FORTIETH ANNUAL REPORT

of the

RESEARCH ADVISORY PANEL OF CALIFORNIA

2010

PREPARED FOR THE

LEGISLATURE AND GOVERNOR

RESEARCH ADVISORY PANEL OF CALIFORNIA
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This report represents a consensus among Panel members acting as individual experts.
It does not represent policies or positions of the appointing agencies nor have those agencies been consulted by the Panel during its function or during the preparation of this report.

SUMMARY OF 2010 PANEL ACTIVITIES

During 2010 the Panel reviewed forty-nine research study submissions. Forty-six were approved by the Panel. Among Forty-six approved studies, fourteen studies were Academic research studies, five studies were Substance Abuse Treatment research protocols, and twenty-seven studies were Clinical Drug Trial research protocols.

Twenty-three research studies were completed or, in a few cases, terminated in 2010, and they were closed on the Panel's records.

At the end of 2010, the Panel was monitoring 105 active research projects. Note Appendices A, B, and C for specific listings.

As part of the Panel's supervisory responsibility, ongoing projects are monitored by means of annual reports, Significant Adverse Event (SAE) reports and site visits. Approval may be withdrawn if the study deviates significantly from the approved protocol.

Table 1 is a list of the studies approved by the Panel in 2010 and Table 2 is a list of the studies closed by the Panel in 2010.

SELECTED RESEARCH FINDINGS

Below are brief summary reports of several Panel approved projects which are of interest and indicative of the types of controlled substance research projects currently ongoing in California:

Dr. George F. Koob, Ph.D. and colleagues at The Scrippts Research Institute have an on-going study titled "Central Mechanisms of Opiate Reinforcement and Dependence" Here is the Project Summary/Abstract:

This is a competing renewal application to continue the study of the neural mechanisms of opiate reinforcement and dependence. Work during the previous funding period has validated animal models of heroin self-administration in dependent rats, animal models of the aversive stimulus effects of opiate withdrawal, and animal models of conditioned increases in opiate intake produced by stimuli paired with withdrawal, in addition, using these models, studies have identified critical elements in the brain stress systems in the basal forebrain (corticotropin releasing factor and norepinephrine) contributing to the motivational effects of opiate withdrawal and dependence. Preliminary results suggest a potential interaction of the orexin brain arousal/stress system with the CRF brain stress

system and suggest the hypothesis that orexin may mediate some of the motivational effects of opiate reinforcement and dependence. The purpose of the present proposal is to test the hypothesis that the orexin brain arousal/stress system interacting with the CRF brain stress system may have a critical role in mediating the aversive stimulus effects of opiate withdrawal, the development of motivational aspects of opiate dependence, and the motivational effects of conditioning associated with the aversive stimulus effects of opiate withdrawal. To test these hypotheses the following specific aims will be implemented. In specific aim 1, the role of the orexin system within specific sites of the extended amygdala and other motivational circuits involving the lateral hypothalamus and ventral tegmental area in the aversive motivational state of opiate withdrawal will be explored using a conditioned place aversion paradigm. In specific aim 2, the role of the orexin system within specific sites of the extended amygdala and other motivational circuits involving the lateral hypothalamus and ventral tegmental area in the increased heroin intake associated with dependence will be explored using a model of escalation of heroin self-administration in rats with extended access. In specific aim 3, the neuroanatomical basis for the interaction of CRF and orexin in activating these motivational circuits during the development of opiate dependence will be explored using c-Fos, CRF and orexin immunohistochemistry (Specific Aim 3). The present proposal will go far towards elucidating the neural circuits and neuropharmacological systems within the basal forebrain circuits which are critical for the motivational aspects of opiate dependence. It also will provide important information for identifying novel approaches to understand vulnerability to and develop prevention and treatment of opioid addiction.

Dr. Murray B. Stein, MD, MPH and colleagues at University of California, San Diego have provided the Panel with the following objective summary of ongoing research titled "Randomized Controlled Trial of Galantamine, Methylphenidate, and Placebo for the Treatment of Cognitive Symptoms in Patients with Mild Traumatic Brain Injury (m TBI) and/or Posttraumatic Stress Disorder (PTSD)"

> Primary Objective is to test the efficacy of galantamine and methylphenidate in reducing cognitive symptoms in participants with mTBI and/or PTSD, as measured by the Postmorbid Cognitive scale of the Ruff Neurobehavioral Inventory. Secondary Objectives are (a) To determine the extent fo which the broad spectrum of PTSD symptoms responds to galantamine or methylphenidate, using the PTSD Checklist - Specific Event Version. (b) To determine the extent to which the broad spectrum of mTBI (i.e., persistent post-concussive) symptoms responds to galantamine or methylphenidate, using the Rivermead Postconcussion Questionnaire ("past week" version). © To determine the extent to extent to which galantamine and methylphenidate affect cognitive functioning in participants with PTSD and/or mTBI, as measured by neuropsychological test performance. (d) To determine the extent to which

galantamine and methylphenidate improve depressive symptoms in participants with PTSD and/or mTBI, as measured by the Patient Health Questionnaire - 9 (e) To determine the extent to which galantamine and methylphenidate reduce the perceived difference between subjects premorbid and postmorbid cognitive functioning, as measured by the premorbid-postmorbid difference score on the Cognitive scale of the Ruff Neurobehavioral Inventory. Exploratory Objectives are (a) To explore whether any baseline characteristics predict response to either galantamine or methylphenidate, and in particular whether certain baseline characteristics are associated with better response to one agent versus the other. (b) To explore whether tolerability of the two agents differs for the total sample, the subsample of patients with mTBI, or the subsample of patients with PTSD.

Dr. Aaron Ettenberg, Ph.D. and colleagues at University of California, Santa Barbara have provided the Panel with the following findings that has recently appeared in the journal *Psychopharmacology* with the title "Dopamine Involvement in Opiate and Stimulant Drug Reinforcement"

Evidence suggests that an organism is prior self-administration experience affects its vulnerability to relapse after the drug reinforcer has been removed. However, there is little or no information on whether the pattern of drug seeking during self-administration reliably predicts relapse when comparisons are made across drug reinforcers. Our most recent study examined this hypothesis by comparing the motivation of animals to seek cocaine or heroin during self-administration, with the same animals' responsiveness to drug-paired cues following a period of drug abstinence. Male rats ran a straight alley once a day for an i.v. injection of either heroin (0.1mg/kg/inj) or cocaine (1.0mg/kg/inj), each paired with a distinct olfactory cue. Fifteen days of one drug reinforcer were followed by 15 days of the alternate reinforcer in a counterbalanced manner. Subjects then experienced 7, 14, or 21-days of non-reinforced extinction after which their response to the drug-paired cues was assessed. The intent here was to assess the ability of heroin-and cocaine-paired cues to induce relapse in the test subjects. Our results showed that during self-administration, heroin-reinforced rats produced faster start latencies and run times than cocaine-reinforced rats. Additionally, only cocaine-reinforced rats developed approach-avoidance "retreat" behaviors reflective of the drug's mixed positive + negative properties. However, in contrast, cue-induced potentiation of runway responding during extinction was observed for the cocaine but not the heroin-paired cue. These results suggest that while the motivation to seek heroin during reinforced responding was stronger than that for cocaine, subjects were subsequently more responsive to the cocaine-paired cues during extinction. Thus, the relative strength of reinforced responding during self-administration may not accurately predict the propensity to reinstate drug-seeking behavior after a period of drug abstinence.

