Supporting gynecologic cancer research: The last 20 years and beyond

The last four decades have witnessed remarkable advances in gynecologic cancer care and research. The year 2011 is an important year in gynecologic oncology since it marks the 20th anniversary of the Foundation for Women’s Cancer (previously known as Gynecologic Cancer Foundation [GCF]). The change in name, implemented in March, 2011, signals the organization’s determination to expand its outreach and mission to women not yet diagnosed with a gynecologic cancer, and to alert them to methods of prevention and early detection of cancers unique to women. This occasion offers a unique opportunity for us to honor the past, celebrate the present, and plan for the future.

For the well-being of women at risk for and those who are affected by gynecologic malignancies, understanding the genesis and basis of these cancers forms the foundation for future advances in treatment and prevention. This foundation is built, in part, by recruiting new generations of investigators interested in gynecologic malignancies. At a national level, the numbers of physician-scientists have continuously withered over the last 30 years [1-4]. These trends have implications not just for gynecologic oncology, but also for obstetrics and gynecology and other biomedical specialties. To reverse these trends within obstetrics and gynecology, two programs were launched—the American Association of Obstetricians and Gynecologists Foundation (AAOGF) Scholars Program in 1984 and the Reproductive Scientist Development Program (RSDP) in 1988. Both of these programs have been quite successful in providing support to individuals early in their academic career [2,5]. However, given the broad focus of these programs, there remained a need for programs focused on gynecologic cancers. Moreover, federal funding for gynecologic cancers has either declined or remained relatively flat for many years [6]. This rate of funding, coupled with the increasing age at which an investigator obtains initial NIH funding, has created an ever increasing need for providing seed grants to new investigators.

The Foundation for Women’s Cancer was established by the Society of Gynecologic Oncologists (SGO) in 1991 and includes all SGO members, giving seamless access to the latest evidence-based information about the prevention, early diagnosis and optimal treatment of gynecologic cancers. Funding for research has become a cornerstone of Foundation for Women’s Cancer’s commitment to knowledge creation. Uniquely, the research grants program targets young investigators with the hope that “seed” grants will provide encouragement and financial support at a crucial point in their career paths, eventually blossoming into more researchers dedicated to gynecologic cancer research. The first such research grant was awarded in the 1995–1996 academic year. The family of Karin Smith began the legacy of honoring the memory of loved ones through funding of research awards to promising young researchers. The Karin Smith/GCF Research Award in Ovarian Cancer recipient was Dr. Beth Karlan for a study titled “Characterization of a Novel Ovarian Inhibitory Substance.” The same year Dr. Jeffrey Fowler received the GCF Research Award in Surgery for a study titled “Laparoscopy Versus Laparotomy: An Evaluation of Adhesion Formation after Pelvic and Paraortic Lymphadenectomy in a Porcine Model.” Each researcher received $50,000 for the one-year research project. The academic success of these investigators since their initial award portended the good things to come.

Between 1995 and 2007, 82 young investigators have received research grants in recognition of their aptitude in the increasingly competitive field of cancer research. Since the inception of this program, there has been an increasing number of grant applications (Fig. 1), which has continuously raised the caliber of science funded by the Foundation for Women’s Cancer. To assess the potential value of the Foundation for Women’s Cancer awards program, we carried out a brief survey of all funded investigators. Among 56 individuals surveyed, representing awards received through 2007, 100% responded. While these investigators have been prolific in publishing their research, over 325 peer-reviewed manuscripts were directly attributed to the work supported by the Foundation for Women’s Cancer. Moreover, the collective support of $2.55 million provided by the Foundation for Women’s Cancer has been leveraged very well by the investigators, resulting in grant funding totaling over $58 million through federal and private foundation granting agencies. This represents a more than 23-fold return (Fig. 2) on the original investment by the Foundation for Women’s Cancer into the early research of these individuals and is a testament to the success of this program.

