



## OUTSTANDING YOUNG ALUMNA

# Molly Brewer, DVM, MD, MS

Class of 1991

**Molly A. Brewer, DVM, MD, MS** is currently Director of the Division of Gynecologic Oncology, Director of the Women's Cancer Prevention Program, and Professor of Obstetrics and Gynecology and Associate Director for Academics at the University of Connecticut Carol and Ray Neag Cancer Center. Dr. Brewer is also a Research Professor in the Department of Electrical and Computer Engineering, UConn Storrs and a Professor in Genetics and the Department of Molecular, Microbial and Structural Biology at the University of Connecticut Health Center. Dr. Brewer received her MD degree in 1991 from Upstate Medical Center where she was elected to the Alpha Omega Medical Honor Society. She was a resident in Obstetrics and Gynecology under Dr. Paul Kirk at the Oregon

Health Sciences in Portland and a fellow in gynecologic oncology at the UT MD Anderson Cancer Center in Houston Texas under Dr. J. Taylor Wharton. Following her fellowship, she had a joint appointment with University of Texas-Houston Medical School and MD Anderson Cancer Center and completed a Master's of Science in Clinical Research Design and Statistical Analysis at the University of Michigan School of Public Health in Ann Arbor. She also developed a large oncology practice at one of the two county hospitals, LBJ, Hermann Hospital and MD Anderson Cancer Center where she taught medical students, residents, and fellows. During her fellowship, she started working with fluorescence and reflectance spectroscopy for the early detection of ovarian cancer with the



biomedical engineers from UT Austin under the direction of Rebecca Richards-Kortum. They published the first manuscripts on the use of optical imaging in evaluating the ovary and this was the beginning of a long collaboration with biomedical engineers in the use of light outside of the visual spectrum for early detection of ovarian cancer. Based on this early work, she has expanded to using imaging to understand the biology of carcinogenesis.

In 2001 she was recruited to the Arizona Cancer Center at the University of Arizona in Tucson, where she was the director of the cancer center's gynecologic oncology division and was promoted to Associate Professor with tenure. She developed a large ovarian imaging program with multiple biomedical engineers and besides teaching medical students and residents, she was an active member of the Biomedical Engineering Program where she mentored both MS and PhD students in her laboratory. She also developed an interest in minimally invasive surgery for gynecologic cancer.

After five years, she was recruited to the University of Connecticut Health Center, where she currently works. She is active in medical student and resident teaching and was awarded the teaching award in 2010 by the fourth year Obstetrics and Gynecology residents. She has a laboratory where she works on ovarian cancer stem cells with PhD and postdoctoral students, residents and medical students. She is NCI funded for noninvasive photoacoustic ovarian imaging in collaboration with Quing Zhu, Professor of Biomedical Engineering at UConn Storrs and is NSF funded in collaboration with Paul Campagnola, Associate Professor of Biomedical Engineering at University of Wisconsin, Madison using second harmonic generation imaging to understand changes in the extracellular matrix that accompany cancer. She regularly reviews NCI grants and is an active journal reviewer and was just named to the Editorial Board of *Gynecologic Oncology Case Reports*.

Her primary passions are patient care, teaching and research and she is active in all areas of academic medicine. She is also dedicated to improving the quality of international



health care and regularly travels to China where she teaches advanced radical surgery to gynecologic surgeons. Dr. Brewer has an active collaboration with Southern Medical University in Guanzhou China and they send her their promising graduate students to train in her laboratory.

Dr. Brewer is a unique MD in that she was first trained as a DVM and practiced for 5 years in a large animal practice and 4 years in a small animal practice. She became frustrated with the lack of ability to fully treat her patients because of the economic limitations of veterinary medicine. She decided to apply to medical school and in 1987 was admitted to the class of 1991 at SUNY Upstate. She now uses her veterinary degree in the development of animal models in ovarian cancer and works with rodents, primates and large animals.

She encourages the students and residents she mentors to develop rewarding and stimulating careers and she considers teaching and mentorship to be one of the greatest privileges of her career. She has two daughters who are the love of her life, Emily, 24 and working in fashion in New York and Laura, 20, a junior at Maryland Institute College of Art, with a major in painting. She says, "I encouraged my daughters to pursue something they loved, rather than just have a job, just as I did when I gave up veterinary medicine to start a new career in human medicine."