

# Here is the list of the winning projects at the 2004 Student Project Showcase

## CONGRATULATIONS!

### **#1 Life Science Graduate Project**

Entry Number 14GL

**EARLY CHLOROSIS FACTOR (ECF): FUNCTIONAL ANALYSIS AT THE MOLECULAR,  
BIOINFORMATIC AND CELLULAR LEVELS**

By: Jessica Posada, Darleen Franklin, and Dr. Maureen Whalen  
Cell and Molecular Biology  
Faculty Advisor: Dr. Maureen Whalen

### **#2 Life Science Graduate Project**

Entry Number 38GL

**THE TEMPERATURE AND PH DEPENDENCE OF FAST PROTEIN RELAXATION IN SPERM WHALE  
CARBONMONOXYMYOGLOBIN FOLLOWING LASER PHOTOLYSIS**

By: Shyam Bhaskaran, Dr. Robert Goldbeck (UC Santa Cruz), Dr. Nancy Counts Gerber,  
Juan Mendoza, Mathew Pitts, Michel Lau, and Dr. Raymond Esquerra  
Biochemistry  
Faculty Advisor: Dr. Raymond Esquerra

### **#3 Life Science Graduate Project**

Entry Number 41GL

**A BLOCKING ANTI-VEGF ANTIBODY FROM THE NEW ANTIBODY PHAGE LIBRARY**

By: Wei-Ching Liang, Vivian C Lee, Ajay Malik, Ling Fu, Ping Wu, Mar Ultsch,  
Kenneth Hillan, Christian Wiesmann, Hanspeter Gerber, and Germaine Fuh  
Biochemistry

Faculty Advisors: Dr. George Gassner, Dr. Nancy Counts Gerber,  
and Germaine Fuh (Genentech)

### **#4 Life Science Graduate Project**

Entry Number 20GL

**ANALYSIS OF THE ROLE OF TWO GENES INVOLVED IN TURNING CELLS INTO  
PIGMENT CELLS, NERVE CELLS AND BRAIN CELLS**

By: Lisa Acosta  
Cell and Molecular Biology  
Faculty Advisor: Dr. Laura Burrus

## **#5 Life Science Graduate Project**

Entry Number 27GL

### **BIOFILM PRODUCTION OF *PAENIBACILLUS* CO-ISOLATE LMB265 AND THE EFFECTS ON *BACILLUS SUBTILIS* BIOFILM**

By: Talia Ronne, Peter Ingmire, Audrey Parangan, and Dr. Leticia Marquez-Magaña  
Cell and Molecular Biology  
Faculty Advisor: Dr. Leticia Marquez-Magana

## **#1 Physical Science Graduate Projects**

Entry Number 54GP

### **IMPLEMENTING IEEE 1588 OVER IEEE 802.11B WIRELESS LAN (WLAN) (SYNCHRONIZING CLOCK OVER THE WIRELESS) AND DEVICENET PROTOCOLS**

By: Afshaneh Pakdaman  
Computer & Communications Engineering  
Faculty Advisors: Dr. Todor Cooklev and Dr. John Eidson (Agilent Technologies)

Entry Number 55GP

### **WIRELESS LOCAL AREA NETWORK SECURITY**

By: Arsham Hatambeiki  
Computer & Communications Engineering  
Faculty Advisors: Dr. Hamid Shahnasser and Dr. Todor Cooklev

## **#2 Physical Science Graduate Project**

Entry Number 65GP

### **ONE- AND TWO-DIMENSIONAL SOLITON-INDUCED WAVEGUIDES IN AN ORGANIC PHOTOREFRACTIVE MONOLITHIC GLASS**

By: Marcus Asaro  
Physics  
Faculty Advisor: Dr. Zhigang Chen

## **#3 Physical Science Graduate Project**

Entry Number 59GP

### **GIS ANALYSIS OF QUATERNARY MARINE TERRACES, POINT REYES PENINSULA, CALIFORNIA**

By: Anne Marie Scherer, Dr. Karen Grove, Dr. Jerry Davis (Department of Geography)  
Geosciences  
Faculty Advisor: Dr. Karen Grove

