Many SJSU students work with College of Science faculty on original scientific research projects. The Student Research Day is a public display of some of the wide variety of research projects from all Departments in the College. The student researchers and faculty will be present to answer questions.

In addition, tours of specific laboratories in Duncan Hall will be available.

Friday, May 5, 2006
Duncan Hall (ground level)

PROGRAM
10:00am to Noon  Poster Session One
Noon to 2pm  Poster Session Two

Sponsored by:
SJSU College of Science
(www.science.sjsu.edu/)
POSTER SESSION ONE
10:00am to NOON

DEPARTMENT OF BIOLOGICAL SCIENCES

1. Infection Resistance of Biomaterial Grafts for Wound Repair.
   Gina T. Giannini
   Faculty: John T. Boothby
   Collaborator: Eric E. Sabelman (VA Palo Alto Health Care System)

2. Population Genetics of the Deer Mice, Peromyscus maniculatus, from the Warner Mountains of California: One Lineage or Two?
   Stephanie A. White, Stephanie MacDonald, Allison Ivancovich,
   Faculty: Leslee A. Parr, John O. Matson

3. 5' noncoding region sequence characterization for all human rhinovirus prototype strains.
   Ishmeet Kahra
   Faculty: John Boothby, David Kiang
   Collaborators: Shigeo Yagi, David Schnurr (California Department of Health Services)

   Elaine Pressly Bryant, Monika Kress, Chris McKay
   Faculty: Sabine Rech

5. Study of microbial diversity in three wetland ponds used to bioremediate agricultural drainage water.
   Diana Simons
   Faculty: Sabine Rech

DEPARTMENT OF CHEMISTRY

6. Importance of the Intermolecular Chiral Discriminatory Forces.
   Uyen Le, Nicole M. Kosareff, Shruthi Reddy
   Faculty: Gilles Muller

   Arthur Cheng
   Faculty: Roger Terrill, Yong Nam (Paul) Pak

8. Characterization of amino based columns and affinity columns.
   Geeta Shetty
   Faculty: Joseph Pesek, Maria Matyska-Pesek

   Nathan Zuckerman
   Faculty: Dan Straus, Roger Terrill, Wendy Fan
   Collaborators: Chongwu Zhao, Bo Lei (USC)
DEPARTMENT OF GEOLOGY

10. High Resolution Analysis of 1906 Earthquake Intensities in the City of San Jose, California.
    Nancy Shostak
    Faculty: John W. Williams

    Brigid Doran
    Faculty: Robert Miller

DEPARTMENT OF MATHEMATICS

12. Modeling Astrophysical Accretion as a Dripping Handrail.
    Arkajit Dey, Matthew Low, Efrem Rensi, Eric Tan, Jason Thorsen, Michael Vartanian, Weitao Wu
    Faculty: Slobodan Simic

DEPARTMENT OF METEOROLOGY

    Authors: Kim Campo
    Faculty: Tom Rickenbach

14. IPCC Model Simulation of Future Climate Change in Southeast Asia.
    Chakkrit Reamruk
    Faculty: Eugene Cordero

DEPARTMENT OF PHYSICS

15. Magnetism Near and in the Vortex Cores of Cuprate Superconductors.
    Barbara Launspach, Tahmina Imam, Victor Chikhani, Sarah Wohl
    Faculty: Carolus Boekema

16. Laser Peening Effects on Stainless Steel Microstructure.
    Tania Zaleski
    Faculty: Ken Wharton

    Natasha Supper
    Faculty: Ramen Bahuguna
DEPARTMENT OF BIOLOGICAL SCIENCES

18. Isolation and Mutation of the Mojastin gene.
Stephanie White, Renato Regalado
Faculty: Julio Soto

Michael Doan, Kenji Kozuka, Michelle Soriano
Faculty: Leslee Parr
Collaborators: Brett Dumbauld (US EPA), Ted Dewitt (USDA), Tony D'Andrea (Oregon State)

20. Evaluation of Urinalysis Analyzers for Point of Care Testing.
Dana Kruetzfeldt
Faculty: Mara Williams

21. Localization and Anchorage cis-acting Elements in Hro-Twist mRNA.
Hoan V. Tran, Stephanie A. Mandal
Faculty: Julio Soto

DEPARTMENT OF CHEMISTRY

22. Simulating Photoelectron Spectra Based ab initio Calculations of Molecular Structure.
Sharon Betters, Adrienne Berka
Faculty Mentor: Patrick Fleming

23. Analysis of Human Vitamin D Receptor Residues That Form Hydrogen Bonding Interactions with the Three Hydroxyl Groups of 1, 25-Dihydroxyvitamin D3.
M. D. Reddy, L. Stoynova, A. Acevedo
Faculty: Elaine D. Collins

24. Effects of Crowding Agents on the Refolding of Lysozyme.
Jeannette Truong, Rebecca Bowen
Faculty: Daryl K. Eggers

Adna Halilovic
Faculty: Daryl K. Eggers

Faculty: John Logan
Collaborators: Dolores C. Miller, Mark H. Sherwood (both IBM-Almaden)

