



tackling today's world of environmental and medical challenges

Student Profile

Oak Crest Proudly Hosts Graduate Student From France



Oak Crest intern, Doriane Dormoy, left, takes time out from her research project to pose with fellow interns Margaux Florin, center, and Lucie La Jaune. Doriane is a third year graduate student from Strasbourg France.

In the world of science there are no global boundaries. Scientific breakthroughs can help people in our own neighborhoods as well as those halfway around the world. Sharing knowledge and hands-on training with aspiring scientists is part of the Oak Crest mission. That's one of the main reasons why Doriane Dormoy selected Oak Crest for her graduate degree internship.

Doriane is studying at Ecole Européenne de Chimie Polymères et Matériaux (ECPM) in Strasbourg France. She is in

her third year at ECPM and working toward her Diplôme d'ingénieur de l'ECPM (master's degree). During her internship at Oak Crest, Doriane will be working on a new aspect of our ongoing intravaginal ring program. This project aims to determine the distribution of orally and topically delivered anti-HIV microbicide agents in both vaginal and rectal tissue using fluorescence and mass spectral imaging techniques. These complementary imaging methods will reveal how the drugs distribute in the various anatomic compartments, which holds significant implications for designing and implementing an effective microbicide-based HIV/AIDS prevention strategy.

New Adherence Grant Started

Senior faculty member Dr. John Moss is the Principal Investigator

News & Events

SUMMER RESEARCH CONNECTION BEGINS SOON

Summer 2013 looks to be another great season at Oak Crest. More than 180 Los Angeles County high school students have applied for paid summer science research internships through the Oak Crest/Caltech Summer Research Connection (SRC) program. The program will be held June 26 – August 5, 2013 and will include teachers and students conducting hands-on research in teams under the mentorship of research scientists in labs at Oak Crest or Caltech.

SRC participants will also attend seminars, meetings and workshops throughout the five-week program and will present their research findings during SRC Seminar Day at the end of the program. With a strong applicant pool of students and more than 30 K-12 STEM teachers wishing to participate, the Oak Crest staff is gearing up for another great summer. Final selection of SRC student and teacher participants will be made by June 2013.

EXPLORING THE WORLD OF SCIENCE WITH OTHERS

Sharing scientific findings among peers and with those who will become the next generation of scientists is key to finding answers

on a new one-year STTR Phase I grant from the National Institutes of Health. The \$211,862 grant entitled "An Intravaginal Ring for Real-time Evaluation of Adherence to Topical Vaginal Drug Delivery" was awarded to Oak Crest and collaborating organization Auritec Pharmaceuticals in December 2012. The project aims to incorporate technology into our intravaginal ring designed to monitor adherence to HIV preventative therapy in large-scale clinical trials.

According to Dr. Moss, the lack of adherence to preventative methods has been implicated as a primary factor in failures of microbicide HIV prevention methods, but current methods of measuring adherence using self-reporting are highly inaccurate. The Oak Crest-Auritec adherence ring will measure intravaginal ring use in real-time with a miniature sensor and microprocessor system, and will store the data so that researchers can download it at the end of a trial period.

Oak Crest Faculty to Head Biotech Education Program



Dr. Sherry Tsai, assistant faculty at Oak Crest, has a passion for science education and it shows. Since joining Oak Crest in November 2007, she has played a key role in the expansion of the institute's education and outreach programs as its Director of Educational Outreach.

Her wealth of knowledge in biotechnology and science education experience made her a natural choice to be named the new Los Angeles area site

director of the Amgen-Bruce Wallace Biotechnology Lab Program.

As Los Angeles Site Director, Dr. Tsai will be responsible for overseeing program activities in the greater Los Angeles region, including Los Angeles, Orange and Ventura Counties. The program serves nearly 20,000 students annually at the Los Angeles area site alone. She begins her new position July 1, 2013.

WHY GIVE TO OAK CREST

Oak Crest is a young, growing, dynamic organization with a highly personal touch. Your donation can have a significantly larger impact on a single researcher's or student's work at Oak Crest than at a larger institution. As one of our philanthropic partners, you will be playing a crucial role in helping Oak Crest to fulfill its mission of benefiting humanity by conducting cutting edge scientific research and by fostering tomorrow's scientists, one student at a time.

The Oak Crest Institute of Science is a 501(c)(3) organization, and most donations are fully tax deductible. There are many ways to support Oak Crest. For more information, please contact giving@oak-crest.org or call 626-817-0883. Thank you for your generosity.

to some of today's toughest medical and environmental problems. Our faculty has been busy coordinating seminars and attending conferences and workshops around the country including:

First International Teacher-Scientist Partnership Conference – February 13-14, 2013, Boston, MA.

American Association for the Advancement of Science Annual Meeting – February 14-18, 2013, Boston, MA.

Microbicides Workshop – February 20-21, 2013, Arlington, VA.

Product Development Workshop 2013: HIV and Multipurpose Prevention Technologies. Poster presentation by Dr. Marc Baum and Dr. John Moss – *"Topical Delivery of Biomolecules for HIV Prophylaxis Using a Novel Intravaginal Ring Platform."*

Professional Development Workshop for Science Teachers – February 23, 2013, Pasadena, CA. *"Plate Tectonics & the Geology of Southern California."* Coordinated by Sherry Tsai. Held at the California Institute of Technology.

Professional Development Workshop and Webinar for Science Teachers – March 16, 2013, Pasadena, CA. *"From Newton to String Theory: How Physics Can Describe Everything."* Coordinated by Sherry Tsai. Held at Oak Crest Institute of Science.

Coordinating Research Council – April 7-10, San Diego, CA 23rd CRC Real World Emissions Workshop Poster presentation by Dr. Marc Baum and Dr. John Moss – *"On-board Measurement of Reduced-Nitrogen Emissions from Vehicles."*

HEI Annual Meeting – April 14-16, 2013, San Francisco, CA Health Effects Institute 2013 Annual Conference

Science Seminar and Webinar for High School Students and Science Teachers - May 23, 2013, La Crescenta, CA.

"Understanding HIV/AIDS."
Coordinated by Sherry Tsai. Held
at Crescenta Valley High School.

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ANNOUNCEMENTS

UPDATING OUR IMAGE

Oak Crest Institute of Science has contracted with a graphic design firm to redesign the organization's website. The new website is scheduled to be launched in late spring and will not only have a new look but will also feature new navigation allowing you better access to information about our programs and our current scientific research. Watch for further announcements regarding the launch date.

MORE NEWS, MORE OFTEN

The Oak Crest Science News is taking on a new look and publication schedule. Along with the redesign of the website, our eNewsletter is also being redesigned. Our new format will provide you with up-to-date information about our research projects, announcements about upcoming events and an overview on our education and outreach activities in an easy to read format. In addition, we will be increasing the frequency of our newsletter to six times per year to keep you better informed.