

Document Coversheet

Study Title: Interactions of Marijuana and Opioids: Pharmacodynamic Effects

Institution/Site:	University of Kentucky
Document (Approval/Update) Date:	1/22/2025
NCT Number:	NCT03705559
IRB Number	45017
Coversheet created:	2/5/2025

IMPORTANT NOTE:

If you accidentally select the wrong IRB type or “Protocol Process Type” while your Initial Review (IR) application is in draft form (unsubmitted), you may change your selections. Please contact the Office of Research Integrity (ORI) at 859-257-9428, IRBsubmission@uky.edu, or [request a consult](#) to resolve any questions regarding your selections *prior* to submitting your Initial Review application.

If your submitted IR application has been returned to you for requested revisions or additional information, to streamline the review process **do not make changes** to your selections here unless instructed to do so by the ORI/IRB.

Changes to this section cannot be made after initial approval has been issued (the option is not available for MR or CR).

For guidance, see:

- [Which IRB?](#)
- [Which Protocol Process Type?](#)
- ["Getting Started"](#)

Which IRB

Medical NonMedical

Protocol Process Type

Exemption
 Expedited (Must be risk level 1)
 Full

The revised Common Rule expanded exemption certification category 4 for certain secondary research with identifiable information or biospecimens. The regulations no longer require the information or biospecimens to be existing. For more information see the [Exemption Categories Tool](#).

MODIFICATION REQUEST SECTION

0 unresolved
comment(s)

*** If this modification changes the scope of your activities to include COVID-19 related research, please insert "COVID19" at the start of your Project and Short Titles.***

Select One:

- This modification does not increase risk to study participants.
- This modification may or will increase risk to study participants.

Is this modification request due to an Unanticipated Problem/Adverse Event, or Protocol Violation?

- Yes
- No

In your professional opinion, does this modification involve information that might relate to a subject's willingness to continue to take part in the research?

- Yes
- No

If yes, state how the information will be communicated to subjects (i.e., re-consent, send letter, etc.):

For each proposed modification, include a justification.

Example: Jane Doe, MD, is being added as co-investigator because she has expertise with the subjects on this protocol. She has completed human subject protections training, and is authorized to obtain consent.

Update Study Personnel: Add Rogers & Rusch. They have completed required trainings and are NOT authorized to consent. Remove Bailey, Chang, Kunzelman, Mandal & Vincent.

PROJECT INFORMATION**0 unresolved
comment(s)**

Title of Project: (Use the exact title listed in the grant/contract application, if applicable).

If your research investigates any aspect of COVID-19, please include "COVID19" at the beginning of your Project Title and Short Title



Interactions of Marijuana and Opioids: Pharmacodynamic and Reinforcing Effects

Short Title Description

Please use a few key words to easily identify your study - this text will be displayed in the Dashboard listing for your study.



Marijuana and Opioids

Anticipated Ending Date of Research Project: 5/17/2026

Maximum number of human subjects (or records/specimens to be reviewed) 150

After approval, will the study be open to enrollment of new subjects or new data/specimen collection? Yes No

Are you requesting that the UK IRB serve as the lead IRB for a multi-site study, OR that the UK IRB defer review to another IRB? [Click [here](#) for "IRB Reliance" help]

Yes No

If "Yes," before completing your IRB application, fill out the [Reliance Request Form](#) and submit it to irbreliance@uky.edu.

PI CONTACT INFORMATION**0 unresolved comment(s)****Principal Investigator (PI) role for E-IRB access**

The PI is the individual holding primary responsibility on the research project with the following permissions on the E-IRB application:

1. Read;
2. write/edit;
3. receive communications; and
4. submit to the IRB (IR, CR, MR, Other Review*).

If research is being submitted to or supported by an extramural funding agency such as NIH, a private foundation or a pharmaceutical/manufacturing company, the PI listed on the grant application or the drug protocol must be listed as PI here.

Please fill in any blank fields with the appropriate contact information (gray shaded fields are not editable). Required fields left blank will be highlighted in pink after you click "Save".

To change home and work addresses, go to [myUK](#) and update using the Employee Self Service (ESS) portal. If name has changed, the individual with the name change will need to submit a ['Name Change Form'](#) to the Human Resources Benefits Office for entering into SAP. The new name will need to be associated with the individual's Link Blue ID in SAP before the change is reflected in E-IRB. Contact the [HR Benefits Office](#) for additional information.

The Principal Investigator's (PI) contact information is filled in automatically based on who logged in to create the application.

If you are not the Principal Investigator, do NOT add yourself as study personnel.

To change the PI contact information on an application in Researcher edit status:

- click "Change Principal Investigator";
- search for the PI's name using the search feature;
- click "Select" by the name of the Principal Investigator, then "Save Contact Information".

You will automatically be added as study personnel with editing permissions to continue editing the application.

**Change Principal Investigator:**

First Name:	<input type="text" value="Shanna"/>	Room# & Bldg:	<input type="text" value="845 Angliana Avenue"/>
Last Name:	<input type="text" value="Babalonis"/>	Speed Sort#:	<input type="text" value="40508"/>
Middle Name:	<input type="text" value="L"/>	Dept Code:	<input type="text" value="7H150"/>
Department:	<input type="text" value="Behavioral Science - 7H150"/>	Rank:	<input type="text" value="Assistant Professor"/>
PI's Employee/Student ID#:	<input type="text" value="10001351"/>	Degree:	<input type="text" value="PhD"/>
PI's Telephone #:	<input type="text" value="8592571881"/>	PI's FAX Number:	<input type="text"/>
PI's e-mail address:	<input type="text" value="babalonis@uky.edu"/>	HSP Trained:	<input type="text" value="Yes"/>
PI is R.N. <input type="radio"/> Yes <input checked="" type="radio"/> No		HSP Trained Date:	<input type="text" value="6/4/2024"/>
		RCR Trained:	<input type="text" value="Yes"/>
<p>Do you, the PI, have a significant financial interest related to your responsibilities at the University of Kentucky (that requires disclosure per the UK administrative regulation 7.2)?</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>			

RISK LEVEL**0 unresolved
comment(s)**

Indicate which of the categories listed below accurately describes this protocol

- (Risk Level 1) Not greater than minimal risk
- (Risk Level 2) Greater than minimal risk, but presenting the prospect of direct benefit to individual subjects
- (Risk Level 3) Greater than minimal risk, no prospect of direct benefit to individual subjects, but likely to yield generalizable knowledge about the subject's disorder or condition.
- (Risk Level 4) Research not otherwise approvable which presents an opportunity to understand, prevent, or alleviate a serious problem affecting the health or welfare of subjects.

**"Minimal risk" means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves from those ordinarily encountered in daily life or during the performance of routine physical or psychological examination or tests.

Refer to [UK's guidance document](#) on assessing the research risk for additional information.



SUBJECT DEMOGRAPHICS**0 unresolved comment(s)**Age level of human subjects: (i.e., 6 mths.; 2yrs., etc.) to **Study Population:**

Describe the characteristics of the subject population, including age range, gender, ethnic background and health status. Identify the criteria for inclusion and exclusion.

Provide the following information:

- A description of the subject selection criteria and rationale for selection in terms of the scientific objectives and proposed study design;
- A compelling rationale for proposed exclusion of any sex/gender or racial/ethnic group;
- Justification for the inclusion of vulnerable groups such as children, prisoners, adults with impaired consent capacity, or others who may be vulnerable to coercion or undue influence.

Please consider these resources:

[NIH Diversity Policy](#)

[FDA Diversity Guidance](#) ⓘ

Participants will be otherwise healthy, non-physically dependent recreational opioid using adults with histories of marijuana use, ages 18-50, with BMI of approximately less than/equal to 30. We will recruit participants from local flyers posted in public areas (libraries, coffee shops), magazines (free employment periodicals), internet postings (Craigslist.com, ResearchMatch.com) and radio ads. To determine basic eligibility criteria, callers respond to our advertisements (or word-of-mouth referrals) and complete a brief (approx. 20-min) telephone interview with qualified staff to determine eligibility for in-person screening. For each study, we anticipated completing in-person screening appointments with approximately 75 individuals in order to enroll 15 individuals and obtain 12 completers/study. These attrition rates are based on our current studies enrolling similar populations (e.g., 5 screened for every participant enrolled; 20-25% attrition with enrolled participants).

Inclusion criteria are itemized below. We conduct several screening visits prior to admission in order to fully assess inclusion/exclusion criteria. In order to confirm that participants are not opioid dependent, we require each participant to provide at least one opioid negative urine sample in the absence of opioid withdrawal signs/symptoms. To confirm that participants are active users of opioids, we will also require each participant to provide at least one opioid positive sample. To confirm that participants have a history of marijuana use, at least one urine sample positive for marijuana/THC during screening. Participants must have a urine sample negative for all drugs (except THC) and a negative breath alcohol test upon admission.

- 1) English-speaking and literate male and female subjects, able to understand and sign Informed Consent Document
- 2) ages 18 to 50 years old inclusive
- 3) not seeking treatment for opioid or any other drug use
- 4) BMI of greater than/equal to 17 and approximately less than or equal to 30
- 5) self-reported opioid use in the past year and past 30 days
- 6) self-reported marijuana use of approximately greater than or equal to 3 occasions in the past 3 months
- 7) providing at least one observed urine sample testing positive for opioids
- 8) providing at least one observed urine sample testing positive for THC/cannabinoids
- 9) providing at least one observed urine sample testing negative for opioids in the absence of opioid withdrawal signs/symptoms
- 10) self-reported history of intranasal opioid use
- 11) self-reported history of smoked and/or vaporized marijuana use
- 12) normal nasal exam during screening
- 13) women of childbearing potential must not be pregnant or breastfeeding at screening and be using an effective form of contraception throughout study participation
- 14) otherwise healthy as determined by the investigator based on medical history, physical examination, vital signs, laboratory chemistries (blood chemistry with liver function tests and hematology, urinalysis and microscopic evaluation, 12-lead electrocardiogram)
- 15) willing and able to comply with all testing requirements defined in the protocol

Exclusion criteria include:

- 1) physical dependence on alcohol, opioids, benzodiazepines or sedative/hypnotics requiring medical management/detoxification
- 2) seeking treatment for drug use
- 3) acute medical problem (e.g., infection) or chronic medical problem requiring daily medication or ongoing medical care (e.g., hypertension, cardiovascular disease, diabetes, respiratory disorders [e.g., asthma, COPD])
- 4) participants taking occasional OTC medications for non-clinically significant issues (e.g., mild seasonal allergies) will be asked to abstain from medication use during enrollment - if participant is unable to abstain from medication, the participant will not qualify; daily oral contraceptive use is permitted
- 5) clinically significant abnormal ECG (as determined by study physician cardiologist)
- 6) clinically significant abnormal laboratory findings (e.g., liver function tests greater than 3x the upper limits of normal range)
- 7) history of seizures
- 8) clinically significant history of head injury
- 9) current or past history of major psychiatric disorder that would limit ability to participate in the study (e.g., bipolar disorder).
- 10) abnormal nasal exam that would suggest the condition would interfere/limit nasal drug administration; abnormal nasal condition that could be exacerbated by drug exposure
- 11) recent use of CYP2C9 and CYP3A4 inhibitor or inducer
- 12) self report of past 30-day synthetic cannabinoid use (K2, Spice)

Attachments

Indicate the targeted/planned enrollment of the following members of minority groups and their subpopulations. Possible demographic sources: [Census Regional Analyst Edition](#), [Kentucky Race/Ethnic Table](#), [Kentucky Population Data](#).

(Please note: The IRB will expect this information to be reported at Continuation Review time for Pre-2019 FDA-regulated Expedited review and Full review applications):

Participant Demographics

	Cisgender Man 	Cisgender Woman 	TGNB/TGE 	Unknown/Not Reported
American Indian/Alaskan Native:	1	0		
Asian:	4	0		
Black/African American:	25	7		
Latinx:	2	2		
Native Hawaiian/Pacific Islander:	1	0		
White:	70	35		
American Arab/Middle Eastern/North African:				
Indigenous People Around the World:				
More than One Race:				
Unknown or Not Reported:	2	1		

If unknown, please explain why:

Indicate the categories of subjects and controls to be included in the study. You may be required to complete additional forms depending on the subject categories which apply to your research. If the study does not involve direct intervention or direct interaction with subjects, (e.g., record-review research, outcomes registries), do not check populations which the research does not specifically target. For example: a large record review of a diverse population may incidentally include a prisoner or an international citizen, but you should not check those categories if the focus of the study has nothing to do with that status.

