Information on an NSF-funded IGERT Project entitled

Integrating the Socioeconomic, Technical, and Agricultural Aspects of Renewable and Sustainable Biorefining (I-STAR)
Project Director: Mary Rezac, Kansas State University

www.igert.ksu.edu

Overview of Project  This project focuses on training PhD students to be leaders in the development of sustainable biorefining. The project focuses on the use of multidisciplinary research teams to overcome the existing agricultural, technical, and socioeconomic barriers to sustainable biorefining.

Parties Involved  Based upon the total funding from NSF, KSU and matching agencies, this project will support research activities conducted by approximately

- 30 separate Ph.D. students over the 5-year funding period. Students are invited to apply for admission to the graduate program in each of the departments listed in the next bullet.
- Eighteen Faculty advisors will direct the research activities. Faculty members are from Agronomy, Agricultural Economics, Bio & Ag Engineering, Chemical Engineering, Grain Science & Industry, and Sociology.
- Approximately 30 undergraduate research students will aid in the conduction of research.
- Four international institutions (in Brazil, Belgium, France, and Austria) will host KSU researchers for short-term training.
- Industrial and Agricultural sites (including ICM, Kansas Farm Bureau, Burns & McDonnell) will host field experiences for PhD researchers.

Expected Project Outcomes

- Development of agricultural practices and conversion technologies that (1) significantly reduce the environmental impacts of the production of biofuels and chemicals; and (2) achieve sustainable and efficient conversion of biomass.
- Preparation of students to become research and educational leaders who can meet the involving needs of the bio-based energy industry through a deep appreciation of the interrelated impact of economic, technological, agrarian, and societal issues.
- Establishment of a vibrant community of researchers focused on systems-orientated solutions to converting biomass into energy and products.

Training Activities

- Team-based research projects
- Field Experiences in Agricultural and Technical Facilities
- Case-study based courses in BioRefining
- International Travel for short-term training and research
- Seminar Series in BioRefining
- Students Conferences with posters and oral presentations
- Guide Mentoring of undergraduate researchers
- Opportunity to receive a graduate certificate in Biobased Products

Program Benefits

- Support of $30,000 per year plus $10,500 a year to cover tuition, fees, health insurances and other costs of education. Financial support for international travel, seminars and conferences.
We are now accepting applications for this National Science Foundation Program opportunity.

_Students who graduate with their B.S. degree are encouraged to apply. The IGERT participating departments below (except Sociology) will permit students to apply for this fellowship program without first completing their M.S. degree._

Every student in the program will receive a $30,000 annual stipend plus a $10,500 annual cost-of-education allowance which covers tuition, fees, and health insurance, as well as international travel and travel to professional conferences.

The K-State NSF Integrative Graduate Education and Research Training (IGERT) Program is open to Ph.D. seeking students who are a U.S. citizen or permanent resident in Agricultural Economics, Agronomy, Biological and Agricultural Engineering, Chemical Engineering, Grain Science, and Sociology. IGERT trainees are organized within interdisciplinary core teams working toward solutions of bioenergy-related problems that integrate technological, agroenvironmental, and socioeconomical issues. This mode of multidisciplinary interaction is central to IGERT program. Our IGERT team has created a highly integrated network of researchers focusing on the complex issues of sustainable bioenergy production.

Organized IGERT opportunities include:

- Mentoring of UG research students
- International travel and study
- Presentations at local, national, and international conferences
- Field experiences to learn about the aspects of biorefining which may be unknown to you
- Specialized topical courses
- And more

Our goal is provide a program which augments your learning experience without adding additional requirements.

I have attached a brochure and program overview for your information. Our IGERT website is: http://igert.ksu.edu/, to inquire to our program please complete our on-line inquiry form here: http://igert.ksu.edu/inquiry

If you’re interested in learning more, please contact me I’d really like to talk to you about this wonderful opportunity.

Best regards,

_Keith Rutlin_
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The I-STAR BioEnergy NSF-IGERT Program is open to incoming and first year doctoral students at Kansas State University in the following programs:

- Agricultural Economics
- Agronomy
- Biological and Agricultural Engineering
- Chemical Engineering
- Grain Science and Industry
- Sociology

Funded NSF–IGERT Traineeships are available. See www.igert.ksu.edu for application information and deadlines.

NSF-IGERT Program

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Success in sustainable biorefining requires that researchers have an understanding of the role of agriculture, technology, and social science in the integrated process.

Expected Project Outcomes

Development of agricultural practices and conversion technologies that (1) significantly reduce the environmental impacts of the production of biofuels and chemicals; (2) achieve sustainable and efficient conversion of biomass; and (3) maintain soil organic matter content.

Preparation of students to become research and educational leaders who can meet the evolving needs of the bio-based energy industry through a deep appreciation of the interrelated impact of economic, technological, agrarian, and societal issues.

Establishment of a vibrant community of researchers focused on systems-oriented solutions to converting biomass into energy and products.

Program Benefits

- Support of $30,000 per year plus $10,500 to cover tuition, fees, health insurances and other costs of education.
- Financial support for international travel (one or two organized trips).
- Organized support for seminars, working with undergraduate research students, and conferences.

Integrative Graduate Education and Research Training – IGERT