The College of Science & Engineering

16th annual

STUDENT PROJECT SHOWCASE
& ALUMNI RECEPTION

LIST OF WINNERS

Friday, May 9, 2014
San Francisco State University
Thank you for your generous financial support toward the 2014 Student Project Showcase!

Kenson Ventures
Robert W. Maxwell

9 FIRST PLACES — $400 each
9 SECOND PLACES — $300 each
9 THIRD PLACES — $200 each
9 FOURTH PLACES — $125 each
14 HONORABLE MENTIONS — $75 each

50 PRIZES TOTAL = $10,275.00
FIRST PLACE
Entry Number: 15 GB
DO YOU SEE WHAT I SEE? THE ROLE OF IMPLICIT BELIEFS IN PERCEIVING A STEREOTYPIC VERSUS COUNTER STEREOTYPIC BLACK MALE
By: Sierra P. Niblett, Eric D. Splan, Monica E. Mendoza, Patrick J. Hibberd, Michael I. King, Dr. Avi Ben-Zeev, and Dr. Mark W. Geisler
Cognitive Psychology
Faculty Advisors: Dr. Avi Ben-Zeev and Dr. Mark W. Geisler

SECOND PLACE
Entry Number: 5 GB
SELF-COMPASSION AS A MODERATOR OF THE RELATIONSHIP BETWEEN BULLYING AND DEPRESSION
By: Susan S. Mauskopf and Dr. Jeffrey T. Cookston
Developmental Psychology
Faculty Advisor: Dr. Jeffrey T. Cookston

THIRD PLACE
Entry Number: 12 GB
SUBLIMINAL PRIMING OF SPONTANEOUSLY EXPERIENCED MEMORIES
By: Lara Krisst, Allison Allen, Meredith Lanska, and Dr. Ezequiel Morsella
Psychology
Faculty Advisor: Dr. Ezequiel Morsella

FOURTH PLACE
Entry Number: 17 GB
THE ROLE OF EMOTIONAL EXPRESSIVITY ON THE RELATIONSHIP BETWEEN COLLECTIVISM AND SOCIAL ADJUSTMENT
By: Frank Du, Amy Tran, and Dr. Seung Hee Yoo
Social Psychology
Faculty Advisor: Dr. Seung Hee Yoo
FIRST PLACE
(Kenson Ventures Excellence Awards)
Entry Number: 40 GL
GROWTH AND PHYSIOLOGICAL RESPONSE OF JUVENILE TIDEWATER GOBY TO INTERSPECIFIC COMPETITION
By: Daniel Chase and Dr. Anne Todgham
Physiology & Behavioral Biology
Faculty Advisor: Dr. Anne E. Todgham

SECOND PLACE
Entry Number: 31 GL
INVESTIGATING UNDERGRADUATE BIOLOGY MAJORS' PERFORMANCE ON THE BIOLOGY CARD SORTING TASK
By: Elijah Combs and Dr. Kimberly Tanner
Microbiology
Faculty Advisor: Dr. Kimberly Tanner

THIRD PLACE
Entry Number: 36 GL
INVESTIGATING NOVICE AND EXPERT EXPLANATIONS OF GMOS: HOW DO UNDERGRADUATE STUDENTS CONCEPTUALIZE MACROSCOPIC BIOLOGICAL PHENOMENA ENCOUNTERED IN DAILY LIFE?
By: Lisa Turk and Dr. Kimberly Tanner
Ecology & Systematic Biology
Faculty Advisor: Dr. Kimberly Tanner

FOURTH PLACE
Entry Number: 30 GL
A MYSTERIOUS ENZYME IS KEY IN UNCOVERING THE PATHWAY BEHIND ARCHAEAAL AMMONIA OXIDATION
By: Donne Estipona, Dr. Robert Yen, and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre
HONORABLE MENTIONS

Entry Number: 20 GL
CD13-POSITIVE SELECTION OF HUMAN ADIPOSE-DERIVED STROMAL CELLS CAN ENHANCE BONE FORMATION
By: Christopher Duldulao and Dr. Michael Longaker (Stanford)
Stem Cell Science
Faculty Advisors: Dr. Lily Chen and Dr. Carmen Domingo

Entry Number: 29 GL
PUTATIVE PROTAMINES, SPCH-1/2/3 PLAY A ROLE IN FERTILITY
By: Jennifer Gilbert, Dana Byrd, Jordan Berry, Vanessa Cota, and Dr. Diana Chu
Cell & Molecular Biology
Faculty Advisor: Dr. Diana Chu

