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Geologist Receives \$409,000 NSF CAREER Grant

Orange, Calif., Sept. 2, 2009 -- Christopher Kim, Ph.D., assistant professor of chemistry at Chapman University, has received the National Science Foundation's most prestigious award for early career, tenure-track teachers and scholars.

The NSF Faculty Early Career Development (CAREER) Program has awarded Dr. Kim a grant of \$409,542 to support his research on arsenic and other mining waste for the next five years. Dr. Kim, 36, is the first professor at Chapman to receive an NSF CAREER grant. Other universities with faculty receiving NSF CAREER grants this year include MIT, Harvard, Stanford and the California Institute of Technology.

"It's a really great honor and a reflection of the work the students and I have been doing for a couple of years now," Dr. Kim said. "It's also a reflection of how Chapman has created an environment for the sciences where we can do this type of work successfully."

Dr. Kim's research examines arsenic and other metals waste from gold, silver and mercury mines in Southern California, primarily in the Mojave Desert. He's interested in the particle size of metals because finer-grained particles are more likely to be inhaled or ingested if the particles stick to hands or unwashed food. Dust-sized airborne particles picked up by winds can also be a health hazard to people living or engaging in leisure activities (especially off-road driving) near the mines.

[\(SEE VIDEO: Dr. Kim discusses his research.\)](#)

So far, his research has shown that as the particle size decreases, the concentrations of metals -- including arsenic, lead, copper, chromium and zinc -- increase. That means the smaller particles of mine waste are more "metal-enriched," making them potentially more hazardous if people inhale or ingest them, Dr. Kim says.

The CAREER award honors scholars toward the beginning of their careers (in the first six years of a tenure-track position) who are likely to become academic leaders in the future. The NSF also looks at how those scholars will share their work on a more broad level. Dr. Kim will work with schools, where he will invite grade-school students and teachers to his Chapman lab to show them his research and also get them excited about science. He also regularly schedules town halls in communities where there is a heavy presence of old mines to discuss the implications of the waste.

Dr. Kim received his A.B. in geology from Princeton University. He received his Ph.D. from Stanford University, Department of Geological and Environmental Sciences, in 2002. For more on Dr. Kim, [CLICK HERE](#). <http://www.chapman.edu/CS/chemistry/faculty/kim.asp> To learn more about his research at

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YouTube link: <http://www.youtube.com/watch?v=tH0S9t7QTpl>