

METABOLIC RESPONSES TO ENVIRONMENTAL SALINITY IN THE CLAM
CORBULA AMURENSIS

By: Adam Paganini and Dr. Jonathon Stillman

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman and Dr. Wim Kimmerer

Abstract:

DUAL ROLES OF THE CONSERVED GLC7/PP1 PHOSPHATASES, GSP-3 AND
GSP-4, IN CHROMOSOME DYNAMICS AND SPERM ACTIVATION

By: Aiza Cathe A. Go, Bernadette Nera, and Mark Samson

Physiology & Cell and Molecular Biology

Faculty Advisor: Dr. Diana Chu

DECODING DARK MATTER: A DYNAMICAL CODE FOR THE JOINT ANALYSIS
OF CLUSTER OBSERVATIONS

By: Alison Mansheim

Physics

Faculty Advisor: Dr. Andisheh Mahdavi

A GEOMETRIC APPROACH TO A NUMBER THEORETIC TOOL: THE
BERNOULLI-DEDEKIND SUM

By: Anastasia Chavez

Mathematics

Faculty Advisor: Dr. Matthias Beck

By: Andrea Cayenne

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman

DESCRIBING ECDYSIS BEHAVIOR IN STICK INSECTS

By: Andrew Carriman

Physiology & Behavioral Biology

Faculty Advisor: Dr. Megumi Fuse

EFFECT OF BINDING FATTY ACIDS ON THE GLYCATION OF HUMAN SERUM
ALBUMIN

By: April Ranney and Emelia Padilla

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

XMAS: EXPERIENTIAL VISUALIZATION, MINING, AND ANALYSIS OF TIME-
SERIES MICROARRAY EXPERIMENTS

By: Ben Dalziel

Computer Science

Faculty Advisor: Dr. Hui Yang and Dr. Rahul Singh

PHOTOLYSIS OF SPERM WHALE CARBONMONOXYMYOGLOBIN.

By: Benjamin Lintner and Ignacio Lopez

Chemistry

Faculty Advisor: Dr. Raymond Esquerra

Abstract:

By: Carol Umanzor

Cell and Molecular Biology and Biological Education

Faculty Advisor: Dr. Kimberly Tanner

INVESTIGATION OF LOW SALINE RESISTANCE IN SINORHIZOBIUM
MELILOTI

By: Charlene Navarrete

Cell and Molecular Biology

Faculty Advisor: Dr. Joseph Chen

EXPANDING YOUR HORIZON ANALYSIS

By: Chia Teoh

Cell and Molecular Biology

Faculty Advisor: Dr. Kimberly D. Tanner

INVESTIGATING BAY AREA FILIPINOS' IDEAS TOWARD ENVIRONMENTAL
CONSERVATION IN A MUSEUM SETTING

By: Courtney Scott

Marine Biology

Faculty Advisor: Dr. Kimberly D. Tanner

USING HOMOLOGY TO DETECT COPY NUMBER VARIATION ASSOCIATED
WITH BREAST CANCER RECURRENCE

By: Daniel DeWoskin

Mathematics

Faculty Advisor: Dr. Javier Arsuaga

A MODEL FOR SOCIAL NETWORKS

By: Elizabeth Gross

Mathematics

Faculty Advisor: Dr. Arek Goetz

STUDENT CONCEPTIONS OF WEATHER PHENOMENA ACROSS MULTIPLE
COGNITIVE LEVELS

By: Elizabeth Polito

Geosciences

Faculty Advisor: Dr. John Monteverdi and Dr. Kimberly Tanner

THE EFFECTS OF WNT6 IN SOMITE PATTERNING

By: Eugenel Espiritu

Cell and Molecular Biology
Faculty Advisor: Dr. Laura Burrus
Abstract:

MOLECULAR SYSTEMATICS OF PHACELIA (BORAGINACEAE).

