

DEPARTMENT OF AGRICULTURE**Cooperative State Research,
Education, and Extension Service****NATIONAL SCIENCE FOUNDATION****Microbial Genome Sequencing Project;
Interagency Program Announcement;
Request for Proposals and Request for
Input**

AGENCIES: U.S. Department of Agriculture and the National Science Foundation.

ACTION: Notice of request for proposals and request for input.

SUMMARY: As a collaborative, interagency effort, the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture (USDA), and the National Science Foundation (NSF) are soliciting proposals for the Microbial Genome Sequencing Project. Proposals are hereby requested from eligible institutions as identified herein for competitive consideration of awards. By this notice, the CSREES additionally solicits stakeholder input from any interested party regarding this request for proposals (RFP) for use in the development of any future RFPs for this Program.

DATES: A "Letter of Intent" is requested and due by close of business (COB) on April 13, 2001 (5:00 p.m. EST). Proposals must be received by COB on May 4, 2001 (5:00 p.m. EST). Proposals received after this date will not be considered for funding. Comments regarding this RFP are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

ADDRESSES: Applicants may e-mail the "Letter of Intent" to Dr. Ann Lichens-Park at apark@reeusda.gov or send the letter by mail to the Microbial Sequencing Project, Mail Stop 2241, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, 1400 Independence Avenue, SW., Washington, D.C. 20250-2241; or fax the letter to the Microbial Genome Sequencing Project at (202) 401-6488.

The address for hand-delivered proposals or proposals submitted using an express mail or overnight courier service is: Microbial Genome Sequencing Project, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, Room 1307, Waterfront Centre, 800 9th Street, SW., Washington, DC 20024.

Proposals sent via the U.S. Postal Service must be sent to the following address: Microbial Genome Sequencing Project, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, STOP 2245, 1400 Independence Avenue, SW., Washington, DC 20250-2245.

Written user comments should be submitted by mail to: Policy and Program Liaison Staff, Office of Extramural Programs, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, STOP 2299, 1400 Independence Avenue, SW., Washington, DC 20250-2299; or via e-mail to: RFP-OEP@reeusda.gov. In your comments, please include the name of the program and the fiscal year of the RFP to which you are responding.

FOR FURTHER INFORMATION CONTACT: Dr. Ann Lichens-Park, Initiative For Future Agriculture and Food Systems; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture, STOP 2241, 1400 Independence Avenue, SW.; Washington, DC 20250-2241, telephone: 202-401-6466, fax: 202-401-6488, e-mail: apark@reeusda.gov; or Dr. Matthew Kane, National Science Foundation, 4201 Wilson Blvd; Arlington, VA 22230; telephone: (702) 292-7189; fax: (703) 292-9064; e-mail: mkane@nsf.gov.

SUPPLEMENTARY INFORMATION:**Table of Contents**

Stakeholder Input

Catalog of Federal Domestic Assistance

Part I—General Information

- A. Legislative Authority and Background
- B. Purpose, Priorities and Fund Availability
- C. Eligibility
- D. Matching Requirements
- E. Types of Proposals
- F. Restrictions on Use of Funds

Part II—Letter of Intent and Program

Description

- A. Letter of Intent
- B. Program Description

Part III—Preparation of a Proposal

- A. Program Application Materials
- B. Content of Proposals
 1. General
 2. Application for Funding Cover Page (Form CSREES-661)
 3. Table of Contents
 4. Project Summary
 5. Response to Previous Review
 6. Project Description
 7. References in Project Description
 8. Appendices to Project Description
 9. Facilities and Equipment
 10. Collaborative and/or Subcontractual Arrangements
 11. Key Personnel
 12. Conflict-of-Interest List

13. Budget
 14. Budget Narrative
 15. Matching Funds
 16. Current and Pending Support (Form CSREES-663)
 17. Assurance Statements (Form CSREES-662)
 18. Certifications
 19. National Environmental Policy Act Exclusions Form (CSREES-1234)
 - C. Application Submission Information
 - D. Acknowledgment of Proposals
- Part IV—Review Process
- A. General
 - B. Evaluation Factors
- Part V—Award Administration
- A. General
 - B. Organizational Management Information
 - C. Award Document
 - D. Notice of Award
 - E. Funding Mechanisms
 - F. Use of Funds; Changes
 - G. Applicable Regulations
 - H. Additional Information
 - I. Confidential Aspects of Proposals and Awards

Stakeholder Input

CSREES is requesting comments regarding this solicitation from any interested party. These comments will be considered in the development of any future RFP for the program. Such comments will be forwarded to the Secretary of Agriculture or her designee for use in meeting the requirements of section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). This section requires the Secretary to solicit and consider input on a current RFP from persons who conduct or use agricultural research, education, and extension for use in formulating future RFPs for competitive programs. Comments should be submitted as provided for in the Addresses and Dates portions of this Notice.

Catalog of Federal Domestic Assistance

This program is listed in the Catalog of Federal Domestic Assistance under 10.302, Microbial Genome Sequencing Project, Initiative for Future Agriculture and Food Systems.

Part I—General Information*A. Legislative Authority and Background*

Section 401 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) (7 U.S.C. 7621) established in the Treasury of the United States an Initiative for Future Agriculture and Food Systems (IFAFS) account and authorized the Secretary of Agriculture to establish a research, extension, and education competitive grants program to address critical emerging U.S. agricultural issues related to (1) future food production, (2)

environmental quality and natural resource management, or (3) farm income. Grants are to be awarded in a number of areas including Agricultural Genome. Microbes, being of significant importance to the environment, and to agricultural production and processing, are an appropriate organism of genomic study under this authority. The authority for NSF participation in this program is found in the National Science Foundation Act of 1950, as amended, 42 U.S.C. 1861, *et seq.* Microbes are of great fundamental biological interest, therefore their genomic study is appropriate to the NSF authority.

An Interagency Working Group on Microbial Genomics established in August 2000 created The Microbe Project (MPIWG) to: 1) identify science-based priorities for a national microbial genome initiative; and 2) plan for a collaborative interagency approach to address these priorities. One of the Project's goals is to develop a coordinated national effort to sequence microbial genomes of broad agricultural and biological importance. It is expected that through these efforts the resulting information, data, research tools and biological materials can be made readily and openly available to the scientific community at large. The Microbial Sequencing Project is a major step towards achieving the MPIWG's goals.

B. Purpose, Priorities and Fund Availability

The purpose of this interagency program announcement is to solicit proposals to conduct high-throughput sequencing of genomes of microbes that are of fundamental biological interest, as well as those that are important to the productivity and sustainability of agriculture and forestry, and to the safety and quality of the nation's food supply. Priority will be given to projects that will provide whole genome sequence data and mapping information on microorganisms to fill key gaps in our knowledge of microbial diversity, of microbes that play roles in diverse ecosystems, and/or microbes that have an impact on agriculture. Priority also will be given to projects that integrate education and outreach and those that establish close collaboration among multiple investigators, institutions and end users.

