DISPLAY (in front of Duncan Hall stairs)

1. **A New Mobile Facility for Studying Wildfires.**
Faculty: Craig B. Clements
Department of Meteorology and Climate Science

POSTERS
Department of Biological Sciences

2. **Circulating Plasmablasts Expressing α4β7/CCR10/P-sel lig Rise in Pediatric Ulcerative Colitis Patients.**

Nicole Tarlton, Caroline Green

Faculty: Tzvia Abramson

Collaborators: Eugene Butcher (Stanford)

3. **Differential and Temporal Immunomodulation of Integrin Receptors on Memory T Cells by *Bordetella pertussis* and *Bordetella parapertussis* Infection in Mice.**
Tuan M. Nguyen, Dipti Ravindra, Ryan Ferguson Chris Sequiera
Faculty: Tzvia Abramson

4. **Genetic Analysis of Vulnerable Dugong (*Dugong dugon*) Populations in Thailand.**
Kyle Martin, Jessie Bushell
Faculty: Leslee Parr, Joshua Mackie

5. **Bromoperoxidase Production By Bacteria Associated With the Marine Acorn Worm, *Ptychodera jamaicensis.***
Michelle Levish, June Shinseki, Mimi Ngo
Faculty: Sabine Rech

6. **Investigation of the Role of Dietary Flavonoids on Cell Death: Evidence to Support a Non-apoptotic Mechanism.**
Tetiana Lialiutska, Nhi Ngo
Faculty: Brandon White

7. **Determining Intracellular Concentrations of Flavonoids in MDA-MB-231 Cells Using Mass Spectrometry.**
Anh Pham, Sina Yadegarynia
Faculty: Brandon White

8. **Identifying Novel Protein Interactions with Mastermind Family of Proteins.**
Anthony Bortolazzo, Christine Ha, Asmara Hoo
Faculty: Brandon White

9. **A Morphological Study of *Eriogonum nortonii* and Implications for its Biogeography**
Lisa D. Morton
Faculty: Rodney Myatt and Susan Lambrecht

10. **Plasticity of Morphological Traits of *Leptosiphon androsaceus* (Polemoniaceae) Across a Moisture Gradient.**
Rachel Hussey
Faculty: Susan Lambrecht

Department of Biological Sciences

11. Effects of Two Classes of Analgesics on Estrous Cyclicity and Angiogenesis in Transplanted Ovarian Tissue in Aged Mice.
Anna Le, Dinaz Lahewala
Faculty: Shelley Cargill

12. The Effect of Post-operative Administration of Meloxicam and Buprenorphine on Transplanted Mouse Ovary Surface Vascularization.
Christine Petrovec
Faculty: Shelley Cargill

13. Microarray Expression Analysis in a Drosophila Model of Fetal Alcohol Syndrome, and the Role of the EGFR Pathway.
David Do, Peter Luu, Luke LaJoie, and Brianna Hagen
Faculty: Rachael L. French

14. The Role of Oxidative Stress in a *Drosophila* Model of Fetal Alcohol Spectrum Disorders.
Theresa Logan, Melissa Ruiz, and Omar Fateen
Faculty: Rachael L. French

15. Metagenomic Analyses of Human Related Bacteria Using a Large Insert Library.
Michael Abrams, Eamon Vandaei, Diana Romero, Vinh Nguyen
Faculty: Cleber Ouverney

16. Prevalence of TM7a in Human Subgingival Plaque.
Farsheed Ghadiri, Iana Vinnichenco, Jamsheed Ghadiri, Jorge Dinis, David Barton
Faculty: Cleber Ouverney

17. *Chloroflexi,* the Saga of a Bacterium Found in Human and Environmental Habitats.
Jayashree Sanjeeviraman, Parisa Kosha, Adam Caldwell
Faculty: Cleber Ouverney

