

# CUR Announces Recipients of the Inaugural CUR Fellows Awards

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*"It is essential that we provide recognition to those faculty who have excelled at integrating research and education. By identifying individuals who are exemplars of the term "research mentor", the CUR Fellows Awards provide much needed peer validation and encouragement as well as allowing honored Fellows to serve as existence proofs and resources to the broader scientific community."* — Norman L. Fortenberry, Division Director, Division of Undergraduate Education, National Science Foundation

At the Council on Undergraduate Research National Conference in Wooster, Ohio, in June, 2000, two outstanding individuals will be honored as the first recipients of CUR Fellows awards: Mary Allen, a biologist at Wellesley College, and Julio Ramirez, a psychologist at Davidson College.

Allen and Ramirez represent the very best as mentors in undergraduate research. Whether positively affecting the lives and careers of their students or making significant contributions to their research fields, these two CUR Fellows are enjoying highly successful careers. With the establishment of these awards, their accomplishments may be widely applauded across the disciplines, and we can celebrate with them this craft we call undergraduate research.

## A Rich Pool of Nominees

When the idea of CUR Fellows awards was posed at the 1998 CUR council meeting at Occidental College, the response was strongly favorable and swift — this was an idea on the minds of many. I worked with an energetic task force to define the award criteria and the selection process and, in October 1999, the first call for nominees went out. With a Nov. 30 deadline — a rather short timeframe to be able to present the first two awards by June 2000 — we were not overly optimistic that we would get many strong nominees. We were quite wrong. Not only were there 66 nominees, but also the quality of the nominations was astonishing.

The selection committee quickly realized there are a lot of amazing people out there who, year after year, expend unimaginable effort for the love of it and to see their students acquire skills for success. Reading the nomination letters was an experience I will long remember. It was the letters from former students that impressed us the most — several of us were moved to tears by the descriptions of heroic efforts by their mentors. Some of those student comments appear here in the sidebars describing Allen and Ramirez. The heartfelt appreciation for long hours of one-on-one contact and genuine

*"I was very thrilled and honored to hear that I was selected to receive one of the first two CUR Fellows Awards. Working closely with all of my talented undergraduate and several faculty colleagues in the research lab has been the best part of teaching at Wellesley. I really am so indebted to each of them!"*



Mary Allen

As an undergraduate and M.S. student, Mary Allen studied chemistry at the University of Wisconsin, Madison. She then received her Ph.D. in microbiology at the University of California, Berkeley. Allen joined the faculty at Wellesley College in 1968 and rose through the ranks to become full professor and chair of the Department of Biological Sciences in 1980 and again in 1997. She currently holds the Jean Glasscock Chair in Biological Sciences.

Allen's research at Wellesley on the biochemistry and environmental physiology of cyanobacteria is nationally recognized and has resulted in 30 publications, 17 of which have undergraduate co-authors. A total of 70 undergraduate students have done senior honors thesis research in her lab and most have gone on to graduate schools or medical schools, such as at Cornell, MIT, Harvard and Berkeley. Hundreds of other students have done research with her. Along with directing a highly successful research program, Allen was awarded the Wellesley College Pianski Prize for excellence in teaching in 1986 and the American Society of Microbiology Carski Foundation Distinguished Teaching Award in 1995. In the words of her colleagues, "Dr. Mary Allen is the epitome of college teachers."

Allen funded her lab continuously for 28 years with 15 external grants from the National Science Foundation, National Institutes of Health and Research Corporation.

Allen led efforts to obtain a Howard Hughes Medical Institute grant and NSF support for a long-running summer research program in her department. Further, Allen has extended the model of involving undergraduates in research to the social sciences through an NSF Award for the Integration of Research and Education. She helped coordinate a program for mentoring minority students entering Wellesley. In addition to her generous service to various scientific societies and at Wellesley, Allen has been a CUR member since 1986 and served as a biology councilor, newsletter editor and 1994-95 CUR president.

One of Allen's past students said, "The most inspiring and helpful aspects of Dr. Allen have been her incredibly positive attitude, her enthusiasm for her field and her genuine interest in her students." She combines her roles as teacher, researcher and department chair "with apparent ease, and continues to remain very accessible to her students despite having numerous responsibilities in and outside the college."

Another student, now with a Ph.D., recalled that what she remembered most of working with Allen was "the excitement that she had about her field of research. Research is difficult and it is easy to get discouraged when things don't work out the first time. But Mary would always say, 'Wonderful!' when she saw a result, and took the time to help and encourage me when things didn't work out as expected. ...Her relationship with me greatly enhanced my confidence and allowed me to try and succeed at things I previously did not think I could accomplish." Mary "instilled in me the lesson that I can do anything that I dream possible. My greatest wish in my teaching career is that I can encourage at least one student enough that they too might learn this incredible lesson, as Mary Allen did for me."

CUR is very proud to present Mary Allen with one of the first CUR Fellows awards.

concern for students' welfare was a common theme through all the nominations.