Check All That Apply (at least one item must be selected)

ADDITIONAL INFORMATION:

- Children (individuals under age 18)
- Wards of the State (Children)
- Emancipated Minors
- Students
- College of Medicine Students
- UK Medical Center Residents or House Officers
- Impaired Consent Capacity Adults
- Pregnant Women/Neonates/Fetal Material
- Prisoners
- Non-English Speaking (translated long or short form)
- International Citizens
- Normal Volunteers
- Military Personnel and/or DoD Civilian Employees
- Patients
- Appalachian Population

Please visit the [IRB Survival Handbook](#) for more information on:

- Children/Emancipated Minors
- Students as Subjects
- Prisoners
- Impaired Consent Capacity Adults
- Economically or Educationally Disadvantaged Persons

Other Resources:

- UKMC Residents or House Officers [see [requirement of GME](#)]
- [Non-English Speaking](#) [see also the E-IRB Research Description section on this same topic]
- [International Citizens](#) [DoD SOP may apply]
- [Military Personnel and/or DoD Civilian Employees](#)

Assessment of the potential recruitment of subjects with impaired consent capacity (or likelihood):

Check this box if your study does NOT involve direct intervention or direct interaction with subjects (e.g., record-review research, secondary data analysis). If there is no direct intervention/interaction you will not need to answer the impaired consent capacity questions.

Does this study focus on adult subjects with any conditions that present a high *likelihood* of impaired consent capacity or *fluctuations* in consent capacity? (see examples below)

Yes No

If Yes and you are not filing for exemption certification, go to "[Form T](#)", complete the form, and attach it using the button below.

Examples of such conditions include:

- Traumatic brain injury or acquired brain injury
- Severe depressive disorders or Bipolar disorders
- Schizophrenia or other mental disorders that involve serious cognitive disturbances
- Stroke
- Developmental disabilities
- Degenerative dementias
- CNS cancers and other cancers with possible CNS involvement
- Late stage Parkinson's Disease
- Late stage persistent substance dependence
- Ischemic heart disease
- HIV/AIDS
- COPD
- Renal insufficiency
- Diabetes
- Autoimmune or inflammatory disorders
- Chronic non-malignant pain disorders
- Drug effects
- Other acute medical crises

Attachments

INFORMED CONSENT/ASSENT PROCESS/WAIVER

0 unresolved
comment(s)

For creating your informed consent attachment(s), please download the most up-to-date version listed in "All Templates" under the APPLICATION LINKS menu on the left, and edit to match your research project.

Additional Resources:

- [Informed Consent/Assent Website](#)
- [Waiver of Consent vs. Waiver of Signatures](#)
- [Sample Repository/Registry/Bank Consent Template](#)

Consent/Assent Tips:

- If you have multiple consent documents, be sure to upload each individually (not all in a combined file).
- If another site is serving as the IRB for the project, attach the form as a "Reliance Consent Form" so the document will not receive a UK IRB approval stamp; the reviewing IRB will need to stamp the consent forms.
- Changes to consent documents (e.g., informed consent form, assent form, cover letter, etc...) should be reflected in a 'tracked changes' version and uploaded separately with the Document Type "Highlighted Changes".
- It is very important that only the documents you wish to have approved by the IRB are attached; DELETE OUTDATED FILES – previously *approved* versions will still be available in Protocol History.
- Attachments that are assigned a Document Type to which an IRB approval stamp applies will be considered the version(s) to be used for enrolling subjects once IRB approval has been issued.

Document Types that do NOT get an IRB approval stamp are:

- "Highlighted Changes",
- "Phone Script", and
- "Reliance Consent Form",
- "Sponsor's Sample Consent Form".

How to Get the Section Check Mark

1. You must:
 - a) provide a response in the text box below describing how investigators will obtain consent/assent, and
 - b) check the box for at least one of the consent items and/or check mark one of the waivers
2. If applicable attach each corresponding document(s) **as a read-only PDF**.
3. If you no longer need a consent document approved (e.g., closed to enrollment), or, the consent document submitted does not need a stamp for enrolling subjects (e.g., umbrella study, or sub-study), only select "Stamped Consent Doc(s) Not Needed".
4. After making your selection(s) be sure to scroll to the bottom of this section and **SAVE** your work!



Check All That Apply

Informed Consent Form (and/or Parental Permission Form and/or translated short form)

Assent Form

Cover Letter (for survey/questionnaire research)

Phone Script

Informed Consent/HIPAA Combined Form

Debriefing and/or Permission to Use Data Form

Reliance Consent Form

Sponsor's sample consent form for Dept. of Health and Human Services (DHHS)-approved protocol

Stamped Consent Doc(s) Not Needed

Attachments

Attach Type	File Name
Informed Consent/HIPAA Combined Form	45017 M&O Study 2 Main Study Consent - v12.0 - Feb 19 2024 (f).pdf
Informed Consent/HIPAA Combined Form	45017 M&O Study 1 Main Study Consent - v12.0 - Feb 19 2024 (f).pdf
Informed Consent/HIPAA Combined Form	45017 M&O Study 1 Screening Consent - v9.0 - Feb 19 2024 (f).pdf
Informed Consent/HIPAA Combined Form	45017 M&O Study 2 Screening Consent - v2.0 - Feb 19 2024 (f).pdf

Informed Consent Process:

Using active voice, in the text box below, describe how investigators will obtain consent/assent. Include:

- the circumstances under which consent will be sought and obtained
- the timing of the consent process (including any waiting period between providing information and obtaining consent)
- who will seek consent
- how you will minimize the possibility of coercion or undue influence
- the method used for documenting consent
- if applicable, who is authorized to provide permission or consent on behalf of the subject
- if applicable, specific instruments or techniques to assess and confirm potential subjects' understanding of the information

Will electronic consent form/process be utilized on-site or remotely for this study?

Yes No

If yes, in addition to addressing the above bullet points, describe the e-consent method and platform, including any hyperlinks, videos, or enhancements used to convey information, if applicable. Attach a representation of the e-consent with signature fields. For guidance, see the ORI [E-Consent web page](#).

Note: all individuals authorized to obtain informed consent should be designated as such in the E-IRB "Study Personnel" section of this application.

Special considerations may include:

- Obtaining consent/assent for special populations such as children, prisoners, or people with impaired decisional capacity
- *Research Involving Emancipated Individuals*
If you plan to enroll some or all prospective subjects as emancipated, consult with UK legal counsel **prior to submitting this application to the IRB**. Include research legal counsel's recommendations in the "Additional Information" section as a separate document.
- *Research Involving Non-English Speaking Subjects*
For information on inclusion of non-English speaking subjects, or subjects from a foreign culture, see IRB Application Instructions for Recruiting Non-English Speaking Participants or Participants from a Foreign Culture.
- *Research Repositories*
If the purpose of this submission is to establish a research repository describe the informed consent process. For guidance regarding consent issues, process approaches, and sample language see the [Sample Repository/Registry/Bank Consent Template](#).

Trained research staff will obtain sober, written informed consent prior to participation in the screening process (using the Screening Consent form). An investigator or study coordinator will obtain sober, written study consent prior to research participation (with the Main Study Consent form). Participants will be required to have a negative alcohol breathalyzer test prior to signing consent and not be stumbling, nodding or appearing intoxicated. Volunteers who have a positive breathalyzer test or appear intoxicated will be asked to return at a later time when they are sober. Volunteers must be fluent in English and are required to take a literacy test to determine reading level. Volunteers will meet with the investigator, physician or the study coordinator on an outpatient basis prior to admission in order to review all experimental procedures and allow the volunteer to ask any questions regarding the protocol prior to signing the study Informed Consent form. There is no time limit on this process. The investigator will also inform the volunteer that this is not a treatment program and that signing the consent form does not obligate them to participate. Each volunteer will receive a copy of the signed consent forms.

Participants may also be consented via Zoom. All consenting procedures will be identical to an in-person consent, except the PI will be present via Zoom (instead of the same room). The participant will be screened by in-person research staff (e.g., participants provided photo ID, negative breathalyzer samples and protocol-appropriate urine samples; staff confirmed participants were not intoxicated). Research staff will provide a copy of the hardcopy (paper) consent form to the participant, which will be verified on camera by the PI. This process allows for a thorough discussion and exchange of information with the participant, a method to ensure the participant's identity, and documentation of the consent itself.

Subjects may ask study personnel questions about the study or make complaints at any time. All staff will be aware to contact Drs. Babalonis or Lofwall about any subject concern or complaint as it arises. Phone numbers for the study PI, as well as the Office of Research Integrity are included in the consent form. It is expected that providing a phone number and contact information for the PI may offer a safe, confidential and reliable channel for participants to express problems, concerns or questions and obtain study information.

Request for Waiver of Informed Consent Process

If you are requesting IRB approval to waive the requirement for the informed consent process, or to alter some or all of the elements of informed consent, complete, Section 1 and Section 2 below.

Note: The IRB does not approve waiver or alteration of the consent process for greater than minimal risk research, except for planned emergency/acute care research as provided under FDA regulations. Contact ORI for regulations that apply to single emergency use waiver or acute care research waiver (859-257-9428).

SECTION 1.

Check the appropriate item:

I am requesting a waiver of the requirement for the informed consent process.

I am requesting an alteration of the informed consent process.

If you checked the box for this item, describe which elements of consent will be altered and/or omitted, and justify the alteration.

SECTION 2.

Explain how each condition applies to your research.

a) The research involves no more than minimal risk to the subject.

b) The rights and welfare of subjects will not be adversely affected.

c) The research could not practicably be carried out without the requested waiver or alteration.

d) Whenever possible, the subjects or legally authorized representatives will be provided with additional pertinent information after they have participated in the study.

Request for Waiver of Signatures

If you are requesting IRB approval to waive the requirement for signatures on informed consent forms, **your research activities must fit into one of three regulatory options:**

1. The only record linking the participant and the research would be the consent document, and the principal risk would be potential harm resulting from a breach of confidentiality (e.g., a study that involves participants who use illegal drugs).
2. The research presents no more than minimal risk to the participant and involves no procedures for which written consent is normally required outside of the research context (e.g., a cover letter on a survey, or a phone script).
3. The participant (or legally authorized representative) is a member of a distinct cultural group or community in which signing forms is not the norm, the research presents no more than minimal risk to the subject, and there is an appropriate alternative mechanism for documenting that informed consent was obtained.

Select the option below that best fits your study.

*If the IRB approves a waiver of signatures, participants must still be provided oral or written information about the study. To ensure you include required elements in your consent document, use the **Cover Letter Template** as a guide. There is an [English](#) and a [Spanish](#) version.*



Option 1

Describe how your study meets these criteria:

- a) The only record linking the participant and the research would be the consent document:
- b) The principal risk would be potential harm resulting from a breach of confidentiality (i.e., a study that involves subjects who use illegal drugs).

Under this option, each participant (or legally authorized representative) must be asked whether (s)he wants to sign a consent document; if the participant agrees to sign a consent document, only an IRB approved version should be used.

Option 2

Describe how your study meets these criteria:

- a) The research presents no more than minimal risk to the participant:
- b) Involves no procedures for which written consent is normally required outside of the research context (i.e. a cover letter on a survey, or a phone script):

Option 3

Describe how your study meets these criteria:

- a) The subject (or legally authorized representative) is a member of a distinct cultural group or community in which signing forms is not the norm.
- b) The research presents no more than minimal risk to the subject.
- c) There is an appropriate alternative mechanism for documenting that informed consent was obtained.

RESEARCH DESCRIPTION**0 unresolved comment(s)**

You may attach a sponsor's protocol pages in the "Additional Information" section and refer to them where necessary in the Research Description. However, each prompt that applies to your study should contain at least a summary paragraph.

Pro Tips:

- **Save your work often to avoid losing data.**
- **Use one of the attachment buttons in this section or under the Additional Information section to include supplemental information with your application. During the document upload process, you will be able to provide a brief description of the attachment.**

Background

Include a brief review of existing literature in the area of your research. You should identify gaps in knowledge that should be addressed and explain how your research will address those gaps or contribute to existing knowledge in this area. For interventional research, search PubMed and ClinicalTrials.gov for duplicative ongoing and completed trials with same condition and intervention(s).

Opioid misuse in the United States is at epidemic levels – in 2015, 4.1 million individuals 12 years and older reported misuse of prescription opioids and heroin and 2.6 million Americans met criteria for opioid use disorder. On an average day in the U.S., 3,900 individuals initiate non-medical use of prescription opioids and 580 initiate heroin use. Across the whole of 2014, 2.1 million individuals initiated non-medical prescription opioid use, second only to marijuana (which had 2.6 million initiates). There were more than 33,000 opioid-related overdose deaths in 2015,²⁹ with an average of 78 individuals dying every day from an opioid-related overdose³⁰ – these deaths occur in pain patients and illicit drug users and can be either intentional or unintentional. This substantial increase in opioid abuse is occurring on a background of a changing landscape of marijuana availability, use and misuse. Marijuana use is now at peak levels in the U.S., with 8.3% of individuals 12 years and older reporting past month marijuana use. Although marijuana and opioids are misused at high rates (with many more taking these drugs therapeutically), there is little to no data available on their co-use, specifically in regard to the impact of marijuana use on opioid response and safety.