There is no commitment by USDA or NSF to fund any particular proposal or to make a specific number of awards. The participating agencies currently have a total of approximately \$9 million available for this Program in fiscal year (FY) 2001. Subject to the availability of funds, the participating agencies

anticipate that an additional \$10 million in funding will be available each year for this program or a successor program in FY 2002 and FY 2003, for an anticipated total level of support of approximately \$30 million over three years.

Applicants may request funding of up to \$2 million over four years. Awards will be made in the form of grants or cooperative agreements which will be determined at the time of the award. The exact amount of the award will depend on the advice of reviewers, agency priorities, and on the availability of funds. Each participating agency will obligate funds separately. However, a proposal may be funded by one or both of the participating agencies.

C. Eligibility

Proposals may be submitted by colleges and universities or research foundations maintained by a college or university and/or non-profit organizations. The source of USDA funds for the Microbial Genome Sequencing Project is the IFAFS program. Under the IFAFS program, proposals may be submitted by colleges and universities or research foundations maintained by a college or university. This represents a change from the FY 2000 IFAFS solicitation. Section 724 of Public Law 106-389, as amended by section 101(3) of H.R. 566 which was enacted by section 1(a)(4) of Public Law 106-554, removed Federal research agencies, national laboratories and private research organizations from eligibility for IFAFS awards. Consortia of such institutions with appropriate research and educational facilities may apply, but a single organization or individual must accept overall management responsibility.

Other types of institutions are not eligible as direct recipients of IFAFS funds, however they may be included as subcontracts on grants made to eligible institutions. Therefore, applications from academic institutions may be awarded by either USDA or NSF. Direct applications from non-profit organizations may be supported solely by NSF funds.

D. Matching Requirements

For funds provided by the USDA, grantees will be required to provide funds or in-kind support to match the amount of Federal funds provided if the grant provides for applied research that is commodity specific and not of national scope.

E. Types of Proposals

In FY 2001, it is anticipated that most projects will be submitted as New

Proposals. However, the USDA held a Microbial Genomics competition through the IFAFS Program in FY 2000 for agriculturally important microbes. Applicants to that program who were not grantees may choose to submit to the Microbial Genome Sequencing Project as a resubmission. Therefore two types of applications may be submitted:

1. New Proposal

This is a project proposal that has not been previously submitted to Microbial Genomics Program of the Initiative for Future Agriculture and Food Systems. All new proposals will be reviewed competitively using the selection process and evaluation criteria described in Part IV—Review Process.

2. Resubmitted Proposal

This is a proposal that had been previously submitted to the IFAFS Microbial Genome Program but was not funded. The resubmitted proposal should clearly indicate the changes that have been made in the project proposal. Further, a clear statement acknowledging comments from the previous reviewers, indicating revisions, rebuttals, etc., can positively influence the review of the proposal. Therefore, for resubmitted proposals, the investigator(s) must respond to the previous panel summary on no more than one page titled, Response to Previous Review, which is to be placed directly after the Project Summary as described in Part III—Preparation of a Proposal. Resubmitted proposals will be reviewed competitively using the selection process and evaluation criteria described in Part IV—Review Process.

F. Restrictions on Use of Funds

1. Funds for Buildings and Facilities

Microbial Genome Sequencing Project funds may not be used for the renovation or refurbishment of research spaces; the purchase or installation of fixed equipment in such spaces; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

2. Funds for Human Cloning

In accordance with the President's Memorandum of March 4, 1997, regarding the use of Federal funds for the cloning of human beings (33 Weekly Comp. Pres. Doc. 278), Microbial Genome Sequencing Project funds shall not be used to support, fund, or undertake any cloning activity that could lead to the creation of a new human being with genetic material identical to that of another human being, including research related directly thereto. The prohibition on use

of grant funds to support human cloning activity includes using, or making available for use, grant-funded equipment for use in connection with human cloning. This ban does not restrict research into the cloning of plants, animals, or individual human cells that cannot develop into a new human being.

Part II—Letter of Intent and Program Description

A. Letter of Intent

Applicants are strongly encouraged to submit a Letter of Intent before submitting a full proposal. This letter should consist of three parts: (1) A descriptive title of the proposed project; (2) names and roles of project directors and other key personnel along with their institutions; and (3) a brief statement of approaches and objectives (500 words or less). This information will be used by CSREES and NSF staff in planning the review process. Because Letters of Intent will not be distributed for peer review, there will be no feedback from CSREES or NSF staff regarding the content of these letters. See Part III, C., Application Submission Information for specific mailing instructions. *Failing to submit a Letter of Intent will not preclude applicants from submitting full proposals, however a Letter of Intent is nonetheless encouraged.*

B. Program Description

Microorganisms dominate the planet in terms of total mass, species diversity, and metabolic diversity. They include plant and animal pathogens, microbes that are beneficial to higher organisms, organisms that synthesize useful products, or play critical roles in the Earth's ecosystems and biogeochemical cycles. Many are of enormous present and future economic and/or agricultural value. Although genome sequence information in itself is only an ordered list of chemical bases, it provides the foundation for understanding how the organism functions and lives, and how the organism interacts with the environment and with other organisms. This knowledge can be used to detect unknown micro-organisms and understand their properties, e.g. why an organism may be pathogenic or beneficial to a plant or animal, or how its properties might be exploited in metabolic engineering, bioremediation, development of sensitive and specific diagnostic tools, improved treatments and preventatives, or more effective vaccines. Knowledge of the genomes of microorganisms is expected to be one of the prime driving forces for research in

the life sciences, including agriculture, biotechnology, forestry, food safety, and environmental engineering over the next quarter century.

This program is designed primarily to encourage competitive research grant applications in support of high-throughput sequencing of genomes of microorganisms (including viruses, bacteria, archaea, fungi, and protozoa) that are of fundamental biological interest, as well as those that are important to the productivity and sustainability of agriculture and forestry, and to the safety and quality of the nation's food supply. This integrated program will provide whole genome sequence data and mapping information on microorganisms that will fill key gaps in our knowledge of microbial diversity, of microbes that play roles in diverse ecosystems, and/or microbes that have an impact on agriculture. Sequencing proposals also should incorporate an education, training, or outreach component within the scope of the project to facilitate education of students and the public, as well as to facilitate application of this knowledge to agricultural challenges where applicable. Education or outreach components may focus on genomics technology or on computational biology and informatics.