In identifying these first CUR Fellows, the selection committee considered many parameters, including active CUR membership and sustained excellence in research with undergraduates as evidenced from numbers of students and years of involvement. We also looked at the number and quality of nominees' publications, especially those with undergraduate co-authors, success in obtaining extramural support for research and student presentations at meetings. Influence was also measured by what happen to their students after graduation, by their outreach to minority or under-represented groups and by their ability to incorporate research activities and experiences into courses. The committee also weighed personal experiences documented in the letters.

In sum, this was a very difficult job due to the overall strength of the nominations. All of the nominees should feel extremely proud of their accomplishments, as are we.

## Challenges of Research at a PUI

Allen and Ramirez have been extremely successful doing research with undergraduates. We should consider just how difficult a job this is, especially since we weren't necessarily prepared for the job! Most of us were educated at major research universities where interactions with undergraduates were relatively uncommon. We might have assisted in teaching introductory lab courses, or perhaps we gave an occasional lecture when our mentor was out on the seminar circuit. Mostly, we took classes with other graduate students, worked alone at the bench or in the field, read paper after paper and talked to our colleagues and mentors. And, as postdocs, it was more of the same — more productivity, probably, but at the expense of interactions with undergraduates.

After years of toil, we landed permanent positions where we learned a new term — "primarily undergraduate institution." Gone were the long hours of freedom to read and mull over papers. Gone were the daily chats with colleagues sharing similar interests and expertise. Gone were the frequent seminars given by luminaries in one's field. And gone were our mentors, the people who could help solve challenging technical problems, suggest the best paper to cite or advise on how best to budget our time to get everything done. We were on our own and with surprisingly little support, given our previous experiences. Before thinking too much about getting our research under way, we had to get lots of lectures written — lots of lectures! We had to write grants, then rewrite them after getting the reviews back, and once they came, we had grant administration workshops (but we weren't trained to be accountants!). Best of all, however, were the undergraduates camped at our door eager to do research with us.

Each student brings different levels of enthusiasm and skill, and it is our job to train them, from scratch, and mold them into serious scientists. And this is where the nominated faculty really excels. They have a knack for connecting with students and making them feel comfortable in new and challenging situations. They nurture students, teach them how to use basic tools of research and spend lots of time talking through approaches and strategies — always looking on the bright side of failed experiments — and then they coach them on the finer points of writing or delivering a research talk. They make time for mentoring by working nights to set up teaching labs or to grade exams.

In sum, this is more than a full-time job that we weren't fully prepared for, but one I wouldn't give up for anything! In light of these challenges, the accomplishments of Allen and Ramirez are even more remarkable. We are indeed proud of their leadership and honor their record of service to undergraduate research.

Mary Allen and Julio Ramirez are the first of what promises to be a long list of CUR Fellows — talented leaders who have been enormously influential but, until now, have not been widely appreciated. They will serve as role models for just how well research with undergraduates can be done.

*"I am both honored and humbled by this wonderful award. I can think of no greater honor than to have my peers recognize my work. By the same token, this award reflects the talent and hard work of all my colleagues who have committed themselves to enhancing the educational experience of our students by integrating teaching and research."*



Julio Ramirez

Julio Ramirez received a B.S. degree in psychology at Fairfield University and M.A. and Ph.D. degrees in biopsychology from Clark University in Worcester, Mass. After completing a post-doctoral year at MIT, he joined the department of psychology at Davidson College in Davidson, N.C., in 1986 and, in 1998, he was named Davidson's first R. Stewart Dickson Professor. Ramirez and his students investigate the recovery of the central nervous system after brain damage and the effects of Alzheimer's disease. His work at Davidson has resulted in 19 research publications — nine with undergraduate co-authors — in the last 13 years. Over that relatively short time 85 students have worked with Ramirez and, judging from their comments, they received a memorable experience. Ramirez has received more than \$2 million in grants from the National Institutes of Health, National Science Foundation, Howard Hughes Foundation and the Pew Charitable Trusts to support biomedical research and education at Davidson.

In 1989, Ramirez was named North Carolina Professor of the Year and also was honored as a National Gold Medal Professor of the Year. His service to the undergraduate-research community includes being a CUR councilor from 1992 to 1997 and the founding president of Faculty for Undergraduate Neuroscience. Ramirez also served as chair of the NIH Small Business Innovation Research Committee.

Ramirez's gifts as a scholar-teacher are remarkable and his infectious energy touches many people beginning with his research students and extending into the community where he speaks to Alzheimer's support groups and local schools. His deep compassion led to the creation of "Love of Learning," a program that allows gifted minority high-school students from Mecklenberg County to spend four summers in his laboratory. His undergraduate research students hail from all over the world. Thirty-one have become doctors or are in medical school, and 13 are working on or have earned Ph.D.s at prestigious programs.

Ramirez instills lifelong confidence in his students. One former student said she was "embarking on my career, anticipating the challenges ahead, nervous and excited, and yet at the same time calm and confident that I can meet those challenges. That is what it feels like to have Julio in my corner. Julio has been a combination of teacher, parent and friend to me for the past 13 years, and my life has been wonderfully enriched because of it." Another former student, an African immigrant who is now an M.D. completing a neuroscience residency program at Duke University, wrote, "Julio has been instrumental in helping me shape my academic career and embodies all the ideals one would wish for in a mentor."

CUR is indeed proud to present Julio Ramirez with an inaugural CUR Fellows Award.