TABLE 1

RESEARCH STUDIES
APPROVED IN 2010

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Matthias Behrends, M.D. Dept. Of Anesthesia & Perioperative Care UCSF, CA	Single Shots Intrathecal Morphine vs. Continuous Lumbar Plexus Blockade for Analgesia following Primary Total Hip Arthroplasty
Peggy Compton, RN, PhD UCLA School of Nursing Los Angeles, CA	Pain, Opioids, and Pro-inflammatory Immune Responses
Giovanni Cucchiaro, MD Childrens Hospital Los Angeles USC Keck School of Medicine Los Angeles, CA	Caudal versus Intrathecal Morphine for Post-operative Pain Control in Pediatric Patients
Ian Gibbons, Ph.D. Theranos, Inc. Palo Alto, CA	Assay Development for Medical Device Submission to FDA
Valerie Gruber, Ph.D. UCSF at SF General Hospital San Francisco, CA	Investigation of Age Differences in Analgesic, Cognitive, and subjective effects of Oxycodone, Hydrocodone, and Acetaminophen
Scott A. Irwin, MD, PhD San Diego Hospice & The Institute for Palliative Medicine San Diego, CA	An Open Label Trial of Methylphenidate for The Rapid Treatment of Depression in Hospice Patients

Table 1 Cont.

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Thomas S. Kilduff, Ph.D. SRI International Menlo Park, CA	Neurobiological Studies of Gammahydroxybutyrate (GHB)
Yuriy Kirichok, Ph.D. UCSF San Francisco, CA	Effects of Cannabinoids on Sperm Activity and Fertility
Daniel Levin, Ph.D. Norac Pharma Azusa, CA	Panel approved research
John E. Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	Interactions between Prazosin and Methamphetamine in Non-Treatment Seeking, Dependent Methamphetamine Abusers
John E. Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	The Effects of MDMA on Sleep Architecture, Water Homeostasis, and Cognitive Function
Edythe London, Ph.D. UCLA Los Angeles, CA	A Study to Assess the Cardiovascular, Cognitive, and Subjective Effects of Atomoxetine in Combination with Intravenous Amphetamine
John E. Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	Role of Serotonin in Acute and Subacute MDMA Effects

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
John E. Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	A Phase-I, Two-Stage, Double-Blind, Placebo-Controlled, Pharmacokinetics and pharmacodynamic Trial of Low Doses of Intravenous 6*B*-Naltrexol (AIKO-150) in Opioid-Dependent Subjects
Rajkumar J. Sevak, Ph.D. UCLA Los Angeles, CA	Human Methamphetamine Self-Administration in a Progressive-Ratio Paradigm
Rajkumar J. Sevak, Ph.D. UCLA Los Angeles, CA	Safety and Initial Efficacy of Lisdexamfetamine for Modifying the Behavioral Effects of Intravenous Methamphetamine in Humans
Matthew L. Springer, Ph.D. UCSF San Francisco, CA	Assessment of Impairment of Vascular Function in Rats by Environmental Exposure to Marijuana Second Hand Smoke
Cephalon, Inc. Fort Washington, PA	A 12-Week, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of Hydrocodone Bitartrate Extended-Release Tablets (CEP-33237) at 15 to 90 mg Every 12 Hours for Relief of Moderate to Severe Pain in Patients with Osteoarthritis or Low Back Pain Who Require Opioid Treatment for an Extended Period of Time (Cephalon C33237/3079)

Table 1 Cont.

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Cephalon, Inc. Fort Washington, PA	A 12-Month, Open-Label Study to Evaluate the Long-Term Safety of Hydrocodone Bitartrate Extended-Release Tablets (CEP-33237) at 15 to 90mg Every 12 Hours in Patients Who Require Opioid Treatment for an Extended Period of Time (Cephalon C33237/3080)
Endo Pharmaceuticals Chadds Ford, PA	An Open-Label, Non-Randomized, Multicenter Effectiveness, Safety and Tolerability Study of Oxymorphone HCl Immediate-Release Oral Liquid in Opioid-Tolerant Pediatric Subjects with Chronic Pain Requiring an Around the Clock Opioid (Endo EN3319-301)
Endo Pharmaceuticals Chadds Ford, PA	An Open-Label, Non-randomized, Multicenter, Ascending Dose by Age, Single- and Multiple-Dose Evaluation of the Effectiveness, Safety, and Tolerability of Oral Liquid Oxymorphone HCl Immediate-Release Oral Liquid for Acute Postoperative Pain in Pediatric Subjects (Endo EN3319-302)
GW Pharmaceuticals Mill Valley, CA	A Double Blind, Randomized, Placebo-Controlled, parallel Group Study of Sativex Oromucosal Spray (Sativex® ; Nabiximols) in Relieving Pain in patients with Advanced Cancer, Who Experience Inadequate Analgesia During Optimized Chronic Opioid Therapy

Table 1 Cont.

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
GW Pharmaceuticals Mill Valley, CA	A Multicenter, Non-Comparative, Follow-On Study to Assess the Long Term Safety of Sativex Oromucosal Spray (Sativex® ; Nabiximols) Therapy in patients with Cancer Related pain
INTRuST Consortium La Jolla, CA	Randomized Controlled Trial of Galantamine, Methylphenidate, and Placebo for the Treatment of Cognitive Symptoms in Patients with Mild Traumatic Brain Injury (mTBI) and/or Posttraumatic Stress Disorder (PISD) ("Cognitive REmediation After Trauma Exposure" Trial = CREATE Trial)
Johnson & Johnson Fort Washington, PA	A One-Year Randomized, Open-label, Parallel-Group, Multiple-Dose Long-Term Safety Study with Controlled Adjustment of Dose of Tapentadol Extended-Release (ER) and Oxycodone Controlled-Release (CR) in Subjects with Chronic, Painful Diabetic Peripheral Neuropathy (DPN) (J&J PAI 3028)
Johnson & Johnson Horsham, PA	An Open-Label, Single-Ascending-Dose Study to Investigate the Pharmacokinetics and Safety of CONCERTA® in Healthy Japanese Adult Male Subjects (J&J CONCERTANAP1003)

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Johnson & Johnson Titusville, NJ	A Randomized, Double-Blind, Placebo- and Active-Controlled Study to Evaluate the Efficacy, Safety and Tolerability of JNJ-42160443 as Monotherapy in Subjects with Moderate to Severe, Chronic Knee pain from Osteoarthritis (J & J PRD JNJ-42160443-PAI-2006)
Johnson & Johnson Malvern, PA	A Single-Dose, Open-Label, Randomized, Two-Way Crossover Study to Assess the Bioequivalence of Tapentadol Give as Two 25mg Extended-Release Tamper-Resistant Formulation (TRF) Tablets Relative to One 50mg Extended-Release TRF Tablet in Healthy Japanese Male Subjects (J & J R331333 PAI 1062)
Johnson & Johnson Malvern, PA	A Single-Dose, Open-Label, Randomized, Two-Way Crossover Study to Assess the Bioequivalence of Tapentadol Given as Two 50mg Extended-Release Tamper-Resistant Formulation (TRF) Tablets Relative to One 100mg Extended-Release TRF Tablet in Healthy Japanese Male Subjects (J & J R331333 PAI 1063)
King Pharmaceuticals R & D Austin, TX	A Phase III, Randomized, Double-blind, Placebo-controlled, Multicenter, Multiple-dose Study of the Safety and Efficacy of Acuracet TM Tablets for the Treatment of Acute, Moderate to Severe Postoperative Pain Following Bunionectomy Surgery in Adult Subjects (King K228-08-3001)

Table 1 Cont.

