

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Structure and Function of Macromolecules

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		15%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		15%	
206	Basic Plant Biology	0%		10%	
211	Insects, Mites, and Other Arthropods Affecting Plants	0%		5%	
212	Pathogens and Nematodes Affecting Plants	0%		5%	
304	Animal Genome	0%		10%	
305	Animal Physiological Processes	0%		25%	
311	Animal Diseases	0%		5%	
312	External Parasites and Pests of Animals	0%		5%	
501	New and Improved Food Processing Technologies	0%		5%	
	Total	0%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	3.0	0.0
Actual	0.0	0.0	9.2	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	389938	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	389938	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	2495518	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Basic research will be conducted that will make fundamental discoveries which will enhance our understanding of molecular mechanisms involved in the regulation of physiological processes in plant and animal systems.

- New faculty and staff will be recruited to build, foster and maintain a cohesive critical mass of research faculty with a diverse set of expertise that focus on the study of structural biology.
- Grant proposals will be written to acquire and maintain state of the art equipment to enhance the research capabilities relating to protein structure/ function/ interactions on the OSU campus.
- Funds will be applied for/ solicited from national, state and university sources to acquire, maintain and restore support for "Core" facilities that are critical to the research mission of DASNR and Oklahoma State University.
- Proposals will be submitted to attract sufficient extramural support to establish an extramurally funded "Structural Biology" Center at OSU that will stimulate collaborations and research productivity.
- Design and conduct basic research to fill critical gaps in scientific knowledge that will address needs, issues and problems that ultimately can be translated into an improvement in plant and animal health.
 - Develop new research methods and procedures
 - Train undergraduate and graduate students, and postdoctoral associates
 - Publish scientific articles
 - Write and submit grant proposals
 - Attend and present scientific findings at professional meetings
 - File patents for protection of intellectual property and negotiate licensing agreements for technology transfer
 - Interact with other researchers both on and off the OSU campus.

2. Brief description of the target audience

- Team members
- Departments and department heads
 - OSU administrators
 - Other faculty and other scientific researchers in DASNR, at OSU & the scientific community
 - Students and post-docs
 - Federal, state, and private funding agencies
 - Scientific journal editors, readers & the scientific community
 - Candidates for open faculty and staff positions.

- Patent officers
- Agricultural, environmental, life, and human science industries
- General public and elected officials

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	0	0	0	0
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2010

Plan: 1

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	10	
Actual	0	10	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of manuscripts submitted based on reserach efforts

Year	Target	Actual
2010	8	0

Output #2

Output Measure

- Number of extramural grants submitted with preliminary data from research efforts

Year	Target	Actual
2010	16	0

Output #3

Output Measure

- Number of presentations given at meetings and conferences to disseminate research results

Year	Target	Actual
2010	19	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of graduate students graduated and postdoctoral associates mentored in structural biology
2	Number of manuscripts published
3	Number of invitations faculty receive to present research findings at universities and colleges and national and international meetings

Outcome #1

1. Outcome Measures

Number of graduate students graduated and postdoctoral associates mentored in structural biology

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	4	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
304	Animal Genome
305	Animal Physiological Processes
311	Animal Diseases
312	External Parasites and Pests of Animals
501	New and Improved Food Processing Technologies

Outcome #2

1. Outcome Measures

Number of manuscripts published

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	8	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
304	Animal Genome
305	Animal Physiological Processes
311	Animal Diseases
312	External Parasites and Pests of Animals
501	New and Improved Food Processing Technologies

Outcome #3

1. Outcome Measures

Number of invitations faculty receive to present research findings at universities and colleges and national and international meetings

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	6	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
304	Animal Genome
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501 New and Improved Food Processing Technologies

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- During (during program)
- Time series (multiple points before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}