

Cooperative Support Agreement EEC-0813570
CFDA No. 47.041

ISU Project # 420-72-24

**SUBCONTRACT AGREEMENT BETWEEN IOWA STATE UNIVERSITY AND
THE BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM**

This Agreement is entered into by and between IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY, an agency of the State of Iowa ("ISU") with a mailing address of 1138 Pearson Hall, Ames IA 50011-2207, and THE BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM ("WISCONSIN"), with a mailing address of 21 N. Park Street, Suite 6401, Madison, WI 53715-1218, acting as a Subcontractor.

BACKGROUND

WHEREAS, the NATIONAL SCIENCE FOUNDATION ("SPONSOR") has awarded to ISU, "Cooperative Support Agreement No. EEC-0813570, NSF Engineering Research Center for Biorenewable Chemicals (CBIRC)" ("PRIME AGREEMENT") attached hereto as Exhibit A, deemed incorporated into and made an integral part of this Agreement; and

WHEREAS, ISU has joined together with committed subrecipient entities including William Marsh Rice University (RICE), University of California, Irvine (IRVINE), The University of New Mexico (NEW MEXICO), The University of Michigan (MICHIGAN), THE SALK INSTITUTE FOR BIOLOGICAL SCIENCES, WISCONSIN to establish the CENTER FOR BIORENEWABLE CHEMICALS ("CBIRC"), an NSF Engineering Research Center ("NSF ERC"), at ISU for the purpose of developing a platform to produce commodity and specialty chemicals from renewable carbon; and

WHEREAS, RICE, IRVINE, NEW MEXICO, VIRGINIA and WISCONSIN shall also be designated as CBIRC "Core Partner Universities" and as "COOPERATORS" in the CBIRC, and SALK and MICHIGAN are designated as CBIRC "AFFILIATES;" and

WHEREAS, CBIRC has an INDUSTRIAL ADVISORY BOARD (IAB) composed of one (1) representative from each CBIRC member. The function of the IAB shall be to provide advice to the CBIRC consistent with the aims of the NSF ERC program, including guidance on strategic direction, research activities, education programs and technology transfer efforts; and

WHEREAS, the SPONSOR has expressed an intent to support the ISU CBIRC for a period of 60 months, contingent on the availability of funds and the scientific progress of the project. ISU will provide first year funding as specified in Article IV below, and pending satisfactory performance and the availability of SPONSOR funding, additional funding will be provided to WISCONSIN in subsequent years. Continued funding will be provided by amendment to this Agreement issued by ISU, and

WHEREAS, WISCONSIN has proposed a research program in collaboration with ISU as detailed in the project scope of work and detailed budget attached hereto as Exhibit B, deemed incorporated into and made an integral part of this Agreement; and

WHEREAS, ISU desires to have WISCONSIN conduct that research program in connection with the PRIME AGREEMENT.

NOW THEREFORE, the parties agree as follows:

Article I. Scope of Work.

WISCONSIN agrees to provide all the necessary qualified personnel, equipment, materials, and facilities to perform the work described in its project scope of work and detailed budget.

WISCONSIN agrees to participate in research thrust meetings, center-wide meetings, annual site visits, and annual working meetings as required by the ISU Principal Investigator, and the SPONSOR. Within thirty (30) days of the execution of this Agreement, ISU will provide WISCONSIN's PI with a meeting schedule covering this Agreement's period of performance.

ISU may if necessary, or if mandated by the SPONSOR, make reasonable change(s) to WISCONSIN's scope of work. Should such change(s) result in change(s) to the price under Article IV, the parties agree to negotiate such change(s) in good faith.

Article II. Period of Performance.

The period of performance of this Agreement shall begin on September 1, 2008 and shall not extend beyond August 31, 2009, unless agreed to in writing by both parties. No costs shall be incurred subsequent to the termination date. This Agreement may be continued for additional years. However, the extension of this Agreement beyond the date specified above is subject to continuation by the PRIME AGREEMENT.

A. Pre-Award Costs.

1. ISU may approve pre-award costs incurred within ninety days (90) of the effective date of the PRIME AGREEMENT as specified in Article 4, NSF Cooperative Agreement Financial & Administrative Terms and Conditions (FATC) (June 1, 2007) (Exhibit A)
2. All requests for approval of pre-award costs shall be made in writing to ISU and directed to the Iowa State University Office of Sponsored Programs Administration, 1138 Pearson Hall, Ames IA 50011-2207 or sent via e-mail to ospa-awards@iastate.edu.

B. Performance Delays.

Whenever WISCONSIN knows or reasonably should know that any actual or potential condition due to circumstances beyond its control is delaying or threatens to delay the timely performance of this Agreement, WISCONSIN shall immediately give ISU written notice to that effect.

Article III. Key Personnel.

BRENT SHANKS is ISU's Project Director for the CBIRC is BRENT SHANKS who shall be responsible for the overall direction of the CBIRC work. WISCONSIN's Principal Investigator for the work described in Exhibit B shall be JAMES A. DUMESIC, who is considered essential to the work being performed under this Agreement. Substitutions for JAMES A. DUMESIC or substantial reductions in any of her efforts shall not be made without the prior written approval of ISU. Any such change to WISCONSIN's Principal Investigator will require a modification to this Agreement, which must be signed by authorized signatories for both parties. If the parties cannot agree on a successor, either party may terminate this Agreement in accordance with the terms of Article XIX herein.

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Article IV. Costs, Invoicing and Payment.