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Mylan Pharmaceuticals Morgantown, WV	Single-Dose Bioequivalence Study of Fentanyl Transdermal System (100mcg/hr; Mylan) to Duragesic® (100mcg/hr; Ortho-McNeil-Janssen) in Health Adult Male Japanese Volunteers (Mylan FENT-1076)
Novartis Pharmaceuticals East Hanover, NJ	A 40-Week, Randomized, Double-Blind, Placebo controlled, Multicenter Efficacy and Safety Study of Ritalin® LA in the Treatment of Adult Patients with Childhood-Onset ADHD (Novartis CRIT124D2302)
Ortho-McNeil Janssen Scientific Affairs (OMJSA) Raritan, NJ	A Randomized, Double-Blind, Parallel-Group Study of NUCYNTA (Tapentadol) Immediate Release vs. Oxycodone Immediate Release for the Treatment of Acute Low Back Pain (OMJSA R331333 PAI 3025)
Purdue Lenexa, KS	An Open-Label Study to Characterize the Pharmacokinetics and Safety of Oxycodone HCl q12h Controlled-Release (ORF) Tablets in Pediatric Patients Aged 6 to 16 Years Inclusive, Who Require Opioid Analgesia (Purdue OTR 1020)

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Purdue Lenexa, KS	An Open-Label, Multicenter Study of the Safety of Twice Daily Oxycodone HCl Controlled-Release Tablets in Opioid Experienced Children from Ages 6 to 16 Years Old, Inclusive, with Moderate to Severe Malignant and/or Nonmalignant Pain Requiring Opioid Analgesics (Purdue OTR 3001)
QRxPharma Inc. Chapel Hill, NC	A Randomized, Double-Blind, Multicenter, Repeat-Dose Comparison of Q8003 to the Morphine-Equivalent Doses of Oxycodone and of Morphine for the Opioid-Related Adverse Events of Nausea, Emesis, and Dizziness in Subjects with Acute Moderate-to-Severe Postoperative pain Following Bunionectomy Surgery (QRxPharma Q8003-022)
Rhodes Pharmaceuticals Boston, MA	A Randomized, Double-Blind Study of the Time Course of Response of Biphentin® Methylphenidate Hydrochloride Extended Release Capsules As Compared to Placebo in Children 6 to 12 Years With Attention Deficit Hyperactivity Disorder in an Analog Classroom Setting (Rhodes RP-BP-EF001)

Table 1 Cont.

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Rhodes Pharmaceuticals Boston, MA	A Randomized, Parallel, Double-Blind Efficacy and Safety Study of Biphentin™ Methylphenidate Hydrochloride Extended Release Capsules Compared to Placebo in Children and Adolescents 6 to 18 years with Attention Deficit Hyperactivity Disorder (Rhodes RP-BP-EF002)
Shire Pharmaceuticals Raleigh, NC	A Phase 2, Multicenter, Randomized, Double-blind, Placebo-controlled, Parallel-group Study to Evaluate the Efficacy, Safety, and Tolerability of SPD489 in Adults with Clinically Significant, Persistent Executive Function Impairments (EFI) and Partial or Full Remission of Recurrent Major Depressive Disorder (Shire SPD-205)
Shire Pharmaceuticals Hampshire, UK	A Phase III, Double-Blind, Placebo-Controlled, Randomized Withdrawal, Multicenter, Extension, Safety and Efficacy Study of Lisdexamfetamine Dimesylate (LDX) in Children and Adolescents Aged 6-17 with Attention-Deficit/Hyperactivity Disorder (ADHD) (Shire SPD489-326)

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Shire Pharmaceuticals Wayne, PA	A Phase 3b, Double-blind, Randomized, Active-controlled, Parallel-group Study to Compare the Time to Response of Lisdexamfetamine Dimesylate to Atomoxetine Hydrochloride in Children and Adolescents aged 6-17 years with Attention-Deficit/Hyperactivity Disorder (ADHD) Who Have Had an Inadequate Response to Methylphenidate Therapy (Shire SPD489-317)
Shire Pharmaceuticals Bristol, TN	A Phase 4, Randomized, Double-blind, Multi-center, Placebo-controlled, Parallel Group Study Evaluating the Safety and Efficacy of SPD489 on Executive Function (self-regulation) Behaviors in Adults with Attention -Deficit/Hyperactivity Disorder (ADHD) Reporting Clinically Significant Impairment of Real-world Executive Function Behavior (Shire SPD489-403)
Zogenix Inc. Emeryville, CA	A Randomized Double-Blind, Placebo-Controlled Trial to Evaluate the Efficacy, Tolerability and Safety of Hydrocodone Bitartrate Controlled-Release Capsules in Opioid-experienced Subjects with Moderate to Severe Chronic Low Back Pain. (Zogenix ZX002-0801)
Zogenix Inc. Emeryville, CA	A Long-Term Open-Label Safety Study of Hydrocodone Bitartrate Controlled-Release Capsules with Flexible Dosing to Treat Subjects with Moderate to Severe Pain. (Zogenix ZX002-0802)

PI / Sponsor	Title of Study / Clinical Drug Trial Protocol
Catalyst Coral Gables, FL	Vigabatrin for Treatment of Cocaine Dependence: A Phase II Study" (Catalyst CPP-01005)
Titan Pharmaceuticals S. San Francisco, CA	A Randomized, Placebo and Active-Controlled, Multi-Center Study of Probuphine in Patients with Opioid Dependence (Titan PRO-806)
Titan Pharmaceuticals S. San Francisco, CA	A Phase 3, Six-Month, Open-Label Re-Treatment Study of Probuphine in Opioid Addiction (Titan PRO-811)
Walter Long, M.D. UCLA Dept of Psychiatry Los Angeles, CA	Sustained-Release Methylphenidate for management of Methamphetamine Dependence
Steven Shoptaw, Ph.D. UCLA Dept of Family Medicine Los Angeles, CA	Phase I Safety Interaction Trial of Ibudilast with Methamphetamine

TABLE 2

RESEARCH STUDIES CLOSED OR
DISCONTINUED IN 2010

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
Charles Grob, M.D. Harbor UCLA Medical Center Los Angeles, CA	Effects of Psilocybin in Terminal Cancer Patients with Anxiety
George Koob, Ph.D. The Scripps Research Institute La Jolla, CA	Neuronal Substrates of Cocaine Reward.
Linghui Li, Ph.D. APRL/CPMC Research Institute San Francisco, CA	An Open-Label Stud to Evaluate the Impact of Genetic Variation in CYP2D6 on the Pharmacokinetics and Pharmacodynamics of Methamphetamine in Healthy Adults
John Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	Bioavailability and Urinary Excretion of Oral L-Methamphetamine
John Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	Interactions between Prazosin and Methamphetamine in Non-Treatment Seeking, Dependent Methamphetamine Abusers
Robert Messing, M.D. Ernest Gallo Clinic & Research Center Emeryville, CA	Protein kinase C epsilon (PKCε) in Responses to Cannabinoids

Table 2 Cont.