By: Genevieve K. Walden
Ecology and Systematic Biology
Faculty Advisor: Dr. Robert Patterson

ANALYSIS OF SRAM RELIABILITY UNDER VARIATIONS AND TRANSISTOR
AGING EFFECTS IN NANO-SCALE

By: Harwinder Singh
Electrical and Computer Engineering
Faculty Advisor: Dr. Hamid Mahmoodi

EXIT STRATEGIES FOR STARTUP COMPANIES: A GAME THEORETIC
APPROACH

By: Jasdeep Gambhir
Mathematics
Faculty Advisor: Dr. Jean-Pierre Langlois

ROLE OF CONFORMATIONAL CHANGES IN SOLUBLE GUANYLATE
CYCLASE

By: Jasmin Kristianto, Kensuke Yamamoto, Stephanie Wood, and Makena Muchunku
Biochemistry
Faculty Advisor: Dr. Nancy Gerber

PROTEIN 3D STRUCTURAL MATCHING USING RESIDUE CONTEXTS

By:
Biochemistry
Faculty Advisor: Dr. Rahul Singh

TANGLESOLVE: A TOPOLOGICAL TOOL USED IN THE ANALYSIS OF SITE-
SPECIFIC RECOMBINATION

By: Jennifer Lopez, Wenjing Zheng, and Dr. Mariel Vazquez
Mathematics
Faculty Advisor: Dr. Mariel Vazquez

ARTHROPOD DIVERSITY ON THE CALIFORNIA ACADEMY OF SCIENCES'
GREEN ROOF

By: Jessica Van Den Berg and Christopher Quock
Ecology and Systematic Biology
Faculty Advisor: Dr. John Hafernik

A 3-D MAP OF THE BARTLETT SPRINGS FAULT, LAKE AND MENDOCINO
COUNTIES, CALIFORNIA

By: Johnathan Brown
Geosciences
Faculty Advisor: Dr. S. John Caskey

POST-MIDDLE-PLEISTOCENE TECTONIC DEVELOPMENT OF THE
CONFIDENCE HILLS, SOUTHERN DEATH VALLEY, CALIFORNIA
By: Joshua T. Goodman, Dr. S. John Caskey, Dr. Elmira Wan, Dr. David B. Wahl, and
Dr. Andrei M. Sarna-Wojcicki
Geology
Faculty Advisor: Dr. S. John Caskey
Abstract:

SPHINGOMYELIN IN MEMBRANE RAFTS REGULATES C2C12 MYOBLAST
DIFFERENTIATION AND MYOTUBE FORMATION
By: Jung Lim and Yuko Okamoto
Cell and Molecular Biology
Faculty Advisor: Dr. Wilfred Denetclaw

COUNTING STANDARD AND SEMISTANDARD TREES
By: Jupei Hsiao
Mathematics
Faculty Advisor: Dr. Federico Ardila

M2K: A SEARCH FOR PLANETS ORBITING LATE K AND EARLY M DWARF
STARS
By: Kelsey Clubb
Astronomy
Faculty Advisor: Dr. Debra Fischer

S-NITROSYLATION OF SOLUBLE GUANYLYL CYCLASE
By: Kensuke Yamamoto
Biochemistry
Faculty Advisor: Dr. Nancy Gerber

RAIL TRAFFIC CONTROL SIMULATOR FOR MAXIMIZING THROUGHPUT
By: Ko Narita
Mechanical Engineering
Faculty Advisor: Dr. V.V. Krishnan

TROPICAL ORIENTED MATROIDS
By: Kristen Freeman
Mathematics
Faculty Advisor: Dr. Federico Ardila

DETERMINATION OF THE NEUROTRANSMITTER THAT INHIBITS THE CNS
DURING ECYDYSIS IN THE HORNWORM, MANDUCA SEXTA

By: Laura Mendoza and Sabina Bera
Physiology and Behavioral Biology
Faculty Advisor: Dr. Megumi Fuse

UNDERSTANDING DISSOLVED ORGANIC CARBON

By: Leah Johnson
Applied Geosciences
Faculty Advisor: Dr. Tomoko Komada
Abstract:

WNTLESS-DEPENDENT DISTRIBUTION AND ACTIVATION OF WNT1 AND WNT3A

By: Lydia Li
Cell and Molecular Biology
Faculty Advisor: Dr. Laura Burrus

SENSITIZATION IN MANDUCA

By: Marissa McMackin and Emily Merchasin
Physiology and Behavior Biology
Faculty Advisor: Dr. Megumi Fuse

THE TRANSCRIPTION FACTOR ATF3 BINDS TO THE IFN-B PROMOTER IN MURINE MACROPHAGES STIMULATED WITH LPS

By: Marvin J. Sandoval
Cell and Molecular Biology
Faculty Advisor: Dr. Steve Weinstein

DIRECTIONAL MEAN SHIFT

By: Mehran Kafai and Yiyi Miao
Computer Science
Faculty Advisor: Dr. Kazunori Okada

INVESTIGATION OF DNA PACKING GEOMETRY IN P4 BACTERIOPHAGES

By: Mela Hardin
Mathematics
Faculty Advisor: Dr. Mariel Vazquez

AUTOMATED IMAGE-BASED PHENOTYPIC SCREENING FOR HIGH-THROUGHPUT DRUG DISCOVERY

By: Michalis Pittas and Ido Heskia
Mathematics
Faculty Advisor: Dr. Rahul Singh

THE EFFECT OF CALMODULIN AND CALCIUM BINDING ON THE REACTIVITY OF THE HEME ACTIVE SITE IN NNOS

By: Mike Minton, Pooncharas Tipgunlakant, Luiz Galdino, and Christopher M. Bernt

Chemistry

Faculty Advisor: Dr. Raymond Esquerra

TOWARDS THE STUDY OF A PHYSICAL INTERACTION BETWEEN CDC24
AND THE CDS1 CHECKPOINT KINASE IN SCHIZOSACCHAROMYCES POMBE

By: Noel Cruz

Cell and Molecular Biology

Faculty Advisor: Dr. Sally G. Pasion

Abstract:

SOLUTION STRUCTURE OF PROTEINS BY MD SIMULATION

By: Qiuting Hong

Chemistry

Faculty Advisor: Dr. Sergio Aragon

THE ROLE OF INDIRECT HYDROPHOBIC INTERACTIONS IN SUBSTRATE
RECOGNITION

By: Raniel Alcantara

Biology

Faculty Advisor: Dr. Teaster Baird, Jr.

UNDERSTANDING THE ROLE OF SWRAA IN SPORULATION IN A SWARMING
STRAIN OF BACILLUS SUBTILIS

By: Rebecca Garcia

Cell and Molecular Biology

Faculty Advisor: Dr. Leticia Marquez-Magaña

THE ROLE OF LEUCOKININ IMMUNOREACTIVITY IN THE TOBACCO
HORNWORM, MANDUCA SEXTA IN THE PROCESS ECDYSIS

By: Roth Ea

Cell and Molecular Biology

Faculty Advisor: Dr. Megumi Fuse

ORDERED TITANIUM DIOXIDE FILMS GROWN ON SELF-ASSEMBLED
MONOLAYERS

By: Shirin M. Usmani, Diana Mars, and Dr. Andrew S. Ichimura

Chemistry

Faculty Advisor: Dr. Andrew S. Ichimura

METABOLOME ANALYSIS OF S. CEREVISIAE

By: Stefan Jenkins

Cell and Molecular Biology

Faculty Advisor: Dr. Lily Chen

CONFORMATIONAL STUDIES OF SGC USING TIME RESOLVED FRET

By: Stephanie Wood

Biochemistry

Faculty Advisor: Dr. Nancy Gerber

THE ROLE OF P53 IN APOPTOSIS OF GASTROINTESTINAL TISSUE STEM
CELLS OF LATE GENERATION TERT $-/-$ MICE

By: Terry Reyes

Cell and Molecular Biology

Faculty Advisor: Dr. Sally G. Pasion

Abstract:

DEALING WITH THE GENDER PARTICIPATION GAP IN SECONDARY SCIENCE
EDUCATION

By: Thomas Jenkinson and Priscilla Owren (Horace Mann Academic Middle School)