As compensation, ISU agrees to reimburse WISCONSIN for performance of work under Article I above, in an amount not to exceed US\$142,810.00, and as specified in Exhibit B. This is the maximum amount that WISCONSIN is authorized to expend or have committed for this project as of September 1, 2008, for the period September 1, 2008 to August 31, 2009.

ISU shall not be obligated to pay WISCONSIN for any costs incurred in excess of this obligated amount.

All costs incurred in the performance of this Agreement are subject to the limitations of Article V of this Agreement and the PRIME AGREEMENT.

Invoices from WISCONSIN shall be submitted at least quarterly, but not more often than monthly, in triplicate, and sent to the ISU Sponsored Programs Accounting Office, 3609 Administrative Services Building, Iowa State University, Ames, Iowa 50011-3609. Costs on each invoice shall be identified by project number and submitted in Wisconsin's format. Wisconsin's invoice shall include a certification statement and cumulative budget column. Wisconsin shall retain for audit by ISU any necessary documentation supporting invoiced amounts, and shall furnish such retained documentation upon the request of ISU.

Payment will be made upon receipt of proper invoices with the final invoice being due no later than sixty (60) days after termination of the Agreement. ISU may refuse to reimburse expenditures for which WISCONSIN submits a voucher more than sixty (60) days after the termination date.

Article V. Allowable Costs and Administrative Requirements.

Allowable costs shall be determined by the PRIME AGREEMENT and in accordance with cost principles generally accepted by, or required to be used by, like organizations in effect at the effective date of this Agreement and the terms and conditions of this Agreement, and as reflected in the governing regulations contained in, as applicable:

- 2 CFR Part 220, *Cost Principles for Educational Institutions* (OMB Circular A-21);
- 2 CFR Part 225, *Cost Principles for State & Local Governments and Indian Tribal Governments* (OMB Circular A-87);
- 2 CFR Part 230, *Cost Principles for Non-Profit Institutions* (OMB Circular A-122);
- Federal Acquisition Regulation 31.2 (48 CFR § 31.2) for commercial firms and those non-profit organizations specifically exempted from the provisions of OMB Circular A-122; and
- 45 CFR 74, Appendix E, *Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals.*

WISCONSIN's normal policies governing salaries, wages and fringe benefits shall apply to all its employees paid from this Agreement providing there is no conflict with the PRIME AGREEMENT. WISCONSIN's published policy on travel and travel reimbursement shall apply to all costs for travel and transportation charged to this Agreement. When policies conflict with the PRIME AGREEMENT, the more restrictive rules shall apply.

Article VI. Facilities and Administrative Costs.

WISCONSIN's estimated facilities and administrative costs are included in the amount stated in Article IV, above and shall not exceed WISCONSIN's federally approved rate. No payment shall be made under this Agreement until WISCONSIN forwards a copy of its most recent federally approved Facilities and Administrative (Indirect) Cost Rate Agreement to the ISU Sponsored Programs Accounting Office, 3609 Administrative Services Building, Iowa State University, Ames, Iowa 50011-3609. In no event shall ISU be obligated to pay WISCONSIN for costs resulting from an increase in facilities and administrative costs if such costs will exceed the funds committed by ISU.

Article VII. Revision of Approved Budget.

WISCONSIN is authorized to rebudget funds which do not require prior approval in accordance with the terms and conditions of the PRIME AGREEMENT. WISCONSIN must follow regulations under OMB circulars OMB A -110 and A - 21, when rebudgeting.

WISCONSIN must obtain prior approval of the ISU Office of Sponsored Programs Administration before making any of the following changes to the approved budget:

- Changes that require the prior approval of the SPONSOR in the PRIME AGREEMENT with ISU;
- Purchase of equipment that is not specified in the approved budget; and
- Domestic or foreign travel where none was included in the approved budget.

All requests requiring prior approval shall be co-signed by an authorized official of WISCONSIN and forwarded to the authorized official of ISU.

Article VIII. Audits and Inspection.

A. Audits. WISCONSIN shall maintain books, records, documents, and other evidence, accounting procedures, and practices, sufficient to reflect properly all direct and facilities and administration costs of whatever nature WISCONSIN claims to have incurred for the performance of this Agreement. The foregoing constitutes "records" for the purposes of this Article.

1. WISCONSIN shall preserve and make available the records defined in Section A above, until the expiration of three (3) years after the end of the budget period which they cover or until audit is completed and all resulting questions are resolved, whichever occurs first.
2. WISCONSIN will forward to Manager, ISU Sponsored Programs Accounting, one copy of its most recent OMB Circular A-133 audit and annual updates thereof. In the alternative, WISCONSIN may provide a URL [internet] citation to allow for electronic access to its most recent A-133 audit. For-profit entities that are not subject to OMB Circular A-133 must submit a copy of their most recent independent audit to Manager, ISU Sponsored Program Accounting.

WISCONSIN's most recent A-133 audit is located at:

<http://www.legis.wisconsin.gov/lab/reports/08-5Full.pdf>

URL Citation

3. Effective with the fiscal year ending after December 31, 2003, non-Federal entities that expend US\$500,000.00 or more in Federal funds (from all sources including pass-through subawards) in the organization fiscal year (12-month turnaround reporting period) shall have a single organization-wide audit conducted in accordance with the provisions of OMB Circular A-133.
4. Effective with the fiscal year ending after December 31, 2003, non-Federal entities that expend less than US\$500,000.00 a year in federal awards are exempt from federal audit requirements for that year. Records must be available for review or audit by appropriate officials including the federal agency, pass-through entity, and General Accounting Office.
5. In the event that WISCONSIN did not have an A-133 audit in the year immediately preceding this Agreement, please complete the following:
 - Did WISCONSIN in last Fiscal Year expend \$500,000 or more in federal awards from all sources?

