

BY ANGELA SPIVEY

A mentor for LIFE

One of Dr. Gary Koch's former students remembers tracking him down long after her graduation to ask him a statistical question. In South America at the time, he called her back that same night—around 1 a.m. Another recalls how his deep voice and practical outlook calmed many a graduate student overwhelmed by endless problem sets. Others say they associate Koch not only with solid advice, but with food—potluck parties after long hours of work, his habit of meeting with students at a favorite breakfast or lunch spot, his insistence that a meal wasn't complete without dessert.

Koch, professor of biostatistics, is a renowned researcher who has published some of the most cited publications in biostatistics. But it's possible he exerts his influence nearly as much through his former students, who tackle research analysis and design problems at organizations worldwide. "People all over the pharmaceutical industry call him up and ask him for advice," says Sonia Davis, senior director of biostatistics at Quintiles Transnational Corp. "Once you're a student of his, you're always a student of his."

Koch (pronounced like cook) supports current students in many ways, including through an endowed fund set up by graduates of the department in 2001 to help students travel to research conferences. When donations are made, Koch matches them up to a certain amount. He matches travel funds for other departments, as well. He does the same for a similar fund at Ohio State. (He also divides his sports loyalties between his

alma maters. For him, it's Carolina basketball but Ohio State football.)

Maybe Koch devotes himself to mentoring because he so values the people who have influenced him, from the high school teachers who showed him that writing was an analytical task not so different from the math at which he excelled, to the Princeton professor, Dr. Sam Wilks, who took an hour to talk to Koch about his research interests and advised him to head to UNC for his doctorate.

After arriving at UNC, Koch took a job as a graduate research associate for biostatistics professor Dr. Jim Grizzle, who asked him to work on several problems, including one in multivariate categorical data. Categorical data are used to track yes or no outcomes, such as whether an infection heals or a headache is alleviated. Koch's work with Grizzle helped widen the scope of statistical methodology for analyzing such data. "That method became something I have worked

on—in one form or another—for the last 40 years," Koch says. "I got my initial stimulus basically while being in a work-study situation with Dr. Grizzle."

But Koch's statistics talent is all his. "He was sort of a phenomenon as a graduate student because he was writing papers that were appearing in *Biometrics*, which is one of the field's main journals," Grizzle says. Koch became a faculty member at Carolina even before he'd officially finished his PhD.

Koch's father was a physician, and because of that, he says, he had leanings toward preventive health, though he knew science, not medicine, would be his professional path. As a master's student at Ohio State, he had focused on operations research and conducted statistical applications in agriculture and education. But in his first semester of biostatistics with Grizzle, he knew this was the field for him.

"I've always been problem-driven," Koch says. "I like to see specific situations, have an understanding of what's involved in them, and have those drive the methodology work that I do."

Koch is tall enough to tower over most people. He comes across as reserved but is affable and has a surprisingly raucous laugh. He focuses intently on the task in front of him, whether that's talking to a student, reading printouts of his email or giving detailed directions about how to get to his office. And he is modest. He points out a textbook he co-wrote with former student Dr. Maura Stokes, now a researcher at SAS, but he doesn't men-

tion it's the best-selling book SAS ever published. "And SAS publishes a lot of books," says Dr. Lisa LaVange, professor of biostatistics and a former student of Koch's.

Despite his prominence, Koch tries his best to accommodate biostatistics students wanting to work in the UNC Biometric Consulting Laboratory, which he directs. The lab, part of the UNC Department of Biostatistics, allows students to acquire career training by working with Koch to design studies and analyze data for UNC researchers in public health and medicine.

In the late 1970s and early 1980s, collaborations between Koch and Dr. Dennis Gillings, then director of the laboratory, led to the development of Quintiles.

Koch and Gillings were thrown together in 1974 when Koch and his student research assistants moved from the fourth floor of Rosenau Hall to "Trailer 39"—one of three makeshift offices set up in and around parking lots behind Rosenau on the Carolina campus. Gillings and his students already were using one end of the trailer, and when Koch and his students moved in, a natural collaboration started.



Dr. Gary Koch on campus, and in the 1980s (top photo) in front of "Trailer 39."

"the trailer," as everyone called it, wasn't just a place to work—it felt like a family.

In addition to consulting for UNC researchers, Gillings and his student assistants began taking on projects for pharmaceutical companies such as Hoechst-Roussel. Koch and students would provide computer programs they developed or lend expertise on

was president and treasurer, and Koch was vice president and secretary. "He made most of the decisions as to how the company was going forward, but I was the sounding board as to whether something he was thinking about was a good idea or a bad idea," Koch says.

Gillings later became so busy he needed either to reduce his Quintiles activities or pursue them full time. He decided at that point to leave the university, and asked Koch to consider whether he wanted to do the same. Koch says his decision was easy. Conducting research and working with students are what make him tick.

After Gillings' departure, Koch went on to become director of the Biometric Consulting Laboratory, which was founded by Gillings in 1980. He has led the lab ever since.

Since then, Koch's student family has grown so large it can be hard to keep track. Just after Gillings left, Koch was supervising both his own student assistants and those who had worked under Gillings, so he was responsible for 17 or 18 students, he says. Davis remembers that even in the 1990s, when she worked in the lab, he supervised about 20 or 25 students. Today, Koch says, it's about 10. Or maybe it's 12. "Sometimes," he laughs, "I feel like the old woman who lived in a shoe." ■

"He always takes the students' interests to heart. Students know they can go to him and get fair and honest help heading in the direction they want to go."

Dr. Rebekkah S. Dann • principal biostatistician, GlaxoSmithKline

It wasn't the decidedly unposh digs in Trailer 39 that drew students there, but the chance to work with Gillings and Koch on real-world problems. "We were in a group of two professors and probably 10 or 12 students, back under the trees behind the School. It really felt like our own important world," says Julie Macmillan, MPH, who worked in the lab while pursuing her master of public health degree in the late 1970s. She is now managing director of Carolina Public Health Solutions at the School. Davis says

methods. "We both tended to peer review what the other did," Koch says. Koch and students also worked on projects for McNeill Consumer Products Co. and American Home Products, the parent company of Wyeth.

When Gillings decided to set up an external company to handle the growing workload from pharmaceutical companies, he asked Koch to co-found it. "We had such substantial collaboration on things, so together we did the paperwork to found Quintiles as a two-person company," Koch says. Gillings