It is recognized that complete genome coverage is the most desirable end-point for whole genome sequencing. However, agriculturally and environmentally relevant microbes encompass a sizable number of microorganisms relevant to animals, plants, and natural resources. To date, very few agricultural or environmental microbes have been, or are in the process of being, sequenced. Consequently, agriculture and environmental biology lag behind other fields, such as human health and energy production, with respect to microbial genomics. For this reason, it may be appropriate in some cases to attempt lower level (e.g., 3X–5X) coverage to provide data on multiple organisms. Choice of complete sequence or "rough draft" coverage is left up to the principal investigators and should be justified in the proposal. As a longer term goal, full genome coverage of several (or all) of these organisms may be desirable. Therefore, investigators proposing partial coverage should explain how the strains or isolates used, high quality genomic DNA from the organism, and an appropriate set of verified clones developed during the course of the sequencing project, will remain accessible to the scientific community for at least five years. Either a cost-recovery system or use of a commercial repository is permissible,

provided that the plan is outlined in the proposal, with an appropriate budget.

Microbial genome projects will be chosen with respect to each agency's mission (fundamental biological interest—NSF, agricultural relevance—USDA). Specific examples of organisms of interest to USDA include high priority pathogens of: animals (e.g. *Actinobacillus pleuropneumoniae*, *Edwardsiella ictaluri*, *Eimeria* spp., *Haemophilus somnus*); plants (e.g., *Erwinia* spp., *Clavibacter* spp., *Streptomyces scabies*, *Aspergillus* spp.); or; food-borne origin (e.g., *Yersinia enterocolitica*). Choices might also include beneficial/useful organisms such as ones from soil (e.g., *Rhizobium* spp., *Methylobacterium extorquens*, *Pseudomonas* spp.) or rumen (e.g., *Ruminococcus flavefaciens*, *Prevotella bryantii*). Microorganisms relevant to aquaculture species and horses are included, along with microorganisms of animals raised for food and fiber. By the time this solicitation is released, it is possible that the sequencing of one or more of these example organisms may already be funded for the public domain; mention here does not guarantee a high priority for sequencing.

Clearly, a large number of microorganisms fit these broad criteria and it is not the intention of USDA or NSF to dictate which organisms should be sequenced. Rather, the choice of organism(s) will be left to the applicant(s) who must justify selection(s) on the basis of biological interest and/or agricultural importance. Organism strains whose sequences are already being targeted by others should be avoided, unless this information will not be in the public domain. If one strain in a particular species is already being sequenced, the applicant should provide strong justification as to why sequencing of another strain should be undertaken. To help assess the current sequencing status for particular microorganisms, applicants are strongly encouraged to visit websites that summarize completed and on-going sequencing projects. For example, the following URL sites may prove useful:

<http://www.tigr.org/tdb/mdb/mdb.html>;
http://www.doe.gov/production/ober/EPER/mig_cont.html;
<http://www.niaid.nih.gov/dmid/genomes/default.htm>;
<http://www.sanger.ac.uk/Projects/>;
<http://www.genome.wisc.edu>;
<http://www.genome.wustl.edu/gsc/index.shtml>;

Phylogenetic affiliation and evolutionary significance may also be addressed when these are considered relevant to the choice of organism. Also,

it should be noted that some organisms may be of profound biological or agricultural importance but not easily cultured or subjected to genetic analysis. Such organisms may be strong candidates for sequencing.

Protozoa, fungi and some bacteria have relatively large genomes, not easily completed under the support of a single grant. Requests for partial funding of a genome are allowable as long as future plans for completing the work are outlined. In these instances, investigators are encouraged to seek partners, in either the form of consortia or support from other sources, so that the sequence can be completed in a reasonable time-frame. As long as the goals and limits of the individual projects are clearly addressed, such cooperative projects are encouraged, as are international collaborations. The expected outcome of the project will be a high quality sequence, much or all of it contiguous, with annotation of open reading frames and deposited in a publicly accessible data base. Additionally, for eukaryotic organisms, applications may propose large-scale expressed sequence tag (EST) projects. For these larger genomes, applicants should indicate the status of efforts supported by other funding agencies and how these efforts would be coordinated with a USDA or NSF funded activity.

Investigators are to provide detailed information on the organism(s) chosen, the method of library preparation and all other pertinent methodological information. Mechanisms to assess validity and accuracy of the data must be described in the proposal. All cloning and sequencing technologies/strategies, particularly ones that are novel, should be described. In judging the merits of a proposal, the speed, level of accuracy, and cost effectiveness of the proposed work will be important issues and considered as one of the evaluation criteria under this program. The number of bases to be sequenced per unit time and an estimate of the dollars required to produce a specific amount of base sequence must be calculated. The latter value should include the costs of generating clones, assembly of sequence and annotation.

Part III—Preparation of a Proposal

A. Program Application Materials

Both participating agencies have agreed to use the USDA guidelines for proposal format (see below) and application kit. Other material may be required at the time of funding to facilitate the implementation of the award. Proposals that are funded by

NSF may be subject to additional submission and reporting requirements.

Program application materials are available at the CSREES website (www.reeusda.gov/microbialgenomics). If you do not have access to the CSREES web page or have trouble downloading material, you may contact the Proposal Services Unit, Office of Extramural Programs, USDA/CSREES at (202) 401-5048. When calling the Proposal Services Unit, please indicate that you are requesting forms for the Microbial Genome Sequencing Project. These materials may also be requested via Internet by sending a message with your name, mailing address (not e-mail) and phone number to psb@reeusda.gov. State that you want a copy of the Program Description and application materials (orange book) for the Fiscal Year 2001 Microbial Genome Sequencing Project.

B. Content of Proposals

1. General

The proposal should follow these guidelines, enabling reviewers to more easily evaluate the merits of each proposal in a systematic, consistent fashion:

(a) The proposal should be prepared on only one side of the page using standard size (8½" x 11") white paper, one inch margins, typed or word processed using no type smaller than 12 point font, and single or double spaced. Use an easily readable font face (e.g., Geneva, Helvetica, Times Roman).

(b) Each page of the proposal, including the Project Summary, budget pages, required forms, and any appendices, should be numbered sequentially.

(c) The proposal should be stapled in the upper left-hand corner. Do not bind. An original and 14 copies (15 total) must be submitted in one package, along with 10 copies of the "Project Summary" as a separate attachment.

(d) If applicable, proposals should include original illustrations (photographs, color prints, etc.) in all copies of the proposal to prevent loss of meaning through poor quality reproduction.

2. Application for Funding Cover Page (Form CSREES-661)

Each copy of each grant proposal must contain an "Application for Funding", Form CSREES-661. One copy of the application, preferably the original, must contain the pen-and-ink signature(s) of the proposing principal investigator(s)/project director(s)(PI/PD) and the authorized organizational representative who possesses the

necessary authority to commit the organization's time and other relevant resources to the project. Any proposed PI/PD or co-PI/PD whose signature does not appear on Form CSREES-661 will not be listed on any resulting grant award. Complete both signature blocks located at the bottom of the "Application for Funding" form.

Form CSREES-661 serves as a source document for the CSREES grant database; it is therefore important that it be completed accurately. The following items are highlighted as having a high potential for errors or misinterpretations: (a) Title of Project (Block 6). The title of the project must be brief (80-character maximum), yet represent the major thrust of the effort being proposed. Project titles are read by a variety of nonscientific people; therefore, highly technical words or phraseology should be avoided where possible. In addition, introductory phrases such as "investigation of," "research on," "education for," or "outreach that" should not be used.

