and their roles in the biosynthesis of opioid peptides
- › WHO/NIDA/CPDD International Traveling Fellows' Research Topics
  - Analysis of data from studies on behavioral treatments and predictors of HCV/HIV status in Ukrainian IDUs
  - Development of plan for project to develop and validate a Chinese version of the ASI





### Exhibit 3—Summary of NIDA International Program Fiscal Year 2006 Accomplishments (continued)

› Humphrey Fellows represent 13 nations

- Armenia
- Bangladesh
- India
- Jamaica\*
- Kenya\*
- Panama
- South Africa
- Sri Lanka
- Syria
- Tanzania
- Trinidad and Tobago
- Venezuela\*
- Vietnam



\*Supported by NIDA

• **Scientific Meetings**

- › NIDA International Forum
  - June 16–19, 2006, in Scottsdale, Arizona
  - 289 registrants from 53 countries
  - International Trends and Needs in Drug Abuse Research
  - 160 poster presentations
  - Posters by nine NIDA components
  - Workshops on
    - Submitting Competitive Grant Applications
    - Web-based Tools for Education, Research, and Publishing
    - Building Latin American Research Networks
    - International Treatment Networking
- › Inhalant Abuse Among Children and Adolescents: Consultation on Building an International Research Agenda
  - November 7–9, 2005, Rockville, Maryland
  - 55 participants from 10 countries
  - Public Health Impact of Inhalant Abuse
  - World Reports: Epidemiology of Inhalant Abuse
  - Neuroscience and Clinical Research
  - Interventions for Prevention and Treatment
  - Reformulation of Products with Abuse Liability
- › International Program-Supported Symposia
  - Society for Neuroscience Research
  - U.S.-Mexico 6th Bi-National Drug Demand Reduction Conference
  - Drugged Driving
- › Travel Support
  - 10 NIDA grantees traveled to 6 scientific meetings
  - 41 researchers from 19 countries traveled to 9 scientific meetings

### Partnering with other international funding organizations

- Binational Agreements
  - › Pavlov Medical University, Russia
  - › Dutch Addiction Program
  - › Spanish National Plan on Drugs
  - › HHS and the Mexican Ministry of Health
- International Organizations and Institutional Partners
  - › World Health Organization
  - › UNAIDS
  - › United Nations Office on Drugs and Crime
  - › Inter-American Drug Abuse Control Commission (CICAD)
  - › Pan American Health Organization
  - › Mexican Consejo Nacional Contra las Adicciones (CONADIC)
  - › Canadian Institute of Health Research
    - Institute of Neurosciences, Mental Health, and Addiction (INMHA)
    - Institute of Aboriginal Peoples' Health (IAPH)

### Developing distance learning programs and Web-based training and research opportunities

- Publishing Addiction Research Internationally, [www.PARINT.org](http://www.PARINT.org)
- Methadone Research Web Guide
- NIDA International Virtual Collaboratory (SBIR)
- International Collaboration Opportunities and Research Partnerships (SBIR)
- Drug Abuse Research Training for International Researchers (SBIR)
- Online International Master's Degree Program in Addiction Studies
- Information Dissemination
  - › Web site
  - › E-letter





National Institute on Drug Abuse  
National Institutes of Health  
U.S. Department of Health and Human Services