SJSU College of Science Student Research Day

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 many Departments will be available.

Friday, May 6, 2005 Duncan Hall (ground level)

PROGRAM

10:00am to 11:45am Poster Session One 11:45 to noon Remarks by SJSU Administration

3. Purification of a Non-heme Bromoperoxidase from an Acorn Worm-Associated Bacterium and Identification of the Bacterium

Jasmine Kaur Faculty: Sabine

Rech

4. Bromoperoxidase Activity and Diversity of Bacterial Isolates from the Red-Banded Acorn Worm

Sherleen C. Bajao Faculty: Sabine

Rech

5. Does Practicing Phosphene Detection Change Human Visual Cortex

Department of Geology

14 An Erupted Record From the Miocene Searchlight Pluton, Nevada Michele C. Dodge, James E. Faulds, Clavin F. Miller Faculty: Jonathan Miller

Department of Mathematics

15.

Program

Faculty: Julio Soto

24. Seasonal Distribution and Abundance of Forensically Important Flies in Santa Clara County
A. Brundage

Faculty: Jeff Honda

25. How Natural Enemies and Aphid Population Dynamics Affect Organic Broccoli 34. Integration of RFID and Wireless Sensor Networks for Elder Healthcare Loc Ho, Zachary Walker Faculty: Melody

Moh

35. Self-Adaptable Trust Mechanism for Web Services

Oana Andreea Dini Faculty: Melody

Moh

36. Intelligent C Language Debugger

Ming Wang Faculty: Robert

Chun

Department of Geology

37. Field, Geochemical, and Geochronologic Evidence for Recharging in a Mushy Magma Reservoir: Cathedral Peak Granodiorite, Tuolumne Intrusive Suite, Sierra Nevada Batholith, California

Seth D. Burgess Faculty: Jonathan

Miller

Department of Mathematics

38. Prime Numbers and Prime Tuples

Dashiell Fryer Faculty: Daniel

Goldston

39. Green's Functions Simulation for the Family of Fokker-Planck Equations Shikha Naik, Lawrence "Rocco" Varela Faculty: Igor Malyshev

Department of Physics

40. Modeling an Er:Yb:glass Laser: Continuous Wave and Pulsed Operation Annol S. Nijjar Faculty: John

Gruber, Ken Wharton

Additional Posters Available for Viewing

If you would like to see additional posters you can find the following posters hanging in

Scanning Electron Microscopy of the Auditory Sensor of B. Dawson, $\mathbf{M.\ Sneary}$

Duncan Hall Sixth Floor - Rooms 634 to 654

Bromoperoxidases of Two Newly Isolated Halophilic Bacteria S. Rech, S. Mayya, P. Grillione

Immunomagnetic Flow Cytometry of J.T. Boothby, R. Kibler

in food

A Method of Extracting DNA from Single Features for Multiple Genetic Analysis A. Henke, T. Chi, J. Smith, $\bf C.~Brinegar$

G. Carlon, M.T. Matyska, G.B. Dawson, J.J. Pesek

Bromoperxidases: Applying Nature's Halogenating Enzymes in Orgnic Chemistry J. Karpel, **R.K. Okuda**

The Ionization Energy of Cyanophosphinogen (HPCN) A. Berka, P.E. Fleming

Making Fluoride Glasses that Conduct Electricity and Emit Light M. Plesha, D. Rauser, Shane Kiley, B. Phebus and **R.H. Terrill**

Spectroscopy with Surface Plasmons: Toward Increasing the Information Content of SPR Spectroscopy

M. Zangeneh, N. Doan, R.H. Terrill

Duncan Hall Basement - Rooms 12 to 20

Comparing Full-Length and Delected Vitamin D Receptor with Respect to Residues 143 and 278 in 1,25-Dihydroxyvitamin D3 Binging A. Acevedo, L. Stoynova, K.Dvvis **E.D. Collins.**

Analysis of Polar Organic Acids, Bases and Water-Soluble Vitamins by Type C Silica Hydride Based HPLC Phases

M.T. Matyska, J.J. Pesek, W. Ciccone, L. Brown

OT-CEC Applications for Pegylated Proteins and Ipratropium Bromide and Related Substances in Pharceutical Formulations V. Krishnamoorthi, M. Matyska-Pesek, J.J. Pesek

Additional Posters Available for Viewing

Self Consistent Field SCF HOMO and LUMO for CuO2 Layer in Cuprates H.S. Sahibundeen, $\bf J.V.\ Acrivos$

Dreyfus-NSF/DMR-NATO-

Department of Meteorology

Sixth Floor of Duncan Hall - near Room 614

Effect of the Antarctic Ozone Hole on Southern Hemisphere Midlatitudes A. Satish, $\bf E.~Cordero$

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/

Sigma Xi, The Scientific Research Society

Founded in 1886, Sigma Xi (pronounced "Zi" as in xylophone) is the international honor society of research scientists and engineers, with a distinguished history of service to science and socity. This non-profit society includes nearly 65,000 scientists and engineers, in more than 100 countries, who were elected to membership based on their research achievements or potential. Nearly 200 members have received the Nobel Prize. Sigma Xi chapters, more than 500 in all, can be found at colleges and universities, government laboratories and industry research centers throughout North America and around the world. In addition to publishing award-winning

magazine, Sigma Xi awards hundreds of grants annually to promising student researchers and sponsors a variety of programs that support research ethics, science and engineering education, the public understanding of science, international research networking and the overall health of the research enterprise.

ACKNOWLEDGEMENTS

SPECIALTHANKS TO:

President Don Kassing AVP of Graduate Studies and Research Pam Stacks

Judith Moore (COS Copy Center)
Stan Vaughn (COS Facilities)
Lee Veliz (COS Central Shops)
Patricia Julien (COS Dean's office)
Mike Stephens and Craig Wood (Dept of Chemistry)

Sigma Xi and chapter members SJSU Office of Student Outreach numerous other faculty who have helped with various aspects