18. An Investigation into the Affects of Neuronal Activity on Proper Neural Connectivity in *C. elegans*.
Benjamin Barsi-Rhyne, Kristine Miller, Alex Lincoln, Christopher Vargas, Asia Guevera, Joori Park, Emma Holdrich
Faculty: Miri VanHoven

19. Understanding the Molecular Mechanisms that Mediate Axon Outgrowth Termination in *C. elegans.*
Johann Zaroli, Minh Pham, William Wung, Anabel Ortiz, Kelli Benedetti, Phil Knezevich, Joori Park, Nathan Cook, Jessica Jarecki
Faculty: Miri VanHoven

20. The Investigation of the UNC-6/Netrin UNC-40/DCC-mediated Synaptic Partner Recognition Pathway in *C. elegans.*
Kelli Benedetti, Aruna Varshney, Akshi Goyal, Dianicha Santana, Pooja Prasad
Faculty: Miri VanHoven

Department of Chemistry

21. **An Optimized Procedure for Separation of Components of Jack3D (Pre-Workout Energy and Focus Drink) by Aqueous Normal Phase (ANP) High Performance Liquid Chromatography with Mass Spectrometry (MS) Detection.**
Rosie Le
Faculty: Joseph J. Pesek and Maria T. Matyska-Pesek

22. **Separation of Water-soluble Vitamins by Aqueous Normal Phase (ANP) High Performance Liquid Chromatography with Ultra-violet (UV) and Mass Spectrometry (MS) Detection: Method Transfer from UV to MS System.**
Hong Nguyen
Faculty: Joseph J. Pesek and Maria T. Matyska-Pesek
Collaborators: Josh Young (Microsolv Tech. Corp., Eatontown, New Jersey)

23. **HPLC Analysis of Asymmetric Dimethylarginine in Blood Plasma.**
Alejandra I. Hasbún, Vy Phan, Zahra Mehr
Faculty: Joseph Pesek, Maria Matyska-Pesek

24. **Determination of Bisphenol A in Receipts by HPLC UV-Vis Detection.**
Andy Dang
Faculty: Joseph J. Pesek, Maria Matyska-Pesek

25. **Reproducibility Reactions of Alginate Gel Encapsulated Bromoperoxidase.**
Daniel Pacheco, Quoc Dang, Thu Le, & John Kim.
Faculty: Roy Okuda

26. **Changes in Valine Solubility as a Function of Different Salt and Osmolyte Solutions.**
Sandra Gattas
Faculty: Daryl K. Eggers

27. **Solute Effects on Apomyoglobin Encapsulated in a Doped Propyl-methyl-phosphonate Silica Matrix.**
Thomas Williams
Faculty: Daryl K. Eggers

28. **A Model System for Measuring Low Affinity Lectin Binding.**
Phillip J. Calabretta
Faculty: Daryl K. Eggers and Marc d'Alarcao
Collaborators: Krishna Kumar, Gizem Akcay, John Ramphal

29. **Design of a Tight-binding Flavonoid-based Caspase-3 Inhibitor.**
Caitlin Crowder
Faculty: J. Brandon White and Marc d'Alarcao
Collaborators: Thomas Young

30. **Surface Film Formation Conditions in Mixtures of Organics and Sulfuric Acid at Upper Troposphere/Lower Stratosphere Acidities.**
Nathan Feick, Jeffrey Berry, Saul Pérez Montaño, Kieu Ha, Linda Leong, Hoang Le, Khaled Khaled, Riyanto Dwisaksono
Faculty: Annalise Van Wyngarden
Collaborators: Laura Iraci (NASA Ames Research Center)

Department of Chemistry

31. Chemical Composition of Surface Films Formed on Mixtures of Organics and Sulfuric Acid at Upper Troposphere/Lower Stratosphere Acidities.
Saul Pérez Montaño, Linda Leong, Kieu Ha, Jeffrey Berry, Nathan Feick
Faculty: Annalise Van Wyngarden
Collaborators: Laura Iraci (NASA Ames Research Center); Deborah Gross and Keven Tell (Carleton College)