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
AcelRx Pharmaceuticals Redwood City, CA	A Multi-Center, Randomized, Placebo-Controlled Phase II Study to evaluate the Clinical Efficacy, Safety, and Tolerability of ARX-F01 Sublingual Sufentanil NanoTabs TM in Patients Undergoing Major Abdominal Surgery (AcelRx ARX-C-005)
AcelRx Pharmaceuticals Redwood City, CA	A Multicenter, Randomized, Placebo-Controlled, Crossover Study for the Evaluation of the Safety, Tolerability and Efficacy of ARX-F02 compared to Placebo in the Treatment of Cancer Breakthrough Pain (AcelRx ARX-C-003)
Cephalon Frazer, PA	A Randomized, Double-Bind, Active-Controlled Crossover Study to Evaluate the Efficacy and Safety of Fentanyl Buccal Tablets Compared With Immediate-Release Oxycodone for the Management of Breakthrough Pain in Opioid-Tolerant patients With Chronic Pain, Followed by a 12-Week Open-Label Extension to Evaluate the Impact of Fentanyl Buccal Tablets on Patient Outcomes (Cephalon C25608/3056/BP/US)

Table 2 Cont.

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
Johnson & Johnson Titusville, NJ	A Randomized, Double Blind, Placebo- and Active-Controlled, Parallel-Group, Multicenter Study of Three Dosages of JNJ-31001074 in the Treatment of Adult Subjects with Attention Deficit/Hyperactivity Disorder (J&J 31001074-ATT-2001)
Johnson & Johnson Malvern, PA	A Single-Dose Study to Evaluate the Effect of Food on the Pharmacokinetics of a Tamper-Resistant prolonged-Release 100mg Tablet Formulation of Tapentadol in healthy Male Japanese Subjects (J&J R331333-PAI-1052)
Johnson & Johnson Malvern, PA	A Single-Dose Study to Evaluate the Relative Bioavailability of a 100mg tamper-Resistant Prolonged-Release Formulation (TRF) of Tapentadol with Respect to the PRI Prolonged-Release 100mg tablet Formulation Under Fasted Condition in Japanese Healthy Subjects (J&J R331333-PAI-1053)
Johnson & Johnson Fort Washington, PA	A One-Year Randomized, Open-label, Parallel-Group, Multiple-Dose Long-Term Safety Study with Controlled Adjustment of Dose of Tapentadol Extended-Release (ER) and Oxycodone Controlled-Release (CR) in Subjects with Chronic, Painful Diabetic Peripheral Neuropathy (DPN) (J&J PAI 3028)

Table 2 Cont.

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
King Pharmaceuticals Austin, TX	A Phase III, Randomized, Double-blind, Placebo-controlled, Multicenter, Multiple-dose Study of the Safety and Efficacy of Acuracet TM Tablets for the Treatment of Acute, Moderate to Severe Postoperative Pain Following Bunionectomy Surgery in Adult Subjects (King K228-08-3001)
Mylan Pharmaceuticals Morgantown, WV	Single-Dose Bioequivalence Study of Fentanyl Transdermal System (100mcg/hr; Mylan) to Duragesic® (100mcg/hr; Ortho-McNeil-Janssen) in Health Adult Male Japanese Volunteers (Mylan FENT-1076)
Neurologic AIDS Research Consortium (NARC) St. Louis, MO	A Phase II, Randomized, Double-Blind, Placebo-Controlled Study of Methadone and Combination of Methadone and SAB378 in HIV-Associated Painful Peripheral Neuropathy (NARC NARC011)
Purdue Pharma Stamford, CT	A Multi-Center, Inpatient, Open-Label, within Subject Dose Titration Study to Characterize the Pharmacokinetics/Pharmacodynamics, Safety and Efficacy of Hydromorphone HCl Oral Solution in Subjects from 28 Days to 16 Years of Age, Inclusive, Who Require Opioid Analgesics for Post-Operative Pain (Purdue HMP4009)

Table 2 Cont.

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
QRxPharma Bedminster, NJ	A Double-Blind, Randomized, Multi-Center, Repeat Dose, Placebo Controlled Study to Compare the Analgesic Efficacy and Safety of the Opioid Combination Q8003 to Each of the Individual Milligram Components (Oxycodone and Morphine) and Placebo in the Management of Acute Moderate to Severe Postoperative Pain Following Bunionectomy Surgery (QRx Q8003-015)
Shire Pharmaceuticals Philadelphia, PA	A Phase III, Open-Label, Extension, Multicenter, Safety and Efficacy Study of Lisdexamfetamine Dimesylate (LDX) in Adolescents Aged 13-17 with Attention Deficit/Hyperactivity Disorder (ADHD) (Shire SPD 489-306)
Shire Pharmaceuticals Philadelphia, PA	A Phase 4, Double-Blind, Multi-center, Placebo-Controlled, Randomized Withdrawal, Safety and Efficacy Study of SPD489 in Adults Aged 18-55 with Attention Deficit/Hyperactivity Disorder (ADHD) (Shire SPD489-401)

Table 2 Cont.

Sponsor / PI	Title of Study / Clinical Drug Trial Protocol
Shire Pharmaceuticals, Inc. Bristol, TN	A Phase 4, Randomized, Double-blind, Multi-center, Placebo-controlled, Parallel Group Study Evaluating the Safety and Efficacy of SPD489 on Executive Function (self-regulation) Behaviors in Adults with Attention - Deficit/Hyperactivity Disorder (ADHD) Reporting Clinically Significant Impairment of Real-world Executive Function Behavior (Shire SPD489-403)
Edythe London, Ph.D. UCLA Dept of Psychiatry Los Angeles, CA	A Human laboratory Assessment of the Safety and Potential Efficacy of Varenicline in Methamphetamine-Dependent Volunteers Receiving Methamphetamine
Steven Shoptaw, Ph.D. UCLA Dept of Family Medicine Los Angeles, CA	Varenicline vs Placebo in Conjunction with Cognitive Behavioral Therapy for the Treatment of Methamphetamine Dependence

APPENDIX A

CURRENTLY OPEN *(through December 31, 2010)*
SCHEDULE I AND SCHEDULE II
NON-HUMAN AND ACADEMIC HUMAN
RESEARCH STUDIES

Principal Investigator	Title of Study
Mark A. Agius, M.D. UC. Davis Davis, CA	Cannabis for Spasticity/Tremor in MS: Placebo Controlled Study
Danilyn Angeles, Ph.D. Loma Linda University Loma Linda, CA	Panel approved research
James T. Arnold, Ph.D. Systems and Techniques Lab. Palo Alto, CA	Panel Approved Research Project
Gayle C. Baldwin, Ph.D. UCLA Los Angeles, CA	Methamphetamine Dependence: A Novel Laboratory Model
Mariusz G. Banaszczyk, Ph.D. Biosite Diagnostics San Marcos, CA	Development of In-vitro Immunoassays for the Detection of Abused Substances
Selena E. Barrett, Ph.D. Ernest Gallo Clinic & Research Ctr. Emeryville, CA	The role of cannabinoids and ibogaine in the treatment of alcoholism and drug addiction

Appendix A Cont.