Yes No.
 - WISCONSIN may be required to undergo pre-award audit and monitoring during the term of this Agreement, and/or post-award audit as deemed necessary by ISU.
6. Any costs paid to WISCONSIN by ISU that are subsequently found to be disallowed under audit shall be refunded to ISU.

B. Records Inspection.

WISCONSIN's records shall be subject at all reasonable times to inspection and audit by ISU or its designated representatives, and/or the cognizant federal audit agency.

Article IX. Equipment, Accountability, and Disposition.

For purposes of this Agreement, "Scientific Equipment" is defined as an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of \$5,000 or greater unless the PRIME AGREEMENT provides for a more restrictive definition. If equipment was not listed in the SPONSOR approved budget, a rebudgeting request shall be sent to the ISU Office of Sponsored Programs Administration for approval prior to purchase.

"General Purpose Equipment" means equipment, the use of which is not limited only to research, medical, scientific or other technical activities. Unless otherwise provided, general purpose equipment is not an allowable cost unless the equipment is primarily or exclusively used in the actual conduct of the research supported by this Agreement.

Title to any approved equipment purchased or fabricated under this Agreement by WISCONSIN will remain with WISCONSIN at the termination of this Agreement unless prohibited by the SPONSOR, or some other circumstance requires equipment to be returned to ISU.

Article X. Inspection.

Designated representatives of ISU and the SPONSOR or any of their authorized representatives shall have the right during ordinary business hours to visit the offices and research facilities of WISCONSIN, and visit and/or inspect the sites at which the work is being performed pursuant to this

Agreement, and review the progress of the work. ISU shall give WISCONSIN reasonable notice prior to conducting any such inspection. All reasonable facilities, including access to relevant data, test results, and computation when used or generated under this Agreement, shall be made available when requested in such a manner as to not unduly delay the progress of the work.

When applicable, such visits shall be subject to compliance with applicable security regulations of the U.S. Government. WISCONSIN shall provide assistance for the safety and convenience of ISU and/or SPONSOR representatives during their visits, including making personnel engaged in the performance of the work available for consultation at all reasonable times.

Article XI. Reports.

- A. WISCONSIN shall prepare, sign and submit the following reports in the form and content required by ISU. ISU will provide the report format requirements to WISCONSIN within thirty (30) days of the execution of this Agreement.

REPORTS	DUE DATE
<p>Semi-Annual Status Reports</p> <p>The Semi-Annual Project Status Reports will collect information from WISCONSIN about the status of WISCONSIN's work. This report will collect information that includes, but is not limited to:</p> <ul style="list-style-type: none"> ▪ Progress toward meeting performance measures; and any other information required by ISU and the SPONSOR. 	<p>February 15</p> <p>September 30</p>
<p>Data Tables</p> <p>NSF maintains a database, ERCWeb, to collect and report quantitative and qualitative data for all of the ERCs. Each center is required to enter data into the database annually as instructed in the "Guidelines for Preparing ERC Annual Reports and Renewal Proposals" and "Guidelines for ERCWeb Data Entry."</p> <ul style="list-style-type: none"> ▪ On or before mid-January of every year, ISU will provide WISCONSIN with details, data collection requirements, and procedures for submission such that ISU can enter CBIRC data into the ERCWeb in a timely fashion. WISCONSIN shall submit required data, in the specified format, no later than February 15. 	<p>February 15</p>
<p>Annual Report</p> <p>WISCONSIN shall submit information necessary for ISU's preparation of the <i>ERC Annual Report</i>. The specific information submitted shall include, but is not limited to, the following:</p> <ul style="list-style-type: none"> ▪ WISCONSIN's progress and plans in furtherance of the ERC vision with supporting data developed from the data submitted to the ERC Program's data base of indicators of progress and impact, information on revenues and expenditures, and 	<p>February 15</p>

<p>proposed budgets. The annual report should also include plans, quantitative information on performance and the ERC's impact on diversity.</p> <ul style="list-style-type: none"> ▪ On or before mid-January of every year, ISU will provide WISCONSIN with details, data collection requirements, and procedures for submission such that ISU can prepare and submit the Annual Report (due to the NSF on April 7). 	
<p>End of Project Report</p> <p>The <i>End of Project Report</i> will collect information about WISCONSIN's completed Project. This report will collect information that includes, but is not limited to:</p> <ul style="list-style-type: none"> ▪ Final performance measures; and any other information required by ISU. 	<p>Within 30 days of Project Completion Date</p>

B. Additional Reports as Requested by ISU.

ISU reserves the right to require more frequent submission of any of the above reports, or to request additional reports if, in the opinion of ISU, more frequent submissions and/or additional reports would help improve WISCONSIN's project performance, or if necessary in order to meet requests from the SPONSOR.

Article XII. Background Intellectual Property.

"Background Intellectual Property" means property and the legal right therein of either or both parties' Intellectual Property developed prior to or independently of this Agreement including inventions, patent applications, patents, copyrights, trademarks, mask works, trade secrets and any information embodying proprietary data such as technical data and computer software.