32. Consideration of Non-Canonical Densely Packed Elements in the Prediction of Protein Surface Residues
Trung Nguyen, Jocelyn Fuentecilla, Frank Nguyen, John Resngit, Reecha Nepal, Radhika Mishra
Faculty: Brooke Lustig

33. Speciation, Photophysical, and Chiral-Optical Properties of Europium(III) - Tetracycline Species.
Kirandeep Deol
Faculty: Gilles Muller

34. Observing Monolayer and Binary Monolayer Formation Through Surface Plasmon Resonance Coupled with Electrochemistry.
Chris Hoff
Faculty: Dr. Roger Terrill

35. Porosimetry Analysis of Thin Films by way of Infrared and Visible Spectroscopy.
Brian W. Olson,
Faculty: Roger Terrill

36. Synthesis and Characterization of a Series of Ru(II) Photosensitizers.
Sudharsan Dwaraknath, Sarah Lee, Diana Lee
Faculty: Lionel Cheruzel

37. Series of Hybrid P450 Enzymes as Light Activated Biocatalysts.
Ngoc-Han Tran, Angelina Nguyen, Thien-Anh Nguyen, Jeremiah Heredia, Daniel Nguyen, Maxine Nguyen, Ngoc Huynh
Faculty: Lionel Cheruzel

38. Computational Fluid Dynamics Modeling of Microdroplets.
Katrina J. Donovan
Faculty: Bradley M. Stone
Collaborators: Andrew J. deMello, Xize Niu, Xavier Casadevall i Solvas (all Department of Chemistry, Swiss Federal Institute of Technology, Zurich, Switzerland); Shelli Gulati (University of Pacific, Stockton, CA)

Department of Computer Sciences

39. **Evaluating TCP for Video Streaming Over the Clouds.**
Ralph Alvarez-Horine
Faculty: Melody Moh

40. **An Improved P2P Streaming Protocol for Vehicular Networks.**
Zhi Yao (Ray) Xie
Faculty: Melody Moh

41. **Enhancing TCP over 6LoWPAN (IPv6 over Low Power Wireless Personal Network) for Multi-Hop Networks.**
Shiro Sakurai
Faculty: Melody Moh

42. **Financial Stock Market Forecast Using Data Mining Techniques.**
Sachin Kamath
Faculty: Teng Moh

43. **Identifying Influential Bloggers.**
Shola SivaNaga Prasad
Faculty: Teng Moh

44. **Face Detection from Images Using Support Vector Machine.**
Parin M Shah
Faculty: Teng Moh

45. **Metamorphic Worm that Carries Its Own Morphing Engine.**
Sudarshan Madenur Sridhara
Faculty: Mark Stamp

46. **Transposition Cryptanalysis of the Zodiac 340 Cipher.**
Tatiana Braginets
Faculty: Mark Stamp

47. **Online Test Monitoring.**
Sumit Kumar
Faculty: Mark Stamp

Department of Geology

48. **Preliminary Analysis of Borosilicate Minerals in Pegmatitic Leucosomes within Aluminous Granulites at Ledge Mountain, Central Adirondack Highlands, New York.**

Susan M. Gervais

Faculty: Ellen P. Metzger

49. **Intrusive Relationships and Deformation of Mafic and Tonalitic Rocks in Part of the Seven Fingered Jack Pluton.**
Kelly Dustin
Faculty: Robert Miller

Department of Geology

50. **Geochronology and Trace Element Analysis of Peach Spring Tuff Zircons and Their Bearing on Growth of the Peach Spring Tuff Magma Chamber and Eruption.**
Marsha Lidbarski
Faculty: Jonathan Miller
Collaborators: Calvin Miller[2], Joseph L. Wooden[3], Jorge A.Vazquez[4], Ayla S. Pamucku[2], Tamara L. Carley[2], Guilherme A.R. Gualda[2]
(2) Department of Earth and Environmental Sciences, Vanderbilt University, Nashville, TN 37235, (3) Geological and Environmental Sciences, Stanford University, Stanford, CA 94305, (4) U.S. Geological Survey, 345 Middlefield Road MS 910, Menlo Park, CA 94025

