National Cancer Institute
Nanotechnology Characterization Laboratory

White Paper Application

Do not exceed character length restrictions indicated.

DATE RECEIVED

1. TITLE OF PROJECT *(Do not exceed 200 characters, including spaces and punctuation.)*

2a. Is this White Paper related to a previous NCL application? If so, when was the previous application submitted?

2b. Is this White Paper related to a previous NCI application? If so, under which program and when was the previous application submitted?

3. **PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR**

3a. NAME (Last, first, middle)

3b. DEGREE(S)

3c. POSITION TITLE

3d. MAILING ADDRESS *(Street, city, state, zip code)*

3e. DEPARTMENT, SERVICE, LABORATORY, OR EQUIVALENT

3f. MAJOR SUBDIVISION

3g. TELEPHONE AND FAX *(Area code, number and extension)*

TEL FAX

E-MAIL

4. APPLICANT ORGANIZATION

NAME

ADDRESS

5. ADMINISTRATIVE OFFICIAL TO BE NOTIFIED IF AWARD IS MADE

NAME

TITLE

ADDRESS

TEL FAX

E-MAIL

6. PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR ASSURANCE: I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties.

SIGNATURE OF PI/PD NAMED IN 3a.
(In ink. "Per" signature not acceptable.)

DATE

Evaluation Criteria: The application should describe all applicable data on a ***single lead candidate*** nanotechnology strategy. The primary evaluation criterion for white papers in Part I is the strategy's previously demonstrated efficacy in a biological system relevant to cancer research. For the purposes of this application, a "biological system" is defined as an *in vitro* or *in vivo* system that uses biologically relevant molecules. The NCL appreciates that biologically relevant data for proposed nanotechnology strategies may be preliminary and limited because of the novelty of this field. However, white papers that address only the "material sciences" aspects of nanotechnology are not desired. If *in vivo* and/or *in vitro* experiments were not conducted, detailed scientific justification explaining why a given nanomaterials is advantageous in cancer diagnosis and/or therapy should be provided. Another important evaluation criterion for the Part I application is that the concept described in the application actually involves nanoscale components. Data demonstrating this (e.g. size measurements) is most appropriately included in the section titled "Physical/Chemical Characterization". For further information please visit: http://ncl.cancer.gov/working_application-process.asp.

Application Deadlines: Applications are accepted year round and reviewed on a quarterly basis. The quarterly deadlines are the first business day of March, June, September, and December. Applications received after these deadlines are retained for review in the next quarter.

Submission: Please submit application electronically to ncl@mail.nih.gov. Annotate "White Paper Application" in the subject heading.

Confidentiality: All applications to the NCL are treated confidentially. If, however, you prefer to have a formal Confidential Disclosure Agreement (CDA) prior to submission of the White Paper, please contact NCI's Technology Transfer Branch; their contact information can be found here: http://ncl.cancer.gov/working_intellectual-property.asp.

Questions: For questions, please email ncl@mail.nih.gov.

I. ABSTRACT (300 words). Briefly summarize the purpose of your proposal.

II. BACKGROUND/INTRO *(250 words). Provide details concerning the development of the nanomaterial.*

III. STRATEGY/CONCEPT *(300 words). Describe the method of action.*

IV. PRELIMINARY DATA (AS APPLICABLE)

- **SYNTHESIS/PREPARATION** *(150 words). Describe the synthesis and purification procedures.*

• **PHYSICAL/CHEMICAL CHARACTERIZATION** *(300 words). Include solubility, size, composition, surface characteristics, purity, stability, and loading as applicable.*

• ***IN VITRO*** *(300 words). Discuss findings from in vitro safety and efficacy studies.*

• ***IN VIVO*** *(300 words). Discuss findings from in vivo safety and efficacy studies.*

V. DISCUSSION
• **NOVELTY** *(150 words). Describe the unique aspects of the nanomaterial.*
• **CLINICAL IMPACT** *(150 words). Provide details concerning the advantages of the nanomaterial when compared to existing therapeutics and/or diagnostics.*
• **COMPATIBILITY WITH SCALE-UP PRODUCTION** *(50 words). Describe the manufacturing process and steps to increase batch quantities.*

(Please attach sequentially numbered figures and data (with appropriate legends and captions) as necessary to support this application. Please reference these figures/tables by their number in the text of your application.)