Principal Investigator	Title of Study
Matthias Behrends, M.D. UCSF San Francisco, CA	A Randomized, Parallel, Double-Blind Efficacy and Safety Study of Biphentin™ Methylphenidate Hydrochloride Extended Release Capsules Compared to Placebo in Children and Adolescents 6 to 18 years with Attention Deficit Hyperactivity Disorder
Nancy E. Buckley, Ph.D. California State Polytechnic Univ. Pomona, CA 91768	Panel approved research
John R. Cashman, Ph.D. Human BioMolecular Research Institute San Diego, CA	Molecular Evolution of Human Cocaine Catalysis
Kent S. Chu, Ph.D. YJ Bio-Products Cordova, CA	Immunochromatographic Test Device for THC and LSD
Laura Colin Biostride, Inc. Redwood City, CA	Panel Approved Research Project
Peggy Compton, RN, PhD UCLA School of Nursing Los Angeles, CA	Pain, Opioids, and Pro-inflammatory Immune Responses
Giovanni Cucchiaro, M.D. USC Keck School of Medicine Los Angeles, CA	Caudal versus Intrathecal Morphine for Post-operative Pain Control in Pediatric Patients

Principal Investigator	Title of Study
G. Patrick Dauert, M.D. UC Davis Medical Center Sacramento, CA	Panel approved research
Mohammad Diab, M.D. UC San Francisco San Francisco, CA	Comparison of Extended-Release Epidural Morphine, PC Epidural Analgesia, & PC Intravenous Analgesia for Post-Op Pain Management after Post. Spinal Fusion in Adolescents
Robert Edwards, M.D. UCSF School of Medicine San Francisco, CA	Panel Approved Research Project
Aaron Ettenberg, Ph.D. UC Santa Barbara Santa Barbara, CA	Dopamine Involvement in Opiate and Stimulant Drug Reinforcement
Frederick D. Frankel, Ph.D. UCLA ISAP Los Angeles, CA	Social Skills Training for Medicated Children
Jean Gehricke, Ph.D. UC Irvine Irvine, CA	Panel Approved Research Project
Ian Gibbons, Ph.D. Theranos, Inc. Palo Alto, CA	Assay Development for Medical Device Submission to FDA
Valerie Gruber, Ph.D. UCSF SF General Hospital San Francisco, CA	Investigation of Age Differences in Analgesic, Cognitive, and subjective effects of Oxycodone, Hydrocodone, and Acetaminophen

Appendix A Cont.

Principal Investigator	Title of Study
Kanthi F. Hettiarachchi, Ph.D. SRI International Menlo Park, CA	Analysis of Cannabinoids
Scott A. Irwin, MD, PhD San Diego Hospice/ Palliative Care San Diego, CA	Panel Approved Research Project
Scott A. Irwin, MD, PhD San Diego Hospice/Palliative Care San Diego, CA	Panel Approved Research Project
Thomas S. Kilduff, Ph.D. SRI International Menlo Park, CA	Neurobiological Studies of Gammahydroxybutyrate (GHB)
Thomas B. King Alexza Molecular Delivery Corp. Palo Alto, CA	Development of an FDA Approved Dronabinol Pharmaceutical Product for Inhalation Delivery
Yuriy Kirichok, Ph.D. UCSF San Francisco, CA	Effects of Cannabinoids on Sperm Activity and Fertility
Edward T. Kisak, Ph.D. Fqubed, Inc. San Diego, CA	Transdermal Delivery of tetrahydrocannabinol
George F. Koob, Ph.D. The Scripps Research Institute La Jolla, CA	Central Mechanisms of Opiate Reinforcement and Dependence

Principal Investigator	Title of Study
Lorrin Koran, M.D. Stanford University, School of Medicine Stanford, CA	Double-Blind Trial of Acute & Intermediate-Tern Dextro-Amphetamine versus Caffeine Augmentation in Treatment-Resistant Obsessive-Compulsive Disorder
Kimberley D. Lakes, Ph.D. UC Irvine Irvine, CA	The Effects of Vyvanse on Brain Hemodynamics and Reading
Adam Leventhal, Ph.D. USC Keck School of Medicine Alhambra, CA	Influence of Genes and Emotions on medication Effects
Daniel Levin, Ph.D. NORAC Pharma Azusa, CA	Panel approved research
Daniel Levin, Ph.D. NORAC Pharma Azusa, CA	Panel approved research
Daniel Levin, Ph.D. NORAC Pharma Azusa, CA	Panel approved research
Marie Lin, Ph.D. R.Ph. Lin-Zhi International, Inc. Sunnyvale, CA	Lin-Zhi Immunoassay Development Study
Edythe London, Ph.D. UCLA Los Angeles, CA	A Study to Assess the Cardiovascular, Cognitive, and Subjective Effects of Atomoxetine in Combination with Intravenous Amphetamine

Appendix A Cont.

Principal Investigator	Title of Study
Sean D. McAllister, Ph.D. CPMC Research Institute San Francisco, CA	Panel Approved Research Project
James T. McCracken, M.D. UCLA NPI Los Angeles, CA	An 8-Week, Randomized, Double-Blind Comparison of Twice-Daily Guanfacine, Once-Daily d-Methylphenidate ER (Focalin XR) and the Combination, with a 12 Month Open-Label Extension for the Treatment of ADHD in Pediatric Subjects Aged 7 to 14 years
John Mendelson, M.D. APRL/CPMC Research Institute San Francisco, CA	The Effects of MDMA on Sleep Architecture, Water Homeostasis, and Cognitive Function
Stanley M. Parsons, Ph.D. UC Santa Barbara Santa Barbara, CA	Panel Approved Research Project
Richard Reznichek, M.D. Harbor-UCLA Medical Center Torrance, CA	A prospective, randomized, double-blind study comparing the efficacy and safety of intra nasal fentanyl spray to placebo as an analgesic in patients undergoing outpatient cystoscopic procedures
Mark Rollins, MD, PhD. UCSF Dept of Anesthesia San Francisco, CA	Supplemental Oxygen: A Reduction in Pulse Oximetry Sensitivity or an Increased Margin of Safety?
Dorit Ron, Ph.D. Ernest Gallo Clinic & Research Ctr Emeryville, CA	Signaling Pathways Involved in the Mechanism of Action of the Anti-Addictive Drug Ibogaine

Principal Investigator	Title of Study
Rajkumar J. Sevak, Ph.D.	Human Methamphetamine Self-Administration in a Progressive-Ratio Paradigm
Rajkumar J. Sevak, Ph.D.	Safety and Initial Efficacy of Lisdexamfetamine for Modifying the Behavioral Effects of Intravenous Methamphetamine in Humans
Matthew L. Springer, Ph.D.	Assessment of Impairment of Vascular Function in Rats by Environmental Exposure to Marijuana Second Hand Smoke
Lawrence Toll, Ph.D. SRI International Menlo Park, CA	Biochemical Studies into Opiate Efficacies
Stephen Van Dien, Ph.D. Genomatica, Inc. San Diego, CA	Panel Approved Research Project
Mark Wallace, M.D. UC San Diego San Diego, CA	Efficacy of Inhaled Cannabis for the Treatment of Painful Diabetic Peripheral Neuropathy
Jennifer L. Whistler, Ph.D. Ernest Gallo Clinic & Research Ctr. Emeryville, CA	Endocytosis and Opioid Receptors
Timothy Wigal, Ph.D. UC Irvine Irvine, CA	Brain Dopamine Function in Adults with Attention Deficit/Hyperactivity Disorder (ADHD)

Appendix A Cont.

