INNOVATIVE PROJECT GRANTS
FOR DIVISIONAL ENHANCEMENT
SPONSORED BY THE COUNCIL COMMITTEE ON DIVISIONAL ACTIVITIES (DAC)

2013 PROPOSAL

Funding will not be considered for events or projects that have already taken place. Only forthcoming programming/ideas will be considered for support. These grants are to "seed" new ideas and will not be considered for continuation of an existing program or project. The guidelines for the Innovative Project Grants can be viewed on the DAC website: Innovative Project Grants

Please send the completed form by:

Date: 10 January 2013 **Division Name:** ENVR and AGRO
Project Title: Intersociety Initiative to Address Air Quality at the Interface of Megacity and Agricultural Areas

Start Date: (MM/DD/YY): 05/01/2013 **Completion Date: (MM/DD/YY):** 01/03/2014
Division Chair: Henry C Ramsey
Division Project Contact: (Name, address, phone, email)
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Requested Funding: $7500

Project Goal (Please provide description of project goal in 250 words or less.)

The goal of this Innovative Project grant is to foster a multinational community of scientists and engineers who can address critical issues of air quality at the interface of megacity and agricultural areas. This community was established through an NSF funded workshop in 2012 and is designed to include established investigators and advanced students from numerous Pan American Countries. Our approach is to engage ACS audience with participants from an NSF funded workshop to expand the community of investigators and to maintain momentum in research about this important air quality issue. This will allow more ACS members to remain at the forefront of this important Air Quality issue.

Describe the innovative aspects of the project:
Building on Previous NSF Support
Bringing together participants from many perspectives to solve an emerging problem
Engaging students in a meaningful and career building fashion
Involving multiple Professional Societies
Involving multiple ACS Technical Divisions and ACS Offices

Project Background:

As cities grow and food demands increase this will become a significant global issue. The number and size of mega-cities has increased dramatically (to 27) as human populations have concentrated in cities. Eleven urban areas have populations exceeding ten million residents. Several nearly contiguous urban areas (or city regions) span several defined cities. Mega city air pollution clearly causes major environmental stress within and near urban areas and is increasingly global in scope. Moreover, expansive agricultural areas are often immediately adjacent to the mega city "boundary", generating emissions with a different range of constituents. As cities grow they encroach into these agricultural areas. Air pollutants from urban and agricultural areas are quite different and interact in ways that often diminish air quality. NSF, USDA, NOAA, the UN and other organizations see this as an emerging issue worthy or serious evaluation. Our activity is designed to will solidify dialogue among an NSF initiated a community of scientists and expand this dialogue to include more ACS members.

ACS
Chemistry for Life™

Project Outline:

Overview: We will assemble an internationally group of scientists and engineers for a two day symposium to address the current understanding of factors that control air quality at the interface of major urban and agricultural areas. Topics will include unban and agricultural air constituents, atmospheric reactions, transport dynamics, process alteration at "air mass" intersection, results of impaired air quality, mitigation and prevention strategies.

Participants will include established an emerging leaders in the field as well as promising students. Time will be scheduled each day to allow students and speakers to interact in an effort to strengthen the students' network and to allow them to discuss specific topics in more depth with established researchers. The symposium will continue building a community of scientists that was initiated by NSF in the summer of 2012.

Time Line:

NSF Workshop	Fall 2012
ACS Symposium	
Intersociety Symposium Proposed	Nov 2012
Organizers Identified	Dec 2012
Speaker Invitations	Jan-Feb 2013
Abstract Deadline	April 2013
Symposium in Indianapolis	Sept 2013
2 Day Symposium	
Poster Session	
Roundtable discussion of research needs and direction	
SETAC Session	
Session proposal	Jan 2013
Speaker invitations	Feb-March 2013
Abstract Deadline	June 2013
Session in Nashville	Nov 2013

Session Outline

Organizers of the symposium: George Cobb ACS ENVR (Baylor University)
Laura McConnell ACS AGRO (USDA)
Sasha Madronich (National Center for Atmos. Research)
Elin Ulrich (USEPA)
Peter Green (University of California, Davis)

Half day sessions and presiding scientists within the symposium

Sources and Atmospheric constituents of concern in Urban and Agricultural Areas	Peter Green Laura McConnell
Identifying and Quantifying Transport and Important Transformation Processes	Sasha Mardonich Elin Ulrich
Emerging atmospheric pollution issues, assessment methods, and prevention technologies	Chuck Kolb George Cobb
Path forward: Better understand atmospheric processes and routes for improving Air Quality	Peter Green Sasha Madronich

We have obtained agreement from six acclaimed speakers to attend and a similar number of graduate students from the NSF workshop have agreed to speak as well. This will serve as a good nucleus to engage a broader array of scientists and engineers in discussions of this emerging environmental issue.

Objectives

To foster a multinational community of scientists and engineers who can address critical issues of air quality at the interface of megacity and agricultural areas.

To develop intersociety collaboration to solve critical and emerging issues in air quality

To share scientific and public outreach approaches that are currently being used in some mega-cities that could be transferred to other regions
To catalyze research collaborations and broader networking among participants and their home institutions; and

To provide the basis for short courses to be developed for future use

Detailed Budget Estimate

ITEM	IPG	ENVR	AGRO	Other ACS	External
Domestic Speakers	2000	500	500		4000
International Speakers	2500	1000	500	1000	1000
Student Participants	3000	500	500	500	4000
Meet the Speaker				1000	1000
SUB TOTALS	7500	2000	1500	2000	10,000
TOTAL BUDGET	$23,000				