A 2014 paper published in JAMA received considerable attention from both the popular press and scientific and medical communities – it reported on the association between medical marijuana laws (MMLs) and rates of opioid overdose mortality. The authors examined the opioid-related death rates (confirmed by death certificate reports) in all 50 U.S. states for several years before and after MMLs were enacted in a time-series analysis. When an age-adjusted model was implemented, states with MMLs had higher rates of opioid overdose deaths compared to states with no MMLs. However, when the models were further adjusted to capture enacted laws (when citizens of the state actually had access to marijuana, rather than the year the law was passed), the opposite relationship emerged – MMLs decreased the rates of opioid overdose deaths by 24.8% annually. However, the exact relationship between these two variables is unclear, as these observations are all correlational and subject to several confounds. If it is marijuana use itself that provides a protective effect, there are no data to directly support this – there is no information regarding the rates of marijuana use (e.g., post-mortem marijuana positive samples) in those who died vs. a comparator group across states. One key factor may be the use of tax revenue (often 25% and greater) from marijuana sales for drug use treatment and prevention/education programs. An extreme example is Colorado (where there were \$1 billion in medical/recreational marijuana sales in 2016 and \$100 million in tax revenue) which devotes approximately \$25 million dollars per year to substance abuse programs (with an additional \$11 million for mental/behavioral health programs, \$7.5 million for health care, and \$45 million for schools).

Another theory on why MMLs could be protective surrounds drug substitution – that is, replacing opioid use with marijuana use. Marijuana clearly has a superior safety profile (e.g., little risk of overdose) compared to opioids (e.g., high risk of respiratory depression/overdose), which would likely make drug substitution a safer choice and potentially reduce death rates. There is some evidence that substitution occurs in a subset of chronic pain patients. However, there is relatively weak evidence that marijuana is a substitute in those who have opioid use disorder. Data from controlled human laboratory studies (our laboratory and others) suggest that pharmaceutical cannabinoids are a weak-to-moderate substitute for opioids during opioid withdrawal. Overall, additional research needs to be conducted to determine if 1) marijuana use changes the safety profile and physiological effects of opioids across a full range of doses, 2) marijuana use modulates opioid response on an array of abuse-related measures, 3) marijuana use modulates opioid intake, 4) opioid use modulates marijuana intake, and 5) there are behavioral/cognitive effects of the two drugs in combination.

Objectives

List your research objectives. Please include a summary of intended research objectives in the box below.

Aim 1: To explore the effects of vaporized doses marijuana over a range of THC concentrations (0, 10 & 30 mg THC) on response to intranasal oxycodone (0, 15 & 30 mg) using a full battery of pharmacodynamic outcomes, including safety/physiological response and abuse-related subjective and observer-rated effects. Secondary aims will examine the psychomotor/cognitive effects across the dose conditions.

Aim 2: To examine 1) the impact of marijuana use on opioid drug-taking behavior by examining the effects of smoked marijuana pre-treatment (0, 30 mg THC) on intranasal oxycodone (0, 15 & 45 mg) self-administration, and 2) the impact of opioid use on marijuana drug-taking behavior by examining intranasal oxycodone pre-treatment (0, 45 mg) on smoked marijuana (0, 10 and 30 mg THC) self-administration.

Overall, these timely and innovative studies will provide some of the first empirical data on the pharmacodynamic interaction of agents from the two most commonly misused drug classes, yielding outcomes on the safety, physiological response, abuse liability, and impact on reinforcing efficacy. These studies may simultaneously inform regulatory considerations related to an emerging public health question (i.e., is marijuana functionally protective against the deleterious effects of opioid misuse or does it cause further harm to those who have ongoing opioid misuse problems) and provide new controlled information on potential interactions relevant to clinical practice, prescribing, and public safety.

Study Design

Describe and explain the study design (e.g., observational, secondary analysis, single/double blind, parallel, crossover, deception, etc.).

- *Clinical Research*: Indicate whether subjects will be randomized and whether subjects will receive any placebo.
- *Community-Based Participatory Research*: If you are conducting [community-based participatory research \(CBPR\)](#), describe strategies for involvement of community members in the design and implementation of the study, and dissemination of results from the study.
- *Qualitative research*: Indicate ranges where flexibility is needed, if a fixed interview transcript is not available, describe interview topics including the most sensitive potential questions.
- *Research Repositories*: If the purpose of this submission is to establish a Research Repository (bank, registry) and the material you plan to collect is already available from a commercial supplier, clinical lab, or established IRB approved research repository, provide scientific justification for establishing an additional repository collecting duplicate material. Describe the repository design and operating procedures. For relevant information to include, see the [UK Research Biospecimen Bank Guidance](#) or the [UK Research Registry Guidance](#).

Two studies will be conducted during this 4-5 year project using randomized, within-subject, double-blind, double-dummy, placebo-controlled designs and enrolling samples of non-physically dependent recreational opioid users with histories of marijuana use as inpatients.

Attachments

Subject Recruitment Methods & Advertising

Describe how the study team will identify and recruit subjects. Please consider the following items and provide additional information as needed so that the IRB can follow each step of the recruitment process.

- How will the study team identify potential participants?
- Who will first contact the potential subjects, and how?
- Will you use advertisements? If so, how will you distribute those?
- How and where will the research team meet with potential participants?
- If applicable, describe proposed outreach programs for recruiting women, minorities, or disparate populations.
- How you will minimize undue influence in recruitment?
- Attach copies of all recruiting and advertising materials (emails, verbal scripts, flyers, posts, messages, etc.).

For additional information on recruiting and advertising:

- [IRB Application Instructions - Advertisements](#)
- [PI Guide to Identification and Recruitment of Human Subjects for Research](#)

Volunteers are recruited primarily through regular newspaper ads, local flyers posted in public areas (e.g., bars, marketplaces), internet postings (including Craigslist.com; ResearchMatch.com; Facebook; BuildClinical; UK Cannabis Center website; among others), by geo-fencing techniques (advertising within a defined geographical location), and by word-of-mouth. We will also utilize IRB-approved radio advertisements for subject recruitment. Flyers and advertisements have our telephone number listed on them, so volunteers typically make initial contact with us by phone or through Facebook, BuildClinical, UK Cannabis Center website, among others. We will also access the UK CCTS Participant Self-Referral Database and will contact individuals who have expressed interest in marijuana-related studies. When calling, a volunteer will speak with one of our trained research staff, all of whom have completed human subjects protection training (web-based CITI and HIPAA-compliance modules). If a volunteer self-discloses information that makes them potentially eligible for the study, he/she will be invited to come in for a screening appointment. Screening is completed by one of our research assistants/research nurses/investigators at the Robert Straus Behavioral Research Facility and/or the UK CCTS. Study investigators may interact with volunteers in any of these settings and appropriate cautions are in place to ensure privacy during the intake process.

We will primarily use ads/flyers to advertise (see attached; approved by UK PR). We are also requesting permission to use Facebook and BuildClinical (see attached screenshot; approved by UK PR) to communicate with participants and to advertise our study.

Attachments

Attach Type	File Name
Advertising	Update to Recruitment Plan.pdf
Advertising	Facebook page - revised Dec 17 APPROVED.pdf
Advertising	Business Card 1 APPROVED.pdf
Advertising	Non-Dep OPI Ad Blue APPROVED.pdf
Advertising	Non-Dep OPI Ad Plain APPROVED.pdf

Advertising	Non-Dep Vol Ad Blue APPROVED.pdf
Advertising	PR Approved Ads.pdf
Advertising	45017 Ads - July 2019.pdf
Advertising	20185 RADIO DRAFT 02 24 2020 APPROVDED[1].pdf
Advertising	Cannabis Ad (f) PR STAMPED.pdf
Advertising	Cannabis Ad (f).pdf
Advertising	BuildClinical Landing Page - PR stamped.pdf
Advertising	BuildClinical Opioid ads - PR stamped.pdf
Advertising	BuildClinical Secure questionnaire.pdf
Advertising	MJ & Opioid Cards - Final 6.1 - PR APPROVED.pdf
Advertising	MJ & Opioid Cards - Final 6.1 - CLEAN COPY.pdf
Advertising	MJ & Opioid Digital Ads - Final 6.1 - PR APPROVED.pdf
Advertising	MJ & Opioid Digital Ads - Final 6.1 - CLEAN COPY.pdf
Advertising	MJ & Opioid Flyers - Final_6.1 - PR APPROVED.pdf
Advertising	MJ & Opioid Flyers - Final 6.1 - CLEAN COPY.pdf

Research Procedures

Describe how the research will be conducted.

- What experience will study participants have?
- What will study participants be expected to do?
- How long will the study last?
- Outline the schedule and timing of study procedures.
- Provide visit-by-visit listing of all procedures that will take place.
- Identify all procedures that will be carried out with each group of participants.
- Describe deception and debrief procedures if deception is involved.

Differentiate between procedures that involve standard/routine clinical care and those that will be performed specifically for this research project. List medications that are explicitly forbidden or permitted during study participation.

Please see the attached document outlining the research procedures.

Attachments

Attach Type	File Name
ResearchProcedures	45017 Research Procedures April 20 2023.pdf
ResearchProcedures	Example Questionnaire Packet.pdf
ResearchProcedures	Screening Packet.pdf

Data Collection & Research Materials

In this section, please provide the following:

- Describe all sources or methods for obtaining research materials about or from living individuals (such as specimens, records, surveys, interviews, participant observation, etc.), and explain why this information is needed to conduct the study.
- For each source or method described, please list or attach all data to be collected (such as genetic information, interview scripts, survey tools, data collection forms for existing data, etc.).
- If you will conduct a record or chart review, list the beginning and end dates of the records you will view.

Outcome measures for this study will include physiological measures (such as heart rate, blood pressure, oxygen saturation, respiratory rate, and body temperature), performance on subject-rated questionnaires (such as visual analog questionnaires, Addiction Research Center Inventory, street value questionnaire, and Pharmacological Class Questionnaire), observer ratings, psychomotor/cognitive tasks (such as the Digit Symbol Substitution Task, Trails Making Task), ocular assessments (such as the Flicker Fusion).

Attachments

Attach Type	File Name
DataCollection	Example Session Packet.pdf

Resources

Describe the availability of the resources and adequacy of the facilities that you will use to perform the research. Such resources may include:

- Staffing and personnel, in terms of availability, number, expertise, and experience;
- Computer or other technological resources, mobile or otherwise, required or created during the conduct of the research;
- Psychological, social, or medical services, including equipment needed to protect subjects, medical monitoring, ancillary care, or counseling or social support services that may be required because of research participation;
- Resources for communication with subjects, such as language translation/interpretation services.

The proposed studies will be conducted at the Straus Behavioral Science Research Building and at the UK Center for Clinical Translational Science (CCTS) Inpatient Research Unit at the UK Hospital. The laboratory and CCTS staff have experience working with and monitoring volunteers with drug abuse histories during participation in clinical pharmacology research protocols. The CCTS is a 12-bed unit and is supervised by nursing staff around the clock. The unit is a secure setting in which it is possible to ensure that volunteers are abstinent from unauthorized drug use during their participation and provides the intensive monitoring and care necessary to conduct these studies safely.

At admission, prior to dosing, every enrolled participant's urine sample will be tested for synthetic cannabinoids (K2, Spice) with standard immunoassay tests. Participants testing positive will be discharged (as these chemicals pose a safety risk for study participation). Participants testing positive for THC at admission (which may be common, given the time course of the metabolites and the study population), confirmatory testing (GCMS) will be completed for (approximately) the first three days after admission to make sure that THC metabolite concentrations are indicative of past use and are washing out (e.g., metabolite concentrations decreasing). During admission, Urine samples will be collected and tested daily (via immunoassay dipstick) to confirm abstinence from illicit drug use. Participants are maintained on a caffeine-free diet throughout their inpatient stay. Because approximately 90% or more of our

volunteers are smokers, we allow smoking during these inpatient studies in a designated outdoor area under staff supervision, but smoking is prohibited during all experimental sessions and for a minimum of 30 min prior to each session. Participants will be required to finish eating approx. 1.5 hr prior to drug administration. Aside from these restrictions, volunteers receive three meals/day and a variety of snacks, fresh fruit and supplemental food for evening snacks or to substitute for a regular meal. Participants are provided with recreational activities (reading, movies, video and board games, crafts) for the duration of their stay. Participants are monitored daily by nursing staff who collect vital signs, weight, and query side effects. Under these conditions, we have been successful in recruiting and retaining participants in studies lasting up to 6 weeks and longer.