Ecology and Systematic Biology

Faculty Advisor: Dr. Kimberly D. Tanner

MICROARRAY ANALYSIS OF HEAT STRESS IN SAMOAN CORALS

By: Tyler Waterson and Dr. Jonathon Stillman

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman

WEB-BASED TOOLS FOR ENHANCING TEACHER PREPARATION PROGRAMS

By: Xinhang Shao and Ngoc Lam-Miller

Computer Science

Faculty Advisor: Dr. Kazunori Okada

A SURVEY THE ENTROPY OF SELF-AVOIDING POLYGONS IN THE SIMPLE
CUBIC LATTICE

By: Zoe Talbot

Mathematics

Faculty Advisor: Dr. Yitwah Cheung, Dr. Rob Scharein, and Dr. Mariel Vazquez

FEEL THE DIFFERENCE: A STUDY OF THE BODY'S RESPONSE TO TACTILE
STIMULI

By: Abraham Reynoso, Joe DeBattista, Ngo Nguyen, and Stephanie Cunningham

Physiology and Behavior Biology

Faculty Advisor: Anne Thilges

FOUNDATION FOR A 20-STORY BUILDING

By: Adamross Lingad, Kimberly Sindac, Timothy Shu, Raul Verduzco

Civil Engineering

Faculty Advisor: Dr. Tim D'Orazio

TRUSS BRIDGE

By: Ahlong Shin, Noris Gomez, Vu Le, Charles Njoroge, and Mesfin Agegnehu

Civil Engineering

Faculty Advisor: Dr. Norman Owen

AIR TRAFFIC CONTROL TOWER

By: Ahmed Thleiji, WenPei Kuang, and Patrick Howell

Civil Engineering

Faculty Advisor: Multu Ozer

Abstract:

DESIGN OF A REVERSIBLY ACTIVATED TRYPSIN VIA AN ENGINEERED METAL BINDING SITE

By: Anna Gubeladze

Biochemistry

Faculty Advisor: Dr. Teaster Baird, Jr.

ROLE OF WNT4 ON MYOGENESIS DURING EARLY EMBRYONIC DEVELOPMENT IN THE CHICK

By: Anthony Eritano

Cellular and Molecular Biology

Faculty Advisor: Dr. Laura W. Burrus

STUDYING SPOOLING-LIKE CONFORMATIONS FOR DNA KNOTS IN WRITHE-DIRECTED ORGANIZATION OF DNA IN PHAGE CAPSIDS OF BACTERIOPHAGE P4

By: Ariff Moolla and Mela Hardin

Biology and Mathematics

Faculty Advisor: Dr. Sally G. Pasion and Dr. Javier Arsuaga

CHARACTERIZATION AND DYNAMICS OF WATER ACCESSIBLE AREAS IN THE HYDROPHOBIC INTERIOR OF PROTEINS USING A COMPUTATIONAL APPROACH

By: Ben Rodriguez

Biochemistry

Faculty Advisor: Dr. Anton Guliaev

THE AVERAGE CROSSING NUMBER OF EQUILATERAL POLYGONS IN CONFINEMENT

By: Benjamin Borgo, Rob Scharein, Yuanan Diao, and Dr. Javier Arsuaga

Applied Mathematics

Faculty Advisor: Dr. Javier Arsuaga

MITOCHONDRIAL DNA STRUCTURE IN TRYPANOSOME

By: Chris Keown

Mathematics

Faculty Advisor: Dr. Javier Arsuaga

SYNTHESIS AND CHARACTERIZATION OF ZEOLITE MFI FILMS USING TPA-F
AND TPA-OH STRUCTURE DIRECTING AGENTS

By: Chris Reaves

Chemistry

Faculty Advisor: Dr. Andrew S. Ichimura

REAL-TIME IMPACT LOGGER & ANALYSIS

By: Christina Phan, Teo Limbo, and Eli Lyons

Electrical Engineering

Faculty Advisor: Dr. Tom Holton

Abstract:

