to him that people share their results and reagents with each other," she says, and he has been "terrific over the years in giving credit to the people who work with him."

Paul Sternberg of the California Institute of Technology, another Hughes investigator who works on nematodes, also emphasizes Sulston's influence. "Everybody knows most of the time what others are doing—that's the ethic," says Sternberg. "We're doing the work not just for our ego's sake. You being first isn't the only motivation. You really are doing this to advance human knowledge."

Sulston's influence hasn't been felt only in isolated acts of generosity. With Cambridge's Alan Coulson and Robert Waterston of Washington University in St. Louis, he organized the nematode genome project, building in principles of cooperation. Kimble notes that one of Sulston's major concerns was that the database be open. "He set up a beautiful series of rules to ensure that nobody would have access to information before anyone else," says Kimble. "This was clearly his ethic, and he thought very hard about how to instill that ethic into the nematode community as a whole."

Yet as the worm field expands, credit conflicts are not as rare as they once were, especially among younger researchers. "The field is not free of credit issues," says one young researcher. This researcher suggests the pattern in nematode biology results partly from the fact that in the British system funds are often distributed by research institutions rather than through competitive grant applications: "If they had to write grants, they'd do things differently."

There's little chance the competitive grant system in the United States will change. Indeed, most researchers argue that the benefits of that system in producing excellence are so great that no thought should be given to changing it. It's also unrealistic to think the culture of credit will disappear; nor will the collaborative ideals of science change. In one form or another, they will continue to clash, and researchers will have to struggle to keep those collisions from tearing communities apart.

–Jon Cohen

Stanford: Bringing In the Big Guns

"It is the editor's everyday experience that unethical or improper behavior occurs all the way down from the most senior to the most junior researchers," says Drummond Rennie, an editor of the *Journal of the American Medical Association*. "The only difference is that when it's the most senior people doing it, that's what's being emulated." For this reason, says Rennie, any effort to teach ethical behavior that doesn't include the most senior people "may be doomed."

Once a year, Rennie, who is also a professor of medicine at the University of California, San Francisco, drives 45 minutes south to the Stanford University School of Medicine, where he gives the introductory lecture in a course entitled The Responsible Conduct of Research. Rennie is one of four of the most senior people in their fields who give the keynote lectures in the course. The others are David Botstein, world-famous geneticist and a former vice president of Genentech, teaching on conflicts of interest at the academic-commercial interface; Ernle Young, Stanford professor of biomedical ethics, on ethical theories and the Stanford guidelines on human subject research; and Donald Kennedy, former president of Stanford and a professor of biology, on issues of authorship, intellectual property, and peer review.

STANFORD UNIVERSITY

Lecture circuit. Immunologist James Maguire initiated Stanford's course in research conduct, which features eminent guests.

Kennedy says his experience as Stanford's president from 1980 through 1992 persuaded him of the need for the course. "Remember," he says, "I spent all those years as the last stop on the appellate chain for all the grievances that arise between faculty members and students on matters of responsible conduct. That's enough to convince anyone that there's a need."

The course is organized by Young and James Maguire, an immunologist and associate dean at the medical school, who initiated it in 1992. Stanford administrators, says Maguire, did not suffer from the delusion that a course in research ethics would stop the kind of person who might be tempted to "totally falsify data," because "those people will never listen," he says. Instead, the goal was to centralize discussions of ethics at Stanford and concentrate on "ethical issues of day-to-day living within major universities doing research and patient care." After the 1989 National Institutes of Health mandate, Stanford made Maguire and Young's course a requirement for every postdoctoral fellow on a training grant. The following year, it spread to all postdocs, and this year, to all trainees in biological sciences.

The Stanford course meets for an hour a week for 7 weeks, then intersperses what Maguire calls the "didactic" lectures of Rennie, Botstein, and company with breakout sessions. In the breakouts, students meet in groups of 15, led by principal investigators in the department. Each session begins with a loose forum discussing the subject of the previous keynote lecture, then moves on to discussions and even play-acting of cases.

"It's funny," says Maguire; "as we've expanded the number of people taking the course, the number of principal investigators wanting to be involved has greatly expanded as well. A lot of P.I.s were doing their own mini–ethics courses in their labs. Now that they see this really works, they're more than happy to teach in it." The sessions cover everything from the analysis of well-publicized cases of misconduct to ethical issues in clinical trials.

But what really sets this course apart is the presence of the big guns. And the motivation for having them there is twofold, says Maguire. On the one hand, they're the most knowledgeable people in the field: They have written extensively on the subjects and can bring a strong sense of reality to what could otherwise be a dry topic. Then, says Maguire, when you have a course with some of the biggest names on campus giving the lectures, you'll get good attendance. "It's probably no different than having [John Kenneth] Galbraith talk at Harvard," he says. "People will come."

–G.T.