Participants will be transported under supervision from the CCTS to the Straus Behavioral Science Research Facility, in which the smoking laboratory is located for each experimental session. The laboratory has on-site medical staff (Dr. Lofwall; a full time ACLS-trained research nurse) and the offices of the PI, Co-Is, the lab supervisor, and research assistants/nurses. This team has safely and successfully conducted several human drug studies in this facility and it is fully equipped for the proposed work, including a BLS crash cart in case of emergency (e.g., naloxone, oxygen, AED), secure Schedule I drug storage facilities, a marijuana smoking laboratory that is equipped with a state-of-the-art ventilation system (equipped with an OSHA-regulated air exchange system for indoor smoking), physiological monitoring equipment, experimental test areas, private exam rooms, wet lab for urine testing and accommodations for observing urine samples. Staff have experience working with and monitoring volunteers receiving opioids and cannabinoids, including smoked marijuana, and conducting drug interaction and self-administration sessions. The laboratory is designed to accommodate comfortable sessions, with a spacious dayroom where participants may relax under supervision when not participating in data collection. After session completion, staff will transport participants back to the CCTS Inpatient Unit (<2 miles away). Participants will complete ECGs once per week to monitor safety.

Potential Risks & Benefits

Risks

- Describe any potential risks – including physical, psychological, social, legal, ability to re-identify subjects, or other risks. Assess the seriousness and likelihood of each risk.
- Which risks may affect a subject's willingness to participate in the study?
- Describe likely adverse effects of drugs, biologics, devices or procedures participants may encounter while in the study.
- *Qualitative research* - describe ethical issues that could arise while conducting research in the field and strategies you may use to handle those situations.
- Describe any steps to mitigate these risks.

Benefits

- Describe potential direct benefits to study participants – including diagnostic or therapeutic, physical, psychological or emotional, learning benefits. This cannot include incentives or payments.
- State if there are no direct benefits.
- Describe potential benefits to society and/or general knowledge to be gained.

Describe why potential benefits are reasonable in relation to potential risks. If applicable, justify why risks to vulnerable subjects are reasonable to potential benefits.

During the screening process, it is possible that volunteers may feel uncomfortable answering personal questions about their health, psychiatric and drug use histories. However, they may stop answering questions at any point (and are informed of this option during the informed consent process). During the screening, subjects will also have a venipuncture in order to draw blood for testing purposes. It is possible that this could lead to bruising, infection, or a blood clot, but this risk is minimal and limited by the sterile procedures, universal precautions and well-trained nursing staff.

The primary risks to the study participants are related to the ingestion of the study drugs. The proposed drug doses of oxycodone and marijuana have been safely administered to humans in previous studies. All participants will be current opioid users with experience using opioids intranasally, have a history of marijuana use and will be familiar with the effects of these drugs. The possible side effects of these compounds are well known and documented. Although many of the participants will likely have histories of co-abusing marijuana and opioids, there is little to no data on their interaction effects (which will be assessed in these studies). The administration of any drug involves some risks simply because individuals differ in their reactions to drugs. Individuals with known allergies or adverse reactions to the study drugs/substances (e.g., marijuana-induced panic) will be excluded. During the test sessions, the participants are never left unattended and a trained nurse will monitor safety throughout the session. We will monitor oxygen saturation, blood pressure and heart rate once per minute during session and respiration rate and expired CO₂ at least every 15 min for the first 2 hr after drug administration and every 30 min thereafter. A registered nurse will monitor these readings throughout each session; after session has been completed, nurses on the inpatient unit will continue to monitor participant safety.

Oxycodone produces the typical side effect profile of mu opioid agonists, and these may include nausea, vomiting, headache, dry mouth, itchiness, drowsiness, sweating, dizziness, stimulation, somnolence, lightheadedness, restlessness, a feeling of well being, talkativeness, urinary retention and constipation. More serious side effects may include allergic reaction and respiratory depression. The doses were selected with care to preclude those that produce clinical relevant respiratory depression (Study 1: 15, 30 mg IN; Study 2: 15, 45 mg IN) and are doses we have administered in prior studies without serious adverse events. Participants will be required to have previous recreational experience with opioids, which will reduce the likelihood of an allergic reaction. Our laboratory has a long history of safely administering opioids through various routes (IV, IN and oral) on both an inpatient and outpatient basis and the procedures and doses in this study were selected with care to minimize risk.

Marijuana is a partial CB1/CB2 agonist that has a high therapeutic index and low risk of acute toxicity. Marijuana with high levels of THC (up to 23%, with doses of 29.3, 49.1 and 69.4 mg THC administered) has been safely administered to a similar population in several research studies without complication. High potency strains (with up to 30%+ THC) and cannabinoid concentrates (with up to 89-90% THC) are legally available in U.S. dispensaries and in several international countries (e.g., Netherlands). Similar strains are also being used for medicinal purposes (and medicinal strains are being diverted for recreational use). Participants reporting adverse events from previous marijuana use (e.g., anxiety, panic) or a history of a condition that would increase the likelihood of an adverse event (e.g., bipolar disorder, asthma) will not be enrolled. Marijuana produces an array of side effects that are typical of CB1/CB2 agonists, including feeling high/intoxicated, euphoria, increased hunger and thirst, perceptual changes, anxiousness, lightheadedness/ dizziness, performance impairment, drowsiness, orthostatic hypotension, resting increases or decreases in blood pressure, increased heart rate, red/bloodshot eyes, dry mouth, sleepiness, concentration difficulties, faintness, restlessness, confusion, loss of coordination, shakiness, stomach upset, headache, paleness, flushing, sweating, slurred speech, fatigue. All of the participants will have a history of recreational marijuana use and will be familiar with its effects, decreasing the risk of unanticipated reactions. We have selected inclusion criteria similar to previous well-controlled marijuana studies (conducted by NIDA, our research group, and others) and studies that have specifically examined high potency marijuana strains. Our laboratory has experience administering smoked and oral pharmaceutical cannabinoids on both an inpatient and outpatient basis and the procedures and doses in this study were selected with care to minimize risk. We will also administer the dose combinations in ascending order (lower dose combinations prior to highest combination) for the first three participants. Safety data will be submitted to the IRB and with the IRB's approval, we will then initiate fully randomized dosing (see attached Research Description for further details).

The cold water task produces some painful sensations. However, the participant has full control over their exposure and can remove their arm from the cold water at any point during the trial. The safety cut-off of 5 minutes of immersion was selected to avoid the risk of tissue damage. We have successfully and safely used this model in several other studies without any safety concerns.

The degree of risk to which individual study volunteers are exposed as a consequence of their research participation is low. In contrast, the potential and probable benefits to be derived by society and to public health and safety appear to be considerable. The major benefits of this study are scientific and clinical ones related to the knowledge gained regarding concurrent marijuana/opioid use and how marijuana may affect the decision to take opioids. Individual volunteers are expected to benefit personally from the medical and psychiatric evaluations, referrals for medical and psychiatric treatment that are provided whenever appropriate, and the financial payments, which are provided for their research participation. Overall, the risk/benefit ratio appears favorable and the conduct of this research seems well justified.

Available Alternative Opportunities/Treatments

Describe alternative treatments or opportunities that might be available to those who choose not to participate in the study, and which offer the subject equal or greater advantages. If applicable, this should include a discussion of the current standard of care treatment(s).

This is not a treatment study - there are no available alternative treatments.

[Back to Top](#)

Records, Privacy, and Confidentiality

Specify where the data and/or specimens will be stored and how the researcher will ensure the privacy and confidentiality of both. Specify who will have access to the data/specimens and why they need access.

Describe how data will be managed after the study is complete:

- If data/specimens will be maintained, specify whether identifiers will be removed from the maintained information/material.
- If identifiers will not be removed, provide justification for retaining them and describe how you will protect confidentiality.
- If the data/specimens will be destroyed, verify that this will not violate [retention policies](#) and will adhere to applicable facility requirements.

If this study will use de-identified data from another source, describe what measures will be taken to ensure that subject identifiers are not given to the investigator.

If applicable, describe procedures for sharing data/specimens with collaborators not affiliated with UK.

For additional considerations:

[Return of Research Results or Incidental Research Findings](#)

[HIPAA policies](#)

[FERPA policies](#)

[Procedures for Transfer agreements](#)

[Information regarding multi-site studies](#)

[NIH Genomic Data Sharing \(GDS\) Policy](#)

[Digital Data](#)

Sources of research material obtained from our volunteers during screening and study participation include: blood and urine specimens, expired breath samples for alcohol, electrocardiogram, self-reported information gathered from the volunteer about their and their families psychiatry and medical history, demographic information, volunteer self-report and study staff observation of drug effects, vital signs (oxygen saturation, temperature, blood pressure, pulse), and other physiologic indices (e.g., pupil diameter). All

sources of research material will be obtained in a HIPAA compliant manner and are collected specifically for the proposed study by trained study staff. The principal investigator and medical team will have access to private health information about volunteers so that determination of study eligibility can be determined. All data with personal health information is kept in a locked file cabinet separate from other volunteer data without identifiable private health information. Prior medical records may be obtained with volunteer consent if there is any question about the volunteers' health history. Each participant will sign a form that details the HIPAA-compliant manner in which research material is collected.

All sources of research material will be obtained in a HIPAA compliant manner and are collected specifically for the proposed study by trained study staff. Identifying information will be stored in a separate locked area from all other data and codes that could link the two. Incidental materials containing subject identifiers will be shredded or incinerated. Identification and access of identifying data/specimens will be available only to study investigators when it is detrimental to subject safety or the conduct of the research protocol. For example, if a subject has an adverse event we will want to obtain a quantitative drug screen to identify whether there may have been illicit drug use while in the study versus a true adverse even related to the study procedures. In addition, a Certificate of Confidentiality will be obtained.

All participants are carefully screened (history and physical exam with physician, routine labs such as CBC, urinalysis, ECG and psychiatric assessment) to exclude those with potential increased risk of adverse effects. Those at increased risk include a history of heart disease, history of seizure or head injury associated with more than a brief loss of consciousness, hypertension, psychosis, and history of adverse reactions to the study drugs. During sessions participants remain under careful observation and are monitored continuously by on-site research staff. Vital signs, including ongoing monitoring of blood pressure and heart rate, will be collected at regular intervals throughout the dosing period. Clinical staff (e.g., M.D. or R.N.) will be available for management of medical issues. Trained personnel draw blood according to routine hospital procedures under sterile conditions that should significantly reduce the risk of any adverse effects from blood draws. In addition, we have substantial experience testing cannabinoids and alcohol in human subjects under a variety of dosing conditions. Female participants will be given pregnancy tests prior to each experimental session to ensure that we do not administer drugs to a pregnant woman. To protect confidentiality, all research subjects are identified by a subject identification code (Subject ID) consisting of their initials and sequentially assigned subject numbers on all forms and data files, and not by their names. Actual subject names and corresponding subject IDs are kept in a locked master file separate from the actual data collected during the study. All personal and experimental information is kept locked and is accessible only to key personnel involved in the research. All volunteer information and data are confidential and never released to anyone outside of the project purview without the volunteer's written authorization. The identity of participants is never revealed in research reports. All intake documentation that contains PHI is handled separately from the actual data collected during the study. For instance, written records with PHI will be stored in a separate, locked area from all other de-identified data and codes linking the two will be kept under lock and key. Electronic data with PHI (e.g., blood and urine test results) are stored in the University of Kentucky's medical database that has limited medical personnel access, is password protected, and monitored for abnormal activity. Incidental materials containing subject identifiers will be shredded or incinerated.

Participants choosing to leave the study early will be advised to complete a vitals check before leaving the research facility (Inpatient Unit, Straus Building). However, we are not permitted to retain participants against their will, so they may choose to leave AMA before a vitals check or before research staff are able to notify to the investigator/physician.

UK IRB policies state that IRB-related research records must be retained for a minimum of 6 years after study closure.
 Check this item to confirm that you will retain all IRB-related records for a minimum of 6 years after study closure.

Payment

Describe the incentives (monetary or other) being offered to subjects for their participation. If monetary compensation is offered, indicate the amount and describe the terms and schedule of payment. Please review [this guidance](#) for more information on payments to subjects, including restrictions and expectations.

Participants will be paid for each screening visit at the rate of \$50 per visit. If only a urinalysis or ECG or vital signs are needed subjects will be paid \$15. Volunteers will earn \$25 for their 2- to 4-week follow-up appointment after study discharge. Volunteers will earn \$80 base pay for each session in which they participate. While enrolled as inpatients, participants will be paid \$60 per night. They will earn a completion bonus of \$60/night if they complete the full study. If the volunteer chooses to leave before completing the study, they will not receive the completion bonus. However, if the participant is discharged early due to unrelated medical issues or investigator decision related to safety (e.g., an adverse reaction to the study drug), they will be paid the completion bonus for the duration of their participation.

Costs to Subjects

Include a list of services and/or tests that will not be paid for by the sponsor and/or the study (e.g., MRI, HIV). Keep in mind that a subject will not know what is "standard" – and thus not covered by the sponsor/study – unless you tell them.

There are no costs to volunteers who participate in this study.

Data and Safety Monitoring

The IRB requires review and approval of data and safety monitoring plans for greater than minimal risk research or NIH-funded/FDA-regulated clinical investigations.

