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**GUEST EDITORIAL**
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## Engaging Underrepresented Students In Research: The Role of Peer Influence

We scientists are a motley group. Some of us scrutinize molecules; others gaze at galaxies. Our pursuit of knowledge may lead us to the laboratory bench, or to the ocean's depths, or to workstations at supercomputer centers.

But we do have a few things in common. We are all driven by a passion for discovery. We are all indebted to the personal mentors who stoked that passion when we were young. And we all get a chance to pay back the debt by serving as mentors to younger scientists.

I was one of the few high school students from my community in London, Ontario to attend college. In my junior year at the University of Western Ontario, when my department chair urged me to go to graduate school, I didn't even know what graduate school was. But I knew he believed in me, and so, buoyed by his confidence, I entered the graduate physics program at McMaster University, where I went on to earn my master's and doctorate degrees.

My thesis adviser at McMaster was a theoretical physicist named Jules Pierre Cabot. Jules had an insatiable curiosity, and he was addicted to the thrill of revelation. Working alongside him was exhilarating. I remember finishing up one experiment at 4 a.m. and realizing on my way home that I knew something that no one else in the world knew. It felt like heaven.

Today, in my physics lab at UC San Diego, I work alongside talented students like Taryl Kirk, the son of immigrants from Trinidad, who was interviewed in the Winter 1999 edition of The Camp Quarterly. Taryl is an extraordinary young man. Watching him grow as a gifted researcher with a bright future is enormously rewarding.

Here at the University of California, scientists strive each day to answer the unanswered, and when we succeed, we take pride in contributing to the betterment of society. But that is only part of our mission. We must strive just as hard, and take just as much pride, in nurturing the women and men who will pick up where we leave off.

Does such mentoring produce tangible benefits? Empirical data (a investigator's touchstone) indicate that it does. Undergraduate students who team up with faculty for serious research experiences enter Ph.D. programs with greater frequency than

other students do. Programs like CAMP that directly orchestrate student-faculty research collaborations play a significant role in making these experiences more widely available.

Such collaborative relationships are especially important in diversifying the ethnic composition of the scientific community. A homogeneous research establishment can never have the breadth of vision to see the big picture. The most fruitful research enterprises are integrated ventures in which assorted investigators bring different perspectives and skills to work on common problems.

Underrepresented students need to hear at an early age that careers in research are attainable and are worth attaining. The number of new slots filled by future biologists, engineers, computer scientists, chemists, and physicists from underrepresented populations will depend largely upon the number of current underrepresented students who can increase their levels of preparation in mathematics and science. To that end, the University of California is dramatically expanding its partnerships with the state's public schools to ensure that more creative young minds fulfill their educational potential.

I know each of you applauds that effort. But do you realize how important you are to its success? The nurturing of young minds happens at the individual level through personal interaction. I am a physicist today because, when I was a student, accomplished physicists with busy schedules took time out to encourage and guide me. To borrow Isaac Newton's phrase, I can see far because I have stood on the shoulders of giants.

I am proud that Taryl Kirk and my other student proteges have brilliant careers ahead of them. And I am pleased to think that they will someday serve as mentors to the next generation of research investigators.

When the eminent African-American educator W.E.B. Du Bois celebrated his 90th birthday, he wrote to his newborn great-grandson, "The return from your work must be the satisfaction which that work brings you and the world's need of that work. With this, life is heaven, or as near heaven as life can get."

We scientists are fortunate that our work brings us satisfaction as it addresses the needs of the world. We can enjoy the thrill of revelation, and we can share with one another our ideas and our fervor for ideas. And, looking to the future, we can ensure that our work continues by preparing our successors to carry it on.

Today, all across California, thousands of elementary, middle and high school students hope as we once hoped and struggle as we once struggled. They need to know that, while a career in science is hard work, the rewards are potentially far greater than in almost any other area of human endeavor. They need to hear that all those hours of concentration will be a worthwhile investment. They need to see that less-traveled paths lead to wonderful worlds.

And, most important, they need mentors to ignite their passion for discovery -- older mentors with years of experience and younger mentors who only recently sat where they now sit.

The University of California's programs for early outreach and for immediate outreach and recruiting need your help. Please join us in reaching talented students of color across our communities. This is shaping up to be our most meaningful collaboration yet, and it promises a great yield for many years to come.