CNG LAWNMOWER

By: Christopher Fernandez, Paul Stelter, and Yeygeuiy Shkelev

Mechanical Engineering

Faculty Advisor: Dr. Kwok-Siong Teh

UNIMODALITY OF ORDER POLYNOMIALS THROUGH THE STUDY OF
EHRHART SERIES OF ORDER POLYTOPES

By: Christopher O'Neill

Mathematics

Faculty Advisor: Dr. Matthias Beck

THE PRESIDIO BEE BIODIVERSITY SURVEY

By: Christopher Quock and Jessica Van Den Berg

Ecology and Systematic Biology

Faculty Advisor: Dr. John Hafernik

THE EFFECTS OF NON-ENZYMATIC GLYCATION ON THE NITRITE
REDUCTASE ACTIVITY OF HEMOGLOBIN

By: Damon Robles, Yadiel K, and Kay Saw

Chemistry

Faculty Advisor: Dr. Raymond Esquerra

SONIC STICK

By: Danny Azar and Ho Yin Chan

Electrical Engineering

Faculty Advisor:

MEMBRANE COMPOSITION AND GENE EXPRESSION DURING THERMAL
ACCLIMATION IN PORCELAIN CRABS

By: Daria Ronges

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman

BROTHERHOOD WAY STORM WATER REMEDIATION

By: David Reber, Nick Birth, Adam Krakow, Mingming Yee, and Alvin Yim
Civil Engineering
Faculty Advisor: Dr. Elahe Enssani

LOW POWER WIRELESS MEDICAL MONITORING SYSTEM

By: Di Lan, William Yu, and Dennison Lorenzana
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang and Dr. Tom Holton
Abstract:

SELF-ASSEMBLED MONOLAYERS TO SUPPORT THE GROWTH OF INORGANIC FILMS

By: Diana Mars and Shirin M. Usmani
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura

MEMBRANE RAFT DISRUPTION IN CHICKEN EMBRYO SKELETAL MUSCLE CELL CULTURES

By: Dianna Baldwin
Zoology
Faculty Advisor: Dr. Wilfred Denetclaw

CHARACTERISTICS OF AN ALUMINUM (III) PHEOPHORBIDE-A SERINE DERIVATIVE AS POTENTIAL USE IN PHOTODYNAMIC THERAPY

By: Diem Huynh
Chemistry
Faculty Advisor: Dr. Ursula Simonis

GROWTH STUDIES OF ORIENTED MFI ZEOLITE FILMS AS A FUNCTION OF TIME

By: Dina Flamik
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura and Dr. Uschi Simonis

SOLAR TRACKER

By: Eugene Russiyanov, Jed Hewitt, and Kate Tun
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang and Dr. Hamid Shannaser

TIMBER ARCH BRIDGE

By: Fabian Gomez, Greg Paulson, Luis Hernandez, Jack Chen, Mikhail Ernakovich, Yonatan Andemariam, Miguel Escudero, and Jose Reynolds
Civil Engineering
Faculty Advisor: Mutlu Ozer

SUPER SCIENCE

By: Gaelen S. Smith, and Alyssa Berry
Physiology and Zoology
Faculty Advisor: Dr. Christopher Moffatt

AUTONOMOUS MICROMOUSE
By: Hailu Keremo, Harrit Bains, and Loon Phang
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang
Abstract:

COMPARATIVE STUDY OF LDH STABILITY IN RESPONSE TO
PHYSIOLOGICAL STRESS ON TROPICAL AND TEMPERATE PORCELAIN
CRABS
By: Haydee Medina
Marine Biology
Faculty Advisor: Dr. Jonathon Stillman

ANNOTATION OF SEVERAL DICISTRONIC GENES IN 12 DROSOPHILID
SPECIES
By: Henry Hunter, Teresa Laird, Christina Staubus, Lala Motlhabi, and Dr. Christopher
D. Smith
Cell and Molecular Biology
Faculty Advisor: Dr. Christopher D. Smith

