



Oklahoma Center for the Advancement of Science and Technology

FY11 Oklahoma Nanotechnology Applications Project Workshop

About OCAST and ONAP

- Only state agency whose sole focus is technology – development, transfer and commercialization.
- Receive state appropriations
- FY09, funded 4 ONAP projects
- FY10, funded 5 ONAP projects
- On average, 54% of ONAP projects are approved for funding

ONAP Program Purpose

- Provides state matching funds for projects related to nanotechnology
- Enhance employment opportunities within Oklahoma
- High probability of producing new or improved commercially successful product, process or service
- Enable new and existing applications in nanotechnology and to encourage collaborations between industry, higher education, and nonprofit research institutions
- Enhance services to Oklahoma manufacturers or Oklahoma companies that are in the process of applying nanotechnology

How is Nanotechnology Defined?

- For the purposes of this solicitation, nanotechnology is defined as technology development at the molecular range (1 nanometer to 100 nanometers) to create and use structures, devices and systems that have novel properties because of their small size.

Award Types

Component	Funding Length	Annual Funding Minimum	Annual Funding Maximum
Proof-of-Concept: <i>Supports early stage applied research & development</i>	2 years	\$10,000	\$45,000
Accelerated: <i>Supports later stage applied research & development</i>	3 years	\$10,000	\$500,000

Applicant Eligibility

- Eligible applicants for ONAP funding include:
 - Oklahoma businesses and manufacturers
 - Oklahoma colleges, Oklahoma universities and Oklahoma non-profit institutions *only if* the proposed project also involves an Oklahoma business or manufacturer as a participant
- Manufacturing of the end product is conducted in Oklahoma

Applicant Ineligibility

- The following are ineligible for ONAP funding:
 - Market surveys
 - Training or technical assistance for business firms
 - Fundamental or basic research and lacks potential for commercialization
 - Projects submitted by an Oklahoma college, university or non-profit research institution **without** the involvement of an Oklahoma business or manufacturer



Oklahoma Center for the Advancement of Science and Technology

Submission Requirements

Solicitation Forms

Editable forms can be found online at: www.ok.gov/ocast

Submission Requirements

Statement of Intent

- Deadline:
 - 5:00 P.M., January 26, 2011
- Delivery Method:
 - By mail or fax to (405) 319-8426
 - Accepting intents today

Intents will not be accepted by e-mail

Submission Requirements

Application

- Deadline:
 - 5:00 P.M., March 23, 2011
- Delivery Method:
 - Mail or hand delivered to the Oklahoma City or Tulsa office.

No e-mail or faxed applications

Required Materials

Each ONAP application must include the following materials:

Number of Sets	Contents
1	Original paper application, marked “original,” with appendices attached (stapled or fastened with a binder clip in the upper left corner). Prepare required Application Form pages 1- 14 (e) (Items 1-28) as provided. Refer to Required Attachments pages 1-10 (Items 29 - 46) for instructions to prepare text sections of the application including presentation order and headings.
1	Paper set of Application Pages 1-14 (e) (Items 1-28), stapled in upper left corner.
1 CD	File containing the entire application in .PDF format, including appendices. Does not require signatures.

Required Materials

- Letter size white paper
- Not less than 0.5-inch margins and single spacing
- Font size not smaller than 10-pt
- Fonts must be Arial, Helvetica, Palatino, or Georgia
- Use the presentation order and headings as shown
- Do not use:
 - Binders
 - Rubber bands
 - Regular paper clips
- OCAST recommends colored sheets to set-off major sections of the proposal

Required Materials

- Total section text page length includes
 - Text
 - Inserted graphs
 - Charts
 - Figures
- If not applicable, acknowledge by number and title “Not Applicable”

Additional Requirements

- Refer to the solicitation for the following:
 - IRB
 - Biographical information
 - Letters of support/recommendation
 - OCAST, previous, and other support
 - Company profile
 - Contact Information

Resubmissions

- A resubmission is a new proposal, which includes the information below:
 - A current Statement of Intent
 - Indication that the proposal is a resubmission in Item 2
 - A separate appendix (item 45) that includes:
 - a letter responding to the reviewers' comments from the previous review and noting all changes in the research plan,
 - a copy of the previously submitted application and
 - all reviews of that application.

