



Service Learning: An avenue for outreach, retention, and training

Stacey Darling-Novak and Jay Jones
Department of Biology
University of La Verne

About the University of La Verne and its Biology Program:

- Small, Private , Liberal Arts University
- Traditional Undergraduates – 2,200
- 8 fulltime biology faculty
- 60-120 incoming biology students/year
- No graduate program in biology
- Senior Research Projects





Program Development through the HSI USDA Grant:

- Service learning course that is major-specific
- Outreach and recruitment
- Connection with the program
- Awareness of new career pathways
- Training of our students in leadership and research skills



CS 305: Learning through community service Science Squads: Opening doors in science education for a diverse community

- Outreach to primarily high schools, but also middle and elementary
- Private and public schools
- LV students develop science lessons/activities
- Present lessons and lead activities
- Write reflection papers
- Log 15 hours with the students/ 1 unit course

Recruitment of students for science camp and future LV science majors:

- A fun learning experience.
- Share information about college
- Announce USDA camp opportunity



**King of the Herd: Carrying Capacity
Crossroads School, Corona CA
Middle School**



**Adaptation Lab
Curtis Elementary, Rialto CA**



**CSI Lab
Crossroads High School**

USDA Summer Science Camp:

Application

Legal Name: _____

Mailing Address: _____

E-mail Address: _____

Home Phone: _____

Cell Phone: _____

Birth Date: _____

Gender: _____

SSN# (optional): _____

Ethnicity (optional): _____

High School or College: _____

Year (circle one): Fr So Jr Sr

GPA: _____

Please provide:

- Official transcripts
- A one page (typed) statement describing your interest in the camp.
- A letter of recommendation from a school academic advisor or teacher.

Camp Dates:
 July 8th-10th 2013 High School Students
 July 10th-12th 2013 College Students

Application due: June 18th, 2013.
 Cut this application out and mail to University of La Verne (address on back)



USDA SCIENCE CAMP

USDA Career Workshop
 Lab and Field Experiences
 Fieldtrip to an Agricultural Research Station at UCIR
 College Admission Workshop

Send Applications to:
 Stacey Novak, Dept. of Biology
 University of La Verne
 1950 Third Street
 La Verne, CA 91750

For more information:
 (909) 593-3511
biology.laverne.edu/usda

This camp is for students who want to learn about **molecular biology and field techniques**. Research aims are in line with the USDA goals of food security, climate change and food safety. All USDA camp activities are led by experienced La Verne faculty members and will ensure a college-like experience.

This three day camp is completely free of charge.
(no overnight stays)

Our goal is to introduce students to sciences, through hands-on lab and field experiences. Show students the breadth of career opportunities in the USDA, and advise students about the educational pathway to realize their career goals in the sciences.

DAY 1
College Admissions workshop, Begin Mini-Research Projects

DAY 2
Continue Lab and Field Research Projects

DAY 3
Research concl., USDA Career Workshops, UCIR Fieldtrip



Criteria for Student Selection

1. Min of 2.5 GPA on a 4.0 scale
2. Involved in extracurricular activities
3. Letter of recommendation from a science teacher or school counselor
4. A personal statement essay

Check List for Applying:

- ✓ Personal Statement
- ✓ Official Transcript
- ✓ Letter of Recommendation

Email any questions to:
stacy.novak@laverne.edu
jones@laverne.edu

- High School Students
- Community College Students
- New LV Freshmen

Day 1:



Mt. Baldy, San Antonio Creek Sample Collection and Laboratory Study

Teaching Assistants – CS 305 Students



Day 2:



Molecular Biology
Lab Experience



Day: 3

USDA Seminars: US Forest Service and APHIS Wildlife Service



**Field trip to UCR ARS: Salinity Lab
National Germplasm Repository for
Citrus and Dates**



Spring/ Summer	Enrollment CS 305	Student Contact numbers	USDA Camp
2012	11	1800	32
2013	16	2000	?