Entry Number: 37 GL
OPISTHOBRANCH POPULATIONS INSIDE AND OUTSIDE CALIFORNIA’S MARINE PROTECTED AREAS
By: Victoria Kentner
Ecology & Systematic Biology
Faculty Advisor: Dr. Terry Gosliner
FIRST PLACE
Entry Number: 73 GP
STATISTICAL ANALYSIS OF GLYCOPROTEIN DATA IN BREAST CANCER CELLS
By: Spencer Bowen
Mathematics
Faculty Advisor: Dr. Alexandra Piryatinska and Dr. Leslie Timpe (Chemistry & Biochemistry)

SECOND PLACE
Entry Number: 54 GP
LOW-POWER COMPARATOR CIRCUIT FOR SWITCH BASED WIRELESS POWER TRANSFER IN IMPLANTS
By: Casey Hardy and Dr. Hao Jiang
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

THIRD PLACE
Entry Number: 77 GP
MEASURING DARK MATTER IN GALAXY CLUSTERS WITH WEAK GRAVITATIONAL LENSING
By: Angela Berti
Astrophysics
Faculty Advisor: Dr. Andisheh Mahdavi

FOURTH PLACE
Entry Number: 66 GP
THE TECTONOMETAMORPHIC EVOLUTION OF THE GREATER HIMALAYAN SEQUENCE ALONG THE ZANSKAR SHEAR ZONE, NW INDIA
By: Seniha Ozum Basta, Theodore D. Burlick, Emma N. Beck, and Dr. Mary L. Leech
Geology
Faculty Advisor: Dr. Mary L. Leech
HONORABLE MENTIONS

Entry Number:  46 GP
HYDROTHERMAL SYNTHESIS OF TITANIUM DIOXIDE
THIN FILMS EXHIBITING PREFERRED <001> ORIENTATION ON
FLUORINE-DOPED TIN OXIDE FOR
DYE-SENSITIZED SOLAR CELL APPLICATIONS
By: Peter F. Slattery
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura

Entry Number:  47 GP
L1 NORMALIZED GRAPHICAL MODELS
OF RESIDUE INTERACTION NETWORKS FOR ENGINEERED PROTEINS
By: Trevor Gokey
Computing for Life Science
Faculty Advisor: Dr. Anton Guliaev (Chemistry)

Entry Number:  60 GP
EMBEDDED WIRELESS SENSOR NETWORK FOR
ENVIRONMENT MONITORING
By: Vinay B. Raghavan
Embedded Electrical & Computer Systems
Faculty Advisor: Dr. Hamid Shahnasser

Entry Number:  69 GP
TRIANGULATIONS OF GALE DUALS OF ROOT POLYTOPES
By: Hannah Winkler
Mathematics
Faculty Advisors: Dr. Federico Ardila and Dr. Matthias Beck

Entry Number:  75 GP
CALIBRATION AND FIRST IMAGES FROM
THE REFURBISHED LEUSCHNER 30-INCH TELESCOPE
By: Adam Fries, Eileen Gonzales, Dr. Adrienne Cool, Nabeel Naqvi, and Dana Zhu
Astronomy
Faculty Advisor: Dr. Adrienne Cool
FIRST PLACE
Entry Number: 82 UB
RESPONSE INTERFERENCE DURING WORKING MEMORY-BASED ACTION CONTROL: A NEW INTERFERENCE PARADIGM FOR NEUROIMAGING
By: Andrew C. Garcia, Dr. Mark W. Geisler, and Dr. Ezequiel Morsella
Psychology
Faculty Advisors: Dr. Mark W. Geisler and Dr. Ezequiel Morsella

SECOND PLACE
Entry Number: 81 UB
THE ASSOCIATION OF EMOTION REGULATION STYLE AND CONFLICT BEHAVIORS IN RELATIONSHIPS
By: Alina Belohlavek and Donish Cushing
Psychology
Faculty Advisor: Dr. Sarah Holley

THIRD PLACE
Entry Number: 90 UB
THE UNHAPPY HEDONIST: EXPLORING THE TENDENCY TO SACRIFICE FOR PLEASURE
By: Masha Ksendzova, Ravi Iyer, Graham Hill, and Dr. Ryan Howell
Psychology
Faculty Advisor: Dr. Ryan T. Howell

FOURTH PLACE
Entry Number: 89 UB
JESUS IN THE CLOUDS: CONTEXT AND PRIMING EFFECTS ON THE PERCEPTION OF AMBIGUOUS STIMULI
By: Lyndsey Wallace
Psychology
Faculty Advisor: Dr. Margaret F. Lynch
Undergraduate Biological Science Division

