

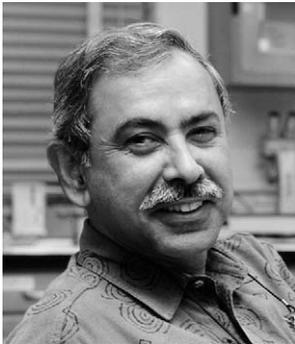
## 2008 Awards

The following people have been recognized by their peers for their outstanding contributions and service to science. The SSR is proud to honor these people.

**2008 Awards Committee:** Robert A. Cushman, Chair; Charlie Chaffin, Andrea Cupp, Michelle Garcia, Steve Hammes, Fred Karsch, Kwan Hee Kim, Carolyn Komar, P. Prabhakara Reddi, Cheryl Rosenfeld, and Xiangzhong (Jerry) Yang.

### Carl G. Hartman Award

Dr. Sudhansu K. Dey



The Carl G. Hartman Award is most prestigious award conferred by the Society for the Study of Reproduction. Each year, this award recognizes an exemplary research career in reproductive biology. The 2008 recipient of the Carl G. Hartman Award is Dr. Sudhansu K. Dey. Dr. Dey's record of discovery clearly meets the criteria of the Hartman Award. He has published more than 250 articles in the highest

impact refereed journals, including a remarkable ten articles in 2006 alone. The majority of these articles address the fundamental issues of embryo-uterine interactions in early gestation and clearly demonstrate that he that he is among the best known and most accomplished of implantation biologists. His record of invited lectures is long and prestigious, including SSR State-of-the-Art Lecture, Gordon Conferences, and numerous appearances on the programs of high-profile international meetings. He was plenary or keynote speaker at three international congresses in 2006, and received six such invitations for 2007—clear indication that the international scientific community holds him and his work in high esteem. He has been recipient of several awards, including the SSR Research Award, in recognition of his contribution to the field during the last half of the 1990s.

Dr. Dey has clearly been an innovator in his research program. His groundbreaking work demonstrating the role of epidermal growth factor in embryo-endometrial signaling provided a new paradigm of paracrine regulation of implantation. He followed this with novel observations of the EGF receptor and, consequently, the role of other members of the EGF family as essential or redundant factors in provoking the early embryo-uterine interactions. These studies showed that the embryo provides important coordination of local uterine events by initiating attachment and invasion, and thus were germinal to the re-evaluation of embryo's role in the implantation process. More recently, Dr. Dey's novel studies of cannabinoid signaling in implantation have had an important impact on human reproduction and fertility by explaining a fundamental cause of recurrent abortion.

Dr. Dey has pioneered the use of both molecular methods and the exploitation of transgenic mouse models to understand the complexity of the processes of embryo attachment and invasion. His investigations of uterine cyclooxygenase-2 (COX-2; now known as prostaglandin-endoperoxide synthase 2, or PTGS-2) provided one of the most important advances in implantation biology in recent decades. He showed PTGS-2 to be critical to

ovulation, fertilization, and implantation, and that PTGS-2-derived prostacyclin mediates embryo implantation. His further investigations of knockout models with phenotypes of disruption of the implantation process, including the homeobox gene *Hoxa-10* and zinc transporter proteins have provided new insight into the transcriptional control of endometrial and embryonic events associated with the initial attachment process. The great strength of Dr. Dey's laboratory is the depth in which he and his co-workers examine each model using multiple methods and endpoints. This strength is exemplified in his recent article (*Endocrinology* 2005; 146:2424–2433) on the role of cyclins during peri-implantation, where he has integrated the findings in the uterus of wild-type mouse with investigation of a null mutation model.

Dr. Dey's timely publication of his original research findings has led to rapid advancement of the field of implantation biology. His frequent and comprehensive reviews (a remarkable three in 2006, including one in *Nature Reviews Genetics*, and one in *Endocrine Reviews*) have provided integration of published information, theoretical synthesis of the overall process of implantation, and visionary projection of the trajectory of investigation of implantation.

The training record of the candidate is likewise outstanding, including supervision of more than one dozen graduate students and more than 30 postdoctoral fellows. Many of these individuals have gone on to establish their own laboratories in the USA or in other countries. In addition, he has trained numerous undergraduates in science and medicine and supervised research rotations of OB/GYN specialist trainees. Several of his trainees have received national and international awards of scholarships and fellowships, and these and others have been recognized for the best presentations at international congresses.