SYNTHESIS, CHARACTERIZATION, AND SUBCELLULAR LOCALIZATION OF
MITOCHONDRIA-BASED PORPHYRINIC PIGMENTS
By: Hnin Khin
Biochemistry
Faculty Advisor: Dr. Uschi Simonis and Dr. Meden Issac

RAPID SYNTHESIS OF HIGH-ASPECT RATIO ZINC OXIDE NANOWIRES BY A
CATALYST-FREE, LOW-POWER INDUCTIVE HEATING PROCESS
By: Joachim Pedersen
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

BEER BOT: AUTOMATIC BEER POURING MACHINE
By: Jonathan Hughes, Marvic Verzano, and Colin Muschette
Electrical and Mechanical Engineering
Faculty Advisor: Dr. Tom Holton

SYNTHESIS AND CHARACTERIZATION OF AMINO ACID SUBSTITUTED
PHEOPHORBIDES
By: Kara Cross
Chemistry
Faculty Advisor: Dr. Ursula Simonis

THE EFFECTS OF DISSONANT AND CONSONANT MUSIC ON HEART RATE,
EEG BRAIN WAVE PATTERNS, AND GALVANIC SKIN RESPONSE

By: Kristina Millikan, Lisa Wise, Inara Iskenderova, and Farnaz Kholousi

Physiology and Behavior Biology

Faculty Advisor: Anne Thilges

EXPLORING THE REPRODUCIBILITY AND VALIDITY OF COMPARATIVE
QUALITATIVE POLYMERASE CHAIN REACTION

By: Laura Cooper

Biochemistry

Faculty Advisor: Dr. Elizabeth Runquist

Abstract:

INVESTIGATION OF PROTEIN INTERACTIONS THAT CONTROL THE NITRITE
REDUCTASE ACTIVITY OF HEME PROTEINS

By: Lea Lough

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

NADH AND METAL BINDING EQUILIBRIA OF PHENYLACETALDEHYDE

By: Levenlou Vender

Biochemistry

Faculty Advisor: Dr. George Gassner

REDUCTIVE IMMOBILIZATION OF SELENIUM OXYANIONS BY ZERO-
VALENT IRON SURFACES

By: Marisa Miller

Biochemistry

Faculty Advisor: Dr. Bruce Manning

ACCEL-O-MOUSE (CODENAME YODA)

By: Mathew Brady, Victor Mannuel, and Lalesh Sharma

Electrical Engineering

Faculty Advisor: Dr. Hao Jiang

ANAEROBIC DEGRADATION OF ORGANIC CARBON IN AN INTERTIDAL
SEDIMENT: RELATIVE IMPORTANCE OF MAJOR ELECTRON ACCEPTORS

By: Mayu Kawaguchi and Jonathon A. Polly

Chemistry

Faculty Advisor: Dr. Tomoko Komada and Dr. Uschi Simonis

HUMAN POWERED VEHICLE

By: Michael Diep, Ahmed Hassani, and Kevin Ng

Mechanical Engineering

Faculty Advisor: Dr. Kwok-Siong Teh

MECHANISM OF STYRENEOXYGENASE WITH SUBSTRATE ANALOGS AND INHIBITORS

By: Mie Win

Biochemistry

Faculty Advisor: Dr. George Gassner

WIRELESS POWER TRANSFER

By: Mojan Norouzi, David Munguia, Akhil Malik, and Zeeshan Ali

Electrical Engineering

Faculty Advisor: Dr. Hao Jiang

Abstract:

JET ENGINE

By: Patrick Moore, Nicholas Ng, and Nick Certo

Mechanical Engineering

Faculty Advisor: Dr. Kwok-Siong Teh and Dr. A. S. Ed Cheng

CONSTRUCTION OF LATTICE KNOTS FROM THE GAUSS CODE

By: Nicholas Normandin

Mathematics

Faculty Advisor: Dr. Mariel Vazquez

SMART MAGNETIC CARD READER FOR THE SCIENCE BUILDING

By: Noppol Setbol, Akeem Abodunrin, and Ronnie Roraldo

Computer Engineering

Faculty Advisor: Dr. Hamid Shahnasser

THE ELECTRIC MOTORCYCLE PROJECT

By: Oliver Burke and David Shirling

Mechanical Engineering

Faculty Advisor: Dr. Kwok-Siong Teh and Dr. A. S. Ed Cheng

WORK IN PROGRESS

By: Paula Robinson

Physiology and Behavior Biology

Faculty Advisor: Dr. Jonathon Stillman

GUIDING AND ROUTING LIGHT ALONG DEFECT CHANNELS: FROM IMPERFECTION TO PERFECTION.