51. **Thermal and Compositional Evolution of the Mid-Miocene Searchlight Magmatic System Recorded by Zircon.**
Brent Johnson
Faculty: Jonathan Miller
Collaborators; Calvin Miller[2], Joseph L. Wooden[3], Lindy Colombini[2]
(2) Department of Earth and Environmental Sciences, Vanderbilt University, Nashville, TN 37235, (3) Geological and Environmental Sciences, Stanford University, Stanford, CA 94305

Department of Mathematics

52. **New Partition Algorithms For 1-D Event Data.**
Sarah Bass, Katarina Gagic, Anh Nguyen, Charlie Petersen, Jim Quach, Jonathan Reyles, Cliff Sandwick, Karen Wu
Faculty: Tim Hsu
Collaborator: Jeff Scargle (NASA Ames Research Center)

Department of Meteorology and Climate Science

53. **Observations of Atmospheric Turbulence Within and Above Canopy Layers During Low-Intensity Prescribed Fires.**
Daisuke Seto
Faculty: Craig Clements
Collaborator: Tara Strand (USDA Forest Service Pacific Northwest Research Station)

54. **A Synoptic Overview of Diablo Winds.**
Jonathan M. Contezac
Faculty: Craig B. Clements

55. **Using ARM Weather Observations to Evaluate NCAR's Community Land Model.**
Terrence J. Mullens, Henry D. Bartholomew
Faculty: Menglin S. Jin

56. **An Analysis of Soil Moisture Diurnal and Annual Variations using ARM Data.**
Henry D. Bartholomew, Menglin S. Jin, Terrence J. Mullens
Faculty: Henry D. Bartholomew

57. **Doppler Lidar and Microwave Profiler Observations of Atmospheric Density Currents.**
Neil Flaiz
Faculty: Craig Clements and Sen Chiao

Department of Meteorology and Climate Science

58. WRF Simulations of Severe Downslope Winds and Rotor Events in Las Vegas.
Angela Reside
Faculty: Dr. Sen Chiao

Department of Physics and Astronomy

59. Design and Construction of an Efficient Electro-Optic Modulator.
Greta Babakhanyan
Faculty: Peter Beyersdorf

60. Polarization Based Shearing Interferometry with Homodyne Detection for Measuring Mirror Curvature and Deformations.
Mark Cordier
Faculty: Peter Beyersdorf

61. Precursor Effects: ME-muSR studies of EuBCO superconductivity near Tc, and of earthquake-like hole-behavior in MgO.
Rudi Schwartz, Ashley Love (both SJSU) and Rashmi Raviprasad (Lynbrook HS)
Faculty: C Boekema and F Freund (NASA)
Collaboration: MC Browne (SLAC)

62. Perchlorate on Mars: Implications for Organic Detection and Decomposition.
Hana Martucci, Daniel Pacheco
Faculty: Monika Kress
Collaborators: Richard Quinn (NASA Ames and SETI Institute), Cynthia Phillips (SETI Institute)

63. Characterization of Mars Analog Rocks on Kauai and their Potential Applications to Mars.
Amanda Aguilera
Faculty: Monika Kress
Collaborators: Janice Bishop and Cynthia Phillips (SETI Institute)

64. Earthquake Prediction by Detection of Charge Carriers in Rocks.
Daniel Jednorozec
Faculty: Monika Kress
Collaborators: Friedmann Freund (SETI Institute)

Acknowledgements:

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Congratulations and thanks to all the hard working undergraduate and graduate students and their faculty mentors who presented their work today!