Dr. Dey has demonstrated his scientific leadership and substantial service contributions to the reproductive biology community by organizing symposia, conferences, and congresses. Many of these have been for SSR Annual Meetings, including three minisymposia on implantation and a Techniques Workshop. Other international meetings that he has organized include Gordon conferences on the reproductive tract, Sero symposia, and Endocrine Society symposia. He played a major role in developing the first Keystone Symposium in Reproductive Biology, held in February 2007. His collaborations and interactions with other researchers have been fruitful, and he is well known for his open and contributory attitude toward other scientists. He is always ready to help a young investigator with reagents, technical assistance, and aid with mouse models. Together, this demonstrates commitment to the community, and is a further indication of his strength as a scientist.

In summary, Dr. Dey has been a pioneer in developing a significant area of knowledge, implantation biology. He has developed this new knowledge in a creative and insightful

manner, as indicated by his numerous quality and highly cited publications. This new knowledge has greatly expanded the understanding of early pregnancy. He is a good citizen of the community and has trained numerous young scientists. These remarkable accomplishments render Dr. S.K. Dey a highly worthy recipient of the Carl G. Hartman Award for 2008.

### SSR Research Award

Dr. Randy Prather

(Supported by a grant from NV Organon)



Dr. Randy Prather is the recipient of the Society for the Study of Reproduction Research Award for 2008. Dr. Prather was hired into the Food for the Twenty-First Century Program as a member of the Animal Reproductive Biology Group at the University of Missouri, and has developed an exceptional, internationally recognized research program that has focused on the molecular, cellular, and physiological mechanisms involved in female germ cell development, fertilization, and early

embryonic development. His research goal is to increase reproductive efficiency of swine and to expand the genetic potential present in pig embryos. One of Dr. Prather's strengths is that he has incorporated different scientific disciplines (Genomics, Transcriptional Profiling, Proteomics, Differential Methylation Hybridization, Cell Biology, Nuclear Transfer, Transgenics, Cell Culture, etc) into his program to achieve his research goals.

Dr. Prather is considered to be an international authority in the application of biotechnologies to the study of early embryonic development and the genetic modification of swine embryos. By any measure one might use, Dr. Prather's research accomplishments are truly outstanding. His research findings have resulted in 187 refereed journal articles (including 26 peer reviewed invited review papers), 31 invited review papers and book chapters, 220 abstracts, 17 extension articles, 88,042 GenBank submissions and 8 patents. He has been exceptionally effective in obtaining funds in support of his research program, over \$53 M (PI or Co-PI = \$48 M; As Major User/Contributor/Collaborator \$4.7 M and Gifts \$289,761). Further evidence of his international recognition is provided by the 80 invited major presentations he has given in other states and countries. One of his greatest strengths is that of his collaborations. The USDA NRI requires submission of a list of collaborators and coauthors from the last 4 years to be included with a grant application. Dr. Prather has 250 names on his list.

Although the primary emphasis of faculty in the Food for the Twenty-first Century Program (Dr. Prather is now Associate Leader for this cluster) is on research and graduate training, Dr. Prather has made significant contributions to undergraduate and graduate education. He has assisted in teaching an undergraduate course on reproductive management and he was instrumental in the development of a graduate course entitled "Gamete Physiology and Pregnancy". Dr. Prather has also devoted

significant amounts of time to service activities. He has served as the Director of the Transgenic Animal Facility (a Molecular Biology Core Facility) from 1990 to 1994 and he currently serves as the Large Animal Facilities Coordinator for the Department of Animal Sciences (1994 to present (now the Division of Animal Sciences). He has also served on the University of Missouri Life Sciences Enhancement Committee, Provost's Life Sciences Task Force, USDA/NRICGP grant review panels (Animal Reproductive Efficiency), Swine in Biomedical Research Organizing Committee and International Conference on Pig Reproduction Organizing Committee (He currently serves as treasurer for this organization). He has or currently serves on the editorial boards of *Xenotransplantation*, *Molecular Reproduction & Reproduction*, *Animal Reproduction Science*, *Cloning & Stem Cells*, and serves as an ad hoc reviewer for numerous other journals.

In conclusion, Dr. Randall S. Prather is a world-class scientist with not only the drive for science but also the critical follow-through for the benefit of others. His research efforts contribute greatly to the stature of the SSR, to the advancement of science, and to the benefit of society. Consequently, we strongly recommend that Dr. Randall S. Prather be recognized with the SSR Research Award. Without question, he will proudly uphold and champion the distinction of this award.