GROUP 1

FIRST PLACE
Entry Number: 111 UL
RECONSTRUCTION OF THE DIVISOME COMPLEX IN THERMOMICROBIUM SPEC. HL1 WITH COMPARATIVE GENOMIC STUDIES OF THL1, ITS CLOSEST RELATIVES AND E.COLI
By: Julia Philipp and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre

SECOND PLACE
Entry Number: 119 UL
CARBON MONOXIDE METABOLISM IN THERMOMICROBIUM SP. HL1
By: Travis Doty and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre

THIRD PLACE
Entry Number: 108 UL
FLAGELLAR PROTEINS IN NONMOTILE THERMOMICROBIUM HL1
By: Eric Lee
Microbiology
Faculty Advisor: Dr. José R. de la Torre

FOURTH PLACE
Entry Number: 122 UL
CAROTENOID SYNTHESIS PROTEINS IN THERMOMICROBIUM SP. HL1 AND ITS ROLE IN MEMBRANE STABILIZATION FOR THERMOPHILIC SPP.
By: Yuji Gomikawa and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre
HONORABLE MENTIONS

Entry Number: 103 UL
*THERMOMICROBIUM SP. HL1 SYNTHESIZES COENZYME A THROUGH AN ALTERNATIVE PATHWAY: COMBINING L-VALINE AND SPERMIDINE METABOLISM*
By: Austin Spencer Lee and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre

Entry Number: 115 UL
*HOW DOES THERMOMICROBIUM SP. HL1 MOVE?*
By: Ryan Wicorek and Dr. José R. de la Torre
Microbiology
Faculty Advisor: Dr. José R. de la Torre
GROUP 2

FIRST PLACE
(Kensong Ventures Fong Excellence Award)
Entry Number: 144 UL1
CORRECTING MISCONCEPTIONS ABOUT HEART ATTACKS:
A NOVEL APPROACH TO DEMONSTRATE
THE ANATOMY OF A HEART ATTACK
By: Eryk Hakman
Physiology & Behavioral Biology
Faculty Advisor: Gloria Nusse

SECOND PLACE
Entry Number: 126 UL1
IDENTIFYING THE ROLE OF WNT LIGANDS IN NEURAL TUBE CLOSURE
By: Carl Grim, Christopher Pineda,
Shea Feeney, Lisa Galli,
and Dr. Laura Burrus
Cell & Molecular Biology
Faculty Advisor: Dr. Laura Burrus

THIRD PLACE
Entry Number: 140 UL1
DECREASING B-CELL FUNCTION IN
OVERWEIGHT LATINO CHILDREN WITHIN
NORMAL FASTING GLUCOSE PARAMETERS
By: Monet Jimenez, Dr. Claudia Toledo-Corral (USC),
and Dr. Micheal Goran (USC)
Cell & Molecular Biology
Faculty Advisors: Dr. Claudia Toledo-Corral (USC) and Dr. Frank Bayliss

FOURTH PLACE
Entry Number: 138 UL1
EFFECTS OF ELEVATION CHANGE ON SURVIVORSHIP
OF PRISTIMANTIS PLATYDACTYLUS INFECTED BY
Batrachochytrium dendrobatidis (BD)
By: Linett Rasmussen
Marine Biology
Faculty Advisor: Dr. Vance Vredenburg
HONORABLE MENTIONS

Entry Number: 129 UL1
EPOTHILONE B AND PACLITAXEL DISPLAY SYNTHETIC LETHAL INTERACTIONS WITH SAC COMPROMISED CELLS WITHIN THE D. MELANOGASTER COMPOUND EYE
By: Torey Jacques and Dr. Blake Riggs
Cell & Molecular Biology
Faculty Advisor: Dr. Blake Riggs

Entry Number: 131 UL1
FACTORS REGULATING EPS-I PRODUCTION CONFER A COMPETITIVE ADVANTAGE DURING SYMBIOSIS BETWEEN SINORHIZOBIUM MELILOTI AND ALFALFA
By: Julian Bustamante and Dr. Joseph Chen
Microbiology
Faculty Advisor: Dr. Joseph Chen
GROUP 3

FIRST PLACE
Entry Number: 160 UL2
NITRIC OXIDE AND ITS ROLE IN PHOTODYNAMIC THERAPY
By: Marco Monroy, Pooncharas Tipgunlakant, Dr. Raymond Esquerra, and Dr. Ursula Simonis
Biochemistry
Faculty Advisor: Dr. Raymond Esquerra