To the extent they have the right to do so, both parties agree to negotiate rights to the Background Intellectual Property necessary to complete the objectives of the project under this Agreement. Both parties shall retain all rights to their respective Background Intellectual Property provided for this purpose. Neither party shall assume any rights in the other party's Background Intellectual Property provided for the project other than the right to use said Background Intellectual Property to achieve the objectives of this project.

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Article XIII. Patent Rights

All matters regarding rights, title, and interest in and to inventions or other intellectual property rights conceived or reduced to practice in the course of performance of this Agreement shall be subject to the regulations issued by the sponsoring agency as such regulations appear in the PRIME AGREEMENT between SPONSOR and ISU. WISCONSIN shall ensure that this policy applies to all persons who perform any part of the work under this Agreement who may reasonably be expected to make inventions hereunder.

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A. Definitions.

1. INVENTION means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the USC, to any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. § 2321 et seq.).
2. SUBJECT INVENTION means any invention of WISCONSIN conceived or first actually reduced to practice in the performance of work under this award, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d)) must also occur during the period of performance.
3. PRACTICAL APPLICATION means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or government regulations available to the public on reasonable terms.
4. MADE when used in relation to any invention means the conception or first actual reduction to practice of such invention.
5. NON-PROFIT ORGANIZATION means a domestic university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. § 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 U.S.C. § 501(a)) or any domestic non-profit scientific or educational organization qualified under a State non-profit organization statute.

B. Allocation of Principal Rights.

WISCONSIN may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this Patent Rights clause and 35 U.S.C. Part 203. With respect to any subject invention in which WISCONSIN retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world.

C. Invention Disclosure, Election of Title and Filing of Patent Applications.

1. WISCONSIN will disclose each subject invention to NSF within two months after the inventor discloses it in writing to WISCONSIN personnel responsible for the administration of patent matters. The disclosure to NSF shall be in the form of a written report and shall identify the award under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding of the nature, purpose, operation, and, to the extent known, the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to NSF, WISCONSIN will promptly notify NSF of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by WISCONSIN. All communications required by this clause shall be submitted to the SPONSOR via the iEdison Invention Management System maintained by the

National Institutes of Health, unless prior permission for another form of submission has been obtained from the NSF Patent Assistant

2. WISCONSIN will elect in writing whether or not to retain title to any such invention by notifying NSF within two years of disclosure to NSF. However, in any case where publication, on sale, or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by NSF to a date that is no more than 60 days prior to the end of the statutory period.
3. WISCONSIN will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. WISCONSIN will file patent applications in additional countries or international patent offices within either ten (10) months of the corresponding initial patent application, or six months from the date when permission is awarded by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.
4. Requests for extension of the time for disclosure to NSF, election, and filing under subparagraphs 1, 2., and 3. may, at the discretion of NSF, be awarded.

D. Conditions When the Government May Obtain Title.

WISCONSIN will convey to NSF, upon written request, title to any subject invention:

1. If WISCONSIN fails to disclose or elect the subject invention within the times specified in paragraph C. above, or elects not to retain title; provided that NSF may only request title within 60 days after learning of the failure of WISCONSIN to disclose or elect within the specified times;
2. In those countries in which WISCONSIN fails to file patent applications within the times specified in paragraph c. above, but prior to its receipt of the written request of NSF, WISCONSIN shall continue to retain title in that country; or
3. In any country in which WISCONSIN decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in a reexamination or opposition proceeding on, a patent on a subject invention.

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E. Minimum Rights to WISCONSIN.

1. WISCONSIN will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if WISCONSIN fails to disclose the subject invention within the times specified in paragraph c. above. WISCONSIN's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which WISCONSIN is a party and includes the right to award sublicenses of the same scope to the extent WISCONSIN was legally obligated to do so at the time the award was made. The license is transferable only with the approval of NSF except when transferred to the successor of that part of WISCONSIN's business to which the invention pertains.

2. WISCONSIN's domestic license may be revoked or modified by NSF to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404. This license will not be revoked in that field of use or the geographical areas in which WISCONSIN has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of NSF to the extent WISCONSIN, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
3. Before revocation or modification of the license, NSF will furnish WISCONSIN a written notice of its intention to revoke or modify the license, and WISCONSIN will be allowed thirty days (or such other time as may be authorized by NSF for good cause shown by WISCONSIN after the notice to show cause why the license should not be revoked or modified. WISCONSIN has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

F. Action to Protect Government's Interest.

1. WISCONSIN agrees to execute or to have executed and promptly deliver to NSF all instruments necessary to: (i) establish or confirm the rights the Government has throughout the world in those subject inventions for which WISCONSIN retains title; and (ii) convey title to NSF when requested under paragraph d. above, and to enable the Government to obtain patent protection throughout the world in that subject invention.
2. WISCONSIN agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by WISCONSIN each subject invention made under this award in order that WISCONSIN can comply with the disclosure provisions of paragraph c. above, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph c.1. above. WISCONSIN shall instruct such employees through the employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.
3. WISCONSIN will notify NSF of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.
4. WISCONSIN agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement:
"This invention was made with Government support under (identify the award) awarded by the National Science Foundation. The Government has certain rights in this invention."

5. WISCONSIN or its representative will complete, execute and forward to NSF a confirmation of a License to the U.S. Government and the page of a United States patent application that contains the Federal support clause within two (2) months of filing any domestic or foreign patent application.

G. Subcontracts.

WISCONSIN will include this Patent Rights clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for WISCONSIN in this Patent Rights clause, and WISCONSIN will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors' subject inventions.

