

## **Interdisciplinary approach improving vocal health of singers**

Dr. Kari Ragan teaches applied voice and vocal pedagogy at the UW, but her interest in the science and medicine of the voice has been a boon to her students as she instructs them in not only the art of singing, but also the science.

A graduate of the School of Music voice program who joined the faculty in 2010, Ragan has enjoyed a multi-faceted career encompassing both performance in classical, opera, and musical theater settings and voice instruction in her private studio. In addition to her teaching and performance career, Ragan also is a Singing Voice Specialist who has undergone extensive training in working with voice disorders in singers.

Her work in the field of voice received important recognition recently when she was selected from a pool of nationwide candidates to receive the 2012 Van L. Lawrence Fellowship. Awarded jointly by the Voice Foundation and the National Association of Teachers of Singing Foundation, the fellowship recognizes excellence in teaching and encourages advances in the field of vocal science.

The fellowship will enable Ragan to extend her research into the neglected role of cool-down exercises in maintaining vocal health and to continue to engage in interdisciplinary work with the UW Otolaryngology and Speech and Hearing Sciences departments.

"My proposal for the fellowship is on the parameters and utilities of cool-down exercises for singers," she says. "More research is needed on the physiology of laryngeal muscles to better inform singers of the potential uses of cooling down the voice after a long rehearsal or performance. We are vocal athletes and must treat our instruments as such. Vocal exercises used for warming up the voice have been written about for centuries, but it is not often a part of a singer's routine to cool their voice down. My hope is that this information will benefit the health of singers greatly."

Ragan's interest in vocal science predates her faculty appointment at the UW, but has expanded significantly in her time here. In 2010, she initiated a pilot program with the Department of Speech and Hearing Sciences, working in collaboration with Martin Nevdahl, a speech pathologist and clinical supervisor in the department whose areas of interest include stuttering, voice disorders, and care of the professional voice. Through this program, Ragan's voice students receive voice evaluations from Nevdahl and his graduate students, including laryngeal videostroboscopy (LVS). LVS provides a magnified, "slow motion" view of the vocal cords in action. This examination can reveal even subtle abnormalities in the vibration of the vocal cords. Students are then referred for appropriate medical evaluation if necessary. The exam results reveal data important to both singer and voice teacher.

"Last week alone, three of my singers' exams revealed vocal problems that must be addressed," Ragan says. "I suspected as such from voice lessons, but the results confirmed my suspicions. This knowledge will make



Kari Ragan of the School of Music Voice faculty.

an enormous difference in determining how to proceed with these singers, all of whom need medical intervention and a team approach to rehabilitation."

When singers suffer from vocal problems, Ragan says, it is critical that they seek proper medical attention from physicians in the field of Otolaryngology, which focuses on treatments and diagnosis of ear, nose, and throat (ENT) disorders. If possible, they should see a laryngologist, who specializes in treatments and diagnosis of disorders and injuries affecting the voice, airway, and swallowing.

"It is such a specialized field, we have only four in the Seattle area," Ragan says. "If the singer must see an ENT, that specialist must specialize in voice. This point is crucial to getting a correct diagnosis."

UW voice students are fortunate to have resources in that field right on campus. Dr. Albert Merati directs the Laryngology program within the University's world-renowned Department of Otolaryngology – Head and Neck Surgery, and his areas of expertise include care of the professional voice. Ragan's students have benefited from Dr. Merati's proximity in numerous ways through his willingness to share knowledge in lectures, presentations, field trips, and collaborative events between Music and Otolaryngology. He, along with Ragan, also serves on the board of the Voice Foundation, which advances such collaborations in the field of voice. Seattle's chapter of the Voice Foundation is one of only four chapters nationwide. Its meetings, led by Dr. Merati, are held on the UW campus.

"Seattle and the greater northwest area is home to a vibrant arts community as well as a world-class medical institution in the University of Washington," Dr. Merati says. "Our voice specialists from the performing arts, speech/language pathology, and medical disciplines are interacting through the Northwest Voice Foundation, educational outreach, and day-to-day care of performers' voices. I have the privilege to instruct in their classes, and they and their voice teachers have the opportunity to come to our clinic. It is awesome."

With the groundwork already laid for robust interdisciplinary collaboration between Music, Otolaryngology, and Speech and Hearing Sciences, Ragan and her UW colleagues are well positioned to make a significant impact on the lives and health of current and future students. "Dr. Ragan's students are very lucky to have someone who cares so much and knows so much about their vocal health as well as their vocal performance," Nevdahl says. "Our ability here at the UW for this type of interdepartmental collaboration not only provides an excellent learning opportunity for all of our students, but also provides an amazing level of care and support for developing singers and performers."