SECOND PLACE
Entry Number: 149 UL2
CHARACTERIZING THE EFFECT OF PORCUPINE ON NEURAL TUBE CLOSURE
By: Shea Feeney, Lisa Galli, Gina Pay, and Dr. Laura Burrus
Biochemistry and Cell & Molecular Biology
Faculty Advisor: Dr. Laura Burrus

THIRD PLACE
Entry Number: 152 UL2
DETERMINING THE ROLE(S) OF PRIME-SIDE RESIDUES IN MACROMOLECULAR INHIBITION OF TRYSIN-FOLD SERINE PROTEASES
By: Commodore St. Germain and Anna Batt (USC)
Biochemistry
Faculty Advisor: Dr. Teaster Baird Jr.

FOURTH PLACE
Entry Number: 166 UL2
ADSORPTION BEHAVIOR OF ARSENIC (III) AND (V) ON SOIL
By: Lucas Alameda and Yan Zhao
Biochemistry and Chemistry
Faculty Advisor: Dr. Bruce Manning

HONORABLE MENTION
Entry Number: 161 UL2
USING TITANOSILICATE (TS-1) ZEOLITE TO MAKE LIGHT HYDROCARBONS FROM WATER AND CARBON DIOXIDE
By: Navid Singhrao and Dr. Andrew S. Ichimura
Biochemistry
Faculty Advisor: Dr. Andrew S. Ichimura
GROUP 1

FIRST PLACE
Entry Number: 179 UP1
MAPPING SITE-SPECIFIC RECOMBINATION IN CIRCULAR DNA
By: Robert Stolz and Dr. Mariel Vazquez
Applied Mathematics
Faculty Advisor: Dr. Mariel Vazquez

SECOND PLACE
Entry Number: 171 UP1
METHANE PRODUCTION IN ANOXIC CONTINENTAL MARGIN SEDIMENTS: INSIGHTS FROM ISOTOPE PROFILES OF DISSOLVED INORGANIC CARBON (DIC)
By: Abraham King Cada, Huan Lei Li, David J. Burdige, and Dr. Tomoko Komada
Chemistry
Faculty Advisor: Dr. Tomoko Komada

THIRD PLACE
Entry Number: 174 UP1
OBSERVATIONS OF LIVING-ROOF CARBON, WATER VAPOR AND HEAT EXCHANGES USING EDDY COVARIANCE
By: Ryan Thorp, Siobhan Lavender, and Kendra Hauser
Atmospheric Sciences and Geography
Faculty Advisor: Dr. Andrew Oliphant
FOURTH PLACE
Entry Number: 173 UP1
DRY DEPOSITION PATTERNS AND SHORT-TERM TEMPERATURE EFFECTS OF ANTHROPOGENIC BLACK CARBON EMISSIONS IN NORTHERN CALIFORNIA
By: Ryan Ford and Dr. Dave Dempsey
Geology
Faculty Advisor: Dr. Dave Dempsey

HONORABLE MENTION
Entry Number: 184 UP1
CONCUSSION ANALYZING HELMET
By: Brandon Boggs, Jose Gudino, Kristopher Ling, and Dr. Thomas Holton
Electrical and Computer Engineering
Faculty Advisor: Dr. Thomas Holton
GROUP 2

FIRST PLACE
Entry Number: 189 UP2
LASER HEATING SYSTEM USED IN HIGH PRESSURE X-RAY DIFFRACTION EXPERIMENTS
By: Aaron Treger
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

SECOND PLACE
Entry Number: 200 UP2
ROLL UP BRIDGE
By: Erasmo De Luna, Michael J. Bradley, Cristian Fernandez, Eric Agnes, Mersedeh H-Javid, Marco Cruz, Rizwan Satti, Tianlong Liu, Xiaofan Zhang, Pengjie Du, Guodong Xuan, Yang Chao, Chunfeng Xue, and Yi Liu
Civil Engineering
Faculty Advisor: Dr. Timonthy D'Orazio

THIRD PLACE
Entry Number: 196 UP2
AUTOMATIC PH SOIL MAPPING SYSTEM
By: Patrick Lewis, Davinder Kuqi, Dirajh Singh, Tayfun Selamoglu, and Jesse Cary
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

FOURTH PLACE
Entry Number: 198 UP2
RELIABILITY ASSESSMENT OF REAL-TIME HYBRID SIMULATION FOR TIME-DELAYED MDOF STRUCTURES
By: Frank Sanchez
Civil Engineering
Faculty Advisor: Dr. Cheng Chen