H. Reporting on Utilization of Subject Inventions.

WISCONSIN agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by WISCONSIN or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by WISCONSIN and such other data and information as NSF may reasonably specify. WISCONSIN also agrees to provide additional reports in connection with any march-in proceeding undertaken by NSF in accordance with paragraph j. of this Patent Rights clause. As required by 35 U.S.C. § 202(c)(5), NSF agrees it will not disclose such information to persons outside the Government without the permission of WISCONSIN.

I. Preference for United States Industry.

Notwithstanding any other provision of this Patent Rights clause, WISCONSIN agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the U.S. However, in individual cases, the requirement for such an agreement may be waived by NSF upon a showing by WISCONSIN or its assignee that reasonable but unsuccessful efforts have been made to award licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

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J. March-in Rights.

WISCONSIN agrees that with respect to any subject invention in which it has acquired title, NSF has the right in accordance with procedures at 37 CFR § 401.6 and NSF regulations at 45 CFR § 650.13 to require WISCONSIN, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if WISCONSIN, assignee, or exclusive licensee refuses such a request, NSF has the right to grant such a license itself if NSF determines that:

1. Such action is necessary because WISCONSIN or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

2. Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by WISCONSIN, assignee, or their licensees;
3. Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by WISCONSIN, assignee, or licensees; or
4. Such action is necessary because the agreement required by paragraph I. of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

K. Special Provisions for Awards with Non-profit Organizations.

If WISCONSIN is a nonprofit organization, it agrees that:

1. Rights to a subject invention in the U.S. may not be assigned without the approval of NSF, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as WISCONSIN;
2. WISCONSIN will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when NSF deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. § 202(e) and 37 CFR § 401.10;
3. The balance of any royalties or income earned by WISCONSIN with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and
4. It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give preference to a small business firm if WISCONSIN determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that WISCONSIN is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of WISCONSIN. However, WISCONSIN agrees that the Secretary of Commerce may review WISCONSIN's licensing program and decisions regarding small business applicants, and WISCONSIN will negotiate changes to its licensing policies, procedures or practices with the Secretary when the Secretary's review discloses that WISCONSIN could take reasonable steps to implement more effectively the requirements of this paragraph k.4.

L. Communications.

All communications required by this Patents Rights clause must be submitted through the iEdison Invention Information Management System maintained by the National Institutes of Health unless prior permission for another form of submission is obtained from the Patent Assistant at patents@nsf.gov or at Office of the General Counsel, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230.

Article XIV. Publication and Licensing

A. Coordination.

WISCONSIN shall make available to and closely coordinate with ISU's Principal Investigator any publication related to the results of the work conducted under this Agreement. Such coordination shall include, but not be limited to, coordination of the review by Members as contemplated in the Membership Agreement. In no event shall the delay be greater than ninety (90) days from the date made available.

B. Acknowledgment of Support.

Any publication (including World Wide Web sites) by WISCONSIN of any material resulting from work under this Agreement shall include an acknowledgement of SPONSOR support in the following terms:

"This material is based upon work supported by the National Science Foundation under Cooperative Support Agreement No. EEC-0813570."

1. Oral acknowledgement of SPONSOR support shall be made during all news media interviews, including popular media such as radio, television and news magazines.

C. Disclaimer.

Every publication (including World Wide Web sites) by WISCONSIN resulting from work under this Agreement, except scientific articles or papers appearing in scientific, technical or professional journals, shall contain the following disclaimer:

"Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation or of Iowa State University."

D. Copies for ISU.

WISCONSIN is responsible for assuring that ISU be provided access, either electronically or in paper form, one (1) copy of every publication of material resulting from work under this Agreement, clearly labeled with the PRIME AGREEMENT number and other appropriate identifying information, immediately after publication.

- E. Notwithstanding anything to the contrary in this Agreement, ISU and WISCONSIN shall extend the licenses and options to Members as set forth in the Membership Agreement.

Article XV. Confidentiality.

ISU and WISCONSIN desire to:

- Keep certain information involving Subject Inventions as "Confidential" for a limited period of time in order to protect patentable subject matter from premature disclosure and thereby potentially facilitate commercial exploitation of CBIIRC results; and

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- Maintain in confidence all "Confidential Information" of a party disclosed by that party to the other in connection with this project. Confidential Information includes all information disclosed in writing or reduced to writing within thirty (30) days of oral disclosure and labeled as "Confidential" except to the extent that:
 1. INFORMATION at the time it was disclosed by either party was in the general public knowledge;
 2. INFORMATION after being disclosed by either party is published or otherwise disseminated to the public other than through RECIPIENT's unauthorized disclosures;
 3. INFORMATION can be shown to have been in RECIPIENT's possession by documentation existing at the time the INFORMATION was disclosed by either party;
 4. INFORMATION can be shown by documentation to have been received in good faith by RECIPIENT independently from a third party; and
 5. INFORMATION can be shown by documentation to have been independently developed by RECIPIENT.

Neither party will use, disclose or grant use of such Confidential Information except as required to perform under this Agreement. Each party will use at least the same standard of care as it uses to protect its own Confidential Information to insure that students, interns, employees, agents and consultants do not disclose or make any unauthorized use of such Confidential Information. Any student, intern, employee, agent or consultant of the receiving party must be notified of the restrictions on the use of the disclosing party's Confidential Information. Each party will promptly notify the other upon discovery of any unauthorized use or disclosure of the Confidential Information. The obligations of the University under this paragraph shall survive and continue for five (5) years after this Agreement ends.