(b) Program to Which You Are Applying (Block 7) "Fiscal Year 2001 Microbial Genome Sequencing Project."

(c) Type of Award Request (Block 13). Check the block for "new" or "resubmission."

(d) Principal Investigator(s)/Project Director(s) (PI/PD) (Block 15). The designation of excessive numbers of co-PI/PD's creates problems during final review and award processing. Listing multiple co-PI/PD's, beyond those required for genuine collaboration, is therefore discouraged. Note that providing a Social Security Number is voluntary, but is an integral part of the CSREES information system and will assist in the processing of the proposal.

(e) Type of Performing Organization (Block 18). A check should be placed in the box beside the type of organization which actually will carry out the effort. For example, if the proposal is being submitted by an 1862 Land-Grant Institution but the work will be performed in a department, laboratory, or other organizational unit of an agricultural experiment station, box "03" should be checked. If portions of the effort are to be performed in several departments, check the box that applies to the individual listed as PI/PD #1 in Block 15.a.

(f) Other Possible Sponsors (Block 22). List the names or acronyms of all other public or private sponsors including other agencies within USDA and other programs funded by CSREES to whom your application has been or might be sent. In the event you decide to send your application to another organization or agency at a later date, you must

inform the identified CSREES Program Director as soon as practicable. Submitting your proposal to other potential sponsors will not prejudice its review by CSREES; however, duplicate support for the same project will not be provided. Complete the "Application for Funding," Form CSREES-661, in its entirety.

(g) One copy of the "Application for Funding" form must contain the signatures (in ink) of the PI/PD(s) and authorized organizational representative for the applicant organization.

3. Table of Contents

For ease in locating information, each proposal must contain a detailed table of contents just after the proposal cover page. The Table of Contents should include page numbers for each component of the proposal. Pagination should begin immediately following the Project Summary (see next section).

4. Project Summary

The proposal must contain a Project Summary of 250 words or less on a separate page which should be placed immediately after the Table of Contents and should not be numbered. The names and institutions of all PI/PDs and co-PI/PDs should be listed on this form, in addition to the title of the project. The summary is not intended for the general reader; consequently, it may contain technical language comprehensible by persons in disciplines relating to the food and agricultural sciences. The project summary should be a self-contained, specific description of the activity to be undertaken and should focus on: Overall project goal(s) and supporting objectives; plans to accomplish project goal(s); and relevance of the project to the goals of the Microbial Sequencing Project.

5. Response to Previous Review

This requirement only applies to "Resubmitted Proposals" as described under Part 1.E, "Types of Proposals." Resubmitted proposals are proposals that have previously been submitted to IFAFS but not funded. For these proposals, the principal investigator(s)/project director(s) must respond to the previous panel summary on no more than one page, titled, "Response to Previous Review," which is to be placed directly after the Project Summary. If desired, additional comments and responses to the previous panel summary may be included in the text of the Project Description, subject to the page limitation.

6. Project Description

A description of the project must not exceed 15 pages inclusive of tables, diagrams and other visual material, but excluding citations. The project description should be numbered and single or double-spaced with text on one side of the page using a 12 point (10 cpi) type font size and one-inch margins. The following points must be addressed in this section.

a. *Relevance and significance of microorganism(s) and other proposed activities.* Include a justification for the microorganism(s) on the basis of biological interest and/or agricultural importance. Include a description of the significance of education/training or outreach activities and their value in improving agriculture and/or fundamental biology. Clearly describe the potential impact of the project.

b. *Sequencing Strategies.* 1. DNA substrates to be sequenced. Investigators are to provide detailed information on the DNA chosen, the method of library preparation and all other pertinent methodological information. If only a portion of a microbial genome will be sequenced (e.g. fungi; protozoa), the strategies proposed must be scalable and applicable to efforts to sequence the entire genome.

2. Sequence quality and quantity. This section should include the level of accuracy to be sought and how that will be measured, the number of bases to be sequenced per unit time, and a discussion of the finishing process and how that will be defined. Where applicable, plans to fill sequence gaps and coordinate sequencing efforts must be discussed in detail.

3. Genome sequencing technologies and strategies. Technologies/strategies that will be used should be described as well as plans for incorporating new developments and/or improvements in sequencing protocols, strategies and technologies as they become available.

4. Costs of production sequencing in relation to the product proposed. The cost-effectiveness of the sequences generated will be a very important issue. An estimate of the dollars required to produce a specific number of bases (which should include the costs of generating clones, assembly and annotation) should be given. If investigators are proposing a strategy that will yield less than the complete genome sequence, they must provide an overall vision of how this strategy will contribute to the cost-effective completion of the entire genome.

c. *Project Management.* 1. Plans for establishing a linkage to a larger research community in order to ensure

a close collaboration between the sequencing project and the ultimate user community of the sequence information.

2. Where applicable, plans for establishing coordination with other existing or planned projects to sequence the microbe(s), both nationally and internationally.

3. Ways to assess progress of the project, including establishing milestones and measuring progress toward them, and/or the use of an advisory committee when applicable.

4. Available facilities and equipment including a statement of institutional commitment for the successful completion of the project.

d. *Information Management.* 1. Data management plan should address issues, including: (1) Mechanisms to assess validity and accuracy of data obtained; (2) mechanisms for annotation of data and release of both raw and finished data into public databases—creative, cost-effective strategies for annotating sequences are encouraged; and (3) community access to data mechanisms of data distribution and interactions with other community databases.

2. Data release policies including how rapidly sequence data will be publicly released after production. Timely release is strongly encouraged in recognition of the benefits to the broader research community. Release should be accompanied by appropriate information on the reliability of the data (e.g., level of coverage and extent of assembly, extent of contamination with vector and other sequences, statistical measures of accuracy). At a minimum, it is anticipated that sequence data will be released within one month after 3X coverage of the genome (or chromosome for eukaryotic organisms) is achieved. The released data should be provided as assemblies of equal to, or greater than, one kilobase contigs. Subsequent releases of assembled sequences should be provided at least on a monthly basis.

3. A statement signed by an authorized institutional official should be included which clearly describes the institutional policy for sharing information materials resulting from this work with other researchers of the community of scientists.

7. References in Project Description

All references cited should be complete, including titles and co-authors, and should conform to an accepted journal format.

8. Appendices to Project Description

Appendices to the Project Description are allowed if they are directly germane to the proposed project and are limited

to a total of two of the following: reprints (papers that have been published in peer reviewed journals) and preprints (manuscripts in press for a peer reviewed journal; these must be accompanied by a letter of acceptance from the publishing journal).