The Foundation for Women’s Cancer has enjoyed a close collaboration with the National Cancer Institute (NCI) through two
programs that offer young investigators the opportunity for research training under the auspices of NCI. The first program was the “GCF/NCI Fellows program”, which supported five investigators from 1995 to 2005. Beginning in 2006, a second collaboration was initiated, the “GCF/NCI Scholars program.” The program’s purpose is to support the development of outstanding translational scientists by offering an additional 1–3 years of investigative training for clinician-scientists with a dedicated interest in gynecologic cancers. The research is performed at the NCI Bethesda campus and satellite campuses in Maryland under the direction of an NCI mentor. At the conclusion of the program, the fellows transition to a position at an extramural institution.

Additional awards have been launched to expand the impact of research funding by the Foundation for Women’s Cancer. In 2004–2005, a special award was created to recognize an individual who can best demonstrate that he or she has been able to use the Foundation for Women’s Cancer award to improve women’s health care by obtaining independent external funding, making important contributions to the literature and/or developing programs that improved women’s health care, including early detection. The “GCF/Margaret Greenfield/Carmel Cohen, MD, Excellence in Ovarian Cancer Research Prize” criteria defines the purpose of the Foundation for Women’s Cancer research grant and awards program—to provide young investigators with “seed” grants to encourage these individuals to pursue research by building on the original grant to make them competitive for larger future research grants from multiple funding sources, including the National Institutes of Health. Each year since 1994 the gynecologic oncology resident or fellow who presented the best paper at the SGO Annual Meeting on Women’s Cancer received a Foundation for Women’s Cancer award acknowledging his or her scientific contribution. In 2005, this recognition continued when the first “GCF/Carol’s Cause Award for the Outstanding Paper by a Fellow” was announced. Since that time, five Fellows in gynecologic Oncology have been recognized through a cash prize for his or her paper presented at the previous year’s SGO Annual Meeting on Women’s Cancer (provided with generous support from Mr. Joe Laino in memory of his wife Carol who lost her battle to endometrial cancer). A new “Claudia Cohen Research Foundation Prize” was announced and first awarded in 2010. This $50,000 prize will be awarded annually to an individual in recognition of his or her outstanding contributions to research improving the care of women with gynecologic cancer. This award is funded by the Claudia Cohen Research Foundation (CCRF) in honor of Claudia Cohen who lost her battle with uterine leiomyosarcoma.

In addition to support for research, during the past twenty years, the Foundation for Women’s Cancer has touched the lives of countless women and their families as each in their own way faced a cancer diagnosis. Through educational materials, free survivors courses held throughout the country and an information-rich Web site (www.wcn.org), the Foundation continues to provide hope through knowledge. The alignment of SGO and Foundation for Women’s Cancer allows for the integration and dissemination of the most current information whether aimed at clinicians, patients or the public. On the basis of previous accomplishments, the next twenty years and beyond hold great promise for success. Our hope moving forward is to expand the magnitude, depth, and breadth of available grants so that the entire spectrum of gynecologic malignancies is represented in the Foundation for Women’s Cancer funding portfolio.

Throughout the program’s history, many families, family foundations, corporate partners and individuals have stepped forward to support promising research. The research portfolio, which is being published to coincide with the celebration of Foundation for Women’s Cancer 20th anniversary, is dedicated to each of them with deepest gratitude.

**Conflict of interest statement**
The authors have no conflict of interest to declare.

**References**


**Anil K. Sood**  
*Department of Gynecologic Oncology and Reproductive Medicine, M.D. Anderson Cancer Center, Houston, TX, USA*  
*Department of Cancer Biology, M.D. Anderson Cancer Center, Houston, TX, USA*

*Center for RNAi and Non-Coding RNA, M.D. Anderson Cancer Center, Houston, TX, USA*

**Corresponding author. Reprint Requests:**  
Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas M.D. Anderson Cancer Center Unit 1362, PO Box 301439, Houston, TX 77230-1439, USA.  
Fax: +1 713 792 7586.  
*E-mail address:* asood@mdanderson.org.

**Marsha T. Wilson**  
*Foundation for Women’s Cancer, Cleaveland, OH, USA*

**Thomas J. Herzog**  
*Division of Gynecologic Oncology, Department of Obstetrics & Gynecology, Columbia University & NY Presbyterian Hospital*