

## SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATES IN TUCSON, ARIZONA



Research Experience for Undergraduates (REU) is an NSF-sponsored program that provides undergraduates a summer stipend to conduct independent research projects in conjunction with NSF funded projects under the mentorship of the project's senior investigators.

**Who is eligible?** Students who are U.S. citizens or permanent residents enrolled in an undergraduate degree program. Members of underrepresented groups are especially encouraged to apply.



**What is expected?** Students will develop an independent research project in conjunction with an ongoing collaborative research project at the University of Arizona conducted by Dr. Steve Archer and Dr. David Breshears. Students will summarize their findings in a written report and present their research in an oral or poster presentation during the Fall Semester of 2009.

**What is the starting date?** Flexible, but May 2009 is preferred.

**How much is the stipend?** Up to \$5,760 or \$480 per week.

**How do I apply?** go to <http://ag.arizona.edu/research/archer/>

**When is the application deadline?** April 30 or until suitable candidate found.



**What is the research about?** Decomposition, the breakdown of dead plant and animal material, is a fundamental process that cycles nutrients and carbon through ecosystems. Most of what is known about decomposition comes from studies in high rainfall areas, but this knowledge does not translate well to dryland ecosystems. Decomposition affects long-term soil fertility and carbon storage and therefore plays an important part in determining the role of drylands in the global carbon cycle. Recent studies suggest that ultra-violet radiation and mixing of eroded soils with litter are important drivers influencing dryland decomposition. Our research tests the importance of these drivers. We hypothesize that the formation of this soil-litter matrix is determined by wind and water erosion and that once it develops the role of ultra-violet radiation is mediated. REU students will interact with collaborators at New Mexico State University (Dr. Heather Throop), Loyola University (Dr. Paul Barnes) and the University of Kentucky (Dr. Rebecca McCulley).



For more information visit our website: <http://www.snr.arizona.edu/project/decomposition>