9. Facilities and Equipment

All facilities and major items of equipment that are available for use or assignment to the proposed research project during the requested period of support should be described. In addition, items of nonexpendable equipment necessary to conduct and successfully complete the proposed project and for which support is requested under this program should be listed in the budget narrative with the amount and justification for each item.

10. Collaborative and/or Subcontractual Arrangements

If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. In addition, evidence should be provided that the collaborators involved have agreed to render these services. If the need for consultant services is anticipated, the proposal narrative should provide a justification for the use of such services, a statement of work to be performed, and a resume or curriculum vitae for each consultant. For purposes of proposal development, informal day-to-day contacts between key project personnel and outside experts are not considered to be collaborative arrangements and thus do not need to be detailed.

All anticipated subcontractual arrangements also should be explained and justified in this section. A proposed statement of work and a budget for each arrangement involving the transfer of substantive programmatic work or the providing of financial assistance to a third party must be provided. Agreements between departments or other units of your own institution and minor arrangements with entities outside of your institution (e.g., requests for outside laboratory analyses) are excluded from this requirement.

If you expect to enter into subcontractual arrangements, please note that the provisions contained in 7 CFR Part 3019, USDA Uniform Administrative Requirements for Grant and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, and the general provisions contained in 7 CFR Part 3015.205, USDA Uniform Federal Assistance Regulations, flow down to

subrecipients. In addition, required clauses from Sections 40–48 (“Procurement Standards”) and Appendix A (“Contract Provisions”) of 7 CFR Part 3019 should be included in final contractual documents, and it is necessary for the subawardee to make a certification relating to debarment/suspension.

11. Key Personnel

All senior personnel who are expected to be involved in the effort should be clearly identified. For each person the following should be included, as applicable:

(a) The roles and responsibilities of each PI/PPD should be clearly described;

(b) An estimate of the time commitment involved for each PI/PPD, including current and pending projects; and

(c) Vitae of each PI/PPD, senior associate, and other professional personnel. This section should include vitae of all key persons who are expected to work on the project, whether or not CSREES funds are sought for their support. The vitae should be limited to two (2) pages each in length, excluding publications listings. A chronological list of all publications in refereed journals during the past four (4) years, including those in press, must be provided for each professional project member for whom a curriculum vitae is provided. Also list only those non-refereed publications that have relevance to the proposed project. All authors should be listed in the same order as they appear on each paper cited, along with the title and complete reference as these usually appear in journals.

12. Conflict-of-Interest-List

A Conflict-of-Interest List must be provided for all individuals involved in the project (identified as key personnel). Each list should be on a separate page and include alphabetically the full names of the individuals in the following categories: (a) All collaborators on projects within the past four years, including pending and planned collaborations; (b) all co-authors on publications within the past four years, including pending publications and submissions; (c) all persons in your field with whom you have had a consulting or financial arrangement within the past four years who stand to gain by seeing the project funded; and (d) all thesis or postdoctoral advisees/advisors within the past four years (some may wish to call these life-time conflicts). This form is necessary to assist program staff in excluding from proposal review those

individuals who have conflicts-of-interest with the personnel in the grant proposal. The Program Director must be informed of any additional conflicts-of-interest that arise after the proposal is submitted.

13. Budget

Prepare the budget, Form CSREES–55, in accordance with instructions provided. Budgets of up to a total of \$2 million over four years may be requested. A budget form is required for each year of requested support. In addition, a cumulative budget is required detailing the requested total support for the overall project period. The budget form may be reproduced as needed by applicants. Funds may be requested under any of the categories listed on the form, provided that the item or service for which support is requested is allowable under the authorizing legislation, the applicable Federal cost principles, and these program guidelines, and can be justified as necessary for the successful conduct of the proposed project. Applicants must also include a Budget Narrative to justify their budgets (see paragraph 12 below.)

The following guidelines should be used in developing your proposal budget(s):

a. *Salaries and Wages.* Salaries and wages are allowable charges and may be requested for personnel who will be working on the project in proportion to the time such personnel will devote to the project. If salary funds are requested, the number of Senior and Other Personnel and the number of CSREES/NSF-Funded Work Months must be shown in the spaces provided. Grant funds may not be used to augment the total salary or rate of salary of project personnel or to reimburse them for time in addition to a regular full-time salary covering the same general period of employment. Salary funds requested must be consistent with the normal policies of the institution.

b. *Fringe Benefits.* Funds may be requested for fringe benefit costs if the usual accounting practices of your organization provide that organizational contributions to employee benefits (social security, retirement, etc.) be treated as direct costs. Fringe benefit costs may be included only for those personnel whose salaries are charged as a direct cost to the project.

c. *Nonexpendable Equipment.* Nonexpendable equipment means tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year and an acquisition cost of \$5,000 (or lower,

depending on institutional policy) or more per unit. As such, items of necessary instrumentation or other nonexpendable equipment should be listed individually by description and estimated cost in the Budget Narrative. This applies to revised budgets as well, as the equipment item(s) and amount(s) may change.

d. Materials and Supplies. The types of expendable materials, supplies, and data which are required to carry out the project should be indicated in general terms with estimated costs in the Budget Narrative.

e. Travel. The type and extent of travel and its relationship to project objectives should be described briefly and justified. If travel is proposed, the destination, the specific purpose of the travel, a brief itinerary, inclusive dates of travel, and estimated cost must be provided for each trip. Airfare allowances normally will not exceed round-trip jet economy air accommodations. U.S. flag carriers must be used when available. See 7 CFR 3015.205(b)(4) for further guidance. Please note that grantees are expected to present their project plan and progress at the International Plant, Animal and Microbial Genome Meetings held annually in San Diego, California and should allocate an appropriate amount in this budget category to fund a trip. Additional information on this meeting will be made available if an award is made.

f. Publication Costs/Page Charges. Include anticipated costs associated with publications in a journal (preparing and publishing results including page charges, necessary illustrations, and the cost of a reasonable number of coverless reprints) and audio-visual materials that will be produced. Photocopying and printing brochure, etc., should be shown in Section I., "All Other Direct Costs" of Form CSREES-55.

g. Computer (ADPE) Costs. Reimbursement for the costs of using specialized facilities (such as a university- or department-controlled computer mainframe or data processing center) may be requested if such services are required for completion of the work.

h. All Other Direct Costs. Anticipated direct project charges not included in other budget categories must be itemized with estimated costs and justified in the Budget Narrative. This also applies to revised budgets, as the item(s) and dollar amount(s) may change. Examples may include space rental at remote locations, subcontractual costs, and charges for consulting services, telephone,

facsimile, shipping costs, and fees necessary for laboratory analyses. You are encouraged to consult the "Instructions for Completing Form CSREES-55, Budget," of the Application Kit for detailed guidance relating to this budget category. Form AD-1048 must be completed by each subcontractor or consultant and retained by the grantee.

i. Indirect Costs. When submitting a proposal, institutions should use their current Federal negotiated rate for indirect costs. Please note that indirect costs for all competitive proposals funded by CSREES are capped at 19% of total Federal funds provided under the award by section 1462 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310). Therefore, awards made by CSREES for the Microbial Genome Sequencing Project are subject to 19 percent indirect costs limitation. (This limitation also applies to the recovery of indirect costs by any subawardee or subcontractor, and should be reflected in the subrecipient budget.) A method for calculating the maximum allowable amount of indirect costs for an USDA award is by multiplying total direct costs by 0.23456. To accommodate the differences in allowable indirect costs between USDA and NSF, the applicant may be required at the time of award to submit a separate budget with indirect cost rates appropriate to each agency.