Principal Investigator	Title of Study
Barth Wilsey, M.D. UC Davis Medical Center Sacramento, CA	The Analgesic Effect of Vaporized Cannabis on Neuropathic Pain

APPENDIX B

CURRENTLY OPEN *(through December 31, 2010)*
SCHEDULE II CLINICAL DRUG TRIAL STUDIES

Sponsor	Description or Title of Clinical Drug Trial Protocol
BRC Operations Pty Ltd. Ultimo, NSW, Australia	International Study to Predict Optimized Treatment in Attention Deficit/.Hyperactivity Disorder (BRC iSPOT-A)
Cephalon, Inc Fort Washington, PA	A 12 wk, Rand, Dbl-Blind, P-C. Study to Eval. the Efficacy & Safety of Hydrocodone Bitartrate ER Tabs (CEP-33237) at 15-90mg q12 hrs for Relief of Mod to Sev Pain in Pts w/ OA or Low Back Pain Who Require Opioid Tx for an Ext. Period of Time (Cephalon C33237/3079)
Cephalon, Inc Fort Washington, PA	A 12 mos, Open-Label Study to Eval. The Long-Term Safety of CEP-33237 at 15-90mg q12 hrs of Pts Who Require Opioid Tx for an Ext. Period of Time (Cephalon C33237/3080)
Eli Lilly Pharmaceuticals Indianapolis, IN	A Fixed-Dose, Randomized, Double-Blind, Placebo-Controlled Study of LY2216684 in Pediatric Patients with Attention Deficit/Hyperactivity Disorder (Lilly H9P-MC-LNBF)
Endo Pharmaceuticals Chadds Ford, PA	An Open-Label Safety and Tolerability Study of Immediate-Release and Extended-Release Oxymorphone in Opioid-Tolerant pediatric Subjects with Chronic Pain (Endo EN3202-036)

Appendix B Cont.

Sponsor	Description or Title of Clinical Drug Trial Protocol
Endo Pharmaceuticals Chadds Ford, PA	An Open-Label, Non-Randomized, Multicenter Effectiveness, Safety and Tolerability Study of Oxymorphone HCl Immediate-Release Oral Liquid in Opioid-Tolerant Pediatric Subjects with Chronic Pain Requiring an Around the Clock Opioid (Endo EN3319-301)
Endo Pharmaceuticals Chadds Ford, PA	Panel Approved Research Project An Open-Label, Non-randomized, Multicenter, Ascending Dose by Age, Single- and Multiple-Dose Evaluation of the Effectiveness, Safety, and Tolerability of Oral Liquid Oxymorphone HCl Immediate-Release Oral Liquid for Acute Postoperative Pain in Pediatric Subjects (Endo EN3319-302)
GW Pharmaceuticals Mill Valley, CA	A double blind, randomized, placebo controlled, parallel group dose-range exploration study of Sativex® in relieving pain in patients with advanced cancer, who experience inadequate analgesia during optimized chronic opioid therapy (GWCA0701)
GW Pharmaceuticals Milly Valley, CA	A Double Blind, Randomized, Placebo-Controlled, parallel Group Study of Sativex Oromucosal Spray (Sativex® ; Nabiximols) in Relieving Pain in patients with Advanced Cancer, Who Experience Inadequate Analgesia During Optimized Chronic Opioid Therapy

Sponsor	Description or Title of Clinical Drug Trial Protocol
GW Pharmaceuticals Milly Valley, CA	A Multicenter, Non-Comparative, Follow-On Study to Assess the Long Term Safety of Sativex Oromucosal Spray (Sativex® ; Nabiximols) Therapy in patients with Cancer Related pain
Insys Therapeutics Phoenix, AZ	A Randomized, Double-Blind, Placebo-Controlled Multi-Center Study to Evaluate the Safety and Efficacy of Fentanyl Sublingual Spray (Fentanyl SL Spray) for the Treatment of Breakthrough Cancer Pain (Insys INS-05-001)
INTRuST Clinical Consortium La Jolla, CA	Randomized Controlled Trial of Galantamine, Methylphenidate, and Placebo for the Treatment of Cognitive Symptoms in Patients with Mild Traumatic Brain Injury (mTBI) and/or Posttraumatic Stress Disorder (PISD) ["Cognitive REmediation After Trauma Exposure" Trial = CREATE Trial"]
Johnson & Johnson Titusville, NJ	A Placebo-controlled, Double-blind, Parallel-group, Individualized Dosing Study Optimizing Treatment of Adults with Attention Deficit Hyperactivity Disorder to an Effective Response with OROS Methylphenidate (OMJSA CONCERTA-ATT-3014)

Appendix B Cont.

Sponsor	Description or Title of Clinical Drug Trial Protocol
Johnson & Johnson Titusville, NJ	A Randomized-Withdrawal, Placebo-Controlled, Study Evaluating the Efficacy, Safety, and Tolerability, of Tapentadol Extended-Release (ER) in Subjects with Chronic, Painful Diabetic Peripheral Neuropathy (DPN) (J&J R331333-PAI-3027)
Johnson & Johnson Horsham, PA	An Open-Label, Single-Ascending-Dose Study to Investigate the Pharmacokinetics and Safety of CONCERTA® in Healthy Japanese Adult Male Subjects (J&J CONCERTANAP1003)
Johnson & Johnson Titusville, NJ	A Randomized, Double-Blind, Placebo- and Active-Controlled Study to Evaluate the Efficacy, Safety and Tolerability of JNJ-42160443 as Monotherapy in Subjects with Moderate to Severe, Chronic Knee pain from Osteoarthritis (J & J JNJ-42160443-PAI-2006)
Johnson & Johnson Malvern, PA	A Single-Dose, Open-Label, Randomized, Two-Way Crossover Study to Assess the Bioequivalence of Tapentadol Give as Two 25mg Extended-Release Tamper-Resistant Formulation (TRF) Tablets Relative to One 50mg Extended-Release TRF Tablet in Healthy Japanese Male Subjects (J & J R331333 PAI 1062)

Sponsor	Description or Title of Clinical Drug Trial Protocol
Johnson & Johnson Malvern, PA	A Single-Dose, Open-Label, Randomized, Two-Way Crossover Study to Assess the Bioequivalence of Tapentadol Given as Two 50mg Extended-Release Tamper-Resistant Formulation (TRF) Tablets Relative to One 100mg Extended-Release TRF Tablet in Healthy Japanese Male Subjects (J & J R331333 PAI 1063)
King Pharmaceuticals Cary, NC	A Multi-center, Primary Care-Based, Open-Label Study to Assess the Success of Converting Opioid-Experienced patients, with Chronic, moderate to Severe Pain, to EMBEDA™ Using a Standardized Conversion Guide, and to identify Behaviors Related to Prescription Opioid Abuse, Misuse, and Diversion (King ALO-01-10-4003)
Neuromed pharmaceuticals Conshohocken, PA	A Phase III, Flexible-Dose Titration Followed by a Randomized Double-Blind Study of Controlled-Release OROS® Hydromorphone HCl (NMED-1077) Compared to Placebo in Patients with Osteoarthritis Pain (NMT 1077-302)
Novartis Pharmaceuticals East Hanover, NJ	A 40-Week, Randomized, Double-Blind, Placebo controlled, Multicenter Efficacy and Safety Study of Ritalin® LA in the Treatment of Adult Patients with Childhood-Onset ADHD (Novartis CRIT124D2302)

Appendix B Cont.