27. Synthesis and Characterization of Cellulose Based Chiral Stationary Phase for HPLC.
Bhavani Thadishetty
Faculty: Joseph J. Pesek, Maria Matyska-Pesek
Aaron Hardin, Shalini Potluri, William Yeh, Siddharth Potnis, Sridhar Busani  
Faculty: Brooke Lustig, Robert Fowler (SJUS Biology)  

DEPARTMENT OF GEOLOGY  

29. The Sentinel Granodiorite: Contact Relationships With Adjacent Plutons and the Case For Inclusion in the Tuolumne Intrusive Suite, Central Sierra Nevada Batholith, California.  
Joseph M. Petsche  
Faculty: Robert Miller  

Jennifer Mendonca  
Faculty: Paula Messina  

DEPARTMENT OF METEOROLOGY  

John Noble  
Faculty: Alison Bridger  

MOSS LANDING MARINE LABORATORIES  

32. Pelvetiopsis Recruitment and Intertidal Macroalgal Canopies.  
Amber Szoboszlai  
Faculty: Mike Graham  

Sara Smith  
Faculty: Nick Welschmeyer  

34. Effects of Entrainment and Thermal Increase on Bacteria and Phytoplankton in the Moss Landing Power Plant: What Blooms in the Plume?  
Gala Wagner  
Faculty: Nick Welschmeyer  

35. Applications of rDNA ITS Sequence Analysis to Assess Inter- and Intraspecific Diversity in Pseudo-nitzschia Communities in Monterey Bay, CA.  
Kendra Hayashi  
Faculty: Nick Welschmeyer  

DEPARTMENT OF PHYSICS  

36. Stellar Variability in the Kepler Field of View.  
Behrang Sadeghi and Kim Mjaseh  
Faculty: Natalie Batalha
Additional Posters Available for Viewing

Additional research posters and displays are distributed in the hallways of Duncan Hall and you may view them at your convenience. In particular:

**Department of Biological Sciences (south side, facing San Salvador St)**

- Research Posters and Displays can be seen on Floors 2 to 6.

**Department of Chemistry (north side, facing Paseo de San Antonio)**

- Research Posters can be seen in the basement level and 6th floor

**Department of Geology (north side, facing Paseo de San Antonio)**

- Research Posters can be seen in the 4th floor

**Department of Meteorology (north side, facing Paseo de San Antonio)**

- Research Posters can be seen in the 6th floor

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Laboratories Open for Visitation

The following laboratories will be open for viewing. Faculty and/or students will be present to explain their research and to answer questions. Please note that labs will be open only during the times indicated on the schedule below:

**Department of Biological Sciences**

10:30am to 11:30am  Duncan Hall 544  Professor Julio Soto
11:30am to 1:00pm  Duncan Hall 542  Professor Leslee Parr

**Department of Chemistry**

10:30am to 11:30am  Duncan Hall 1 to 6 (basement)  The Keck Facility for Chemical Research
12:30pm to 1:30pm  Duncan Hall 1 to 6 (basement)  The Keck Facility for Chemical Research
About the Sponsor's of the Student Research Day

San Jose State University’s College of Science

The College of Science (COS) transforms its majors into qualified science professionals for a global and regional Silicon Valley work force, and prepares them for advanced (graduate) training and life-long learning. Core science education is provided for engineers, health care professionals, K-12 teachers, and other technical fields, as well as basic mathematics and science skills to students in on-science majors. Our students are instilled with a general awareness of science and technology, necessary to be an informed citizen in our highly technical, culturally diverse society.

The mission of the COS is:

- To prepare students for rewarding careers in biological sciences, physical sciences, mathematics and computer science.
- To provide lower division core biology, chemistry, mathematics, meteorology, geology and physics courses for majors in other technical areas.
- To offer courses in quantitative reasoning and in the physical universe and its life forms that satisfy the University’s general education requirements.
- To teach the discipline-specific courses for the science and mathematics teacher credential programs.

One of the ways that the College of Science prepares students for their post college work is to offer a wide range of opportunities to work with faculty on independent research projects. In support of these projects, College faculty obtained $4.5 million in external funding in 2004. Students gain invaluable training, and in most cases work directly with the faculty member involved in the project.

For more information, please visit the College of Science website: [http://www.science.sjsu.edu/](http://www.science.sjsu.edu/)

ACKNOWLEDGEMENTS

Many people contributed to the success of this event. Special thanks to Dean Vida Kenk (Interim Dean, COS) and Stan Vaughn (Facilities Manager, COS) and their staff for providing essential infrastructure and support. The SJSU Advancement Office (Nancy Bussani and staff) arranged publicity for this event.

Last but NOT least:

**Thanks and congratulations** to all the hard working undergraduate and graduate students, and their faculty advisors for their hard work and for sharing it with us today!