14. Budget Narrative

A budget narrative should be included which discusses how the budget specifically supports the proposed project activities. Except for indirect costs for which support is requested, the budget narrative should explain how each budget item (such as salaries and wages for professional and technical staff, student workers, travel, equipment, etc.) is essential to achieving project objectives. Funds may be requested under any of the categories listed on the budget form, provided that the item or service for which support is sought is allowable under the enabling legislation and the applicable Federal cost principles.

15. Matching Funds

If an applicant concludes that matching funds are not required as specified in Part I., a justification should be included in the Budget Narrative. CSREES will consider this justification when ascertaining final matching requirements. CSREES retain the right to make final determinations regarding matching requirements. For those grants requiring matching funds as specified in

Part I., proposals should include written verification of commitments of matching support (including both cash and in-kind contributions) from third parties. Written verification means:

(a) For any third party cash contributions, a separate pledge agreement for each donation, signed by the authorized organizational representatives of the donor organization and the applicant organization, which must include: (1) The name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) the dollar amount of the cash donation; and (5) a statement that the donor will pay the cash contribution during the grant period; and

(b) For any third party in-kind contributions, a separate pledge agreement for each contribution, signed by the authorized organizational representatives of the donor organization and the applicant organization, which must include: (1) The name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) a good faith estimate of the current fair market value of the third party in-kind contribution; and (5) a statement that the donor will make the contribution during the grant period.

The sources and amount of all matching support from outside the applicant institution should be summarized on a separate page and placed in the proposal immediately following the Budget Narrative. All pledge agreements must be placed in the proposal immediately following the summary of matching support.

The value of applicant contributions to the project shall be established in accordance with applicable cost principles. Applicants should refer to OMB Circulars A-21, Cost Principles for Educational Institutions, A-87, Cost Principles for State, Local, and Tribal Governments, A-122, Cost Principles for Non-Profit Organizations, and for for-profit organizations, the cost principles in the Federal Acquisition Regulation at 48 CFR 31.2 (see 7 CFR 3015.194).

16. Current and Pending Support (Form CSREES-663)

All proposals must contain Form CSREES-663 listing this proposal and any other current public or private research support (including in-house support) to which key personnel identified in the proposal have committed portions of their time, whether or not salary support for the

person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to other possible sponsors, including other USDA programs or agencies. Concurrent submission of identical or similar proposals to other possible sponsors will not prejudice proposal review or evaluation by the participating agency for this purpose. However, a proposal that duplicates or overlaps substantially with a proposal already reviewed and funded (or that will be funded) by another organization or agency will not be funded under this program. Note that the project being proposed should be included in the pending section of the form.

17. Assurance Statements (Form CSREES-662)

A number of situations encountered in the conduct of projects require special assurances, supporting documentation, etc., before funding can be approved for the project. In addition to any other situation that may exist with regard to a particular project, it is expected that some applications submitted in response to these guidelines will involve the following:

a. *Recombinant DNA or RNA Research.* As stated in 7 CFR 3015.205 (b)(3), all key personnel identified in the proposal and all endorsing officials of the proposing organization are required to comply with the guidelines established by the National Institutes of Health entitled, "Guidelines for Research Involving Recombinant DNA Molecules," as revised. If your project proposes to use recombinant DNA or RNA techniques, you must so indicate by checking the "yes" box in Block 19 of Form CSREES-661 (the Cover Page) and by completing Section A of Form CSREES-662. For applicable proposals recommended for funding, Institutional Biosafety Committee approval is required before CSREES or NSF funds will be released.

b. *Animal Care*—Responsibility for the humane care and treatment of live vertebrate animals used in any grant project supported with funds provided by CSREES or NSF rests with the performing organization. Where a project involves the use of living vertebrate animals for experimental purposes, all key project personnel identified in a proposal and all endorsing officials of the proposing organization are required to comply with the applicable provisions of the Animal Welfare Act of 1966, as amended (7 U.S.C. 2131 *et seq.*) and the regulations promulgated thereunder by

the Secretary in 9 CFR parts 1, 2, 3, and 4 pertaining to the care, handling, and treatment of these animals. If your project will involve these animals, you should check "yes" on block 20 of CSREES-661 and complete Section B of Form CSREES-662. In the event a project involving the use of live vertebrate animals results in a grant award, funds will be released only after the Institutional Animal Care and Use Committee has approved the project.

c. *Protection of Human Subjects*—Responsibility for safeguarding the rights and welfare of human subjects used in any grant project supported with funds provided by CSREES or NSF rests with the performing organization. Guidance on this issue is contained in the National Research Act, Pub. L. No. 93-348, as amended, and implementing regulations promulgated by the Department under 7 CFR part 1c. If you propose to use human subjects for experimental purposes in your project, you should check the "yes" box in Block 21 of Form CSREES-661 and complete Section C of Form CSREES-662. In the event a project involving human subjects results in a grant award, funds will be released only after the appropriate Institutional Review Board has approved the project.

18. Certifications

By signing the Application for Funding cover page (Form CSREES-661), applicants are providing the required certifications set forth in 7 CFR part 3017, as amended, regarding Debarment and Suspension and Drug-Free Workplace; and 7 CFR part 3018 regarding Lobbying. Submission of the individual forms found in the application kit is not required (Forms AD-1047, -1049, -1050, and the Certification Regarding Lobbying). For additional information, refer to the certification at the bottom of Form CSREES-661.

Form AD-1048 must be completed by a subcontractor or consultant and retained by the awardee.

Questions specifically related to the completion of the above certifications should be directed to the CSREES Office of Extramural Programs, Grants Management Branch at (202) 401-5050.

19. National Environmental Policy Act Exclusions Form (Form CSREES-1234)

As outlined in 7 CFR part 3407 (the Cooperative State Research, Education, and Extension Service regulations implementation of the National Environmental Policy Act of 1969 (NEPA), and 45 CFR part 640 (the NSF regulations regarding compliance with NEPA) the environmental data for any

proposed project is to be provided to CSREES and NASA so that the Federal agency may determine whether any further action is needed. In some cases, however, the preparation of environmental data may not be required. Certain categories of actions are excluded from the requirements of NEPA.

