

The list of former CSUN undergraduates and graduate students who have conducted cancer research under the guidance and mentorship of biology professor Steven Oppenheimer goes on for pages and pages. Medical doctors. Dentists. Ph.D.s. Professors. Biotechnology researchers. Many completed their master's degree and published studies with the professor. Such is the legacy of Oppenheimer, one of the longest-serving and most influential researchers in the history of CSUN's Department of Biology.

He officially retired in May after teaching at CSUN since 1971, but he's not riding off into the sunset — and he's certainly not done researching the effects of specific chemicals on clusters of cells. The university has pledged to support his award-winning research program for biology undergraduates as long as he wants to continue.

"Research stimulates some students to go into a research career," Oppenheimer said. "And in many cases, it's a requirement to get into medical school, dental school, pharmacy school. These days, most of the biology majors need research to go on to more advanced degrees and programs."

In CSUN's Center for Cancer and Developmental Biology, Oppenheimer spent decades with graduate students studying the effects of certain sugars on sea urchin embryo cells. (The National Institutes of Health recommended sea urchin embryo cells as ideal models for cellular research, since their structure and mechanisms are similar to human cells.) Today, Oppenheimer's undergraduates are testing the effects of different chemicals to see if they "unclump" clusters of yeast cells, another model system.

"If we find chemicals that unclump cells, those chemicals could potentially be used with humans to unclump cancer cells," said Oppenheimer, "which should increase the likelihood of the body's defenses to kill the cancer cells. Anything that can unclump the cells can help destroy cancer in the body."

For the past 15 years, Oppenheimer has had 50 undergraduates per semester in the lab working on this research. The program was one of the factors that garnered him a Presidential Award for Excellence in Mathematics and Science Mentoring from President Obama in 2010, one of only about 20 educators nationally honored with the annual award at a White House ceremony.

He was elected a fellow of the American Association for the Advancement of Science, one of the

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nation's most prestigious research honors, and he has co-authored about 300 published papers, books, abstracts and national presentations with his students and colleagues.

Oppenheimer also devoted two decades to organizing and publishing the *New Journal of Student Research Abstracts*, which celebrated its 20th year in 2015. The collaboration between CSUN and Los Angeles Unified School District and private-school teachers promotes science, technology, engineering and mathematics (STEM) for K-12 students, and the annual journal includes hundreds of science project abstracts from students.

"It's very good to excite students before college," Oppenheimer said. "When you get them early, like in middle school, you can turn them on to science. We need more research scientists!"—*Olivia Herstein*



Department
BIOLOGY,
COLLEGE OF
SCIENCE AND
MATHEMATICS

Topic
CANCER AND
DEVELOPMENTAL
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