Article XVI. Publicity.

Neither party shall use the name of the other party, nor the name of any member of the project staff in any publicity or advertisement, whether with respect to this Agreement, without the prior written approval of an authorized representative of the other party, or unless required by law.

Article XVII. Copyright.

A. Subject Writings.

Subject writing means any material that:

- Is or may be copyrightable under Title 17 of the U.S.C.; and
- Is produced by WISCONSIN or its employees in the performance of work under this award.
- Subject writings include such items as reports, books, journal articles, software, databases, sound recordings, videotapes, and videodiscs.

B. Copyright Ownership and Federal Government License.

WISCONSIN may own copyrights in all subject writings in accordance with the PRIME AGREEMENT. Copyright in all subject writing shall be subject to a nonexclusive, nontransferable, irrevocable, royalty-free license to the Federal Government to exercise or have exercised for or

on behalf of the United States throughout the world all the exclusive rights provided by copyright. WISCONSIN grants to ISU a non-exclusive, nontransferable, irrevocable, royalty-free license to all subject writings delivered or developed under this Agreement, to the extent required to meet ISU's obligations under its PRIME AGREEMENT with SPONSOR. All subcontracts or other arrangements entered into by WISCONSIN for the purpose of developing or procuring subject writing shall specifically reference and reserve the right of the Federal Government and ISU with respect to subject writings.

Article XVIII. Subcontracts.

It is understood that WISCONSIN shall not subcontract any of the research effort required under Article I above, without prior written approval of ISU. Any subcontracts which are a part of WISCONSIN approved budget at the time of execution of this Agreement are hereby approved without further action on the part of WISCONSIN or ISU.

Article XIX. Termination/Cancellation.

- A. This Agreement may be terminated by either party at any time upon issuing of written notice thirty (30) days prior to termination or at any time upon mutual agreement of the parties.
- B. In the event the PRIME AGREEMENT is terminated or funding thereunder ceases, ISU may, at its option, immediately suspend or terminate, in whole or in part, this Agreement by sending written notice of such suspension or termination to WISCONSIN.
- C. Upon receipt of such notice of termination pursuant to paragraph (A) or (B) above, WISCONSIN shall make no further commitments under this Agreement, and shall take all reasonable actions to cancel outstanding obligations. All costs, not exceeding the total set forth in Article IV of this Agreement, associated with the termination, including facilities and administrative costs and costs incurred prior to the effective termination date, and which have not been reimbursed to WISCONSIN, and that are otherwise allowable, shall be reimbursed to WISCONSIN. WISCONSIN shall submit to ISU, within thirty (30) days after the effective termination date, a final report of all costs incurred and all funds received. Upon payment of such costs WISCONSIN shall deliver to ISU all information and items which, if this Agreement had been completed, would have been required to be furnished to ISU, including, but not limited to, partially completed plans, drawings, data, documents, surveys, maps, reports and models.
- D. ISU, in addition to whatever legal remedy it may have in law or in equity, may terminate this Agreement upon written notice for WISCONSIN's material failure to comply with the terms or provisions of this Agreement. WISCONSIN shall promptly deliver to ISU all data, reports, summaries and such other information and material as may have been prepared for and/or accumulated by WISCONSIN in the performance of this Agreement, whether completed or in process. ISU will provide WISCONSIN a written notice of termination fifteen (15) days in advance of proposed termination. WISCONSIN shall attempt to cure material failure in the time preceding termination. If WISCONSIN fails to cure material failure within this time, termination will proceed as scheduled. Within thirty (30) days of any termination made under this Article, WISCONSIN shall supply ISU with financial statements detailing all costs up to the effective termination date. The sole and complete remedy of WISCONSIN shall be payment for work completed prior to the effective termination date. This section shall not limit in any legal or equitable remedies otherwise available to ISU.

Article XX. Notices.

All notices (excluding Invoices that are handled under Article IV) to and under this Agreement shall be in writing and sent to each party as set forth below:

ISU

Iowa State University
Office of Sponsored Programs Administration
1138 Pearson Hall
Ames, IA 50011-2207
Phone: 515.294.5225
FAX: 515.294.8000
FAX: 515.294.8000
E-Mail: grants@iastate.edu

WISCONSIN

The Board of Regents of the
University of Wisconsin System
21 N. Park Street, Suite 6401
Madison, WI 53715-1218
Phone: 608.262.3822
FAX: 608.262.5111
E-Mail: preaward@rsp.wisc.edu

Article XXI. Amendments or Changes.

Amendments or changes to this Agreement must be in writing and signed by each party's authorized representative.

Article XXII. Applicable Law.

This Agreement shall be governed by and construed in a court of competent jurisdiction.

Article XXIII. Indemnification.

TO the extent permitted by law, each party agrees to accept the responsibility for claims for injury or damage to any person or persons or property that arise solely out of that party's negligent acts or omissions in connection with this project. Each party further agrees that the other party shall not be liable for damages arising solely from injuries or damages sustained by any person or persons or property resulting from its own negligent performance or omission under this Agreement.

Article XXIV. Insurance.

WISCONSIN shall obtain and maintain comprehensive liability insurance or self-insurance sufficient to cover its responsibilities under this Agreement. If requested, WISCONSIN agrees to provide evidence of such insurance or self-insurance to ISU via a Certificate of Insurance or other documentation acceptable to ISU.

Article XXV. Dispute Resolution.