Release of Information

OCAST is subject to the Open Meetings Act and the Open Records Act.

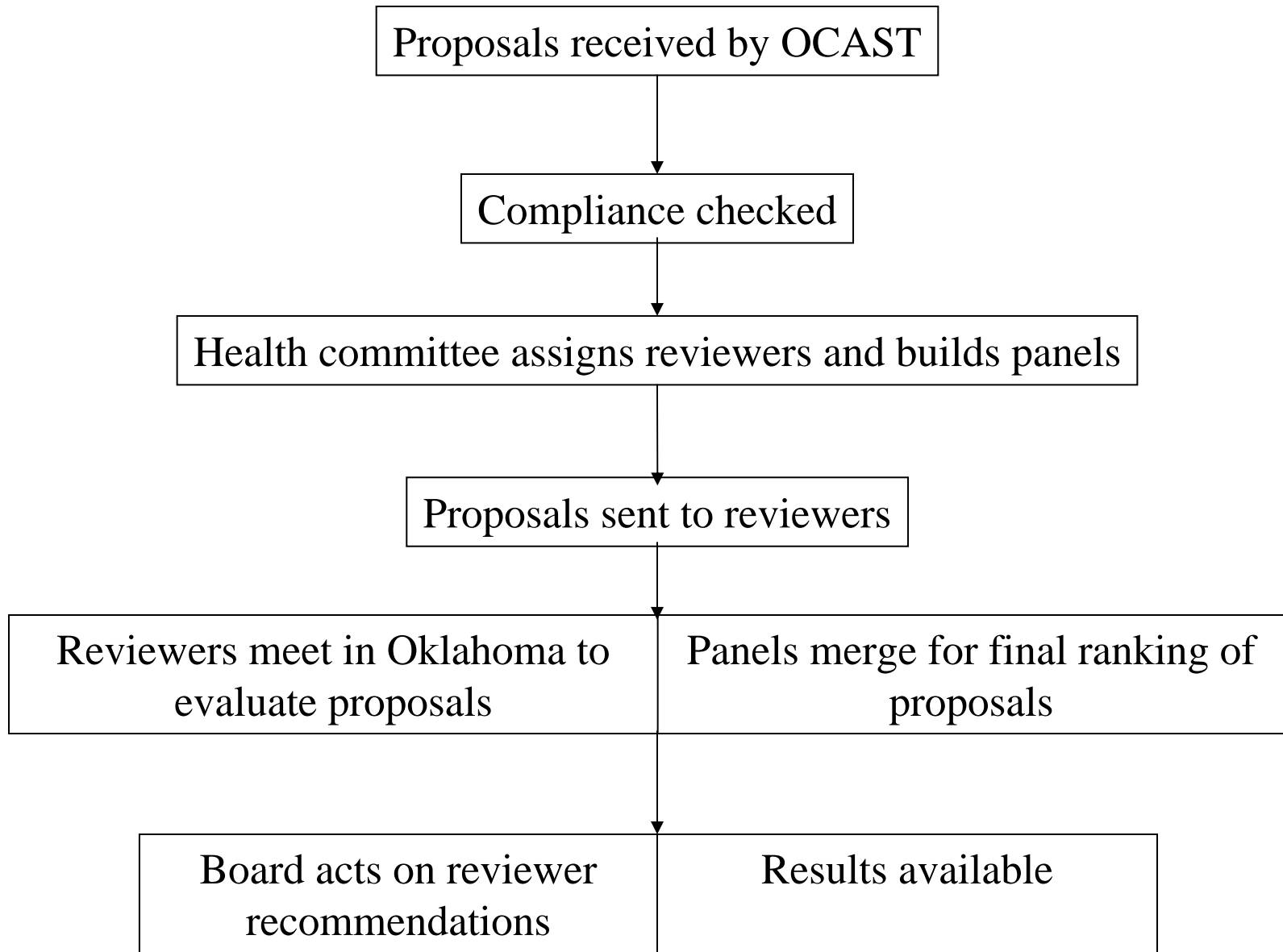
Statement of Intent, application abstracts and executive summaries from progress reports are consider public information.

