SSR New Investigator Award *(sustaining support from the Virendra B. Mahesh New Investigator Endowment Fund).* Dr. Andrea S. Cupp is the recipient of the 2006 SSR New Investigator Award. Dr. Cupp is a young investigator who has contributed significantly to the field of reproductive biology. She is a researcher, mentor, and teacher poised to become a leader in her field. Dr. Cupp exemplifies a researcher who is committed to advancing the field of reproductive biology and the training of future scientists.

Dr. Cupp received her Ph.D. from the University of Nebraska in 1994 and during the next 10 years published 29 manuscripts in peer-reviewed journals. Dr. Cupp is the first author on 10 of these; 15 of the 29 were published in *Biology of Reproduction.* Her Ph.D. research with Dr. Jim Kinder addressed differential sensitivity of gonadotropin secretion to estradiol modulation during the bovine estrous cycle. Her studies were a significant contribution to the broader program in Dr. Kinder's laboratory that defined endocrine changes associated with follicular development and early formation of the bovine corpus luteum.

Dr. Cupp acquired her current interest in the role played by growth factors in early gonadal differentiation and development during 6 years of collaboration with Dr. Michael Skinner as a postdoctoral fellow and research assistant professor. This collaboration produced an exciting series of publications describing the impact of specific growth factors in testicular development and defining a developmental cascade that occurs as the indifferent gonad undergoes differentiation of Sertoli cells and formation of the fetal testes on a molecular and cellular level. She produced 14 publications from her postdoctoral fellowship. Research ranged from identification of growth factors involved in testis morphogenesis such as TGF-alpha and neurotrophin 3, to the effects of environmental toxicants and endocrine disruptors on that process. Dr. Cupp was involved in projects regarding the transcriptional control of Sertoli cell differentiation and prostate development. She helped establish the experimental model to investigate gonadal development during embryonic organ culture and used that system to provide insights into novel development and how environmental factors affect this process. These findings were summarized and integrated with information from other laboratories by Drs. Cupp and Skinner in a recent book chapter entitled ''Embryonic Sertoli cell differentiation,'' in *Sertoli Cell Biology,* 2005, edited by Skinner and Griswold. According to Dr. Skinner, Dr. Cupp ''is one of the most mature and productive postdoctoral fellows I have ever had as well as one of the most suited to an academic career of independent research.''

Dr. Cupp joined the faculty of the Animal Science Department at the University of Nebraska in 2000 and continued working in the field of testicular function while expanding her research interest into fetal ovarian development. She received an NIH/NICHD RO3 award on the role of VEGF in testis development in (2003–05) and another NIH/NICHD RO3 on molecular and cellular regulation of testis development (2004–06). She also obtained a number of smaller awards that added to her independence as a young investigator. She recruited an industrious group of graduate students and

technicians whose efforts are summarized in a series of high-quality abstracts that are now being submitted and reviewed for publication.

Dr. Cupp's stature within the field of reproductive biology was already being recognized in 2004. She served as chair of the Physiology Program of the Midwest Section of the American Society of Animal Science/American Dairy Science Association and organized a highly successful symposium entitled ''Factors Affecting Ovarian Follicular Development.'' At this meeting the abstract presentation by her graduate student, Rebecca Bott, was awarded first place in the graduate student competition. Dr. Cupp became the youngest president of the Nebraska Physiological Society, also in 2004. For the 2004 Annual Meeting of SSR, Dr. Cupp proposed, organized, and chaired a minisymposium entitled ''Genomics and Proteomics in the Ovary and Testis.'' She was a member of the USDA/NRI Grant Review Panel for Animal Reproduction and a member of the NIH/NIDDK/NICHD Panel to review proposals for the Murine Atlas of Genitourinary Development. In 2004, Dr. Cupp was one of two recipients honored with a Junior Faculty for Excellence in Research Award, presented by the Agriculture Research Division of the University of Nebraska at Lincoln. Collectively, Dr. Cupp has demonstrated that she can conduct a productive research program while attracting funding to support her efforts, and balance these efforts with service to the research community in a variety of leadership roles.

The significance of Dr. Cupp's research to the field of reproductive biology is not limited to her impressive publication record in the areas of gonadal development and function. Dr. Cupp has established a culture system for perinatal rat ovaries in her laboratory from a technique developed within the Skinner laboratory. This culture system has allowed her to advance the study of antagonists and the overexpression of angiogenic factors in ovarian morphogenesis and function. She has taught this technique to colleagues such as Dr. Melissa Peplin at Syracuse University and one of her collaborators, Dr. Bridgette Kirkpatrick at Collins County Community College. Dr. Kirkpatrick utilizes the ovarian organ culture in a 2-year biotechnology program to develop research projects with her students. Dr. Cupp is also advancing the technique of follicle aspiration to determine how antagonists of angiogenesis and overexpression of angiogenic factors affect ovarian folliculogenesis and steroidogenesis. These techniques facilitate research not only in the field of reproductive science but also in allied fields of study such as toxicology. These experimental procedures will assist in determining the effect of endocrine disruptors on gonadal function.

In addition to the rising number of manuscripts from her own research that are in various stages of submission, review, and publication, Dr. Cupp further displays her independence as a new investigator by her ongoing list of invited lectureships, her mentoring of graduate students, and her ability to establish collaborations on a variety of her projects.

In summary, it is quite apparent that Dr. Cupp not only is committed to advancing the field of reproductive biology and training of future scientists but is already accomplished

in these areas. Her credentials make Dr. Cupp a worthy choice for the SSR New Investigator Award.