- If you are conducting greater than minimal risk research, or your clinical investigation is NIH-funded, describe your Data and Safety Monitoring Plan (DSMP). [Click here for additional guidance on developing a Data and Safety Monitoring Plan.](#)
- If this is a non-sponsored investigator-initiated protocol considered greater than minimal risk research, and if you are planning on using a Data and Safety Monitoring Board (DSMB) as part of your DSMP, [click here for additional guidance](#) for information to include with your IRB application.



Please see attached DSMP. (within grant application)

[Back to Top](#)

Future Use and Sharing of Material (e.g., Data/Specimens/Information)

If the material collected for this study will be used by members of the research team or shared with other researchers for future studies, please address the following:

- list the biological specimens and/or information that will be kept
- briefly describe the types, categories and/or purposes of the future research
- describe any risks of the additional use
- describe privacy/confidentiality protections that will be put into place
- describe the period of time specimens/information may be used
- describe procedures for sharing specimens/information with secondary researchers
- describe the process for, and limitations to, withdrawal of specimens/data

There is a possibility that data/tissue/specimens/blood collected may be shared with other investigators in the future. If that is the case, the data/tissue/specimen/blood will not contain identifying information unless the individual provides consent/authorization or an Institutional Review Board (IRB) approves the research. Language to this effect is included in IRB-approved Marijuana & Opioid Screening, Study 1 & Study 2 consent forms.

See Confidentiality section of Research Description for additional information about confidentiality/privacy protections.

Are you recruiting or expect to enroll **Non-English Speaking Subjects or Subjects from a Foreign Culture?** (does not include short form use for incidentally encountered non-English subjects)

Yes No

— Non-English Speaking Subjects or Subjects from a Foreign Culture

Recruitment and Consent:

Describe how information about the study will be communicated to potential subjects appropriate for their culture, and if necessary, how new information about the research may be relayed to subjects during the study.

When recruiting Non-English-speaking subjects, provide a consent document in the subject's primary language. After saving this section, attach both the English and translated consent documents in the "Informed Consent" section.

Cultural and Language Consultants:

The PI is required to identify someone who is willing to serve as the cultural consultant to the IRB.

- This person should be familiar with the culture of the subject population and/or be able to verify that translated documents are the equivalent of the English version of documents submitted.
- The consultant should not be involved with the study or have any interest in its IRB approval.
- Please include the name, address, telephone number, and email of the person who agrees to be the cultural consultant for your study.
- ORI staff will facilitate the review process with your consultant. Please do not ask them to review your protocol separately.

For more details, see the IRB Application Instructions on [Research Involving Non-English Speaking Subjects or Subjects from a Foreign Culture.](#)

Local Requirements:

If you will conduct research at an international location, identify and describe:

- relevant local regulations
- data privacy regulations
- applicable laws
- ethics review requirements for human subject protection

Please provide links or sources where possible. If the project has been or will be reviewed by a local ethics review board, attach a copy in the "Additional Information/Materials" section. You may also consult the current edition of the [International Compilation of](#)

Does your study involve **HIV/AIDS research and/or screening for other reportable diseases (e.g., Hepatitis C, etc...)?**

Yes No

HIV/AIDS Research

If you have questions about what constitutes a reportable disease and/or condition in the state of Kentucky, see ORI's summary sheet: "Reporting Requirements for Diseases and Conditions in Kentucky" [[PDF](#)].

HIV/AIDS Research: There are additional IRB requirements for designing and implementing the research and for obtaining informed consent. Describe additional safeguards to minimize risk to subjects in the space provided below.

For additional information, visit the online [IRB Survival Handbook](#) to download a copy of the "Medical IRB's requirements for Protection of Human Subjects in Research Involving HIV Testing" [D65.0000] [[PDF](#)], and visit the [Office for Human Research Protections web site](#) for statements on AIDS research, or contact the Office of Research Integrity at 859-257-9428.

PI-Sponsored FDA-Regulated Research

Is this an investigator-initiated study that:

- 1) involves testing a Nonsignificant Risk (NSR) Device, or
- 2) is being conducted under an investigator-held Investigational New Drug (IND) or Investigational Device Exemption (IDE)?

Yes No

PI-Sponsored FDA-Regulated Research

If the answer above is yes, then the investigator assumes the regulatory responsibilities of both the investigator and sponsor. The Office of Research Integrity provides a summary list of sponsor IND regulatory requirements for drug trials [[PDF](#)], IDE regulatory requirements for SR device trials [[PDF](#)], and abbreviated regulatory requirements for NSR device trials [[PDF](#)]. For detailed descriptions see [FDA Responsibilities for Device Study Sponsors](#) or [FDA Responsibilities for IND Drug Study Sponsor-Investigators](#).

- Describe the experience/knowledge/training (if any) of the investigator serving as a sponsor (e.g., previously held an IND/IDE); and
- Indicate if any sponsor obligations have been transferred to a commercial sponsor, contract research organization (CRO), contract monitor, or other entity (provide details or attach FDA 1571).

This study is covered by IN 141,123 - see attached confirmation. Through her work with Dr. Walsh, Dr. Babalonis has gained extensive experience submitting INDs, amendments, is familiar with reporting requirements for adverse events, annual progress reporting requirements and record keeping requirements. She is also familiar with Good Clinical Practice guidelines and has participated in numerous related trainings over the years. She has assisted with training and managing a multi-disciplinary staff on regulatory affairs, confidentiality issues, reporting requirements, data management, data quality assurance, data storage, and human subjects' protections. Dr. Babalonis has completed the FDA investigational drug sponsor/investigator training available through the ORI.

IRB policy requires mandatory training for investigators who are also FDA-regulated sponsors (see [Sponsor-Investigator FAQs](#)). A sponsor-investigator must complete the applicable Office of Research Integrity web based training, (drug or device) before final IRB approval is granted.

Has the sponsor-investigator completed the mandatory PI-sponsor training prior to this submission?

Yes No

If the sponsor-investigator has completed equivalent sponsor-investigator training, submit documentation of the content for the IRB's consideration.

Attachments

Attach Type	File Name
SponsorInvTraining	SBabalonis Certificate.pdf
SponsorInvTraining	IND 141123.pdf

HIPAA**0 unresolved
comment(s)**

Is HIPAA applicable? Yes No

(Visit ORI's [Health Insurance Portability and Accountability Act \(HIPAA\) web page](#) to determine if your research falls under the HIPAA Privacy Regulation.)



I have attached a HIPAA Waiver of Authorization. Yes No

[Attachments](#)

STUDY DRUG INFORMATION

0 unresolved
comment(s)

The term drug may include:

- FDA approved drugs,
- unapproved use of approved drugs,
- investigational drugs or biologics,
- other compounds or products intended to affect structure or function of the body, and/or
- [complementary and alternative medicine products](#) such as dietary supplements, substances generally recognized as safe (GRAS) when used to diagnose, cure mitigate, treat or prevent disease, or clinical studies of [e-cigarettes](#) examining a potential therapeutic purpose.

Does this protocol involve a drug including an FDA approved drug; unapproved use of an FDA approved drug; and/or an investigational drug?

 Yes NoIf yes, complete the questions below. Additional [study drug guidance](#).

LIST EACH DRUG INVOLVED IN STUDY IN THE SPACE BELOW

Drug Name:

Study 1:

Oxycodone (0, 15, 30 mg), intranasal
Marijuana (0, 10, 30 mg THC), vaporized

Study 2:

Oxycodone (0, 15, 45 mg), intranasal
Marijuana (0, 10, 30 mg THC), vaporized

Study 2 Qualification sessions:

Oxycodone (0, 30 mg), intranasal
Marijuana (0, 20 mg THC), vaporized

Note: Inpatient studies are required by Hospital Policy to utilize [Investigational Drug Service \(IDS\) pharmacies \(Oncology or Non-Oncology\)](#). Use of IDS is highly recommended, but optional for outpatient studies. Outpatient studies not using IDS services are subject to periodic inspection by the IDS for compliance with drug accountability good clinical practices.

Indicate where study drug(s) will be housed and managed:

 Investigational Drug Service (IDS) UK Hospital

Other Location:

Oxycodone and matched placebo will be stored and managed at the IDS. Marijuana will be stored at the Robert Straus Research Facility in our secure Schedule I drug storage area.

Is the study being conducted under a valid Investigational New Drug (IND) application?

 Yes No

If Yes, list IND #(s) and complete the following:

IND 141,123

IND Submitted/Held by:

Sponsor: Held By: Investigator: Held By: Shanna Babalonis,
Ph.D.Other: Held By:

Checkmark if the study is being conducted under FDA's Expanded Access Program (e.g., Treatment IND) or if this is an Individual Patient Expanded Access IND ([FDA Form 3920](#)).

FDA's Expanded Access Program Information for Individual Patient Expanded Access INDs, and attach the following:

- [FDA Form 3926](#);
- FDA expanded access approval or correspondence;
- Confirmation of agreement from manufacturer or entity authorized to provide access to the product.

For guidance and reporting requirements at the conclusion of treatment see the [Expanded Access SOP](#).

Complete and attach the required [Study Drug Form](#) picking "Study Drug Form" for the document type. Any applicable drug documentation (e.g., Investigator Brochure; approved labeling; publication; FDA correspondence, etc.) should be attached using "Other Drug Documentation" for the document type.



Attachments

Attach Type	File Name
Study Drug Form	SBabalonis - DEA license.pdf
Study Drug Form	Study Drug Marijuana-Oxycodone.pdf

STUDY DEVICE INFORMATION

0 unresolved
comment(s)

A DEVICE may be a:

- component, part, accessory;
- assay, reagent, or in-vitro diagnostic device;
- software, digital health, or mobile medical app;
- other instrument if intended to affect the structure or function of the body, diagnose, cure, mitigate, treat or prevent disease; or
- a homemade device developed by an investigator or other non-commercial entity and not approved for marketing by FDA.

For additional information, helpful resources, and definitions, see ORI's [Use of Any Device Being Tested in Research web page](#).

Does this protocol involve testing (collecting safety or efficacy data) of a medical device including an FDA approved device, unapproved use of an approved device, humanitarian use device, and/or an investigational device?

Yes No

[Note: If a marketed device(s) is only being used to elicit or measure a physiologic response or clinical outcome, AND, NO data will be collected on or about the device itself, you may answer "no" above, save and exit this section, (Examples: a chemo drug study uses an MRI to measure tumor growth but does NOT assess how effective the MRI is at making the measurement; an exercise study uses a heart monitor to measure athletic performance but no safety or efficacy information will be collected about the device itself, nor will the data collected be used for comparative purposes against any other similar device).]

If you answered yes above, please complete the following questions.

— LIST EACH DEVICE BEING TESTED IN STUDY IN THE SPACE BELOW —

Device Name:

Is the study being conducted under a valid Investigational Device Exemption (IDE), Humanitarian Device Exemption (HDE) or Compassionate Use?

Yes No

If Yes, complete the following:

IDE or HDE #(s)

IDE/HDE Submitted/Held by:

Sponsor:

Held By:

Investigator:

Held By:

Other:

Held By:

Check if this is a Treatment IDE or Compassionate Use under the Food and Drug Administration (FDA) Expanded Access program.

For Individual or Small Group Expanded Access, see [FDA's Early Expanded Access Program Information](#), and attach the following:

- FDA expanded access approval or sponsor's authorization;
- An independent assessment from an unininvolved physician, if available;
- Confirmation of agreement from manufacturer or entity authorized to provide access to the product.

For guidance and reporting requirements at the conclusion of treatment see the [Medical Device SOP](#).

Does the intended use of any research device being tested (not clinically observed) in this study meet the regulatory [definition](#) of Significant Risk (SR) device?

- Yes. Device(s) being tested in this study presents a potential for serious risk to the health, safety, or welfare of a subject and (1) is intended as an implant; or (2) is used in supporting or sustaining human life; or (3) is of substantial importance in diagnosing, curing, mitigating or treating disease, or otherwise prevents impairment of human health; or (4) otherwise presents a potential for serious risk to the health, safety, or welfare of a subject.
- No. All devices being tested in this study do not present a potential for serious risk to the health, safety, or welfare of subjects/participants.

Complete and attach the required [Study Device Form](#), picking the "Study Device Form" for the document type. Any applicable device documentation (e.g., Manufacturer information; patient information packet; approved labeling; FDA correspondence, etc.) should be attached using "Other Device Documentation" for the document type.



Attachments

RESEARCH SITES

0 unresolved
comment(s)

To complete this section, ensure the responses are accurate then click "SAVE".

A) Check all the applicable sites listed below at which the research will be conducted. If none apply, you do not need to check any boxes.

