

Carol Barnes Recognized by American Psychological Association for Major Scientific Contributions

BIO5 Institute
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The American Psychological Association has named the UA's **Carol A. Barnes** a 2014 Distinguished Scientific Contribution award recipient. The award will be presented during a ceremony at the APA convention Aug. 7-10 in Washington, D.C. Barnes also will deliver a featured lecture at the convention on Aug. 9.

The APA **Distinguished Scientific Contribution Award** [1], first given in 1956, recognizes senior scientists for distinguished theoretical or empirical contributions to basic research in psychology.

The **Committee on Scientific Awards** [2], which is overseen by the APA Board of Scientific Affairs and staffed by the APA Science Directorate, selects the recipients on the basis of nominations submitted by a wide range of scientists and institutions. Reviewers with expertise in particular areas of research provide further advice to the committee. Further information about the recipients' backgrounds and research will appear in the November awards issue of *American Psychologist*.

Barnes [3], Regents' Professor of Psychology, has conducted innovative research on aging and memory at the UA for almost a quarter of a century and has brought more than \$35 million in research funding to the University. She recently was awarded the Society for Neuroscience's Ralph W. Gerard Prize in Neuroscience, the highest recognition conferred by the society, which honors outstanding scientists who have made significant contributions to neuroscience throughout their careers.

"Dr. Barnes has done groundbreaking work on the neurobiological mechanisms underlying memory changes in normal aging. She understands that a detailed knowledge of the process of normal aging will provide an essential background against which disease-related brain changes can be understood," said **Betty Glisky**, professor and head of the UA **Department of Psychology** [4]. "The breadth of scientific techniques and levels of analysis she uses to investigate the complex topic of brain aging distinguish her work. She also serves the scientific community in many ways and is an outstanding mentor to the many students who carry on her work."

Barnes – who also holds appointments in the departments of **Neurology** [5] and **Neuroscience** [6] – was among the first neuroscientists to investigate how normal aging affects the brain circuitry underlying cognitive processes like memory. Driven by the philosophy that scientists cannot fully comprehend brain disorders and diseases such as Alzheimer's until they clearly understand how a healthy brain functions, Barnes has employed a variety of scientific techniques to uncover the changes that take place in the aging brain. Her work has helped to define neurobiological norms of successful brain aging across mammalian species.

Barnes earned her doctorate at Carleton University and completed postdoctoral fellowships at Dalhousie University, the University of Oslo and University College London. She is the director of the UA's **Evelyn F. McKnight Brain Institute** [7] and the Evelyn F. McKnight Endowed Chair for Learning and Memory in Aging. She also is the associate director of the UA's **BIO5 Institute** [8], and the co-chair of the Arizona Health Sciences Center's Neuroscience Advisory Council.

The BIO5 Institute at the UA mobilizes top researchers in agriculture, engineering, medicine, pharmacy and science to find bold solutions to humanity's most pressing health and environmental challenges. Since 2001, this interdisciplinary approach has been an international model of how to conduct collaborative research, and has resulted in improved food crops, innovative diagnostics and devices, and promising new therapies.

The **Evelyn F. McKnight Brain Institute** [9] at the UA is one of four McKnight Brain Institutes across the U.S. established by the McKnight Brain Research Foundation to promote research and investigation of fundamental brain mechanisms responsible for memory loss during aging. Investigators are working to uncover the neurobiological changes in the brain that cause memory to decline as we age, and to understand what characterizes "normal" from pathological aging, so that therapies can be developed to help optimize brain and mental health function throughout life.

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