



tackling today's world of environmental and medical challenges

Life Science Technology Symposium a Big Success

A capacity crowd of over 100 entrepreneurs, scientists, educators and some of Pasadena's most influential people gathered at the Pasadena Convention Center to learn more about the emerging life science technologies that are being created in Pasadena.

The symposium, sponsored by the [Pasadena Bioscience Collaborative](#) and the [Oak Crest Institute of Science](#), was held Tuesday, October 21, as part of the Innovate Pasadena [CONNECT Week](#). Pasadena Mayor Bill Bogaard welcomed the group and presented opening remarks about the importance of the development of life science technology and the marriage of education, high technology and science that is taking place in the City. Senator Jack Scott echoed these same sentiments during his introductory comments.



Dr. Robert Grubbs, Nobel laureate and Entrepreneur

Keynote speaker, Dr. Robert Grubbs, Nobel laureate and serial entrepreneur, shared his experience and wisdom gained through years of creating startup companies. Dr. Grubbs encouraged entrepreneurs to keep their businesses in Pasadena even after they grow beyond the start-up stage in order to capitalize on growth opportunities and the wealth of resources available from organizations such as Caltech.

The opening presenter was Dr. Sherry Tsai, assistant faculty at Oak Crest and site director for the Greater Los Angeles [Amgen Biotech Experience](#) (ABE). Sherry shared with the group her role in encouraging students and K-12 teachers to explore the world of science through the Amgen Biotech

Experience. "It's very exciting to be involved in the Amgen program because of the value it brings to the classroom," says Sherry. "The program engages students in learning molecular biology using relevant curricula, tools, and techniques that are often not available to teachers because of funding deficits."

Sherry went on to explain that participating teachers receive a free loaned kit with research-grade equipment and supplies that allow students to participate in advanced science laboratories. The hands-on ABE

News & Events

WORK ON OCIS U19 NIH GRANT UNDERWAY

The Oak Crest Institute of Science (OCIS) U19 National Institutes of Health (NIH) kick-off meeting was held October 3 via teleconference from the conference room at OCIS. The five-year research initiative entitled, "Systematic Development of Antiretroviral Intravaginal Rings for HIV Prevention" is supported by the National Institute of Allergy And Infectious Diseases of the NIH under Award Number U19AI113048. The purpose of the meeting was to bring the nationwide team of collaborators together for introductions and instructions on moving the grant project forward.

Representatives from the Centers for Disease Control and Prevention (CDC), the University of Texas Medical Branch, Johns Hopkins University, the University of Colorado, Boulder, Scripps Research Institute, University of California, Los Angeles, Vanderbilt University, Miriam Hospital, and Auritec Pharmaceuticals participated in the event.

"As lead organization on the grant, it is our (Oak Crest's) responsibility to spearhead all activities and to implement a communications system that keeps all parties up to date on activities, challenges and findings," said Dr. Marc Baum, principal investigator on the grant. "Our first teleconference was very

curriculum ties the laboratory experiences to the development of medicines, using technologies employed by the biotechnology industry in the discovery of human therapeutics. During the 2013-2014 school year more than 62,000 students from 491 schools participated in program worldwide. Over 23,000 of those students came from the greater Los Angeles area alone.

In keeping with the theme of hands-on, relevant scientific research, Manjula Gunawardana, senior scientist at Oak Crest, presented an overview of the mission and vision of the Oak Crest Institute of Science. Focusing on fact that Oak Crest is not only an innovative chemistry research facility but also an education center for students of all socio-economic backgrounds and ages, Manjula highlighted features of Oak Crest that set it apart from other institutions.

“Oak Crest was created to provide students, from high school age through graduate school, the opportunity to work side-by-side with experienced scientists on projects using advanced and novel scientific methods, that are affecting regional environmental quality as well as medical care in the developing world,” said Manjula. “This type of mentored research is unlike any other science program available today and we are proud to be influencing the next generation of scientists through our work,” he added.