Camp Ethnicity

Hispanic Latino	41%
White Caucasian	41%
African American	12%
Asian Pacific Islander	6%

Exit Evaluations: USDA Camp 2012

Overall	Knowledge USDA jobs	Future Career USDA	Molecular Biology Lab	Field Biology Experience	USDA Speakers
9.0	9.0	7.0	9.1	9.2	7.5



Agricultural Biology Option within Environmental Biology Major

- Rangeland Ecology
- Plant Productivity
- Soils-based Microbiology
- Biochemistry – Pesticides and Food Safety

Plant Productivity



Rangeland Ecology



Student Research



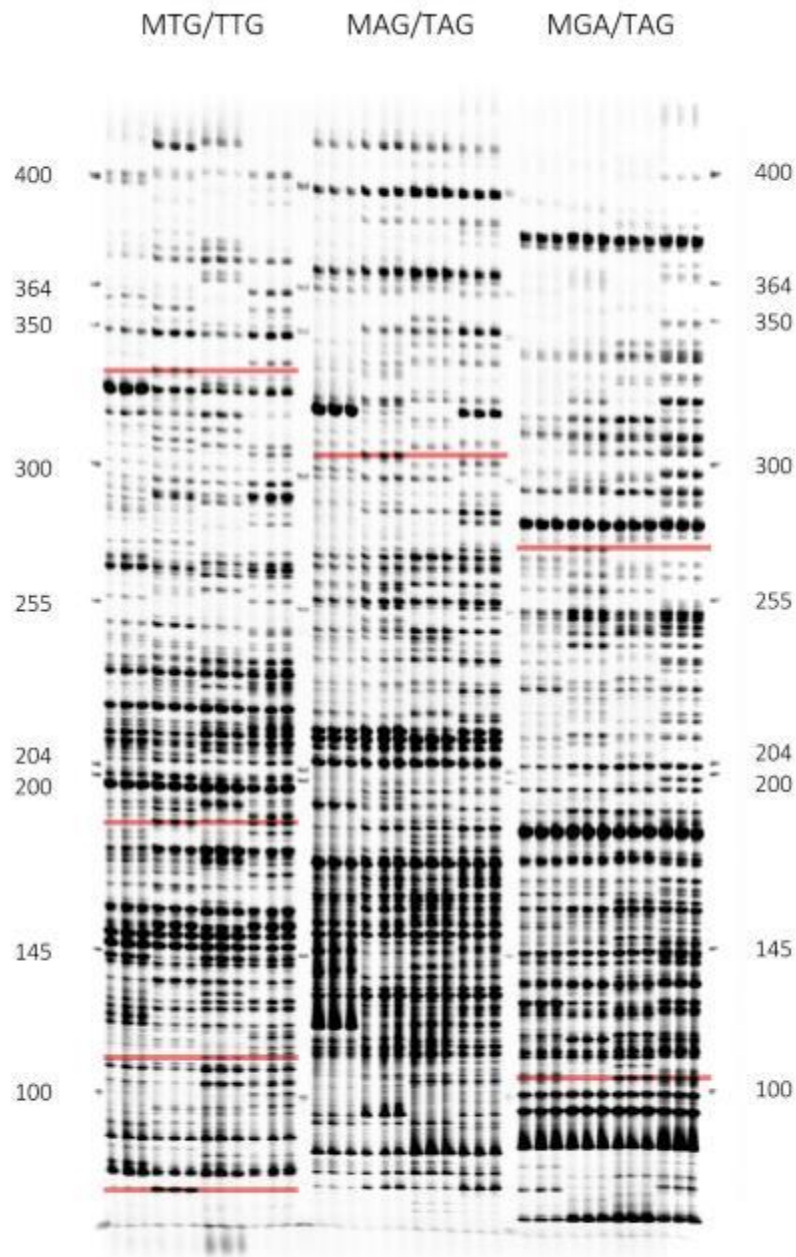
Types of projects:

- Increasing maize productivity
- Impact studies, Climate Change
- Effects of pesticides on T-cell development
- Food antioxidants
- Floriculture

Student support:

- Summer stipends
- Scholarships
- Student Mini-research Grants





Studies in gene expression during PCD of endosperm tissue in maize kernels

Technique: cDNA AFLPs



Acknowledgements:

Department of Biology:

Jay Jones

Kat and Pablo Weaver

Bob Neher

Students:

CS 305 Students

Jesus Bolanos

Lane Jackson

Peter Marquez

Oscar Valencia

Lila Luna

Roshan Gamage

Avneet Nijjar

Jonathan Cabrera



Funding:

HSI-USDA Grant

Title V STEM