If any dispute arises between the parties in connection with this Agreement and it cannot be resolved by mutual agreement after meetings between the parties, the parties agree to submit their dispute to mediation, with the exception of allegations of violation of federal or state securities laws. Mediation shall take place at a venue mutually acceptable to the parties. Each party shall be responsible for payment of its own expenses, including the cost of depositions, experts, evidence and reasonable attorneys' fees. The mediator's fees and expenses shall be divided equally between the parties. This mediation provision shall not preclude the rights of the parties in pursuing their remedies through the courts with respect to matters not involving the interpretation of the terms and conditions of this Agreement.

Article XXVI. Equal Opportunity and Non Discrimination.

WISCONSIN's activities hereunder are subject to the provisions of:

- Title VI of the Civil Rights Act of 1964 [42 U.S.C. § 2000d];
- Title IX of the Educational Amendments of 1972 [20 USC 1681 et seq.];
- The Rehabilitation Act of 1973 [29 U.S.C. § 794],
- The Age Discrimination Act of 1975 [42 U.S.C. §§ 6101 et seq],
- The Americans With Disabilities Act of 1990 (42 USC 12101 et seq.);

In the event of non-compliance with this Article, this Agreement may be cancelled, terminated, or suspended in whole or in part, as deemed necessary by ISU.

Article XXVII. Protection of Vertebrate Animals.

If vertebrate animals are included in this project, WISCONSIN agrees that the rights and welfare of vertebrate animals will be protected in accordance with policies established by the Animal Welfare Act [7 U.S.C. § 2131 et seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR §§ 1.1-4.11] pertaining to the humane care, handling, and treatment of vertebrate animals held or used for research, teaching or other activities supported by federal awards. WISCONSIN is expected to ensure that the guidelines described in the National Academy of Science (NAS) Publication, "Guide for the Care and Use of Laboratory Animals" (1996) are followed and to comply with the *Public Health Service Policy and Government Principles Regarding the Care and Use of Animals* (included as Appendix D to the NAS Guide).

WISCONSIN shall bear full responsibility for the proper and safe performance of all work and services involving the use of vertebrate animals under this Agreement. If vertebrate animals are included in this project, then WISCONSIN agrees to send a copy of current IACUC approval to ISU within this signed Agreement.

- Will WISCONSIN be engaged in research involving vertebrate animals in the performance of the Agreement?

Yes _____ No

- If yes, please indicate the following:

1. PHS Animal Welfare Assurance # _____ Assurance Date _____
2. Approved IACUC Project # _____ Approval Date _____

Article XXVIII. Protection of Human Subjects or Participants.

If this project involves the use of human subjects, WISCONSIN is responsible for the protection of the rights and welfare of any human subjects involved in research, development and related activities supported by this Agreement and WISCONSIN agrees to comply with the NSF regulation, entitled "Protection of Human Subjects [45 CFR Part 690]." WISCONSIN agrees the participation of any human subjects will continue to be reviewed and approved in the event this Agreement is extended by mutual consent beyond the current period of performance.

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- Will WISCONSIN be engaged in human subject research in the performance of the Agreement?

Yes _____ No X

- If yes, please indicate the following:

1. Federal Wide Assurance (FWA) # _____ Assurance Date _____
2. Approved IRB Protocol # _____ Approval Date _____
3. A copy of the letter from the IRB representative indicating the date of review and approval shall be submitted to ISU with this signed Agreement and renewal letters shall be submitted to ISU annually.

Article XXIX. Additional Responsibilities.

WISCONSIN agrees as follows:

A. Research Involving Recombinant DNA Molecules.

If this project involves the use of recombinant DNA molecules, WISCONSIN agrees to comply with the requirements of the *NSF Award and Administration Guide* ("AAG") Chapter VI.B.2.

B. Clean Air and Water.

1. To comply with all the requirements of Section 114 of the *Clean Air Act* [42 U.S.C. § 7414] and Section 308 of the *Clean Water Act* [33 U.S.C. § 1318], respectively, relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in Section 114 and Section 308 of the *Clean Air Act* and the *Clean Water Act*, respectively, and all regulations and guidelines issued thereunder before the award of this Agreement.
2. That no portion of the work required by this Agreement will be performed in a facility listed on the *Environmental Protection Agency List of Violating Facilities* on the date the Agreement is executed unless and until EPA eliminates the name of such facility or facilities from such listing.
3. To use its best efforts to comply with clean air standards and clean water standards at the facility in which the work under this Agreement is being performed.

C. Conflict of Interest and Investigator Financial Disclosure.

1. Conflict of Interest.

If WISCONSIN employs more than fifty (50) persons, WISCONSIN shall maintain an appropriate written and enforced policy on conflict of interest consistent with the provisions of AAG Chapter IV.A.

2. Financial Disclosure.

WISCONSIN certifies that to the best of WISCONSIN's knowledge and belief, all financial disclosures related to the activities funded by this Agreement and required by its conflict of interest policy have been made; and that all identified conflicts of interest under this

Agreement will have been satisfactorily managed, reduced or eliminated prior to the expenditures of any funds under this Agreement in accordance with WISCONSIN's conflict of interest policy (or ISU's conflict of interest policy if WISCONSIN does not have one).

D. Debarment and Suspension.

To the best of its knowledge and belief, WISCONSIN certifies that it and its principals are fully compliant with the requirements of Subpart C of 45 CFR Part 620, "*Responsibilities of Participants Regarding Transactions.*" Should WISCONSIN subcontract any of its research effort under this Agreement as specified in Article XVIII. Subcontracts, above, it shall require that the language of this paragraph (D) be included in the award documents of all subawards at a lower tier (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

E. Drug-Free Workplace.

WISCONSIN will provide a drug-free workplace in accordance with the Drug-Free Workplace Act of 1988 (41 U.S.C. 701).