**Manjula Gunawardana,
Senior Scientist at Oak Crest**



**Tom Smith, MD, and CEO of
Auritec Pharmaceuticals, Inc.**

Additional presenters included Tom Smith, MD, founder and chief executive officer of [Auritec Pharmaceuticals, Inc.](#) Auritec is a research and development company specializing in innovative, extended release drug delivery systems. Auritec is partnering with Oak Crest on a \$20 million grant from the National Institutes of Health (NIH) to systematically develop an intravaginal ring capable of delivering powerful antiretroviral drugs to prevent the spread of sexually transmitted HIV in women. The five-year grant is funded under the NIH U19 Program, a mechanism that funds collaborative projects involving multiple institutions including the Centers for Disease Control and Prevention, Johns Hopkins University, Scripps Research Institute, UCLA and more.

Rounding out the presentations were entrepreneurs from various scientific startups currently housed at the Pasadena Bioscience Collaborative. They included Dr. Stephen Chapman from Deton Corp; Dr. Zoya Gluzman-Poltorak from Neumedicines; Dr. Jack Whalen from Platinum Group Coatings and Dr. Adrian Ponce from Verrix Bio.

Guests and presenters alike agreed that the symposium was very informative and eye opening. Many guests said they had not realized the magnitude of scientific research and development that is taking place in Pasadena. From disease diagnosis and prevention, to radiation mitigation and revolutionary treatments for Parkinson's, the research that was showcased will not only benefit the scientific community, but the entire world.

Oak Crest Welcomes Guests During IP Connect Week

For the second time this year, the Oak Crest Institute of Science opened its doors to the community for an inside look into the thriving research/educational facility.

Guests participated in guided tours of the lab lead by staff and recent graduates of [The Rose Hills Foundation Fellows Research Fellows](#)

successful. This proved to be an effective way for the team to communicate and participate in meaningful exchange of information including program specific aims, program structure and program activities.”

Work on the \$20 million U19 grant project will take five years to complete. Teleconferences between team members will be scheduled on a regular basis throughout the grant period. In addition, an annual meeting of collaborators will be held each year.

“This is a stellar team of researchers,” added Dr. Baum. “We are off to a great start and we expect exceptional results from this collaborative effort.”

Support Oak Crest on #GivingTuesday

We have a day for giving thanks. We have two for getting deals. Now, we have #GivingTuesday, a global day dedicated to giving back. On **Tuesday, December 2, 2014**, charities, families, businesses, community centers, and students around the world will come together for one common purpose: to celebrate generosity and to give.

As a #GivingTuesday partner, Oak Crest invites you to take part in this global day of philanthropy. Your financial donation to Oak Crest helps us to maintain the highest standards of research and education, and directly provides advanced research equipment, supplies, salaries, scholarships, and stipends to our teams of faculty and students so that they can continue working to solve the environmental and medical challenges affecting our global community.

REASONS TO GIVE:

- The Institute has a proven track record in conducting both applied and fundamental research in the environmental and medical sciences. Research at Oak Crest has a solid emphasis on meeting society's practical and immediate needs.
- Thanks to our small size, your financial support is used for research and mentoring activities with few associated administrative



[Program.](#)

Highlights of the tour included an inside look at Oak Crest's specialized labs including the atmospheric chemistry and aerosol research laboratory, the laser spectroscopy and imaging laboratory, the analytical laboratory and molecular and microbiology laboratories. In addition, the group visited the instrumentation development lab and got an up-close look at the multi-nuclear NMR spectroscopy instrumentation facility.

"We are pleased to have the opportunity to open our facility up to the public so that they can see first-hand the caliber of work that we are doing at Oak Crest," said president and senior faculty, Marc M. Baum. "I am extremely happy to see my vision come to life as students work side-by-side with scientists solving some of the toughest environmental and medical problems of today."

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costs.

- 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.

Beat the before year-end tax deduction rush and make plans now to support Oak Crest on **#GivingTuesday, December 2, 2014**. For more details about the #GivingTuesday movement, visit [#GivingTuesday](#). Be sure to watch your inbox for more information from Oak Crest on our #GivingTuesday campaign.



ANNOUNCEMENTS

RESEARCH, PUBLICATIONS AND SPECIAL EVENTS

Congratulations to the following Oak Crest faculty for the recent publication of their scientific papers:

Baum, M. M. et al., *Pharmacokinetics of Injectable, Long-acting Nevirapine for HIV Prophylaxis in Breastfeeding Infants*, October 2014, *Antimicrobial Agents and Chemotherapy* (AAC).

Tsai, S.M. et al.. *Gender Differences in the Consistency of Middle School Students' Interest in Engineering and Science Careers*. *J-PEER*, 2014, 4, Article 2