In order for CSREES to determine whether any further action is needed with respect to NEPA (e.g., preparation of an environmental assessment (EA) or environmental impact statement (EIS)), pertinent information regarding the possible environmental impacts of a proposed project is necessary; therefore, Form CSREES-1234, "NEPA Exclusions Form," must be included in the proposal indicating whether the applicant is of the opinion that the project falls within a categorical exclusion and the reasons therefore. If it is the applicant's opinion that the proposed project falls within the categorical exclusions, the specific exclusion must be identified. Form CSREES-1234 and the supporting documentation should be included as the last page of this proposal.

Even though a project may fall within the categorical exclusions, CSREES may determine that an EA or EIS is necessary for an activity, if substantial controversy on the environmental grounds exists or if other extraordinary conditions or circumstances are present which may cause such activity to have a significant environmental effect.

C. Application Submission Information

1. When To Submit (Deadline Date)

"Letters of Intent" must be received by COB on April 13, 2001 (5:00 p.m. EST). Proposals must be received by COB on May 4, 2001 (5:00 p.m. EST). Proposals received after this date will not be considered for funding.

2. What to Submit

For full proposals, an original and 14 copies must be submitted. Also submit 10 copies of the proposal's Project Summary. All copies of the proposals and the Project Summaries must be submitted in one package.

3. Where To Submit

Applicants should e-mail the "Letter of Intent" to Dr. Ann Lichens-Park at apark@reeusda.gov or send the letter by mail to the Microbial Sequencing Project; Mail Stop 2241; Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture, 1400 Independence Avenue, SW., Washington, DC 20250-2241; or fax the letter at (202) 401-6488.

Applicants are strongly encouraged to submit completed proposals via overnight mail or delivery service to ensure timely receipt by the USDA. The address for hand-delivered proposals or proposals submitted using an express mail or overnight courier service is: Microbial Sequencing Project, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, Room 1307, Waterfront Centre, 800 9th Street, SW., Washington, DC 20024.

Proposals sent via the U.S. Postal Service must be sent to the following address: Microbial Sequencing Project, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, STOP 2241, 1400 Independence Avenue, SW., Washington, DC 20250-2241.

D. Acknowledgment of Proposals

The receipt of proposals will be acknowledged by e-mail. Therefore, applicants are encouraged to provide e-mail addresses, where designated, on the Form CSREES-661. If the applicant's e-mail address is not indicated, CSREES will acknowledge receipt of the proposal by letter.

Once the proposal has been assigned an identification number, please cite that number on all future correspondence. If the applicant does not receive an acknowledgment within 60 days of the submission deadline, please contact the Program Director.

Part IV—Review Process

A. General

All proposals, will be reviewed together by a panel in the pertinent program area. Prior to technical examination, a preliminary review will be made for responsiveness to the program area. Proposals that do not fall within the guidelines of this Program will be eliminated from Program competition and will be returned to the applicant.

Individual written comments and in-depth discussions will be provided by a peer review panel prior to recommending applications for funding. Peer review panel members will be selected based upon their training and experience in relevant scientific, extension, or education fields taking into account the following factors: (a) The level of formal scientific, technical education, and extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education or extension activities; (b) the need to

include as peer reviewers experts from various areas of specialization within relevant scientific, education, and extension fields; (c) the need to include as reviewers other experts (producers, range or resource managers/operators, consumers, etc.) who can assess relevance of the proposals to targeted audiences and to program needs; (d) the need to include as peer reviewers experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, private profit and non-profit organizations), and geographic locations; (e) the need to maintain a balanced composition of peer review groups with regard to minority and female representation and an equitable age distribution; and (f) the need to include members that can judge the effective usefulness to producers and the general public of each proposal.

B. Evaluation Factors

The following evaluation factors will be used in reviewing applications:

1. Relevance of the Microorganism(s) To Be Sequenced and the Scientific Merit of the Project

This criterion addresses the scientific and/or practical importance of the microorganism chosen for sequencing, the conceptual adequacy of the sequencing approach including suitability and feasibility of methodology, clarity and delineation of objectives, demonstration of feasibility through preliminary data, novelty, uniqueness and originality.

2. The Broader Impact of the Activity on the Biological Sciences and Agriculture, Including Education, Training, and Outreach

This criterion addresses the potential of proposed activity to contribute to better understanding or improvement of the quality and effectiveness of the Nation's scientific research, education, and human resources capabilities. An important issue is the likelihood of national impact and widespread, appropriate dissemination and use of results in strengthening the biological sciences and agriculture of this nation.

Priority also will be given to projects that integrate education and outreach and those that establish close collaboration among multiple investigators, institutions, and end users.

3. Performance Competence

This criterion addresses the technical merit of the proposed approach, the capabilities of the proposed personnel, including those of the Principal

Investigator and other senior staff as discussed above, the adequacy of the resources available or proposed, and the likelihood that this project will lead to a successful, timely, cost-effective completion of the microbial genome sequence(s).

4. Project Management

This criterion addresses the overall quality of the technical and managerial aspects of the proposal, including plans for the release of the data and the sharing of the information and resources resulting from the project to the scientific community as noted below, and for management oversight and long-range planning.

5. Scientific Collaboration and Information Sharing

Sequencing of the genome of an organism is a community activity. As such, a close collaboration among the scientists and organizations involved in sequencing activities and effective dissemination to the potential users of the information are important components of this criterion.

6. Appropriateness of the Proposed Budget

Part V—Award Administration

The U.S. Microbial Sequencing Project will be administered and managed as an interagency program involving both participating agencies throughout the entire process from the development of the program announcement to the review, selection and monitoring of awards. The interagency program managers will coordinate program administration activities such as review of periodic reporting of project evaluations and annual investigator team meetings.

USDA and NSF will fund awards separately. The amount of each award will be determined jointly by USDA and NSF and their representatives after the panel review process has been completed. Other material may be required prior to funding to facilitate the implementation of the award from participating agencies.

A. General

Within the limit of funds available for such purpose, the awarding official shall make awards to those responsible, eligible applicants whose proposals are judged most meritorious in the announced program area by procedures set forth in this request for proposals. The date specified as the effective date of the award shall be no later than September 30, of the Federal fiscal year in which the project is approved for support and funds are appropriated for

such purpose, unless otherwise permitted by law. It should be noted that the project need not be initiated on the award effective date, but as soon thereafter as practicable so that project goals may be attained within the funded project period. All funds awarded under this request for proposals shall be expended solely for the purpose for which the funds are awarded in accordance with the approved application and budget, the terms and conditions of the award, the applicable Federal cost principles, and the applicable participating agency assistance regulations.

B. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one-time basis as part of the responsibility determination prior to the award if such information has not been provided previously under this or another program for which the sponsoring agency is responsible. Copies of forms recommended for use in fulfilling the requirements contained in this section will be provided by the awarding agency as part of the pre-award process.