Sponsor	Description or Title of Clinical Drug Trial Protocol
OMJSA Raritan, NJ	A Randomized, Double-Blind, Parallel-Group Study of NUCYNTA (Tapentadol) Immediate Release vs. Oxycodone Immediate Release for the Treatment of Acute Low Back Pain (OMJSA R331333 PAI 3025)
Ortho-McNeil Janssen Scientific Affairs, LLC	Double-Blind, Randomized, Placebo-Controlled, Crossover Study Evaluating the Academic, Behavioral and Cognitive Effects of CONCERTA on Older Children with ADHD (The ABC Study) (OMJSA CONCERTA-ATT-4069)
Ortho-McNeil Janssen Scientific Affairs, LLC	A Randomized, Double-Blind, Multi-Center, Parallel-Group Study of Tapentadol Immediate Release (IR) vs. Oxycodone IR for the Treatment of Subjects with Acute Post-Operative Pain Following Elective Arthroscopic Shoulder Surgery (OMJSA R331333-PAI-3022)
Purdue Pharma Lenexa, KS	An Open-Label Study to Characterize the Pharmacokinetics and Safety of Oxycodone HCl q12h Controlled-Release (ORF) Tablets in Pediatric Patients Aged 6 to 16 Years Inclusive, Who Require Opioid Analgesia (Purdue OTR 1020)

Sponsor	Description or Title of Clinical Drug Trial Protocol
Purdue Pharma Lenexa, KS	An Open-Label, Multicenter Study of the Safety of Twice Daily Oxycodone HCl Controlled-Release Tablets in Opioid Experienced Children from Ages 6 to 16 Years Old, Inclusive, with Moderate to Severe Malignant and/or Nonmalignant Pain Requiring Opioid Analgesics (Purdue OTR 3001)
QRxPharma Chapel Hill, NC	A Double-Blind, Randomized, Multi-Center, Repeat Dose, Placebo Controlled Study to Compare the Analgesic Efficacy and Safety of the Opioid Combination Q8003 to Each of the Individual Milligram Components (Oxycodone and Morphine) and Placebo in the Management of Acute Moderate to Severe Postoperative Pain Following Bunionectomy Surgery (QRxPharma Q8003-015)
QRxPharma Chapel Hill, NC	A Randomized, Double-Blind, Multicenter, Repeat-Dose Comparison of Q8003 to the Morphine-Equivalent Doses of Oxycodone and of Morphine for the Opioid-Related Adverse Events of Nausea, Emesis, and Dizziness in Subjects with Acute Moderate-to-Severe Postoperative pain Following Bunionectomy Surgery (QRxPharma Q8003-022)

Rhodes Pharmaceuticals Boston, MA	A Randomized, Double-Blind Study of the Time Course of Response of Biphentin® Methylphenidate Hydrochloride Extended Release Capsules As Compared to Placebo in Children 6 to 12 Years With Attention Deficit Hyperactivity Disorder in an Analog Classroom Setting (Rhodes RP-BP-EF001)
Rhodes Pharmaceuticals Boston, MA	A Randomized, Parallel, Double-Blind Efficacy and Safety Study of Biphentin™ Methylphenidate Hydrochloride Extended Release Capsules Compared to Placebo in Children and Adolescents 6 to 18 years with Attention Deficit Hyperactivity Disorder (Rhodes RP-BP-EF002)
Shire Pharmaceuticals Raleigh, NC	A Phase II, Multicenter Study with Open-label and Randomized Double-blind Placebo-Controlled Withdrawal Phases to Evaluate the Efficacy, Safety, and Tolerability of SPD489 in Adults with Schizophrenia and Predominant Negative Symptoms Who Are Clinically Stable and Taking Stable Doses of Atypical Antipsychotic Medication (Shire SPD489-204)
Shire Pharmaceuticals Raleigh, NC	A Phase 2, Multicenter, Randomized, Double-blind, Placebo-controlled, Parallel-group Study to Evaluate the Efficacy, Safety, and Tolerability of SPD489 in Adults with Clinically Significant, Persistent Executive Function Impairments (EFI) and Partial or Full Remission of Recurrent Major Depressive Disorder (Shire SPD-205)

Sponsor	Description or Title of Clinical Drug Trial Protocol
Shire Pharmaceuticals Hampshire, UK	A Phase III, Double-Blind, Placebo-Controlled, Randomized Withdrawal, Multicenter, Extension, Safety and Efficacy Study of Lisdexamfetamine Dimesylate (LDX) in Children and Adolescents Aged 6-17 with Attention-Deficit/Hyperactivity Disorder (ADHD) (Shire SPD489-326)
Shire Pharmaceuticals Wayne, PA	A Phase 3b, Double-blind, Randomized, Active-controlled, Parallel-group Study to Compare the Time to Response of Lisdexamfetamine Dimesylate to Atomoxetine Hydrochloride in Children and Adolescents aged 6-17 years with Attention-Deficit/Hyperactivity Disorder (ADHD) Who Have Had an Inadequate Response to Methylphenidate Therapy (Shire SPD489-317)
Zogenix Inc. Emeryville	A Randomized Double-Blind, Placebo-Controlled Trial to Evaluate the Efficacy, Tolerability and Safety of Hydrocodone Bitartrate Controlled-Release Capsules in Opioid-experienced Subjects with Moderate to Severe Chronic Low Back Pain. (Zogenix ZX002-0801)
Zogenix Inc. Emeryville	A Long-Term Open-Label Safety Study of Hydrocodone Bitartrate Controlled-Release Capsules with Flexible Dosing to Treat Subjects with Moderate to Severe Pain. (Zogenix ZX002-0802)

APPENDIX C

CURRENTLY OPEN *(December 31, 2010)* RESEARCH STUDIES
ON THE TREATMENT OF CONTROLLED SUBSTANCE ABUSE

Investigator or Sponsor	Description or Title of Research Study
Catalyst Pharmaceuticals Coral Gables, FL	Vigabatrin for Treatment of Methamphetamine Dependence: A Phase II Study (Catalyst CPP-02001)
Catalyst Pharmaceuticals Coral Gables, FL	Vigabatrin for Treatment of Cocaine Dependence: A Phase II Study (Catalyst CPP-01005)
Keith E. Flower, M.D. APRL/CPMC Research Institute San Francisco, CA	A Pilot Trial of Naltrexone for Methamphetamine Addiction - Role of the A118G SNP
Gantt P. Galloway, Pharm.D. APRL/CPMC Research Institute San Francisco, CA	A Dose Ranging Study of Modafinil for Methamphetamine Dependence
Keith Heinzerling, MD, MPH UCLA ISAP Los Angeles, CA	Pharmacogenomics and Medication Development for Methamphetamine Dependence
Keith Heinzerling, MD, MPH UCLA ISAP Los Angeles, CA	Pilot Trial of Bupropion versus Placebo for Methamphetamine Abuse in Adolescents
Walter Ling, M.D. UCLA ISAP Los Angeles, CA	Optimizing Outcomes Using Suboxone for Opiate Dependence

Walter Ling, M.D. UCLA ISAP Los Angeles, CA	Sustained-Release Methylphenidate for management of Methamphetamine Dependence
NIDA Rockville, MD	Starting Treatment with Agonist Replacement Therapies (START) (NIDA CTN Protocol 0027)
NIDA Bethesda, MD	Phase 2, Double-Blind, Placebo-Controlled Trial of Modafinil for the Treatment of Methamphetamine Dependence (NIDA/VA CSP #1026)
Steven Shoptaw, Ph.D. UCLA. Los Angeles, CA	Phase I Safety Interaction Trial of Ibudilast with Methamphetamine
Titan Pharmaceuticals S. San Francisco, CA	A Randomized, Placebo and Active-Controlled, Multi-Center Study of Probuphine in Patients with Opioid Dependence (Titan PRO-806)
Titan Pharmaceuticals S. San Francisco, CA	A Phase 3, Six-Month, Open-Label Re-Treatment Study of Probuphine in Opioid Addiction (Titan PRO-811)

APPENDIX D

SECTIONS CONCERNING THE RESEARCH ADVISORY PANEL
FROM THE CALIFORNIA HEALTH AND SAFETY CODE

§ 11213. Persons who, under applicable federal laws or regulations, are lawfully entitled to use controlled substances for the purpose of research, instruction, or analysis, may lawfully obtain and use for such purposes such substances as are defined as controlled substances in this division, upon approval for use of such controlled substances in bona fide research, instruction, or analysis by the Research Advisory Panel established pursuant to Sections 11480 and 11481.