However, marketing plans, financial statements, trade secrets, research concepts, methods or products, or any other proprietary information are exempt by statute.



Oklahoma Center for the Advancement of Science and Technology

Review Process & Evaluation Criteria



Evaluation Criteria

- *Proof-of-concept* proposals are evaluated 30% for the potential for economic impact and 70% for the technical merit of the research and the ability to perform the research.
- *Accelerated* proposals are evaluated 50% for the economic impact and 50% for the technical merit and the ability to perform the research.

Evaluation Criteria

Peer reviewers evaluate all applications according to the following criteria:

Technical merit of the research

Ability to perform the research

Potential for economic impact and commercialization development strategy

Evaluation Criteria

Technical merit of the research

1. The creativity and inventiveness of the proposed research
2. The significance of the research to generate intellectual property to meet Oklahoma goals

Evaluation Criteria

Ability to perform the research

1. The degree that the state-of-the-art techniques and processes are to be used
2. The quality and probability of success of the research plan
3. The competence of the research personnel
4. The adequacy of the existing or proposed resources: collaborations and facilities
5. The commitment of the applicant organization
6. The appropriateness of the budget

Evaluation Criteria

Potential for economic impact and commercialization strategy

1. The degree of interest shown by industry
2. The domestic and international growth potential in the proposed area
3. The potential of short, medium, and long-term impact on the Oklahoma economy
4. The amount of risk relative to the return for the proposed project
5. Status of Intellectual Properties Agreement

Evaluation Criteria

Potential for economic impact and commercialization strategy

6. Commitment of financial resources to successfully bring product to market
7. Availability of marketing capability to successfully bring product to market through Oklahoma manufacturing resources
8. Potential for creating high-tech jobs in Oklahoma, considering both the probability and number

Evaluation Criteria

The following criteria will also be evaluated under the Accelerated Project

1. A plan for manufacturing or replicating the product, process or service, and what that final product, process or service will look like
2. Demonstration that the technology can be scaled to meet market demand
3. Testing of the final prototype to validate that it does deliver the promised technology

Evaluation Criteria

The following criteria will also be evaluated under the Accelerated Project

4. Commercialization plan including articulation of the steps necessary, and the anticipated timeline for, moving the technology from R&D through production
5. Strategy for marketing and distribution of the final product, process or service



Oklahoma Center for the Advancement of Science and Technology

Commercialization & Economic Impact

Commercialization

Development Strategy

Proof-of-Concept: 4 pages maximum

Accelerated: 10 pages maximum

- A. Describe in a short sentence the product, process or service to be commercialized and its end use.
- B. Describe the customers or clients.
- C. Describe the domestic and global markets and market size, market growth rates, number and nature of competitors.

Commercialization Development Strategy

- D. State the competitive advantage the project offers in the targeted markets.
- E. Using a chart or table, describe the key steps required to commercialize the product, process or service. This plan should include a schedule of key business milestones.
- F. Provide projected income statements and cash flow projections.

Economic Impact Statement

Maximum 4 pages

- Discuss the project's potential impact on Oklahoma's economy during the project and at 2, 5 and 10 years following the project.
- Carefully discuss under a separate heading for each time period items 39A. through G., during the project, and at 2, 5 and 10 years after completion.

Economic Impact Statement

- A. Increase in scientific and technical staffing levels. This includes student/post-doctoral associates gaining technical expertise.
- B. Increase in work force staff.
- C. Productivity, profitability or cost savings.
- D. Amount of capital investment in equipment and facilities at the organizations participating in the project.

Economic Impact Statement

- E. The estimated gross sales, net sales, and cost avoidance.
- F. If applicable, describe technology transfer plans.
- G. Other sources of funding and capital attracted to Oklahoma.