UK Sites

- UK Classroom(s)/Lab(s)
- UK Clinics in Lexington
- UK Clinics outside of Lexington
- UK Healthcare Good Samaritan Hospital
- UK Hospital

Schools/Education Institutions

- Fayette Co. School Systems *
- Other State/Regional School Systems
- Institutions of Higher Education (other than UK)

***Fayette Co. School systems, as well as other non-UK sites, have additional requirements that must be addressed. See ORI's [IRB Application Instructions - Off-site Research](#) web page for details.**

Other Medical Facilities

- Bluegrass Regional Mental Health Retardation Board
- Cardinal Hill Hospital
- Eastern State Hospital
- Norton Healthcare
- Nursing Homes
- Shriner's Children's Hospital
- Veterans Affairs Medical Center
- Other Hospitals and Med. Centers

- Correctional Facilities
- Home Health Agencies
- International Sites

Research activities conducted at performance sites that are not owned or operated by the University of Kentucky (UK) or at sites that do not fall under the UK IRB's authority, are subject to special procedures for coordination of research review. Additional information is required (see [IRB Application Instructions - Off-Site Research](#) web page), including:

- A letter of support and local context is required from non-UK sites. See *Letters of Support and Local Context* on the [IRB Application Instructions - Off-Site Research](#) web page for more information.
- Supportive documentation, including letters of support, can be attached below.
- NOTE: If the non-UK sites or non-UK personnel are engaged in the research, there are additional federal and university requirements which need to be completed for their participation. For instance, the other site(s) may need to complete their own IRB review, or a cooperative review arrangement may need to be established with non-UK sites.

- Questions about the participation of non-UK sites/personnel should be discussed with the ORI staff at (859) 257-9428.

List all other non-UK owned/operated locations where the research will be conducted:

Robert Straus Research Facility

Describe the role of any non-UK site(s) or non-UK personnel who will be participating in your research.

Please describe the plan for the management of reporting unanticipated problems, noncompliance, and submission of protocol modifications and interim results from the non-UK sites:

Attachments

B) If your research involves collaboration with any sites and/or personnel outside the University of Kentucky, then it is considered multisite research and IRB reliance issues will need to be addressed. This may include national multi-center trials as well local studies involving sites/personnel external to UK. If you would like to request that the University of Kentucky IRB (UK IRB) serve as the lead IRB for your study, or if you would like the UK IRB to defer review to another IRB, please contact the IRBReliance@uky.edu.

RESEARCH ATTRIBUTES

0 unresolved
comment(s)

Instructions: For various reasons, it is necessary to determine whether your research activities meet the definition of clinical research and/or a clinical trial. Your responses to the next series of questions will make that determination. For more details on the definitions, go to ORI's [clinical research vs. clinical trial web page](#) or visit [NIH's decision tree](#) for the NIH Clinical Trial definition.

My research activities include one or more of the following:

Patient-oriented research regarding mechanisms of human disease, therapeutic interventions, clinical studies, or development of new technologies

Yes No

Material of human origin (such as tissues, specimens, and cognitive phenomena) for which an investigator (or colleague) directly interacts with human subjects

Yes No

Epidemiologic or Behavioral Studies

Yes No

Outcomes Research or Health Services Research

Yes No

Does your research involve one or more human subjects prospectively assigned into one or more health-related biomedical or behavioral interventions (which may include placebo or other control) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes?

Yes No

Indicate the items below that apply to your research. Depending on the items applicable to your research, you may be required to complete additional forms or meet additional requirements. Contact the ORI (859-257-9428) if you have questions about additional requirements.

Not applicable

Check All That Apply

For additional requirements and information:

- Academic Degree/Required Research
- Alcohol/Drug/Substance Abuse Research
- Biological Specimen Bank Creation (for sharing)
- Cancer Research
- CCTS-Center for Clinical & Translational Science
- Certificate of Confidentiality
- Collection of Biological Specimens for banking and use
- Community-Based Participatory Research
- Deception
- Educational/Student Records (e.g., GPA, test scores)
- Emergency Use (Single Patient)
- Gene Transfer
- Genetic Research
- NIH Genomic Data Sharing (GDS) (databases such as GWAS, dbGaP, GenBank)
- Treatment with Human Cells, Tissues, and Cellular and Tissue Based Products
- Individual Expanded Access or Compassionate Use
- International Research
- Planned Emergency Research Involving Exception from

- [Cancer Research \(MCC PRMC\)](#)
- [Certificate of Confidentiality](#) (look up "Confidentiality/Privacy...")
- [CCTS \(Center for Clinical and Translational Science\)](#)
- [Clinical Research](#) (look up "What is the definition of....")
- [Clinical Trial](#)
- [Collection of Biological Specimens for Banking](#) (look up "Specimen/Tissue Collection...")
- [Collection of Biological Specimens](#) (look up "Specimen/Tissue Collection...")
- [Community-Based Participatory Research](#) (look up "Community-Engaged...")
- [Data & Safety Monitoring Board \(DSMB\)](#)

*For Medical IRB: [Service Request Form](#) for CCTS DSMB

- [Data & Safety Monitoring Plan](#)
- [Deception*](#)

*For deception research, also go to the E-IRB Application Informed Consent section, checkmark and complete "Request for Waiver of Informed Consent Process"

- [Emergency Use \(Single Patient\) \[attach Emergency Use Checklist\] \(PDF\)](#)
- [Genetic Research](#) (look up "Specimen/Tissue

Informed Consent

- Recombinant DNA
- Registry or data repository creation
- Stem Cell Research
- Suicide Ideation or Behavior Research
- Survey Research
- Transplants
- Use, storage and disposal of radioactive material and radiation producing devices
- Vaccine Trials

Collection...")

- [Gene Transfer](#)
- [HIV/AIDS Research](#) (look up "Reportable Diseases/Conditions")
- [Screening for Reportable Diseases \[E2.0000\]](#) (PDF)
- [International Research](#) (look up "International & Non-English Speaking")
- [NIH Genomic Data Sharing \(GDS\) Policy](#) (PDF)
- [Planned Emergency Research Involving Waiver of Informed Consent*](#)

*For Planned Emergency Research Involving Waiver of Informed Consent, also go to the E-IRB Application Informed Consent section, checkmark and complete "Request for Waiver of Informed Consent Process"

- [Use, storage and disposal of radioactive material and radiation producing devices](#)

FUNDING/SUPPORT

0 unresolved
comment(s)

If the research is being submitted to, supported by, or conducted in cooperation with an external or internal agency or funding program, indicate below all the categories that apply. [?](#)

Not applicable

Check All That Apply

Grant application pending
 (HHS) Dept. of Health & Human Services
 (NIH) National Institutes of Health
 (CDC) Centers for Disease Control & Prevention
 (HRSA) Health Resources and Services Administration
 (SAMHSA) Substance Abuse and Mental Health Services Administration
 (DoJ) Department of Justice or Bureau of Prisons
 (DoE) Department of Energy
 (EPA) Environmental Protection Agency
 Federal Agencies Other Than Those Listed Here
 Industry (Other than Pharmaceutical Companies)
 Internal Grant Program w/ proposal
 Internal Grant Program w/o proposal
 National Science Foundation
 Other Institutions of Higher Education
 Pharmaceutical Company
 Private Foundation/Association
 U.S. Department of Education
 State

Other:

Specify the funding source and/or cooperating organization(s) (e.g., National Cancer Institute, Ford Foundation, Eli Lilly & Company, South Western Oncology Group, Bureau of Prisons, etc.):

NIDA grant R01 DA045700-01

Click applicable listing(s) for additional requirements and information:

- [\(HHS\) Dept. of Health & Human Services](#)
- [\(NIH\) National Institutes of Health](#)
- [\(CDC\) Centers for Disease Control & Prevention](#)
- [\(HRSA\) Health Resources & Services Administration](#)
- [\(SAMHSA\) Substance Abuse & Mental Health Services Administration](#)
- Industry (Other than Pharmaceutical Companies) [\[IRB Fee Info\]](#)
- [National Science Foundation](#)
- [\(DoEd\) U.S. Department of Education](#)
- [\(DoJ\) Department of Justice or Bureau of Prisons](#)
- [\(DoE\) Department of Energy Summary](#) and [Department of Energy Identifiable Information Compliance Checklist](#)
- [\(EPA\) Environmental Protection Agency](#)

Add Related Grants

If applicable, please search for and select the OSPA Account number or Electronic Internal Approval Form (eIAF) # (notif #) associated with this IRB application using the "Add Related Grants" button.
 If required by your funding agency, upload your grant using the "Grant/Contract Attachments" button.

[Add Related Grants](#)

[Grant/Contract Attachments](#)

Attach Type	File Name
GrantContract	Grant Application.pdf

The research involves use of Department of Defense (DoD) funding, military personnel, DoD facilities, or other DoD resources. (See [DoD SOP](#) and [DoD Summary](#) for details)

Yes No

Using the "attachments" button (below), attach applicable materials addressing the specific processes described in the DoD SOP.

[DOD SOP Attachments](#)

Additional Certification: (If your project is federally funded, your funding agency may request an Assurance/ Certification/Declaration of Exemption form.) Check the following if needed:

Protection of Human Subjects Assurance/Certification/Declaration of Exemption (Formerly Optional Form – 310)

Assurance/Certification Attachments

OTHER REVIEW COMMITTEES

0 unresolved
comment(s)

If you check any of the below committees, additional materials may be required with your application submission.

Does your research fall under the purview of any of the other review committees listed below? [If yes, check all that apply and attach applicable materials using the attachment button at the bottom of your screen.]

Yes No

Additional Information

Institutional Biosafety Committee

Radiation Safety Committee

Radioactive Drug Research Committee

Markey Cancer Center (MCC) Protocol Review and Monitoring Committee (PRMC)

Graduate Medical Education Committee (GME)

Office of Medical Education (OME)

- [Institutional Biosafety Committee \(IBC\)](#) - Attach required IBC materials
- [Radiation Safety Committee \(RSC\)](#) - For applicability, see instructions and attach form
- [Radioactive Drug Research Committee \(RDRC\)](#)
- [Markey Cancer Center \(MCC\) Protocol Review and Monitoring Committee \(PRMC\)**](#) - Attach MCC PRMC materials, if any, per instructions.
- [Office of Medical Education \(OME\)](#)
- [Graduate Medical Education Committee \(GME\)](#)

Attachments

**** If your study involves cancer research, be sure to select "Cancer Research" in the "Research Attributes" section.** ORI will send your research protocol to the Markey Cancer Center (MCC) Protocol Review and Monitoring Committee (PRMC). The [MCC PRMC](#) is responsible for determining whether the study meets the National Cancer Institute (NCI) definition of a clinical trial and for issuing documentation to you (the investigator) which confirms either that PRMC approval has been obtained or that PRMC review is not required. Your IRB application will be processed and reviewed independently from the PRMC review.

ADDITIONAL INFORMATION/MATERIALS**0 unresolved comment(s)**

Do you want specific information inserted into your approval letter? Yes No

Approval Letter Details:

If you wish to have specific language included in your approval letter (e.g., serial #, internal tracking identifier, etc...), type that language in the box below exactly as it should appear in the letter. The text you enter will automatically appear at the top of all approval letters, identical to how you typed it, until you update it. Don't include instructions or questions to ORI staff as those will appear in your approval letter. **If these details need to be changed for any reason, you are responsible for updating the content of this field.**

Additional Materials:

If you have other materials you would like to include for the IRB's consideration, check all that apply and attach the corresponding documents using the Attachments button below.

- Detailed protocol
- Dept. of Health & Human Services (DHHS) approved protocol (such as NIH sponsored Cooperative Group Clinical Trial)
- Other Documents

Protocol/Other Attachments

NOTE: [Instructions for Dept. of Health & Human Services \(DHHS\)-approved protocol](#)

If you have password protected documents, that feature should be disabled prior to uploading to ensure access for IRB review.

To view the materials currently attached to your application, click "All Attachments" on the left menu bar.

SIGNATURES (ASSURANCES)**0 unresolved comment(s)****Introduction**

All IRB applications require additional assurances by a Department Chairperson or equivalent (DA), and when applicable, a Faculty Advisor or equivalent (FA). This signifies the acceptance of certain responsibilities and that the science is meritorious and deserving of conduct in humans. The person assigned as DA *should not* also be listed in the Study Personnel section, and the individual assigned as FA *should* be listed in the Study Personnel section.

For a list of responsibilities reflected by signing the Assurance Statement, refer to ["What does the Department Chairperson's Assurance Statement on the IRB application mean?"](#)

For a detailed illustration of how to complete this section, please review the short online video tutorial ["Signatures \(Assurance\) Section - How to Complete."](#) Otherwise, follow the steps below.

**Required Signatures:**

Individuals chosen as signees may remove the application from their Inbox without signing the Assurance Statement by clicking "Return to PI" with a comment about why it is being returned (e.g., specific edits are deemed necessary).

The PI, and personnel chosen as a contact, will receive an email notification that edits are needed, and can find the draft application in both the "Draft" folder and the "Signatures Status" folder located in the menu in the left margin of the default Inbox page. The researcher does not have a 'reply' option to the signee's comments and must make the requested edits directly in the application, or communicate outside the E-IRB system as to why not. Once the response is finalized, the researcher must re-visit the "Assurances Required" section to click the "Return to Signee" button for their re-consideration; the signee will receive an email notification at that time.

Hover your mouse cursor here for additional instructions.



