



THE VOYAGER

YOUR VEHICLE TO STELLAR OPPORTUNITIES

The New sletter for COSMOS Alumni - November/December 2005 - Volume II, Issue 2

Happy Holidays!

by Melina Duarte

As a veteran of the COSMOS program (yup, I've been around since it started in 2000) I would like to welcome you to this edition of the COSMOS Voyager. I am pleased to announce the COSMOS Program finished another great year and set a new attendance record with 541 participants in the program this summer. Given the importance of math and science to the future of our world, we hope to build on this success and offer the COSMOS experience to even more students next summer.



Melina Duarte is the Assistant Director for UC Irvine COSMOS

(see Greetings on page 4)

2005 California Nobel Laureate Dinner

On Monday, November 21st, the University of California Office of the President (UCOP) and the Consulate General of Sweden hosted the 2005 California Nobel Laureate Dinner at the Getty Center in Los Angeles.

Nine Nobel Laureates and Los Angeles Mayor Antonio Villaraigosa were among the special guests who attended the black-tie event.

Sixteen participants representing all four COSMOS campuses presented a poster board on their latest ventures in mathematics and science. Presenters took center stage at the reception, providing COSMOS students the opportunity to share their understanding of advanced math and science concepts with the world's greatest minds. After the reception, COS-



Leslie Tong presents her poster board on The Effects of Duration After Inoculation and Location of Infection

MOS participants and their parents joined the attendees for dinner and keynote address by Nobel Laureate, Dr. Ahmed Zewail. Dr. Zewail recieved the 1999 Nobel Prize in Chemistry for showing that ultra-short laser pulses can be used to see atoms in chemical reactions.

UCD & UCSD COSMOS Alumni Scholarships

The UC Davis and UC San Diego COSMOS Programs are offering scholarships available exclusively to alumni who have attended programs at either campus. Each campus will offer the following scholarships:

The Chela Financial Scholarship

– Three \$2,500 scholarships will be awarded to alumni planning to major in any mathematics or science based field of study.

The Director's Award

– One \$6,000 scholarship will be awarded to a female alumna entering a major in the field of mathematics, engineering, or

SCHOLARSHIP DEADLINES

UC Davis COSMOS
January 6th, 2006

UC San Diego COSMOS
January 13th, 2006

physical sciences.

To be eligible to apply, you must plan on being a college freshman in Fall 2006 and pursuing an education in the designated fields of study. We are looking for students who exhibit high academic achievement, reveal exceptional leadership,

are motivated by topics in mathematics and/or science, and who actively participated in their COSMOS program cluster. You may apply to only one of these scholarships. Applications for the UCD scholarships are available at www.cosmos.ucdavis.edu/2006scholarship.pdf.

Applications for the UCSD award will be mailed to eligible alumni on December 15, 2005.

Decisions for awards will be based on the completed application, transcripts, test

(see Scholarships on page 2)

IN FOCUS: SCIENCE ACTIVITIES IN SOUTHERN CALIFORNIA

Each issue, The Voyager will highlight science activities occurring in different regions throughout California. Next issue will focus on the Central Valley.

Stars in the Park - Hosted by The San Diego Astronomy Association (SDAA)

At dusk on the first Wednesday of each month, following the monthly "Sky Tonight" planetarium show in the Reuben H. Fleet Space Theater (www.rhfleet.org), members of the SDAA set up telescopes west of the Fleet on The Prado, for free public sky viewing. The setup is at 6:30pm and the event runs from 7:00pm through 9:00pm (weather

permitting). The SDAA is a non-profit educational organization established and incorporated in 1963. The purpose of the SDAA is to further the education of its members and the general public in the subjects of astronomy and the related space and physical science, and to increase public awareness and enjoyment of these sciences. For more information, visit www.rhfleet.org/site/astronomy/gazin.html

Science of the Dark Side of the Universe - Reuben H. Fleet Science Center

Dark Matter and Dark Energy dominate the Universe and

control its fate. What are these mysterious "substances?" Come join astrophysicist Kim Griest (<http://physics.ucsd.edu/~griest>), as we explore Einstein's Theories and beyond. You will hear about expanding space-time, the energy of nothingness, and see amazing images of what our Universe contains! The lecture will be given at the Reuben H. Fleet Science Center in the Lecture Hall on Saturday December 10th from 1-2pm. For more information, visit (www.rhfleet.org/site/education/weekendtalk.html#science_dark_side_of_univ)