### SSR Distinguished Service Award

Dr. Joanne E. Fortune

(Supported by a grant from EMD Serono Research Institute, LLC)



Dr. Joanne E. Fortune is the recipient of the SSR Distinguished Service Award for 2008. Dr. Fortune has demonstrated, in every way, "unselfish service and leadership in advancing the discipline of reproductive biology," the primary criterion for the award. Dr. Fortune has served the Society continuously and in a variety of capacities for many years. Her leadership positions in the Society are most impressive and include the following: President-Elect, President, and Past President (1993–1996);

Secretary, Board of Directors, (1989–1992); Treasurer, Board of Directors, (1986–1992); Member, Board of Directors, (1983–1986); and assignments on most of the Committees supporting the functions of the Society. In all, Dr. Fortune spent a total of nine years on the Board of Directors of SSR and continues to provide good counsel as a Past President. She was an innovative President, who along with Dr. Barry Zirkin as Program Chair, introduced the minisymposia that make up a very important part of our annual meetings today. She was one of the early leaders in organizing the Ovarian Workshops, which have often been held in conjunction with SSR meetings.

Dr. Fortune's contributions to the Society and to the discipline of reproductive biology also include the organization of a number of national and international meetings, and participation in public advisory groups including the Local Arrangements Committee for the SSR Annual Meeting (1985–1986) and the

Past Presidents Advisory Group (1996–1997). She also serves as the Society's representative on the Science Policy Committee of FASEB (Federation of American Societies for Experimental Biology). In addition, Dr. Fortune has served on numerous NIH, USDA, and NSF Grant Review Panels, as well as the Editorial Boards of *Biology of Reproduction*, *Endocrinology*, *Domestic Animal Endocrinology*, *Journal of Reproduction and Development*, and *Theriogenology*.

Dr. Fortune has been and continues to be a superb mentor for graduate and postdoctoral students, including 12 doctoral and 15 post-doctoral students and numerous Ph.D. and M.S. graduate committees. All of her graduate and postdoctoral students are successful scientists and nearly all of them hold responsible positions in the field and are contributors to the Society for the Study of Reproduction. She has obtained and directed a number of training grants (NIH and USDA) and her students have received 8 Lalor Foundation fellowships.

Dr. Fortune's research program is one of the strongest in the nation. She has been funded by competitive grants from NIH and/or the USDA since 1980. She was the major contributor to development of the two-cell—two-gonadotropin concept for estrogen production in the ovary. She was one of the early leaders in ultrasonographic studies of the ovarian follicle in cattle; in this area, she described and studied the causes of prolonged follicular dominance in cattle. More recently, she was the first to initiate studies of the growth of primordial follicles in vitro in any species other than the mouse. This potentially has far-reaching implications for animal agriculture and human fertility.

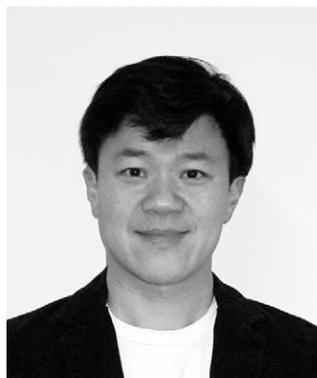
Finally, Dr. Fortune is an outstanding and dedicated teacher, as evidenced by her recent appointment to a coveted James Law Professorship at Cornell University. She has developed and taught a series of both undergraduate and graduate courses in reproductive biology at Cornell.

In summary, Dr. Fortune has demonstrated all of the criteria for the Society for the Study of Reproduction Distinguished Service Award.

### SSR New Investigator Award

Dr. Humphrey H.-C. Yao

(Supported by the Virendra B. Mahesh New Investigator Fund)



Dr. Humphrey H.-C. Yao is the recipient of the SSR New Investigator Award for 2008. Dr. Yao completed his Ph.D. degree in 1999 at the University of Illinois, Urbana-Champaign, under the mentorship of Dr. Janice Bahr. Dr. Yao was an outstanding graduate student publishing seminal discoveries in five papers in *Biology of Reproduction* and an author on four book chapters and review articles. He won the Trainee

Research Award at the 1998 SSR meeting. From 2000 to 2002, he had a very productive postdoctoral training under the capable guidance of Dr. Blanche Capel at Duke University.