First Name	Last Name	Role	Department	Signee Return Comment	Date Signed	
Carl	Leukefeld	Department Authorization	Behavioral Science	05/17/2018 06:37 AM	View/Sign	
Shanna	Babalonis	Principal Investigator	Behavioral Science	05/17/2018 09:14 AM	View/Sign	

Department Authorization

This is to certify that I have reviewed this research protocol and that I attest to the scientific validity and importance of this study; to the qualifications of the investigator(s) to conduct the project and their time available for the project; that facilities, equipment, and personnel are adequate to conduct the research; and that continued guidance will be provided as appropriate. When the principal investigator assumes a sponsor function, the investigator has been notified of the additional regulatory requirements of the sponsor and by signing the principal investigator Assurance Statement, confirms he/she can comply with them.

*If the Principal Investigator is also the Chairperson of the department, the Vice Chairperson or equivalent should complete the "Department Authorization".

**IF APPLICABLE FOR RELIANCE: I attest that the principal investigator has been notified of the regulatory requirements of both the Reviewing and Relying IRBs, according to the information provided in the E-IRB application. The attached Reliance Assurance Statement, signed by the principal investigator, confirms that he/she can comply with both sets of IRB requirements.

Principal Investigator's Assurance Statement

I understand the University of Kentucky's policies concerning research involving human subjects and I agree:

1. To comply with all IRB policies, decisions, conditions, and requirements;
2. To accept responsibility for the scientific and ethical conduct of this research study;
3. To obtain prior approval from the Institutional Review Board before amending or altering the research protocol or implementing changes in the approved consent/assent form;
4. To report to the IRB in accord with IRB/IBC policy, any adverse event(s) and/or unanticipated problem(s) involving risks to subjects;
5. To complete, on request by the IRB for Full and Expedited studies, the Continuation/Final Review Forms;
6. To notify the Office of Sponsored Projects Administration (OSPA) and/or the IRB (when applicable) of the development of any financial interest not already disclosed;
7. Each individual listed as study personnel in this application has received the mandatory human research protections education (e.g., CITI);
8. Each individual listed as study personnel in this application possesses the necessary experience for conducting research activities in the role described for this research study.
9. To recognize and accept additional regulatory responsibilities if serving as both a sponsor and investigator for FDA regulated research.

Furthermore, by checking this box, I also attest that:

- I have appropriate facilities and resources for conducting the study;
- I am aware of and take full responsibility for the accuracy of all materials submitted to the IRB for review;
- If applying for an exemption, I also certify that the only involvement of human subjects in this research study will be in the categories specified in the Protocol Type: Exemption Categories section.
- If applying for an Abbreviated Application (AA) to rely on an external IRB, I understand that certain items above (1, 3, 4, 7-8) may not apply, or may be altered due to external institutional/IRB policies. I document my agreement with the [Principal Investigator Reliance Assurance Statement](#) by digitally signing this application.

*You will be able to "sign" your assurance after you have sent your application for signatures (use Submission section). Once all Assurance Statement signatures have been acquired, return to this section to submit your application to ORI.

**KEY INFORMATION FOR****MAIN STUDY CONSENT:****STUDY 1: MARIJUANA AND OPIOID STUDY**

You are being invited to take part in a research study about the effects of vaporized marijuana and intranasal opioids on mood and behavior. You are being invited to take part because you have experience with marijuana and opioids and have expressed interest in the study.

WHAT IS THE PURPOSE, PROCEDURES, AND DURATION OF THIS STUDY?

By doing this study, we hope to learn more about how marijuana and opioids influence your mood, physiological responses (heart rate, breathing) and your behavior. Your participation in this research will include approximately 1-4 screening visits (about 4 hrs each); if you qualify for the study, you will be asked to live at the UK Hospital for approximately 1 month. You will not be allowed to leave the hospital and will not be allowed to have visitors during your stay.

WHAT ARE REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

You may choose to participate to earn extra money. However, there is no direct benefit to you for taking part in this study. Your willingness to take part may help us understand how marijuana and opioids affect your body (heart rate, breathing), mood and behavior (accuracy, reaction time on certain tasks).

WHAT ARE REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?

You may not have the time necessary to participate. If you participate, you will have to live at the UK Hospital for approximately 1 month. Please let us know if this is a concern. There are also risks and side effects associated with marijuana and opioids – a full list of these effects are listed in the detailed portion of the consent form.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits or rights you would normally have if you choose not to volunteer.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

The person in charge of this study is Shanna Babalonis, Ph.D. of the University of Kentucky, Department of Behavioral Science and Center on Drug and Alcohol Research. If you have questions, suggestions, concerns regarding this study or you want to withdraw from the study her contact information is: **(859) 257-1881**.

If you have any questions, suggestions or concerns about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

DETAILED CONSENT:

ARE THERE REASONS WHY YOU WOULD NOT QUALIFY FOR THIS STUDY?

If you are not ages 18-50, you will not be allowed to take part in this study. If you are seeking treatment for drug abuse, you should not take part in this study; please tell us now and we will help you find treatment. You will not be allowed to participate if you are physically dependent on opioids (you get sick when you stop using). You will not be allowed to participate if the medical staff thinks that giving you the study drugs could be dangerous to your health. If you have any serious medical problems (e.g., a history of heart problems, breathing problems, head trauma, epilepsy or seizures), you will not be allowed to participate in this study. If you decide that you do not want to participate or do not think the study will fit your schedule, you should not take part.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

If you are selected to participate, you will live at the UK Hospital in the CCTS Inpatient Unit. During your stay, you will participate in 11 sessions. Each session will last approximately 8 hrs and you will participate in about 2-3 sessions per week. You will be given a calendar that will list the date of each session. On your days off from session, you can read, watch movies, and engage in recreational activities, but you will not be permitted to leave the hospital or have visitors.

WHAT WILL YOU BE ASKED TO DO?

If you agree to be in the study, we will ask you to do the following things:

1. Once you are medically cleared for the study, you will live at the UK Hospital for about 1 month. You will be transported by staff members to the Straus Research Facility for each session. You will stay at the Straus Facility for approximately 8 hrs on session days. Once session is completed, you will be transported back to the UK Hospital.
2. You will need to follow the inpatient unit rules for the duration of your stay. If you do not follow the rules, you will be discharged from the study – you will not receive a payment bonus if you are discharged for breaking rules.

Some examples of these rules are:

- You will not be allowed to have any visitors, but you will be able to make phone calls
- You will be allowed to smoke cigarettes, but only under supervision of the CCTS nursing staff
- No sexual behavior or sexual intercourse for the duration of the study
- No drug or alcohol use; you cannot use any drugs that are not given to you as part of the study

3. After you are admitted to the inpatient unit, we will show you the session room where testing will take place. We will teach you how to use the computer and show you the kinds of questions you will be asked and tasks you will need to complete. You will have plenty of time to ask questions about how to perform any of the tasks.

We will teach you how to use the vaporizer (using placebo marijuana) to make sure that you are comfortable with the dose administration procedures. You will have plenty of time to practice before the sessions begin.

4. There are a total of 11 sessions. The two sessions are qualification sessions – these sessions help us determine if you will qualify for the rest of the study. If you qualify, you will complete 9 experimental sessions.
5. During the qualification sessions, you will receive an intranasal dose (a snorted drug) and a vaporized dose. The powder will contain an opioid drug (for example: hydromorphone, oxycodone, morphine, or hydrocodone) or placebo (an inactive substance). The vaporized dose will contain active marijuana or placebo. Each of these qualification sessions will last approximately 4 hours. After you complete these sessions, you will be informed whether you qualify to continue with the rest of the study. If you do not qualify, you will be discharged. If you qualify to continue, you can continue with the rest of the study.

6. After the qualification session, there are 9 experimental sessions. You will receive a calendar of the dates of each session. An example calendar is provided below.

Sample Study Calendar:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1		Admission		Practice/ Training	Qualification Session 1	Qualification Session 2	
Week 2		Session 1		Session 2		Session 3	
Week 3		Session 4		Session 5		Session 6	
Week 4		Session 7		Session 8		Session 9	Discharge

7. During each of the 9 sessions, you will receive two doses: vaporized marijuana and an intranasal opioid dose. The marijuana dose will contain active marijuana or placebo. You will vaporize the dose according to our instructions. If you are not able to follow our instructions, you will be discharged.

8. During each session, you will also receive an intranasal drug dose that contains an active dose of an opioid (for example: hydromorphone, oxycodone, oxymorphone, hydrocodone) or placebo (a blank/inactive dose). We will ask you to snort the powder through a straw.

9. During sessions, we will measure how you respond to each test drug by measuring things like your heart rate, blood pressure, temperature, oxygen saturation, pupil diameter, and respiration rate. We will also ask you questions about how you are feeling. For example, we may ask you if you are feeling high, if you like the drug effects or if you are feeling sick. We will also ask you to complete tasks that measure your coordination, have you estimate time intervals, and look at blinking lights to test your eyes – this test will not harm your vision. Each session will last approximately 8 hrs.

We will also ask you to place your arm into a cooler of cold water. You will let us know when the cold sensation begins to hurt; you will remove your arm when you can no longer tolerate the cold water. This test will not injure your skin or cause frostbite. You will also answer some questions about the cold sensation and how you are feeling.

10. During session, you may engage in activities such as reading, as long as these activities do not interfere with the study or any of the scheduled tasks or questionnaires.

11. On days when you are not in session, you will be asked to fill out several questionnaires each day. For example, we will ask you about how you feel, whether you feel tired or have an upset stomach. The nurses will measure your vital signs (heart rate, blood pressure, etc.) several times every day. You will also give breath and urine samples every day, which will be tested for drugs and alcohol; women will be tested for pregnancy. Use of drugs or alcohol that are not given to you as part of the study is forbidden and will result in your dismissal from the study.

12. If you are female, you will be tested regularly to see if you are pregnant. If the test is positive, you will be notified, discharged from the study and referred for treatment. If you become pregnant at any time during the study (during screening, during the study, in the time between study discharge and your follow-up appointment, anytime in the 30 days after you leave the study), you will need to notify the study investigator (Dr. Babalonis) or the study physician (Dr. Lofwall) as soon as possible: **Shanna Babalonis, Ph.D. (859) 257-1881; Michelle Lofwall, M.D. (859) 323-9321**

By signing this consent form you are agreeing to practice an effective method of birth control (e.g., oral contraceptives, intrauterine device, diaphragm, condom) for the entire study duration (prior to study admission through 30-days after study completion).

13. We will complete an ECG approximately one time per week during your inpatient stay.
14. After you complete all of the sessions, you will be discharged from the inpatient unit. We will ask you to come back to the Straus Facility approximately 2-4 weeks after you complete the study. We will ask you about your drug use and health, and we will collect an observed urine sample.
15. At any point, if you decide that you want to seek treatment for your substance use, we will assist you in finding treatment.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

The risks and discomforts of this study are related primarily to the drugs given to you and the experimental procedures. We have carefully selected the doses to minimize the risk of serious side effects.

The likely risks of receiving marijuana include feeling high/intoxicated, euphoria, increased hunger and thirst, perceptual changes, anxiousness, panic-like reaction, lightheadedness/dizziness, performance impairment, drowsiness, orthostatic hypotension, resting increases or decreases in blood pressure, increased heart rate, red/bloodshot eyes, dry mouth, sleepiness, concentration difficulties, faintness, restlessness, confusion, loss of coordination, shakiness, stomach upset, headache, paleness, flushing, sweating, slurred speech, and fatigue. There is also a chance that marijuana could cause a lung infection due to microbes on the plant – we have taken precautions to decrease these chances of this happening.

The likely risks of receiving opioids include dizziness, stimulation, restlessness, a feeling of well being, talkativeness, itchiness, nausea, vomiting, decreased breathing, headache, constipation, dry mouth, sweating, sleepiness, drowsiness, and light-headedness. The risks of decreased breathing after administration of opioid drugs is related to the dose administered. We have carefully selected the doses to minimize the chance of decreased breathing.

During this study, you will be snorting powder through a straw. Snorting drugs can irritate the nasal tissue and potentially give you a nosebleed. You have experience with snorting opioid drugs so you are probably familiar with the sensations.

We will watch you carefully throughout your participation to minimize the chance of any serious reactions.

We do not have any plans to draw your blood after the screening is completed. However, if you were to get sick or hurt during the study, we may need to conduct these tests. There are risks related to blood draws include soreness, bruising, pain, infection, possible fainting, and bleeding. It is possible that we will have to try more than once to draw blood.

An ECG is painless; however, the electrodes may feel cold when first applied. In rare cases, some people may develop a rash or irritation where the patches were placed.

Exposure to drugs may have harmful effects on a fetus or a newborn, and you will not be allowed to participate in the study if you are pregnant, planning to become pregnant or breastfeeding during the study, or if you cannot use an appropriate contraception method.

We will make every effort to keep private all research records that identify you to the extent allowed by law. However, there is a risk that a breach in confidentiality may occur. If this occurs, it may cause problems such as embarrassment and emotional stress.

There is always a chance that any medical treatment can harm you. The research medications/treatments/procedures in this study are no different. In addition to risks described in this document, you may experience a previously unknown risk or side effect. We will do everything we can to keep you from being harmed.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

You will not get any personal benefit from taking part in this study. However, if you take part in this study, you may help us learn more about the effects of marijuana and opioids when taken together.

WHAT WILL IT COST YOU TO PARTICIPATE?

The study procedures and medications will be provided to you at no cost.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep confidential all research records that identify you to the extent allowed by law. Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private. We will collect your social security number; this is required in order for you to participate.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Your name will be kept separate from the information that you give, and these two things will be stored in different places under lock and key. Information collected electronically will be stored on password-protected computers.

To help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. With this Certificate, The researchers with this Certificate may not disclose or use information, documents, or biospecimens that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other action, suit, or proceeding, or be used as evidence, for example, if there is a court subpoena, unless you have consented for this use. The researchers will use the Certificate to resist any demands for information that would identify you, except as explained below. You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive research information, then the researchers may not use the Certificate to withhold that information.

You should know that there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court or to tell authorities if you report information about a child being abused or if you pose a danger to yourself or someone else. The Certificate of Confidentiality does not prevent the researchers from disclosing voluntarily, without your consent, information that would identify you as a participant in the research project under certain circumstances including: abuse or neglect, harm to self or others, or diagnosis of certain communicable diseases (including but not limited to, hepatitis C, HIV, or tuberculosis), which will be reported to the State Health Department along with your full name as required by law.

Officials of the Food and Drug Administration, National Institutes of Health, and the University of Kentucky may look at or copy pertinent portions of records that identify you.

CAN YOU CHOOSE TO WITHDRAW FROM THE STUDY EARLY?

You can choose to leave the study at any time. You will not be treated differently if you decide to stop taking part in the study.

The investigators conducting the study may need to remove you from the study. This may occur for a number of reasons. You may be removed from the study if:

- you are not able to follow the directions,
- they find that your participation in the study is more risk than benefit to you, or
- the agency paying for the study chooses to stop the study early for a number of scientific reasons.

If you stop the study because of side effects from the medication or another health-related reason, we will follow-up with you by telephone or request that you come visit us so we can see how you are doing.

ARE YOU PARTICIPATING, OR CAN YOU PARTICIPATE, IN ANOTHER RESEARCH STUDY AT THE SAME TIME AS PARTICIPATING IN THIS ONE?

You may not take part in this study if you are currently involved in another research study. It is important to let the investigator know if you are in another research study. You should discuss this with the investigator before you agree to participate in another research study while you are in this study.

WHAT HAPPENS IF YOU GET HURT OR SICK DURING THE STUDY?

If you believe you are hurt or if you get sick because of something that is done during the study, you should call Michelle Lofwall, M.D. (859) 323-9321. Dr. Lofwall will determine what type of treatment, if any, is best for you at that time.

It is important for you to understand that the University of Kentucky does not have funds set aside to pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. That cost will be your responsibility. Also, the University of Kentucky will not pay for any wages you may lose if you are harmed by this study. The medical costs related to your care and treatment because of research related harm will be your responsibility.

You do not give up your legal rights by signing this form.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will receive payment for your participation. You will receive \$60 per night that you stay in the hospital. If you complete the study, you will receive an additional \$60 for every night of your stay (\$120/night if you complete). However, you will not receive this bonus if you are dismissed from the study, do not qualify after the qualification session is completed, or if you choose to quit the study before completion. For example, if you complete the study and stay 25 nights (the number of nights will vary slightly for each person), you would earn \$3,000 for the inpatient stay.

You will also receive \$25 for your follow up appointment scheduled for 2-4 weeks after your discharge from the study.

We will provide your earnings to you via check(s). The maximum amount of each check is \$500. You will receive your first check at discharge. We will mail you the remainder of the checks. We will mail you \$500 per check per day until you are fully paid. We will mail the checks to the address that you provide us.

For example, if you complete the study and earn \$3,000, you will receive \$500 on the day of discharge and then will receive five \$500 checks in the mail ($5 \times \$500 = \$2,500$); it will take approximately 1 week for you to receive all 5 checks. Alternatively, you are permitted to visit our office to pick up a check in-person during normal business hours Monday-Friday (closed on weekends, holidays).

Study payments are considered taxable income reportable to the Internal Revenue Service (IRS). You will be asked to complete a W-9 form which includes your name, address and Social Security number. A form 1099 will be sent to you if your total payments for research participation are \$600 or more in a calendar year.

WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR DECISION TO PARTICIPATE?

You will be informed if the investigators learn new information that could change your mind about staying in the study. You may be asked to sign a new informed consent form if the information is provided to you after you have joined the study.

WHAT ELSE DO YOU NEED TO KNOW?

This study is funded by the National Institute of Health/National Institute on Drug Abuse.

A description of this clinical trial will be available on www.ClinicalTrials.gov as required by U.S. Law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

FUTURE USE OF YOUR PROTECTED HEALTH INFORMATION OR SPECIMEN(S):

There is a possibility that data/tissue/specimens/blood collected from you may be shared with other investigators in the future. If that is the case, the data/tissue/specimen/blood will not contain information that can identify you unless you give your consent/authorization or the UK Institutional Review Board (IRB) approves the research. The IRB is a committee that reviews ethical issues, according to federal, state and local regulations on research with human subjects, to make sure the study complies with these before approval of a research study is issued. After removal, the information or samples may be used for future research or shared with other researchers without your additional informed consent.

AUTHORIZATION TO USE OR DISCLOSE YOUR IDENTIFIABLE HEALTH INFORMATION

The privacy law, HIPAA (Health Insurance Portability and Accountability Act), requires researchers to protect your health information. The following sections of the form describe how researchers may use your health information.

Your health information that may be accessed, used and/or released includes:

Name, address, date of birth, weight, gender, social security number, results of physical exams, blood tests, urine tests related to the study, and ECG results.

The Researchers may use and share your health information with:

- The University of Kentucky's Institutional Review Board/Office of Research Integrity;
- Law enforcement agencies (only when required by law)
- University of Kentucky representatives
- UK HealthCare and their representatives
- UK Hospital
- The National Institutes of Health and/or its divisions
- The Investigational Drug Service (IDS) at the University of Kentucky
- Food and Drug Administration
- Center for Clinical and Translational Science (CCTS)

If you are a woman and you become pregnant anytime during the study or within 30 days after discharging from the study, you must inform Dr. Lofwall or Dr. Babalonis – they must then report the outcome of your pregnancy to the Sponsor (and/or the FDA).

The researchers agree to only share your health information with the people listed in this document.

Should your health information be released to anyone that is not regulated by the privacy law, your health information may be shared with others without your permission; however, the use of your health information would still be regulated by applicable federal and state laws.

You may not be allowed to participate in the research study if you do not sign this form. If you decide not to sign this form, it will not affect your:

- Current or future healthcare at the University of Kentucky;
- Current or future payments to the University of Kentucky;
- Ability to enroll in any health plans (if applicable); or
- Eligibility for benefits (if applicable).

After signing the form, you can change your mind and NOT let the researcher(s) collect or release your health information (revoke the Authorization). If you revoke the authorization:

- You will send a written letter to Dr. Babalonis to inform her of your decision. Her address is:
Shanna Babalonis, Ph.D.
845 Angliana Avenue
Lexington, KY, 40508
- Researchers may use and release your health information **already** collected for this research study.
- Your protected health information may still be used and released should you have a bad reaction (adverse event).
- You may not be allowed to participate in the study.

The use and sharing of your information has no time limit.

If you have not already received a copy of the Privacy Notice, you may request one. If you have any questions about your privacy rights, you should contact the University of Kentucky's Privacy Officer between the business hours of 8am and 5pm EST, Monday-Friday at (859) 323-1184.

INFORMED CONSENT SIGNATURE PAGE

You are a participant or are authorized to act on behalf of the participant. This consent includes the following:

- Key Information Page
- Detailed Consent

You will receive a copy of this consent form after it has been signed.

Signature of research participant _____

Date _____

Printed name of research participant _____

**Printed name of person obtaining informed consent/
HIPAA authorization** _____

Date _____

**Signature of Principal Investigator
or Sub/Co-Investigator** _____

Interactions of Marijuana and Opioids: Pharmacodynamic and Reinforcing Effects Protocol
Number: 45017

Statistical Analysis Plan

All analyses will be conducted using SAS Version 9.3 or higher (SAS Institute, Inc; Cary, NC, USA), and all hypothesis testing will be two-sided with a significance level of 0.05. P-values will be presented with 3 decimals and p-values that are less than 0.001 will be represented as <0.001.

Continuous data will be summarized using descriptive statistics: number of observations (n), arithmetic mean, standard error, minimum, and maximum. Frequencies and percentages will be used to summarize categorical (discrete) outcomes. Means and standard errors will be presented to two decimal places.

Analysis Populations

Two study populations will be defined for analysis.

Enrolled Population - All subjects who sign the Informed Consent Form.

Completer Population - Subjects in the who complete the entire Study Phase.

Demographics and Other Baseline Characteristics

Demographic and baseline characteristics will be summarized; no statistical comparisons will be made on demographic or baseline characteristics. The demographic and baseline characteristics will consist of age, sex, race, ethnicity, height (cm), weight (kg), and BMI (kg/m²).

Continuous variables (age, height, weight, BMI) will be summarized by n, mean, standard deviation, min, median, and max. Frequencies and percentages will be used to describe categorical (discrete) variables including gender, race, and ethnicity.

Analysis of Primary Outcomes

The primary analyses will be performed based on the Completer Population. The primary Emax VAS item Drug Liking and will be analyzed in a mixed model including the nine drug conditions with a compound symmetry covariance structure. Within each model, subject will be treated as random effects, and the remaining parameter as fixed effects. Mixed models are suited for data with repeated measures, correlations among observations within an individual subject, and the presence of missing data. The response of individual subjects is first modeled, and then the estimates for each individual are combined in a group analysis (Singer, 1998; Ballinger 2004; Diggle et al. 1996; Gibbons et al. 1993; Kreft and De Leeuw 1998). Tukey post-hoc tests will compare active doses to placebo and other relevant active dose comparisons.

Analysis of Secondary Outcomes

Secondary analyses will be performed based on the Completer Population. Secondary pharmacodynamic outcomes will include:

- Raw time course data of VAS items (e.g., High, Good Drug Effects, Bad Drug Effects, Any Drug Effects, Desire to Use Opioids), subjective opioid adjectives, street value, observer adjectives, DSST, cold pressor test, cold water VAS, flicker/fusion, balance task, heart rate, systolic blood pressure, diastolic blood pressure, respiration rate, oxygen saturation, end tidal carbon dioxide, and pupil diameter from the nine dose conditions.
- Emax and Emin (where appropriate) on the VAS items, subjective opioid adjectives, street value, observer adjectives, DSST, cold pressor test, cold water VAS, flicker/fusion, heart rate, systolic blood pressure, diastolic blood pressure, respiration rate, oxygen saturation, end tidal carbon dioxide, and pupil diameter from the nine dose conditions.

Secondary analyses will be completed in mixed models that include drug condition and time (when appropriate with an autoregressive covariance structure) with a compound symmetry covariance structure. Subject will be treated as random effects and the remaining parameters fixed. Tukey post-hoc tests will compare active doses to placebo and other relevant active dose comparisons.

Safety and Tolerability Analyses

Adverse events (AEs) recorded after signing informed consent but prior to the first dose will be recorded as baseline AEs and will be listed by subject but will not be included in the summary safety analysis. AEs will be summarized by relationship to study drug and severity.

Missing Data

Within-session missing data are expected to be less than 3% for each outcome. Inspection of missing data and correlates of missingness will be examined upon study completion. The use of mixed models as an analytic strategy obviates the need for the missing values to be imputed.

Identification and Summary of Protocol Deviations

Major protocol deviations from the participant's entry criteria through study completion will be documented and summarized as far as they can be extracted from the numeric and coded study data.

References:

Ballinger GA (2004) Using generalized estimating equations for longitudinal data analysis. *Organizational Research Methods* 7(2): 127-150.

Diggle PJ, Liang K, Zeger SL (1996) *Analysis of Longitudinal Data*. Oxford University Press, Inc., Oxford University Press, Inc.

Gibbons RD, Hedeker D, Elkin I, Waterman C, Kraemer HC, Greenhouse JB, Shea MT, Imber SD, Sotsky SM, Watkins JT (1993) Some conceptual and statistical issues in analysis of longitudinal psychiatric data. Application to the NIMH treatment of Depression Collaborative Research Program dataset. *Arch Gen Psychiatry* 50: 739-50.

Kreft I, De Leeuw J (1998) Introducing Multilevel Modeling. Sage Publications, Ltd., Sage Publications, Ltd.

Singer JD (1998) Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *J Educ Behav Stat* 24: 323-355.