## **#4 Physical Science Graduate Project**

Entry Number 56GP

### **PERFORMANCE AND EXHAUST EMISSIONS OF SINGLE-CYLINDER UTILITY ENGINES USING ALCOHOL-GASOLINE BLENDS**

By: Francisco A. Martinez  
Environmental Engineering  
Faculty Advisors: Dr. Ahmad Ganji, Dr. Anthony Wheeler, and Dr. Wenshen Pong

## **#5 Physical Science Graduate Project**

Entry Number 44GP

### **SIMULATING A MODEL RAILWAY SYSTEM**

By: Haijie Xiao, Michael Beck, and Gary Thompson

Computer Science

Faculty Advisor: Dr. Arno Puder

## **#1 Life Science Undergraduate Project**

Entry Number 84UL

### **DEVELOPMENT OF AN HPLC-BASED ASSAY FOR MONITORING THE ENZYMIC ACTIVITY OF PROSTATE-SPECIFIC MEMBRANE ANTIGEN**

By: Jamie M. Moser, Joe Blecha, Lisa Wu, Nicholas Santiago, Yen Phan, and Jenni Rowley

Chemistry

Faculty Advisor: Dr. Clifford Berkman

## **#2 Life Science Undergraduate Project**

Entry Number 81UL

### **TOWARD THE DESIGN OF A NEW PHOTODYNAMIC DRUG: SYNTHESIS AND CHARACTERIZATION OF A PORPHYRIN BEARING TWO DIFFERENT MESO-PHENYL SUBSTITUENTS**

By: Diana Tracy and Dr. Ursula Simonis

Chemistry

Faculty Advisor: Dr. Ursula Simonis

## **#3 Life Science Undergraduate Project**

Entry Number 71UL

### **IDENTIFYING ADDITIONAL PROMOTER(S) IN THE FLA/CHE OPERON OF *BACILLUS SUBTILIS***

By: Joyce Cueto

Cell and Molecular Biology

Faculty Advisor: Dr. Leticia Marquez-Magana

## **#4 Life Science Undergraduate Project**

Entry Number 72UL

### **COMPARATIVE ANALYSIS OF PLANT RESPONSE TO THREE BACTERIAL EFFECTORS: *avrRxv*, *y4LO*, and *yopJ***

By: Kseniya Zakharyevich

Cell and Molecular Biology

Faculty Advisor: Dr. Maureen Whalen

## **#5 Life Science Undergraduate Project**

Entry Number 75UL

### **PLANT DIVERSITY IN MONTANE MEADOWS OF THE EASTERN SIERRA NEVADA: CORRELATING PATCH AND LANDSCAPE FEATURES WITH PLANT SPECIES RICHNESS**

By: Scott Simono, Dr. Gretchen LeBuhn, Rich Hatfield, and Jennifer Carah

Botany

Faculty Advisor: Dr. Gretchen LeBuhn

## **#1 Physical Science Undergraduate Project**

Entry Number 114UP

**STORMWATER CONSTRUCTED WETLAND, LAKE MERCED RESTORATION PROJECT**

By: Sheila Sannadan, Alain Luu, and Abey Fasil

Civil Engineering

Faculty Advisor: Dr. Elahe Enssani, Greg Bartow (SFPUC), and Patrick Sweetland (City of Daly City)

## **#2 Physical Science Undergraduate Project**

Entry Number 108UP

**AUTOMATIC METER READING SYSTEM**

By: James Zhao and Orlando Guillory

Electrical Engineering

Faculty Advisor: Dr. Hamid Shahnasser

## **#3 Physical Science Undergraduate Project**

Entry Number 111UP

**MICROPROCESSOR CONTROLLED FOUNTAIN**

By: Matthew Baldwin, Ari Harding, and Bernadette Mapote

Mechanical Engineering

Faculty Advisor: Dr. Mamdouh Abo-El-Ata

## **#4 Physical Science Undergraduate Project**

Entry Number 120UP

**CHARACTERIZATION OF NIOBIUM THIN FILMS  
INTRODUCING METHODS, WHICH MINIMIZE UNIFORM ELASTIC STRAIN**

By: Jeff Haas and Juan Pablo Saenz

Physics

Faculty Advisor: Dr. Barbara Neuhauser

## **#5 Physical Science Undergraduate Project**

Entry Number 102UP

**DATA IMAGE ACQUISITION AND MANIPULATION**

By: Alan Fong, Jose Fernandez and Ellen McLaughlin

Electrical Engineering

Faculty Advisor: Dr. Hamid Shahnasser