F. Disclosure of Lobbying Activities.

1. No U.S. Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any U.S. Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any U.S. Federal contract, grant, loan, or cooperative agreement.

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2. If any funds other than U.S. Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any U.S. agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this U.S. Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL "Disclosure of Lobbying Activities," [www.whitehouse.gov/omb/grants/grants_forms.html] in accordance with its instructions.

3. WISCONSIN shall require that the language of this paragraph (F) be included in the award documents of all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

G. Research Misconduct.

WISCONSIN has full responsibility for the conduct of its work supported under this award and for adherence to the "NSF research misconduct regulations published at 45 Code of Federal Regulations (CFR) Part 689.

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H. Annual Certification.

WISCONSIN agrees that it will comply with the requirements of Article XXIX, A-D and in accordance with applicable regulations throughout the term of this Agreement.

Article XXX. Benefit.

This Agreement is binding upon and shall inure to the benefits of the parties hereto, their representatives, successors and assigns. No failure or successive failures on the part of ISU, its successors or assigns, to enforce any covenant or article, and no waiver or successive waivers on its or their part of any condition of this Agreement shall operate as a discharge of such covenant, article, or condition, or render the same invalid, or impair the right of ISU, its successors and assigns, to enforce the same in the event of any subsequent breach or breaches by WISCONSIN, its successors or assigns.

Article XXXI. Export Controls.

It is understood that ISU and WISCONSIN (individually "Party", collectively "Parties") are subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities, and that its obligations hereunder are contingent on compliance with applicable U.S. export laws and regulations (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979). In the event that export controlled information is required to be provided by WISCONSIN to ISU, WISCONSIN will so inform ISU in writing, directed to the Director, ISU Office of Sponsored Programs Administration, prior to any such disclosure, and shall not forward or provide any export controlled information to ISU without the express written permission of ISU. The burden shall be on the party disclosing the export controlled information to make it available only to eligible individuals as designated by ISU, or to obtain the appropriate license or approval from the relevant agency, or to invoke an available exception, exemption, or exclusion. ISU shall have the right to terminate the Agreement under Article XIX, Termination/Cancellation, if the disclosure of export controlled information, under license or otherwise would destroy ISU's ability to invoke the fundamental research exclusion with regard to the conduct or reporting of its research.

Article XXXII. No Implied Waiver.

The failure of either party at any time to require performance by the other party of any provision of this Agreement shall in no way affect the right to require such performance at any time thereafter, nor shall the waiver of either party of a breach of any provision of this Agreement constitute a waiver of any succeeding breach of the same or any other provision.

Article XXXIII. Severability.

If any clause of this Agreement is illegal, invalid or unenforceable under any statute, regulation, ordinance, executive order or other rule of law, such clause shall be deemed reformed or deleted, but only to the extent necessary to comply with such statute, regulation, ordinance order, or rule, and the remaining provisions of this Agreement shall remain in full force and effect. If the deletion substantially alters the basis of this Agreement, the parties will negotiate in good faith to amend the provisions of this Agreement to give effect to the original intent of the parties.

Article XXXIV. Nature of Relationship.

ISU and WISCONSIN are independent contractors and shall not act as an agent for the other, nor shall either be deemed to be an employee of the other for any purpose whatsoever. Neither party

shall enter into any agreement or incur any obligations of the other's behalf, or commit the other in any manner without the other party's prior written consent.

Article XXXV. Order of Precedence:

In the event of any inconsistency among sections of this Agreement, the following order of precedence shall apply:

- The terms and conditions required to be flowed down from the PRIME AGREEMENT in Exhibit A.
- The terms and conditions of this Agreement, including all "Exhibits" and "Attachments" hereto.
- "Iowa State University Center for Biorenewable Chemicals (CBIRC) Membership Agreement."

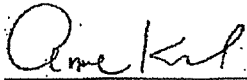
Article XXXVI. Entire Agreement.

This Agreement, including any exhibits, attachments and provisions incorporated by reference, constitutes the entire agreement between the parties hereto and supersedes all prior agreements, understandings and arrangements, oral or written, among the parties hereto with respect to the subject matter hereof.

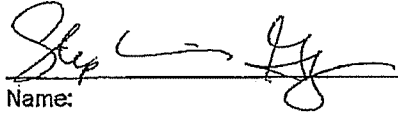
AGREED AND ACCEPTED

For IOWA STATE UNIVERSITY

For THE BOARD OF REGENTS OF THE
UNIVERSITY OF WISCONSIN SYSTEM



Anne Kinzel
ISU Senior Award Administrator



Name:
Title:

Date: Feb. 13, 2009

Date: 2/16/2009

F.E.I.N. 396006492

WI DUNS No. 161202122

WI Congressional Dist. 2nd

PLEASE PROVIDE THE FOLLOWING INFORMATION FOR THE PERSON RESPONSIBLE FOR FISCAL MATTERS PERTAINING TO THIS AGREEMENT:

Robert Mouglin
Name

(608) 262-0181
Telephone Number

21 N. Park Street, Suite 6401
Street Address

(608) 262-5111
Facsimile Number

Madison, WI 53715
City, State, Zip

rwmougin@rsp.wisc.edu
E-Mail Address