In 2003, Dr. Yao was offered a faculty position in the College of Veterinary Medicine at the University of Illinois through the Postgenomics Program. This Program targeted particularly bright and productive young scientists. Needless to say, the members of the reproductive biology faculty were most pleased to have Dr. Yao return to the campus as an assistant professor. Dr. Yao quickly established an independent research program focused on sex determination and gonadal development. In 2004, he was awarded a two-year March of Dimes Starter Scholar Research Award and in January 2005 he was awarded a five-year RO1 NIH grant. He currently has four grant proposals pending. As a new faculty member, he attracted outstanding and productive students to his laboratory. In the past two years, three-four of his students were among the SSR Trainee Research Award Finalists. This past year, one of the students won first place in the poster presentations and two students won second and fourth in the oral presentations. The success of these graduate students is definitely the result of Dr. Yao's mentoring. During 2000–2007, Dr. Yao published 10 research articles in high-impact journals, in addition to eight book chapters and review articles. He was the recipient of awards as a postdoctoral fellow, and now as a faculty member in the College of Veterinary Medicine, University of Illinois, he has received two prestigious research awards given by the College of Veterinary Medicine. Dr. Yao has been an invited speaker at national and international meetings and has given seminars at top research universities. He was an invited presenter at a minisymposium entitled "Development and Function of the Male and Female Ducts" at the 2007 SSR meeting where he spoke on "Interactions Between Androgens and Local Signaling Molecules in Wolffian Duct Morphogenesis." Dr. Yao is also on the Board of Reviewing Editors for *Biology of Reproduction*, serves as an ad hoc reviewer for many journals, and has been a faculty member of the annual Frontiers in Reproduction course taught at Woods Hole, Massachusetts, since 2003. All of these above citations indicate that Dr. Yao is truly an outstanding young investigator and deserving recipient of the 2007 New Investigator Award.

### Trainee Mentoring Award

Dr. Michael F. Smith



The SSR Awards Committee and the Trainee Affairs Committee (TAC) are delighted to announce Dr. Michael F. Smith as the recipient of the 2008 SSR Trainee Mentoring Award. Dr. Smith joined the faculty at the University of Missouri, Columbia, in the Department of Animal Sciences in 1980, where he currently holds the rank of Professor. He successfully balances his teaching, research, and service appointments while mentoring undergraduates, graduate students, and postdoctoral fellows.

Dr. Smith selflessly gives of himself for the betterment of his laboratory and the community at large. He took on the added task as serving as Interim Director of Animal Sciences (2001 to 2005) while maintaining his mentorship in the classroom and laboratory. Over the years more than 3,600 students have enrolled in his classes. He has officially mentored 17 graduate students, 5 postdoctoral fellows and has been instrumental in the lives of numerous other students.

During his tenure at Missouri, Dr. Smith has received many awards highlighting his excellence in research. In addition to his research citations, Dr. Smith has received numerous awards for his excellence in teaching in the areas of reproductive physiology and reproductive management at the undergraduate and graduate level. The Gamma Sigma Delta organization first recognized Dr. Smith with the Graduate Teaching Award in 1987. The College of Agriculture honored him with the Green Chalk Undergraduate Teaching Award in 1991 and the Undergraduate Teaching Award in 1993. Also in 1993, Dr. Smith was honored with the National Association of Colleges and Teachers of Agriculture Teaching Award of Merit. In 1995, he received a William T. Kemper Fellowship for Teaching Excellence from the University of Missouri. In 2005, he was inducted into the College of Agriculture, Food and Natural Resources Teaching Academy. Dr. Smith possesses a unique ability to ignite a passion for learning in his students.

The profound impact that Dr. Smith makes on trainees extends far beyond the classroom. Regardless of class size, he learns the name of each student. He listens to their interests and helps them to define and achieve their goals. At any given time you can walk into his laboratory and see graduate students, undergraduates, and (or) postdoctoral fellows working together. It would not be uncommon to also find Dr. Smith benchside talking about the science and working with his students. He

claims that “excellence in teaching and research are not mutually exclusive . . . both take hard work and dedication, but excellence in teaching will enhance your skills as a researcher and excellence in research will make you a better teacher,” and he instills that mantra in his graduate students. Dr. Smith’s background in the field of reproductive biology is diverse: from basic physiology to applied applications of technologies. Those who have been mentored by Dr. Smith have noted that while the overall goals of his laboratory remain constant, he is highly flexible in allowing fluidity in scope or navigation of his program to meet the specific desires and goals of his students.

Dr. Smith’s students have gone on to become highly successful in both industry and academia. During his mentorship his students are encouraged to become involved in their field, and he often has both undergraduates and graduate students presenting original research at the annual SSR meeting. He has also mentored several students who have served our society on the TAC including trainee representatives. He instills an eagerness to learn, to think, and to serve. Dr. Smith is described by previous students as an excellent mentor and role model who gives selflessly of his time and efforts for the benefit and professional development of his students. He is regarded by his students, both past and present, as a mentor and a friend whom they can and do call upon for advice at any time. Dr. Smith embodies every quality described in the description of the award and beyond.