By: Ratna Lama

Physics

Faculty Advisor: Dr. Zhigang Chen

CHICKEN EMBRYO DEVELOPMENT: REGIONAL AND TEMPORAL DEVELOPMENT OF SOMITES

By: Remy Binder and Meghan Lane
Cell and Molecular Biology
Faculty Advisor: Dr. Wilfred Denetclaw

DEVELOPMENT OF A NEW FIELD METHOD FOR DETERMINATION OF
ARSENIC IN DRINKING WATER USING ION EXCHANGE RESINS AND
HANDHELD X-RAY FLUORESCENCE ANALYZER

By: Rene L. Johnson and Peter E. Baker
Biochemistry
Faculty Advisor: Dr. Pete T. Palmer
Abstract:

ARE SEASTARS OF THE GENUS LEPTASTERIAS SEPERATED BY HABITAT IN
THE ROCKY INTERTIDAL OF NORTHERN CALIFORNIA? AN ANALYSIS OF
MITOCHONDRIAL DNA AND MORPHOLOGY

By: Richard Coleman, Alyssa Lai, and Ashley Smith
Marine Biology
Faculty Advisor: Dr. Sarah Cohen

PROGRESSIVE METAL STAMPING DIE

By: Richard Moore
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

HIGH SPEED RAIL STATION

By: Robert Halliday, Colin Kemper, Lucas Zimmer, Marjess Tacoban, Shiraz Muzaffar,
and Sunia Malolo
Civil Engineering
Faculty Advisor: Dr. Wenshen Pong

INTRODUCING NOVEL SUBSTRATE SELECTIVITY INTO TRYPSIN THROUGH
REDESIGN

By: Sayeeda Najibi
Biochemistry & Cell and Molecular Biology
Faculty Advisor: Dr. Teaster Baird, Jr.

SOLAR POWERED BATTERY CHARGER

By: Scott Siordia, Yves Fotso, James Carolino, and Kris Quismorio
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

NEW SFSU ENGINEERING HALL

By: Sean Jaime, James Go, Carrie King, and Tiffany Chin
Civil Engineering
Faculty Advisor: Dr. Wenshen Pong

SYNTHESIS OF AN ARGININE SUBSTITUTED PEOPHORBIDE-A AS EFFECTIVE
PHOTOSENSITIZERS FOR PHOTODYNAMIC THERAPY (PDT)

By: Soohwan Kim

Chemistry

Faculty Advisor: Dr. Uschi Simonis

SURFACE CHEMISTRY UNDER PHOTOLYSIS

By: Stéphanie Cherdo

Chemistry

Faculty Advisor: Dr. Andrew S. Ichimura

Abstract:

INVERTED PENDULUM ROBOT

By: Tim Wang and Curtis Hilger

Electrical Engineering

Faculty Advisor: George Anwar

GEOTECHNICAL ENGINEERING OF FOUNDATION DESIGNS

By: Travis Haft, Radoslaw Stamcher, Devon Crowe, and Stephen Jo

Civil Engineering

Faculty Advisor: Dr. Tim D'Orazio

HECKE OPERATORS ON PALINDROMIC POLYNOMIALS

By: Whitney Zeldow

Mathematics

Faculty Advisor: Dr. Matthias Beck

THE PLIOCENE RESPONSE TO WARMER THAN MODERN SEA SURFACE
TEMPERATURES IN COASTAL UPWELLING REGIONS

By: Zi Zi Searles

Geology

Faculty Advisor: Dr. Petra Dekens

cam in office 4/15 wanting to register

By: Rozaliya Rangelova

Faculty Advisor: