On Letterhead

[Name]

University of Florida

[Department]

[Address]

[Phone]

[Fax]

[Email]

[Date]

Food and Drug Administration

Center for Drug Evaluation and Research

Central Document Room

5901-B Ammendale Rd.

Beltsville, MD 20705-1266

***OR***

Food and Drug Administration
Center for Biologics Evaluation and Research
Office of Tissues and Advanced Therapies
Review Management Staff
Document Control Center,
10903 New Hampshire Avenue

WO-71, G112

Silver Spring, MD 20993-0002

RE: New IND Application Submission

Dear Reviewers,

Pursuant to 21 CFR 312, I am submitting an original, Sponsor-Investigator Investigational New Drug (IND) application.

The IND is being submitted to evaluate [Complete]

[If pre-IND meeting held, insert text referencing the pre-IND # and date of meeting]

If you have any questions about the material included in this IND, please do not hesitate to contact me at [Phone], by email at [Email] or by fax at [Fax] any time during your review. [if another person designated to interact with FDA on behalf of sponsor, “(Name) is authorized to

interact with the FDA on my behalf and (name’s) contact information is (phone, email, fax).” This is usually Sheila Austin, Regulatory Specialist (352)273-8702, fax (352)273-8703, sheila.austin@ufl.edu]

Thank you in advance for your consideration,

Sincerely,

[Name]

University of Florida

[Department]

Enclosure:

**INVESTIGATIONAL NEW DRUG APPLICATION**

**DATE**

IND Application Title:

Drug Product:

IND Serial Number: 0000

Sponsor-Investigator: [Name}

 University of Florida

[Department]

[Address]

[Phone]

[Fax]

[Email]

**1.0 FDA Form 1571**

*INSTRUCTIONS: Add text, “Please see the signed and dated Form FDA 1571 next’*

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**3.0 Introduction**

3.1 Introductory Statement

*A brief introductory statement including the name of the investigational drug and all active ingredients, the drug's pharmacological class, the structural formula of the drug (if known), the formulation of the dosage form(s) to be used, the route of administration, and the broad objectives and planned duration of the proposed clinical investigation(s)should be provided here.*

*INSTRUCTIONS FOR 3.1 TO 3.1.6*

*If a particular heading provided below is not applicable or the information is not known/available at the time of the IND submission, then state “not applicable” or provide an explanation stating that the information is not known or available.*

*NOTE: If a pre-IND meeting was already held with the FDA, the pre-IND number, meeting date, and outcomes should be referenced here.*

3.1.1 Drug Name and all Active Ingredients

*ADDITIONAL INSTRUCTIONS: List all known names of the investigational drug including, but not limited to, the proprietary name, generic name, chemical name, and any other names of the drug*

3.1.2 Pharmacological Class

*ADDITIONAL INSTRUCTIONS: Insert description of pharmacological class. If not known, explain why it is not known*

3.1.3 Structural and Chemical Formula

*ADDITIONAL INSTRUCTIONS: Insert a succinct description of the formulation including dosage amounts of each active ingredients of the drug product*

3.1.4 Formulation of Dosage Form

*ADDITIONAL INSTRUCTIONS: Insert a succinct description of the formulation including dosage amounts of each active ingredients of the drug product*

3.1.5 Route of Administration

*ADDITIONAL INSTRUCTIONS: Insert a description of the route of administration*

3.1.6 Broad Objectives and Planned Duration of the Proposed Clinical Investigation

*ADDITIONAL INSTRUCTIONS: Provide description of the objectives of the clinical investigation(s) proposed as part of this application, and how long you expect the investigation(s) (clinical trial) to last. If more than one is proposed, then insert appropriate subheading so the FDA can clearly distinguish what information pertains to which trial*

3.2 Brief Summary of Previous Human Experience

*INSTRUCTIONS: A brief summary of previous human experience with the drug, with reference to other IND's if pertinent, and to investigational or marketing experience in other countries that may be relevant to the safety of the proposed clinical investigation(s) should be provided here. This should be a high-level summary of the information provided in Section 9 – Previous Human Experience*

