

COOPERATIVE AGREEMENT NO.

ECD-8907039

Between

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

and

Montana State University
Bozeman, MT 59717

EFFECTIVE DATE: April 15, 1990
EXPIRATION DATE: April 14, 1995

This Agreement is entered into between the United States of America, hereinafter called the Government, represented by the National Science Foundation, hereinafter called the Foundation or NSF, and Montana State University hereinafter called the Awardee.

NSF Program Official: Tapan Mukherjee, Phone (202) 357-9707
NSF Grants and Contracts Official: Dionie Henry, Phone (202) 357-9626.

Please have an authorized official of your institution execute this Agreement and return three (3) signed copies within ten (10) working days to the Grants and Contracts Official noted above, Division of Grants and Contracts.

THE UNITED STATES OF AMERICA

By *George J. Lynch*
(Signature)

George J. Lynch
(Name)

Grants & Contracts Officer
(Title)

APR 24 1990
(Date)

ACCEPTANCE

John W. Jutila
(Signature)

John W. Jutila
(Name)

Vice President for Research
(Title)

May 16, 1990

NATIONAL SCIENCE FOUNDATION

This is a copy of the NSF agreement related to statement of work and reporting requirements.

MONTANA STATE UNIVERSITY

Enclosures as Stated

E. This Agreement consists of the Statement of Purpose, the Agreement Terms, the Special Conditions (below), and the enclosed Cooperative Agreement General Conditions, NSF CA-1 (10/88) which incorporate the Grant General Conditions, GC-1 (10/88). In the event of any conflict between the Special Conditions and the General Conditions, the Special Conditions shall take precedence.

III. SPECIAL CONDITIONS

A. In accordance with the Awardee's responsibilities under this Agreement, the following Special Conditions apply:

1. AWARDEE STATEMENT OF WORK

a. Montana State University shall be responsible for the management, staffing, operation, and self-assessment of the Engineering Research Center for Interfacial Microbial Process Engineering. This Center will pursue the following objectives:

(1) Provide opportunities to perform high quality long-term research needed to develop fundamental knowledge to meet the entrepreneurial needs of the U.S. industry dealing with the technological problems and opportunities in interfacial microbial processes, an area critical to U.S. competitiveness in world markets.

(2) Develop and update a strategic plan in cooperation with industrial and other advisors to focus the research and other activities of the Center on clearly delineated advances in knowledge, technology and education needed to improve U.S. industrial competitiveness.

(3) Involve a cross-disciplinary team of individuals from various backgrounds, possessing different engineering or scientific skills, assuring that the focus and goals of the Center contribute more than would occur with individually funded research projects.

(4) Include a significant education component involving both graduate and undergraduate students in the research activities of the Center.

(5) Emphasize the systems aspects of engineering and help educate and train students in synthesizing, integrating, and managing engineering systems to better prepare them for engineering practice.

(6) Provide shared experimental capabilities appropriate to the Center's goals through provision of instruments, skilled technicians, or other maintenance and operating requirements.

(7) Include in the Center the participation of engineers and scientists from industrial organizations, state and local agencies, and/or government laboratories in order to focus the activities of the Center on current and projected user needs.

(8) Develop methods for the timely and successful transfer of knowledge to industrial and other users.

(9) Codify new knowledge generated at the Center and further continuing education of practicing engineers.

(10) Develop and implement an effective Center management system.

(11) Assure that the Center is well integrated into the university system.

(12) Strive to involve a significant number of the Awardee's graduate engineering students at both the master's and doctoral levels. The Center's program should also have a substantial impact on undergraduate engineering students. A minimum faculty commitment of three full-time equivalent (FTE) positions is a reasonable assumption.

(13) The Center is expected to strive to involve minorities underrepresented in engineering and women in research, management, and other significant positions in the Center.

(14) It is expected that the University will provide substantial commitments in the form of financial and other support, integration of the ERC with the participating departments and programs, and tenure practices which support involvement in the ERC.

b. A uniform data base of quantitative indicators of activity and progress will be maintained by the Center. Details of the data base will be determined by NSF and provided to the Center after coordination with all Center's Directors.

2. FUNDING AND FUNDING SCHEDULE

a. It is the intention of the Foundation to provide up to \$7.4 million to support this Center for the first five years commencing April 15, 1990. Funds in the amount of \$1,726,130 are hereby provided to support the Center for the period April 15, 1990 to April 14, 1991 as described in your proposal dated February 10, 1989 as modified by revised budget dated March 12, 1990.

b. The level of continued NSF support will be negotiated with the Awardee annually and will depend upon an annual site review of progress in February, the industrial support level, and the availability of funds.

c. During the third year of the Center's operation, 1993, the Foundation will conduct a major site evaluation/review in March to determine whether NSF will continue to support full Center operations, or will provide decreased funding to phase out NSF support of the Center over a two year period. In the event NSF determines to continue full Center operations, a new level of support will be negotiated to provide for an additional five-year support period effective at the beginning of the fourth year (1993) of the Center's operation. The Center will again be evaluated in the same manner during the sixth year. If funding is continued again, the Center will operate another five years, completing an eleven-year life cycle.

Each major site evaluation/review will result in either continued support or phase down support.

Under no circumstances will the Center receive more than eleven years of NSF support without reentering the competition for prospective centers.

In the event NSF determines to phase out Center support, the Awardee may still submit new proposals for any NSF-announced ERC competitions.

e. Nothing in the above terms supersedes the Foundation's rights under Article 40, "Suspension or Termination for Convenience," of the Cooperative Agreement General Conditions, NSF CA-1 (10/88).

3. AWARDEE REPORTING REQUIREMENTS

Delete Article 16, "Progress Reports," of the Grant General Conditions, GC-1 (10/88) in its entirety and substitute in lieu thereof.

a. An initial detailed strategic plan, as indicated in paragraph, III.A.1.a (2) of the Awardee Statement of Work, and base-line data of indicators of Center activity and progress are due June 30, 1990.

b. An annual report, due on February 1, will serve in part as the Awardee's request for continuing support, and will contain the following information:

(1) Annual progress report, prepared as directed, by a format specified by NSF by September 1, will contain a description of: updated strategic plan, research accomplishments and plans; industry/user collaboration; educational achievements; major facility and equipment acquisitions; patents or other innovations resulting from the Center's activities; outreach to other universities and technology transfer to industry; role of the ERC in the university; management and planning system; and industrial and other funding.

(2) Personnel and financial report containing the following information: long-range aggregate budget expectations, and priorities to the end of the award period; budget explanations by major research thrust areas and major function for the reporting year and the next year; a statement of funds estimated to remain unobligated at the end of the period for which NSF currently is providing support; a proposed budget for the ensuing year in accordance with NSF Form 1030; and current information about other support of key personnel.

b. Renewal Proposal. In lieu of a third and sixth year annual report, the Awardee will submit a renewal proposal to NSF requesting support for another five year period beginning at the end of the third and sixth year of this Agreement. The renewal proposal is due at NSF by February 1, 1993 and 1996. NSF will specify the format of this proposal by September 1.

c. Annual report on data base of indicators of activity and progress due July 31 each year under instructions from NSF.

d. Annual report of actual expenditures by function for the period April 15 to April 14 due August 1 of each year.

e. Verbal Reports and Liaison -- the Awardee will meet as necessary with the Division of Engineering Centers or other staff designated by NSF to review operations of the Center and to exchange views, ideas, and information concerning the Center.

f. Special Reports -- The Awardee shall also submit such special reports as may be reasonably requested by the Foundation.

g. Final Report -- A final report, in lieu of an annual report, will be due within 3 months of the expiration date of this Agreement.