



Carl G. Hartman Award

(Supported by a grant from Cook Medical)

This award is the 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 recipient of the 2013 Carl G. Hartman Award is **Michael D. Griswold, Ph.D.**

Dr. Michael D. Griswold, Regents Professor of Molecular Biosciences at Washington State University (WSU), is world renowned for his contributions to our understanding of Sertoli cell structure and functions and the crucial role of vitamin A in spermatogenesis, and he is a loyal member of SSR.

Dr. Griswold received a B.S. in chemistry and a Ph.D. in biochemistry from the University of Wyoming. Funded by an NIH Postdoctoral Fellowship, he conducted postdoctoral studies on amphibian metamorphosis with Dr. Philip Cohen at the University of Wisconsin and, funded by an EMBO Fellowship, he studied *Xenopus* RNA with Dr. Flauco P. Tocchini-Valentini in Rome. Dr. Griswold spent a year as an Assistant Professor of Pharmacology at Baylor College of Medicine in Houston, followed by two years as a Research Associate in the laboratory of Dr. Irving Fritz at the University of Toronto, where he acquired what would become a life-long interest in Sertoli cells. Dr. Griswold joined the faculty of WSU in 1976 as an Assistant Professor of Biochemistry and Basic Medical Sciences, was promoted to Associate and then full Professor, and then was appointed Chair of the Department of Biochemistry and Biophysics in 1994, Director of the School of Molecular Biosciences in 1999, and Dean of the College of Sciences, a position he held from 2003 to 2010. Dr. Griswold became a Regents Professor of Molecular Biosciences in 2008 and, in 2011, he received the WSU Eminent Faculty Award, the highest faculty honor at WSU.

Dr. Griswold's research has been continuously funded by the NIH since 1977 (with the same

grant, "Hormonal Control of the Maturation of Sertoli Cells") and has also received NIH's Research Career Development Award (1979–1984) and MERIT Award (1997–2007). He has published more than 230 original scientific articles, book chapters, and review articles. His recognition in the field of Sertoli cell function and spermatogenesis is evidenced by his many keynote addresses, which include the SSR President's Symposium (1994 and 2007), Larry Ewing Lecture at Johns Hopkins University (2001), Andrew Nalbandov Lecture at the University of Illinois (1993), Asdell Lecture at Cornell University (2008), Bailly Lecture at Southern Illinois University (2010), Serono Lecturer at the Andrology Society (1994), and Distinguished Faculty Address at WSU (1994). Dr. Griswold received the WSU Sahlin Excellence in Research Award (1999) and the SSR Research Award (2006) and became a AAAS Fellow in 2009.

Dr. Griswold is an exemplary mentor. He trained seven M.S. students; 24 graduate students, including Drs. Mike Skinner, Ken Roberts, and Leslie Heckert; and 26 postdoctoral fellows and research associates, including Drs. Carlos Morales, Kwan Hee Kim, Carol Linder, Derek McLean, and Cathryn Hogarth. Dr. Griswold received the Frontiers in Reproduction Beacon Award in 2008 for his outstanding mentoring. Dr. Heckert wrote: "His high expectations returned dedication, creativity and independence from the members of his laboratory, which in turn produced a vibrant and exciting research environment. He led by example, support and occasionally by providing unsolicited words of encouragement...."

Dr. Griswold has unselfishly served his profession, SSR, the Andrology Society, and the Testis Workshop. He was a member of the SSR Board of Directors (1989–1992), SSR Annual Meeting Program Chair (1998), SSR President-Elect and President (1997–1999), Andrology Society Board of Directors (2000–2003), and Program Committee Chair for Testis Workshop (1993 and 2007) and Andrology Society (1996). He served the NIH on the Reproductive Biology Study Section (1983–1987), and continues to do ad hoc reviews for the NIH. Dr. Griswold has also served as an Editorial Board Member for *Endocrinology*, *Journal of Andrology*, *Biology of Reproduction*, *Endocrine Journal*, *Molecular Cellular Endocrinology*, and *Spermatogenesis*.

Dr. Griswold's contributions to Sertoli cell physiology and spermatogenesis are impressive. His lab demonstrated in 1980 that vitamin A modulated Sertoli cell function; in 1987 that vitamin A altered Sertoli cell gene expression; and in 1987, in a landmark publication with Dr. Morales, that retinol induced synchronization of seminiferous tubules in vitamin A-deficient rats. The crucial role that vitamin A plays in regulating germ cell entry into meiosis is still being investigated not only by the Griswold lab but also by many others in the field, including Drs. Kwan Hee Kim, Peter Koopman, and David Page. Moreover, Dr. Griswold's leadership role in this area is evidenced by his collaborative publications with Drs. John McCarrey, the late Lonnie Russell, Martin Dym, Bob Braun, Kate Loveland, David Zarkower, Marvin Meistrich, and Paul Cooke.

Dr. Griswold's lab pioneered microarray/gene profiling analyses of FSH-treated Sertoli cells beginning in 2002, followed by analysis of spermatogonial stem cells, testis, seminiferous epithelium, epididymis, spermatogenesis, and embryonic development of the testis. These databases are freely available to the scientific community; the number of investigators across the world who have used these databases is remarkable.

As evidenced from the comments above, Dr. Griswold has been at the forefront of research in male reproductive biology for the past three decades. Dr. Heckert wrote: "His ideas, approaches, and results have enhanced our understanding of Sertoli cell and gamete function, improved animal models and methodologies for the study of spermatogenesis, and precipitated new concepts in testis biology, contraception and infertility. Because of Dr. Griswold, more is known about the role of retinoic acid in regulating meiosis and the cycle of the seminiferous epithelium, the actions of FSH and testosterone, Sertoli cell function, and the characteristics of spermatogonial stem cells."

Dr. Michael Griswold meets and exceeds the criteria for the Hartman Award in terms of his original research, mentoring of many successful scientists, foresight, generosity to the field, and leadership. He has made SSR proud. (*Submitted by Mary Hunzicker-Dunn, Ph.D.*)