(see Activities on page 4)

eMagazine is a Great Resource

Source: www.latinograduate.net

The Latino Scholastic Achievement Corporation (LASC) produces a news eMagazine (www.latinograduate.net) featuring great information for COSMOS alumni preparing to apply to universities. The website offers practical bilingual educational programming. The site now offers timely and practical information via its video, audio and eMagazine areas. Each streaming channel and publication offers students and parents expert advice on the following areas:

- Understanding the college admission process
- Obtaining financial aid
- Finding and obtaining scholarships
- Preparing for campus to career transition
- And much, much more

Visit this great resource and see how it can help you.

Upcoming Southern California Math & Science Exhibits and Events

The next issue will focus on Central Valley events

Stars in the Park
San Diego Astronomy Association
Fleet Science Center in San Diego
Every first Wednesday of the month

Science of the Dark Side of the Universe
Fleet Science Center in San Diego
December 10th, 2005 1-2pm

Life in Extreme Environments
The Ocean Institute at Dana Point
Runs through December 18, 2005

***Note: The COSMOS Program neither endorses nor sponsors these events.**

Scholarships (from page 1)

scores, and recommendations from math/science teachers and COSMOS faculty. The UCD COSMOS deadline for all application materials is Friday January 6th, 2006. The UCSD COSMOS deadline for all application materials is Friday, January 13th, 2006.

This is a unique opportunity for UC Davis and UC San Diego COSMOS alumni as these scholarships are offered **ONLY** to students who have successfully completed the program at one of

these sites. *The Director's Award and Chela Financial scholarships are awarded to UCI and UCSC COSMOS students under different criteria and procedures.* Consider submitting an application if you are eligible for either of these scholarships.

OPPORTUNITY REMINDER

The deadline to submit your research project for the Young Epidemiology Scholars (YES) Competition is February 1, 2006.

For more information, visit www.collegeboard.com/yes.

Davidson Institute for Talent Development Programs

The Davidson Institute for Talent Development is an organization dedicated to supporting profoundly intelligent young people and providing opportunities for them to develop their talents to make a positive difference. Each year the THINK Summer Institute and the Davidson Fellows programs bring together gifted students from all over the nation so that they can be inspired, challenged, and rewarded for their efforts.

Here are some questions to ask yourself while making plans for next summer. Does the idea of sitting around all summer without anything interesting to do sound unbearable? Would you like to spend three weeks being challenged in classes at the University of Nevada, Reno? Students will be able to earn up to seven transferable college



2005 Davidson Fellow Laureate, Milana Zaurova, works in the lab. Milana's project was Gene Therapy Meets Chemotherapy

credits in a three-week residential program. Each student will attend one morning class and one afternoon class of their choice, taught by university faculty. The classes being offered at the 2006 THINK sessions

are: chemistry, philosophy, English, calculus and communications. In addition to attending stimulating classes you will be surrounded by intellectual peers and enjoy some of the best events and attractions that northern Nevada has to offer!

The 2006 THINK Summer Institute will run from Saturday, July 8 through Saturday, July 29. To qualify, students must be 12-15 years old during THINK and a U.S. citizen residing in the United States. Applicants must also meet or exceed designated SAT or ACT scores, and submit a \$50 non-refundable application fee. The deadline for applications is April 3, 2006. Scholarships are available based on financial need. For all requirements please visit www.THINKSummerInstitute.org.

(see THINK on page 4)

Intel Science Fairs: Opportunities for Achievement

COSMOS has a special relationship with the annual INTEL Regional Science & Engineering Fairs and INTEL IPYS (Promising Young Scientists). COSMOS alumni are invited to apply and submit a project for one of the regional fairs.

A science fair project is an exciting thing! You'll be surprised at yourself and what you can accomplish! Pick a topic and ask a question! It's that easy! Any topic that interests you can be turned into a science fair project. Interested in airplanes? Rollerblades? Fish? Dogs? Baseball? All involve science or engineering. The key to a great projects is to find something you like. Then you'll walk away with a greater understanding of it

and science.

Enlist the help of your English and math teachers, not just your science teacher. Your English teacher can help you with putting together your background research paper and writing up your notebook and backboard. Your math teacher can help with statistics that are useful in proving (and sometimes disproving) your hypothesis.