Intellectual Property Relationships and Protection

- Describe the plan to protect the intellectual property
- Collaborative proposals
 - Provide a short statement describing how the intellectual property patent and licensing agreements will be effectuated
- Existing agreements
 - Provide a short statement indicating the types of agreements that have been executed between the parties



Oklahoma Center for the Advancement of Science and Technology

Research Plan

Maximum 15 pages

Research Plan

- A. Objectives for the period of the proposed work:
- Hypothesis: State concisely what the research described in the application is intended to accomplish

Research Plan

- B. The significance of the research:
 - i. Briefly sketch the background
 - ii. Evaluate existing knowledge in this area and identify the gaps that exist
 - iii. State the importance of this research by relating its aims to longer-term objectives
 - iv. Present related projects and demonstrate this effort does not repeat previous studies nor infringe on intellectual property rights

Research Plan

C. Preliminary and related studies

- i. Describe prior research by the investigator(s) that lead to formulating the proposal
- ii. Describe competence of the investigator(s) who will perform the proposed project

D. Research methodology:

- i. Detail the research design
- ii. Discuss the methodologies and the means by which the data will be analyzed and interpreted.
- iii. Note any procedures that may be dangerous to personnel and the precautions that will be used in these situations
- iv. Include indicators of success
- v. Using the heading “*Facilities, Equipment and Resources*” describe the resources necessary and available for this project

Research Plan

Timetable:

- Include a timetable that shows research goals and the alternate path(s) if the research goal is not attained.

	1	2	3	4	5	6	7	8	9	10	11	12
Order supplies				X					X			
Purchase reagents					X					X		
Synthesize catalyst						X				X		
Alternate Scheme I							X					
Alternate Scheme II										X		
Test model											X	
Revise model												X
Quality assurance		X	X	X	X	X	X	X	X	X	X	X
Report preparation					X							

Literature Cited

- While disciplines vary in the accepted style, the citation must be sufficient for a reviewer to locate the cited information with little searching
- Use a referencing style suitable for your discipline
- Each citation must include the title of the journal article or specific book chapter



Oklahoma Center for the Advancement of Science and Technology

Budgets & Matching Documentation

Common Terminology

- Principal Investigator (PI) – Person submitting the proposal and performing the research.
- Business or Manufacturer – Must be involved in an ONAP project. Does not have to serve as the PI but will be a contracting entity.
- Fiscal Agent – This is the official to whom OCAST will send all contract payments.
- Designated Contract Official – This is the official to which OCAST will send all award contract correspondence:
 - The award letter
 - Requests for information and documentation
 - Initiated contract
 - Executed contract
 - Progress report and performance evaluation information and requests

Matching Requirements

Business vs. Universities & Non-Profits

Equipment as Match

Business *cannot* use equipment & machinery as match

Universities & non-profits *can* use equipment as match to fulfill part or the entire required match. Equipment will be considered for match if it does not originate from state-appropriated funds

Salary as Match

No state appropriated funds can be used as match

Business *can* use salary as match
Non-profits *can* use salary as match as long as they do not receive monies from state appropriations

State universities *cannot* use salary as match

Matching Requirements

In order to qualify for funding for an ONAP project:

- Funding sources cannot be from state-appropriated money
- Matching monies must be specifically for the ONAP project

In-kind services and indirect costs are not allowed

Direct Costs

The ONAP program allows only research direct costs as part of matching expenses.

- Examples of allowed direct costs:
 - Research related: travel, supplies, equipment, patient care, alterations and rent
- Examples of non-allowed direct costs:
 - Advertising, public relations, food, housing cost, automobiles, personal computers, lobbying costs, selling and marketing costs, first class air travel, patent and licensing fees

Indirect Costs

ONAP does not allow indirect costs as part of the match expenses. Examples of indirect costs are:

- Building & equipment depreciation, interest, operations and maintenance, overhead, administrative support, library, tuition and fees

Contact Information

Tessa North

tessa.north@ocast.ok.gov

405.319.8410

866.265.2215

OCAST Website

www.ok.gov/ocast