3.3 Withdrawn From Investigation or Marketing in any Country

*INSTRUCTIONS: If the drug has been withdrawn from investigation or marketing in any country for any reason related to safety or effectiveness, identification of the country(ies) where the drug was withdrawn and the reasons for the withdrawal should be provided here*

**4.0 General Investigational Plan**

*INSTRUCTIONS: In this section, provide a brief overview of the investigational plan for the first year the drug is studied. Be sure to include/address the information requested in each of the subsections of section 4*

4.1 Rationale for Drug and Study

*INSTRUCTIONS: In this section, state the rationale for using the investigational drug and/or conducting the research study. Include background information on the science that supports the use of the investigational drug and/or the research study. Note: This information can either be split into two sections, as illustrated here (4.1.1. and 4.1.2., or included all together under 4.1). Use your best judgment as to which style is more appropriate for your application*

4.2 Indications to be Studied the First Year

*INSTRUCTIONS: State the indication(s) to be studied during the first year of the IND here*

4.3 General Approach to be Followed in Evaluating the Drug

*INSTRUCTIONS:**State the general approach to be followed in evaluating the drug here*

4.4 Clinical Trials to be Conducted First Year

*INSTRUCTIONS:**Provide an overview of the clinical trial(s) that are planned to be conducted during the first year of the IND here. If the plans are not yet developed for the first year of the IND, indicate this here*

4.5 Estimated Number of Subjects to be Given the Drug in First Year

*INSTRUCTIONS: Provide an estimate of the number of total participants to be given the investigational drug in the proposed clinical trial(s) to be conducted during the first year of the IND. If the drug is to be given to multiple populations, i.e., healthy volunteers and patient populations, be sure to provide an estimate for each individual population*

4.6 Anticipated Risks of Particular Severity or Seriousness

*INSTRUCTIONS: Provide an overview of all risks of particular severity or seriousness anticipated on the basis of the toxicological data in animals and/or prior studies with the investigational drug or related drugs in humans here. Also include any study procedures that carry anticipated risks of particular severity or seriousness in this section*

**5.0 Investigator’s Brochure**

*INSTRUCTIONS:*

* *If an early phase trial is being conducted at a single center, then an investigator brochure (IB) is not necessary. If no IB is included in the IND application, provide a brief explanation for FDA reviewers as to why.*
* *If studying an approved drug that has a package insert, change the section heading to “Package Insert” and place the package insert information here. A number of package inserts are available for download at http://dailymed.nlm.nih.gov/. The package insert needs to be from the manufacturer of the drug that will be supplying the drug for the study.*
* *If there is an IB, insert text after stating “Please see next the Investigator‟s Brochure” and then insert the IB*

**6.0 Protocol**

*[****REGULATORY REFERENCE****: 21CFR312.23(a)(6)*

*(6)Protocols.*

*(i) A protocol for each planned study. (Protocols for studies not submitted initially in the IND should be submitted in accordance with 312.30(a).) In general, protocols for Phase 1 studies may be less detailed and more flexible than protocols for Phase 2 and 3 studies. Phase 1 protocols should be directed primarily at providing an outline of the investigation--an estimate of the number of patients to be involved, a description of safety exclusions, and a description of the dosing plan including duration, dose, or method to be used in determining dose--and should*

*specify in detail only those elements of the study that are critical to safety, such as necessary monitoring of vital signs and blood chemistries. Modifications of the experimental design of Phase 1 studies that do not affect critical safety assessments are required to be reported to FDA only in the annual report.*

*(ii) In Phases 2 and 3, detailed protocols describing all aspects of the study should be submitted. A protocol for a Phase 2 or 3 investigation should be designed in such a way that, if the sponsor anticipates that some deviation from the study design may become necessary as the investigation progresses, alternatives or contingencies to provide for such deviation are built into the protocols at the outset. For example, a protocol for a controlled short-term study might include a plan for an early crossover of non-responders to an alternative therapy.*

*(iii) A protocol is required to contain the following, with the specific elements and detail of the protocol reflecting the above distinctions depending on the phase of study:*