C. Award Document

The USDA award document shall include at a minimum the following:

1. Legal name and address of performing organization or institution to whom the funding agency has awarded an award under this program;
2. Title of Project;
3. Name(s) and address(es) of principal investigator(s) chosen to direct and control approved activities;
4. Award identification number assigned by the funding agency;
5. Project period, specifying the amount of time the funding agency intends to support the project without requiring recompetition for funds;
6. Total award amount approved by the funding agency during the project period;
7. Legal authority(ies) under which the award is made;
8. Approved budget plan for categorizing project funds to accomplish the stated purpose of the award; and
9. Other information or provisions deemed necessary by the funding agency to carry out its respective awarding activities or to accomplish the purpose of a particular award.

An NSF award consists of: (1) The award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on

which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposed referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1) or Federal Demonstration Partnership (FDP) Terms and Conditions and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Condition (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

D. Notice of Award

The notice of award, in the form of a letter, will be prepared and will provide pertinent instructions or information to the awardee that is not included in the award document.

E. Funding Mechanisms

The two mechanisms by which new, renewal, and supplemental grants may be awarded are as follows:

- (1) Standard grant. This is a funding mechanism whereby the Federal Government agrees to support a specified level of effort for a predetermined time period without the announced intention of providing additional support at a future date.
- (2) Continuation grant. This is a funding mechanism whereby the Federal Government agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support will be in the best interests of the Federal government and the public. This kind of mechanism normally will be awarded for an initial one-year period, and any subsequent continuation project grants will be awarded in one-year increments. The award of a continuation project grant to fund an initial or succeeding budget period does not constitute an obligation to fund any subsequent budget period. Unless prescribed otherwise by CSREES or NSF, a grantee must submit a separate application for continued support for each subsequent fiscal year. Requests for such continued support must be submitted in duplicate at least three months prior to the expiration date of the budget period currently

being funded. Decisions regarding continued support and the actual funding levels of such support in future years usually will be made administratively after consideration of such factors as the grantee's progress and management practices and the availability of funds. Since initial peer reviews are based upon the full term and scope of the original application, additional evaluations of this type generally are not required prior to successive years' support. However, in unusual cases (e.g., when the nature of the project or key personnel change or when the amount of future support requested substantially exceeds the grant application originally reviewed and approved), additional reviews may be required prior to approving continued funding.

F. Use of Funds; Changes

Unless otherwise stipulated in the terms and conditions of the award, the following provisions apply:

1. Delegation of Fiscal Responsibility: The awardee may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of funds.

2. Changes in Project Plans:

a. The permissible changes by the awardee, principal investigator(s), or other key project personnel in the approved research project award shall be limited to changes in methodology, techniques, or other aspects of the project to expedite achievement of the project's approved goals. If the awardee and/or the principal investigator(s) are uncertain as to whether a change complies with this provision, the question must be referred to the USDA Authorized Departmental Officer (ADO) or NSF Grants Officer for a final determination.

b. Changes in approved goals, or objectives, shall be requested by the awardee and approved in writing by the ADO or NSF Grants Officer prior to effecting such changes. In no event shall requests for such changes be approved which are outside the scope of the original approved project.

c. Changes in approved project leadership or the replacement or reassignment of other key project personnel shall be requested by the awardee and approved in writing by the awarding official prior to effecting such changes.

d. Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, shall be requested by the awardee and approved

in writing by the ADO or NSF Grants Officer prior to effecting such transfers.

e. Changes in Project Period: The project period may be extended by the awarding agency without additional financial support, for such additional period(s) as the ADO or NSF Grants Officer determines may be necessary to complete or fulfill the purposes of an approved project. Any extension of time shall be conditioned upon prior request by the awardee and approval in writing by the ADO or NSF Grants Officer, unless prescribed otherwise in the terms and conditions of an award.

f. Changes in Approved Budget: Changes in an approved budget must be requested by the awardee and approved in writing by the ADO or NSF Grants Officer prior to instituting such changes if the revision will involve transfers or expenditures of amounts requiring prior approval as set forth in the applicable Federal costs principles, Agency regulations, or in the award document.

G. Applicable Regulations

Several other Federal statutes and regulations apply to proposals considered for review and to projects awarded under this program. For CSREES awards, applicable regulations are those cited in part V. E. of the IFAFS RFP published in the **Federal Register** on February 23, 2001, 66 FR 11507]. For NSF awards, the applicable regulations are cited in the section entitled REGULATION, GUIDELINES, AND LITERATURE in the Catalog of Federal Domestic Assistance under 46.074: Biological Sciences.

For specific information on policies and procedures pertaining to the award and administration of NSF grants and cooperative agreements, refer to the NSF Grant Policy Manual which can be found at

<http://www.nsf.gov/bfa/cpo/policy/grants.htm>.

H. Additional Information

In the view of some, raw genomic sequences, in the absence of additional demonstrated biological information, lack demonstrated utility and therefore are inappropriate for patent filing. Patent applications on large blocks of primary genomic sequence could stifle future research and the development of future inventions of useful products. However, according to the Bayh-Dole Act, the grantees have the right to elect to retain title to subject inventions and are free to choose to apply for patents should additional biological experiments reveal convincing evidence of utility. CSREES and NSF grantees are reminded that the grantee institutions is required to disclose each subject invention to the Federal government within two months after the inventor discloses it in writing to grantee institution personnel responsible for patent matters. Where appropriate, a plan for apportionment of rights to intellectual property with international partners should be provided.

Investigators are expected to explain clearly how the ownership of information and research materials and their public release will be handled. Rapid and unrestricted sharing of genomic sequence data is essential for advancing research on agriculturally and environmentally important species. Early release of unfinished sequence has already proven useful in accelerating the pace of experimental discovery in non-agricultural fields, such as human health, energy production and bioremediation. At the same time, CSREES and NSF recognize that it also is necessary to allow investigators time to verify the accuracy of their data and to accomplish the goals proposed in their application, which often includes the assembly and annotation of the sequence data.

I. Confidential Aspects of Proposals and Awards

When a proposal results in an award, it becomes a part of the record of the Agency's transactions, available to the public upon specific request. Information that the CSREES or NSF Director determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked as such and sent in a separate statement, two copies of which should accompany the proposal. The original copy of a proposal that does not result in an award will be retained by the Agency for a period of one year. Other copies will be destroyed. Proposals that do not receive an award will be released to others only with the consent of the applicant or to the extent required by law. If such a request is made, the applicant will be consulted prior to release of the proposal. A proposal may be withdrawn at any time prior to the final selection action thereon.

Potential applicants are strongly encouraged to contact project officers and discuss their plans. Inquiries regarding the announcement can be directed to any one of the agency representatives identified at the beginning of this request for proposals.

Done at Washington, D.C., on this 20th day of March 2001.

Colien Hefferan,

Administrator, Cooperative State Research, Education, and Extension Service

Mary E. Clutter,

Assistant Director for Biological Sciences, National Science Foundation.

[FR Doc. 01-7265 Filed 3-22-01; 8:45 am]

BILLING CODE 3410-22-P