We encourage all COSMOS alumni (and applicants) to look into these excellent opportunities and plan now to enter an INTEL science fair near you. COSMOS Alumna Amber Irish Hess was one of four California Finalists this past year!

Get help and coaching at

student/parent/teacher "clinics." Visit www.sciserv.org/iseff/aff_fairs/fairlist/californ.asp and www.sciserv.org/iseff/students/tips_advice.asp.

For more information on creating a successful science fair project, visit www.cosmos.ucdavis.edu/2006/sfi.html.

Look at the rules and start your science fair project today!

- Greater Sacramento Area (www.srsfair.org) 3/17 & 3/18/06
- Greater San Diego Area (www.GSDSEF.org) 3/28 through 4/2/06
- Synopsys Santa Clara Valley (www.science-fair.org/) 3/8 & 3/9/06

Greetings (from page 1)

I hope all is well in school and that you don't miss us too much. Be sure to keep us updated on your achievements (awards, scholarships, science fair awards, etc.) and to ensure we have your most recent contact information. We would love to hear from you. Who knows, we may even profile you on our website or invite you to mingle with Nobel Laureates. Your success is our success...you know how we love to brag about you!

Activities (continued from page 2)

Life in Extreme Environments – The Ocean Institute

Extreme...is not just for sports anymore! The Ocean Institute's "Life in Extreme Environments" offers a deeper look at life. Recent discoveries of six-foot tube worms, mussels that never eat, and eyeless shrimp and bacteria that thrive on chemicals too toxic for any other life, have caused scientists to re-think life as we know it. Where are these life forms and what can

We are gearing up for another recruitment season. Our recruitment period is really a small window of opportunity since the application is only available between January 15th and March 15th. We are working on having a calendar of presentations on the COSMOS statewide website (www.ucop.edu/cosmos). Check back regularly to see if we will be in your neck of the woods.

We would love to have you make a cameo appearance at our presenta-

we learn from them? The Ocean Institute in Dana Point offers an innovative weekend public program and invites families to participate in the opening of three new learning labs with fun, new hands-on explorations of life in the extreme.

Every weekend this Fall, the Ocean Institute will offer a series of ongoing 30-minute interactive discovery labs. The Institute will also have on display remotely operated underwater vehicles and

tions – who better to advertise the program. If you would like to present COSMOS information to your community on your own, I will be happy to send you brochures and promotional items to distribute. Just send an email to cosmos@uci.edu.

I hope to stay in contact with you and look forward to hearing about your achievements. I wish the warmest holiday greetings and all the best in your studies this semester!

specialized collection devices used by the submarine Alvin to collect specimens from extreme thermal vent environments. A traveling interactive astrobiology exhibit from the Carnegie Science Museum will show visitors the link between life in extreme environments on Earth and the possibility of life on other planets. For more information, visit www.ocean-institute.org/html/exhibits.html.

THINK (continued from page 3)

Or maybe a summer program is not quite what you have in mind. If you have a great work that you would like to present, the Davidson Fellows is the program for you! Davidson Fellows come from all over the country, have all kinds of interests and pursue a wide variety of dreams. One thing they all have in common is passion for what they do and a desire to make a difference. The Davidson Fellows awards are intended to help them reach their goals.

The Davidson Fellows program offers scholarships to any young person under the age of 18 who has completed an important piece of

work in the field of Mathematics, Science, Technology, Music, Literature, Philosophy or Outside the Box. They must also be prepared to describe their journey in developing the project and to explain its purpose and social relevance. Each September Davidson Fellows are honored in Washington, D.C.

Past Davidson Fellows projects include:

- Research into the physics of dust particles to aid in the design of exploration and support systems for Martian space flight missions.
- Development of an effective method of treating malignant glioma, the deadliest form of brain cancer,

combining chemotherapy and gene therapy.

- Mathematical modeling of gasoline sprays to reduce automobile emissions.

Davidson Fellows deadlines are quickly approaching, for complete details please visit www.DavidsonFellows.org.

January 13, 2006 – deadline for Outside the Box Screening Form

March 15, 2006 – deadline for Preliminary Submission Overview Form for all categories but Outside the Box

March 31, 2006 – Application deadline for all Davidson Fellows categories