*(a) A statement of the objectives and purpose of the study.*

*(b) The name and address and a statement of the qualifications (curriculum vitae or other statement of qualifications) of each investigator, and the name of each sub-investigator (e.g., research fellow, resident) working under the supervision of the investigator; the name and address of the research facilities to be used; and the name and address of each reviewing Institutional Review Board. {NOTE: - FDA Form 1572 and CVs}*

*(c) The criteria for patient selection and for exclusion of patients and an estimate of the number of patients to be studied.*

*(d) A description of the design of the study, including the kind of control group to be used, if any, and a description of methods to be used to minimize bias on the part of subjects, investigators, and analysts.*

*(e) The method for determining the dose(s) to be administered, the planned maximum dosage, and the duration of individual patient exposure to the drug.*

*(f) A description of the observations and measurements to be made to fulfill the objectives of the study.*

*(g) A description of clinical procedures, laboratory tests, or other measures to be taken to monitor the*

*INSTRUCTIONS: Add text, “Please see next the protocol.”*

**7.0 Chemistry, Manufacturing, and Controls (CMC)**

***If the drug product is a FDA approved product and not being adulterated for the proposed clinical trials, then for 7.1-7.3 reference package insert provided in 5.0.***

7.1 Introduction: Statement of Risk

*INSTRUCTIONS: A statement whether or not chemistry of either the investigational drug or drug product or the manufacturing of either moiety presents any risk should be included here.*

*A description of any chemistry and/or manufacturing differences between the drug proposed for use in proposed trial and that used in animal toxicology trials must be included here*

7.2 Drug Substance

*INSTRUCTIONS: Provide the following information for the Drug Substance Description:*

*a. Description including physical, chemical, and/or biological characteristics*

*b. Name and address of manufacturer*

*c. Description of manufacturing processes that should include flow diagram*

*d. Description Acceptable limits and analytical methods to demonstrate identity, strength, quality and purity including copy of COA (Validation data and established specifications may only be required for some well characterized biotechnology products)*

*e. Description stability data and test methods to obtain data during toxicologic studies and proposed trial planned trial.*

*f. References**to US Pharmacopeia-National Formulary may be made to supply requested information*

7.3 Drug Product

*INSTRUCTIONS: Provide the following information for the Drug Product Description:*

*a. List of all components including reasonable substitutes for inactive compounds which do or do not appear in final drug product*

*b. Quantitative composition of the drug product including any reasonable or anticipated variations during the manufacture*

*c. Name and address of manufacturer*

*d. Written and diagrammatic descriptions of the manufacturing process including sterilization processes where applicable and packaging procedures*

*e. Brief description of test methods used to show identity, strength, quality and purity, including copy of COA for clinical batch (Assessment of bioactivity and preliminary specifications may be required for some well characterized biotechnology products)*

*f. Description of stability data and test methods to obtain data in the drug's final packaging during toxicologic studies and proposed trial*

7.4 Placebo

*INSTRUCTIONS: Provide a brief diagrammatic, tabular, and written description of the composition, manufacture, and control of any placebo used in the proposed trial here*

7.5 Labeling

*INSTRUCTIONS:**Provide a copy of all investigational drug and/or placebo labels to be used here*

7.6 Claim for Categorical Exclusion for Environmental Assessment

*INSTRUCTIONS: Add text, “In accordance with 21 CFR 25.31(e), an IND application is categorically excluded from the requirement to prepare an environmental assessment because the drug is intended for use in clinical studies and in research in which any waste will be controlled. The amount of waste expected to enter the environment may reasonably be expected to be nontoxic.”*

**8.0 Pharmacology and Toxicology**

***If the drug product is a FDA approved product and not being adulterated for the proposed clinical trials, then reference package insert provided in 5.0.***

***INSTRUCTIONS****: For each section below, after each summary/description of nonclinical testing, be certain to indicate whether or not the testing was performed in compliance with Good Laboratory Practices (GLP). If the testing was performed by a vendor, please indicate whether or not a certificate of GLP compliance is being provided and cross-reference the certificate‟s location in the IND application. If the testing was not performed in compliance with GLP, provide a statement here describing why the testing was not performed in compliance with GLP.*

8.1 Pharmacology and Drug Disposition

*ADDITIONAL INSTRUCTIONS: Describe the pharmacological effects and mechanism(s) of action of the investigational drug in animals, and information on the absorption, distribution, metabolism, and excretion of the drug (if known) here*

8.2 Toxicology

*ADDITIONAL INSTRUCTIONS: Provide an integrated summary of the toxicological effects of the investigational drug in animals and in vitro. Depending on the nature of the investigational drug and the phase of the investigation, the description should include the results of acute, subacute, and chronic toxicity tests; tests of the drug's effects on reproduction and the developing fetus; any special toxicity testing related to the drug's particular mode of administration or conditions of use (e.g., inhalation, dermal, or ocular toxicology); and any in vitro studies intended to evaluate drug toxicity here.*

*For each toxicology study that is primarily intended to support the safety of the proposed clinical investigation, a full tabulation of data suitable for detailed review should be included here*

**9.0 Previous Human Experience**

***[REGULATORY REFERENCE: 21CFR312.23(a)(9) – Previous human experience with the investigational drug. A summary of previous human experience known to the applicant, if any, with the investigational drug. The information is required to include the following:***

***(i) If the investigational drug has been investigated or marketed previously, either in the United States or other countries, detailed information about such experience that is relevant to the safety of the proposed investigation or to the investigation's rationale. If the drug has been the subject of controlled trials, detailed information on such trials that is relevant to an assessment of the drug's effectiveness for the proposed investigational use(s) should also be provided. Any published material that is relevant to the safety of the proposed investigation or to an assessment of the drug's effectiveness for its proposed investigational use should be provided in full. Published material that is less directly relevant may be supplied by a bibliography.***

***(ii) If the drug is a combination of drugs previously investigated or marketed, the information required under paragraph (a)(9)(i) of this section should be provided for each active drug component. However, if any component in such combination is subject to an approved marketing application or is otherwise lawfully marketed in the United States, the sponsor is not required to submit published material concerning that active drug component unless such material relates directly to the proposed investigational use (including publications relevant to component-component interaction).***

***(iii) If the drug has been marketed outside the United States, a list of the countries in which the drug has been marketed and a list of the countries in which the drug has been withdrawn from marketing for reasons potentially related to safety or effectiveness.***

 ***INSTRUCTIONS****: Provide the information requested per the above regulatory requirements. Insert subheadings as needed per the information provided. If there is no data on previous human experience with the investigational drug, then insert text stating that there is no previous human experience here*

**10.0 Additional Information**

*INSTRUCTIONS: Under each heading below are listed the regulatory requirements per the above regulatory reference. Note: Each section should be addressed and, if not applicable, state “not applicable” and provide an explanation as to why it does not apply here*

10.1 Drug Dependence and Abuse Potential

*ADDITIONAL INSTRUCTIONS:**Drug dependence and abuse potential. If the investigational drug is a psychotropic substance or has other abuse potential, a section describing relevant clinical studies and experience and studies in test animals should be included here*

10.2 Radioactive Drugs

*ADDITIONAL INSTRUCTIONS: Radioactive drugs. If the drug is a radioactive drug, sufficient data from animal or human studies to allow a reasonable calculation of radiation-absorbed dose to the whole body and critical organs upon administration to a human subject. Phase 1 studies of radioactive drugs must include studies which will obtain sufficient data for dosimetry calculations*

10.3 Pediatric Studies

*ADDITIONAL INSTRUCTIONS:**Describe the plans for assessing pediatric safety and effectiveness here. If there are not plans to assess pediatric safety and effectiveness, explain why here*

10.4 Other Information

*ADDITIONAL INSTRUCTIONS:**Provide any additional information here which you believe will add to the FDA review of this IND application*

**11.0 Relevant Information**

*INSTRUCTIONS: Per the section instructions and regulatory reference, provide any relevant information the FDA requested be submitted with the application. If the FDA did not make such a request, then either remove this section or insert text stating the FDA did not request relevant information be submitted with this application*

**12.0 Bibliography**

**13.0 Appendices**