Such research, instruction, or analysis shall be carried on only under the auspices of the head of a research project which has been approved by the Research Advisory Panel pursuant to Section 11480 or Section 11481. Complete records of receipts, stocks at hand, and use of these controlled substances shall be kept.

§ 11480. The Legislature finds that there is a need to encourage further research into the nature and effects of marijuana and hallucinogenic drugs and to coordinate research efforts on such subjects.

There is a Research Advisory Panel which consists of a representative of the State Department of Health Services, a representative of the California State Board of Pharmacy, a representative of the Attorney General, a representative of the University of California who shall be a pharmacologist, a physician, or a person holding a doctorate degree in the health sciences, a representative of a private university in this State who shall be a pharmacologist, a physician, or a person holding a doctorate degree in the health sciences, a representative of a statewide professional medical society in this state who shall be engaged in the private practice of medicine and shall be experienced in treating controlled substance dependency, a representative appointed by and serving at the pleasure of the Governor who shall have experience in drug abuse, cancer, or controlled substance research and who is either a registered nurse, licensed pursuant to Chapter 6 (commencing with Section 2700) of Division 2 of the Business and Professions Code, or other health professional. The Governor shall annually designate the private university and the professional medical society represented on the Panel. Members of the Panel shall be appointed by the heads of the entities to be represented, and they shall serve at the pleasure of the appointing power.

The Panel shall annually select a chairman from among its members.

§ 11480. Cont.

The Panel may hold hearings on, and in other ways study, research projects concerning marijuana or hallucinogenic drugs in this state. Members of the Panel shall serve without compensation, but shall be reimbursed for any actual and necessary expenses incurred in connection with the performance of their duties.

The Panel may approve research projects, which have been registered by the Attorney General, into the nature and effects of marijuana or hallucinogenic drugs, and shall inform the Attorney General of the head of the approved research projects which are entitled to receive quantities of marijuana pursuant to Section 11478.

The Panel may withdraw approval of a research project at any time, and when approval is withdrawn shall notify the head of the research project to return any quantities of marijuana to the Attorney General.

The Panel shall report annually to the Legislature and the Governor those research projects approved by the Panel, the nature of each research project, and, where available, the conclusions of the research project.

§ 11481. The Research Advisory Panel may hold hearings on, and in other ways study, research projects concerning the treatment of abuse of controlled substances.

The Panel may approve research projects, which have been registered by the Attorney General, concerning the treatment of abuse of controlled substances and shall inform the chief of such approval. The Panel may withdraw approval of a research project at any time and when approval is withdrawn shall so notify the chief.

The Panel shall, annually and in the manner determined by the Panel, report to the Legislature and the Governor those research projects approved by the Panel, the nature of each research project, and where available, the conclusions of the research project.

§ 11603. The Attorney General, with the approval of the Research Advisory Panel, may authorize persons engaged in research on the use and effects of controlled substances to withhold the names and other identifying characteristics of individuals who are the subjects of the research. Persons who obtain this authorization are not compelled in any civil, criminal, administrative, legislative, or other proceedings to identify the individuals who are the subjects of research for which the authorization was obtained.

§ 11604. The Attorney General, with the approval of the Research Advisory Panel, may authorize the possession and distribution of controlled substances by persons engaged in research. Persons who obtain this authorization are exempt from state prosecution for possession and distribution of controlled substances to the extent of the authorization.

§ 24172. Experimental subject's bill of rights; contents

As used in the chapter, "experimental subject's bill of rights," means a list of the rights of a subject in a medical experiment, written in a language in which the subject is fluent. Except as otherwise provided in Section 24175, this list shall include, but not be limited to the subject's right to:

(a) Be informed of the nature and purpose of the experiment.

(b) Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be utilized.

(c) Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

(d) Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

(e) Be given a disclosure of any appropriate alternative procedures, drugs or devices that might be advantageous to the subject, and their relative risks and benefits.

(f) Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

(g) Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

(h) Be instructed that consent to participate in the medical experiment may be withdrawn at any time and the subject may discontinue participation in the medical experiment without prejudice.

§ 24172. Cont.

(i) Be given a copy of the signed and dated written consent form as provided for by Section 24173 or 24178.

(j) Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

§ 24173. Informed consent

As used in this chapter, "informed consent" means the authorization given pursuant to Section 24175 to have a medical experiment performed after each of the following conditions have been satisfied:

(a) The subject or subject's conservator or guardian, or other representative, as specified in Section 24175, is provided with a copy of the experimental subject's bill of rights, prior to consenting to participate in any medical experiment, containing all the information required by Section 24172, and the copy is signed and dated by the subject or the subject's conservator or guardian, or other representative, as specified in Section 24175.

(b) A written consent form is signed and dated by the subject or the subject's conservator or guardian, or other representative, as specified in Section 24175.

(c) The subject or subject's conservator or guardian, or other representative, as specified in Section 24175, is informed both verbally and within the written consent form, in nontechnical terms and in a language in which the subject or the subject's conservator or guardian, or other representative, as specified in Section 24175, is fluent, of the following facts of the proposed medical experiment, which might influence the decision to undergo the experiment, including, but not limited to:

(1) An explanation of the procedures to be followed in the medical experiment and any drug or device to be utilized, including the purposes of the procedures, drugs, or devices. If a placebo is to be administered or dispensed to a portion of the subjects involved in a medical experiment, all subjects of the experiment shall be informed of that fact; however, they need not be informed as to whether they will actually be administered or dispensed a placebo.

§ 24173. Cont.

(2) A description of any attendant discomfort and risks to the subject reasonably to be expected.

(3) An explanation of any benefits to the subject reasonably to be expected, if applicable.

(4) A disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.

(5) An estimate of the expected recovery time of the subject after the experiment.

(6) An offer to answer any inquiries concerning the experiment or the procedures involved.

(7) An instruction to the subject that he or she is free to withdraw his or her prior consent to the medical experiment and discontinue participation in the medical experiment at any time, without prejudice to the subject.

(8) The name, institutional affiliation, if any, and address of the person or persons actually performing and primarily responsible for the conduct of the experiment.

(9) The name of the sponsor or funding source, if any, or manufacturer if the experiment involves a drug or device, and the organization, if any, under whose general aegis the experiment is being conducted.

(10) The name, address, and phone number of an impartial third party, not associated with the experiment, to whom the subject may address complaints about the experiment.

(11) The material financial stake or interest, if any, that the investigator or research institution has in the outcome of the medical experiment. For purposes of this section, "material" means ten thousand dollars ($10,000) or more in securities or other assets valued at the date of disclosure, or in relevant cumulative salary or other income, regardless of when it is earned or expected to be earned.

§ 24173. Cont.

(d) The written consent form is signed and dated by any person other than the subject or the conservator or guardian, or other representative of the subject, as specified in Section 24175, who can attest that the requirements for informed consent to the medical experiment have been satisfied.

(e) Consent is voluntary and freely given by the human subject or the conservator or guardian, or other representative, as specified by Section 24175, without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence.